



The lwarp package

L^AT_EX to HTML

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Abstract

The **lwarp** package converts L^AT_EX to HTML by using L^AT_EX to process the user's document and directly generate HTML tags. External utility programs are only used for the final conversion of text and images. Math may be represented by SVG images or MATHJAX. Hundreds of L^AT_EX packages are supported, including dozens with MATHJAX emulation.

Documents may be produced by DVI or PDF L^AT_EX, LuaL^AT_EX, XeL^AT_EX; by several CJK engines, classes, and packages; or by customized systems such as **perltex** and **pythontex**. A *texlua* script automates compilation, index, glossary, and batch image processing, and also supports *latexmk*. Configuration is semi-automatic at the first manual compile. Support files are self-generated. Print and HTML versions of each document may coexist.

Assistance is provided for HTML import into EPUB conversion software and word processors.

Requirements include the commonly-available POPPLER utilities (included with MiKTeX) and PERL. Detailed installation instructions are included for each of the major operating systems and T_EX distributions.

A quick-start tutorial is provided, as well as extensive documentation for special cases, a general index, and a troubleshooting index. Automatic error testing is provided for configuration files, package load order, and image generation.

SVG math and many other generated images include L^AT_EX expressions in the alt tags. MATHJAX may be used with advanced equation numbering under the direct control of **lwarp**.

Complicated tables are supported, which copy/paste well into LIBREOffice WRITER.

Supported classes and packages include memoir and koma-script, cleveref, caption, mdframed, siunitx, and many popular packages for tabulars, floats, graphics, theorems, the title page, bibliography, indexing, footnotes, and editorial work, as well as a number of CJK-related classes and packages.

T_EX is a self-modifying tokenized macro-expansion language. Since **lwarp** is written directly in L^AT_EX, it is able to interpret the document's meaning at a deeper level than external conversions which merely approximate T_EX. HTML5 and CSS3 are leveraged to provide advanced features such as **booktabs** trim, multicolumns, side-by-side minipages, and JAVASCRIPT-free navigation.

For a list of supported features, see [table 2: Supported packages and features](#).

To update existing projects, see [section 1: Updates](#).

Lwarp is still in development. Changes are likely.

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Support T_EX development

T_EX and related projects:

- are mostly open-sourced and a volunteer effort;
- benefit students, academics, scientists, engineers, and businesses;
- help drive education, public and private research, and commercial activity;
- are used in the fields of mathematics, science, engineering, and humanities;
- are international in reach;
- span decades of development;
- are enduring — many older packages are still actively used and maintained;
- are largely backwards compatible;
- are portable across all the major computing platforms;
- are usable even on older computers and away from internet access;
- are continuing to maintain relevance with modern improvements;
- require no yearly subscription fees;
- and are supported by an active community of knowledgeable volunteers.

Please consider helping by joining and/or contributing to the T_EX Users Group, a United States 501(c)(3) tax-exempt charitable organization. Contributions are accepted by credit card, check, or Pay Pal, via the United Way, or by USA or European bank transfer. Membership in TUG supports the development of T_EXLive, the major T_EX distribution.

Donations may be directed towards individual projects:

TUG Bursary Fund: Assistance for attending annual TUG meetings.

CTAN: The Comprehensive T_EX Archive Network — Central storage for T_EX.

T_EX Development Fund: Support for specific projects.

EduT_EX: Teaching and using T_EX in schools and universities.

GUST e-foundry fonts: Enhanced for math and additional language groups.

LaT_EX Project: Modernizing the L^AT_EX core.

Libre Font Fund: Fonts, tools (FontForge), and distribution (the Open Font Library).

LuaT_EX: Combining the pdfT_EX engine and the Lua language.

MetaPost: Postscript graphics.

MacT_EX: T_EX for Mac.

PDF Accessibility: Modern PDF standards.

Other: Additional projects may be specified.

To make a contribution: <https://www.tug.org/donate.html>

For country-specific T_EX users groups: <http://tug.org/usergroups.html>

For users of MiK_T_EX: <https://miktex.org/donations.html>

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1 Updates

The following is a summary of updates to **lwarp**, highlighting new features and any special changes which must be made due to improvements or modifications in **lwarp** itself.

For a detailed list of the most recent changes, see the end of the Change History on page 1228.

v0.88: Indexing, boxing, theorems.

- core**
 - Now has programmed support for more than 500 packages and classes, of which more than 60 also support MATHJAX.
 - Fixed: `\ref*`, and also added MATHJAX emulation.
 - If starting a new paragraph, `\hrulefill` creates a `<div>` with a thin horizontal line across the page. Use instead of `\hrule`.
 - Fixed: Use `\chaptername` where appropriate.
 - Fixed: Inline links causing extraneous paragraphs.
 - lwarpmk**
 - Added **lwarpmk -v** to print the version number.
 - indexing**
 - Added the `IndexRef` option to control the display of index entries. See section 7.5.
 - Added `\IndexPageSeparator` and `\IndexRangeSeparator` for custom index styles.
 - Added support for `gindex`, `xindex`.
 - Verified to work as-is with `varindex`.
 - packages**
 - `cleveref`, `varioref`: Fix for starred macros.
 - `varioref`: Removed page-related text from HTML output.
 - `xfakebold`: Updated to v0.08, using `pdfrender`.
 - `caption`, `scrextend`: Fixed `\caption*`.
 - Added `fbox`, `shadethm`, `tcolorbox`, `termcal`, `thmbox`, `thmtools`.

v0.87: MATHJAX, bibliography packages.

- core**
 - Added boolean `FixSmallCaps` for fonts which render small caps as all caps.
 - Fixed `\bibliography` to use the HTML version's `.bbl` file. Previously the HTML bibliography relied on the print version's `.bbl`, thus would fail if the print document had not yet been created.
 - MATHJAX**
 - Added `\ifstar` and `\ifnextchar` to MATHJAX, and removed `\DeclareIfstar`. See section 8.7.5.
 - Removed**
 - `\DeclareIfstar`
 - packages**
 - `physics`: Now supports the MATHJAX v3 extension.
 - `mathtools`: Improved `\underbracket`, `\overbracket` for MATHJAX.
 - `nccmath`: Improved `\underrel` for MATHJAX.
 - `mhchem`: Now supports the MATHJAX v3 extension for `\ce` inside math.
 - `cancel`: Now supports the MATHJAX v3 extension.

- **embrac**: Neutralized kerning for improved HTML conversion.
- Added `citeref`, `drftcite`, `jurabib`, `multibib`, `splitbib`.
- Verified to work as-is with `bibtopic`, `collref`, `mciteplus`.

v0.86: MATHJAX major updates.

core

- Fixed: Filename if named files with *, parens, period in section name.
- Fixed: Labels in `eqnarray`, `lateximage`.

MATHJAX

- Updated to MATHJAX v3. New repository.
- Fixed forward references for MATHJAX.
- Improved MATHJAX equation number formatting, now compatible with `amsmath \numberwithin` for chapters, sections, subsections, as well as `amsmath subequations`. See section 8.7.5.
- Added `\DeclareIfstar` to define starred \TeX macros in MATHJAX. See section 8.7.5.
- Generates an error if `\MathJaxFilename` file does not exist.

packages

- `mathtools`, `nccmath`, `physics`: Added starred macros for MATHJAX.
- `nccmath`: Fixed `\nr`, `\displaybreak` for MATHJAX.
- `xcolor`: Fixed `\textcolor` with `babel-french`.

v0.85: fontspec

packages

- `fontspec`: Fixed core font change macros for world languages.



acro formats

- `acro`: Due to v3 changes, when defining acronym formats, use `\textbf` instead of `\bfseries`, etc.
- Fixed `idxlayout`, `mathtools`, `titlesec`, `url`.

v0.84: Previous/next page links, numerous fixes.

docs

- Added documentation of `BlockClass` and `\InlineClass` for CSS `<div>s` and `s`. See section 7.8.
- Added `\LinkPrevious`, `\LinkNext` page links. See section 7.6.
- Added `\FirstPageBottom`. Home page no longer shares `\PageBottom`. See section 7.6.



home page footer changed

core

- Improved coexistence with `comment`, support for nested environments.
- No longer requires but still supports the `caption` package.
- Improved filenames and HTML titles when using special characters.
- Change: Append `-0` to section named `Index` previously `_index` to distinguish from `index.html`
- Fixed style tags for `\multicolumn`, `\multirow`.
- Fixed spacing in tabbing.
- Fixed `lateximage` for: `quote`, `quotation`, `verse`, `center`, `flushleft`, `flushright`, `<par>` tags, packages `verbatim`, `alltt`, `epigraph`.
- Fixed `textcomp` due to integration into \LaTeX kernel.
- Fixed `\itshape`, etc. Adapted to \LaTeX fontaxes integration.



lwarpmk packages

- Fixed `\@fnsymbol`.
- Warns about section names with dollar-delimited math.
- Warns about a `` containing a float, caption, section, `mdframed`, or other `<div>` object.
- Only warn about Xe_{La}TeX logo and `graphics` if actually used `\Xe`.
- **lwarpmk clean** also removes `comment_*.cut`.
- `scrextend`, `scrartcl`, `scrbook`: Added `\titlehead`, `\subject`, `\subtitle`, `\publishers`.
- `titling`: Fixed `\printthanks`.
- `memoir`, `abstract`: Fixed for updated memoir.
- `memoir`: Fixed `\newcomment`, `pagenotes`, `crossreferences`. Fixed setting a recursive name.
- Fixed or improved: `amsthm`, `backref`, `biblatex`, `fixme`, `nfssect-cfr`, `ntheorem`, `parcolumns`, `realscripts`, `rotfloat`, `titling`.
- Added `boxedminipage`, renamed from `boxedminipage2e` per author.
- Verified to work as-is with `mcite`.

v0.83: memoir fixes.

packages

- `memoir`: Various fixes and updates.
- `physunits`: Updated to v1.0.4.

v0.82: MATHJAX notes, xpinyin improvements, various updates.

MATHJAX

packages

- Improved footnotes with MATHJAX.
- Added MATHJAX emulation for `endnotes`, `marginnote`, `nccfoots`, `pagenote`, `parnotes`, `sidenotes`.
- `xpinyin`: Added pinyin with modern HTML.
- `luatexko`: Added `\dotemph`, `\ruby`, `\uline`, etc.
- `soul`: Fixed `\<`.
- `chemfig`: Updated to v1.5.
- `draftwatermark`: Updated to v2.0.
- `ulem`: Fixed: `\dashuline`.
- `amsmath`: Fixed: `\intertext` with MATHJAX.
- `endnotes`: Fixed: Marks in print mode.
- `tocvsec2`, `tableof`: Verified to work as-is.
- Added `etoc` (nullified).

v0.81: MATHJAX speedup and additional emulations.

core

MATHJAX

- Improved warning regarding SVG math sizing/baselines and `graphics/graphicsx`. See section 8.7.
- Improved MATHJAX emulation processing speed.

- Added MATHJAX emulation for accsupp, axessibiltiy, colonequals, decimal, dotlessi, econometrics, engtlc, multiobjective, physunits, Slunits, stackrel, statmath.
- packages
- axessibility: Updated to 2020/01/08 version.
 - gridset: Updated to v0.3.
 - Slunits: Fixed for math mode.
 - Added DotArrow, nolbreaks, luamplib, returntogrid, statex2, tagpdf.
 - Verified to work as-is with icomma, mathpunctspace, textualcomma.
- v0.80:** MATHJAX, biblatex.
- MATHJAX
- Added docs and warning/info messages re: avoiding slow MATHJAX compilation. See section 8.7.5, [Customizing MATHJAX](#).
 - Added MATHJAX emulation for accessibility, autobreak, centernot, extarrows, fouridx, gensymb, leftidx, mathcomp, mathdots, mathfixs, mismath, nccmath, noitcrul, pdfcomment, relsize, rmathbr, subsubscripts, xfrac.
 - Improved MATHJAX emulation for unicode-math.
- packages
- biblatex, url: Now create hyperlinks.
 - amsmath: Fix to center starred environments.
 - xcolor, graphics: Made more macros robust.
 - colortbl: Fix: Rule color in a lateximage.
 - chemmacros: Updated to v5.10.
 - Added fewerfloatpages, ghsystem, hhline, mismath, nccmath.
- v0.79:** MATHJAX, nested tabular.
- MATHJAX
- Added or improved MATHJAX emulation for amsmath, ar, arydshln, bm, bigdelim, bigstrut, booktabs, braket, mathtools, multirow, physics, siunitx, slashed, unicode-math, xfakebold.
 - Warn if using certain packages not supported by MATHJAX.
- core
- tabular: Now may be nested.
 - minipage, \parbox, fminipage, \makebox, \framebox: Fix: Adjust for virtual page size.
 - Uses new iftex.
- packages
- graphicx: Fix: Negative angles.
 - caption: Fix: \captionlistentry with longtable.
 - multirow: Fix: Centered vertical alignment.
 - siunitx: Fix: \square, \cubed.
 - booktabs: Fix: memoir with lateximage.
 - babel and polyglossia: Added troubleshooting warnings.
 - fontawesome, fontawesome5: Supports text color and size.
 - transparent: Fix: lateximages.
 - epigraph: Updated to v1.5e.

- xurl: Updated to v0.08.
- subcaption: Fixed with memoir.
- floatrow: Fix: `\linewidth`. No longer require float, graphics.
- floatflt, wrapfig, niceframe: Fix: Adjust for virtual page size.
- Added widetable, witharrows, steinmetz.
- Added awesomebox, catoptions.
- Added svg, supports svg-extract.
- Added parcolumns, pdfcolparcolumns,
- Added parallel, pdfcolparallel.
- Added pdfcol, pdfcolfoot, pdfcolmk.

v0.78: Fixes for support files, alt tags, hyperlinks, and the 2019/10 L^AT_EX release.

docs

- Docs: Improved documentation regarding package options. See section 8.1.
- Fix to overwrite existing support files using new filecontents environment.

packages

- breqn: Previously broken by the 2019/10 L^AT_EX update, but now working again.
- graphics: Fix for `\includegraphics` alt tags.
- babel-french: Fix for hyperlinks.
- media9, movie15, multimedia: Fix for the 2019/10 L^AT_EX update.
- accessibility: Added.

v0.77: Updates to fix recently-broken packages.

- booktabs: Updated to v1.6180339.
- chemformula: Updated to v4.15.

v0.76: MATHJAX, updates for L^AT_EX 2019/10 release.

docs

- Docs: Expanded documentation regarding the use of multiple projects in the same directory. See section 5.17.

MATHJAX

packages

- MATHJAX: Updated to v2.7.6.
- xr: Updated to v5.05.
- xr-hyper: Updated to v6.1.
- Verified works as-is with xcite.
- acro: Updated to v2.10.

⚠ broken

- Currently broken in print mode by the 2019/10 L^AT_EX update, and waiting for fixes: breqn, grffile, multimedia, movie15.

v0.75: keyfloat, wrapfig

packages

- \minipage: Fix for `\linewidth`.
- keyfloat: Improved color control.
- wrapfig: Fix for `\linewidth`.

v0.74: Docs, svg math, *lwarpmk*, HTML alt and title text, lyluatex

docs

- Added to the tutorial the section **What next?**. See section 5.19.
- Added documentation about localization options. See section 7.1.
- Added documentation about accessibility options. See section 7.2.
- Renamed and updated HTML alt text macros:

HTML alt text
changed names

Old	New
(hard coded as “image”)	<code>\ImageAltText</code>
<code>\mathimagename</code>	<code>\MathImageAltText</code>
<code>\packagediagramname</code>	<code>\PackageDiagramAltText</code>

- Added `\ImageAltText` for the default HTML alt text for an image. See section 7.6.
- Added `\ThisAltText`, which may be used to assign a one-time HTML alt tag to the very next image generated by *lwarp*, such as a `lateximage`, `picture`, `tikzpicture`, an image generated by various chemistry or engineering packages, or an svg math image. This macro also adds a title tag to a reference or hyperlink. See section 7.6.

svg math

- Adjusted `\LateximageFontSize` default from .75 to 1.
- Fix: Font control for svg math.

misc

- Fix: Ignores negative `\hspace`.
- Warning if `SideTOCDepth < FileDepth`.

lwarpmk

- *lwarpmk*: **lwarpmk clean** removes additional files.
- *lwarpmk*: **lwarpmk epstopdf** and **lwarpmk pdftosvg** now honor directories.

packages

- lyluatex: Split images by system or per fullpage, improved margins and scaling.
- Tested to work as-is with `mathspec`, `unicode-math`.

v0.73: `\include`, memoir, koma-script, caption, xy, datatool, music scores.

- Fix for `\include`.
- Warning for a tabular inside a ``.
- `\color`: Added HTML support for rules and frames, but not inline text. Use `\textcolor` if possible.
- Improved many HTML tags, reducing *tidy* warnings. See Change History.
- memoir: Fixes for `\frontmatter*` and `\mainmatter*`. Added `\book`.
- koma-script: Fix for starred captions in the toc.
- caption: Fix for starred captions.
- datatool: Added pie, bar, and plot charts.
- threeparttable: Added `measuredfigure`.
- intopdf: Updated to v0.2.1.
- tocdata: Updated to v2.03.
- quotchap: Updated to v1.2.

packages

- **versionotes**: Updated to v0.4.
- **backnaur**: Now uses svg images. Updated to v3.1.
- **xy**: Fix for `\xybox`, improved `xy`, also now compatible with `qcircuit`.
- **fancyvrb**: Fix for label HTML tags.
- Added **stackengine**.
- Added **lyluatex**. (Music scores.)
- **musicography**: Updated to 2019/05/28. Added support for `lateximages`.

music

v0.72: Font control, `\multicolumn`, `xr` and `xr-hyper`.

⚠ **images**

- Due to internal changes, images for inline svg math and `lateximages` will have new hash values, and will have to be regenerated using

Enter ⇒ **lwarpmk cleanlimages**

and

Enter ⇒ **lwarpmk limages**

- Docs: Color-codes package names in the table of supported packages and features, table 2, according to each package's level of support by `lwarp`.
- `\multicolumn`: Fix for paragraph columns.
- `xr`, `xr-hyper`: Fixes for references, `\externaldocument`.
- `soulutf8`: Fix: Loads `soul` for emulation.
- `boxedminipage2e`: Added support for `lateximages`.
- `zhlineskip`: Updated to v1.0e.
- Added `fontaxes`, `slantsc`, `tabfigures`.
- Added `nfssect-cfr`, thus supporting `cfr-lm` and several other font packages.
- Added `backnaur`, `hypbmsec`, `minibox`, `pdfcrypt`, `shapepar`.

packages

v0.71: Error handling, multimedia, `tabular`.

- `tabular`: Added support for '*' columns. Fix for paragraph tags.
- `quotation`: Fix for HTML tag.
- Docs: Added a section about error conditions tested by `lwarp`. See section 13.1.
- **lwarpmk**: If file `lwarpmk.conf` is an older version, or the incorrect operating system, displays the print command to use to recompile.
- **chemfig**: Updated for v1.4.
- **endfloat**: Updated for v2.7.
- **textpos**: Updated for v1.9.1.
- Added `media9`, `movie15`, `multimedia`.

packages

multimedia

v0.70: Error handling, MATHJAX, mathtools.

- Error handling for “Label(s) changed.” Refuses to **lwarpmk limages** until recompile first.
- Fix: If Computer Modern font is used, ensures cm-super or lmodern is used.
- Fixes for \makebox.
- Fixes for \parbox inside a .
- MATHJAX: Updated to v2.7.5. Loads the autoload-all.js extension. Added \MathJaxFilename to select custom scripts.
- textcomp, xunicode: Fix for \textinterrobang.
- mhchem: Works with MATHJAX. See section 362.
- changes: Updated to v3.1.2.
- Added autonum, changelayout, inputtrc, mathtools, metalogox.

v0.69: Error handling, many fixes, improved keyfloat / tocdata.

- Fix for HTML corruption of lateximage displays.
- \makebox, \framebox: Fix for ($\langle width, height \rangle$) arguments.
- fminipage: Honors \minipagefullwidth.
- array, longtable: Fix for \tabularnewline.
- tabularx, tabulary: Fix to require the array package.
- supertabular, xtab: Fix to clear caption after use.
- graphics: Added a warning if used the \includegraphics scale option.
- multirow: Added an error if didn't use \mrowcell or \mcolrowcell when using \multirow or \multicolumnrow.
- keyfloat: Updated for v2.00, additional improvements.
- Added ctable, eqlist, eqparbox, ftcap, listliketab, minitoc, tocdata, topcapt.

v0.68: Error handling, tabulars, footnotes.

- **lwarpmk**: Improved error handling for image generation if compile was incomplete.
- tabular: Fix for \warpprintonly.
- longtable: Improved flexibility for \endhead, etc. Improved error reporting if \endhead, etc. incorrect for **lwarp**.
- threeparttable: Fix for caption type.
- hyperref: Fix for options with braces.
- morefloats: Fix to be loaded early for print output.
- listings: Updated for v1.7.
- Added bigfoot, fnpara, footnotebackref, manyfoot, tablefootnote, threeparttablex.
- Added layouts, niceframe, perpage, showtags.
- Prevented alg, algorithmic, pdfcpot, fncylab.

v0.67: Filename generation, symbol fonts.

docs

- Documentation fix for <project>-images, <project>-images.txt.
- Added discussion regarding section names. See section 8.4.

filenames

- Added \FilenameNullify and \FilenameSimplify for filename generation. See section 8.4.
- Core, textcomp, xunicode: Nullified additional symbols during filename generation.

packages

- color: Fix for version number warnings.
- Added academicons, bbding, dingbat, eurosym, fontawesome, fontawesome5, marvosym, pifont, typicons.
- Added changes, easyReview, fitbox, foreign, gloss, karnaugh-map, multicap, nomencl, notes, struktex, umoline, xfakebold.
- Tested to work as-is with askmaps, curves, euro, karnaughmap, tikz-karnaugh.

v0.66: xr, multiple projects, image names/directory, HTML formatting

⚠ Reset the configuration

- Due to changes in *lwarpmk*, **recompile any existing project a single time** using **pdf_latex filename.tex** or similar, after which *lwarpmk* may then be used with the new configuration files.

lateximage

- Adds options ImagesDirectory and ImagesName to assign directory and name prefixes for lateximage images. The new defaults include the job-name, allowing the image directories for multiple projects to coexist.

⚠ existing projects

- To reuse existing lateximage directories, add lwarp options

```
\usepackage[
  ImagesDirectory={lateximages},
  ImagesName={lateximage-}
]{lwarp}
```

If not reused, the existing lateximages directory and lateximages.txt file may be removed.

filenames

- Added \FilenameLimit to control the maximum length of the filenames generated by lwarp.

⚠ Possible filename changes

- Improved filename generation when special characters or macros are used in section names.

WINDOWS

- Fix for **lwarpmk cleanlimages** with WINDOWS.

floats

- Fixes for floats in the home page.

lists, table notes

- Improved css for definition lists, table notes.

tabular

- tabular: Fixes for \par in column specifier, minipage inside tabular.

indexing

- Indexing: Fix for a long line of multiple entries.

minipage

- \minipagefullwidth: Fix for global changes.
- Added \UseMinipageWidths and \IgnoreMinipageWidths. See section 8.3.3.

colors

- Improved \fbox, \fboxBlock, \fminipage to use current text color.

HTML

- Improved HTML output formatting.

docs

- Added discussion regarding invalid HTML. See section 8.1.1.

packages

- Added discussion regarding math in section names, `\imagegraphics` scale option. See section 6.
- Added discussion regarding international languages in section names. See section 8.14.
- `caption`: Fix for options clash.
- `xr`, `xr-hyper`: Now compatible.
- `subcaption`: Improved horizontal spacing.
- `multicol`: Fix for minipage inside `multicols`.
- `multicolrule`: Updated for v1.2.
- `tocbasic`: Minor update.
- `acronym`: Fix for acronym in float caption.
- `kotexutf`: Patch with *pdflatex* and new `lwarp` labels.
- `extramarks`, `fancyhdr`: Updated for v3.10.
- `memoir`: Added docs regarding version numbers. See section 8.13.
- `zref`: No longer required.
- Added `ar`, `ed`, `indentfirst`, `nameauth`, `truncate`.
- Verified to work as-is with `changelog`.
- Prevented `colortab`, `epsf`, `hyper`, `pacinpar`, `picins`, `sistyle`, `ucs`.

v0.65: `css` layout, `alt` tags, Japanese.

page layout

- Moved the `sideroc` to the left side, allowing improved `css` for margin notes.
- Improved page layout `css`.

image alt tags

- `graphicx \includegraphics`: Added the `alt` key to assign an `alt` tag to an image. Default is “image”, assigned to pass validation.

duplicate HTML files

- Detects and causes an error if duplicate HTML file names are generated, caused by identical or similar sectioning names.

fixes

- Fix for `tabular*`.
- Fix for `tabular` border colors.
- Fixes `\quad`, `\enskip`, and figure captions to pass validation.

Japanese

- Added `ltj*` classes, `bounddvi`, `gentombow`, `ltjtext`, `plarydshln`, `plext`, `plextarydshln`, `plextcolortbl`, `pxatbegshi`, `pxeveryshi`, `pxftnright`, `pxjahyper`, `tasctmac`.
- Verified to work with `plarray`, `plautopatch`, `plextarray`, `plextdelarray`, `pxgentombow`, `plsiunitx`, `pxpdfpages`, `pxpgfrcs`, `pxpgfmark`.

packages

- Added support for `fontspec \textsi` and `\sishape`.
- Added `multicol`'s `\docolaction`.
- Added `embrace`, `footnoterange`, `multicolrule`, `versionotes`.

v0.64: Koma-Script, Japanese, Chinese.

- Japanese
 - Added utarticle and related classes.
 - Improved uarticle and related classes.
- Chinese
 - Fix for biblatex with C_TE_X and other classes.
- Koma-Script
 - Fixes for scrlayer, scrlayer-scrpage.
- packages
 - addlines: Updated to v0.3.
 - Added bsheaders, gmeometric, marginal, rmpage, scrpage2.

v0.63: mdframed, Chinese, Japanese, Korean

- localization
 - Added \Linkhomename: A user-definable name for the **Home** link.
 - Documented \sidetocname: A user-definable name for the sideroc.
- fixes
 - Fix: \LinkHome for print output.
- optimizations
 - Moved package load checks to the lwarp core to reduce the number of lwarp-* files.
- packages
 - mdframed: Fix with amsthm, improved titles and font control. Improved rule widths.
- Chinese
 - Fixes for xeCJK.
 - Added xpinyin, zhlineskip.
 - Verified to work with cjkpunct, upzhkinsoku, zhspacing.
- Japanese
 - Verified to work with zxjatype, luatexja, luatexja-fontspec.
 - Added bxjsarticle and related classes.
 - Added ltjsarticle and related classes.
 - Added p_LA_TE_X, up_LA_TE_X, uarticle and related classes.
 - Prevented utarticle and related classes.
 - Prevented bxcjkatype.
- Korean
 - Verified to work with kotex, xetexko, luatexko.

v0.62: MiK_TE_X docs, HTML title, C_TE_X, xeCJK, bitpattern.

- docs
 - Docs: Setting a UTF-8 locale. See section 9.8.
- MiK_TE_X
 - MiK_TE_X: Docs for *MiK_TE_X Console* and miktex-poppler-bin.
- HTML <title>
 - HTML subpage titles: Added \HTMLTitleBeforeSection and \HTMLTitleAfterSection to select whether the HTML <title> displays the website name before or after the section name. See section 7.6.
- fixes
 - Fix for package options handling.
 - Fixes for horizontal white space between fminipage, fcolorminipage, colorboxBlock, fcolorboxBlock.
 - Logos: Fix for X_YL_AT_EX logo, improved css, made robust, improved search-engine optimization.
 - \[\$1]: Additional HTML
 if \$1 > 0 pt.
 - Fixes for \includgraphics filename, and with FormatWP.
 - Fix: css for \textup.

- Chinese
 - Fix: Added `\slshape`.
- packages
 - Added `ctex` package and related classes, `xeCJK`.
 - Prevented `CJK`, `CJKutf8` unless `xeCJK`, `ctex` are used.
 - `chemfig`: Docs for new macro `\polymerdelim`.
 - `asymptote`: Docs for compilation.
 - `chngepage`: Fix to load `lwarp-changeage`.
 - `algorithm2e`: Fix with non-book classes.
 - `register`: Updated to v1.8.
 - `nicefrac`: Improved font control and css, honors nice and ugly.
 - `units`: Improved font control and css, honors tight and loose.
 - `xfrac`: Improved css.
 - `textcomp` and `xunicode`: Fix conflicts with `\textcircled`.
 - `ulem`: Improved compatibility with `CJKulem`, `lateximage`.
 - `MathJax` and `siunitx`: Removed inoperable extension.
 - Added `bitpattern`, `pdfcomment`, `pdfmarginpar`, `tram`, `unitsdef`, `xexchangebar`.
 - Added `musicography`, `octave`, `semantic-markup`.
 - Added `2in1`, `flippdf`, `notespages`, `rviewport`, `twoup`.
- v0.61:** Custom compilation, EPS-related packages, documentation, indexes.
- docs
 - Split index into multiple indexes.
 - Improved documentation regarding font selection. See section 7.4.
 - Added documentation regarding debugging options. See section 34.
 - Added documentation regarding HTML entities inside program listings. See section 8.2.1.
- custom compiling
 - Added options to specify the shell commands to execute for `lwarpmk print` and `lwarpmk html`, allowing the use of `lwarp` with `perltex`, `pythontex`, etc. If not specified, these are set automatically depending on the L^AT_EX engine, `--shell-escape`, and `lwarp` options. See section 9.
- ⚠ changed names
 - Changed macro names to match `\displaymathother`, `\displaymathnormal`:

Old	New
<code>\StartDynamicMath</code>	<code>\inlinemathother</code>
<code>\StopDynamicMath</code>	<code>\inlinemathnormal</code>
- fixes
 - Fix: Paragraph tags in a tabular.
 - Fix: `supertabular` and `xtab` captions.
 - Fix: DVI L^AT_EX `\includegraphics` EPS images.
 - Fix: `newfloat` lists.
 - Fix: css footnotes text align, `minipage` tabular and footnote margins.
- packages
 - Added `epsfig`, `psfrag`, `psfragx`, `pstool`.
 - Added `copyrightbox`, `pdfprivacy`, `thinsp`, `threadcol`, `uspace`.
 - Added `chkfloat`, `cmdtrack`, `dprogress`, `lua-visual-debug`, `refcheck`, `srcltx`, `srctex`, `vpe`, `xbmks`.

v0.60: Fixes for longtable, listings.

fixes

- longtable, etc.: Fixes for slowdown and memory management for very long tables.
- listings: Fix for HTML entities, and also when used inside a list.
- diagbox: Fix for incorrect HTML par tags.

packages

- Added 2up, booklet.
- Added bophook, draftfigure, fullminipage, grid-system, layaureo.
- Added leading, widows-and-orphans.
- Added fancytabs, thumb, thumbs.

v0.59: DVI *latex*, MATHJAX, asymptote, pdftricks and pstricks, epstopdf, brqn.

 Reset the configuration

- Due to changes in *lwarpmk*, **recompile any existing project a single time** using **pdf_latex filename.tex** or similar, after which *lwarpmk* may then be used with the new configuration files.

lwarpmk

- Added an error if *lwarpmk.conf*'s format has changed and the document must be recompiled.
- Added a warning if the *lwarpmk.conf* configuration file appears to be for the wrong operating system, in case files are transferred between systems.
- Added

`lwarpmk epstopdf <list-of-EPS-files>`

to quickly convert a document's EPS images to PDF or SVG. See section 8.8.

DVI *latex*

latexmk

math

- Added support for DVI *latex*. See section 7.5.
- Fix for `--shell-escape` with *latexmk*.
- Updated MathJax script to v2.7.4.
- Fix: MathJax chapter number removed from non-numeric tagged equations.
- Added MathJax support for nicefrac, units.
- Fix for `\[` and `\]` with `\displaymathnormal`.

images

- Fix for `\includegraphics` filename expansion.
- `\includegraphics` now works with `.pdf` and `.eps` filename extensions.

packages

- Moved amsmath out of the *lwarp* core.
- Fix for chemformula `\NMR`.
- Added asymptote, pdftricks, pstricks, pst-eps.
- Added breqn, Slunits.
- Added bxpapersize, canoniclayout, draftcopy, fnbreak, nccfancyhdr.
- Added accsupp, axessibility.
- Added xunicode.
- Improved and now supports epstopdf.
- Tested to work as-is: eepic, sepfootnotes.

docs

- Added information about setting up a development version of *lwarp*.

v0.58: Extensive improvements in indexing, glossaries. Adds PDF-inclusion packages.

⚠ Reset the configuration

lwarpmk
glossaries

index and glossary

misc. fixes

packages

- Due to changes in *lwarpmk*, **recompile any existing project a single time** using **pdflatex filename.tex** or similar, after which *lwarpmk* may then be used with the new configuration files.
- *lwarpmk*: Added the `-p` option to specify the project name.
- *lwarpmk*: Now uses *makeglossaries* for glossary generation, allowing the processing of multiple glossaries at once.
- Added *lwarp* option `GlossaryCmd` to specify the shell command used by *lwarpmk printglossary* and *lwarpmk htmlglossary*. Defaults to *makeglossaries*.
- Docs: Extra indexing options. See section 8.6.14.
- Added support for *makeindex*. (Previously supported only *xindy*.) Also added indexing packages listed below.
- Added *lwarp* options `PrintIndexCmd`, `HTMLIndexCmd`, and `LatexmkIndexCmd` to specify shell commands used by *lwarpmk printindex*, *lwarpmk htmlindex*, and *latexmk*. May be preset with the *makeindex* or *xindy* *lwarp* options. See section 7.5.
- Added *lwarp* options `makeindex` and `xindy` to set `PrintIndexCmd`, `HTMLIndexCmd`, and `LatexmkIndexCmd` to sensible values for a typical single index. See section 7.5.
- Added *lwarp* option `makeindexStyle` to tell *lwarpmk* to use a custom style instead of *lwarp.ist*. See section 8.6.20.
- Fix for index entries with `\see`, `\seealso`, `\emph`, `\textbf`, etc.
- Replaced each `\csuse` with `\@nameuse` for improved error detection.
- Additional internal print/HTML macro selection improvements.
- Fix: `\printindex` finishes pending `\index` writes first.
- Fixes for memoir: `makeidx`, `ccaption`, multiple indexes, `\specialindex`.
- Fixes for komascript: Indexing improvements.
- Added `imakeidx`, `index`, `repeatindex`, `splitidx`.
- Added `attachfile`, `attachfile2`, `intopdf`, `pdfpages`, `pdfx`.
- Added cases.
- Tested to work as-is: `notes2bib`, `hvinde`.

v0.57: *algorithm2e*, float styles, tabular packages, internal improvements.

MathJax
math macros

dynamic math

⚠ new name

- Added support for MathJax equations with `\footnote`, `\footnotemark`.
- Added `\StartDefiningMath` and `\StopDefiningMath` for use when defining macros in the preamble which contain `$`. See section 8.7.7.
- Added `\inlinemathother` and `\inlinemathnormal` to delimit math expressions which depend on a variable condition such as a counter. Such expressions will not be hashed for reuse, and will be converted to svg math images even when MathJax is enabled. See section 8.7.8.
- Renamed `\EndDefiningTabulars` to `\StopDefiningTabulars`.

lateximage alt tags

- Improved localization for lateximage HTML alt tags. For svg math images, the alt tag under some conditions will be set to `\MathImageAltText`, which defaults to `math image`. For packages, the alt tag is set using the package name followed by `\PackageDiagramAltText`, which defaults to `diagram`. Ex:

`(-xy- diagram)`

See section 7.6.

misc. fixes

- Fix: Improved print/HTML macro selection.

- Fix: `\href` text catcodes.

- Fix: `\subref` text.

packages

- Fixes: Colored `\rule` and `\boxframe`.

- float, rotfloating: Adds support for float styles ruled and boxed.

- float: Fix: Do not create `\l@<type>` until `\listof` is used.

- marginnote: Fix: Long optional argument.

- ellipsis: Adds `\midwordellipsis`.

- breakurl: Fix for text catcodes.

- Added `algorithm2e`, `register`, `ltablex`, `xltabular`, `xellipsis`, `trimclip`, `errata`, `vowel`, `xpiano`.

- Prevents `glossary`.

- Tested to work as-is with `gauss`, `phonrule`, `piano`, `Slunits`, `tikzcodeblocks`.

v0.56: Shell escape, tabular packages.

lwarpmk

- Added

`lwarpmk pdftosvg <list-of-PDF-files>`

to quickly convert a document's PDF images to SVG, for use with HTML. See section 8.8.

- Added support for `--shell-escape`. See section 7.3.

tabular

- Added support for `array w` and `W` columns.

- Fix: `\multicolumn` parameter handling.

- Added support for double `\hlines`, `\midrules`, and vertical rules.

- Added support for `arydshln` dashed lines with HTML `tabular`, but reverts to plain rules for `lateximage` and `svg math array`.

misc. fixes

- Fix: `\thinspace`.

- Fix: `paralist` compact environments.

packages

- Added `parnotes`, `quoting`, `lua-check-hyphen`, `tocenter`, `underscore`.

- Added `bibunits`.

- Tested to work as-is with `babelbib`, `bodegraph`, `fast-diagram`, `nicematrix`, `structmech`.

v0.55: Various fixes.

misc fixes

- Fix: Extraneous space in file links, which also prevented *Calibre* EPUB conversions.
- Fix: Float optional argument regression.
- Fix: \ForceHTMLTOC with \phantomsection.
- Fix: Overfull boxes in lateximages.
- Fix: QED symbols in lateximage.

packages

- koma-script: Fix: Figure with \centering, etc.
- Added clrdblpg.

v0.54: Float \centering, improved image checks.

⚠ Reset the configuration

- Due to changes in *lwarpmk*, **recompile any existing project a single time** using **pdf_latex filename.tex** or similar, after which *lwarpmk* may then be used with the new configuration files.

lwarpmk

- *lwarpmk* limages checks for the presence of the HTML version of the document and valid image references before attempting to create the lateximages.
- *lwarpmk*: Improved error message if configuration file does not exist.

BibTeX

- Added documentation for avoiding error with BibTeX and \etalchar. See section 8.6.9.

polyglossia

- Added documentation regarding polyglossia. See section 8.15.4.

macros in section names

- Added documentation regarding the use of macros in section names. See section 8.1.

document encoding

⚠ New and revised encoding options

- Renamed and added package options:

Old Package Option	New Package Option
xdyFilename	xindyStyle
IndexLanguage	xindyLanguage
–	xindyCodepage
–	pdftotextEnc

Use these options along with inputenc or inputenx to process documents in an encoding other than UTF-8. See section 7.4.

floats with \centering, etc.

- Floats now honor \centering, \raggedright, \raggedleft, and their ragged2e equivalents, when placed directly after:

```
\begin{floattype}
\centering
```

misc. fixes

- tikz: \pgfpicture, fit, align, font.
- ragged2e: \centering etc.
- hyperref: \hypertarget was creating duplicate of \label.
- hyperref: Active chars inside \hyperref, \hyperlink.
- hyperref: \ref inside \hyperlink caused a nested HTML link.
- glossaries: Fix when not using babel or polyglossia.



packages

- `textcomp`: `\textperthousand`.
- \LaTeX core verse environment: line spacing.
- Removed `\citetitle`, adjusted `\attribution`.
- `memoir`: Minor update for v3.7g.
- Added `inputenx`, `bibunits`, `chnpage`, `forest`, `magaz`, `gridset`.
- Prevents loading `ae`, `aecc`, `t1enc`, and `wasysym`.

v0.53: Improved image checks.

lwarpmk

- *lwarpmk*: Added a warning about corrupted images due to the need to recompile the document one more time.
- *lwarpmk*: Added the `lwarpmk cleanimages` command.
- Added documentation for `lwarpmk cleanimages` and `lwarpmk pdftohtml`.

v0.52: Improved footnotes, svg math.

documentation

- Improved install instructions regarding `lwarp_baseline_marker.png`.
- Added documentation regarding footnotes in section headings, and footnotes with `\VerbatimFootnotes` from `fancybox`, `fancyvrb`. See section 8.5.4.
- Added documentation regarding font selection when using \XeLaTeX or \LuaLaTeX with `fontspec` and traditional font packages. See section 7.4.

SVG math

- Fix: Limit the number of background tasks when generating `lateximages`.
- Added user-adjustable svg math font scaling. See section 81.3.
- Added warnings if `lwarp_baseline_marker.png` is not present, or if `graphicx` or `graphics` is not loaded.
- Improved `\ensuremath` hashing expansion.
- Fix: `equation*` with `split`.
- `tabbing` now works inside a `lateximage`. Use for math in `tabbing`.

MathJax

- Fix: MathJax script was not executing in some conditions.
- Added `\CustomizeMathJax` to add custom functions. See section 8.7.

footnotes

- Fix: Footnote numbering when using `HTMLDebugComments`.
- Fix: Footnote paragraph tags.
- Fix: `FootnoteDepth` defaults to `\subsubsection`.

misc. fixes

- Fix: `\kill` in a `lateximage`.
- Fix: `\FileDepth`, misc. others, when input encoding is not `utf8`.
- Fix: `\texorpdfstring` in a section name.

packages

- `hyperref` emulation: Fix for `#`, `%`, `&`, `~`, `_` characters in URLs.
- `fancybox`, `fancyvrb`: Initial support for `\VerbatimFootnotes`.
- `nicefrac`: Added with fix for `\ensuremath`.
- `graphicx`: Fix for option defaults. Added v1.1a/b options.
- `endfloat`: Updated for v2.6.
- `url`: Fixes for active characters.

v0.51: Improved svg math, added numerous chemistry packages.

documentation

- Docs: Added **Things to avoid**.
- Docs: Added to **Converting an existing document**.
- Docs: Multiple authors and affiliations with custom classes. See section **8.6.1**.
- Docs: tikz with matrices. See section **8.8.1**.

SVG math

- Improved svg math baseline.
- Improved svg math font and color.
- Faster svg math rendering.
- Improved support for display math containing complicated math objects, such as tikz-cd. See section **8.7.9**.
- Fix: \addcontentsline inside svg math.
- Fix: SVG math containing an embedded lateximage.

MathJax

misc. fixes

- MathJax now handles \ensuremath in expressions.
- Fix: Added alignat environment.
- Fix: afterpackage no longer required, which conflicted with scrfile.
- Fix: titling \thanks mark.
- Fix: fancybox improvements.
- Fix: tikz \tikz macro. (Previously only the tikzpicture environment worked.)
- Fix: tikz with optional argument.

packages

- Added mhchem, chemfig, chemformula, chemmacros, chemnum, chemgreek, epstopdf-base, grid, ltxgrid.

2 Introduction

The `lwarp` project aims to allow a rich \LaTeX document to be converted to a reasonable HTML5 interpretation, with only minor intervention on the user's part. No attempt has been made to force \LaTeX to provide for every HTML-related possibility, and HTML cannot exactly render every possible \LaTeX concept. Where compromise is necessary, it is desirable to allow the print output to remain typographically rich, and compromise only in the HTML conversion.

Several “modern” features of HTML5, CSS3, and SVG are employed to allow a fairly feature-rich document without relying on the use of JAVASCRIPT. Limited testing on older browsers shows that these new features degrade gracefully.

`lwarp` is a native \LaTeX package, and operates by either patching or emulating various functions. Source-level compatibility is a major goal, but occasional user intervention is required in certain cases.

As a package running directly in \LaTeX , `lwarp` has some advantages over other methods of HTML conversion. \TeX itself is still used, allowing a wider range of \TeX trickery to be understood. Lua expressions are still available with Lua \TeX . Entire categories of \LaTeX packages work as-is when used with `lwarp`: definitions, file handling, utilities, internal data structures and calculations, specialized math-mode typesetting for various fields of science and engineering, and anything generating plain-text output. Blocks of PDF output may be automatically converted to SVG images while using the same font and spacing as the original print document, directly supporting `Tikz` and `picture`. Numerous packages are easily adapted for HTML versions, either by loading and patching the originals, or by creating nullified or emulated replacements, and all without resorting to external programming. As a result, several hundred packages have already been adapted (table 2), and an uncounted number more work as-is.

Packages have been selected according to several criteria: perceived importance, popularity lists, recent CTAN updates, CTAN topics, mention in other packages, support by other HTML conversion methods, and from sample documents taken from public archives. These include some “obsolete” packages as well.¹

Assistance is also provided for modifying the HTML output to suit the creation of EPUB documents, and for modifying the HTML output to ease import into a word processor.

`pdflatex`, `xelatex`, or `lualatex` may be used, allowing `lwarp` to process the usual image formats. While generating HTML output, SVG files are used in place of PDF. Other formats such as PNG and JPG are used as-is.

¹An amazing number of decades-old packages are still in use today.

SVG images may be used for math, and are also used for `picture`, `Tikz`, and similar environments. The `svg` format has better browser and e-book support than `MathML` (as of this writing), while still allowing for high-quality display and printing of images (again, subject to potentially bug-ridden² browser support).

Furthermore, `svg` images allow math to be presented with the same precise formatting as in the print version. Math is accompanied by `<alt>` tags holding the `LATEX` source for the expression, allowing it to be copy/pasted into other documents.³ Custom `LATEX` macros may be used as-is in math expressions, since the math is evaluated entirely inside `LATEX`. An MD5 hash is used to combine multiple instances of the same inline math expression into a single image file, which then needs to be converted to `svg` only a single time.

The `MATHJAX` JavaScript display engine may be selected for math display instead of using `svg` images. Subject to browser support and Internet access, `MATHJAX` allows an `HTML` page to display math without relying on a large number of external image files.⁴ `lwarp` maintains `LATEX` control for cross-referencing and equation numbering, and attempts to force `MATHJAX` to tag equations accordingly.

A `texlua` program called *lwarpmk* is used to process either the print or `HTML` version of the document. A few external utility programs are used to finish the conversion from a `LATEX`-generated `PDF` file which happens to have `HTML5` tags, to a number of `HTML5` plain-text files and accompanying images.

`lwarp` automatically generates the extra files necessary for the `HTML` conversion, such as `css` and `.xdy` files, and configuration files for the utility *lwarpmk*. Also included is a parallel version of the user's source document, `<sourcename>-html.tex`, which selects `HTML` output and then inputs the user's own source. This process allows both the printed and `HTML` versions to co-exist side-by-side, each with their own auxiliary files.

When requesting packages during `HTML` conversion, `lwarp` first looks to see if it has its own modified version to use instead of the standard `LATEX` version. These `lwarp-packageName.sty` files contain code used to emulate or replace functions for `HTML` output.

²`FIREFOX` has had an on-again/off-again bug for quite some time regarding printing `svgs` at high resolution.

³There seems to be some debate as to whether `MathML` is actually an improvement over `LATEX` for sharing math. The author has no particular opinion on the matter, except to say that in this case `LATEX` is much easier to implement!

⁴One `svg` image file per math expression, except that duplicate inline math expressions are combined into a single file according to the MD5 hash function of its contents. A common scientific paper can easily include several thousand files, and in one case the MD5 hash cut the number of files in half and the rendering time by 30%.

2.1 Typesetting conventions

Font weight, family, and style are used to indicate various objects:

Table 1: Typesetting conventions

package	L ^A T _E X package.
<i>program</i>	Program's executable name.
option	Program or package option.
filename	File name in the operating system.
BRAND NAME	Proper name for a program, operating system, etc.
commands	Commands to be entered by the user.
code	Program code.
\macroname	L ^A T _E X macro.
environment	L ^A T _E X environment.
counter	L ^A T _E X counter.
boolean	L ^A T _E X boolean.
<element>	HTML element.
attribute	HTML attribute.
User Interface	A user-interface item.
ACRO	Acronym.

2.2 Supported packages and features

Table 2 lists some of the various L^AT_EX features and packages which may be used.

Package names are colored according to their support level:

name: Supported as-is.

name: Modified to work with HTML output, and perhaps also as print output in `svg` `math` or `lateximage` environments.

name: Emulated for HTML output.

name: Ignored for HTML output, but provides source-level compatibility.

MJ: Supported as-is for MATHJAX, subject to limitations.

MJ: Emulated for MATHJAX using custom macros, subject to limitations.

MJ: Ignored by MATHJAX, but may be used in the document source.

Table 2: L^AT_EX lwarp package — Supported features

Category	Status and supported features.
Engines:	DVI L ^A T _E X, pdfL ^A T _E X, X _Y L ^A T _E X, LuaL ^A T _E X, upL ^A T _E X
Compiling:	<i>latexmk</i> , <i>perltex</i> , <i>pythontex</i> , <i>make</i> , etc.
Classes:	article, book, report, scrartcl, scrbook, screprt, memoir, CJK-related as listed below.
Koma-script:	scrxextend , scrhack , scrlayer . Others as listed below.
Memoir:	memhfixc
Languages:	babel , polyglossia . cjkpunct , xeCJK .
Chinese:	C _T E _X , ctex , upzhkinsoku , xpinyin , zhlineskip , zhspacing .
Japanese:	upL ^A T _E X, LuaT _E X-ja, gentombow, lltjext , plarray , plarydshln , plautopatch , plex , plextarray , plextarydshln , plextcolorobl , plextdelarray , pxatbegshi , pxeveryshi , pxftnright , pxgentombow , pxjahyper , pxpdfpages , pxpgfrcs , pxpgfmark , tascmac , zxjatype . bxjsarticle and related, ltjsarticle and related, luatexja , luatexja-fontspec , ujarticle and related, utarticle and related.
Korean:	kotex , luatexko , xetexko .

lwarp Supported Functions — continued

Category	Status
Page layout:	2in1, 2up, a4, a4wide, a5comb, addlines, anysize, atbegshi , blowup, booklet, bophook, bounddvi, bxpapersize, canoniclayout, changelayout , changepage , chngpage, clrdblpg, continue, draftcopy, drafftfigure, draftwatermark, ebook, everyshi, fancyhdr , fancytabs, flippdf, fullminipage, fullpage, fwlw, geometry, gmeometric, grid, grid-system , gridset, layaureo, layout, layouts, leading, ltxgrid, nccfancyhdr, notespages, nowidow, pagegrid, pagesel, parallel , parcolumns , pdfcolparallel, pdfcolparcolumns, pdfcrypt, pdfprivacy, preview, ragged2e , returntogrid, rmpage, scrlayer-scrpage , scrpage2 , setspace , textarea, threadcol, thumb, thumbs, titleps, tocenter, turnthepage, twoup, typearea, underlin, vmargin, watermark, widows-and-orphans, zwpagelayout.
Sectioning:	Adds FileDepth for splitting the HTML output. Files may be numbered sequentially or named according to section name. Common short words and punctuation are removed from the file-names. anonchap , bsheaders, fncychap, hypbmsc , indentfirst , quotchap , section, sectionbreak , secdot , sectsty, titlesec, tocvsec2 .
Table of contents, figures, tables:	Supported, with hyperlinks. etoc, minitoc, multitoc, shorttoc , tableof , titletoc, tocbasic, tocbibind , tocdata , tocloft, tocstyle, tocvsec2 .
Title page:	\maketitle , titlepage, authblk , titling .
Front & back matter:	abstract , appendix .
Indexing:	makeindex , xindy , and xindex are supported, with hyperlinks. gindex , hindex , idxlayout , imakeidx , index , makeidx , repeatindex , splitidx , varindex , xindex .
Glossary:	gloss , glossaries and xindy , nomencl .
Bibliography:	babelbib , bibtopic , backref , biblatex , bibunits , chapterbib , cite , citeref , collref , drftcite , hypernat , jurabib , mcite , mciteplus , multibib , natbib , notes2bib , splitbib , showtags .
Cross-references:	bookmark , breakurl , cleveref , fancyref , hypdestopt , hyperref , perpage , prettyref , titleref , url , varioref , xcite , xr , xr-hyper , xurl .

lwarp Supported Functions — continued

Category	Status
Margin notes:	marginal, marginfit, marginfix, sclayer-notecolumn , versionotes .
Footnotes:	Adds FootnoteDepth to print footnotes at section breaks. MATHJAX emulation for \footnote, and also as marked in the following: bigfoot , dblfnote , endheads , endnotes ^{MJ} , fixfoot , fnbreak , fnpara , fnpos , footmisc , footnote , footnotebackref , footnoterange , footnpag , manyfoot , marginnote ^{MJ} , nccfoots ^{MJ} , pagenote ^{MJ} , parnotes ^{MJ} , pdfcolfoot , pfnote , sepfootnotes , sidenotes ^{MJ} , tablefootnote .
Math:	Converted to SVG images with HTML <alt> tags containing the L ^A T _E X source for the math expression. MATHJAX supported as an alternative. amsmath ^{MJ} : \mathcal{AMS} environments are supported. User-defined macros are available during conversion, due to native L ^A T _E X processing.
Theorems:	Native L ^A T _E X theorems, amsthm , nththeorem , shadethm , theorem , thmbox , thmtools .
Additional math:	Math fonts via SVG images, amscd , autobreak ^{MJ} , autonum , backnaur , bm ^{MJ} , braket ^{MJ} , breqn , cases , centernot ^{MJ} , colonequals ^{MJ} , decimal ^{MJ} , delarray , DotArrow ^{MJ} , dotlessi ^{MJ} , dotlessj ^{MJ} , extrarrows ^{MJ} , fouridx ^{MJ} , guass , icomma ^{MJ} , jkmath , leftidx ^{MJ} , mathcomp ^{MJ} , mathdots ^{MJ} , mathfixs ^{MJ} , mathpunctspace ^{MJ} , mathspec , mathtools ^{MJ} , mismath ^{MJ} , multiobjective ^{MJ} , nccmath ^{MJ} , nicematrix , noitcru1 ^{MJ} , pb-diagram , resizegather , rmathbr ^{MJ} , stackrel ^{MJ} , statex2 ^{MJ} , statmath ^{MJ} , subsupscripts ^{MJ} , textualicomma ^{MJ} , unicode-math ^{MJ} , witharrows ^{MJ} , xfakebold ^{MJ} , xy . Many others work as-is.
Display math with \displaymathother:	Complicated math objects in display math, such as tikz-cd , etc.
Units and fractions:	nicefrac ^{MJ} , Slunits ^{MJ} , siunitx ^{MJ} , units ^{MJ} , unitsdef , xfrac ^{MJ} .
Floats:	Appear where declared. capt-of , caption , cutwin , dblfloating , endfloat , fewerfloatpages , fix2col , flafter , float , floatflt , floatrow , fltrace , ftcap , hypcap , keyfloat , morefloats , multicap , newfloat , nonfloat , placeins , rotfloat , stfloats , subcaption , subfig , subfigure , subfloat , topcapt , trivfloat , wrapfig .

lwarp Supported Functions — continued

Category	Status
Tabular:	tabular environment, <code>array</code> ^{MJ} , <code>arydshln</code> ^{MJ} , <code>bigdelim</code> ^{MJ} , <code>bigstrut</code> ^{MJ} , <code>booktabs</code> ^{MJ} , <code>colortbl</code> , <code>ctable</code> , <code>diagbox</code> , <code>hhline</code> ^{MJ} , <code>longtable</code> , <code>ltablex</code> , <code>ltxtable</code> , <code>multirow</code> ^{MJ} , <code>supertabular</code> , <code>tabularx</code> , <code>tabulary</code> , <code>threeparttable</code> , <code>threeparttablex</code> , <code>widetable</code> , <code>xltabular</code> , <code>xtab</code> .
Graphics:	<code>graphics</code> and <code>graphicx</code> . <code>\includegraphics</code> supports width, height, origin, angle, and scale tags, and adds class. References to PDF files are changed to svg, other image types are accepted as well. <code>\rotatebox</code> and <code>\scalebox</code> are supported as well as HTML can handle. <code>rotating</code> is emulated but all objects are unrotated. <code>picture</code> , <code>tikz</code> , and <code>xy</code> are converted to an svg image. <code>asymptote</code> , <code>curves</code> , <code>datatool</code> , <code>eepic</code> , <code>epsfig</code> , <code>epstopdf</code> , <code>figsize</code> , <code>fitbox</code> , <code>grffile</code> , <code>luamplib</code> , <code>media9</code> , <code>movie15</code> , <code>multimedia</code> , <code>overpic</code> , <code>pict2e</code> , <code>psfrag</code> , <code>psfragx</code> , <code>pst-eps</code> , <code>pstool</code> , <code>pstricks</code> , <code>rviewport</code> , <code>svg</code> , <code>svg-extract</code> , <code>tikz-3dplot</code> .
xcolor:	Full package color names, any color models, and <code>mixing</code> . <code>\textcolor</code> , <code>\colorbox</code> , <code>\fcolorbox</code> . Enhanced for HTML compatibility.
Lists:	Standard L ^A T _E X environments, <code>enumerate</code> , <code>enumitem</code> , <code>eqlist</code> , <code>hang</code> , <code>listliketab</code> , <code>paralist</code> .
Environments:	Standard L ^A T _E X environments.
<code>minipage</code> , <code>\parbox</code> :	Some HTML5-imposed limitations. Nested minipages are supported. <code>eqparbox</code> , <code>minibox</code> , <code>pbox</code> , <code>shapepar</code> .
Quotations:	<code>copyrightbox</code> , <code>csquotes</code> , <code>epigraph</code> , <code>quoting</code> , <code>verse</code> .
Verbatim:	<code>fancyvrb</code> , <code>moreverb</code> , <code>shortvrb</code> , <code>verbatim</code> .
Frames:	<code>boxedminipage</code> , <code>boxedminipage2e</code> , <code>fancybox</code> , <code>fbox</code> ^{MJ} , <code>framed</code> , <code>mdframed</code> , <code>niceframe</code> , <code>shadow</code> , <code>tcolorbox</code> ^{MJ} , <code>vertbars</code> .
Multi-columns:	<code>adjmulticol</code> , <code>multicol</code> , <code>multicolrule</code> , <code>vwcol</code> .
Margins:	<code>fullwidth</code> , <code>hanging</code> , <code>midpage</code> .
Line numbering:	<code>fnlineno</code> , <code>lineno</code> .

lwarp Supported Functions — continued

Category	Status
Direct formatting:	<code>\emph</code> , <code>\textsuperscript</code> , <code>\textbf</code> , etc are supported. <code>\bfseries</code> , etc. are only supported in some cases. <code>cancel</code> ^{MJ} , <code>ellipsis</code> , <code>embrac</code> , <code>enparen</code> , <code>hyphenat</code> , <code>lettrine</code> , <code>lips</code> , <code>lua-check-hyphen</code> , <code>luacolor</code> , <code>magaz</code> , <code>nolbreaks</code> , <code>normalcolor</code> , <code>pdfcol</code> , <code>pdfcolmk</code> , <code>pdfrender</code> , <code>realscripts</code> , <code>relsize</code> ^{MJ} , <code>scalefnt</code> , <code>soul</code> , <code>soulpos</code> , <code>soulutf8</code> , <code>stackengine</code> , <code>textfit</code> , <code>thinsp</code> , <code>trimclip</code> , <code>truncate</code> , <code>ulem</code> , <code>umoline</code> , <code>underscore</code> , <code>uspace</code> , <code>xellipsis</code> .
Acronyms:	<code>acro</code> , <code>acronym</code> .
Ordinals:	<code>engord</code> , <code>fntcount</code> , <code>nth</code> .
Text ligatures:	Ligatures for symbols are supported. Ligatures for f, q, t are intentionally turned off because many simpler browsers do not display them correctly. Modern full-featured browsers re-create these ligatures on-the-fly.
Horizontal space:	HTML output for <code>thin-unbreakable</code> , <code>unbreakable</code> , <code>\enskip</code> , <code>\quad</code> , <code>\qqquad</code> , <code>\hspace</code> .
Rules:	<code>\rule</code> with width, height, raise, text color.
HTML reserved characters:	<code>\&</code> , <code>\textless</code> , and <code>\textgreater</code> are converted to HTML entities.
Fonts:	Used as-is. Appear in SVG math expressions or embedded image environments. <code>fontaxes</code> , <code>nfssect-cfr</code> , <code>slantsc</code> , <code>tabfigures</code> . Tested to work as-is: Special font macros in <code>cfr-lm</code> and others which use <code>nfssect-cfr</code> .
Symbols:	Native L ^A T _E X diacriticals, <code>academicons</code> , <code>amssymb</code> ^{MJ} , <code>bbding</code> , <code>chemgreek</code> , <code>dingbat</code> , <code>euro</code> , <code>eurosym</code> , <code>fontawesome</code> , <code>fontawesome5</code> , <code>gensymb</code> ^{MJ} , <code>latexsym</code> ^{MJ} , <code>marvosym</code> , <code>mathcomp</code> ^{MJ} , <code>metalogo</code> , <code>metalogox</code> , <code>pifont</code> , <code>textalpha</code> , <code>textcomp</code> , <code>textgreek</code> , <code>typicons</code> , <code>xunicode</code> .
Files:	<code>attachfile</code> , <code>attachfile2</code> , <code>hyperxmp</code> , <code>inputtrc</code> , <code>intopdf</code> , <code>pdfpages</code> , <code>pdfx</code> , <code>xmpincl</code> .

lwarp Supported Functions — continued

Category	Status
Science and engineering:	algorithm2e , algorithmicx , ar^{MJ} , askmaps , axodraw2 , bitpattern , blochsphere , bodegraph , bohr , bytefield , chemfig , chemformula , chemgreek , chemmacros , chemnum , circuitikz , econometrics^{MJ} , elements , engtlc^{MJ} , fast-diagram , ghsystem , hepnicenames , heppennames , karnaughmap , karnaugh-map , listings , listingsutf8 , linop , mhchem^{MJ} , pgfgantt , phfqit , physics^{MJ} , physunits^{MJ} , qcircuit , register , simpler-wick , slashed^{MJ} , steinmetz^{MJ} , structmech , struktex , tikz-karnaugh , tikzcodeblocks
Arts and humanities:	foreign , forest , lyluatex , musicography , nameauth , octave , phonrule , piano , schemata , semantic-markup , tikz-dependency , vowel , xpiano
Calendars:	termcal
Admonitions:	awesomebox , notes .
Editorial:	changebar , changelog , changes , easy-todo , easyReview , ed , errata , fixme , fixmetodonotes , pdfcomment^{MJ} , pdfmarginpar , todo , todonotes , tram , xexchangebar .
Accessibility:	accessibility^{MJ} , accsupp^{MJ} , axessibility^{MJ} , pdfcomment^{MJ} , tagpdf .
Package handling:	catoptions .
Debug:	chkfloat , cmdtrack , dprogress , lua-visual-debug , refcheck , srcltx , srctex , vpe , xbmks .
Working as-is:	Various utility, calculation, file, and text-only packages, such as calc , fileerr , somedefs , trace , xspace . Also, most math-only packages, including specialized typesetting for various fields of science and engineering.

3 Alternatives

Summarized below are several other ways to convert a \LaTeX or other document to HTML. Where an existing \LaTeX document is to be converted to HTML, `lwarp` may be a good choice. For new projects with a large number of documents, it may be worth investigating the alternatives before decided which path to take.

3.1 internet class

Cls `internet` The closest to `lwarp` in design principle is the `internet` class by Andrew Stacey—an interesting project which directly produces several versions of markdown, and also HTML and EPUB. <https://github.com/loopspace/latex-to-internet>

3.2 TeX4HT

Prog `TeX4ht` <http://tug.org/tex4ht/>

Prog `htlatex`

This system uses native \LaTeX processing to produce a DVI file containing special commands, and then uses additional post-processing for the HTML conversion by way of numerous configuration files. In some cases `lwarp` provides a better HTML conversion, and it supports a different set of packages. `TeX4ht` produces several other forms of output beyond HTML, including ODT and a direct path to EPUB, and is still being developed.

3.3 Translators

These systems use external programs to translate a subset of \LaTeX syntax into HTML. Search for each on CTAN (<http://ctan.org>).

Prog `Hevea` **H^Ev^Ea**: <http://hevea.inria.fr/> (not on CTAN)

Prog `TtH` **T_TH**: <http://hutchinson.belmont.ma.us/tth/>

Prog `GELLMU` **GELLMU**: <http://www.albany.edu/~hammond/gellmu/>

Prog `LaTeXML` **LaTeXML**: <http://dlmf.nist.gov/LaTeXML/>

Prog `Plastex` **PlasTeX**: <https://github.com/tiarno/plastex>

Prog `LaTeX2HTML` **LaTeX2HTML**: <http://www.latex2html.org/>
and <http://ctan.org/pkg/latex2html>.

Prog `TeX2page` **TeX2page**: <http://ds26gte.github.io/tex2page/index.html>

Finally, `GladTeX` may be used to directly insert \LaTeX math into HTML:

Prog `GladTeX` **GladTeX**: <http://humenda.github.io/GladTeX/>

3.4 AsciiDoc and AsciiDoctor

AsciiDoc is one of the most capable markup languages, providing enough features to produce the typical technical-writing document with cross-references, and it writes L^AT_EX and HTML.

Prog AsciiDoc **AsciiDoctor:** <http://asciidoctor.org/> (More active.)

Prog AsciiDoctor **AsciiDoc:** <http://asciidoc.org/> (The original project.)

3.4.1 ASCIIDOCTOR-L^AT_EX

The AsciiDoctor-LaTeX project is developing additional L^AT_EX-related features.

AsciiDoctor-Latex:

<http://www.noteshare.io/book/asciidoctor-latex-manual>

Prog AsciiDoctor-LaTeX <https://github.com/asciidoctor/asciidoctor-latex>

3.5 PANDOC

Prog Pandoc A markup system which also reads and writes L^AT_EX and HTML.

Pandoc: <http://pandoc.org/>

(Watch for improvements in cross-references to figures and tables.)

3.6 Word processors

Prog Word It should be noted that the popular word processors have advanced through the years
 Prog LibreOffice in their abilities to represent math with a L^AT_EX-ish input syntax, unicode math fonts,
 Prog OpenOffice and high-quality output, and also generate HTML with varying success. See recent
 developments in MICROSOFT[®] *Word*[®] and LIBREOFFICE[™] *Writer*.

3.7 Commercial systems

Prog Adobe Likewise, several professional systems exist whose abilities have been advancing
 Prog FrameMaker in the areas of typesetting, cross-referencing, and HTML generation. See ADOBE[®]
 Prog InDesign *FrameMaker*[®], ADOBE *InDesign*[®], and MADCAP *Flare*[™].

Prog Flare

Prog Madcap

3.8 Comparisons

AsciiDoc, Pandoc, and various other markup languages typically have a syntax which tries to be natural and human-readable, but the use of advanced features tends to

require many combinations of special characters, resulting in a complicated mess of syntax. By contrast, \LaTeX spells things out in readable words but takes longer to type, although integrated editors exist which can provide faster entry and a graphic user interface. For those functions which are covered by the typical markup language it is arguable that \LaTeX is comparably easy to learn, while \LaTeX provides many more advanced features where needed, along with a large number of pre-existing packages which provide solutions to numerous common tasks.

Text-based document-markup systems share some of the advantages of \LaTeX vs. a typical word processor. Documents formats are stable. The documents themselves are portable, work well with revision control, do not crash or become corrupted, and are easily generated under program control. Formatting commands are visible, cross-referencing is automatic, and editing is responsive. Search/replace with regular expressions provides a powerful tool for the manipulation of both document contents and structure. Markup systems and some commercial systems allow printed output through a \LaTeX back end, yielding high-quality results especially when the \LaTeX template is adjusted, but they lose the ability to use \LaTeX macros and other \LaTeX source-document features.

The effort required to customize the output of each markup system varies. For print output, \LaTeX configuration files are usually used. For HTML output, a CSS file will be available, but additional configuration may require editing some form of control file with a different syntax, such as XML. In the case of `lwarp`, CSS is used, and much HTML output is adjusted through the usual \LaTeX optional macro parameters, but further customization may require patching \LaTeX code.

The popular word processors and professional document systems each has a large base of after-market support including pre-designed styles and templates, and often include content-management systems for topic reuse.

4 Installation

Table 3 shows the tools which are used for the L^AT_EX to HTML conversion. In most cases, these will be available via the standard package-installation tools.

Detailed installation instructions follow.

Table 3: Required software programs

Provided by your L^AT_EX distribution:

From T_EXLive: <http://tug.org/texlive/>.

L^AT_EX: *pdflatex*, *xelatex*, or *lualatex*.

The lwarp package: This package.

The lwarpmk utility: Provided along with this package. This should be an operating-system executable in the same way that *pdflatex* or *latexmk* is. It is possible to have the lwarp package generate a local copy of *lwarpmk* called *lwarpmk.lua*. See table 4.

luatex: Used by the *lwarpmk* program to simplify and automate document generation.

xindy: The *xindy* program is used by lwarp to create indexes. On a MiK_TE_X system this may have to be acquired separately, but it is part of the regular installer as of mid 2015.

latexmk: Optionally used by *lwarpmk* to compile L^AT_EX code. On a MiK_TE_X system, *Perl* may need to be installed first.

pdfcrop: Used to pull images out of the L^AT_EX PDF.

POPPLER PDF utilities:

pdftotext: Used to convert PDF to text.

pdfseparate: Used to pull images out of the L^AT_EX PDF.

pdftocairo: Used to convert images to SVG.

These might be provided by your operating-system package manager, and MiK_TE_X provides *miktex-poppler-bin-** packages.

From POPPLER: poppler.freedesktop.org.

For MacOS[®], see <https://brew.sh/>, install *Homebrew*, then

Enter ⇒ **brew install poppler**

For WINDOWS, see MiK_TE_X *miktex-poppler-bin-**, or:

<https://sourceforge.net/projects/poppler-win32/> and:

<http://blog.alivate.com.au/poppler-windows/>

Perl:

This may be provided by your operating-system package manager, and may be required for some of the POPPLER PDF utilities.

strawberryperl.com (recommended), perl.org

Automatically downloaded from the internet as required:

MATHJAX: Optionally used to display math. From: mathjax.org

4.1 Installing the lwarp package

There are several ways to install **lwarp**. These are listed here with the preferred methods listed first:

Pre-installed: Try entering into a command line:

Enter \Rightarrow **kpsewhich lwarp.sty**

If a path to **lwarp.sty** is shown, then **lwarp** is already installed and you may skip to the next section.

TEX Live: If using a TEX Live distribution, try installing via *tlmgr*:

Enter \Rightarrow **tlmgr install lwarp**

MiKTeX:

1. For newer versions of MiKTeX, install or update **lwarp** using the *MiKTeX Console* program.
2. For older versions of MiKTeX, to install **lwarp** the first time, use the *MiKTeX Package Manager (Admin)*. To update **lwarp**, use *MiKTeX Update (Admin)*.
3. Either way, also update the package **miktex-misc**, which will install and update the *lwarpmk* executable.

Operating-system package: The operating-system package manager may already have **lwarp**, perhaps as part of a set of TEX-related packages.

CTAN TDS archive: **lwarp** may be downloaded from the Comprehensive TEX Archive:

1. See <http://ctan.org/pkg/lwarp> for the **lwarp** package.
2. Download the TDS archive: **lwarp.tds.zip**
3. Find the TEX local directory:

TEX Live:

Enter \Rightarrow **kpsewhich -var-value TEXMFLOCAL**

MiKTeX:

In the **Settings** window, **Roots** tab, look for a local TDS root.

This should be something like:

`/usr/local/texlive/texmf-local/`

4. Unpack the archive in the TDS local directory.
5. Renew the cache:

Enter \Rightarrow **mktextlsr**

— or —

Enter \Rightarrow **texhash**

Or, for WINDOWS MiKTeX, start the program called *MiKTeX Settings (Admin)* and click on the button called **Refresh FNDB**.

CTAN .dtx and .ins files: Another form of TEX package is **.dtx** and **.ins** source files. These files are used to create the documentation and **.sty** files.

1. See <http://ctan.org/pkg/lwarp> for the lwarp package.
2. Download the zip archive lwarp.zip into your own lwarp directory.
3. Unpack lwarp.zip.
4. Locate the contents lwarp.dtx and lwarp.ins
5. Create the .sty files:
Enter ⇒ **pdflatex lwarp.ins**
6. Create the documentation:

```
pdflatex lwarp.dtx (several times)
makeindex -s gglo.ist -o lwarp.gls lwarp.glo
makeindex -s gind.ist lwarp.idx
pdflatex lwarp.dtx (several times)
```

7. Copy the .sty files somewhere such as the T_EX Live local tree found in the previous CTAN TDS section, under the subdirectory:
`<texlocal>/tex/latex/local/lwarp`
8. Copy lwarp_baseline_marker.png and lwarp_baseline_marker.eps to the same place as the .sty files.
9. Copy the documentation lwarp.pdf to a source directory in the local tree, such as:
`<texlocal>/doc/local/lwarp`
10. Renew the cache:
 Enter ⇒ **mktextlsr**
 — or —
 Enter ⇒ **texhash**
 Or, for WINDOWS M_IK_TE_X, start the program called *MiKTeX Settings (Admin)* and click on the button called **Refresh FNDB**.
11. See section 4.2.1 to generate your local copy of *lwarpmk*.
12. Once the local version of lwarpmk.lua is installed, it may be made available system-wide as per section 4.2.

Project-local CTAN .dtx and .ins files: The .dtx and .ins files may be downloaded to a project directory, then compiled right there, alongside the document source files. The resultant *.sty and lwarpmk.lua files may be used as-is, so long as they are in the same directory as the document source. The files lwarp_baseline_marker.png and lwarp_baseline_marker.eps must also be copied as well. This approach is especially useful if you would like to temporarily test lwarp before deciding whether to permanently install it.

Just testing!

4.2 Installing the lwarpmk utility

(Note: If *lwarpmk* is not already installed, it is easiest to use a local copy instead of installing it system-wide. See section 4.2.1.)

After the lwarp package is installed, you may need to setup the *lwarpmk* utility:

1. At a command line, try executing **lwarpmk**. If the *lwarpmk* help message appears, then *lwarpmk* is already set up. If not, it is easiest to generate and use a local copy. See section 4.2.1.
2. For MiKTeX, try updating the miktex-misc package. This may install the *lwarpmk* executable for you.

Otherwise, continue with the following:

3. Locate the file `lwarpmk.lua`, which should be in the scripts directory of the TDS tree. On a T_EX Live or MiKTeX system you may use

Enter ⇒ **kpsewhich lwarpmk.lua**

(If the file is not found, you may also generate a local copy and use it instead. See section 4.2.1.)

4. Create *lwarpmk*:

Unix: Create a symbolic link and make it executable:

- (a) Locate the T_EX Live binaries:

Enter ⇒ **kpsewhich -var-value TEXMFROOT**

This will be something like:

`/usr/local/texlive/<year>`

The binaries are then located in the `bin/<arch>` directory under the root:

`/usr/local/texlive/<year>/bin/<architecture>/`

In this directory you will find programs such as *pdf_latex* and *makeindex*.

- (b) In the binaries directory, create a new symbolic link from the binaries directory to `lwarpmk.lua`:

Enter ⇒ **ln -s <pathtolwarpmk.lua> lwarpmk**

- (c) Make the link executable:

Enter ⇒ **chmod 0755 lwarpmk**

WINDOWS T_EX Live: Create a new `lwarpmk.exe` file:

- (a) Locate the T_EX Live binaries as shown above for UNIX.
- (b) In the binaries directory, make a *copy* of `runscript.exe` and call it `lwarpmk.exe`. This will call the copy of `lwarpmk.lua` which is in the scripts directory of the distribution.

WINDOWS MiKTeX: Create a new `lwarpmk.bat` file:

- (a) Locate the MiKTeX binaries. These will be in a directory such as:

`C:\Program Files\MiKTeX 2.9\miktex\bin\x64`

In this directory you will find programs such as `pdflatex.exe` and `makeindex.exe`.

- (b) Create a new file named `lwarpmk.bat` containing:

`texlua "C:\Program Files\MiKTeX 2.9\scripts\lwarp\lwarp.texlua" %*`

This will call the copy of `lwarpmk.lua` which is in the scripts directory of the distribution.

4.2.1 Using a local copy of *lwarpmk*

It is also possible to use a local version of *lwarpmk*:

1. When compiling the tutorial in section 5, use the `lwarpmk` option for the `lwarp` package:

```
\usepackage[lwarpmk]{lwarp}
```

2. When the tutorial is compiled with *pdf_latex*, the file `lwarpmk.lua` will be generated along with the other configuration files.
3. `lwarpmk.lua` may be used for this project:

Unix:

- (a) Make `lwarpmk.lua` executable:

```
Enter ⇒ chmod 0755 lwarpmk.lua
```

- (b) Compile documents with

```
Enter ⇒ ./lwarpmk.lua html
```

```
Enter ⇒ ./lwarpmk.lua print
```

etc.

- (c) It may be useful to rename or link to a version without the `.lua` suffix.

WINDOWS:

Compile documents with either of the following, depending on which command shell is being used:

```
Enter ⇒ texlua lwarpmk.lua html
```

```
Enter ⇒ texlua lwarpmk.lua print
```

etc.

Or:

```
Enter ⇒ lwarpmk html
```

```
Enter ⇒ lwarpmk print
```

etc.

4.3 Installing additional utilities

To test for the existence of the additional utilities:

Enter the following in a command line. If each programs' version is displayed, then that utility is already installed. See table 3 on page 73.

```
Enter ⇒ luatex --version
```

```
Enter ⇒ xindy --version
```

```
Enter ⇒ latexmk --version
```

```
Enter ⇒ perl --version
```

```
Enter ⇒ pdftocrop --version
```

```
Enter ⇒ pdftotext -v
```

```
Enter ⇒ pdfseparate --version
```

```
Enter ⇒ pdftocairo -v
```

To install *xindy*, *latexmk*, and *pdfcrop*:

The T_EX utilities *xindy*, *latexmk*, and *pdfcrop* may be installed in *TeXLive* with *tlmgr*, installed by *MikTeX*, provided by your operating system's package manager, or downloaded from the *CTAN* archive:

<http://ctan.org/pkg/xindy>

<http://ctan.org/pkg/latexmk>

<http://ctan.org/pkg/pdfcrop>

To install the POPPLER utilities to a UNIX/LINUX system:

Prog [requirement] pdftotext

Prog [requirement] pdfseparate

Prog [requirement] pdftocairo

The tools from the POPPLER project should be provided by your operating system's package manager.

To install the POPPLER utilities to a MacOS machine:

1. Install *Homebrew* from <https://brew.sh/>:

```
/usr/bin/ruby -e "$(curl -fsSL https://raw.githubusercontent.com/Homebrew/install/master/install)"
```

2. Install the POPPLER utilities:

Enter ⇒ **brew install poppler**

To install the POPPLER utilities to a WINDOWS machine:

If using MikTeX, install a miktex-poppler-bin-* package. Otherwise:

1. See table 3 on page 73.
2. Download and extract the POPPLER utilities *pdftotext*, *pdfseparate*, and *pdfseparate* to a directory, such as Poppler.
3. In the **Start** window, type "Path" to search for results related to Path. Or, open the control panel and search for "Path".
4. Choose **Edit the system environment variables** in the control panel.
5. Choose the **Environment Variables** button.
6. Choose the **Path** variable, then the **Edit** button.
7. Choose the **New** button to make an additional entry.
8. Enter the bin directory of the POPPLER utilities, such as:

C:\Users\<myname>\Desktop\Poppler\poppler-0.5_x86\poppler-0.5\bin

Be sure to include \bin.

9. Click **Ok** when done.

Prog [requirement] perl

To install PERL to a WINDOWS machine:

1. Download and install a version of PERL, such as STRAWBERRY PERL, to a directory without a space in its name, such as C:\Strawberry.
 2. Edit the **Path** as seen above for the POPPLER utilities.
 3. Enter the bin directory of the *perl* utility, such as:
- C:\Strawberry\perl\bin
- Be sure to include \bin.
4. Click **Ok** when done.

Any utilities installed by hand must be added to the PATH.

5 Tutorial

This section shows an example of how to create an lwarp document.

Need help?

See the [General Index](#) for “how-to”, and the [Troubleshooting Index](#) if something doesn't work. A [Troubleshooting](#) section is also available. The [Index of Objects](#) contains automated entries for each package, macro, environment, counter, boolean, and other objects; individually and also sorted by category.

5.1 Starting a new project

1. Create a new project directory called tutorial.

File tutorial.tex

2. Inside the tutorial directory, create a new file called tutorial.tex. This may be done several ways:

Copy from the documentation PDF:

A listing is in fig. 1, which may be copied/pasted from the figure directly into your own editor, depending on the quality of the PDF viewer and editor, or:

Copy from the lwarp documentation directory:

Another copy may be found by entering into a command line:

Enter ⇒ **texdoc -l lwarp_tutorial.txt**

This should be in the doc/latex/lwarp/ directory along with this PDF documentation. Copy lwarp_tutorial.txt directly into your tutorial directory, renamed as tutorial.tex.

File lwarp_tutorial.txt

⚠ Note: .txt suffix!

⚠ Bad formatting!

When using WINDOWS, use an editor other than NOTEPAD, since NOTEPAD does not accept the end-of-line from a UNIX text file.

3. Compile the project:

Enter ⇒ **pdflatex tutorial.tex**

(several times)

(*xelatex* or *lualatex* may be used as well. lwarp also supports DVI *latex* for use with .eps images.)

4. View the resulting tutorial.pdf with a PDF viewer.

A number of new files are created when tutorial.tex is compiled, as shown in table 4. These files are created by the lwarp package.

(Two of the new files are configuration files for the helper program *lwarpmk*. Whenever a print version of the document is created, the configuration files for *lwarpmk* are updated to record the operating system, L^AT_EX engine (*latex*, *pdflatex*, *xelatex*, or *lualatex*), the filenames of the source code and HTML output, and whether the additional helper program *latexmk* will be used to compile the document.)

Figure 1: tutorial.tex listing

Note: There are two pages!

```
% Save this as tutorial.tex for the lwarp package tutorial.

\documentclass{book}

\usepackage{iftex}

% --- LOAD FONT SELECTION AND ENCODING BEFORE LOADING LWARP ---

\ifPDFTeX
\usepackage{lmodern}           % pdflatex or dvi latex
\usepackage[T1]{fontenc}
\usepackage[utf8]{inputenc}
\else
\usepackage{fontspec}         % XeLaTeX or LuaLaTeX
\fi

% --- LWARP IS LOADED NEXT ---
\usepackage[
%   HomeHTMLFilename=index,      % Filename of the homepage.
%   HTMLFilename={node-},        % Filename prefix of other pages.
%   IndexLanguage=english,       % Language for xindy index, glossary.
%   latexmk,                     % Use latexmk to compile.
%   OSWindows,                   % Force Windows. (Usually automatic.)
%   mathjax,                     % Use MathJax to display math.
]{lwarp}
% \boolfalse{FileSectionNames} % If false, numbers the files.

% --- LOAD PDFLATEX MATH FONTS HERE ---

% --- OTHER PACKAGES ARE LOADED AFTER LWARP ---
\usepackage{makeidx} \makeindex
\usepackage{xcolor}      % (Demonstration purposes only.)
\usepackage{hyperref,cleveref} % LOAD THESE LAST!

% --- LATEX AND HTML CUSTOMIZATION ---
\title{The Lwarp Tutorial}
\author{Some Author}
\setcounter{tocdepth}{2}      % Include subsections in the \TOC.
\setcounter{secnumdepth}{2}   % Number down to subsections.
\setcounter{FileDepth}{1}     % Split \HTML\ files at sections
\booltrue{CombineHigherDepths} % Combine parts/chapters/sections
\setcounter{SideTOCDepth}{1}   % Include subsections in the side\TOC
\HTMLTitle{Webpage Title}     % Overrides \title for the web page.
\HTMLAuthor{Some Author}      % Sets the HTML meta author tag.
\HTMLLanguage{en-US}          % Sets the HTML meta language.
\HTMLDescription{A description.} % Sets the HTML meta description.
\HTMLFirstPageTop{Name and \fbox{HOMEPAGE LOGO}}
\HTMLPageTop{\fbox{LOGO}}
\HTMLPageBottom{Contact Information and Copyright}
\CSSFilename{lwarp_sagebrush.css}
```

```

\begin{document}

\maketitle % Or titlepage/titlingpage environment.

% An article abstract would go here.

\tableofcontents % MUST BE BEFORE THE FIRST SECTION BREAK!
\listoffigures

\chapter{First chapter}

\section{A section}

This is some text which is indexed.\index{Some text.}

\subsection{A subsection}

See \cref{fig:withtext}.

\begin{figure}\begin{center}
\fbbox{\textcolor{blue!50!green}{Text in a figure.}}
\caption{A figure with text\label{fig:withtext}}
\end{center}\end{figure}

\section{Some math}

Inline math:  $r = r_0 + vt - \frac{1}{2}at^2$ 
followed by display math:
\begin{equation}
a^2 + b^2 = c^2
\end{equation}


\begin{warpprint} % For print output ...
\cleardoublepage % ... a common method to place index entry into TOC.
\phantomsection
\addcontentsline{toc}{chapter}{\indexname}
\end{warpprint}
\ForceHTMLPage % HTML index will be on its own page.
\ForceHTMLTOC % HTML index will have its own toc entry.
\printindex

\end{document}

```

Table 4: Configuration files created by print version

tutorial.pdf:	The PDF output from L ^A T _E X. The print version of the document.
tutorial_html.tex:	A small .tex file used to create a parallel HTML version of the document, which co-exists with usual the PDF version, and which will have its own auxiliary files. In this way, both PDF and HTML documents may co-exist side-by-side.
Auxiliary files:	The usual L ^A T _E X files .aux, .log, .out, .toc, .lof, .idx. When an HTML version of the document is created, _html versions of the auxiliary files will also be generated.
lwarpmk.conf:	A configuration file for <i>lwarpmk</i> , which is used to automate the compilation of PDF or HTML versions of the document.
tutorial.lwarpmkconf:	Another configuration file used by <i>lwarpmk</i> , which is only useful if you wish to have several projects residing in the same directory.
.css files:	lwarp.css, lwarp_formal.css, lwarp_sagebrush.css These files are standard for lwarp, and are not meant to be modified by the user.
sample_project.css:	An example of a user-customized css file, which may be used for project-specific changes to the lwarp defaults.
lwarp.ist:	Used by lwarp while creating an index using <i>makeindex</i> . This file should not be modified by the user. A custom file may be used instead, if necessary.
lwarp.xdy:	Used by lwarp while creating an index using <i>xindy</i> . This file should not be modified by the user. A custom file may be used instead, if necessary.
lwarp_one_limage.txt:	For WINDOWS only. Used to process svg images in the background. Copied to lwarp_one_limage.cmd when images are generated.
lwarp_mathjax.txt:	Inserted into the HTML files when MATHJAX is used to display math. Do not modify, see \MathJaxFilename instead.
comment_*.cut:	Temporary files used by lwarp to conditionally process blocks of text. These files may be ignored.

When the *lwarpmk* option is given to the *lwarp* package:

lwarpmk.lua: A local copy of the *lwarpmk* utility.

On UNIX-related operating systems this file must be made executable:

```
chmod u+x lwarpmk.lua
```

This may be useful to have to archive with a project for future use.

5.2 Compiling the print version with *lwarpmk*

The *lwarpmk* utility program is used to compile either the printed or the HTML version of the document.

`lwarpmk print` is used to recompile a printed version of the document.

1. Re-compile the print version:

Enter ⇒ **lwarpmk print**

lwarpmk prints an introduction then checks to see if the document must be recompiled. If it seems that the files are up-to-date, then *lwarpmk* informs you of that fact and then exits.

2. Make a small change in the original document, such as adding a space character.
3. Recompile again.

Enter ⇒ **lwarpmk print**

The document is recompiled when a change is seen in the source. Several compilations may be necessary to resolve cross-references.

4. Force a recompile to occur.

Enter ⇒ **lwarpmk again**

Enter ⇒ **lwarpmk print**

`lwarpmk again` updates the date code for the file, triggering a recompile the next time the document is made.⁵

5. Process the index.^{6 7}

Enter ⇒ **lwarpmk printindex**

6. Recompile again to include the index.

Enter ⇒ **lwarpmk print**

7. To force a single recompile when needed, even if no changes were detected:

Enter ⇒ **lwarpmk print1**

Note that the HTML customization commands are ignored while making the print version.

⁵Although, when using the utility *latexmk* (introduced later), the changed date is ignored and an actual change in contents must occur to cause a recompile.

⁶The command **lwarpmk printglossary** is also available to process a glossary produced with the *glossaries* package. See section 8.6.12.

⁷Also see section 8.6.15 for index options.

5.3 Compiling the HTML version with *lwarpmk*

`lwarpmk html` is used to recompile an HTML version of the document.

1. Compile the HTML version:

Enter \Rightarrow **lwarpmk html**

- (a) *lwarpmk* uses \LaTeX to process `tutorial_html.tex` to create `tutorial_html.pdf`.
- (b) *pdftotext* is then used to convert to the file `tutorial_html.html`. This file is a plain-text file containing HTML tags and content for the entire document.
- (c) *lwarpmk* manually splits `tutorial_html.html` into individual HTML files according to the HTML settings. For this tutorial, the result is `tutorial.html` (the home page), along with `First-chapter.html`⁸, `Some-math.html`, and the document's index in `_Index.html`.⁹

2. View the HTML page in a web browser.

Open the file `tutorial.html` in a web browser.

math

Note that math is still displayed as its alt tag, which is the plain-text \LaTeX source, until the images of the math expressions have been generated. Math may be displayed as SVG images or by a MATHJAX script, as seen in sections 5.4 and 5.5.

3. Force a recompile:

Enter \Rightarrow **lwarpmk again**

Enter \Rightarrow **lwarpmk html**

Enter \Rightarrow **lwarpmk print**

4. Process the HTML index and recompile:¹⁰¹¹

Enter \Rightarrow **lwarpmk htmlindex**

Enter \Rightarrow **lwarpmk html**

`_Index.html` is updated for the new \LaTeX index.

5. Reload the web page to see the added index.
6. To force a single recompile when needed, even if no changes were detected:

Enter \Rightarrow **lwarpmk html1**

⁸`First-chapter.html` also contains the first section, even though the second section is its own HTML page. This behavior is controlled by the boolean `CombineHigherDepths`.

⁹`index.html` is commonly used as a homepage, so the document index is in `_Index.html`.

¹⁰The command **lwarpmk htmlglossary** is also available to process a glossary produced with the `glossaries` package. See section 8.6.12.

¹¹Also see section 8.6.15 for index options.

5.4 Generating the svg images

math as svg images By default `lwarp` represents math as svg images, with the \LaTeX source included in `alt` attributes. In this way, the math is displayed as it was drawn by \LaTeX , and the \LaTeX source may be copied and pasted into other documents.


picture and Tikz `lwarp` uses the same mechanism for `picture` and `Tikz` environments.

1. Create the svg images:


Enter \Rightarrow `lwarpmk limages`

Enter \Rightarrow `lwarpmk html`

2. Move to the tutorial's HTML math page and reload the document in the browser.
3. The math images are displayed using the same font and formatting as the printed version.
4. Copy/paste a math expression into a text editor to see the \LaTeX source.

 **adding/removing** When a math expression, picture, or `Tikz` environment is added or removed, the svg images must be re-created by entering `lwarpmk limages` to maintain the proper image-file associations. Inline svg math may be hashed and thus not need to be recreated, but display math and objects such as `Tikz` may move to new image numbers when the document is changed.


recompile first Before attempting to create the svg image files, `lwarpmk` verifies that the HTML version of the document exists and has correct internal image references.¹² If it is necessary to recompile the document's HTML version one more time, `lwarpmk` usually will inform the user with an error message, but there are some conditions which cannot be detected, so the user should watch for the \LaTeX recompile warnings.

 **HTML instead of images** If HTML appears where an svg image should be, recompile the document one more time to get the page numbers back in sync, then remake the images one more time.

 **page counter** Incorrect svg images will also occur if the document changes the page counter:

```
\setcounter{page}{<value>}
```

The page counter must *not* be adjusted by the user.

 **Lots of files!** Expressing math as svg images has the advantage of representing the math exactly as \LaTeX would, but has the disadvantage of requiring an individual file for each math expression. For inline math, and some other objects, `lwarp` uses an MD5 hash on its \LaTeX source to combine multiple instances of identical inline expressions into a single image file, but display math and other environments such as `picture` and `Tikz` require one image file each. For a document with a large amount of math, see section 5.5 to use `MATHJAX` instead.

¹²This becomes important when dealing with a document containing thousands of images.

5.5 Using MATHJAX for math

math with MATHJAX Math may also be represented using the MATHJAX JAVASCRIPT project.


1. In the tutorial's source code, uncomment the mathjax package option for lwarp:

```
mathjax, % Use MathJax to display math.
```

2. Recompile

```
Enter ⇒ lwarpmk html
```

3. Reload the math page.

 **MATHJAX requirements** MATHJAX requires web access unless a local copy of MATHJAX is available, and it also requires that JAVASCRIPT is enabled for the web page. The math is rendered by MATHJAX. Right-click on math to see several options for rendering, and for copying the L^AT_EX source.

While using MATHJAX has many advantages, it may not be able to represent complex expressions or spacing adjustments as well as L^AT_EX, and it may not support some math-related packages.

5.6 Changing the css style

For a formal css style, add to the preamble:

```
\usepackage{lwarp}  
...  
\CSSFilename{lwarp_formal.css}  
...  
\begin{document}
```

For a modern css style, `lwarp_sagebrush.css` is also provided:

```
\CSSFilename{lwarp_sagebrush.css}
```

See section 7.7 for more information about modifying the css styling of the document.

5.7 Customizing the HTML output

A number of settings may be made to control the HTML output, including filename generation, automatic compilation, math output, document splitting, meta data, and page headers and footers.

See section 7.6 for more information.

5.8 Using *latexmk*

latexmk is a L^AT_EX utility used to monitor changes in source files and recompile as needed.

1. In the tutorial's source code uncomment the *latexmk* option for the *lwarp* package:

```
latexmk, % Use latexmk to compile.
```

2. Recompile the printed version of the document.

```
Enter ⇒ lwarpmk print
```

lwarp updates its own configuration files (*lwarpmk.conf* and *tutorial.lwarpmkconf*) whenever the printed version of the document is compiled. These configuration files remember that *lwarpmk* should use *latexmk* to compile the document.

3. Recompile the document.

```
Enter ⇒ lwarpmk print
```

and/or

```
Enter ⇒ lwarpmk html
```

Changes are detected by comparing checksums rather than modification times, so *lwarpmk* again will not trigger a recompile, but *latexmk* has a much better awareness of changes than the *lwarpmk* utility does and it is likely to correctly know when to recompile. A recompile may be forced by making a small change to the source, and a single recompile may be forced with:

```
Enter ⇒ lwarpmk print1
```

and/or

```
Enter ⇒ lwarpmk html1
```

forced single-pass recompile

5.9 Using Xe_ΛTeX or Lua_ΛTeX

Xe_ΛTeX or Lua_ΛTeX may be used instead of _ΛTeX.

1. Remove the auxiliary files for the project:

Enter ⇒ **lwarpmk cleanall**

2. Use *xelatex* or *lualatex* to compile the printed version a single time.

Enter ⇒ **xelatex tutorial.tex**

— *or* —

Enter ⇒ **lualatex tutorial.tex**

When the compile occurs, the configuration files for *lwarpmk* are modified to remember which TeX engine was used. Xe_ΛTeX or Lua_ΛTeX will be used for future runs of *lwarpmk*.

3. To recompile the document:

Enter ⇒ **lwarpmk print**

-and-

Enter ⇒ **lwarpmk html**

4. Also remember to update the indexes and recompile again:

Enter ⇒ **lwarpmk htmlindex**

Enter ⇒ **lwarpmk html**

Enter ⇒ **lwarpmk printindex**

Enter ⇒ **lwarpmk print**

5.10 Using DVI _ΛTeX


Traditional DVI _ΛTeX may also be used along with .eps image files. An svg version of each image must also be provided. *lwarpmk* may be used to convert image formats.

To convert EPS files to PDF:

Enter ⇒ **lwarpmk epstopdf *.eps** (or a list of files)

To convert PDF files to SVG:

Enter ⇒ **lwarpmk pdftosvg *.pdf** (or a list of files)

 **bitmapped fonts** See section 7.4 regarding font selection to avoid the use of bitmapped fonts.

5.11 Using a glossary

lwarp supports the gloss and glossaries packages, although this tutorial does not supply an example.

5.11.1 gloss package

See section [8.6.11](#).

5.11.2 glossaries package

To process the glossary for the print version:

```
Enter ⇒ lwarpmk printglossary
```



(If **makeglossaries** is not found, see section [8.6.12](#).)

To process the glossary for the HTML version:

```
Enter ⇒ lwarpmk htmlglossary
```

In each case, the document will have to be recompiled afterwards:

```
Enter ⇒ lwarpmk html1
```

```
Enter ⇒ lwarpmk html
```

```
Enter ⇒ lwarpmk print1
```

```
Enter ⇒ lwarpmk print
```

See section [8.6.12](#) to set options for processing glossaries.

5.12 Cleaning auxiliary files

To remove the auxiliary files `.aux`, `.toc`, `.lof`, `.lot`, `.idx`, `.ind`, `.log`, and `.gl*`, and a few others:

```
Enter ⇒ lwarpmk clean
```

5.13 Cleaning auxiliary and output files

To remove the auxiliary files, and also remove the `.pdf` and `.html` files:

```
Enter ⇒ lwarpmk cleanall
```

5.14 Cleaning the images from the <project>-images directory

The `<project>-images` directory contains SVG images automatically generated for inline and display math, tikz, etc. To remove all the images from the `<project>-images` directory:

```
Enter ⇒ lwarpmk cleanimages
```

5.15 Converting PDF or EPS images to SVG

HTML cannot display PDF or EPS images, so any external PDF graphics images must be converted to SVG format. *pdftocairo* and *epstopdf* may be used one image at a time, but *lwarpmk* also provides a way to convert PDF or EPS images in bulk:

```
Enter ⇒ lwarpmk epstopdf *.eps      (or a list of files)
```

```
Enter ⇒ lwarpmk pdftosvg *.pdf      (or a list of files)
```


Be sure to always provide SVG files for HTML output.

5.16 Creating HTML from an incomplete compile

During testing it may be useful to finish the HTML conversion even when the document had errors and did not compile successfully. To attempt an HTML conversion of an incomplete document:

```
Enter ⇒ lwarpmk pdftohtml [-p project]
```

5.17 Processing multiple projects in the same directory

 `xr`, `xr-hyper`, `xcite`

It is possible to have several projects in the same directory. *lwarpmk* has an optional parameter which is the document to compile.

To create each project:

```
Enter ⇒ pdflatex project_a
```

```
Enter ⇒ pdflatex project_b
```

Each project is given its own configuration file:

```
project_a.lwarpmkconf, project_b.lwarpmkconf
```

To compile each project with `lwarkmk`:

```
Enter ⇒ lwarpmk print -p project_a
```

```
Enter ⇒ lwarpmk print -p project_b
```

```
Enter ⇒ lwarpmk html -p project_a
```

```
Enter ⇒ lwarpmk html -p project_b
```

To generate each project's images:

```
Enter ⇒ lwarpmk limages -p project_a
```

```
Enter ⇒ lwarpmk limages -p project_b
```

To clean each project's images:

```
Enter ⇒ lwarpmk cleanlimages -p project_a
```

```
Enter ⇒ lwarpmk cleanlimages -p project_b
```

To clean each project's auxiliary files:

```
Enter ⇒ lwarpmk cleanall -p project_a
```

```
Enter ⇒ lwarpmk cleanall -p project_b
```

If using *bibtex*, for example, the HTML version must also be processed:

```
Enter ⇒ bibtex project_a_html
```

5.18 Using the *make* utility

lwarpmk has an action which may be useful for integration with the common *make* utility:

```
lwarpmk pdftohtml [-p project]
```

make may be used to compile the code to PDF with HTML tags (`project_html.pdf`), then *lwarpmk* may be used to convert each target to HTML files.

5.19 What next?

How do I do something? See the [General Index](#).

Something do not work! See the [Troubleshooting Index](#) or section 13: [Troubleshooting](#).

Package options: See section 28, [Package options](#).

HTML and filename settings: See section 7.6, [Customizing the HTML output](#).

Footnote placement: See section 7.6, [Customizing the HTML output](#).

Title page, indexing, glossaries: See section 8.6, [Front and back matter](#).

Shell escape: See section 7.3, [Shell escape](#).

css customization: See section 7.7, [Customizing the css](#).

MATHJAX customization: See section 8.7.5, [Customizing MATHJAX](#).

Localization: (languages) — See section 7.1, [Localization](#).

Accessibility: (alt and title tags) — See section 7.2, [Accessibility](#).

Converting an existing document: See section 6, [Converting an existing document](#).

EPUB conversion: See section 10, [EPUB conversion](#).

Word processor conversion: See section 11, [Word-processor conversion](#).

6 Converting an existing document

To convert an existing document for use with lwarp:

1. Arrange the document in the following order:

- (a) Declare the `\documentclass`.
- (b) Load text fonts.
- (c) Load `inputenc` or `inputenx`, `fontenc`, or `fontspec`.
- (d) Load lwarp.
- (e) Load remaining packages.

2. Modify the document:

⚠ **math in section names**

- (a) If using named HTML files, in section names use paren math `\(x+y\)` instead of dollar math `$x+y$`. (Dollar math works, but appears in the file-name.) Or, use a short name for the toc entry without the math, or use `\texorpdfstring` from the `hyperref` package:

```
\section{Some math \texorpdfstring{$1+2=3$}{three}}
```

⚠ **scale**

- (b) Avoid using the `\includegraphics scale` option. Change:

```
\includegraphics[scale=<xx>]{...}
```

to:

```
\includegraphics[width=<yy>\linewidth]{...}
```

⚠ **tabular**

- (c) Possible changes to tabular environments include: * columns, `multirow`, `longtable`, `supertabular`, `xtab`, `bigdelim`. See section 8.10.1.

⚠ **package options**

- (d) If using braces in package options, such as with `caption`, see section 8.1.

- (e) Possible option clashes with `memoir`. See section 8.13.

⚠ **indexes**

- (f) If using indexes, see section 8.6.15.
- (g) If using many indexes, glossaries, `.aux` files, etc., see section 8.6.15 regarding `morewrites`. If `morewrites` is already used, be sure to add the setup with `allocate=10`.

- (h) Other changes as per **Special cases and limitations**, section 8.

3. Convert any PDF images to SVG. See section 8.8.

4. Manually compile the print version with *latex*, *pdflatex*, *lualatex*, or *xelatex*.

5. `lwarpmk print` to finish the print version.

6. `lwarpmk html` to create the HTML version.

7. `lwarpmk limages` to create the SVG images of any SVG math, `lateximage`, `Tikz`, etc.

Need help?

See the **General Index** for “how-to”, and the **Troubleshooting Index** if something doesn’t work. A **Troubleshooting** section is also available. The **Index of Objects** contains automated entries for each package, macro, environment, counter, boolean, and other objects; individually and also sorted by category.

Table 5: Localization settings

Object names: L^AT_EX provides redefinable names for various objects, and lwarp adds a few more. Use `\renewcommand` to change these.

`\abstractname`: This macro is honored by lwarp.

`\linkhomename`: Displayed by the link to the homepage.

`\linkpreviousname`: Displayed by the link to the previous page.

`\linknextname`: Displayed by the link to the next page.

`\sitetocname`: Displayed at the head of the sideroc.

HTML settings: See table 8 and section 7.6 for details.

`\HTMLLanguage`: The language to declare for each web page.

`\ImageAltText`, `\MathImageAltText`, `\PackageDiagramAltText`, `\AltTextOpen`, `\AltTextClose`: The defaults used for HTML alt text for images. See section 7.2.

`\CSSFilename`: The name of the css file to use.

`\MathJaxFilename`: The name of the MATHJAX script to use.

Package options:

`ImagesName` and `ImagesDirectory`: These options control the filenames used by lwarp when it automatically generates images. See table 7 and section 7.5.

`xindyStyle`, `xindyLanguage`, `xindyCodepage`: When using *xindy*, these options may be set according to local use. See section 8.6.21.

`pdftotextEnc`: To adjust the encoding of *pdftotext*.

7 Additional details

7.1 Localization

Regional localization is supported by lwarp via the package options and macros shown in table 5.

7.2 Accessibility

lwarp provides several methods for improving access to the document using tools such as text-only browsers, copy/paste, text-to-speech readers, or Braille readers. HTML provides the alt text attribute for images, which is used by lwarp as describe below. HTML also provides the title attribute, which usually generates a pop-up text. lwarp can add this to a reference or hyperlink. MATHJAX also has provisions for improved accessibility as well. See table 6.

Table 6: Accessibility settings

\ImageAltText: The default HTML alt text for `\includegraphics` and `lateximages`. Set with `\renewcommand`.

\includegraphics alt key: For `\includegraphics`, `lwarp` adds the alt key/value. For example:

```
\includegraphics[alt={Some text.}]{filename}
```

svg math: For simple svg math, `lwarp` places the \LaTeX math expression in the alt text, so that the \LaTeX expression may be copied and pasted to another document as plain text.

\MathImageAltText: For complicated svg math, such as enclosed in `\InlineMathOther/\InlineMathNormal`, or `\DisplayMathOther/\DisplayMathNormal`, the HTML alt text will be set to `\MathImageAltText`. Set with `\renewcommand`.

MATHJAX: For MATHJAX, the accessibility tools provided by MATHJAX are enabled by default by `lwarp`'s MATHJAX scripts.

\PackageDiagramAltText: Various packages create diagrams which `lwarp` converts into svg images. These are given alt text set to `\PackageDiagramAltText`. Set with `\renewcommand`.

\ThisAltText: The HTML alt text of the next image may be set with:

```
\ThisAltText{Custom text about the image.}
<SVG math, Tikz, picture, etc.>
```

The next single image will be generated with the given text, and the following images will revert to back to their defaults.

`\ThisAltText` may also be used to assign an HTML title to the next reference or hyperlink.

```
\ThisAltText{Custom text about the link.}
Text ... \ref{label_name} ... text.
```

See section 7.6.

\AltTextOpen and \AltTextClose: By default, HTML alt text is enclosed by parentheses. This may be changed by redefining `\AltTextOpen` and `\AltTextClose`. Set with `\renewcommand`.

7.3 Shell escape

Opt `--shell-escape` Some documents require the use of an external program, which is allowed when using the `--shell-escape` command-line option. When the document is first compiled manually, and also whenever the print version is recompiled, *lwarp* detects and remembers whether shell escape is enabled. If so, it will also be enabled when the document is recompiled with *lwarpmk*.

7.4 Font and UTF-8 support

⚠ **type 3 bitmapped fonts** *lwarp* uses *pdftotext* to convert PDF output into UTF-8-encoded text. This process requires that UTF-8 information be embedded in the PDF file, which may prevent the use of older “type 3” bit-mapped fonts, and of older packages such as *ae*. The *lwarp* option `pdftotextEnc` may be useful in some situations. See section 7.5.

vector fonts While using DVI *latex* or PDF *pdflatex*, if no font-related package is specified then the default COMPUTER MODERN font is used, which may be a “type 3” bit-mapped font which may not convert well to plain text. A “type 1” vector font is required.

Computer Modern

⚠ *pdflatex*

⚠ DVI *latex*

Pkg *cm-super*

To use the updated *cm-super*'s type 1 fonts instead of Computer Modern, install the *cm-super* font package.

Pkg *lmodern*

To use Latin Modern instead, add

```
usepackage{lmodern}
```

to the preamble.

Pkg *dejavu*

Another useful option is the Deja Vu series of fonts, which have an increased coverage of language and glyphs:

```
\usepackage{dejavu}
```

latex, *pdflatex*, T1, UTF8 While using DVI *latex* or PDF *pdflatex*, *lwarp* automatically loads *fontenc* with T1 encoding. *fontenc* may be loaded with an additional encoding after *lwarp*. *inputenc* is automatically loaded with UTF8 encoding if it has not yet been loaded, but may also be specified with another encoding such as *latin1*. See the next section regarding index encoding.

⚠ *xelatex*, *lualatex*, *fontspec* Xe_{La}TeX and Lua_{La}TeX users must use the *fontspec* package. Do NOT use *fontenc*!

Place *fontspec* or *fontenc*, *xunicode*, and other font and UTF-8 related commands after the `\documentclass` command and before `\usepackage{lwarp}`.

⚠ **package conflicts** In some cases, a package conflict may require that a font package be loaded after *lwarp*, which should work as well:

1. `documentclass{article/book/report}` comes first, followed by any of:

2. Font and UTF-8 related commands:

- For Xe_{La}TeX or Lua_{La}TeX:

Pkg fontspec

ligatures

– fontspec and font choices

lwarp sets the following to turn off T_EX ligatures during the generation of HTML tags, and turn off common ligatures in regular text, since older browsers may not display them correctly and newer browsers can automatically re-create them.

```
\defaultfontfeatures[\rmfamily]{Ligatures={NoCommon,TeX}}
\defaultfontfeatures[\sffamily]{Ligatures={NoCommon,TeX}}
\defaultfontfeatures[\ttfamily]{Ligatures=NoCommon}
```

• For *pdf_latex*:

Pkg lmodern

Pkg fontenc

Pkg inputenc

Pkg inputenx

Pkg newunicodechar

File glyphtounicode.tex

(a) `\usepackage{lmodern}`, or other font-related packages(b) `\usepackage[T1]{fontenc}`(c) `\usepackage[utf8]{inputenc}`, or `latin1`, etc. Or use `inputenx`.(d) `\usepackage{newunicodechar}` along with related definitions.

(e) To assist with the PDF-HTML conversion:

i. `\input glyphtounicode.tex`ii. `\input glyphtounicode-cmr.tex`% from the pdfx packageiii. `\pdfgentounicode=1`(f) Another option to assist with the PDF-HTML conversion, such as the `dotless j` (`\j`):– `\usepackage{cmap}` — *or* —– `\usepackage{mmap}` — *or* —– `\usepackage[noTeX]{mmap}`(g) `\usepackage{textcomp}` **dotless j**

Pkg cmap

Pkg mmap

Pkg textcomp

3. `\usepackage{lwarp}` (section 7.5) is placed after any of the above, followed by:4. `\usepackage{newtxmath}` or other math-related font packages. Many of these load `amsmath`, which must be loaded after `lwarp`, so they must also be loaded after `lwarp`. **fontspec with monospaced fonts**5. `\setmonofont{TeX Gyre Cursor}` or similar may be required if using X_YL^AT_EX or Lua_AT_EX and `fontspec` along with traditional font packages such as `txfonts`, `newtxtext`, etc. This is required to turn off the monospaced font's ligatures with `fontspec` after loading the traditional font packages. Monospaced output ligatures must be turned off to produce the correct HTML characters.

Any monospace font with built-in ligatures may require these ligatures to be disabled for HTML. In one example, JETBRAIN MONO, it is required to use

```
\setmonofont{JetBrains Mono}[%
...
Contextuals=AlternateOff,
]
```

After `lwarp` is loaded, the ligature may be re-enabled for print mode by using `\setmonofont` again inside a `warpprint` environment.

6. ... the rest of the preamble and the main document.

 **JETBRAIN MONO** **HTML corrupted** **UTF-8 locale** In some cases, an external program may require a UTF-8 “locale”. See section 9.8.

7.4.1 Indexes, glossaries, and encoding

lwarp supports *makeindex*, *xindy*, *xindex*, and glossaries, gloss, and nomencl.

See section 8.6.14 for indexing, and section 8.6.12 for the glossaries package.

7.5 lwarp package loading and options

lwarp supports book, report, and article classes, as well as the equivalent Koma-script classes and memoir, and various CJK-related classes and packages.

Load the lwarp package immediately after the font and UTF-8 setup commands.

Package options may be set while loading lwarp, or later with

```
\lwarpsetup{<key=value, . . . >}
```

Pkg lwarp lwarp package options are as follows:

Opt mathsvg **mathsvg** and **mathjax**: Selects SVG images or MATHJAX for math display. See section 8.7.

Opt mathjax

Default: mathsvg

Opt latexmk **latexmk**: Tells *lwarpmk* to use *latexmk* to recompile the document several times if necessary. Otherwise, *lwarpmk* attempts to determine for itself whether to recompile. See section 7.6.

Default: false

Opt dvips **dvips**: Tells *lwarpmk* to use *dvips* and *ps2pdf* to convert DVI output to PDF.

Default: false

Opt dvipdfm **dvipdfm**: Tells *lwarpmk* to use *dvipdfm* to convert DVI output to PDF.

Default: false

Opt dvipdfmx **dvipdfmx**: Tells *lwarpmk* to use *dvipdfmx* to convert DVI output to PDF.

Default: false

Opt HomeHTMLFilename **HomeHTMLFilename**:

Default: \BaseJobname

Filename of the homepage, without the “.html” suffix. Defaults to the \BaseJobname. A common setting is:

```
HomeHTMLFilename=index
```

filename underscores

causing the homepage to be the file index.html. Underscores are allowed in HomeHTMLFilename and HTMLFilename options, but may need to be escaped elsewhere, such as when appearing in a list:

```
\item [\href{file\_name.pdf}{text}] \
```

See section 7.6.1 for examples of naming and numbering HTML files.

Opt HTMLFilename **HTMLFilename**: A filename prefix for the rest of the HTML web pages. Useful for numbered web pages with a common prefix. May be empty. See section 7.6.1 for examples of naming and numbering HTML files.

Default: <empty>

Opt ImagesName **ImagesName**: The prefix for the images automatically generated by lwarp for objects such as svg math and lateximages.

Default: image-

Opt ImagesDirectory **ImagesDirectory**: The directory for the images automatically generated by lwarp for

Default: \jobname-images

Table 7: Lwarp package options

Option	Description
mathsvg	Show math using SVG images.
mathjax	Show math using MATHJAX.
latexmk	Use <i>latexmk</i> for compiling documents.
dvips	Use <i>dvips</i> and <i>ps2pdf</i> to convert DVI documents.
dvipdfm	Use <i>dvipdfm</i> to convert DVI documents.
dvipdfmx	Use <i>dvipdfmx</i> to convert DVI documents.
HomeHTMLFilename	The filename of the home page.
HTMLFilename	A prefix for the filenames of the remaining web pages.
ImagesName	A prefix for the filenames of generated images.
ImagesDirectory	The directory used to hold generated images.
PrintLatexCmd	The shell commands for lwarpmk print .
HTMLLatexCmd	The shell commands for lwarpmk html .
For indexing (section 8.6.15) and glossaries (section 8.6.12):	
makeindex	Use <i>makeindex</i> to generate indices.
makeindexStyle	Set a custom style for <i>makeindex</i> .
xindy	Use <i>xindy</i> to generate indices.
xindyStyle	Set a custom style for <i>xindy</i> .
xindyLanguage	The <i>xindy</i> language option used for index generation.
xindyCodepage	The <i>xindy</i> codepage option used for index generation.
xindex	Use <i>xindex</i> to generate indices.
xindexConfig	Set a custom configuration file for <i>xindex</i> .
PrintIndexCmd	Shell commands executed by lwarpmk printindex .
HTMLIndexCmd	Shell commands executed by lwarpmk htmlindex .
LatexmkIndexCmd	Shell commands executed by <i>latexmk</i> .
IndexRef	How to format index links.
GlossaryCmd	Shell command executed by lwarpmk printglossary and lwarpmk htmlglossary .
Seldom necessary:	
OSWindows	Force compatibility with MS-WINDOWS.
pdftotextEnc	Set the encoding for <i>pdftotext</i> .
lwarpmk	Generate a local copy of <code>lwarpmk.lua</code> .
Used internally by lwarp:	
warpprint	Generate print output, and also generate configuration files.
warphTML	Generate HTML output.
BaseJobname	The <code>\jobname</code> to use. Set to the <code>\jobname</code> of the printed version even while generating HTML.

objects such as `svg math` and `lateximages`. By default, these images will appear in a directory named `<jobname>-images`, and the images will be named and numbered `image-<nn>`.

- Opt `PrintLatexCmd` **PrintLatexCmd:** Sets the shell commands executed by **lwarpmk print**. If not specified, will automatically be set according to the detected \LaTeX engine and the use of `--shell-escape`.
Default: `<automatic>`
- Opt `HTMLLatexCmd` **HTMLLatexCmd:** Sets the shell commands executed by **lwarpmk html**. If not specified, will automatically be set according to the detected \LaTeX engine and the use of `--shell-escape`.
Default: `<automatic>`
- Opt `makeindex` **makeindex:** Sets `PrintIndexCmd`, `HTMLIndexCmd`, and `LatexmkImageCmd` to use *makeindex* when generating indexes with **lwarpmk printindex**, **lwarpmk htmlindex**, or *latexmk*. If neither `makeindex` nor `xindy` is used, `makeindex` is assumed.
Default: `makeindex`
- Opt `makeindexStyle` **makeindexStyle:** If you wish to use a custom `.ist` file for index generation, see section 8.6.20.
Default: `lwarp.ist`
- Opt `xindy` **xindy:** Sets `PrintIndexCmd`, `HTMLIndexCmd`, and `LatexmkImageCmd` to use *xindy* when generating indexes with **lwarpmk printindex**, **lwarpmk htmlindex**, or *latexmk*.
Default: `makeindex`
- Opt `xindyStyle` **xindyStyle:** If you wish to use a custom `.xdy` file for index generation, see section 8.6.21.
Default: `lwarp.xdy`
- Opt `xindyLanguage` **xindyLanguage:** If using an index or glossary, see section 28.
Default: `english`
- Opt `xindyCodepage` **xindyCodepage:** If using an index, see section 28.
Default: `utf8`
- Opt `xindex` **xindex:** Sets `PrintIndexCmd`, `HTMLIndexCmd`, and `LatexmkImageCmd` to use *xindex* when generating indexes with **lwarpmk printindex**, **lwarpmk htmlindex**, or *latexmk*.
Default: `makeindex`
- Opt `xindexConfig` **xindexConfig:** If you wish to use a custom `xindex-*.lua` file for index generation, see section 8.6.22.
Default: `<empty>`
- Opt `PrintIndexCmd` **PrintIndexCmd:** Sets the shell commands executed by **lwarpmk printindex**. If not specified, will be set by the selection of `makeindex` or `xindy`. May be used to specify the creation of multiple indexes. See section 8.6.15.
Default: `<automatic>`

Examples:

```
makeindex -s lwarp.ist projectname.idx (makeindex)
xindy -M lwarp.xdy -L english -C utf8 projectname.idx (xindy)
```

automatic setting

The use of the `makeindex` or `xindy` options sets `PrintIndexCmd` to sensible values for each of those programs while compiling a single index. `lwarp`'s `makeindexStyle`, `xindyStyle`, `xindyLanguage`, and `xindyCodepage` options will be used if specified.

⚠ xindy

If specifying `PrintIndexCmd` manually, be sure to assign an *xindy* language and codepage with the `-L` and `-C xindy` options, as the `lwarp xindyLanguage` and `xindyCodepage` options are not used for the `PrintIndexCmd` option when it is set manually.

This option is stored in the configuration files `lwarpmk.conf` and `*.lwarpmkconf`, and is then passed by the `lwarpmk printindex` command to the operating system to compile the print indexes. Since the command string is parsed by `TEX`, written to a file, read from the file by `LuaTEX`, and finally passed to the operating system, any attempt at quoting will be problematic. For complicated commands, it would be best to create a shell script, and simply refer to the script with the `lwarp PrintIndexCmd` option.

Opt HTMLIndexCmd

Default: <automatic>

HTMLIndexCmd: Sets the shell commands executed by `lwarpmk htmlindex`. If not specified, will be set by the selection of `makeindex` or `xindy`. May be used to specify the creation of multiple indexes. See section 8.6.15.

⚠ filenames

Example settings are similar to `PrintIndexCmd`, but append `_html` to the filenames:

```
makeindex -s lwarp.ist projectname_html.idx (makeindex)
xindy -M lwarp.xdy -L english -C utf8 projectname_html.idx (xindy)
```

automatic setting

The use of the `makeindex` or `xindy` options sets `HTMLIndexCmd` to sensible values for each of those programs while compiling a single index. `lwarp`'s `makeindexStyle`, `xindyStyle`, `xindyLanguage`, and `xindyCodepage` options will be used if specified.

⚠ xindy

If specifying `HTMLIndexCmd` manually, be sure to assign an *xindy* language and codepage with the `-L` and `-C xindy` options, as the `lwarp xindyLanguage` and `xindyCodepage` options are not used for the `HTMLIndexCmd` option when it is set manually.

As with `PrintIndexCmd`, to generate complicated indexes it may be worthwhile to use a shell script, then refer to that script with `HTMLIndexCmd`.

Opt LatexmkIndexCmd

Default: <automatic>

LatexmkIndexCmd: Sets the shell commands executed by `latexmk`. Unlike `PrintIndexCmd` and `HTMLIndexCmd`, `LatexmkIndexCmd` does not include any filenames, which will be provided instead by `latexmk`. See section 8.6.15.

Example settings are similar to `PrintIndexCmd`, but without a filename:

```
makeindex -s lwarp.ist (makeindex)
xindy -M lwarp.xdy -L english -C utf8 (xindy)
```

automatic setting

The use of the `makeindex` or `xindy` options sets `LatexmkIndexCmd` to either of the two settings show above. `lwarp`'s `makeindexStyle`, `xindyStyle`, `xindyLanguage`, and `xindyCodepage` options will be used if specified. Unlike `PrintIndexCmd` and `HTMLIndexCmd`, *latexmk* uses either of the single-line settings of `LatexmkIndexCmd` shown above to compile each of multiple indexes if necessary.

⚠ xindy

If specifying `LatexmkIndexCmd` manually, be sure to assign an *xindy* language and codepage with the `-L` and `-C xindy` options, as the `lwarp xindyLanguage` and `xindyCodepage` options are not used for the `LatexmkIndexCmd` option when it is set manually.

Opt IndexRef
Default: cref

IndexRef: Describes how to display the index entries for HTML output. Possible values are `ref`, `nameref`, `refnameref`, `cref`, `crefnameref`, `autoref`, or a text string such as `(link)` or `(*)` for each index entry reference. (Adding parentheses around a single character makes the link larger and easier to click on.) The default is `cref`, which is available even if the print document does not use `cleveref`, as the `lwarp` package relies on `cleveref` during HTML output. Option `autoref` gives the same results as `cref`.

`\ref` and `\cref` to starred or otherwise unknown links will display as `(*)` instead of `??`.

⚠ ??

If using `cref` (the default), and if a reference appears as `??` with a non-functional link, use `cleveref`'s `\crefname` to give a name to that type of label.

In general, `crefnameref` gives the most information, but the index can become quite verbose. Using `(*)` or similar yields a very compact index.

Opt GlossaryCmd
Default: makeglossaries

GlossaryCmd: Sets the shell command executed by `lwarpmk printglossary` and `lwarpmk htmlglossary`. The print or HTML glossary filename is appended to this command. See section 8.6.12.

Opt OSWindows

OSWindows: `lwarp` attempts to automatically sense WINDOWS, but it may be forced with this option. See section 7.9.

Opt pdftotextEnc
Default: UTF-8

pdftotextEnc: Used to specify the encoding used by *pdftotext* during the PDF-HTML conversion. In most situations, the default is the correct choice.

Opt lwarpmk

lwarpmk: If you wish to have `lwarp` generate a local copy of `lwarpmk.lua` for archival or local-installation purposes, compile the print version with the `lwarpmk` option set. See section 28.

The following options are used internally by `lwarp`, and usually are not used in the user's document:

Opt warpprint
Opt warpHTML

warpprint and **warpHTML:** Usually controlled by *lwarpmk*, and not set in the docu-

ment. Select the `warpprint` option to generate print output (default), or the `warpHTML` option to generate HTML5 output. The default is print output, so the print version may be compiled with the usual *pdflatex*, etc. When `lwarp` is loaded in print mode, it creates `<project>_html.tex`, which sets the `warpHTML` option before calling the user's source code `<project>.tex`. In this way, `<project>.tex` can `\usepackage{lwarp}` without any options to create a printed version, while `<project>_html.tex` will create an HTML version.

Opt	BaseJobname	BaseJobname: Not intended for the user. Used internally by <code>lwarp</code> when creating the
	Default: <code>\jobname</code>	<code>*_html.tex</code> file used to compile the HTML version. See section 28.

7.6 Customizing the HTML output

⚠ Placement!

Table 8 shows several settings may be used to customize the HTML output. Watch for the correct placement of each!

⚠ Changes!

Note that if changes are made, it is best to first:

1. Clear all the HTML, PDF, and auxiliary files:

Enter \Rightarrow `lwarpmk clearall`

2. Recompile the print version in order to recreate the configuration files for *lwarpmk*:

Enter \Rightarrow `lwarpmk print`

3. Finally, recompile the HTML version with the new settings:

Enter \Rightarrow `lwarpmk html`

Placed in the preamble before `\begin{document}`:

<code>\HTMLFirstPageTop</code> Default: <code><empty></code>	\HTMLFirstPageTop: <code>{\langle contents \rangle}</code> A user-definable custom action applied to the top of the home page. Useful for logos, etc. <code>\LinkNext</code> may be used to link to the next web page. Defaults empty. Ignored in print output.
<code>\HTMLFirstPageBottom</code> Default: <code><empty></code>	\HTMLFirstPageBottom: <code>{\langle contents \rangle}</code> A user-definable custom action applied to the bottom of the home page. Useful for logos, etc. <code>\LinkNext</code> may be used to link to the next web page. Defaults empty. Ignored in print output.
<code>\linkhomename</code> Default: <code>Home</code>	\linkhomename: Name of the link to the home page. Paragraphs are allowed. Redefine with <code>\renewcommand</code> .
<code>\linkpreviousname</code> Default: <code>Previous</code>	\linkpreviousname: Name of the link to the previous page. Paragraphs are allowed. Redefine with <code>\renewcommand</code> .
<code>\linknextname</code> Default: <code>Next</code>	\linknextname: Name of the link to the next page. Paragraphs are allowed. Redefine with <code>\renewcommand</code> .
Ctrl <code>tocdepth</code>	tocdepth: Sectioning depth of the table of contents. See section 16 for a list of \LaTeX stack depths.
Ctrl <code>SideTOCDepth</code> Default: 1 <code>sideroc</code>	SideTOCDepth: Sectioning depth of the sideroc. Defaults to 1, causing the sideroc to show sections but not subsections. Each subpage of the website has its own small table of contents on the side (the “sideroc”). Its depth is set by <code>SideTOCDepth</code> . This sideroc is only shown if the browser display is wide enough. When using a narrow web browser window, “responsive web design” is used to show the sideroc at the top of the page, as well as a link back to Home at the top and bottom.

It is recommended to set:

`SideTOCDepth = FileDepth`

Table 8: HTML settings

Macro/Cntr/Bool	Loc*	Description
\linkhomename	P	Name of the link to the homepage.
\linkpreviousname	P	Name of the link to the previous page.
\linknextname	P	Name of the link to the next page.
SideTOCDepth	P	Sectioning depth of the sideroc.
\sidetocname	P	Name of the sideroc.
FileDepth	P	Sectioning depth of the file splits.
CombineHigherDepths	P	Combine higher section levels.
FileSectionNames	P	Use section names for file names, else use numbers.
\FilenameLimit	P	Maximum length of the generated filenames.
FootnoteDepth	P	Sectioning depth of footnotes.
\abstractname	P	The name of the abstract.
\ImageAltText	PD	\includegraphics and other images' alt tag.
\ThisAltText {{text}}	PD	Assigns an alt/title tag for the next image or link.
\MathImageAltText	PD	The svg math image lateximage alt tag.
\PackageDiagramAltText	PD	The suffix for a package's lateximage alt tags.
\AltTextOpen	PD	Start an HTML alt tag.
\AltTextClose	PD	End an HTML alt tag.
\CSSFilename	PS	The CSS for the following files.
\MathJaxFilename	PS	The MathJax script for the following files.
\HTMLLanguage	PS	The HTML lang tag.
\HTMLTitle	PS	The homepage's <title>, overriding \title.
\HTMLTitleBeforeSection	PS	Set subpage <title>s to \HTMLTitle - sectionname
\HTMLTitleAfterSection	PS	Set subpage <title>s to sectionname - \HTMLTitle
\HTMLAuthor	PS	The HTML author meta tag, overriding \author.
\HTMLDescription	PS	The HTML description meta tag.
\HTMLFirstPageTop	P	Heading for the home page.
\HTMLFirstPageBottom	P	Footer for the home page.
\HTMLPageTop	PS	Heading for the other pages.
\HTMLPageBottom	PS	Footer for the other pages.
\IndexPageSeparator	P	Index page list separator.
\IndexRangeSeparator	P	Index page range separator.
FixSmallCaps	P	Set true if small caps rendered as all caps.
HTMLDebugComments	P	Boolean to generate HTML comments.

* **P:** Preamble, **D:** Anywhere in the document. **S:** Before a section.

or

`SideTOCDepth = FileDepth + 1`

⚠ inaccessible pages

If `SideTOCDepth < FileDepth`, web pages will be inaccessible via the sideroc.

`\sidedtocname`
Default: Contents

\sidedtocname: Name of the sideroc. Paragraphs are allowed. Redefine with `\renewcommand`.

Ctrl `FileDepth`
Default: -5

FileDepth: Sectioning depth of file splits. Defaults to -5, causing the entire HTML website to be one single file.

- To place the entire file into one HTML page, use:
`\setcounter{FileDepth}{-5}`
- To split the HTML file at `\section` depth, use:
`\setcounter{FileDepth}{1}`
- To ensure that the HTML pages/files are accessible:
Place a `\tableofcontents` somewhere before the first section break (therefore in the “home page”), and set
`tocdepth >= FileDepth`



Bool `CombineHigherDepths`
Default: true

CombineHigherDepths: Combine a higher section with its first lower subsections, down to the `FileDepth`. Defaults to true. Set to false to simulate the concept of a chapter opening on its own page, for example.

The file splits are controlled by the counter `FileDepth` and the boolean `CombineHigherDepths`. Setting `FileDepth` to 0 splits the file at chapters, 1 at sections, etc. `CombineHigherDepths` controls whether to combine pages at levels higher than the chosen `FileDepth`, such as in this tutorial where the page which opens the chapter also contains the first section. Be careful to set `tocdepth` and `SideTOCDepth` to allow access to each page of the website. Set `tocdepth` and `SideTOCDepth` to be greater than or equal to `FileDepth`.

⚠ Inaccessible pages!

⚠ Lost in an old page!

When making changes to the file structure, it is possible to end up with the web browser pointing to an old file which is no longer in use. When this occurs, changes to the web site will not appear in the browser, even if reloading the page, because that page is no longer in use. It is best to return to the home page, clean the files (`lwarpmk cleanall`), change `FileDepth` and/or `CombineHigherDepths`, then finally recompile and renavigate to the desired page using the new file structure.

Bool `FileSectionNames`
Default: true

FileSectionNames: If true, web page filenames are derived from a sanitized version of the section names. If false, web pages are numbered. Either way, the `HTMLFilename` option is used as a prefix. See section 7.6.1 for examples of naming and numbering HTML files. The user must ensure that filenames are unique after being sanitized. For example, `math` in the section name is removed before creating the filename, so the rest of the filename must be sufficiently unique to avoid name collisions.

⚠ Unique filename!

`\FilenameLimit`
Default: 80

\FilenameLimit: The maximum length of the filenames generated by `lwarp`. “.html” is added to this length. Redefine with `\renewcommand`.

Ctrl `FootnoteDepth`
Default: 3

FootnoteDepth: Determines where to place pending footnotes. 3 places foot-

notes before each break down to the `\subsubsection` level. 1 places footnotes before each `\section` break. Any pending footnotes are also placed at the bottom of each page before each file break.

Bool	<code>FixSmallCaps</code> Default: <code>false</code>	FixSmallCaps: Set true if SMALL CAPS are rendering in all caps (“SMALL CAPS”). May be required for some fonts (<code>erewhon</code> , <code>utopia</code> , <code>fbf</code> , et al.), and packages such as <code>embrac</code> .
Bool	<code>HTMLDebugComments</code> Default: <code>false</code>	HTMLDebugComments: Set true to generate HTML comments, such as which section or <code><div></code> is being opened or closed.
	<code>\abstractname</code> Default: <code>Abstract</code>	\abstractname: The name of the abstract. This may also be over-written by the <code>babel</code> package. Defaults to “Abstract”. Redefine with <code>\renewcommand</code> .
	<code>\IndexPageSeparator</code> Default: <code>“ , ”</code>	\IndexPageSeparator: Index page list separator. Adjust to match index style file. If using <code>gindex</code> , this is set automatically to <code>gindex's \indexpagessep</code> .
	<code>\IndexRangeSeparator</code> Default: <code>“--”</code>	\IndexRangeSeparator: Index page range separator. Adjust to match index style file. If using <code>gindex</code> , this is set automatically to <code>gindex's \indexrangesep</code> .

Placed before `\begin{document}`, or before any sectioning command which causes a file break:

`\CSSFilename`
Default: `lwarp.css`

\CSSFilename: `{\filename.css}` Sets the css file to use for the following files. May be changed before each each sectioning command which would cause a file split.

The css styles of the web pages are set by the `\CSSFilename` command. If `\CSSFilename` is not used, a default plain style is used to mimic printed L^AT_EX output. `lwarp_sagebrush.css` is a semi-fancy colored style as shown in this tutorial. Change it to `lwarp_formal.css` for a more formal look, or comment out the `\CSSFilename` command to see the default. `\CSSFilename` may be used before each file break to set the css for individual pages of the website.

`\MathJaxFilename`
Default: `lwarp_mathjax.txt`

\MathJaxFilename: `{\filename}` Sets the MathJax script file to use for the following files. May be changed before each each sectioning command which would cause a file split.

The MathJax script file is copied into the head of each HTML file. This may be used to point to a local repository, add extensions, or change the script somewhere in the middle of the document. `\MathJaxFilename` may be used before each file break to set the script file for individual pages of the website.

`\HTMLLanguage`
Default: `en-US`

\HTMLLanguage: `{\language}` The HTML file's HTML lang meta tag. Defaults to `en-US`.

`\HTMLTitle`
Default: `\thetitle`

\HTMLTitle: `{\title}` Overrides `\title` for the HTML header's meta title. Defaults to `\thetitle`, which is set by `\title`, or empty otherwise. Unlike the author, `\thetitle` is set by `\title` even if not using the titling package.

`\HTMLTitleBeforeSection`
Default: `\HTMLTitleBeforeSection`

\HTMLTitleBeforeSection: Sets subpage `<title>` tags to show the website title followed by the section name.

<code>\HTMLTitleAfterSection</code>	\HTMLTitleAfterSection: Sets subpage <title> tags to show the section name followed by the website title.
<code>custom <title></code>	To customize subpage <title>s, redefine <code>\theHTMLTitleSection</code> , which defaults to: <pre> \def\theHTMLTitleSection{% \theHTMLTitle\theHTMLTitleSeparator\theHTMLSection% } </pre>
<code>\HTMLAuthor</code> Default: <code>\theauthor</code>	\HTMLAuthor: <code>{\langle author \rangle}</code> The HTML header's meta author. Defaults to <code>\theauthor</code> , which is set by <code>\author</code> if using the <code>titling</code> package, but is empty otherwise. There are several ways to represent the author and affiliations, especially if using the <code>authblk</code> package, most of which do not result in a sensible <code>\theauthor</code> , so <code>\HTMLAuthor</code> is useful to create a list of authors without their affiliations.
<code>\HTMLDescription</code> Default: <code><empty></code>	\HTMLDescription: <code>{\langle description \rangle}</code> Sets the HTML description tag for the following files. May be changed before each each sectioning command which would cause a file split.
<code>\HTMLPageTop</code> Default: <code><empty></code>	\HTMLPageTop: <code>{\langle contents \rangle}</code> A user-definable custom action applied to the top of pages other than the home page. Useful for logos, etc. Defaults empty. <code>\LinkHome</code> may be used to place a link back to the homepage, as well as <code>\LinkPrevious</code> and <code>\LinkNext</code> . Ignored in print output.
<code>\HTMLPageBottom</code> Default: <code><empty></code>	\HTMLPageBottom: <code>{\langle contents \rangle}</code> A user-definable custom action applied to the bottom of pages other than the home page. Useful for authors, copyright notices, contact information, etc. Defaults empty. <code>\LinkHome</code> may be used to place a link back to the homepage, as well as <code>\LinkPrevious</code> and <code>\LinkNext</code> . Ignored in print output.
<code>\LinkHome</code>	\LinkHome: Creates a link to the home page. Usually used in <code>\HTMLPageTop</code> and related.
<code>\LinkPrevious</code>	\LinkPrevious: Creates a link to the previous HTML page, unless already at the home page. Usually used in <code>\HTMLPageTop</code> and related.
<code>\LinkNext</code>	\LinkNext: Creates a link to the next HTML page, unless already at the end. Usually used in <code>\HTMLPageTop</code> and related.

Placed in the home page before the first sectioning command which causes a file break:

<code>\tableofcontents</code> ⚠ TOC on the homepage!	\tableofcontents: Used to place a table of contents on the home page. This command must be used before the first file split, so that a way is available to navigate to other files from the homepage. Links to each chapter/section are provided, as selected by <code>tocdepth</code> .
---	--

Placed in the document wherever necessary:

<code>\ImageAltText</code> Default: <code>image</code>	\ImageAltText: Redefine with <code>\renewcommand</code> . <code>\includegraphics</code> and other images are assigned an HTML alt tag according to <code>\ImageAltText</code> along
---	--

with `\AltTextOpen` and `\AltTextClose`. This text is visible in the browser if images are not loaded, and appears when the text is copied and pasted. The default is “image”, and it may be changed according to the document’s language. This may be set in the preamble, or changed as necessary inside the document, where it will affect the following `\includegraphics` and other images.

`\ThisAltText`

\ThisAltText: `{\langle text \rangle}` `\ThisAltText` can be used to assign an HTML alt text attribute to the next image generated by a `lateximage`, `picture`, `tikzpicture`, or any other similar environment which generates an image, or the next SVG math expression. This tag is cleared after use. The tag is also cleared after each MATHJAX expression, in case the user changes between SVG math and MATHJAX.

`\ThisAltText` also may be used to add an HTML title to a reference or hyperlink, such as a `\ref`, `\cref`, `\href`, `\url`, `\hyperref`, or `\hyperlink`. In each case, the alternative text is cleared after use.

`\MathImageAltText`

Default: math image

\MathImageAltText: Redefine with `\renewcommand`. When creating an SVG math image, its HTML alt tag may be set to the math expression, which may be hashed for image reuse. In the case of `\ensuremath` or after `\inlinemathother`, where the contents require a unique image for each instance of the same expression, the alt tag is set to `\MathImageAltText`, along with `\AltTextOpen` and `\AltTextClose`, and the image is not reused.

This alt expression is visible in the browser if images are not loaded, and appears when the text is copied and pasted. The default is “math image”, and it may be changed according to the document’s language. This may be set in the preamble, or changed as necessary inside the document, where it will affect the following SVG math images.

`\PackageDiagramAltText`

Default: diagram

\PackageDiagramAltText: Redefine with `\renewcommand`. For many packages, the output is placed inside a `lateximage` with an HTML alt tag set to the package name followed by `\PackageDiagramAltText`. For example:

`(-xy- diagram)`

This expression is visible in the browser if images are not loaded, and appears when the text is copied and pasted. The default is “diagram”, and may it be changed according to the document’s language. This may be set in the preamble, or changed as necessary inside the document, where it will affect the following package diagrams.

`\AltTextOpen`

Default: (

`\AltTextClose`

Default:)

\AltTextOpen: Redefine with `\renewcommand`.

\AltTextClose: Redefine with `\renewcommand`. HTML alt text is enclosed by the macros `\AltTextOpen` and `\AltTextClose`, which default to an opening and closing parenthesis.

Env `warpprint`

warpprint: An environment which is only used while generating print output. Place inside anything which does not apply to HTML and which may cause problems with `lwarp`. If `lwarp` knows about and emulates or supports a package then its related macros, lengths, counters, etc. probably won’t have to be placed inside a `warpprint` environment, but unknown packages may cause problems which may be isolated from `lwarp` using this environment.



Do not place anything else on the same line as \end{warpprint}. Also do not nest warpprint inside itself.

Env warpHTML

warpHTML: An environment which is only included while generating HTML output. This is useful for website logos and other items which have no purpose in printed output.



Do not place anything else on the same line as \end{warpHTML}. Also do not nest warpHTML inside itself.

\warpprintonly

\warpprintonly: {<contents>} A macro version of the warpprint environment.

\warpHTMLonly

\warpHTMLonly: {<contents>} A macro version of the warpHTML environment.

7.6.1 Example HTML file naming

Examples of ways to name or number HTML files:

Numbered HTML nodes:

Example: Homepage index.html, and node-1, node-2.¹³

```
\usepackage[
  HomeHTMLFilename=index,
  HTMLFilename={node-}
]{lwarp}
\boolfalse{FileSectionNames}
```

Named HTML sections, no prefix:

Example: index.html, and About.html, Products.html

```
\usepackage[
  HomeHTMLFilename=index,
  HTMLFilename={}
]{lwarp}
\booltrue{FileSectionNames}
```

Named HTML sections, with prefix:

Example: Homepage mywebsite.html, and additional pages such as mywebsite-About.html, mywebsite-Products, etc.

```
\usepackage[
  HomeHTMLFilename=mywebsite,
  HTMLFilename={mywebsite-}
]{lwarp}
\booltrue{FileSectionNames}
```

¹³See \SetHTMLFileNumber to number in groups by chapter, for example.

7.7 Customizing the css

`\CSSFilename` `{\filename}`
 Default: `lwarp.css`

`\CSSFilename` may be used to choose which .css file is used to display each page of the web site. Use `\CSSFilename` before `\begin{document}` to assign the style of the home page. If different parts of the website should have different styles, call `\CSSFilename` again before each section heading which creates a new file. This may be changed numerous times throughout the file, resulting in different HTML pages having different css files assigned:

```
...
\CSSFilename{myCSS.css}
\chapter{Another Chapter}
...
```

The styles provided by `lwarp` include:

lwarp.css: A default style if `\CSSFilename` is not used. This style is comparable to a plain L^AT_EX document. To set this style, you may use `\CSSFilename{lwarp.css}`, or no `\CSSFilename` call at all.

lwarp_formal.css: A formal style with a serif fonts and a traditional look.

lwarp_sagebrush.css: A style with muted colors, gradient backgrounds, additional borders, and rounded corners.

To see each style in use, change the `\CSSFilename` entry in the tutorial, `lwarpmk.html` again, and then reload the tutorial webpage.

Custom css A customized style may also be created. For each new project a file called `sample_project.css` is generated. This may be renamed to `<project>.css` then used by assigning `\CSSFilename{<project>.css}`.



Rename it!

Note that `sample_project.css` is overwritten whenever `lwarp` is loaded in print mode. It is therefore important to rename the file to something like `<project>.css` before using it, so that your own changes are not overwritten.

`<project>.css` has an entry which loads `lwarp.css`, and this entry may be changed to load `lwarp_formal.css` or `lwarp_sagebrush.css` if desired. Additional changes to the css may be made by making entries later in the `<project>.css` file.

File `lwarp.css`
 File `project.css`
 File `sample_project.css`

It is best to make a local project-specific css file such as `project.css`, containing only things which are different from `lwarp.css`. The file `project.css` should refer to `lwarp.css` as follows:

```
/* ( --- Start of project.css --- ) */
/* ( --- A sample project-specific CSS file for lwarp --- ) */

/* Uncomment one of the following: */
@import url("lwarp.css") ;
```

```

/* @import url("lwarp_formal.css") ; */
/* @import url("lwarp_sagebrush.css") ; */

/* Project-specific CSS setting follow here. */
/* . . . */

/* ( --- End of project.css --- ) */

```

Finally use \CSSFilename{<project>.css} in the document to activate the custom CSS.

7.8 Assigning css classes and styles

HTML CSS classes and styles may be assigned to fragments of the document.

Env BlockClass [*<style>*] {*<class>*}

An entire block of text, including paragraphs, may be assigned a CSS class and optional CSS style using the BlockClass environment. The result is placed inside a <div>. A BlockClass may nest other BlockClasses or \InlineClasses.

\InlineClass ((*<wp CSS style>*) [*<web CSS style>*] {*<CSS class>*}) {*<text>*}

A section of text without paragraphs may be assigned a CSS class and optional CSS style using the \InlineClass macro. The result is placed inside a . \InlineClass may be nested, but per the HTML standard it must not contain BlockClass, nor may it contain a paragraph, nor several other objects such as HTML figures. \InlineClass also accepts a second optional parameter, enclosed inside parentheses, which assigns the style while generating output for a word processor, while ignoring the web style.

Nullified versions of BlockClass and \InlineClass are provided for the print version, so they may be used in the document without placing them inside warpHTML or \warpHTMLonly.

7.9 Selecting the operating system

Prog Unix	lwarp tries to detect which operating system is being used. UNIX / MAC OS / LINUX is the default (collectively referred to as "UNIX" in the configuration files), and MS-WINDOWS is supported as well.
Prog Mac OS	
Prog Linux	
Prog MS-Windows	If MS-WINDOWS is not correctly detected, use the lwarp option OSWindows.
Prog Windows	When detected or specified, the operating-system path separator used by lwarp is modified, and the boolean usingOSWindows is set true. This boolean may be tested by the user for later use.
Opt OSWindows	

7.10 Selecting actions for print, HTML, or MATHJAX output


The following environments and macros are used to select actions which only apply to either traditional \LaTeX print-formatted PDF generation, or to HTML generation, or to HTML with MATHJAX.

For most of built-in \LaTeX and many additional packages there is user-level source code support or emulation, so no special handling will be required. For those cases which `lwarp` does not handle by itself, the following environments and macros may be used to isolate sections of code for print-only or HTML-only.

These environments are also useful for creating a special version of the titlepage for print and another for HTML.

Env `warpHTML` Anything which is to be done only for HTML5 output is surrounded by a `warpHTML` environment:


```
\begin{warpHTML}
... something to be done only during \HTML\ generation
\end{warpHTML}
```

 `\end{warpHTML}` Do *not* place anything else on the same line as `\end{warpHTML}`. The exact phrase is used to mark the end of the environment. Do not nest `warpHTML` inside itself.

 **nesting**

Env `warpprint` Anything which is to be done only for print output is surrounded by a `warpprint` environment:


```
\begin{warpprint}
... something to be done only during traditional \PDF\ generation
\end{warpprint}
```

 `\end{warpprint}` As above, do not place anything else on the line with `\end{warpprint}`. Do not nest `warpprint` inside itself.

 **nesting**

Env `warpall` Anything which is to be done for any output may be surrounded by a `warpall` environment. Doing so is optional.

```
\begin{warpall}
... something to be done during print \PDF\ or \HTML\ output
\end{warpall}
```

 `\end{warpall}` As above, do not place anything else on the line with `\end{warpall}`. Do not nest `warpall` inside itself.

 **nesting**

Macros are also provided for print-only or HTML-only code:

`\warpprintonly` $\{\langle actions \rangle\}$

Performs the given actions only when print output is being generated.

`\warpHTMLonly` $\{\langle actions \rangle\}$

Performs the given actions only when HTML output is being generated.

Env `warpMathJax` Anything which is to be done only while using HTML output with MATHJAX is surrounded by a `warpMathJax` environment. Usually, this is `\CustomizeMathJax`, used to add emulation macros. `\end{warpMathJax}` must appear on its own line. Do not nest `warpMathJax` inside itself.

⚠ `\end{warpMathJax}`
⚠ nesting

7.11 Commands to be placed into the warpprint environment

Certain print-related commands should always be placed inside a `warpprint` environment, or may need other special handling. These are unrelated to HTML output, but are hard to isolate automatically. For example:

- Paragraph formatting: `\parindent` `\parskip`
- Manual page positions such as the `textpos` package, which is emulated but only in a limited way.
- Anything changing the page counter. `lwarp` requires that the page counter not be adjusted during HTML output.

Some packages require additional setup commands. Where these packages are emulated for HTML, setup commands may work for the emulated HTML output as well as for print output. See the details for each package in this document for more information.

Also see section 13: [Troubleshooting](#).

7.12 Title page

In the preamble, place an additional block of code to set the following:

```
\title{Document Title} % One line only
\author{Author One\affiliation{Affiliation One} \and
        Author Two\affiliation{Affiliation Two} }
\date{Optional date}
```

The title is used in the meta tags in the HTML files, unless overridden by `\HTMLTitle`, and the rest are used in `\maketitle`. To use a `\subtitle` or `\published` field, see section 66.8.

`\maketitle` Use `\maketitle` just after the `\begin{document}`, as this will establish the title of the homepage. Optionally, use a `titlepage` environment instead.

Env `titlepage` The `titlepage` environment may be used to hold a custom title page. The `titlepage`

will be set in a <div> class titlepage, and \printtitle, etc. may be used inside this environment.

Env titlingpage Another form of custom title page, where \maketitle is allowed, and additional information may be included as well.

\title {\<title>}

⚠ **HTML corrupted** Avoid newlines in the \title; these will interfere with the file break and css detection.
 ⚠ **newlines** Use a \subtitle command instead (section 66.8). The title will appear in the document \maketitle as a heading <h1>. The HTML meta title tag will also have this title, unless \HTMLTitle is used to set the meta title to something else instead.

\author {\<author>}

In \author, \protect may be needed before some formatting commands. In HTML, the author will appear in a <div> of class author in the \maketitle. If the titling package is used, the author will also appear in a HTML meta tag, but \HTMLAuthor may be necessary to create a plain list of names if \author had affiliations added. \affiliation is a new addition to lwarp.

\date {\<date>}

\date works as expected. In HTML, this will appear in a <div> class titledate.

\thanks {\<text>}

\thanks are allowed in the titlepage fields, and will be rendered as HTML notes at the bottom of the title page.

7.13 HTML page meta descriptions

\HTMLDescription {\<A description of the web page.>}

Default: (none)

limitations

Each page of HTML output should have its own HTML meta description, which usually shows up in web search results, is limited to around 150 characters in length, and should not include the ASCII double quote character (").

placement

Use \HTMLDescription just before \begin{document} to set the description of the home page, and also just before each sectioning command such as \chapter or \section where a new file will be generated, depending on FileDepth. For example, if FileDepth is 1, use \HTMLDescription just before each \section command, and that description will be placed inside the HTML page for that \section. The same description will be used for all following HTML files as well, until reset by a new \HTMLDescription. It is best to use a unique description for each HTML file.

disabling

To disable the generation of HTML description meta tags, use:

\HTMLDescription{}

7.14 HTML homepage meta title

`\HTMLTitle` $\{\langle title \rangle\}$

Default: `\HTMLtitle{\thetitle}`

Sets the contents of the web page `<meta name="title">` element. May be set empty to cancel the meta title tag.

See section 7.6 for `\HTMLTitleBeforeSection` and `\HTMLTitleAfterSection`, used to set the title for HTML subpages.

7.15 HTML page meta author

`\HTMLAuthor` $\{\langle author \rangle\}$

Default: `\HTMLAuthor{\theauthor}`

Sets the contents of the web page `<meta name="author">` element. May be set empty to cancel the meta author tag.

`\author` may be used to create a list of authors and their affiliations, in several formats if using `authblk`, and these may not successfully parse properly into a sensible list for `\theauthor`. `\HTMLAuthor` may be used to set the meta tag to a simple list of names.

8 Special cases and limitations


Some commonly-used L^AT_EX expressions should be modified as follows to allow for a smooth conversion to both HTML and print-formatted outputs.

Need help?

See the [General Index](#) for “how-to”, and the [Troubleshooting Index](#) if something doesn't work. A [Troubleshooting](#) section is also available. The [Index of Objects](#) contains automated entries for each package, macro, environment, counter, boolean, and other objects; individually and also sorted by category.

8.1 Things to avoid

In the document, avoid the following:

 **options with braces** **Package options:** Package options may cause problems with `lwarp`, especially if they include curly braces.

If selecting options with braces in `\usepackage` does not work:

```
\usepackage[font={it,small}]{caption}% does not work
```

... try instead selecting the package options before loading `lwarp`:

```
\PassOptionsToPackage{font={it,small}}{caption}
```

```
...
```

```
\usepackage{lwarp}
```

```
...
```

```
\usepackage{caption}
```

... or try setting package options after the package has been loaded:

```
\usepackage{caption}
```

```
\captionsetup{font={it,small}}
```

page counter: Do not adjust the page counter. If doing so is required for the print version, place the adjustment inside a `warpprint` environment.

Custom math environment macros: Do not use expressions such as `\beq` as a replacement for `\begin{equation}`.

Custom macros in section, figure, table names: Custom macros which appear in sectioning commands or float captions then appear in the `.toc`, `.lof`, and `.lot` lists, and should be made robust using `\newrobustcmd` or `\robustify` from `etoolbox`, `xparse`, etc.

When setting `FileSectionNames` to `true` to name the HTML files from the section names, the file names are created from sanitized versions of the chapter or section names, but the section names must be plain text or something which expands into plain text. Robust macros will not work at the sectioning level which is used for file names, but a robust macro or other complicated name may be used for the mandatory argument of `\chapter`, `\section`, etc., if a plain-text version is also included in the optional argument:

```
\chapter[Plain Name]{\ARobustMacro{Fancy Name}}
```

8.1.1 Invalid HTML

Additionally, some objects are valid \LaTeX , but invalid HTML. An example is a tabular inside `\textbf`, since HTML does not allow a table inside a span. `lwarp` will create the table, and the browser may support it, but the result is technically invalid.

8.2 Formatting

8.2.1 Text formatting

- ⚠ **\bfseries, etc.** `\textbf`, etc. are supported, but `\bfseries`, etc. work only in some situations.
- ⚠ **HTML special chars** `&`, `<`, and `>` have special meanings in HTML. If `\&`, `\textless`, and `\textgreater` are used, proper HTML entities will be used, but there may be HTML parsing problems if these special characters occur unescaped in program listings or other verbatim text.
- program listings For program listings, the `listings` package is supported, and its `literate` option is used to convert `&`, `<`, and `>` to proper HTML entities.
- verbatim The various `verbatim`-related environments do not convert `&`, `<`, and `>`, so care must be taken to avoid accidentally including valid HTML code inside these environments. Adding a space on either side may be sufficient.

8.2.2 Small caps

- Bool FixSmallCaps Some fonts, such as `erewhon`, `utopia`, or `fbb`, and some packages such as `embrac`, copy/paste “SMALL CAPS” as all caps (“SMALL CAPS”), which `lwarp` then reads as all caps, so the text is printed in all caps. If small caps are being rendered as all caps, set:

```
\booltrue{FixSmallCaps}
```

- ⚠ **CJK fonts** Some CJK fonts may not work if `FixSmallCaps` is set true.

8.2.3 Horizontal and vertical space and rules

- \hspace `\hspace` is converted to an inline HTML span of the given width, except that `0` width is ignored, a width of `.16667em` is converted to an HTML thin breakable space (`U+2009`), and a `\fill` is converted to a `\quad`.
- \vspace `\vspace` is ignored for HTML.
- ~, \, `~` and `\,` are converted to HTML entities.
- \kern `\kern` and `\hskip` are entered into the HTML PDF output as-is, then interpreted by *pdftotext*, and thus usually appear as a single space.
- \rule `\rule` is converted to an HTML rule of the same dimensions, of the currently selected


text color.

`\hrule` `\vrule` Both `\hrule` and `\vrule` are ignored for HTML. To create a horizontal dividing rule across the page, use `\hrulefill` in its own paragraph.

`\hrulefill` `\hrulefill` usually creates a one-inch rule, similar to a “fill in the blank”. If it is used at the start of a new paragraph, it creates a `<div>` with a thin horizontal border across the page, as would often be done with `\hrule`.

8.2.4 Text alignment

Use the environments `center`, `flushright`, `flushleft` instead of the macros `\centering`, `\raggedright`, `\raggedleft`.

 **figure & table alignment** `\centering`, etc. are honored in a figure or table if they are the first command inside the float:


```
\begin{table*}
\centering
\caption{A Table}
...
```

8.2.5 Accents

Native \LaTeX accents such as `\`` will work, but many more kinds of accents are available when using Unicode-aware \XeLaTeX and \LuaLaTeX . If using accents in section names which will become file names, it is recommended to use the \LaTeX accents such as `\`` and `\v` instead of Unicode accents. The \LaTeX accents will have the accents stripped when creating the filenames, whereas the Unicode accents will appear in the file names, which may cause issues with some operating systems.

8.2.6 textcomp package

Pkg `textcomp` Some `textcomp` symbols do not have Unicode equivalents, and thus are not supported.

 **missing symbols** Many `textcomp` symbols are not supported by many system / browser fonts. In the CSS try referencing fonts which are more complete, but expect to see gaps in coverage.

8.2.7 Superscripts and other non-math uses of math mode

Use `x` instead of `^{x}`

8.2.8 Empty `\item` followed by a new line of text or a nested list:

lists Use a trailing backslash: `\item[label] \`

8.2.9 Filenames and URLs in lists or footnotes

filename underscore Escape underscores in the filenames:


```
\item[\href{file\_name.pdf}{text}]
```

8.2.10 relsize package

Pkg relsize For HTML, only the inline macros are supported: `\textlarger`, `\textsmaller`, and `\textscale`. Each becomes an inline span of a modified font-size.

`\relsize`, `\larger`, `\smaller`, and `\relscale` are ignored.

While creating SVG math for HTML, the original definitions are temporarily restored, and so should work as expected.

 **not small** The HTML browser's setting for minimum font size may limit how small the output will be displayed.

8.3 Boxes and minipages


8.3.1 Marginpars

`\marginpar` [*left*] [*right*] `\marginpar` may contain paragraphs, but in order to remain inline with the surrounding text `lwarp` nullifies block-related macros inside the `\marginpar`. Paragraph breaks are converted to `
` tags.

`\marginparBlock` [*left*] [*right*] To include block-related macros, use `\marginparBlock`, which takes the same arguments but creates a `<div>` instead of a ``. A line break will occur in the text where the `\marginBlock` occurs.


8.3.2 Save Boxes

 **HTML corrupted**

 **boxes** T_EX boxes are placed inline and do not allow line breaks, so boxes with long contents may overflow the line during HTML conversion. `lwarp` uses methods which help avoid this problem.

 **minipage, \parbox** `\savebox` and related do not (yet) support `minipage` or `\parbox`.


8.3.3 Minipages


 **inline** A line of text with an inline `minipage` or `\parbox` will have the `minipage` or `\parbox` placed onto its own line, because a paragraph is a block element and cannot be made inline-block.

placement `minipages` and `\parboxes` will be placed side-by-side in HTML unless you place a

`\newline` between them.


side-by-side Side-by-side minipages may be separated by `\quad`, `\qquad`, `\enskip`, `\hspace`, `\hfill`, or a `\rule`. When inside a `center` environment, the result is similar in print and HTML. Paragraph tags are suppressed between side-by-side minipages and these spacing commands, but not at the start or end of the paragraph.


 **minipage in a span** There is limited support for minipages inside an HTML ``. An HTML `<div>` cannot appear inside a ``. While in a ``, minipages, and `\parboxes`, and any enclosed lists have limited HTML tags, resulting in an “inline” format, without markup except for HTML breaks. Use `\newline` or `\par` for an HTML break.


 **minipage size** When using `minipage`, `\parbox`, and `fminipage`, a virtual 6×9 inch text area is used for `\linewidth`, `\textwidth`, and `\textheight`, both for sizing the minipage, and also for its contents.

if width is `\linewidth` If a minipage or `\parbox` is assigned a width of exactly `\linewidth`, in HTML it is automatically given no HTML width, thus allowed to fill the line as needed, similar to how it appears in print output.

full-width if HTML A new macro `\minipagefullwidth` requests that, during HTML output, the next single minipage or `\parbox` be generated without an HTML width attribute, allowing it to be the full width of the display rather than the declared print-output width. This may be useful where the printed version's width makes no sense in HTML.

 **tabular, multicols** Inside a `tabular` or `multicols` environment, where the width depends on the browser window, `\minipagefullwidth` is effectively used by default for every minipage or `\parbox` inside the environment. `\UseMinipageWidths` may be used to tell `lwarp` to honor the specified widths of all following minipages and `\parboxes` until the end of the local scope, and `\IgnoreMinipageWidths` may be used to tell `lwarp` to ignore the specified widths.

 **multicol** Inside a `multicols`, `\linewidth` is divided by the specified number of columns.

 **text alignment** Nested minipages adopt their parent's text alignment in HTML, whereas in regular L^AT_EX PDF output they do not. Use a `flushleft` or similar environment in the child minipage to force a text alignment.

8.3.4 Side-by-side minipages

Place side-by-side minipages inside a `center` environment, with horizontal space between them, such as `\quad`, `\qquad`, `\hspace`, or `\hfill`. The result is similar in print and HTML. Do not use space commands at the start or end of the line.

8.3.5 Framed minipages and other environments

`\fbox` can only be used around inline `` items during HTML output, but HTML cannot place a block element such as a `<div>` for a minipage or a list inside of a ``. Several options are provided for framing an object, depending on which kind of object and which packages are loaded:

`\fbox`
`\fboxBlock`
 Env `fminipage`

For a framed object, options include:

To remove the frame in HTML output: Place the `\fbox` command and its closing brace inside `\warpprint` environments. This will nullify the frame for HTML output.

For inline text:

To frame the contents inline with some formatting losses in HTML: This is the default action of `\fbox` when enclosing a `minipage`. During HTML output, `\fbox` nullifies the HTML tags for `minipage`, `\parbox`, and lists. The contents are included as inline text inside the `\fbox`'s `` of class `framebox`. For lists, line breaks are converted to HTML breaks. The result is a plain-text inline version of the contents, framed inline with the surrounding text, but lacking any extra HTML markup.

For inline minipage and lists:

To frame the contents on their own line with improved formatting in HTML: A new command `\fboxBlock` is included, intended to be a direct replacement for `\fbox` for cases where the `\fbox` surrounds a `minipage`, table, or list. For print output, this behaves as `\fbox`. For HTML output, the contents are placed inside an HTML `<div>` with the class `framed`, resulting in the contents being placed on their own line with a frame surrounding them. The contents preserve their HTML formatting, so lists and minipages look nicer, and valid HTML is created for a tabular. While an `\fbox` containing a tabular is valid \LaTeX code, the result in HTML is problematic since a table is a `<div>` not a ``, so use `\fboxBlock` around a tabular, or else place the tabular inside a `minipage`, or use `fminipage`, described next. Also see below regarding the “Misplaced alignment tab character &.” error.

For display tabular,
minipages, and lists:

To create a framed minipage in both print and HTML: A new environment `fminipage` is included. For print output, this is identical to `minipage`, except that it is also framed. For HTML output, this forms a `<div>` of class `framed`, the contents preserve their HTML formatting, and valid HTML is created for a tabular. Also see section 86 for a new environment `fcloorminipage`. Also see below regarding the “Misplaced alignment tab character &.” error.

colored boxes and frames:

To create colored frames and boxes: See section 588 for `xcolor`'s `\colorbox` and `\fcolorbox`, and `lwarp`'s additional `\colorboxBlock` and `\fcolorboxBlock`.

⚠ Misplaced alignment
tab character &

To frame tables or verbatim environments: Place the contents inside a `fminipage`, or perhaps a `\fboxBlock` for a tabular. Also, if using `\fboxBlock` with tabular, you will have to use `\StartDefiningTabulars` before the start of the macro which uses `\fboxBlock` and the tabular, and `\StopDefiningTabulars` afterwards. Also see the `lwarp` documentation for the `fancybox` package.

To frame equations: See section 240 for the `fancybox` package.

For fancy framed minipages: See packages `boxedminipage`, `shadow`, `fancybox`, `framed`, `mdframed`.

Custom environments: Use a custom environment to create a sidebar, containing a `BlockClass` environment with custom CSS formatting, and `\warpprintonly{\hrule}` command:

```
\begin{BlockClass}{frameminipage}% ignored in print output
% use \CSS\ to format div class framedminipage
```

```

\warpprintonly{\hrule} % only appears in print output
Contents
\warpprintonly{\hrule} % only appears in print output
\end{BlockClass}

```

8.3.6 fancybox package

Pkg fancybox
framed equation example

fancybox's documentation has an example FramedEqn environment which combines math, \Sbox, a minipage, and an \fbox. This combination requires that the entire environment be enclosed inside a lateximage, which is done by adding \lateximage at the very start of FramedEqn's beginning code, and \endlateximage at the very end of the ending code. Unfortunately, the HTML alt attribute is not used here.

```

\newenvironmentFramedEqn
{
\lateximage% NEW
\setlength{\fboxsep}{15pt}
... }{...
\[\fbox{\TheSbox}\]
\endlateximage% NEW
}

```

framing alternatives

\fbox works with fancybox. Also see lwarp's \fboxBlock macro and fminipage environment for alternatives to \fbox for framing environments.


framed table example

The fancybox documentation's example of a framed table using an \fbox containing a tabular does not work with lwarp, but the FramedTable environment does work if \fbox is replaced by \fboxBlock. This method does lose some HTML formatting. A better method is to enclose the table's contents inside a fminipage environment. The caption may be placed either inside or outside the fminipage:

```

\begin{table}
\begin{fminipage}{\linewidth}
\begin{tabular}{lr}
...
\end{tabular}
\end{fminipage}
\end{table}

```

 **framed verbatim** lwarp does not support the verbatim environment inside a span, box, or fancybox's \Sbox, but a verbatim may be placed inside a fminipage. The fancybox documentation's example FramedVerb may be defined as:

```

\newenvironment{FramedVerb}[1] % width
{
  \VerbatimEnvironment
  \fminipage{#1}
  \beginVerbatim
}{
  \endVerbatim
  \endfminipage
}

```

framed \VerbBox fancybox's \VerbBox may be used inside \fbox.

indented alignment LVerbatim, LVerbatimInput, and LUseVerbatim indent with horizontal space which may not line up exactly with what *pdftotext* detects. Some lines may be off slightly in their left edge.

8.3.7 mdframed package

Pkg mdframed Most basic functionality is supported, including frame background colors and single-border colors and thickness, title and subtitle background colors and borders and thickness, border radius, and shadow. CSS classes are created for mdframed environments and frame titles.

 **loading** When used, lwarp loads mdframed in HTML with framemethod=none.

font For title font, use

```
frametitlefont=\textbf,
```

instead of

```
frametitlefont=\bfseries,
```

where \textbf must appear just before the comma and will receive the following text as its argument (since the text happens to be between braces in the mdframed source). Since lwarp does not support \bfseries and friends, only one font selection may be made at a time.

theoremtitlefont theoremtitlefont is not supported, since the following text is not in braces in the mdframed source.

ignored options userdefinedwidth and align are currently ignored.

css classes Environments created or encapsulated by mdframed are enclosed in a <div> of class mdframed, and also class md<environmentname> for new environments.

Frame titles are placed in a <div> of class [mdframedtitle]. Subtitles are in a <div> of class [mdframedsubtitle], and likewise for subsubtitles.

8.3.8 tcolorbox package

Pkg tcolorbox tcolorbox is emulated for HTML and MATHJAX, and supported as-is inside a lateximage

or SVG math.

What has been tested to work (at least partly) includes:

- `tcolorbox`, `\tcbox`.
- Title, subtitle.
- Upper, lower parts.
- Colors and title fonts.
- Floating objects.
- Some layered box features.
- Counters, labels, references.
- `listings`, `listingsutf8`.
- theorems: Theorems are supported. `math`, `ams equation`, etc. are not supported. Use a `tcolorbox` with regular math inside it. `\tcboxmath` and `\tcbhighmath` are supported in SVG math, and emulated in MATHJAX.
- Fitting features: `\tcboxfit` becomes `\tcbox` in HTML.
- Footnote numbering does not match the printed output.
- MathJax emulation is provided for common macros.

⚠ **math**

⚠ **footnotes**

⚠ **undefined references** If using `cleveref`, it may be necessary to name theorems such as:

```
\crefname{tcb@cnt@mytheo}{my theorem}{my theorems}
```

8.4 Section names

If using named HTML files, by selecting `\booltrue{FileSectionNames}`, the generated filenames may be simplified by using `\FilenameSimplify` and `\FilenameNullify`:

```
\FilenameSimplify {<text>}
```

To remove common short words from the automatically-generated filenames, replacing each with a single hyphen “-”, use `\FilenameSimplify`:

```
\FilenameSimplify*{-in-}
\FilenameSimplify*{A-}
```

The first example removes the word “in” in the middle of a filename, and the second example removes “A” at the start of the filename. The star forces the arguments to be detokenized, which is required for a plain-text comparison. (The unstarred form is used for a token-sensitive comparison, which is seldom required by the user.) After simplification, repeated hyphen characters will be further simplified to a single hyphen “-”. Finally, single hyphens at the start or end of the filename are removed.

```
\FilenameNullify {<macros>}
```

⚠ **macros in section names** Macro names may appear in the automatically-generated file names. To remove these, create *non-robust* nullified versions of the macros, ensuring that each line ends with a percent character % as shown below. These are placed inside `\FilenameNullify`, which adds them to the list of macros which are nullified during filename generation. Low-level macros such as `\begingroup` will cause problems when nullified. Many macros such as `\textbf` are already nullified. `lwarp` also already nullifies built-in symbol and

textcomp macros, including if defined by xunicode, but not all xunicode macros. See the definition of `\LWR@nullfonts` for a complete list.

```
\FilenameNullify{%
  \renewcommand*{\macroname}[1]{#1}%
  \renewcommand*{\anothermacro}{}%
}
```

- ⚠ **duplicate filename** Avoid duplicate file names. Section names at levels which result in HTML file splits must be unique. `lwarp` will generate an error if a duplicate HTML filename is generated. Use the optional TOC caption entry parameter for formatting. Remember to `\protect` L^AT_EX commands which appear in section names and TOC captions.

- ⚠ **math in section names** If using named HTML files, in section names use paren math `\(x+y\)` instead of dollar math `$x+y$`. (Dollar math works, but appears in the filename.) Or, use a short name for the TOC entry without the math, or use `\texorpdfstring` from the `hyperref` package:

```
\section{Some math \texorpdfstring{$1+2=3$}{three}}
```

8.5 Cross-references

- ⚠ **label characters** labels Labels with special characters may be a problem. It is best to stick with alpha-numeric, hyphen, underscore, and perhaps the colon (if not French).

- ⚠ **empty link** \nameref `\nameref` refers to the most recently-used section where the `\label` was defined. If no section has been defined before the `\label`, the link will be empty. Index entries also use `\nameref` and have the same limitation.

8.5.1 Page references

- ⚠ **L^AT_EX page numbers** The printed page does not translate to the HTML page, so `\pageref` references are converted to parentheses containing `\pagerefPageFor`, which defaults to “see”, followed by a hyperlink to the appropriate object.

Ex:

```
\ref{sec:name} on page \pageref{sec:name}
in HTML becomes:
“Sec. 1.23 on page (see sec. 1.23)”.
```

`\pagerefPageFor` may be redefined to “page for”, empty, etc. See page 501.

8.5.2 cleveref and varioref packages


Pkg `cleveref` `cleveref` and `varioref` are supported, but printed page numbers do not map to HTML, so a section name or a text phrase are used for `\cpageref` and `\cpagerefrange`. This phrase includes `\cpagerefFor`, which defaults to “for”.

- ⚠ **cleveref page numbers**

Ex:


```
\cpageref{tab:first,tab:second}
in html becomes:
“pages for table 4.1 and for table 4.2”
```

See `\cpagerefFor` at page 721 to redefine the message which is printed for page number references.


 **varioref types** `cleveref` changes the behavior of `varioref` in that the reference type is automatically printed if `cleveref` is loaded. `lwarp` requires `cleveref`, so the HTML version will always automatically print the reference types even if the print mode does not. The simplest way to make them match is to require the `cleveref` package for the document.

8.5.3 Hyperlinks, `hyperref`, and `url`

`Pkg` `hyperref` `lwarp` emulates `hyperref`, including the creation of active hyperlinks, but does not require that `hyperref` be loaded by the document.

 **comments between arguments** Do not place a comment with a % character between arguments for `\hyperref`, etc., as it is neutralized for inclusion in HTML URLs.

`lwarp` can also load `url`, but `url` should not be used at the same time as `hyperref`, since they both define the `\url` command. `lwarp` does not (yet) attempt to convert `url` links into hyperlinks during HTML output, nor does the print version of `url` create hyperlinks.

 **backref** When generating HTML, `lwarp`'s emulation of `hyperref` does not automatically load `backref`, so `backref` must be loaded explicitly.

8.5.4 Footnotes, endnotes, and page notes

`lwarp` uses native \LaTeX footnote code, although with its own `\box` to avoid the \LaTeX output routine. The usual functions mostly work as-is.


footnote numbering To have footnote numbers reset each time footnotes are printed:

```
\setcounter{footnoteReset}{1}
```

For `bigfoot`, `manyfoot`, or `perpage`:

```
\MakePerPage{footnoteX}
— or —
\MakeSortedPerPage{footnoteX}
```

The footnotes are reset when they are printed, according to section level as set by `FootnoteDepth`, which is not necessarily by HTML page. This is recommended for `\alph`, `\Alph`, or `\fnsymbol` footnotes, due to the limited number of symbols which are available.

 **MathJax, \footnotemark** If using `MATHJAX`, after each math expression with a `\footnotemark`, adjust the footnote counter by the number of `\footnotemarks`:

```
\[ (math expression with two instances of \footnotemark) \]
\warphTMLonly{\addtocounter{footnote}{2}}
```

Similarly for endnotes, but *not* sidenotes.

Also for MATHJAX, \footnotename is used for a \footnotemark if the actual footnote number is not known. To redefine it, provide it before loading lwarp:


```
\providecommand{\footnotename}{something}
\usepackage{lwarp}
```

Similar for sidenotes. For endnotes:

```
\def\endnotename{something}% \def allows name to start with "end"
```

For the pagenote package, there is no \pagenotename to define, since there is no \pagenotemark command.

footmisc The footmisc stable option is emulated by lwarp.

 **sectioning commands** When using footnotes in sectioning commands, to generate consistent results between print and HTML, use the footmisc package with the stable option, provide a short toc entry, and \protect the \footnote:

```
\usepackage[stable]{footmisc}
...
\subsection[Subsection Name]
{Subsection Name\protect\footnote{A footnote.}}
```

memoir with footmisc If using memoir class, with which lwarp preloads footmisc, the stable option must be declared before lwarp is loaded:



memoir

```
\PassOptionsToPackage{stable}{footmisc}
\usepackage{lwarp}
...
```

Do not use a starred sectioning command. As an alternative, it may be possible to adjust \secnumdepth instead.

fancybox, fancyvrb



\VerbatimFootnotes



sectioning or displaymath

If using fancybox or fancyvrb with \VerbatimFootnotes, and using footnotes in a sectioning command or display math, use \footnotemark and \footnotetext:

```
\subsection[Subsection Name]
{Subsection Name\protect\footnotemark}
\footnotetext{A footnote with \verb+verbatim+.}
```

and likewise for equations or display math.

At present there is a bug such that paragraph closing tags are not present in footnotes when \VerbatimFootnotes are selected. The browser usually compensates.

pfnote



pfnote numbers

While emulating pfnote, lwarp is not able to reset HTML footnote numbers per page number to match the printed version, as HTML has no concept of page numbers. lwarp therefore uses continuous footnote numbering even for pfnote.

bigfoot, manyfoot



verbatim

Verbatim footnotes are not yet supported.

If using the `bigfoot` package, and possibly also `manyfoot`, problems may occur with counter allocation because `lwarp` uses many counters, and there is a difference in how counters numbered 256 and up are handled in `pdfLATEX`. With `bigfoot` this has been known to show up as an error related to one footnote insert being forbidden inside another. Another problem showed up as a input stack error, and which of these problems occurred depended on how many counters were allocated.

As a possible solution, try creating several new counters before defining `bigfoot` or `manyfoot` footnotes, hoping to shift the problematic counter above the 256 threshold. It may instead be necessary to use `XYLATEX` or `LuaATEX` instead of `pdfLATEX`.

8.5.5 `xr`, `xr-hyper`, and `xcite` packages

See section 5.17.

8.6 Front and back matter

8.6.1 Custom classes with multiple authors and affiliations

Some classes allow multiple authors and affiliations. Often it is possible to emulate these using a standard class along with `authblk`:

```
%\documentclass{customclass} % for print document
\documentclass{article} % for html document

\usepackage{lwarp}
\begin{warpHTML}
\usepackage{authblk}
\let\affiliation\affil % maybe required
\end{warpHTML}
```

8.6.2 Starred chapters and sections

HTML page and TOC

The following describes `\ForceHTMLPage` and `\ForceHTMLTOC`, which may be used for endnotes, glossaries, `tocbibind`, bibliographies, and the index. See the following sections where applicable. Continue here if interested in the reason for adding these commands to `lwarp`.

Some packages use `\chapter*` or `\section*` to introduce reference material such as notes or lists, often to be placed in the back matter of a book. These starred sections are placed inline instead of on their own HTML pages, and they are not given TOC entries.

`lwarp` provides a method to cause a starred section to be on its own HTML page, subject to `FileDepth`, and also a method to cause the starred section to have its own TOC entry during HTML output.

`\ForceHTMLPage` To place a starred section on its own HTML page, use `\ForceHTMLPage` just before the

`\chapter*` or `\section*`. **lwarp** will create a new page for the starred sectional unit.

A starred sectional unit does not have a TOC entry unless one is placed manually. The typical method using `\phantomsection` and `\addcontentsline` works for inline text but fails when the new starred section is given its own webpage after the TOC entry is created, or when creating an EPUB where the TOC entry will point to the page before the starred section. If the starred section has its own HTML page but no correct TOC entry pointing to that page, the page will be inaccessible unless some other link is created.

`\ForceHTMLTOC` To automatically force the HTML version of the document to have a TOC entry for a starred section, use `\ForceHTMLTOC` just before the `\chapter*` or `\section*`, and place `\phantomsection` and `\addcontentsline` inside a `warpprint` environment.

For print output, `\ForceHTMLTOC` and `\ForceHTMLPage` have no effect.

8.6.3 abstract package

Pkg abstract If using the number option with file splits, be sure to place the table of contents before the abstract. The number option causes a section break which may cause a file split, which would put a table of contents out of the home page if it is after the abstract.

8.6.4 titling and authblk

Pkg titling **lwarp** supports the native \LaTeX titling commands, and also supports the packages `authblk` and `titling`. If both are used, `authblk` should be loaded before `titling`.

package support
Pkg authblk
load order
`\published` and `\subtitle`
If using the `titling` package, additional titlepage fields for `\published` and `\subtitle` may be added by using `\AddSubtitlePublished` in the preamble. See section 66.8.

8.6.5 tocloft package

Opt [tocloft] titles If using `tocloft` with `tocbibind`, `anonchp`, `fncychap`, or other packages which change chapter title formatting, load `tocloft` with its `titles` option, which tells `tocloft` to use standard \LaTeX commands to create the titles, allowing other packages to work with it.

Pkg tocloft


Pkg tocloft

8.6.6 appendix package

Pkg appendix During HTML conversion, the option `toc` without the option `page` results in a TOC link to whichever section was before the appendices environment. It is recommended to use both `toc` and `also page` at the same time.

8.6.7 pagenote package

Pkg pagenote `pagenote` works as-is, but the `page` option is disabled.

 **labels** Note that labels in page notes do not appear as expected, even in the print version.


8.6.8 endnotes package

Pkg endnotes To place the endnotes in the toc, use:
[table of contents](#)

```
\usepackage{endnotes}
\appto\enoteheading{\addcontentsline{toc}{section}{\notesname}}
\renewcommand*{\notesname}{Endnotes} % optional
```


[HTML page](#) To additionally have the endnotes on their own HTML page, if FileDepth allows:

```
\ForceHTMLPage
\theendnotes
```

 **\endnotemark numbering** If using MATHJAX, see section 8.5.4 regarding the use of \endnotemark and \endnotetext.

8.6.9 BibTeX

\etalchar Displays a superscript “+” to indicate “and others”.

 **Modify *.bib** When enough authors are cited for a source, BibTeX may use the \etalchar command to display a math superscript with a + character to indicate “and others”. Without modification, this will result in an “Improper \prevdepth” error. At present, lwarp requires that \etalchar be replaced by a text superscript. To do so, add to the start of the .bib file the following:

```
@PREAMBLE{"\let\etalchar\relax \newcommand{\etalchar}[1]{\textsuperscript{#1}}"}

```

8.6.10 xcite package

See section 5.17.

8.6.11 gloss package

Pkg gloss To process the HTML glossary:

 **compiling** bibtex <projectname>_html.gls

8.6.12 glossaries package

Pkg glossaries
processing glossaries

Opt GlossaryCmd

Default: `makeglossaries`

Opt [lwarpmk] `printglossary`

Opt [lwarpmk] `htmlglossary`

lwarpmk has the commands `lwarpmk printglossary` and `lwarpmk htmlglossary`, which process the glossaries created by the glossaries package using that package's *makeglossaries* program.

The shell command to execute is set by the `lwarp` option `GlossaryCmd`, which defaults to `makeglossaries`. The print or HTML glossary filename is appended to this command.

⚠ *makeglossaries not found*

In some situations it may be required to modify the default command, such as to add the `perl` command in front:

```
\usepackage[
  GlossaryCmd={perl makeglossaries},
] {lwarp}
```

xindy language

To set the language to use for processing glossaries with *xindy*:

```
\usepackage[
  GlossaryCmd={makeglossaries -L english},
] {lwarp}
```

Other options for *makeglossaries* may be set as well.

placement and toc options

The glossaries may be placed in a numbered or unnumbered section, given a TOC entry, and placed inline or on their own HTML page:

Numbered section, on its own HTML page:

```
\usepackage[xindy,toc,numberedsection=nolabel]{glossaries}
...
\printglossaries
```

Unnumbered section, inline with the current HTML page:

```
\usepackage[xindy,toc]{glossaries}
...
\printglossaries
```

Unnumbered section, on its own HTML page:

```
\usepackage[xindy,toc]{glossaries}
...
\ForceHTMLPage
\printglossaries
```

⚠ *glossary style*

The default `style=item` option for glossaries conflicts with *lwarp*, so the style is forced to `index` instead.

⚠ *number list*

The page number list in the printed form would become `\namerefs` in HTML, which could become a very long string if many items are referenced. For now, the number list is simply turned off.

print/HTML versions

The print and HTML versions of the glossary differ in their internal page numbers. Separate commands for generating print and HTML glossaries are used, even though the page number is currently ignored.

8.6.13 nomencl package

Pkg nomencl To process the HTML nomenclature:

```
makeindex <project>_html.nlo -s nomencl.ist -o <project>_html.nls
```

8.6.14 Indexing overview

There are many ways to process indexes for a \LaTeX document, including native \LaTeX capabilities, a number of packages and classes, the possible availability of shell escape and *latexmk*, and the need to process print and HTML versions. *lwarp* attempts to provide easy recompilation of indexes along with the rest of the document, but the various indexing options must be set correctly. Numerous examples are given below. Some differ in minor details, so the important parts are highlighted in red, and options are in green.

Once set up properly, the entire document may be recompiled with **lwarpmk print** and **lwarpmk html**. In some cases, it will also be necessary to compile the indexes with **lwarpmk printindex** and **lwarpmk htmlindex**. A recompile may then be forced with **lwarpmk print1** and **lwarpmk html1**.

manual processing The user may continue to process indexes manually or by shell script without the use of *lwarpmk*, but adjustments will be required to process HTML indexes as well. In general, *.idx and *.ind files will be accompanied by *_html.idx and *_html.ind files.

custom index style If using a custom indexing style file, see sections 8.6.20 to 8.6.22.

link appearance To control how the index links appear in the HTML output, see the IndexRef option in section 7.5, page 104.

source code See section 76 for *lwarp*'s core index and glossary code, section 313 for index, section 499 for splitidx, section 312 for imakeidx, section 547 for tocbibind, and section 608.17 for memoir's indexing patches.

8.6.15 Indexing with makeidx, makeindex, xindy, xindex, gindex

lwarpmk processing The following allow the user to process indexes automatically, or using *lwarpmk*'s commands:

```
Enter ⇒ lwarpmk printindex
```

```
Enter ⇒ lwarpmk htmlindex
```

Prog makeindex For a single index using *makeindex*:

```
\usepackage[makeindex,latexmk]{lwarp}
```

The usual .idx and .ind files will be used, along with the new lwarp.ist style file. When creating the HTML index, "_html" is automatically appended to each of the names.

lwarpmk will use *latexmk* if specified, in which case *latexmk* will create the index automatically. Otherwise, use

Enter ⇒ **lwarpmk printindex**

Enter ⇒ **lwarpmk htmlindex**

to compile the indexes.

To use a custom configuration file, see section [8.6.20](#).

Prog xindy **For a single index using *xindy*:**

```
\usepackage[
  xindy,
  xindyLanguage=english,           <optional>
  xindyCodepage=utf8,             <optional>
  latexmk                          <optional>
]{lwarp}
```

The usual `.idx` and `.ind` files will be used, along with the new `lwarp.xdy` style file.

lwarpmk will use *latexmk* if specified, in which case *latexmk* will create the index automatically. Otherwise, use

Enter ⇒ **lwarpmk printindex**

Enter ⇒ **lwarpmk htmlindex**

to compile the indexes.

To use a custom configuration file, see section [8.6.21](#).

Prog xindex **For a single index using *xindex*:**

```
\usepackage[
  xindex,
  latexmk                          <optional>
]{lwarp}
```

The usual `.idx` and `.ind` files will be used.

lwarpmk will use *latexmk* if specified, in which case *latexmk* will create the index automatically. Otherwise, use

Enter ⇒ **lwarpmk printindex**

Enter ⇒ **lwarpmk htmlindex**

to compile the indexes.

To use a custom configuration file, see section [8.6.22](#).

Pkg gindex **For a single index using gindex:**

```
\usepackage[
    makeindex,
    makeindexStyle=gindex.ist,
    . . . or . . .
    makeindexStyle=gindexh.ist,
    latexmk
]{lwarp} <optional>
```

The usual .idx and .ind files will be used.

lwarpmk will use *latexmk* if specified, in which case *latexmk* will create the index automatically. Otherwise, use

Enter ⇒ **lwarpmk printindex**

Enter ⇒ **lwarpmk htmlindex**

to compile the indexes.

To use a custom configuration file, copy *gindex.ist* to a new file, modify, then specify it with *MakeindexStyle* as above. *lwarp* will automatically adapt to *gindex*'s *\indexpagessep* and *\indexrangesep* settings.

8.6.16 Indexing with index

Prog index

lwarp is told how to use *makeindex* using the *PrintIndexCmd* and *HTMLIndexCmd* options. The file *lwarp.ist* is specified, which generates index letter heads for print output and also allows special HTML formatting for HTML output.

For multiple indexes using *makeindex* and *index*:

(Assuming that the second index has file extensions .sist and .sind)

```
\usepackage[
    makeindex, latexmk,
    PrintIndexCmd={
        makeindex -s lwarp.ist <projectname>.idx ;
        makeindex -s lwarp.ist
        -o <projectname>.sind <projectname>.sid
    },
    HTMLIndexCmd={
        makeindex -s lwarp.ist <projectname>_html.idx ;
        makeindex -s lwarp.ist
        -o <projectname>_html.sind <projectname>_html.sid
    }
]{lwarp}
\usepackage{index}
. . .
\makeindex
\newindex{secondname}{sid}{sind}{Second Index}
```



WINDOWS

For WINDOWS, replace the two “;” characters with “&”.

When creating the HTML index, “_html” is automatically appended to the index filenames.

Use

Enter ⇒ **lwarpmk printindex**

Enter ⇒ **lwarpmk htmlindex**

to compile the indexes.

If the `latexmk` option is selected for `lwarp`, *latexmk* will compile the document but will *not* compile the indexes. **lwarpmk printindex** and **lwarpmk htmlindex** will still be required.

8.6.17 Indexing with `splitidx`

Prog `splitidx`

`lwarp` is told how to use *splitindex* using the `PrintIndexCmd` and `HTMLIndexCmd` options. The file `lwarp.ist` is specified, which generates index letter heads for print output and also allows special HTML formatting for HTML output.

If the `latexmk` option is selected for `lwarp`, *latexmk* will compile the document but will *not* compile the indexes. **lwarpmk printindex** and **lwarpmk htmlindex** will still be required.



\thepage When using `\AtWriteToIndex` or `\AtNextWriteToIndex`, the user must not refer to `\thepage` during HTML output, as the concept of a page number is meaningless. Instead, do

```
\addtocounter{LWR@autoindex}{1}
\LWR@new@label{LWRindex-\arabic{LWR@autoindex}}
```

where the `\index`-like action occurs, and then refer to `\arabic{LWR@autoindex}` instead of `\thepage` where the reference should occur.

See section 608.17 in the `lwarp-patch-memoir` package for the `\@wrsplindexhyp` macro as an example.

For multiple indexes using *makeindex* and *splitidx*:

```

\usepackage[
  makeindex, latexmk,
  PrintIndexCmd={
    splitindex <projectname> -- -s lwarp.ist
  },
  HTMLIndexCmd={
    splitindex <projectname>_html -- -s lwarp.ist
  }
]{lwarp}
\usepackage{splitidx}
...
\makeindex
\newindex[Second Index]{secondname}

```

When creating the HTML index, “_html” is automatically appended to each of the names.

Use

Enter ⇒ **lwarpmk printindex**

Enter ⇒ **lwarpmk htmlindex**

to compile the indexes.

For multiple indexes using *xindy* and *splitidx*:

```

\usepackage[
  xindy, latexmk,
  PrintIndexCmd={
    splitindex -m xindy <projectname> -- -M lwarp.xdy
    -L english -C utf8 <optional>
  },
  HTMLIndexCmd={
    splitindex -m xindy <projectname>_html -- -M lwarp.xdy
    -L english -C utf8 <optional>
  }
]{lwarp}
\usepackage{splitidx}
...
\makeindex
\newindex[Second Index]{secondname}

```

When creating the HTML index, “_html” is automatically appended to each of the names.

Use

Enter ⇒ **lwarpmk printindex**

Enter ⇒ **lwarpmk htmlindex**

to compile the indexes.

8.6.18 Indexing with imakeidx

Prog imakeidx

Due to the number of methods which may be used to process multiple indexes, the options for style file and *xindy* language and codepage must be specified in one of several different ways. These are described in detail later in this section, but are summarized here.

If shell escape is used, *imakeidx* will automatically compile the indexes by itself. Options specifying a custom style file and *xindy* language and codepage must be specified for each `\makeindex` command using its `options=` option, which must include *lwarp*'s special `lwarp.ist` or `lwarp.xdy` file, or a file based on them. If using a custom indexing style file, see sections 8.6.20 to 8.6.22.

The `splitindex` option is also available if shell escape is used, in which case the `splitidx` package and *splitindex* program will also be used.

If shell escape is not possible, *latexmk* may be used to automatically compile the indexes. The style, language, and codepage options are specified with *lwarp*'s `makeindexStyle`, `xindyStyle`, `xindyLanguage`, and `xindyCodepage` options. These are passed to *latexmk* by *lwarpmk*'s `lwarpmk printindex` and `lwarpmk htmlindex` commands.

Where shell escape and *latexmk* are not possible, *lwarpmk* may be used to manually compile the indexes. *lwarp*'s `PrintIndexCmd` and `HTMLIndexCmd` options are used.

For a single or multiple indexes using *makeindex* and *imakeidx*:

The index style `lwarp.ist` is automatically used for HTML output. This file turns on letter headings, so it may be desirable to specify it as an option, in which case it will also be used for print output, which will help match the print and HTML output.

```
\usepackage[makeindex,latexmk]{lwarp}
\usepackage[makeindex]{imakeidx}
...
\makeindex[options={-s lwarp.ist}]
\makeindex[name=secondname,options={-s lwarp.ist}]
```

imakeidx will automatically compile the indexes. Shell escape is not required while using *makeindex*. *latexmk* may be specified, and if so it will be used for `lwarpmk print` and `lwarpmk html`, but *imakeidx* will actually create the indexes.

For a single or multiple indexes using *makeindex* and *splitindex* with *imakeidx*:

The index style `lwarp.ist` is automatically used for HTML output. This file turns on letter headings, so it may be desirable to specify it as an option, in which case it will also be used for print output, which will help match the print and HTML output.

```

\usepackage[makeindex,latexmk]{lwarp}
\usepackage[makeindex,splitindex]{imakeidx}
...
\makeindex[options={-s lwarp.ist}]
\makeindex[name=secondname,options={-s lwarp.ist}]

```

⚠ enable shell escape

Shell escape is required while using *splitindex*. For the first compile, use

Enter ⇒ **pdflatex --shell-escape** projectname.tex

Enter ⇒ **pdflatex --enable-write18** projectname.tex (MiKTeX)

or similar with *xelatex* or *lualatex*. lwarp will remember that shell escape was used.

imakeidx will automatically execute *splitindex*, and will also use *makeindex* to compile the indexes.

latexmk may be specified, and if so it will be used for **lwarpmk print** and **lwarpmk html**, but *imakeidx* will actually create the indexes.

For multiple indexes using *xindy* and *imakeidx*, using shell escape:

Options may be given to *imakeidx*'s `\makeindex` command. The style file `lwarp.xdy` is automatically used for HTML output, and is not necessary for print output since the output will be similar. If language or codepage must be set, they should be specified as options for `\makeindex`, since *imakeidx* will process the indexes.

```

\usepackage[xindy,latexmk]{lwarp}
\usepackage[xindy,splitindex]{imakeidx}
...
\makeindex[
  options={ -M lwarp.xdy -L english -c utf8 }
]
\makeindex[
  name=secondname,
  options={ -M lwarp.xdy -L english -c utf8 }
]

```

⚠ enable shell escape

For the first compile, use

Enter ⇒ **pdflatex --shell-escape** projectname.tex

Enter ⇒ **pdflatex --enable-write18** projectname.tex (MiKTeX)

or similar with *xelatex* or *lualatex*. lwarp will remember that shell escape was used.

imakeidx will automatically execute *splitindex* if selected, and will also use *xindy* to compile the indexes.

If selected, *latexmk* will automatically recompile the entire document as necessary.

For indexes using *xindy* and *imakeidx*, without shell escape, but *with latexmk*:

lwarp's options are used, and are passed to *latexmk*.

```
\usepackage[
  xindy,
  xindyLanguage=english,           <optional>
  xindyCodepage=utf8,             <optional>
  latexmk,
]{lwarp}
\usepackage[xindy]{imakeidx}
...
\makeindex
\makeindex[name=secondname]
```

latexmk will create the indexes automatically when **lwarpmk print** and **lwarpmk html** are executed.

For indexes using *xindy* and *imakeidx*, without shell escape, and *without latexmk*:

lwarpmk must be told how to create the indexes:

```
\usepackage[
  xindy,
  PrintIndexCmd={
    xindy -M lwarp.xdy -L english -C utf8
    <projectname>.idx ;
    xindy -M lwarp.xdy -L english -C utf8
    secondname.idx
  },
  HTMLIndexCmd={
    xindy -M lwarp.xdy -L english -C utf8
    <projectname>_html.idx ;
    xindy -M lwarp.xdy -L english -C utf8
    secondname_html.idx
  }
]{lwarp}
\usepackage[xindy]{imakeidx}
...
\makeindex
\makeindex[name=secondname]
```

 **WINDOWS**

For WINDOWS, replace the two “;” characters with “&”.

<projectname> is the \jobname: if compiling “name.tex”, use the filenames name.idx and name_html.idx.

Use

Enter ⇒ **lwarpmk printindex**

Enter ⇒ **lwarpmk htmlindex**

to compile the indexes.

For multiple indexes using *xindex* and *imakeidx*, using shell escape:

xindex, *makeindex*, *imakeidx*, and *splitindex* can all work together:

```
\usepackage[%
  xindex,
  xindexConfig=-imakeidx,
  latexmk
]{lwarp}
\usepackage[makeindex,splitindex]{imakeidx}
...
\makeindex[%
  options={ -s lwarp.ist} }
]
\makeindex[
  name=secondname,
  options={ -s lwarp.ist} }
]
```

 enable shell escape

For the first compile, use:

Enter ⇒ **pdflatex --shell-escape projectname.tex**

Enter ⇒ **pdflatex --enable-write18 projectname.tex** (MiKTeX)

or similar with *xelatex* or *lualatex*. *lwarp* will remember if shell escape was used.

xindex will use *imakeidx*, and *imakeidx* will automatically execute *splitindex* if selected.

If selected, *latexmk* will automatically recompile the entire document as necessary.

8.6.19 Indexes with memoir

For a single index with memoir and *makeindex*:

```
\documentclass{memoir}
\usepackage[makeindex,latexmk]{lwarp}
...
\makeindex
```

The usual *.idx* and *.ind* files will be used, along with the *lwarp.ist* style file.

lwarpmk will use *latexmk* if specified, in which case *latexmk* will create the index automatically. Otherwise, use

Enter ⇒ **lwarpmk printindex**

Enter ⇒ **lwarpmk htmlindex**

to compile the indexes.

For multiple indexes with memoir and *makeindex*, using *latexmk*:

lwarp's options are used, and are passed to *latexmk*.

```
\documentclass{memoir}
\usepackage[makeindex,latexmk]{lwarp}
...
\makeindex
\makeindex[secondname]
```

lwarpmk will use *latexmk* to create the indexes automatically when the user executes **lwarpmk print** and **lwarpmk html**.

For multiple indexes with memoir and *makeindex*, without *latexmk*:

lwarpmk must be told how to create the indexes:

```
\documentclass{memoir}
\usepackage[
  makeindex,
  PrintIndexCmd={
    makeindex -s lwarp.ist <projectname>.idx ;
    makeindex -s lwarp.ist secondname.idx
  },
  HTMLIndexCmd={
    makeindex -s lwarp.ist <projectname>_html.idx ;
    makeindex -s lwarp.ist secondname_html.idx
  }
]{lwarp}
...
\makeindex
\makeindex[secondname]
```

 **WINDOWS**

For WINDOWS, replace the two “;” characters with “&”.

<projectname> is the \jobname: if compiling “name.tex”, use the filenames name.idx and name_html.idx.

Use

Enter ⇒ **lwarpmk printindex**

Enter ⇒ **lwarpmk htmlindex**

to compile the indexes.

For a single index with memoir and xindy:

```

\documentclass{memoir}
\usepackage[
    xindy,
    xindyLanguage=english,
    xindyCodepage=utf8,
    latexmk
]{lwarp}
...
\xindyindex
\makeindex

```

<optional>
<optional>
<optional>

The usual .idx and .ind files will be used, along with the lwarp.xdy style file.

lwarpmk will use *latexmk* if specified, in which case *latexmk* will create the index automatically. Otherwise, use

Enter ⇒ **lwarpmk printindex**

Enter ⇒ **lwarpmk htmlindex**

to compile the indexes.

For multiple indexes with memoir and xindy, using latexmk:

lwarp's options are used, and are passed to *latexmk*.

```

\documentclass{memoir}
\usepackage[
    xindy,
    xindyLanguage=english,
    xindyCodepage=utf8,
    latexmk
]{lwarp}
...
\xindyindex
\makeindex
\makeindex[secondname]

```

<optional>
<optional>

lwarpmk will use *latexmk* to create the indexes automatically.

For multiple indexes with memoir and xindy, without latexmk:

lwarpmk must be told how to create the indexes:

```
\documentclass{memoir}
\usepackage[
  xindy,
  PrintIndexCmd={
    xindy -M lwarp.xdy -L english -C utf8
    <projectname>.idx ;
    xindy -M lwarp.xdy -L english -C utf8
    secondname.idx
  },
  HTMLIndexCmd={
    xindy -M lwarp.xdy -L english -C utf8
    <projectname>_html.idx ;
    xindy -M lwarp.xdy -L english -C utf8
    secondname_html.idx
  }
]{lwarp}
...
\xindyindex
\makeindex
\makeindex[secondname]
```



WINDOWS

For WINDOWS, replace the four “;” characters with “&”.

<projectname> is the \jobname: if compiling “name.tex”, use the filenames name.idx and name_html.idx.

Use

Enter ⇒ **lwarpmk printindex**

Enter ⇒ **lwarpmk htmlindex**

to compile the indexes.

8.6.20 Using a custom *makeindex* style file

Prog	makeindex	When using <i>makeindex</i> , <i>lwarpmk</i> uses the file <code>lwarp.ist</code> to process the index. This file
File	<code>lwarp.ist</code>	is over-written by <i>lwarp</i> whenever a print version of the document is processed.

To use a custom *makeindex* style file:

1. Copy `lwarp.ist` to a new filename such as `projectname.ist`
2. Make changes to `projectname.ist`. Keep the lines which refer to `\hyperindexref`. These lines creates the hyperlinks for the HTML index. During print output `\hyperindexref` becomes a null function.
3. If changing

```
delim_n -and- delim_r
```

in `projectname.ist`, then in the document preamble redefine

`\IndexPageSeparator` -and- `\IndexRangeSeparator`

to match.

Opt `makeindexStyle`

4. In the document source use the `makeindexStyle` option for `lwarp`:

```
\usepackage[
...other options ...
makeindex,
makeindexStyle=projectname.ist,
]{lwarp}
```

Likewise, refer to the custom style file if using `\PrintIndexCmd`, `\HTMLIndexCmd`, or `\LatexmkIndexCmd`.

5. Recompile the print version, which causes `lwarp` to rewrite the `lwarpmk.conf` configuration file. This tells `lwarpmk` to use the custom `projectname.ist` file instead of `lwarp.ist`.

8.6.21 Using a custom *xindy* style file

Prog `xindy`
File `lwarp.xdy`

When using *xindy*, `lwarpmk` uses the file `lwarp.xdy` to process the index. This file is over-written by `lwarp` whenever a print version of the document is processed.

To use a custom *xindy* style file:

1. Copy `lwarp.xdy` to a new filename such as `projectname.xdy`
2. Make changes to `projectname.xdy`.

Keep the lines which refer to `\hyperindexref`:

```
(define-attributes (("hyperindexref"))
(markup-locref :open "\hyperindexref{" :close "}")
...
(markup-locref :open "\textit{\hyperindexref{" :close "}}" :attr "textit")
```

These lines create the hyperlinks for the HTML index. During print output `\hyperindexref` becomes a null function.

To create custom styles, refer to the lines for `\textbf` and `\textit`.

3. If changing any of

```
markup-locref-list :sep
markup-locclass-list :open
markup-locclass-list :sep
markup-crossref-layer-list :sep
markup-range :sep
```

in `projectname.xdy`, then in the document preamble redefine

`\IndexPageSeparator` -and- `\IndexRangeSeparator`

to match.

- Opt xindyStyle 4. In the document source use the xindyStyle option for **lwarp**:
- ```
\usepackage[
 ... other options ...
 xindy,
 xindyStyle=projectname.xdy,
]{lwarp}
```
- Likewise, refer to the custom style file if using `\PrintIndexCmd`, `\HTMLIndexCmd`, or `\LatexmkIndexCmd`.
5. Recompile the print version, which causes **lwarp** to rewrite the `lwarpmk.conf` configuration file. This tells *lwarpmk* to use the custom `projectname.xdy` file instead of `lwarp.xdy`.

### 8.6.22 Using a custom *xindex* style file

Prog xindex To use a custom *xindex* style file:

 filename

1. Copy `xindex-cfg.lua` to a new filename such as `xindex-projectname.lua`. The filename must start with `xindex-` and end with `.lua`.
2. Make changes to `xindex-projectname.lua`.
3. If changing
 

```
itemPageDelimiter -and- rangeSymbol
```


 in `xindex-projectname.lua`, then in the document preamble redefine
 

```
\IndexPageSeparator -and- \IndexRangeSeparator
```


 to match.

- Opt xindexConfig 4. In the document source use the `xindexConfig` option for **lwarp**:
- ```
\usepackage[
  ... other options ...
  xindex,
  xindexConfig=projectname, % (without xindex- or .lua)
]{lwarp}
```
- Likewise, refer to the custom style file if using `\PrintIndexCmd`, `\HTMLIndexCmd`, or `\LatexmkIndexCmd`.
5. Recompile the print version, which causes **lwarp** to rewrite the `lwarpmk.conf` configuration file. This tells *lwarpmk* to use the custom `xindex-projectname.lua` file instead of the default `xindex-cfg.lua`.

8.6.23 Additional indexing limitations

 *xindy* with *hyperref* *xindy* and *hyperref* may not work well together for print output with “see”, “see also”, reference ranges, or stylized index references. It may be necessary to turn off hyper-referencing for indexes:

```
\usepackage[hyperindex=false]{hyperref}
```

 **empty index** If an HTML index is empty, it may be necessary to add the following before `lwarp` is loaded:

```
\usepackage{morewrites}
\morewritessetup{allocate=10}
...
\usepackage{lwarp}
```

makeindex custom display styles When using *makeindex*, custom display styles are possible:

```
\begin{warpprint}
\newcommand{\notesstyle}[1]{#1nn}
\end{warpprint}

\begin{warpHTML}
\makeatletter
\newcommand{\notesstyle}[1]{\LWR@doindexentry{#1} notes }
\makeatother
\end{warpHTML}
...
A sentence.\index{key|notesstyle}
```

xindy custom display styles For custom styles with *xindy*, see `lwarp.xdy` for `\textbf` and `\textit` as examples.

8.6.24 Index positions, `roc`, `tocbibind`

placement and `roc` options An index may be placed inline with other HTML text, or on its own HTML page:

Pkg `makeidx` **Inline, with a manual `roc` entry:**

A commonly-used method to introduce an index in a \LaTeX document:

```
\cleardoublepage
\phantomsection
\addcontentsline{toc}{section}{\indexname}% or chapter
\printindex
```

Pkg `makeidx` **On its own HTML page, with a manual `roc` entry:**

```
\begin{warpprint}
\cleardoublepage
\phantomsection
\addcontentsline{toc}{section}{\indexname}% or chapter
\end{warpprint}
\ForceHTMLPage
\ForceHTMLTOC
\printindex
```

Pkg `tocbibind` **Inline, with an automatic `roc` entry:**

The `tocbibind` package may be used to automatically place an entry in the `roc`.

```

\usepackage[nottoc]{tocbibind}
...
\cleardoublepage
\phantomsection % to fix print-version index link
\printindex

```

Pkg `tocbibind` **On its own HTML page, with an automatic toc entry:**

```

\usepackage[nottoc]{tocbibind}
...
\cleardoublepage
\phantomsection % to fix print-version index link
\ForceHTMLPage
\printindex

```

Opt [tocbibind] `numindex` Use the `tocbibind` `numindex` option to generate a numbered index. Without this option, the index heading has no number.

numbered index section

Other packages, such as `imakeidx`, may also have options for including the index in the Table of Contents.

Pkg `tocloft`

If using `tocloft` with `tocbibind`, `anonchap`, `fncychap`, or other packages which change chapter title formatting, load `tocloft` with its `titles` option, which tells `tocloft` to use standard L^AT_EX commands to create the titles, allowing other packages to work with it.

⚠ **tocloft & other packages**

8.7 Math

8.7.1 Math in section names

⚠ **math in section names**

If using named HTML files, in section names use paren math `\(x+y\)` instead of dollar math `$x+y$`. (Dollar math works, but appears in the filename.) Or, use a short name for the toc entry without the math, or use `\texorpdfstring` from the `hyperref` package:

```

\section{Some math \texorpdfstring{$1+2=3$}{three}}

```

8.7.2 Rendering tradeoffs

Math rendering Math may be rendered as SVG graphics or using the MATHJAX JavaScript display engine.

svg files Rendering math as images creates a new svg file for each expression, except that an MD5 hash is used to combine identical duplicates of the same inline math expression into a single file, which must be converted to svg only once. Display math is still handled as individual files, since it may contain labels or references which are likely to change.

svg inline The SVG images are currently stored separately, but they could be encoded in-line directly into the HTML document. This may reduce the number of files and potentially speed loading the images, but slows the display of the rest of the document before the images are loaded.

- PNG files** Others L^AT_EX-to-HTML converters have used PNG files, sometimes pre-scaled for print resolution but displayed on-screen at a scaled down size. This allows high-quality print output at the expense of larger files, but SVG files are the preferred approach for scalable graphics.
- MathML** Conversion to MathML might be a better approach, among other things allowing a more compact representation of math than SVG drawings. Problems with MathML include limited browser support and some issues with the fine control of the appearance of the result. Also see section 10 regarding EPUB output with MATHJAX.

8.7.3 SVG option

- SVG math option** For SVG math, math is rendered as usual by L^AT_EX into the initial PDF file using the current font¹⁴, then is captured from the PDF and converted to SVG graphics via a number of utility programs. The SVG format is a scalable-vector web format, so math may be typeset by L^AT_EX with its fine control and precision, then displayed or printed at any size, depending on (sometimes broken) browser support. An HTML alt attribute carries the L^AT_EX code which generated the math, allowing copy/paste of the L^AT_EX math expression into other documents.

- SVG image font size** For the lateximage environment, the size of the math and text used in the SVG image may be adjusted by setting \LateximageFontSizeName to a font size name — *without the backslash*, which defaults to:

```
\renewcommand{\LateximageFontSizeName}{normalsize}
```

For inline SVG math, font size is instead controlled by \LateximageFontScale, which defaults to:

```
\newcommand*{\LateximageFontScale}{.75}
```

- SVG math copy/paste** For SVG math, text copy/paste from the HTML <alt> tags lists the equation number or tag for single equations, along with the L^AT_EX code for the math expression. For \mathcal{AMS} environments with multiple numbers in the same environment, only the first and last is copy/pasted, as a range. No tags are listed inside a starred \mathcal{AMS} environment, although the \tag macro will still appear inside the L^AT_EX math expression.

- ⚠ **SVG math size, baseline** SVG math sizing and baselines are improved if the graphics or graphicx package is loaded. An almost-invisible marker is placed at either end of the image to assist in cropping and computing the baseline. A warning is issued at the end of the compile if graphics or graphicx are not used.

- ⚠ **SVG math in T_EX boxes** SVG math does not work inside T_EX boxes, since a \newpage is required before and after each image.

8.7.4 MATHJAX option

- MATHJAX math option** The popular MATHJAX alternative (mathjax.org) may be used to display math.

Prog MathJax

¹⁴See section 593 regarding fonts and fractions.


When MATHJAX is enabled, math is rendered twice:

1. As regular L^AT_EX PDF output placed inside an HTML comment, allowing equation numbering and cross referencing to be almost entirely under the control of L^AT_EX, and
2. As detokenized printed L^AT_EX commands placed directly into the HTML output for interpretation by the MATHJAX display scripts. An additional script is used to pre-set the equation number format and value according to the current L^AT_EX values, and the MATHJAX cross-referencing system is ignored in favor of the L^AT_EX internal system, seamlessly integrating with the rest of the L^AT_EX code.

8.7.5 Customizing MATHJAX

equation numbering lwarp detects and adjusts MATHJAX equation numbering format for article and book style equations as well as `amsmath \numberwithin` for chapters, sections, and subsections. Custom equation number formats may be set as follows, for example:


```
\renewcommand*{\theequation}{\Alph{section}.\arabic{equation}}
\AtBeginDocument{
  \renewcommand*{\theMathJaxsection}{\Alph{section}.}
}
```

 **subequation** The `amsmath` `subequations` environment is supported, but only with `\alpha` subequation numbering.

global customizations MATHJAX does not have preexisting support every possible math function. Additional MATHJAX function definitions may be defined in the preamble. These will be declared at the start of each HTML page, and thus will have a global effect across all HTML pages.

Examples:

```
\begin{warpMathJax}
\CustomizeMathJax{
  \newcommand{\expval}[1]{\langle#1\rangle}
  \newcommand{\abs}[1]{\lvert#1\rvert}
}
\CustomizeMathJax{\newcommand{\arcsinh}{\text{arcsinh}}}
\CustomizeMathJax{\newcommand{\arccosh}{\text{arccosh}}}
\CustomizeMathJax{\newcommand{\NN}{\mathbb{N}}}
\end{warpMathJax}
```

 **slow compilation** To avoid a slowdown in compile speed, use the `warpMathJax` environment to prevent its contents from being processed in print or svg math output. Also, place each new definition inside its own `\CustomizeMathJax`. A warning to this effect is issued if an overly-long definition is attempted.

lwarp already provides MATHJAX customizations for some packages.

siunitx When using `siunitx`, a similar process may be used to add custom units:

```

\begin{warpMathJax}
\CustomizeMathJax{\newcommand{\myunit}{\mathrm{WXYZ}}}}
\CustomizeMathJax{\newcommand{\umyunit}{\mathrm{\micro\myunit}}}}
\end{warpMathJax}

```

advanced control For more advanced control over dynamically creating custom definitions, see as an example the `lwarp` definition for `\DeclarePairedDelimiterX`, in section 355, [mathtools](#).

local customizations For customizations local to the current HTML page only, macros may be defined as follows:

```

\begin{warpMathJax}
\(\ \newcommand{\macroname}{. . . } \)
\(\ \newcommand{\anothername}{. . . } \)
\end{warpMathJax}

```

To maintain compile speed, use the `warpMathJax` environment, and use a separate math environment for each definition.

`\ifstar` For MATHJAX, use `\ifstar` instead of `\@ifstar`:

```

\CustomizeMathJax{
  \def\myname{
    \ifstar\starredaction\unstarredaction
    % (Do not place anything after!)
  } }

```

`\ifnextchar` For MATHJAX, use `\ifnextchar` instead of `\@ifnextchar`:

```

\CustomizeMathJax{csdef\myname{\ifnextchar X \found\notfound}}

```

“X” may be a single ASCII character, or a hex number inside braces, ex:

```

\CustomizeMathJax{\def\myname{\ifnextchar{0x7B}\found\notfound}}

```

Use “(” or “{0x28}” for a left parenthesis, “{0x7B}” for a left brace, “{0x7D}” for a right brace, or “{0x5C}” for a backslash.

8.7.6 MATHJAX limitations

MATHJAX limitations Limitations when using MATHJAX include:

Prog MathJax



`\multicolumn`, `multirow`

- MATHJAX does not support `\multicolumn` or `multirow`. These may be used in text tabulars or SVG math, but in MATHJAX math arrays they are emulated. `\multicolumn` only fills a single cell, resulting in a short row. `\multirow` simply prints its text on the first line.



footnotes

- Footnotes are emulated when used inside a MATHJAX expression. For an equation with a single footnote, the correct footnote number is used. For non-equations, `\footnotename` is used instead, since the actual number cannot be tracked. See section 8.5.4 regarding the use of footnotes with MATHJAX.



references

- Inside a MATHJAX expression, references to equations work within the same HTML web page, but do not work when referring to an equation in a different

HTML web page. Outside of a MATHJAX expression, in the text body, references work as expected.

lateximage

- Math appearing inside a lateximage, and therefore also inside a Tikz or picture environment, is rendered as SVG math even if MATHJAX is used in the rest of the document.

siunitx

- For siunitx, see [siunitx package](#), section 8.7.12.

physics

- For physics, see [physics package](#), section 8.7.14.

tabbing

- A tabbing environment is emulated using an HTML <pre>. While MATHJAX is enabled inside tabbing, the browser may not correctly render the horizontal alignment of the math and text following after on the same line.



other macros and packages

- Other math-related macros and packages are not directly supported by MATHJAX, including \ensuremath and bigdelim, and occasionally-used macros such as \relax. While using MATHJAX, lwarp provides emulation for footnotes, bm, mathtools, nicefrac, siunitx, and units.

8.7.7 Catcode changes

preamble macros with math

The math shift character \$ is not set for HTML output until after the preamble. Macros defined in the preamble which contain \$ must be enclosed between \StartDefiningMath and \StopDefiningMath to temporarily change to the HTML meaning of \$:

```
\StartDefiningMath
\newcommand{. . . }
\StopDefiningMath
```

As an alternative, use \ (and \) instead of \$, in which case \StartDefiningMath and \StopDefiningMath are not necessary.

If a package defines macros using \$, it may be necessary to use \StartDefiningMath and \StopDefiningMath before and after loading the package.

8.7.8 Complicated inline math objects

\inlinemathnormal
\inlinemathother

changing contents

complicated alt tag

An inline math expression is usually converted to a reusable hashed svg math image, or a MathJax expression. The hash or expression depends on the contents of the math expression. In most cases this math expression is static, such as $x+1$, so the image can be reused for multiples instances of the same expression. In some cases, the math expression includes a counter or other object which may change between uses. Another problem is complicated contents which do not expand well in an alt tag. The macro \inlinemathother may be used before a dynamic math expression, and \inlinemathnormal after. Doing so tells lwarp to use an unhashed svg math image, even if MathJax is in use. See section 43.

8.7.9 Complicated display math objects

\displaymathnormal

By default, or when selecting \displaymathnormal, MATHJAX math display environ-

ments print their contents as text into HTML, and SVG display math environments render their contents as SVG images and use their contents as the alt tag of HTML output. To do so, the contents are loaded into a macro for reuse. In some cases, such as complicated Tikz pictures, compilation will fail.

`\displaymathother`
MathJax unsupported
 complicated alt tag

When selecting `\displaymathother`, it is assumed that the contents are more complicated than “pure” math. An example is an elaborate Tikz picture, which will not render in MATHJAX and will not make sense as an HTML alt tag. In this mode, MATHJAX is turned off, math display environments become SVG images, even if MATHJAX is selected, and the HTML alt tags become simple messages. The contents are internally processed as an environment instead of a macro argument, so complicated objects such as Tikz pictures are more likely to compile successfully.

8.7.10 ntheorem package

Pkg ntheorem

⚠ Font control

This conversion is not total. Font control is via CSS, and the custom L^AT_EX font settings are ignored.

⚠ cref reference format
 undefined

If the print version does not use `cleveref`, place all `\theoremstyle` and `\newtheorem` declarations in the preamble inside `\AtBeginDocument`.¹⁵ For some theorems, it may also be required to add inside `\AtBeginDocument` something such as:

```
\AtBeginDocument{ % if not using cleveref package
  \theoremstyle{definition}
  \newtheorem{dtheorem}{Definition}
  . . .
  \usepackage{etoolbox} % for \ifdef
  \ifdef{\cref}{
    \crefname{Proof}{Proof}{Proofs}
  }{}
}
```

⚠ Equation numbering

`ntheorem` has a bug with equation numbering in $\mathcal{A}\mathcal{M}\mathcal{S}$ environments when the option `thref` is used. `lwarp` does not share this bug, so equations with `\split`, etc, are numbered correctly with `lwarp`’s HTML output, but not with the print output. It is recommended to use `cleveref` instead of `ntheorem`’s `thref` option.

8.7.11 mathtools package

Pkg mathtools

⚠ equation numbering

`showonlyrefs` is disabled, as it conflicts with `cleveref`, which is used by `lwarp`. Equation numbers may not match the print version.

⚠ italic correction

`mathic` is not emulated for HTML.

⚠ MATHJAX

If using MATHJAX:

- `mathtools disallowspace` does not work for MATHJAX. Protect brackets which are not optional arguments, such as:


¹⁵`lwarp` uses `cleveref` for the HTML conversion, and loads `cleveref` `\AtEndPreamble`, just before `\AtBeginDocument`.


```
\begin{gathered}{{}}
[p]=1 . . .
\end{gathered}
```


- `showonlyrefs` does not work in MATHJAX, and will result in a difference in equation numbering compared to the print version.
- Due to MATHJAX limitations, the following do not render well: `\overbracket`, `\underbracket`, `\overbrace`, `\underbrace`, `rcases`, `drcases`, `\Aboxed`, and `\ArrowBetweenLines`.
- For the new cases-like environments, `\text` must be used to set the normal roman font if desired.
- `alignat` in MATHJAX requires math mode, but in L^AT_EX it doesn't. It may be required to use `warpHTML` and `warpprint` to isolate a version for each mode.
- `\DeclarePairedDelimiter` and related must be in the preamble before `\begin{document}`.

8.7.12 siunitx package

Pkg `siunitx` Due to *pdftotext* limitations, fraction output is replaced by symbol output for per-mode and quotient-mode.
fractions

 **math mode required** Some units will require that the expression be placed inside math mode.


 **tabular** Tabular S columns are rendered as simple c columns, and tabular s columns are not supported. These may be replaced by c columns with each cell contained in `\num` or `\si`.


 **MathJax** For math mode with svg display, the original `siunitx` code is used while generating the svg image. For text mode, `lwarp` uses an emulation which provides a very effective HTML interpretation of `siunitx`. For math expressions while using MATHJAX, a limited emulation is used. Most functions work reasonably well, but many options cannot be emulated. `siunitx` macros with more than one optional value cannot absorb the second optional value, and complicated parsing such as for `\ang` is not supported. The result usually looks fine, and otherwise is enough to get the meaning across.

`lwarp`'s MATHJAX emulation for `siunitx` is meant to be a stop-gap measure until an extension is included in MATHJAX. As of this writing, the third-party `siunitx` extension for MATHJAX is not currently hosted at any public CDN, thus `siunitx` is not usable with this extension unless a local copy of this extension is created first. See `\MathJaxFilename` to select a custom MathJax script, but `lwarp`'s emulation would have to be disabled as well.

Document modifications required for MATHJAX:

custom units • Custom units may be added with `\CustomizeMathJax`. See the `lwarp-siunitx` code for examples.

 **unit spacing** • Units work better using `~` between units instead of using periods.

-  `\square`, `\cubic`
- To square or cube compound units, enclose the following compound units in braces:

`\cubic{\centi\meter}`

Single units do not require braces.

Also see **MATHJAX option**, section 8.7.4.

8.7.13 units and nicefrac packages

Pkg units units and nicefrac work with lwarp, but MATHJAX does not have an extension for units or nicefrac. These packages do work with lwarp's option `svgmath`.

8.7.14 physics package

Pkg physics physics works as-is for HTML with SVG math.

For MATHJAX, the MATHJAX v3 physics extension is used.

8.7.15 newtxmath package

Pkg newtxmath The proper load order is:

 loading sequence

```
...
\usepackage{lwarp}
...
\usepackage{amsthm}
\usepackage{newtxmath}
...
```

8.8 Graphics

Pkg graphics Avoid using the `\includegraphics scale` option. Change:

Pkg graphicx `\includegraphics[scale=<xx>]{...}`

 scale

to:

```
\includegraphics[width=<yy>\linewidth]{...}
```

`\includegraphics file formats`

For `\includegraphics` with `.pdf` or `.eps` files, the user must provide a `.pdf` or `.eps` image file for use in print mode, and also a `.svg`, `.png`, or `.jpg` version of the same image for use in HTML.

```
\includegraphics{filename} % print:.pdf/.eps HTML:.svg, etc.
```

For print output, lwarp will automatically choose the `.pdf` or `.eps` format if available, or some other format otherwise. For HTML, one of the other formats is used instead.

If a .pdf or .eps image is referred to with its file extension, the extension will be changed to .svg for HTML:

```
\includegraphics{filename.pdf} % uses .svg in html
\includegraphics{filename.eps} % uses .svg in html
```

Prog pdftocairo To convert a PDF image to SVG, use the utility *pdftocairo*:

PDF to SVG

Enter ⇒ **pdftocairo -svg filename.pdf**

Prog lwarpmk pdftosvg For a large number of images, use *lwarpmk*:

Enter ⇒ **lwarpmk pdftosvg *.pdf** (or a list of filenames)

Prog lwarpmk epstopdf For EPS images converted to PDF using the package *epstopdf*, use

Prog epstopdf
epstopdf package

Enter ⇒ **lwarpmk pdftosvg *.PDF**

to convert to SVG images.

DVI latex When using DVI *latex*, it is necessary to convert EPS to PDF and then to SVG:

Enter ⇒ **lwarpmk epstopdf *.eps** (or a list of filenames)

Enter ⇒ **lwarpmk pdftosvg *.pdf** (or a list of filenames)

PNG and JPG For PNG or JPG while using *pdflatex*, *lualatex*, or *xelatex*, the same file may be used in both print or HTML versions, and may be used with a file extension, but will also be used without the file extension if it is the only file of its base name.

GIF GIF files may be used for HTML, but another format must also be provided for print output.

file extension priorities If a file extension is not used, for HTML the file extension priorities are: SVG, GIF, PNG, then JPG.

⚠ graphics vs. graphicx If using the older *graphics* syntax, use both optional arguments for *\includegraphics*. A single optional parameter is interpreted as the newer *graphicx* syntax. Note that viewports are not supported by *lwarp*—the entire image will be shown.

⚠ viewport

⚠ viewport
units

For *\includegraphics*, avoid px and % units for width and height, or enclose them inside *warpHTML* environments. For font-proportional image sizes, use ex or em. For fixed-sized images, use cm, mm, in, pt, or pc. Use the keys `width=.5\linewidth`, or similar for `\textwidth` or `\textheight` to give fixed-sized images proportional to a 6 by 9 inch text area. Do not use the `scale` option, since it is not well supported by HTML browsers.


options *\includegraphics* accepts width and height, origin, rotate and scale, plus new class and alt keys.

HTML class With HTML output, *\includegraphics* accepts an optional `class=xyz` keyval combination, and if this is given then the HTML output will include that class for the image. The class is ignored for print output.


HTML alt tags Likewise, the *\includegraphics* alt key adds an HTML alt tag to an image, and is

ignored for print output. If not assigned, each image is given an alt tag according to `\ImageAltText`.

`\rotatebox` `\rotatebox` accepts the optional origin key.

 **browser support** `\rotatebox`, `\scalebox`, and `\reflectbox` depend on modern browser support. The CSS3 standard declares that when an object is transformed the whitespace which they occupied is preserved, unlike L^AT_EX, so expect some ugly results for scaling and rotating.


8.8.1 tikz package

 **displaymath and matrices** `Pkg tikz` If using display math with `tikzpicture` or `\tikz`, along with matrices with the `&` character, the document must be modified as follows:

```
\usepackage{tikz}
\tikzset{every picture/.style={ampersand replacement=\&}}
```

and each instance of `&` in the `tikz` expression must be replaced with `\&`.

8.8.2 grffile package

 **matching PDF and SVG** `Pkg grffile` `grffile` is supported as-is. File types known to the browser are displayed, and unknown file types are given a link. Each PDF image for print mode should be accompanied by an SVG, PNG, or JPG version for HTML.

8.8.3 color package

`Pkg color` `color` is superseded by `xcolor`, and `lwarp` requires several of the features of `xcolor`. When `color` is requested, `xcolor` is loaded as well.

8.8.4 xcolor package

`Pkg xcolor` `\colorboxBlock` and `\fcolorboxBlock` are provided for increased HTML compatibility, and they are identical to `\colorbox` and `\fcolorbox` in print mode. In HTML mode they place their contents into a `<div>` instead of a ``. These `<div>`s are set to display: `inline-block` so adjacent `\colorboxBlock`s appear side-by-side in HTML, although text is placed before or after each.

Print-mode definitions for `\colorboxBlock` and `\fcolorboxBlock` are created by `lwarp`'s core if `xcolor` is loaded.

`background: none` `\fcolorbox` and `\fcolorboxBlock` allow a background color of `none`, in which case only the frame is drawn, which can be useful for HTML.

`color support` Color definitions, models, and mixing are fully supported without any changes required.

colored tables `\rowcolors` is supported, except that the optional argument is ignored so far.

colored text and boxes `\textcolor`, `\colorbox`, and `\fcolorbox` are supported.

`\color` and `\pagecolor` `\color` and `\pagecolor` are ignored. Use `css` or `\textcolor` where possible.

8.8.5 epstopdf package

Pkg epstopdf Images with an `.eps` extension will be converted to `.pdf`. The HTML output uses the `.svg` version, so use

 **convert to .svg**

Enter \Rightarrow `lwarpmk pdftosvg <listofPDFfiles>`

to generate `.svg` versions.

8.8.6 pstricks package

Pkg pstricks All pstricks content should be contained inside a `pspicture` environment.

 **use pspicture**

8.8.7 pdftricks package

Pkg pdftricks The pdftricks image files `<jobname>-fig*.pdf` must be converted to `.svg`, or else a missing file error will occur. The image files must also be converted again whenever they change. To convert the images:


 **convert image files**

Enter \Rightarrow `lwarpmk pdftosvg <jobname>-fig*.pdf`

8.8.8 psfrag package


Pkg psfrag The psfrags environment is modified to use `lateximage` to encapsulate the image. Always use a psfrags environment to contain any local `\psfrag` macros and the associated `\includegraphics` or `\epsfig` calls. Outside of a psfrags environment, psfrags adjustments will not be seen by lwarp.

 **use psfrags**

 Tip: Use a mono-spaced font for the tags in the EPS file.

8.8.9 pstool package

Pkg pstool `\graphicspath` is ignored, and the file directory must be stated.

 **path and filename** The filename must not have a file extension.

Use

Enter \Rightarrow `lwarpmk html`

followed by

Enter ⇒ **lwarpmk limages**

8.8.10 asymptote package


Pkg asymptote To compile:

```
pdflatex project.tex
asy project-*.asy
pdflatex project.tex

lwarpmk print
asy project-*.asy
lwarpmk print1
lwarpmk print1

lwarpmk html
asy project_html-*.asy
lwarpmk html1
lwarpmk html1
lwarpmk limages
```

8.8.11 overpic package

Pkg overpic
 **scaling**

The macros `\overpicfontsize` and `\overpicfontskip` are used during HTML generation. These are sent to `\fontsize` to adjust the font size for scaling differences between the print and HTML versions of the document. Renew these macros before using the `overpic` and `Overpic` environments.

8.8.12 Multimedia packages

Pkg multimedia
Pkg movie15
Pkg media9

The packages `multimedia`, `movie15`, and `media9` are supported.

HTML5 `<audio>` and `<video>` objects are created for `.mp3` and `.mp4` files.

HTML5 `<embed>` objects are created for `http` and `ftp` links.

`\href` links are created for other media types. (Unfortunately, there is not much overlap between the file types supported for print output and the file types supported by HTML5.)

For `media9`, a multimedia object is inserted for each `addressource=`, as well as each `flashvars source=` and `src=`. This may result in duplicate objects.

Undesired objects may be nullified by placing them inside `\warpprintonly` or the `warpprint` environment.

Each HTML multimedia object includes the poster text, except for `<embed>` objects. For `movie15`, the `text` option is supported to specify the poster text.

The `width`, `height`, and `totalheight` options are supported. The HTML object is scaled according to the display width, correctly compensating for either tall or wide viewports.

Other options are ignored.

`media9 \addmediapath` is supported. It is assumed that the same path structure will exist for the HTML document.

HTML5 media controls are always specified for each `<audio>` and `<video>` object.

`media9` slideshows are not supported.

`\hyperlinkmovie`, `\movieref`, and `\mediabutton` are not supported.

3D objects are not supported.

If using a YOUTUBE™ video, use an “embedded” URL with `.../embed/...` instead of `.../v/...`

8.9 Tabbing

The tabbing environment works, except that `svg math` and `lateximages` do not yet work inside the environment.


 **math in tabbing** If math is used inside tabbing, place tabbing inside a `lateximage` environment, which will render the entire environment as a single `svg` image.

8.10 Tabular

8.10.1 tabular environment

Tabular mostly works as expected, but pay special attention to the following, especially if working with environments, macros inside tabulars, `multirows`, `siunitx S` columns, or the packages `multirow`, `longtable`, `supertabular`, or `xtab`.

Defining macros and environments:

 **Misplaced alignment tab character &**

- When defining environments or macros which include `tabular` and instances of the `&` character, it may be necessary to make `&` active before the environment or macro is defined, then restore `&` to its default catcode after, using the following commands. These are ignored in print mode.

`\StartDefiningTabulars`

`<define macros or environments using tabular and & here>`

`\StopDefiningTabulars`

 **floatrow**

This includes before and after defining any macro which used `\ttabbox` from `floatrow`.

⚠ tabular inside another environment

- When creating a new environment which contains a tabular environment, lwarp's emulation of the tabular does not automatically resume when the containing environment ends, resulting in corrupted HTML rows. To fix this, use `\ResumeTabular` as follows. This is ignored in print mode.

```
\StartDefiningTabulars % because & is used in a
definition
\newenvironment{outerenvironment}
{
\tabular{cc}
left & right \\
}
{
\TabularMacro\ResumeTabular
left & right \\
\endtabular
}
\StopDefiningTabulars
```

Cell contents:

⚠ macro in a table

- Using a custom macro inside a tabular data cell may result in an extra HTML data cell tag, corrupting the HTML table. To avoid this, use `\TabularMacro` just before the macro. This is ignored in print mode.

```
\TabularMacro\somemacro & more row contents \\
```

Column specifiers:

@ and !

- Only one each of @ and ! is used at each column, and they are used in that order.

\multirow

- In `\multirow` cells, the print version may have extra instances of <, >, @, and ! cells on the second and later rows in the `\multirow` which do not appear in the HTML version.

⚠ \newcolumntype

- `\newcolumntype` is ignored; unknown column types are set to l.

Rules:

vertical rules

- Doubled `\hlines`, `\midrules`, and vertical rules are supported.
- Vertical rules next to either side of an @ or ! column are displayed on both sides of the column.

width and trim

- Width options are honored. Trim options are converted to rounded top corners. Trim corners are not rounded with @ or ! columns, and full-width rules ignore trim. When given an optional width, each cell is styled to create the custom border. Without an optional width, the entire row is given a class to assign the standard border.

combined rules

- If you wish to use `\cmidrule` followed by `\bottomrule`, it may be necessary to use:


```
\cmidrule{2-3} \\[-2ex]
\bottomrule
```

 The optional `-2ex` is ignored in HTML, but improves the visual formatting in the print output.

⚠ `\warpprintonly`
 ⚠ Misplaced `\noalign`

- For `\toprule` and `\bottomrule`, when combined with a `warpprint` or `warpHTML` environment, if a “Misplaced `\noalign`” error occurs, change
`This & That \endhead`
 to
`\warpprintonly{This & That \endhead}`
 and likewise with the other `\end` headings. Keep the `\endfirsthead` row unchanged, as it is still relevant to HTML output.

Other:

longtable headings

⚠ S columns

- `tabularx` ignores the width, but X columns do produce paragraph columns or multicolumns.
- For `longtable`, place headings and footings which do not apply to HTML inside `\warpprintonly{}`.
- For S columns (from the `siunitx` package), while producing print output, anything non-numeric must be placed inside `{ }` braces, including commands such as `\multirow`. While producing HTML output, though, anything placed inside braces is not seen by `lwarp`’s tabular handling algorithm. To resolve this problem, make a copy of the row, with one version for print output, containing the extra braces, and another version for HTML output, without the extra braces, such as:
`\warpprintonly{1 & 2 & {\multirow{2}{2cm}{Text}} & 3 \\}`
`\warpHTMLonly{1 & 2 & \multirow{2}{2cm}{Text} & 3 \\}`
- In \LaTeX , a tabular may be placed inside a `minipage`, but in HTML a `<table>` may not be inside a ``. If this situation is detected, a warning is printed instructing the user to isolate the `` using `\warpprintonly` or the `warpprint` environment.

⚠ tabular inside a ``

8.10.2 multirow package

vposn

multirow cells

- Note that recent versions of `multirow` include a new optional `vposn` argument.
- For `multirow`, insert `\mrowcell` into any empty multi-row cells. This will be a null function for the print output, and is a placeholder for parsing the table for HTML output. An error is generated if this is missed.

```
... & \multirow{2}{.5in}{text} & ...
... & \mrowcell                & ...
```

colored cells

- The `multirow` documentation regarding colored cells recommends using a negative number of rows. This will not work with `lwarp`, so `\warpprintonly` and `\warpHTMLonly` must be used to make versions for print and HTML.

with `\multicolumn`

⚠ `\multicolumn &`
`\multirow`

- See section 379.2 for `\multicolumnrow`.
`lwarp` does not support directly combining `\multicolumn` and `\multirow`. Use `\multicolumnrow` instead. To create a 2 column, 3 row cell:

```
\multicolumnrow{2}{c}[c]{3}[0]{1in}[0pt]{Text}
```

The two arguments for `\multicolumn` come first, followed by the five arguments for `\multirow`, many of which are optional, followed by the contents.

⚠ skipped cells

As per `\multirow`, skipped cells to the right of the `\multicolumnrow` statement are not included in the source code on the same line. On the following lines, `\mcolrowcell` must be used for each cell of each column and each row to be skipped. An error is generated if this is missed.

⚠ empty cells

```
... & \multicolumnrow{2}{c}[c]{3}[0]{1in}[0pt]{Text} & ...
... & \mcolrowcell & \mcolrowcell & ...
... & \mcolrowcell & \mcolrowcell & ...
```

⚠ MathJax

- MATHJAX does not support `multirow`, so it is emulated to only print its text on the first row. `\multirow` works as expected in text tabulars or svg math.

8.10.3 longtable package

Pkg longtable Use one of either `\endhead` or `\endfirsthead` for both print and HTML, and use a `\warpprintonly` macro to disable the other head phrase, and also the `\endfoot` and `\endfirstfoot` phrases. (See section 8.10.4 if using `threeparttablex`.)

```
\begin{longtable}{ [column specifiers] }
[ ... ] \endfirsthead % or \endhead, for print and HTML
\warpprintonly{ % not used in HTML
[ ... ] \endhead % or \endfirsthead
[ ... ] \endfoot
[ <lastfoot macros> ] \endlastfoot
}
... table contents ...
\warppHTMLonly{
[ <lastfoot macros> ] % HTML last footer, without \endfoot
% or \endlastfoot.
}
\end{longtable}
```

⚠ Misplaced \noalign

Use the `\warpprintonly` macro instead of the `warpprint` environment. Doing so helps avoid “Misplaced `\noalign`.” when using `\begin{warpprint}`.

⚠ \kill

`\kill` is ignored, place a `\kill` line inside

```
\begin{warpprint} ... \end{warpprint}
```

or place it inside `\warpprintonly`.

⚠ lateximage

`longtable` is not supported inside a `lateximage`.

8.10.4 threeparttablex package

Pkg threeparttablex `threeparttablex` is used with `longtable` and `booktabs` as follows:

```

\begin{longtable}{ [column specifiers] }
[ . . . ] \endfirsthead    % or \endhead, for print and HTML
\warpprintonly{           % not used in HTML
[ . . . ] \endhead        % or \endfirsthead
[ . . . ] \endfoot
\bottomrule \insertTableNotes \endlastfoot
}
. . . table contents . . .
\warppHTMLonly{ % HTML last footer
\bottomrule
\UseMinipageWidths % optional
\insertTableNotes
\endlastfoot
}
\end{longtable}

```

table width The table notes are created using a `\multicolumn`. By default the width is not specified to the browser, so long table notes can cause the table to be spread out horizontally. For HTML output, `lwarp` guesses the width of the table depending on the number of columns, then restricts its guess to a min/max range. To use this guess for the width of the table notes, use `\UseMinipageWidths` before `\insertTableNotes`. The width is then specified, and in many cases the result is an improvement in overall table layout.

8.10.5 supertabular and xtab packages

Pkg supertabular For `\tablefirsthead`, etc., enclose them as follows:

```

Pkg xtab
\StartDefiningTabulars
\tablefirsthead
. . .
\StopDefiningTabulars

```

⚠ Misplaced alignment
tab character &

See section 8.10.1.

⚠ lateximage supertabular and xtab are not supported inside a `lateximage`.

8.10.6 colortbl package


Pkg colortbl Only use `\rowcolor` and `\cellcolor` at the start of a row, in that order.

⚠ row/cell color colortbl ignores the overhang arguments.

8.10.7 ctable package

⚠ Misplaced alignment
tab character & Use `\StartDefiningTabulars` before one or more `\ctables`, and `\StopDefiningTabulars` after. These change the meaning of the ampersand & character.

8.10.8 bigdelim package

 **Pkg bigdelim** `\ldelim` and `\rdelim` use `\multirow`, so `\mrowcell` must be used in the proper number of empty cells in the same column below `\ldelim` or `\rdelim`, but not in cells which are above or below the delimiter:

```

\begin{tabular}{lll}
<empty> & a & b \\
\ldelim{\{}{3}{.25in}[left ] & c & d \\
\mrowcell & e & f \\
\mrowcell & g & h \\
<empty> & i & j \\
\end{tabular}


```

$$\begin{array}{cc}
 \leftarrow & a \quad b \\
 & \left\{ \begin{array}{cc} c & d \\ e & f \\ g & h \end{array} \right. \\
 \leftarrow & i \quad j
 \end{array}$$

For MATHJAX, limited emulation is provided which merely prints the delimiter and optional text in the first row.

8.11 Floats

8.11.1 Float contents alignment

 **figure & table alignment** `\centering`, etc. are honored in a figure or table if they are the first command inside the float:

```

\begin{table*}
\centering
\caption{A Table}
...

```

8.11.2 float, trivfloat, and/or algorithmicx together

Pkg float If using `\newfloat`, `trivfloat`, and/or `algorithmicx` together, see section 558.1.

Pkg trivfloat

Pkg algorithmicx

 **package conflicts**

8.11.3 caption and subcaption packages

Pkg caption Package options may cause problems with `lwarp`, especially if they include curly braces.
Pkg subcaption

If selecting options with braces in `\usepackage` does not work:


```
\usepackage[font={it,small}]{caption}% does not work
```

... try instead selecting the package options before loading lwarp:

```
\PassOptionsToPackage{font={it,small}}{caption}
...
\usepackage{lwarp}
...
\usepackage{caption}
```

... or try setting package options after the package has been loaded:

```
\usepackage{caption}
\captionsetup{font={it,small}}
```


 **numbering** To ensure proper float numbering, set caption positions such as:

```
\captionsetup[figure]{position=bottom}
\captionsetup[subfigure]{position=bottom}
\captionsetup[table]{position=top}
\captionsetup[subtable]{position=top}
```

Similarly for `longtable`. These positions depend on where the user places the `\caption` command inside each float.

8.11.4 subfig package


Pkg subfig


 **lof/lotdepth** At present, the package options for `lofdepth` and `lotdepth` are not working. These counters must be set separately after the package has been loaded.


In the document source, use `\hfill` and `\hspace* subfig>inline` between subfigures to spread them apart horizontally. The use of other forms of whitespace may cause paragraph tags to be generated, resulting in subfigures appearing on the following lines instead of all on a single line.

8.11.5 floatrow package

Pkg floatrow

 **Misplaced alignment** Use `\StartDefiningTabulars` and `\StopDefiningTabulars` before and after defining macros using `\ttabbox` with a tabular inside. See section 8.10.1.

 **tab character & subfig package** When combined with the `subfig` package, while inside a `subfloatrow` `\ffigbox` and `\ttabbox` must have the caption in the first of the two of the mandatory arguments.

 **\FBwidth, \FBheight** The emulation of `floatrow` does not support `\FBwidth` or `\FBheight`. These values are pre-set to `.3\linewidth` and `2in`. Possible solutions include:

- Use fixed lengths. `lwarp` will scale the HTML lengths appropriately.
- Use `warpprint` and `warpHTML` environments to select appropriate values for each case.

- Inside a warpHTML environment, manually change `\FBwidth` or `\FBheight` before the `\ffigbox` or `\ttabbox`. Use `\FBwidth` or `\FBheight` normally afterwards; it will be used as expected in print output, and will use your custom-selected value in HTML output. This custom value will be used repeatedly, until it is manually changed to a new value.

8.11.6 keyfloat package

Pkg keyfloat If placing a `\keyfig[H]` inside a `keywrap`, use an absolute width for `\keyfig`, instead of `lw-proportional` widths. (The `[H]` option forces the use of a `minipage`, which internally adjusts for a virtual 6-inch wide `minipage`, which then corrupts the `lw` option.)

⚠ keywrap

8.12 KOMA-SCRIPT classes

Cls komascript Many features are ignored during the HTML conversion. The goal is source-level compatibility.

`\captionformat`, `\figureformat`, and `\tableformat` are not yet emulated.

⚠ Not fully tested! Please send bug reports!

Some features have not yet been tested. Please contact the author with any bug reports.

8.13 MEMOIR class

Cls memoir lwarp uses `caption`, which causes a warning from `memoir`. This is normal. Adjust captions via `caption`, instead of `memoir`.

⚠ captions

⚠ options clash While emulating `memoir`, `lwarp` pre-loads a number of packages (section 608.1). This can cause an options clash when the user's document later loads the same packages with options. To fix this problem, specify the options before loading `lwarp`:

```
\documentclass{memoir}
...
\PassOptionsToPackage{options_list}{package_name}
...
\usepackage{lwarp}
...
\usepackage{package_name}
```

⚠ version numbers memoir emulates a number of packages, and declares a version date for each which often does not match the date of the corresponding freestanding package. This can cause warnings about incorrect version numbers. Since `lwarp` is intended to support the freestanding packages, which are often newer than the date declared by `memoir`, it is hoped that `memoir` will update and change its emulated version numbers to match.

`\label(bookmark){tag}` `\label` accepts an optional (bookmark) argument, but this is ignored in HTML.

⚠ comment The `comment` environment is from the `comment` package, and thus requires that the

`\begin` and `\end` each be on its own line:

```
\begin{comment}
This is a comment.
\end{comment}
```

`\newcomment` Comments defined with `\newcomment` use memoir's definitions, and behave as expected, where the `\begin` and `\end` do have to each be on its own line.

⚠ `verbatim footnotes` `\verbfootnote` is not supported.

⚠ `\newfootnoteseries` `\newfootnoteseries`, etc. are not supported.

⚠ `page notes` `lwarp` loads `pagenote` to perform memoir's `pagenote` functions, but there are minor differences in `\pagenotesubhead` and related macros.

`page notes with cleveref` To add support for pagenotes with `cleveref`, add:

```
\crefname{pagenote}{page note}{page notes}
\Crefname{pagenote}{Page note}{Page notes}
```

`page note \nameref` Note that for print mode, `\nameref` print the section name where the page notes are declared in the text, but for HTML it prints the name where the page notes are printed.

⚠ `poems` Poem numbering is not supported.

⚠ `verbatim` The `verbatim` environment does not yet support the memoir enhancements. It is currently recommended to load and use `fancyvrb` instead.

⚠ `glossaries` The memoir glossary system is not yet supported by *lwarpmk*. The `glossaries` package may be used instead, but does require the glossary entries be changed from the memoir syntax to the `glossaries` syntax.

⚠ `framewithtitle, titledframe` The custom frame commands in the memoir manual may be emulated by placing the original definitions in the preamble inside `warpprint` environments, and then providing an HTML equivalent:

```
\begin{warpHTML}
\newcommand{\FrameTitle}[2]{%
  \textbf{#2}
}

\newenvironment{framewithtitle}[2][\FrameFirst@Lab\ (cont.)]{%
  \begin{fminipage}{\linewidth}
  \textbf{#2}
  \begin{minipage}{\linewidth}
  }
  {\end{minipage}\end{fminipage}}

\newcommand{\TitleFrame}[2]{%
  \par
  \textbf{#1}\par
  \fboxBlock{#2}
}
```

```

\newenvironment{titledframe}[2][\FrameFirst@Lab\ (cont.)]{%
  \par
  \textbf{#2}
  \begin{fminipage}{\linewidth}
}
{\end{fminipage}}
\end{warpHTML}

```

8.14 International languages



section and file names

If using *pdflatex* with the setting `\booltrue{FileSectionNames}`, non-ASCII text in section names can result in corrupted HTML file names. *pdflatex* may be used if setting `\boolfalse{FileSectionNames}`, in which case HTML file numbers will be generated.

For correct HTML file names, use *xelatex*, *lualatex*, or dedicated document classes / engines.

(As of this writing, this warning is only relevant to the *kotex* package.)

8.15 Miscellaneous packages

8.15.1 verse and memoir

Pkg `verse` When using `verse` or `memoir`, always place a `\\` after each line.

Cls `memoir`
\attrib The documentation for the `verse` and `memoir` packages suggest defining an `\attrib` command, which may already exist in current documents, but it will only work for print output. *lwarp* provides `\attribution`, which works for both print and HTML output. To combine the two so that `\attrib` is used for print and `\attribution` is used for HTML:

```

\begin{warpHTML}
\let\attrib\attribution
\end{warpHTML}

```

Len `\vleftskip` These lengths are used by `verse` and `memoir` to control the left margin, and they may already be set by the user for print output. New lengths `\HTMLvleftskip` and `\HTMLleftmargin` are provided to control the margins in HTML output. These new lengths may be set by the user before any `verse` environment, and persist until they are manually changed again. One reason to change `\HTMLleftmargin` is if there is a wide `\flagverse` in use, such as the word “Chorus”, in which case the value of `\HTMLleftmargin` should be set to a wide enough length to contain “Chorus”. The default is wide enough for a stanza number.

Len `\vleftmargin`

Len `\HTMLvleftskip`

Len `\HTMLleftmargin`



spacing

Horizontal spacing relies on *pdftotext*’s ability to discern the layout (`-layout` option) of the text in the HTML-tagged PDF output. For some settings of `\HTMLleftmargin` or `\HTMLvleftskip` the horizontal alignment may not work out exactly, in which case a



verse margin

label may be shifted by one space. During translation to HTML, the stanza numbers are kept out of the left margin, which would have caused *pdftotext* to shift everything over.

8.15.2 newclude package

Pkg newclude newclude modifies \label in a non-adaptive way, so newclude must be loaded before lwarp is loaded:



loading

```
\documentclass{article}
... <font setup>
\usepackage{newclude}
\usepackage[lwarpHTML]{lwarp}
...
```

8.15.3 babel package

Pkg babel When French is used, the caption separator is changed to a dash. To restore it to a colon, the following may be placed before lwarp is loaded:



\CaptionSeparator

```
\renewcommand*{\CaptionSeparator}{:~}
```

punctuation spaces

Also when French is used, lwarp creates fixed-width space around punctuation by patching \FBcolonspace, \FBthinspace, \FBguillspace, \FBmedkern, \FBthickkern, \FBtextellipsis, and the tilde. If the user's document also changes these parameters, the user's changes should be placed inside a warpprint environment so that the user's changes do not affect the HTML output.



customized spacing

8.15.4 polyglossia package

Pkg polyglossia lwarp uses cleveref, which has some limitations when using polyglossia, possibly resulting in the error

```
! Undefined control sequence. . . . \@begindocumenthook
```

To test compatibility, add

```
\usepackage{cleveref}
```

near the end of the preamble (as the last package to be loaded), and try to compile the print version. It may be necessary to set

```
\setdefaultlanguage{english}
```

or some other language supported by cleveref, then select other languages using \setotherlanguages.

Once the print version works with cleveref and polyglossia, the HTML version should work as well using lwarp.

8.15.5 todonotes and luatodonotes packages

Pkg todonotes The documentation for todonotes and luatodonotes have an example with a todo

Pkg luatodonotes

inside a caption. If this example does not work it will be necessary to move the `todo` outside of the caption.

8.15.6 **fixme**

Pkg `fixme` External layouts (`\fxloadlayouts`) are not supported.

⚠ **external layouts** User control is provided for setting the HTML styling of the “faces”. The defaults are as follows, and may be changed in the preamble after `fixme` is loaded:

```
\def\FXFaceInlineHTMLStyle{font-weight:bold}
\def\FXFaceEnvHTMLStyle{font-weight:bold}
\def\FXFaceSignatureHTMLStyle{font-style:italic}
\def\FXFaceTargetHTMLStyle{font-style:italic}
```

8.15.7 **acro package**

⚠ **formats** Define acronymn formats using `\textbf` instead of `\bfseries` etc.

8.15.8 **chemfig package**

If using `\polymerdelim` to add delimiters to a `\chemfig`, wrap both inside a single `lateximage`:

```
\begin{lateximage}[-chemfig-~\PackageDiagramAltText]
\chemfig{...}
\polymerdelim[...]{...}
\end{lateximage}
```

8.15.9 **chemformula package**

⚠ **chemformula with MATHJAX** `chemformula` works best without `MATHJAX`. If `MATHJAX` is used, `\displaymathother` must be used before `array`, and then `\displaymathnormal` may be used after. (The `chemformula` package adapts to `array`, but does not know about `MATHJAX`, and `MATHJAX` does not know about `chemformula`.)

While using `MATHJAX`, `\displaymathother` may also be used for other forms of display and inline math which contain `chemformula` expressions.

8.15.10 **mhchem package**

See section 362.

8.15.11 xparse package

Pkg xparse To remove from the log any warnings about redeclaring objects, place the following before lwarp is loaded:

```
\usepackage[log-declarations=false]{xparse}
```

8.15.12 kotex package

Pkg kotex See section 8.14 regarding *pdf_latex* and Korean section names.



Korean section names

9 Compiling using custom shell commands

`lwarp` and `lwarpmk` try to make it easy to process print and HTML compilation tasks in most situations. Depending on the operating system, command-line options, T_EX engine, and `lwarp` options, the commands `lwarpmk print` and `lwarpmk html` are automatically set up to correctly recompile the project. These actions may be overridden using `lwarp` options, thus allowing the use of packages such as `perltex` and `pythontex`.

9.1 Command options


Opt `PrintLatexCmd` The `lwarp` options `PrintLatexCmd` and `HTMLLatexCmd` are used to set customized commands to be executed by `lwarpmk print` and `lwarpmk html`.
 Opt `HTMLLatexCmd`

PrintLatexCmd should be set to shell commands which take `project.tex` and generate `project.pdf`.

HTMLLatexCmd should be set to take `project_html.tex` and generate `project_html.pdf`. `lwarpmk` will then take `project_html.pdf` and automatically convert it and generate `project.html`.

9.2 Literal character macros

The `lwarp` package options are parsed by T_EX, and so some characters require the use of a special macro to represent them. See table 9. `\LWRopquote` and `\LWRopseq` may be used to increase operating-system portability. `\jobname` must have `_html` appended for processing HTML. `\space` may be necessary between other macros.

 **macro not found** To use these macros, either `kvoptions-patch` must be loaded before `lwarp`:

```
\usepackage{kvoptions-patch}
\usepackage[
  PrintLatexCmd={ ... } ,
  HTMLLatexCmd={ ... }
]{lwarp}
```

Table 9: Literal character macros

Character	Macro	Comment
%	\LWRpercent	
\$	\LWRdollar	
&	\LWRamp	
%	\LWRhash	
\	\LWRbackslash	
' or "	\LWRopquote	Depends on the operating system.
& or &&	\LWRopseq	Depends on the operating system.
(space)	\space	Forces an extra space.
(jobname)	\jobname	Without file extension.

or \lwarpsetup must be used to set PrintLatexCmd and HTMLLatexCmd:

```

\usepackage[...]{lwarp}
\lwarpsetup{
  PrintLatexCmd=
  {
    latex tm \LWRopseq
    dvips -o tm-pics.ps tm.dvi \LWRopseq
    ps2pdf tm-pics.ps \LWRopseq
    pdflatex tm.tex
  } ,
  HTMLLatexCmd=
  {
    latex tm_html \LWRopseq
    dvips -o tm_html-pics.ps tm_html.dvi \LWRopseq
    ps2pdf tm_html-pics.ps \LWRopseq
    pdflatex tm_html.tex
  }
}

```

9.3 *latexmk*

Prog `latexmk` If *latexmk* is used for a project, it may be easiest to continue using it.

latexmk project.tex would create `project.pdf` as normal.

latexmk project_html.tex would create `project_html.pdf`, then

lwarpmk pdftohtml project_html.pdf would take `project_html.pdf` and convert it to `project.html`.

Pkg `sagetex` *latexmk* may simplify the use of packages such as `sagetex`.

9.4 perltex package

Pkg `perltex` The `lwarp` package option settings to use `perltex` would be similar to:

```
\usepackage[
  . . .
  PrintLatexCmd={perltex -latex=pdflatex project.tex} ,
  HTMLLatexCmd={perltex -latex=pdflatex project_html.tex} ,
  . . .
]{lwarp}
```

⚠ “impure” math Place `perltex` math expressions between `\displaymathother` and `\displaymathnormal`, or `\inlinemathother` and `\inlinemathnormal`. See section 8.7.9.

9.5 pythontex package

Pkg `pythontex` An example using `pythontex`:

```
\usepackage[
  . . .
  PrintLatexCmd={
    pdflatex project.tex \LWRopseq
    pythontex project \LWRopseq
    pdflatex project.tex
  } ,
  HTMLLatexCmd={
    pdflatex project_html.tex \LWRopseq
    pythontex project_html \LWRopseq
    pdflatex project_html.tex
  } ,
  . . .
]{lwarp}
```

Another possibility is to use *latexmk*, placing the **latexmk** . . . commands in the `PrintLatexCmd` and `HTMLLatexCmd` options. While using these options, the `lwarp` option `latexmk` would not be used.

⚠ “impure” math No attempt has yet been made to make `pythontex` robust with HTML output. Some math objects must be surrounded by `\displaymathother` ... `\displaymathnormal`, or `\inlinemathother` ... `\inlinemathnormal`. Displays of code may have to be enclosed

⚠ HTML look-alike inside a `lateximage` environment to prevent `<`, `>` and similar from being interpreted by the browser as HTML entities.

9.6 Other packages

Pkg `sympytex` Other packages such as `sympytex` and `rterface` would be set up similar to `pythontex`,

Pkg `rterface`


and the same warnings would apply.

9.7 *make* program

Prog **make** To use *lwarp* with the *make* program, have the makefile take `project.tex` and generate the print version `project.pdf`, as normal. `\usepackage{lwarp}` must be used, and it generates `lwarpmk.conf` when the print version is created.

To generate HTML, first have `project_html.tex` be compiled to generate `project_html.pdf`. This must be in PDF format. Finally, have `project_html.pdf` be converted to HTML using `lwarpmk pdftohtml project_html.pdf`, and convert SVG math with `lwarpmk limages`.

9.8 UTF-8 locale

 **UTF-8 locale** *lwarpmk* uses the *texlua* program, which sets the “locale” to “C”, including for external operating-system calls such as when executing `lwarpmk html`. In some cases, an external program called from the user’s document may require the use of a UTF-8 “locale”. For UNIX-related operating systems, it may be required to use *lwarp*’s custom compilation options to add a locale change:

```
\usepackage{lwarp}[
  PrintLatexCmd={
    env LC_CTYPE=en_US.UTF-8
    xelatex -shell-escape project.tex
  }
  HTMLLatexCmd={
    env LC_CTYPE=en_US.UTF-8
    xelatex -shell-escape project_html.tex
  }
]
```

Pkg **ditaa** The only example seen so far where this is required is the *ditaa* package, where the locale change allows the use of UTF-8 with Xe_{La}TeX and *ditaa*. To use Lua_{La}TeX instead, the locale change would have to be made inside the *ditaa* package where it calls the *ditaa* program.

10 EPUB conversion

lwarp does not produce EPUB documents, but it may be told to modify its HTML output to greatly assist in the conversion. An external program may then be used to finish the conversion to EPUB.

<meta> author To assign the author's name for regular lwarp HTML files, and also for the EPUB, use `\HTMLAuthor {<name>}`. This assigns the name to the `<meta>` author element. It may be set empty, and it defaults to `\theauthor`.

A special boolean is provided to simplify the process of converting lwarp HTML output to EPUB:

FormatEPUB	
Bool	FormatEPUB
Default: false	FormatEPUB changes HTML output for easy EPUB conversion via an external program. Removes per-file headers, footers, and nav. Adds footnotes per chapter/section.

To help convert lwarp HTML output to EPUB, add

```
\booltrue{FormatEPUB}
```

to the project's source preamble after `\usepackage{lwarp}`. The EPUB version of the document cannot co-exist with the regular HTML version, so

```
Enter ⇒ lwarpmk cleanall
```

```
Enter ⇒ lwarpmk html
```

```
Enter ⇒ lwarpmk limages
```

to recompile with the FormatEPUB boolean turned on. Several changes are then made to the HTML output:

- Headers, footers, and navigation are removed at file splits.
- Any accumulated footnotes are printed at the bottom of each section.

The resulting files will be ready to be loaded into an EPUB conversion program, such as the open-source program *Calibre* (<https://calibre-ebook.com/>).

⚠ **search order**

The EPUB conversion program must know what order the files are included. For lwarp projects, set the EPUB conversion software to do a breadth-first search of the files. For *Calibre*, this option is found in

Preferences → Plugins → File type plugins → HTML to Zip

⚠ **encoding**

Check the box **Add linked files in breadth first order**. Set the document encoding as `utf-8`, which is what lwarp generates for HTML, even if the original printed document uses some other encoding.

section breaks

The EPUB-conversion program must also know where the section breaks are located. For a list of **lwarp**'s section headings, see table 11. For example, an article class document would break at `\section`, which is mapped to HTML heading level `<h4>`, whereas a book class document would break at `\chapter`, which is HTML heading level `<h3>`. For *Calibre*, this option is found in

Preferences → Conversion (Common Options) → Structure Detection → Detect chapters at (XPath expression)

Select the “magic wand” to the right of this entry box, and set the first entry

Match HTML tags with tag name:

to “h4”. (Or “h3” for document classes with `\chapters`.) The Detect chapters at field should then show

`//h:h4` — or — `//h:h3`

This option is also available on the main tool bar at the **Convert books** button.

Once these settings have been made, the **lwarp**-generated HTML files may be loaded by *Calibre*, and then converted to an EPUB.

MATHJAX support

MATHJAX may be used in EPUB documents. Some e-readers include MATHJAX, but any given reader may or may not have a recent version, and may or may not include extensions such as support for `siunitx`.

lwarp adds some modifications to MathML to support equations numbered by chapter. These modifications may not be compatible with the e-reader's version of MATHJAX, so **lwarp** requests that a known version be loaded instead. In some cases chapter numbering of equations still doesn't work.

Until math support in EPUB documents is improved, it is recommended to use SVG images instead of MATHJAX, especially for equations numbered by chapter, or where `siunitx` support is important.

11 Word-processor conversion

lwarp may be told to modify its HTML output to make it easier to import the HTML document into a word processor. At the time of this writing, it seems that *LIBREOffice* works best at preserving table layout, but it still has some limitations, such as an inability to automatically assign figure and table frames and captions according to user-selected HTML classes. lwarp provides some assistance in locating these frame boundaries, as shown below.

11.1 Activating word-processor conversion

A special boolean is provided to simplify the process of converting lwarp HTML output to EPUB:

FormatWP	
Bool FormatWP Default: false	Changes HTML output for easier conversion by a word processor. Removes headers and nav, prints footnotes per section, and also forces single-file output and turns off HTML debug comments. Additionally, honors the booleans WPMarkFloats, WPMarkMinipages, WPMarkTOC, and WPMarkLOFT.

To help modify lwarp HTML output for easier import to a word processor, add

```
\booltrue{FormatWP}
```

to the project's source preamble after lwarp is loaded. The following changes are then made to the HTML output:

formatting adjustments

- If using a class without chapters, \section and lower are shifted up in level for the HTML heading tags. The CSS has not been changed, so the section heading formats will not match the normal HTML output, but when imported to *LibreOffice Writer* the higher section headings will import as **Heading 1** for the title, **Heading 2** for \section, etc.
- Headers, footers, and navigation are removed at file splits.
- Any accumulated footnotes are printed at the bottom of each section.
- Forces single-file output.
- Turns off HTML debugging comments. These are comments appearing inside the HTML code, marking the opening/closing of sections and <div>s, but they are no longer useful when the document has been imported into a word processor.
- An additional <div> with an id encapsulates each float and minipage, which on import into *LibreOffice Writer* causes a thin frame to appear around the text block for each.
- Float captions are given an explicit italic formatting.

- Tabular rule borders are made explicit for *LibreOffice Writer*. LIBREOffice displays a light border around each cell while editing, even those which have no border when printed, and **lwarp** also uses a light border for thin rules, so it will be best to judge the results using the print preview instead of while editing in LIBREOffice.
- `\includegraphics` and `svg` math width and height are made explicit for LIBREOffice.
- `\hspace` is approximated by a number of `\quads`, and rules are approximated by a number of underscores.
- Explicit HTML styles are given to:
 - `\textsc`, etc.
 - `\underline`, `soul` and `ulem` markup.
 - `center`, `flushleft`, `flushright`.
 - `\marginpar`, `keyfloat`, `sidenotes`, `floatflt`, and `wrapfig`.
 - `fancybox` `\shadowbox`, etc.
 - The \LaTeX and \TeX logos.
- Honors several booleans:

WPMarkFloats: Marks the begin and end of floats.

WPMarkMinipages: Marks the begin and end of minipages.

WPMarkTOC: Marks the location of the Table of Contents.

WPMarkLOFT: Marks the locations of the List of Figures/Tables.

WPMarkMath: Prints \LaTeX math instead of using images.

WPTitleHeading: Adjusts title and section headings.

Several of these may be used to add markers to the HTML text which help determine where to adjust the word processor document after import.

11.2 Additional modifications

WPMarkFloats

Bool WPMarkFloats
Default: false

Adds

```
=== begin table ===
...
=== end ===
```

or

```
=== begin figure ===
...
=== end ===
```

around floats while formatting for word processors. This helps identify boundaries of floats to be manually converted to word-processor frames and captions.

WPMarkMinipages

Bool WPMarkMinipages
Default: false

Adds

```
=== begin minipage ===
...
=== end minipage ===
```

around minipages while formatting for word processors. This helps identify boundaries of minipages to be manually converted to word-processor frames.

WPMarkTOC

Bool WPMarkTOC
Default: true

While formatting for word processors, adds

```
=== table of contents ===
```

where the Table of Contents would have been. This helps identify where to insert the actual TOC.

If set false, the actual TOC is printed instead.

WPMarkLOFT

Bool WPMarkLOFT
Default: false

While formatting for word processors, adds

```
=== list of figures === and/or
=== list of tables ===
```

where each of these lists would have been. This helps identify where to insert the actual lists.

If set false, the actual lists are printed instead.

WPMarkMath

[siunitx](#)
Bool WPMarkMath
Default: false
Prog TeXMaths

While formatting for word processors, prints math as \LaTeX code instead of creating SVG images or MATHJAX. This is useful for cut/paste into the *LibreOffice Writer TeXMaths* extension.

When using the siunitx package, enter

```
\usepackage{siunitx}
```

in the *TeXMaths* preamble. Equation numbering is problematic for \mathcal{AMS} math environments.

Table 10: Section HTML headings for word-processor conversion

Section	HTML headings*			
	With \chapter		Without \chapter	
	WPTitleHeading true	false	WPTitleHeading true	false
Title	<h1>	plain	<h1>	plain
\book	<div>	<div>	<div>	<div>
\part	<h2>	<h1>	<h2>	<h1>
\chapter	<h3>	<h2>	—	—
\section	<h4>	<h3>	<h3>	<h2>
\subsection	<h5>	<h4>	<h4>	<h3>
\paragraph	<h6>	<h5>	<h5>	<h4>
\subparagraph		<h6>	<h6>	<h5>

* For default depths when not FormatWP, see table 11 on page 200.

WPTitleHeading

Bool WPTitleHeading
Default: false
section headings

While formatting for word processors, true sets the document title to <h1>, which is expected for HTML documents, but also causes the lower-level section headings to start at **Heading 2** when imported into LIBREOffice. Set to false to cause the title to be plain text, and the section headings to begin at **Heading 1**.

See table 10 on page 184.

11.3 Recommendations

TOC, LOF, LOT For use with *LibreOffice Writer*, it is recommended to:

1. Set \booltrue{FormatWP}
2. Set \booltrue{WPMarkTOC} and \boolfalse{WPMarkLOFT}
3. Use lwarp to generate the HTML document.
4. Copy/paste from the HTML document into an empty *LibreOffice Writer* document.
5. Manually insert a LIBREOffice TOC in the LIBREOffice document.
6. Manually add frames around each float, adding a caption which is cut/pasted from each float's simulated caption.
7. Manually create cross references.

This process yields a document with an actual LIBREOffice Table of Contents, but a simulated List of Figures and List of Tables.

siunitx For siunitx, remember to adjust the preamble as mentioned above.

LO view border options LIBREOffice has options in the **View** menu to turn on/off the display of thin borders around table cells and text objects.

11.4 Limitations

Floats and captions are not explicitly converted to LIBREOffice floats with their own captions. Floats are surrounded by a thin frame in the LIBREOffice editor, and may be marked with `WPMarkFloats`, but are not given a proper LIBREOffice object frame. Captions are given an explicit italic formatting, but not a proper LIBREOffice paragraph style.

Cross references are not actual LIBREOffice linked cross references.

The List of Figures and List of Tables are not linked. The pasted pseudo LOF and LOT match the numbering of the L^AT_EX and HTML versions.

Equation numbering is not automatic, but the equation numbers in SVG math will match the L^AT_EX and HTML output. SVG math is recommended when using the \mathcal{AMS} environments, which may have multiple numbered equations per object.


As of when last checked, LIBREOffice ignores the following:

- Minipage alignment.
- Tabular cell vertical alignment.
- Image rotation and scaling.
- Rounded border corners, which are also used by:
 - `\textcircled`
 - `booktabs trim`
- `\hspace` and rules, also used by `algorithmic`.
- Coloring of text decorations, used by `soul` and `ulem`.
- Overline text decoration, used by `romanbar`.

LIBREOffice also has limitations with frames and backgrounds:

- Multiple lines in an object are framed individually instead of as a whole.
- Nested frames are not handled correctly.
- Images inside boxes are not framed correctly.
- Spans with background colors and frames are not displayed correctly.

12 Modifying lwarp

- locating something** To quickly find the source for a package in `lwarp.dtx`, search for `*packagename`, such as `*siunitx`.
- Likewise, to quickly find the source for a file in `lwarp.dtx`, search for `*filename`, such as `*lwarp.css`.
- Purely text-based packages probably will work as-is when generating HTML.
- Look to existing code for ideas on how to expand into new code.
- image of TeX output** An environment may be converted to a `lateximage` then displayed with an image of the resulting L^AT_EX output. See section 90 for an example of the `picture` environment.
- css classes** To create a custom HTML block or inline CSS class, see section 51.9.
- print/HTML macros** To create print and HTML versions of the same macro or environment, see section 35.
-  **TeX boxes** Any TeX boxes must be undone, as `svg math` or `lateximages` require `\newpage`, which will not work in a TeX box.

12.1 Creating a development system

The following creates a local development system for `lwarp` on a TeXLive system in a UNIX-like environment. Doing so allows anything requesting `lwarp` to use the development version instead of whichever version is installed in TeXLive.

Create a development directory:

Place into this directory `lwarp.dtx` and `lwarp.ins`.

To create `lwarp.sty`, execute

Enter \Rightarrow **`pdflatex lwarp.ins`**

which creates `lwarp.sty` and several hundred additional `lwarp-*.sty` files for the various packages which are supported.

To create the initial documentation `lwarp.pdf`, execute

Enter \Rightarrow **`pdflatex lwarp.dtx`**

To make the development files visible to other projects:

Create the directory

```
/usr/local/texlive/texmf-local/tex/latex/local/lwarp
```

Inside this directory, create the file `update`, containing:

```
rm lwarp-*.sty
ln -s /path_to_dev_directory/lwarp*.sty .
ln -s /path_to_dev_directory/lwarp_baseline_marker.png .
ln -s /path_to_dev_directory/lwarp_baseline_marker.eps .
mktexlsr
```

Run `./update` now, and whenever a new `lwarp-*` package is added.

To make the development version of *lwarpmk* visible to other projects:

```
cd /opt
ln -s /usr/local/texlive/texmf-local/bin/x86_64-linux texbin_local
cd texbin_local
ln -s ../../scripts/lwarp/lwarpmk.lua lwarpmk
cd /usr/local/texlive/texmf-local/scripts/
mkdir lwarp
cd lwarp
ln -s /path_to_dev_directory/lwarpmk.lua lwarpmk
```

Verify that the correct version is found with

Enter \Rightarrow **which lwarpmk**

To make the local versions visible to the shell:

Paths must be set by the shell startup, such as in `.bashrc` and `.cshrc`:

In `.bashrc`:

```
PATH=/opt/texbin_local:/opt/texbin:$PATH
```

In `.cshrc`:

```
setenv PATH ${HOME}/bin:/opt/texbin_local:/opt/texbin:${PATH}
```

To fully compile the lwarp documentation and indexes:

```
pdflatex lwarp.ins
pdflatex lwarp.dtx
pdflatex lwarp.dtx <if necessary>
makeindex -s gglo.ist -o lwarp.gls lwarp.glo <indexes>
splitindex lwarp.idx - -s gind.ist
pdflatex lwarp.dtx
pdflatex lwarp.dtx <if necessary>
makeindex -s gglo.ist -o lwarp.gls lwarp.glo <indexes>
splitindex lwarp.idx - -s gind.ist <again>
pdflatex lwarp.dtx
pdflatex lwarp.dtx <if necessary>
```

(The second round of index processing is required to fully resolve the final Index of Indexes.)

To make it easier to update the documentation after a minor change, it is useful to create a command script called `make_index`, containing:

```
makeindex -s gglo.ist -o lwarp.gls lwarp.glo
splitindex lwarp.idx -- -s gind.ist
```

 **references**

Note that Index of Indexes and the cross-references to the indexes may not be correct until the above has been accomplished.

12.2 Modifying a package for lwrap

If a class loads additional packages, it will be required to modify the class for lwrap, since lwrap must be loaded before most other packages.

To work with lwrap, a class must first set up anything which replicates the functions of the basic L^AT_EX classes, load any required fonts, then load lwrap, then finally load and adjust any other required packages.

When creating HTML, lwrap redefines the `\usepackage` and `\RequirePackage` macros such that it first looks to see if a `lwrap-⟨packagename⟩.sty` version exists. If so, the lwrap version is used instead. This modular system allows users to create their own versions of packages for lwrap to use for HTML, simply by creating a new package with a `lwrap-` prefix. If placed in the local directory along with the source code, it will be seen by that project alone. If placed alongside the other lwrap- packages where T_EX can see it, then the user's new package will be seen by any documents using lwrap. (Remember `mktexlsr` or `texhash`.)

An `lwrap-⟨packagename⟩.sty` package is only used during HTML generation. Its purpose is to pretend to be the original package, while modify anything necessary to create a successful HTML conversion. For many packages it is sufficient to simply provide nullified macros, lengths, counters, etc. for anything which the original package does, while passing the raw text on to be typeset. See the pre-existing lwrap- packages for examples.

Anything the user might expect of the original package must be replaced or emulated by the new lwrap- package, including package options, user-adjustable counters, lengths, and booleans, and conditional behaviors. In many of these packages, most of the new definitions have a “local” prefix according to the package name, and @ characters inside the name, which hides these names from the user. In most cases these macros will not need to be emulated for HTML output. Only the “user-facing” macros need to be nullified or emulated.

Each lwrap-* package should first call either of:

```
\LWR@ProvidesPackageDrop
```

— *or* —

```
\LWR@ProvidesPackagePass
```

If “Drop”ped, the original print-version package is ignored, and only the lwrap- version is used. Use this where the original print version is useless for HTML. If “Pass”ed, the original package is loaded first, with the user-supplied options, then the lwrap- version continues loading as well. See section 402 ([nttheorem](#)) for an example of selectively disabling user options for a package. Use this when HTML output only requires some modifications of the original package. For a case where the original package is usable without changes, there is no need to create a lwrap- version.

12.2.1 Adding a package to the lwarp.dtx file

When adding a package to `lwarp.dtx` for permanent including in `lwarp`, provide the `lwarp-<packagename>` code in `lwarp.dtx`, add its entry into `lwarp.ins`, and also remember to add

```
\LWR@loadafter{<packagename>}
```

to `lwarp.dtx` in section 20.1. This causes `lwarp` to stop with an error if `packagename` is loaded before `lwarp`. Finally, add an entry in table 2, **Supported packages and features**, and also the Updates section.

12.3 Modifying a class for lwarp

If a class loads additional packages, it will be required to modify the class for `lwarp`, since `lwarp` must be loaded before most other packages.

To work with `lwarp`, a class must first set up anything which replicates the functions of the basic \LaTeX classes, load any required fonts, then load `lwarp`, then finally load and adjust any other required packages.

12.4 Testing lwarp

When changes have been made, test the print output before testing the HTML. The print output compiles faster, and any errors in the printed version will be easier to figure out than the HTML version.

Remember that the configuration files are only rewritten when compiling the printed version of the document.

When changing the source to *lwarpmk* or a css file in `lwarp.dtx`:

1. Change the source in `lwarp.dtx`.
2. `pdflatex lwarp.ins`
3. `pdflatex lwarp.dtx`
4. If modifying *lwarpmk* the new version should now be active.
5. If modifying css files:
 - (a) For the document, `lwarpmk print` to update the css files in the project.
 - (b) Reload the HTML document to see the effect of the new css files.

Sometimes it is worth checking the `<project>_html.pdf` file, which is the PDF containing HTML tags. Also, `<project>_html.html` has the text conversion of these tags, before the file is split into individual HTML files.

It is also worth checking the browser's tools for verifying the correctness of HTML and css code.

12.5 Modifying *lwarpmk*

Prog `lwarpmk` In most installations, `lwarpmk.lua` is an executable file located somewhere the operating system knows about, and it is called by typing **lwarpmk** into a terminal.

File `lwarpmk.lua`

A project-local copy of `lwarpmk.lua` may be generated, modified, and then used to compile documents:

1. Add the `lwarpmk` option to the `lwarp` package.
2. Recompile the printed version of the document. The `lwarpmk` option causes `lwarp` to create a local copy of `lwarpmk.lua`
3. The `lwarpmk` option may now be removed from the `lwarp` package.
4. Copy and rename `lwarpmk.lua` to a new file such as `mymake.lua`.
5. Modify `mymake.lua` as desired.
6. If necessary, make `mymake.lua` executable.
7. Use `mymake.lua` instead of `lwarpmk.lua`.

13 Troubleshooting

13.1 lwarp package error conditions and warnings

lwarp tests for a number of error conditions and prints appropriate warnings. The following is a summary of these conditions.

13.1.1 Configuration file `lwarpmk.conf`

File does not exist: The configuration file must exist for `lwarpmk`.

Incorrect Unix /Windows selection: The operating system which was detected by `lwarp`. So far only Unix and Windows are supported.

Incorrect delimiter characters. Older versions of *lwarpmk* used a different delimiter.

Source name is set to lwarp: `lwarp` has recently been recompiled in this directory, which overwrote the project's configuration files. This also occurs if *lwarpmk* is executed in `lwarp`'s source directory.

Incorrect operating system: The configuration file was set for a different operating system, perhaps due to sharing in a collaborative project.

Outdated configuration files: `lwarp` has been updated since this project was last compiled. If there appears to be a valid print command in the file, `lwarpmk` displays this to instruct the user how to recompile the print version, which then updates the configuration files.

The designated source file does not exist: For whatever reason...

Unknown engine: `lwarp` cannot determine which engine is being used. Supported are DVI \LaTeX , PDF \LaTeX , Xe \LaTeX , Lua \LaTeX , and up \LaTeX .

13.1.2 Image generation with `lwarpmk limages`

“Wait a moment for the images to complete before reloading page.”:

Images are generated by background tasks. If the document is reloaded before these tasks are complete, some images may not yet be generated. *lwarpmk* tries to wait for background tasks to complete before exiting.

HTML version does not exist: Images are extracted from the HTML version, which must be compiled before images are generated.

***-images.txt does not exist:** This file tells which images to extract from the HTML file. If the file does not exist, it may be that no `svg math` or `lateximages` were used. If so, `lwarpmk limages` is not necessary.

Cross references are not correct: The document must have up-to-date cross references to locate the images to extract. A number of conditions may cause incorrect cross references.

“WARNING: Images will be incorrect.”: An image reference was not found. Recompile.

lwarpmk epstopdf * or lwarpmk pdftosvg *: Errors if filenames are not found.

13.1.3 Default bitmapped font

lwarp requires the use of a vector font. If lwarp detects that the document uses the default COMPUTER MODERN font, and the cm-super package is not installed, it is assumed that the font is bitmapped. An error is generated, along with the recommendation to install cm-super or use lmodern.

13.1.4 Packages

Loaded before lwarp: Some packages and classes must be loaded before lwarp. These include input and font encoding, morewrites and newclude, and a number of CJK-related packages and classes.

Loaded after lwarp: Most packages which are modified by lwarp must be loaded after lwarp.

Loaded never: Some packages do not work with lwarp. An error is generated, along with a list of alternatives to consider.

Specific packages: Some packages enforce a specific load order vs. certain other packages.

Patching error: lwarp tries to patch some packages using xpatch. If the original package has been updated more recently than lwarp, a patch may not work. It may be necessary to use an older version of the package until lwarp is updated.

longtable: lwarp's longtable package issues detailed error messages regarding the use of the table headers and footers.

polyglossia: If used, an informative message is printed to instruct the user to be sure to set a language, without which an error will occur.

babel or polyglossia: An informative message is printed to note that not all languages are supported by cleveref.

13.1.5 Compiling

SideTOCDepth < FileDepth: A warning is displayed if these counters are set such that the sideroc will not be able to access all pages of the website.

Filenames: lwarp may generate file names from section names. While doing so, the filenames are simplified, and special characters and math are removed. If this process generates a duplicate filename, an error is generated, describing the filename and which section name generated it. A warning is issued if dollar-delimited math is used. Parenthesis-delimited math is recommended instead.

- ⚠ **HTML corrupted** **Multirow:** When `\multirow` or `\multicolrow` are used, `\mrowcell` or `\mcolrowcell` must be placed in the appropriate cells to avoid corrupted HTML output.
- (width,height) missing a comma:** `\makebox` and `\framebox` can accept a parenthesis-delimited width and height, which must be separated by a comma.
- “Load graphicx or graphics for improved SVG math baselines.”:** SVG math sizing and baselines are improved if either of these packages are used.
- “Load graphicx or graphics for improved XeTeX logo.”:** If these packages are loaded, the Xe_{La}TeX logo can use the reversed “E”.
- “It is recommended to use [width=xx\linewidth] instead of [scale=yy]”:** Browser support of `scale` does not have the same effect as in L^AT_EX.

13.2 Using the lwarp package

The following address problems which may occur, and possible solutions to each.

Also see:

Section 7.11: **Commands to be placed into the warpprint environment**

Section 8: **Special cases and limitations**

- ⚠ **HTML corrupted** **Text is not converting correctly / corrupted HTML tags:**
- Font-related UTF-8 information must be embedded in the PDF file. See section 7.4 regarding bitmapped vs. vector fonts.
 - See section 8.2.1 regarding HTML entities and the characters `&`, `<`, and `>`.

- ⚠ **dotlessj** **Dotless j (`\j`):** See section 7.4 regarding `cmap`, `mmap`.

Undefined HTML settings:

- See the warning regarding the placement of the HTML settings at section 7.6.

Tabular problems: See section 8.10.1.

Obscure error messages:

Print first: Be sure that a print version of the document compiles and that your document’s L^AT_EX code is correct, before attempting to generate an HTML version.

`\end{warpHTML}`, `\end{warpprint}`, `\end{warpall}`, `\end{warpMathJax}`:
Each of these must be without any other characters on the same line.

“Runaway argument? File ended while scanning use of `\next`:
Don’t use `warpHTML`, `warpprint`, `warpall`, or `warpMathJax` inside itself.

Options clash: If using `memoir`, see section 8.13.

“Missing `\begin{document}`.”: Some packages require that their options be specified before `lwarp` is loaded, or via the package’s setup macro, especially if these options include the use of braces. See section 8.1.

⚠ `warpHTML`, `warpprint`,
`warpMathJax`, `warpall`

“No room for a new \write.”: Before `\usepackage{lwarp}`, add:

```
\usepackage{morewrites}
\morewritessetup{allocate=10}
```

“! TeX capacity exceeded, sorry [text input levels=15].”: Packages were nested too many levels deep. Locate the file `texmf.cnf` for your distribution, and add the line

```
max_in_open = 30
```

“Missing \$ inserted.”: If using a filename or URL in a footnote or `\item`, escape underscores with `_.`

“Label(s) may have changed. Rerun to get cross-references right.”:

This warning may repeat endlessly if a math expression is used in a caption. Simple math expressions such as $X=1$ may be replaced with

```
\textit{X}\,,=,1
```

“Leaders not followed by proper glue”:

This can be caused by a missing `l@<floattype>` or `l@<sectiontype>` definition. See `lwarp`’s definitions for examples.

“Improper \prevdepth”: `lateximages` and `svg` math require `\newpage`, which cannot work inside `TeX` boxes or `\ensuremath`. Anything using `\newsavebox`, `\newbox`, `lrbox`, `\savebox`, `\hbox`, `\vbox`, `\usebox`, `\sbox`, etc., must be modified to work without box commands.

If you find something using `\ensuremath`, have it temporarily set:

```
\LetLtxMacro\@ensuredmath\LWR@origensuredmath
```

inside a group first.

As a stop-gap measure, you may wish to try incrementing the counter `LWR@texboxdepth` before the problematic macro, and then decrementing it after. Doing so tells `lwarp` to avoid using a `\newpage` inside the macro, which may avoid this error.

Also, custom macros which appear inside a section, figure, or table name should be made robust since they appear inside the `.toc`, `.lof`, or `.lot` files. Use `\newrobustcmd` or `\robustify` from `etoolbox`, `xparse`, etc.

If using BibTeX, see section 8.6.9.

“! Undefined control sequence. . . . \@begindocumenthook”:

See section 8.15.4 if using `polyglossia`.

“\begin{equation} ended by \end{document}”: Do not use custom macros such as `\beq` and `\eeq` to replace

```
\begin{equation}
...
\end{equation}
```

“Misplaced \omit”: If using `\LWR@formatted` to define new macros for print and HTML modes, see section 35 regarding `\LWR@expandableformatted`.

“Token not allowed in a PDF string”: This `hyperref` warning appears while creating the print-mode document, not HTML. A low-level macro is being used in a section name which appears in the PDF bookmarks. `hyperref` re-

`LWR@texboxdepth`

⚠ macros in section, table,
figure names

⚠ BibTeX

⚠ polyglossia

⚠ custom macros for
environments

⚠ `\LWR@formatted`

moves this macro from the bookmark, and warns of doing so. To avoid this warning, use `\pdfstringdefDisableCommands` in the preamble to define simplified replacement macros for each, or use `\texorpdfstring` in the `\section` or related macro to declare what to use for the T_EX text, v.s. the PDF bookmark. See the [hyperref](#) manual.

⚠ quote character

“Command `\textquoteright` invalid in math mode”: This can occur when the document source has math containing the slanted quote ‘ character, instead of using the upright quote ’ character.

⚠ “impure” math objects

Complicated objects inside math: Some objects, such as Tikz, may not compile in lwarp’s normal math emulation. Insert

`\displaymathother — or — \inlinemathother`

before the math, and then

`\displaymathnormal — or — \inlinemathnormal`

when displaying “normal” math. See section [8.7.9](#).

Slow compilation of math objects: Complicated math objects can also cause problems with alt tags, resulting in very slow compilation, large alt tags, and possible crashes. Use `\inlinemathother ... \inlinemathnormal` or `\displaymathother ... \displaymathnormal` around the math expression.

⚠ MATHJAX

Incorrect MATHJAX: Some objects do not convert to MATHJAX. Use `\displaymathother` before these objects, then `\displaymathnormal` to return to “normal” display math. See section [8.7.9](#).

Missing sections: See section [7.6](#) regarding the `FileDepth` and `SideTOCDepth` counters, and the use of `\tableofcontents` in the home page.

Misnumbered footnotes from section headings: See section [8.5.4](#).

Missing HTML files:

- See the warning regarding changes to the HTML settings at section [7.6](#).
- Ensure that the filenames are unique after math and short words are removed. See `FileSectionNames` at section [7.6](#).

Missing / incorrect cross-references:

- Use `lwarpmk` again followed by `lwarpmk html` or `lwarpmk print` to compile the document one more time.
- Labels with special characters may be a problem. It is best to stick with alpha-numeric, hyphen, underscore, and perhaps the colon (if not French). `\nameref` refers to the most recently-used section where the `\label` was defined. If no section has been defined before the `\label`, the link will be empty. Index entries also use `\nameref` and have the same limitation.
- `cleveref` and `varioref` are supported, but printed page numbers do not map to HTML, so a section name or a text phrase are used for `\cpageref` and `\cpagerefrange`. This phrase includes `\cpagerefFor`, which defaults to “for”.

labels

⚠ label characters

`\nameref`

⚠ empty link

⚠ cleveref page numbers

Ex:
`\cpageref{tab:first,tab:second}`
 in html becomes:
 “pages **for** table 4.1 and **for** table 4.2”
 See `\cpagerefFor` at page 721 to redefine the message which is printed for page number references.

BibTeX errors with `\etalchar`: See section 8.6.9.

Malformed URLs: Do not use the % character between arguments of `\hyperref`, etc., as this character is among those which is neutralized for inclusion in HTML URLs.

Em-dashes or En-dashes in listing captions and titles:

Use Xe_{La}TeX or Lua_{La}TeX.

Floats out of sequence:

Mixed “Here” and floating: Floats [H]ere and regular floats may become out of order. `\clearpage` if necessary.

Caption setup: With `\captionsetup` set the positions for the captions above or below to match their use in the source code.

Images are appearing in strange places:

- Enter `lwarpmk limages` to refresh the lateximage images.

SVG images:

⚠ adding/removing

When a math expression, picture, or Tikz environment is added or removed, the svg images must be re-created by entering `lwarpmk limages` to maintain the proper image-file associations. Inline svg math may be hashed and thus not need to be recreated, but display math and objects such as Tikz may move to new image numbers when the document is changed.

recompile first

Before attempting to create the svg image files, *lwarpmk* verifies that the HTML version of the document exists and has correct internal image references.¹⁶ If it is necessary to recompile the document's HTML version one more time, *lwarpmk* usually will inform the user with an error message, but there are some conditions which cannot be detected, so the user should watch for the \LaTeX recompile warnings.

⚠ HTML instead of images

If HTML appears where an svg image should be, recompile the document one more time to get the page numbers back in sync, then remake the images one more time.

⚠ page counter

Incorrect svg images will also occur if the document changes the page counter:

`\setcounter{page}{<value>}`

The page counter must *not* be adjusted by the user.

⚠ Lots of files!

Expressing math as svg images has the advantage of representing the math exactly as \LaTeX would, but has the disadvantage of requiring an individual file for each math expression. For inline math, and some other objects, *lwarp* uses an MD5 hash on its \LaTeX source to combine multiple instances of identical inline expressions into a single image file, but display math and other environments such as `picture` and `Tikz` require one image file each. For a document with a large amount of math, see section 5.5 to use MATHJAX instead.

¹⁶This becomes important when dealing with a document containing thousands of images.

Plain-looking document:

- The document's css stylesheet may not be available, or may be linked incorrectly. Verify any `\CSSFilename` statements point to a valid css file.



HTML corrupted

Broken fragments of HTML:

- Check the PDF file used to create HTML to see if the tags overflowed the margin. (This is why such large page size and margins are used.)

Changes do not seem to be taking effect:

- Be sure to `lwarpmk clean`, recompile, then start by reloading the home page. You may have been looking at an older version of the document. If you changed a section name, you may have been looking at the file for the old name.
- See the warning regarding changes to the HTML settings at section 7.6.
- Verify that the proper css is actually being used.
- The browser may compensate for some subtle changes, such as automatically generating ligatures, reflowing text, etc.

Un-matched conditional compiles:

- Verify the proper begin/end of `warpprint`, `warpHTML`, and `warpall` environments.

13.2.1 Debug tracing output

`\tracinglwarp` When `\tracinglwarp` is used, `lwarp` will add extra tracing messages to the `.log` file. The last several messages may help track down errors.

Place `\tracinglwarp` just after `\usepackage{lwarp}` to activate tracing.

13.3 Compiling the `lwarp.dtx` file

lwarp_tutorial.tex: Copy or link `lwarp_tutorial.txt` from the TDS doc directory to the source directory, or wherever you wish to compile the documentation. This file is included verbatim in the documentation, but is in the doc directory so that it may be found by *texdoc* and copied by the user.

Illogical error messages caused by an out-of-sync `lwarp.sty` file:

1. Delete the `lwarp.sty` file.
2. Enter `pdflatex lwarp.ins` to generate a new `lwarp.sty` file.
3. Enter `pdflatex lwarp.dtx` to recompile the `lwarp.pdf` documentation.

Un-nested environments:

Be sure to properly nest:

- `\begin{macrocode}` and `\end{macrocode}`
- `\begin{macro}` and `\end{macro}`
- `\begin{environment}` and `\end{environment}`

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File 1 **lwarp.sty**

15 Implementation

This package is perhaps best described as a large collection of smaller individual technical challenges, in many cases solved through a number of ~~crude hacks~~ clever tricks. Reference sources are given for many of the solutions, and a quick internet search will provide additional possibilities.

Judgement calls were made, and are often commented. Improvements are possible. The author is open to ideas and suggestions.

Packages were patched for re-use where they provided significant functionality. Examples include `xcolor` with its color models and conversion to `HTML` color output, and `siunitx` which provides many number and unit-formatting options, almost all of which are available in pure-text form, and thus easily used by *pdftotext*.

Packages were emulated where their primary purpose was visual formatting which is not relevant to `HTML` output. For example, packages related to sectioning are already patched by numerous other packages, creating a difficult number of combinations to try to support, and yet in `HTML` output all of the formatting is thrown away, so these packages are merely emulated.

Packages with graphical output are allowed as-is, but must be nested inside a `lateximage` environment to preserve the graphics.

Testing has primarily been done with the Iceweasel/Firefox browser.

Table 11: Section depths and HTML headings

Section	\LaTeX depth	HTML headings *
Title of the entire website		<code><h1></code>
(none)	-5	new for this package
book	-2	<code><div class = "book"></code>
part	-1	<code><h2></code>
chapter	0	<code><h3></code>
section	1	<code><h4></code>
subsection	2	<code><h5></code>
subsubsection	3	<code><h6></code>
paragraph	4	<code></code>
subparagraph	5	<code></code>
listitem	7	new for this package, used for list items

* If FormatWP is true, section headings may be adjusted, depending on WPTitleHeading. See table 10 on page 184.

16 Section depths and HTML headings

Stacks are created to track depth inside the \LaTeX document structure. This depth is translated to HTML headings as shown in table 11. “Depth” here is not depth in the traditional computer-science stack-usage sense, but rather a representation of the nesting depth inside the \LaTeX document structure.

When starting a new section, the program first must close out any existing sections and lists of a deeper level to keep the HTML tags nested correctly.

Support for the memoir package will require the addition of a book level, which may push the HTML headings down a step, and also cause subsubsection to become a `<div>` due to a limit of six HTML headings.

It is possible to use HTML5 `<section>` and `<h1>` for all levels, but this may not be well-recognized by older browsers.

Fixed levels for parts and chapters allow the CSS to remain fixed as well.

17 Source code

This is where the documented source code for `lwarp` begins, continuing through the following sections all the way to the change log and index at the end of this document.


The following sections document the actual implementation of the `lwarp` package.

line numbers The small numbers at the left end of a line refer to line numbers in the `lwarp.sty` file.

subjects Blue-colored tags in the left margin aid in quickly identifying the subject of each paragraph.

objects Black-colored tags in the left margin are used to identify programming objects such as files, packages, environments, booleans, and counters. Items without a tag are

index entries command macros. Each of these also appears in the index as individual entries, and are also listed together under “files”, “packages”, “environments”, “booleans”, and “counters”.

 **warnings** Special warnings are marked with a warning icon.

for HTML output: Green-colored tags in the left margin show which sections of source code apply to the
for PRINT output: generation of HTML, print, or both forms of output.
for HTML & PRINT:

18 Detecting the T_EX engine — *pdf_latex*, *lua_latex*, *xel_latex*

See: <http://tex.stackexchange.com/a/47579>.

Detects X_lT_EX and Lua_LT_EX:

```

1 \RequirePackage{iftex}[2019/11/07]
2 \RequirePackage{ifpdf}
3 \RequirePackage{ifptex}
4
5 \newif\ifxetexorluatex
6
7 \ifXeTeX
8   \xetexorluatextrue
9 \else
10  \ifLuaTeX
11    \xetexorluatextrue
12  \else
13    \xetexorluatexfalse
14  \fi
15 \fi

```

19 Early package requirements

Pkg etoolbox Provides \ifbool and other functions.

Pkg xpatch Patches macros with optional arguments.

```

16 \RequirePackage{etoolbox}[2011/01/03]% v2.6 for \BeforeBeginEnvironment, etc.
17 \RequirePackage{xpatch}

```

Pkg ifplatform Provides \ifwindows to try to automatically detect WINDOWS OS.

```

18 \RequirePackage{ifplatform}% sense op-system platform

```

Pkg letltxmacro

```

19 \RequirePackage{letltxmacro}

```

20 Package load order

Several packages must never be used with *lwarp*, others should only be loaded before *lwarp*, and others should only be loaded after. The *lwarp* core checks most of these cases. In some *lwarp*-* packages, `\LWR@loadbefore` is used to trigger an error if they are loaded after *lwarp*, while additional code provides necessary patches for when they are loaded before.

Packages which must be loaded after `lwarp` are enforced by a large number of `\LWR@loadafter` statements, below. Some packages are emulated by `memoir`, and so these are tested by `\LWR@notmemoirloadafter`, which does not cause an error if `memoir` is used.

`\LWR@checkloadfilename` is used to check each filename to see if it must never be loaded, or must always be loaded before `lwarp`.

20.1 Tests of package load order

`\LWR@loadafter` `{\langle packagename \rangle}` Error if this package was loaded before `lwarp`.

```

20 \newcommand*\LWR@loadafter[1]{%
21 \ifpackageloaded{#1}
22 {
23   \PackageError{lwarp}
24     {%
25       Package #1,\MessageBreak
26       or one which uses #1,\MessageBreak
27       must be loaded after Lwarp.\MessageBreak
28       Enter 'H' for possible solutions%
29     }
30     {Move “\protect\usepackage{#1}” after
31       “\protect\usepackage{lwarp}”.\MessageBreak
32       Package #1 may also be loaded by something else,\MessageBreak
33       which must also be moved after Lwarp.}
34 }
35 {}
36 }
```

`\LWR@notmemoirloadafter` `{\langle packagename \rangle}` Error if not `memoir` class and this package was loaded before `lwarp`.

`memoir` emulates many packages, and pretends that they have already been loaded.

```

37 \ifclassloaded{memoir}
38 {\newcommand*\LWR@notmemoirloadafter[1]{} }
39 {\LetLtxMacro\LWR@notmemoirloadafter\LWR@loadafter}
```

`\LWR@notltjloadafter` `{\langle packagename \rangle}` Error if not a `ltjs*` class and this package was loaded before `lwarp`.

```

40 \LetLtxMacro\LWR@notltjloadafter\LWR@loadafter
41
42 \ifclassloaded{ltjarticle}{\renewcommand*\LWR@notltjloadafter[1]{} }
43 \ifclassloaded{ltjbook}{\renewcommand*\LWR@notltjloadafter[1]{} }
44 \ifclassloaded{ltjreport}{\renewcommand*\LWR@notltjloadafter[1]{} }
45 \ifclassloaded{ltjsarticle}{\renewcommand*\LWR@notltjloadafter[1]{} }
46 \ifclassloaded{ltjsbook}{\renewcommand*\LWR@notltjloadafter[1]{} }
47 \ifclassloaded{ltjsreport}{\renewcommand*\LWR@notltjloadafter[1]{} }
48 \ifclassloaded{ltjspf}{\renewcommand*\LWR@notltjloadafter[1]{} }
49 \ifclassloaded{ltjskiyou}{\renewcommand*\LWR@notltjloadafter[1]{} }
```

```

50 \@ifclassloaded{ltjtarticle}{\renewcommand*{\LWR@notltjloadafter}[1]{}{}}
51 \@ifclassloaded{ltjtbook}{\renewcommand*{\LWR@notltjloadafter}[1]{}{}}
52 \@ifclassloaded{ltjtreport}{\renewcommand*{\LWR@notltjloadafter}[1]{}{}}

```

`\LWR@loadbefore` `{\langle packagename \rangle}` Error if this package is loaded after lwarp.

```

53 \newcommand*{\LWR@loadbefore}[1]{%
54 \ifpackageloaded{#1}
55 {}
56 {
57   \PackageError{lwarp}
58   {%
59     Package #1 must be loaded before lwarp.\MessageBreak
60     Enter 'H' for possible solutions%
61   }
62   {Move “\protect\usepackage{#1}” before “\protect\usepackage{lwarp}”.}
63 }
64 }

```

`\LWR@checkloadbefore` `{\langle thispackagename \rangle}{\langle packagename \rangle}`

If package names match, error if it is loaded after lwarp.

```

65 \newcommand*{\LWR@checkloadbefore}[2]{%
66   \edef\LWR@tempone{#1}%
67   \ifdefstring{\LWR@tempone}{#2}{%
68     \LWR@loadbefore{#1}%
69   }{}%
70 }

```

`\LWR@loadnever` `{\langle badpackagename \rangle}{\langle replacementpkgnames \rangle}`

The first packages is not supported, so tell the user to use the second instead.

```

71 \newcommand*{\LWR@loadnever}[2]{%
72 \PackageError{lwarp}
73 {%
74   Package #1 is not supported\MessageBreak
75   by lwarp's HTML conversion.\MessageBreak
76   Package(s)\MessageBreak
77   \space\space#2\MessageBreak
78   may be useful instead%
79 }
80 {%
81   Package #1 might conflict with lwarp in some way,\MessageBreak
82   or is superceded by another package.\MessageBreak
83   For a possible alternative, see package(s) #2.
84 }
85 }

```

`\LWR@checkloadnever` `{\langle thispackagename \rangle}{\langle badpackagename \rangle}{\langle replacementpkgnames \rangle}`

If this package name is the bad packagename, suggest the replacements instead.

```

86 \newcommand*{\LWR@checkloadnever}[3]{%
87   \edef\LWR@tempone{#1}%
88   \ifdefstring{\LWR@tempone}{#2}{%
89     \LWR@loadnever{#2}{#3}%
90   }{}%
91 }

```

`\LWR@earlyloadnever` $\{\langle badpackagename \rangle\} \{\langle replacementpkgname \rangle\}$

The first package is not supported, so tell the user to use the second instead. This version checks immediately for packages which may have been loaded before lwarp.

```

92 \newcommand*{\LWR@earlyloadnever}[2]{%
93   \ifpackageloaded{#1}{%
94     \LWR@loadnever{#1}{#2}%
95   }{}%
96 }

```

`\LWR@earlyclassloadnever` $\{\langle badclassname \rangle\} \{\langle replacementclassname \rangle\}$

The first class is not supported, so tell the user to use the second instead. This version checks immediately for classes which may have been loaded before lwarp.

```

97 \newcommand*{\LWR@earlyclassloadnever}[2]{%
98   \@ifclassloaded{#1}{%
99     \PackageError{lwarp}
100 {%
101   Class #1 is not supported\MessageBreak
102   by lwarp's HTML conversion.\MessageBreak
103   Class(es) #2 may be useful instead
104 }
105 {%
106   Class #1 might conflict with lwarp in some way,\MessageBreak
107   or is superceded by another class.\MessageBreak
108   For a possible alternative, see class(es) #2.
109 }
110 }{}%
111 }

```

20.2 Error for disallowed packages and classes loaded before lwarp

```

112 \LWR@earlyclassloadnever{jarticle}{ujarticle}
113 \LWR@earlyclassloadnever{jbook}{ujbook}
114 \LWR@earlyclassloadnever{jreport}{ujreport}
115 \LWR@earlyclassloadnever{tarticle}{utarticle}
116 \LWR@earlyclassloadnever{tbook}{utbook}
117 \LWR@earlyclassloadnever{treport}{utreport}
118 \LWR@earlyloadnever{ae}{cm-super, lmodern}
119 \LWR@earlyloadnever{aecompl}{cm-super, lmodern}
120 \LWR@earlyloadnever{aecc}{cm-super, lmodern}

```

```

121 \LWR@earlyloadnever{alg}{algorithm2e, algorithmicx}
122 \LWR@earlyloadnever{algorithmic}{algorithm2e, algorithmicx}
123 \LWR@earlyloadnever{bitfield}{bytefield}
124 \LWR@earlyloadnever{caption2}{caption}
125 % \LWR@earlyloadnever{ccaption}{caption}% might be preloaded by memoir
126 \LWR@earlyloadnever{colortab}{colortbl}
127 \LWR@earlyloadnever{csvtools}{datatool}
128 \LWR@earlyloadnever{doublespace}{setspace}
129 \LWR@earlyloadnever{epsf}{graphicx}
130 \LWR@earlyloadnever{fancyheadings}{fancyhdr}
131 \LWR@earlyloadnever{fncylab}{cleveref}
132 \LWR@earlyloadnever{formula}{siunitx}
133 \LWR@earlyloadnever{glossary}{glossaries}
134 \LWR@earlyloadnever{hyper}{hyperref}
135 \LWR@earlyloadnever{newthm}{ntheorem}
136 \LWR@earlyloadnever{pdfcpot}{microtype}
137 \LWR@earlyloadnever{picinpar}{floatflt, wrapfig}
138 \LWR@earlyloadnever{picins}{floatflt, wrapfig}
139 \LWR@earlyloadnever{rplain}{fancyhdr}
140 \LWR@earlyloadnever{si}{siunitx}
141 \LWR@earlyloadnever{sistyle}{siunitx}
142 \LWR@earlyloadnever{slashbox}{diagbox}
143 \LWR@earlyloadnever{statex}{statex2}
144 \LWR@earlyloadnever{tlenc}{fontenc, inputenc, inputenx}
145 \LWR@earlyloadnever{ucs}{inputenc, inputencx}
146 \LWR@earlyloadnever{wasysym}{textcomp, amssymb, amsfonts, mnsymbol, fdsymbol}

```

The older CJK and CJKutf8 only work with xeCJK:

```

147 \@ifpackageloaded{xeCJK}{}{
148   \LWR@earlyloadnever{CJK}{ctex, xeCJK}
149   \LWR@earlyloadnever{CJKutf8}{ctex, xeCJK}
150 }

```

bxckjatype is based on CJK:

```

151 \LWR@earlyloadnever{bxckjatype}{upLaTeX, bxjsarticle, uarticle, utarticle}

```

hangul is not in TeXLive, and is not tested:

```

152 \LWR@earlyloadnever{hangul}{kotex, xetexko, luatexko}

```

20.3 Enforcing package loading after lwarp

Packages which should only be loaded after lwarp are tested here to trip an error of they have already been loaded.

The following packages must be loaded after lwarp:

```

153 \LWR@loadafter{2in1}
154 \LWR@loadafter{2up}
155 \LWR@loadafter{a4}
156 \LWR@loadafter{a4wide}
157 \LWR@loadafter{a5comb}

```

```
158 \LWR@notmemoirloadafter{abstract}
159 \LWR@loadafter{academicons}
160 \LWR@loadafter{accessibility}
161 \LWR@loadafter{accsupp}
162 \LWR@loadafter{acro}
163 \LWR@loadafter{acronym}
164 \LWR@loadafter{adjmulticol}
165 \LWR@loadafter{addlines}
166 \LWR@loadafter{afterpage}
167 \LWR@loadafter{algorithm2e}
168 \LWR@loadafter{algorithmicx}
169 \LWR@loadafter{alltt}
170 \LWR@loadafter{amsmath}
171 \LWR@loadafter{amsthm}
172 \LWR@loadafter{anonchp}
173 \LWR@loadafter{anysize}
174 \LWR@notmemoirloadafter{appendix}
175 \LWR@loadafter{ar}
176 \LWR@loadafter{arabicfront}
177 \LWR@notmemoirloadafter{array}
178 \LWR@loadafter{arydshln}
179 \LWR@loadafter{asymptote}
180 % \LWR@loadafter{atbegshi}% used by morewrites
181 \LWR@loadafter{attachfile}
182 \LWR@loadafter{attachfile2}
183 \LWR@loadafter{authblk}
184 \LWR@loadafter{autobreak}
185 \LWR@loadafter{autonum}
186 \LWR@loadafter{awesomebox}
187 \LWR@loadafter{axessibility}
188 \LWR@loadafter{axodraw2}
189 \LWR@loadafter{backnaur}
190 \LWR@loadafter{backref}
191 \LWR@loadafter{balance}
192 \LWR@loadafter{bbding}
193 \LWR@loadafter{bigdelim}
194 \LWR@loadafter{bigfoot}
195 \LWR@loadafter{bigstrut}
196 \LWR@loadafter{bitpattern}
197 \LWR@loadafter{blowup}
198 \LWR@loadafter{bm}
199 \LWR@loadafter{booklet}
200 \LWR@loadafter{bookmark}
201 \LWR@notmemoirloadafter{booktabs}
202 \LWR@loadafter{bophook}
203 \LWR@loadafter{bounddvi}
204 \LWR@loadafter{boxedminipage}
205 \LWR@loadafter{boxedminipage2e}
206 \LWR@loadafter{braket}
207 \LWR@loadafter{breakurl}
208 \LWR@loadafter{breqn}
209 \LWR@loadafter{bsheaders}
210 \LWR@loadafter{bypapersize}
211 \LWR@loadafter{bytefield}
212 \LWR@loadafter{cancel}
```

```
213 \LWR@loadafter{canoniclayout}
214 \LWR@loadafter{caption}
215 \LWR@loadafter{caption2}
216 \LWR@loadafter{cases}
217 % catoptions is supported by the lwarp core
218 % \LWR@loadafter{ccaption}% may be preloaded by memoir
219 \LWR@loadafter{centernot}
220 \LWR@loadafter{changebar}
221 \LWR@loadafter{changelayout}
222 \LWR@notmemoirloadafter{changepage}
223 \LWR@loadafter{changes}
224 \LWR@loadafter{chappg}
225 \LWR@loadafter{chapterbib}
226 \LWR@loadafter{chemfig}
227 \LWR@loadafter{chemformula}
228 \LWR@loadafter{chemgreek}
229 \LWR@loadafter{chemmacros}
230 \LWR@loadafter{chemnum}
231 \LWR@loadafter{chkfloat}
232 \LWR@notmemoirloadafter{chnpage}
233 \LWR@loadafter{cite}
234 \LWR@loadafter{citeref}
235 \LWR@loadafter{cleveref}
236 \LWR@loadafter{cmdtrack}
237 \LWR@loadafter{colonequals}
238 \LWR@loadafter{color}
239 \LWR@loadafter{colortbl}
240 \LWR@loadafter{continue}
241 \LWR@loadafter{copyrightbox}
242 \LWR@notmemoirloadafter{crop}
243 % ctex must be loaded before lwarp
244 \LWR@loadafter{ctable}
245 \LWR@loadafter{cuted}
246 \LWR@loadafter{cutwin}
247 \LWR@loadafter{dblfloatfix}
248 \LWR@loadafter{dblfnote}
249 \LWR@notmemoirloadafter{dcolumn}
250 \LWR@loadafter{decimal}
251 \LWR@loadafter{diagbox}
252 \LWR@loadafter{dingbat}
253 \LWR@loadafter{DotArrow}
254 \LWR@loadafter{dotlessi}
255 \LWR@loadafter{dprogress}
256 \LWR@loadafter{draftcopy}
257 \LWR@loadafter{draftfigure}
258 \LWR@loadafter{draftwatermark}
259 \LWR@loadafter{drftcite}
260 \LWR@loadafter{easy-todo}
261 \LWR@loadafter{ebook}
262 \LWR@loadafter{econometrics}
263 \LWR@loadafter{ed}
264 \LWR@loadafter{ellipsis}
265 \LWR@loadafter{embrac}
266 \LWR@loadafter{emptypage}
267 \LWR@loadafter{endfloat}
```

```
268 \LWR@loadafter{endheads}
269 \LWR@loadafter{endnotes}
270 \LWR@loadafter{engtlc}
271 \LWR@notmemoirloadafter{enumerate}
272 \LWR@loadafter{enumitem}
273 \LWR@notmemoirloadafter{epigraph}
274 \LWR@loadafter{epsfig}
275 \LWR@loadafter{epstopdf}
276 \LWR@loadafter{epstopdf-base}
277 \LWR@loadafter{eqlist}
278 \LWR@loadafter{eqparbox}
279 \LWR@loadafter{errata}
280 \LWR@loadafter{eso-pic}
281 \LWR@loadafter{etoc}
282 \LWR@loadafter{eurosym}
283 \LWR@loadafter{everypage}
284 \LWR@loadafter{everyshi}
285 \LWR@loadafter{extarrows}
286 \LWR@loadafter{extramarks}
287 \LWR@loadafter{fancybox}
288 \LWR@loadafter{fancyhdr}
289 \LWR@loadafter{fancyref}
290 \LWR@loadafter{fancytabs}
291 \LWR@loadafter{fancyvrb}
292 \LWR@loadafter{fbox}
293 \LWR@loadafter{fewerfloatpages}
294 \LWR@loadafter{figcaps}
295 \LWR@loadafter{figsize}
296 \LWR@loadafter{fitbox}
297 \LWR@loadafter{fix2col}
298 \LWR@loadafter{fixme}
299 \LWR@loadafter{fixmetodonotes}
300 \LWR@loadafter{flafter}
301 \LWR@loadafter{flippdf}
302 \LWR@loadafter{float}
303 \LWR@loadafter{floatflt}
304 \LWR@loadafter{floatpag}
305 \LWR@loadafter{floatrow}
306 \LWR@loadafter{fltrace}
307 \LWR@loadafter{flushend}
308 \LWR@loadafter{fnbreak}
309 \LWR@loadafter{fncychap}
310 \LWR@loadafter{fnlineno}
311 \LWR@loadafter{fnpara}
312 \LWR@loadafter{fnpos}
313 \LWR@loadafter{fontawesome}
314 \LWR@loadafter{fontawesome5}
315 % fontenc must be loaded before lwarp
316 % fontspec must be loaded before lwarp
317 \LWR@loadafter{footmisc}
318 \LWR@loadafter{footnote}
319 \LWR@loadafter{footnotebackref}
320 \LWR@loadafter{footnotehyper}
321 \LWR@loadafter{footnoterange}
322 \LWR@loadafter{footnpag}
```

```
323 \LWR@loadafter{foreign}
324 \LWR@loadafter{forest}
325 \LWR@loadafter{fouridx}
326 \LWR@loadafter{framed}
327 \LWR@loadafter{ftcap}
328 \LWR@loadafter{ftnright}
329 \LWR@loadafter{fullminipage}
330 \LWR@loadafter{fullpage}
331 \LWR@loadafter{fullwidth}
332 \LWR@loadafter{fwlw}
333 \LWR@loadafter{gensymb}
334 \LWR@loadafter{gentombow}
335 % geometry is always loaded by lwarp, and lwarp-geometry is AtBeginDocument
336 \LWR@loadafter{ghsystem}
337 \LWR@loadafter{gindex}
338 \LWR@loadafter{glossaries}
339 \LWR@loadafter{gmeometric}
340 % \LWR@loadafter{graphics}% pre-loaded by xunicode
341 % \LWR@loadafter{graphicx}% pre-loaded by xunicode
342 \LWR@loadafter{gloss}
343 \LWR@loadafter{glossary}
344 \LWR@loadafter{grffile}
345 \LWR@loadafter{grid}
346 \LWR@loadafter{grid-system}
347 \LWR@loadafter{gridset}
348 \LWR@loadafter{hang}
349 \LWR@loadafter{hanging}
350 \LWR@loadafter{hhline}
351 \LWR@loadafter{hybpmsec}
352 \LWR@loadafter{hypcap}
353 \LWR@loadafter{hypdestopt}
354 \LWR@loadafter{hypernat}
355 \LWR@loadafter{hyperref}
356 \LWR@loadafter{hyperxmp}
357 \LWR@loadafter{hyphenat}
358 \LWR@loadafter{idxlayout}
359 \LWR@loadafter{ifoddpge}
360 \LWR@loadafter{imakeidx}
361 \LWR@notmemoirloadafter{index}
362 % inputenc must be loaded before lwarp
363 % inputenx must be loaded before lwarp
364 % inputtrc may be loaded before lwarp
365 \LWR@loadafter{intopdf}
366 \LWR@loadafter{jurabib}
367 \LWR@loadafter{karnaugh-map}
368 \LWR@loadafter{keyfloat}
369 \LWR@loadafter{layaureo}
370 \LWR@loadafter{layout}
371 \LWR@loadafter{layouts}
372 \LWR@loadafter{leading}
373 \LWR@loadafter{leftidx}
374 \LWR@loadafter{letterspace}
375 \LWR@loadafter{lettrine}
376 \LWR@loadafter{lineno}
377 \LWR@loadafter{lips}
```

```
378 \LWR@loadafter{listings}
379 \LWR@loadafter{listliketab}
380 \LWR@loadafter{longtable}
381 \LWR@loadafter{lscape}
382 \LWR@loadafter{ltablex}
383 \LWR@loadafter{ltcaption}
384 \LWR@loadafter{ltxgrid}
385 \LWR@loadafter{ltxtable}
386 \LWR@loadafter{lua-check-hyphen}
387 \LWR@loadafter{lua-visual-debug}
388 \LWR@loadafter{luacolor}
389 \LWR@loadafter{luamplib}
390 \LWR@loadafter{luatodonotes}
391 \LWR@loadafter{lyluatex}
392 \LWR@loadafter{magaz}
393 \LWR@notmemoirloadafter{makeidx}
394 \LWR@loadafter{manyfoot}
395 \LWR@loadafter{marginfit}
396 \LWR@loadafter{marginfix}
397 \LWR@loadafter{marginnote}
398 \LWR@loadafter{marvosym}
399 \LWR@loadafter{mathcomp}
400 \LWR@loadafter{mathdots}
401 \LWR@loadafter{mathfixs}
402 \LWR@loadafter{mathtools}
403 \LWR@loadafter{mcaption}
404 \LWR@loadafter{mdframed}
405 \LWR@loadafter{media9}
406 \LWR@loadafter{memhfixc}
407 \LWR@loadafter{metalogo}
408 \LWR@loadafter{metalogoX}
409 \LWR@loadafter{mhchem}
410 \LWR@loadafter{microtype}
411 \LWR@loadafter{midfloat}
412 \LWR@loadafter{midpage}
413 \LWR@loadafter{minibox}
414 \LWR@loadafter{minitoc}
415 \LWR@loadafter{mismath}
416 % morefloats must be allowed early for print mode
417 \LWR@notmemoirloadafter{moreverb}
418 % morewrites must be loaded before lwarp
419 \LWR@notmemoirloadafter{movie15}
420 \LWR@notmemoirloadafter{mparhack}
421 \LWR@loadafter{multibib}
422 \LWR@loadafter{multicap}
423 %\LWR@loadafter{multicol}% loaded by ltxdoc
424 \LWR@loadafter{multicolrule}
425 \LWR@loadafter{multimedia}
426 \LWR@loadafter{multiobjective}
427 \LWR@loadafter{multirow}
428 \LWR@loadafter{multitoc}
429 \LWR@loadafter{musicography}
430 \LWR@loadafter{nameauth}
431 \LWR@loadafter{nameref}
432 \LWR@loadafter{natbib}
```

```
433 \LWR@notmemoirloadafter{nccfancyhdr}
434 \LWR@loadafter{nccfoots}
435 \LWR@loadafter{nccmath}
436 \LWR@notmemoirloadafter{needspace}
437 % newclude must be loaded before lwarp
438 \LWR@loadafter{newtxmath}
439 % newunicodechar must be loaded before lwarp
440 \LWR@notmemoirloadafter{nextpage}
441 \LWR@loadafter{nicefrac}
442 \LWR@loadafter{niceframe}
443 \LWR@loadafter{noitcrul}
444 \LWR@loadafter{nolbreaks}
445 \LWR@loadafter{nomencl}
446 \LWR@loadafter{nonfloat}
447 \LWR@loadafter{nonumonpart}
448 \LWR@loadafter{nopageno}
449 \LWR@loadafter{notes}
450 \LWR@loadafter{notespages}
451 \LWR@loadafter{nowidow}
452 \LWR@loadafter{ntheorem}
453 \LWR@loadafter{octave}
454 \LWR@loadafter{overpic}
455 \LWR@loadafter{pagegrid}
456 \LWR@notmemoirloadafter{pagenote}
457 \LWR@loadafter{pagesel}
458 \LWR@loadafter{paralist}
459 \LWR@loadafter{parallel}
460 \LWR@loadafter{parcolumns}
461 \LWR@loadafter{parnotes}
462 \LWR@notmemoirloadafter{parskip}
463 \LWR@loadafter{pbox}
464 \LWR@loadafter{pdfcol}
465 \LWR@loadafter{pdfcolfoot}
466 \LWR@loadafter{pdfcolmk}
467 \LWR@loadafter{pdfcolparallel}
468 \LWR@loadafter{pdfcolparcolumns}
469 \LWR@loadafter{pdfcomment}
470 \LWR@loadafter{pdfcrypt}
471 \LWR@loadafter{pdflandscape}
472 \LWR@loadafter{pdfmarginpar}
473 \LWR@loadafter{pdfpages}
474 \LWR@loadafter{pdfprivacy}
475 \LWR@loadafter{pdfrender}
476 \LWR@loadafter{pdfsync}
477 \LWR@loadafter{pdftricks}
478 \LWR@loadafter{pdfx}
479 \LWR@loadafter{perpage}
480 \LWR@loadafter{pfnote}
481 \LWR@loadafter{phfqit}
482 \LWR@loadafter{physics}
483 \LWR@loadafter{physunits}
484 \LWR@loadafter{pifont}
485 \LWR@loadafter{placeins}
486 \LWR@loadafter{plarray}
487 \LWR@loadafter{plarydshln}
```

```
488 \LWR@loadafter{plextarray}
489 \LWR@loadafter{plextarydshln}
490 \LWR@loadafter{plcolortbl}
491 \LWR@loadafter{plextdelarray}
492 \LWR@loadafter{prelim2e}
493 \LWR@loadafter{prettyref}
494 \LWR@loadafter{preview}
495 \LWR@loadafter{psfrag}
496 \LWR@loadafter{psfragx}
497 \LWR@loadafter{pst-eps}
498 \LWR@loadafter{pstool}
499 \LWR@loadafter{pstricks}
500 % \LWR@loadafter{pxatbegshi}% may be used by morewrites
501 \LWR@loadafter{pxeveryshi}
502 \LWR@loadafter{pxftnright}
503 \LWR@loadafter{pxjahyper}
504 \LWR@loadafter{quotchap}
505 \LWR@loadafter{quoting}
506 \LWR@loadafter{ragged2e}
507 \LWR@loadafter{realscripts}
508 \LWR@loadafter{refcheck}
509 \LWR@loadafter{register}
510 \LWR@loadafter{relsize}
511 \LWR@loadafter{repeatindex}
512 \LWR@loadafter{resizegather}
513 \LWR@loadafter{returntogrid}
514 \LWR@loadafter{rmathbr}
515 \LWR@loadafter{rmpage}
516 \LWR@loadafter{romanbar}
517 \LWR@loadafter{romanbarpagenumber}
518 \LWR@loadafter{rotating}
519 \LWR@loadafter{rotfloat}
520 \LWR@loadafter{rviewport}
521 \LWR@loadafter{savetrees}
522 % scalefnt is loaded by babel-french
523 \LWR@loadafter{schemata}
524 \LWR@loadafter{scrextend}
525 \LWR@loadafter{scrhack}
526 \LWR@loadafter{scrlayer}
527 \LWR@loadafter{scrlayer-notecolumn}
528 \LWR@loadafter{scrlayer-scrpage}
529 \LWR@loadafter{scrpage2}
530 \LWR@loadafter{section}
531 \LWR@loadafter{sectionbreak}
532 \LWR@loadafter{sectsty}
533 \LWR@loadafter{semantic-markup}
534 \LWR@notmemoirloadafter{setspace}
535 \LWR@loadafter{shadow}
536 \LWR@loadafter{shapepar}
537 \LWR@notmemoirloadafter{showidx}
538 \LWR@loadafter{showkeys}
539 \LWR@loadafter{showtags}
540 \LWR@loadafter{sidecap}
541 \LWR@loadafter{sidenotes}
542 \LWR@loadafter{SIunits}
```

```
543 \LWR@loadafter{siunitx}
544 \LWR@loadafter{slantsc}
545 \LWR@loadafter{slashed}
546 \LWR@loadafter{soul}
547 \LWR@loadafter{soulpos}
548 \LWR@loadafter{soulutf8}
549 \LWR@loadafter{splitbib}
550 \LWR@loadafter{splitidx}
551 \LWR@loadafter{srcltx}
552 \LWR@loadafter{srctex}
553 \LWR@loadafter{stabular}
554 \LWR@loadafter{stackengine}
555 \LWR@loadafter{stackrel}
556 \LWR@loadafter{statex2}
557 \LWR@loadafter{statmath}
558 \LWR@loadafter{steinmetz}
559 \LWR@notltjloadafter{stfloats}
560 \LWR@loadafter{struktex}
561 \LWR@loadafter{subcaption}
562 \LWR@loadafter{subfig}
563 \LWR@loadafter{subfigure}
564 \LWR@loadafter{subsupscripts}
565 \LWR@loadafter{supertabular}
566 \LWR@loadafter{svg}
567 \LWR@loadafter{syntonly}
568 \LWR@loadafter{t1inc}
569 \LWR@loadafter{tabfigures}
570 \LWR@loadafter{tabls}
571 \LWR@loadafter{tablefootnote}
572 \LWR@notmemoirloadafter{tabularx}
573 \LWR@loadafter{tabulary}
574 \LWR@loadafter{tagpdf}
575 \LWR@loadafter{tascmac}
576 \LWR@loadafter{tcolorbox}
577 \LWR@loadafter{termcal}
578 \LWR@loadafter{textarea}
579 % \LWR@loadafter{textcomp}% maybe before lwarp with font packages
580 \LWR@loadafter{textfit}
581 \LWR@loadafter{textpos}
582 \LWR@loadafter{theorem}
583 \LWR@loadafter{thinsp}
584 \LWR@loadafter{thm-listof}
585 \LWR@loadafter{thm-restate}
586 \LWR@loadafter{thmbox}
587 \LWR@loadafter{threadcol}
588 \LWR@loadafter{threeparttable}
589 \LWR@loadafter{threeparttablex}
590 \LWR@loadafter{thumb}
591 \LWR@loadafter{thumbs}
592 \LWR@loadafter{tikz}
593 \LWR@loadafter{titleps}
594 \LWR@loadafter{titlesec}
595 \LWR@loadafter{titletoc}
596 \LWR@notmemoirloadafter{titling}
597 % \LWR@loadafter{tocbasic}% preloaded by koma-script classes
```

```
598 \LWR@notmemoirloadafter{tocbibind}
599 \LWR@loadafter{tocdata}
600 \LWR@loadafter{toccenter}
601 \LWR@notmemoirloadafter{tocloft}
602 \LWR@loadafter{tocstyle}
603 \LWR@loadafter{todo}
604 \LWR@loadafter{todonotes}
605 \LWR@loadafter{topcapt}
606 \LWR@loadafter{tram}
607 \LWR@loadafter{transparent}
608 \LWR@loadafter{trimclip}
609 \LWR@loadafter{trivfloat}
610 \LWR@loadafter{truncate}
611 \LWR@loadafter{turnthepage}
612 \LWR@loadafter{twoup}

613 % \LWR@loadafter{typearea}% preloaded by koma-script classes
614 \LWR@loadafter{typicons}
615 % \LWR@loadafter{ulem}% preloaded by ctexart and related classes
616 \LWR@loadafter{umoline}
617 \LWR@loadafter{underscore}
618 \LWR@loadafter{unicode-math}
619 \LWR@loadafter{units}
620 \LWR@loadafter{unitsdef}
621 \LWR@loadafter{upref}
622 \LWR@loadafter{url}
623 \LWR@loadafter{uspace}
624 \LWR@loadafter{varioref}
625 \LWR@notmemoirloadafter{verse}
626 \LWR@loadafter{versionotes}
627 \LWR@loadafter{vertbars}
628 \LWR@loadafter{vmargin}
629 \LWR@loadafter{vowel}
630 \LWR@loadafter{vpe}
631 \LWR@loadafter{vwcol}
632 \LWR@loadafter{wallpaper}
633 \LWR@loadafter{watermark}
634 \LWR@loadafter{widetable}
635 \LWR@loadafter{widows-and-orphans}
636 \LWR@loadafter{witharrows}
637 \LWR@loadafter{wrapfig}
638 \LWR@loadafter{xbmks}
639 \LWR@loadafter{xcolor}
640 \LWR@loadafter{xexchangebar}
641 \LWR@loadafter{xellipsis}
642 % xetexko-vertical must be loaded before lwarp
643 \LWR@loadafter{xfakebold}
644 \LWR@loadafter{xfrac}
645 \LWR@loadafter{xltabular}
646 \LWR@loadafter{xltextra}
647 \LWR@loadafter{xmpinl}
648 \LWR@loadafter{xpiano}
649 \LWR@loadafter{xpinyin}
650 \LWR@loadafter{xr}
651 \LWR@loadafter{xr-hyper}
```

```

652 \LWR@loadafter{xtab}
653 % xunicode must be loaded before lwarp
654 \LWR@loadafter{xurl}
655 \LWR@loadafter{xy}
656 \LWR@loadafter{zwpagelayout}

```

21 MD5 hashing

The MD5 hash is used for lateximage filenames for svg math.

```

657 \newcommand{\LWR@mdfive}[1]{%
658     \PackageError{lwarp}
659         {No MD5 macro was found}
660         {%
661             Lwarp must find the macros \protect\pdfmdfivesum\space
662             or \protect\mdfivesum.%
663         }
664 }

```

The default for pdf \LaTeX , dvi \LaTeX , up \LaTeX , etc:

```

665 \let\LWR@mdfive\pdfmdfivesum

```

For Lua \LaTeX :

```

666 \ifLuaTeX
667 \RequirePackage{pdftexcmds}
668 \let\LWR@mdfive\pdf@mdfivesum
669 \fi

```

For Xe \LaTeX :

```

670 \ifXeTeX
671 \@ifundefined{pdf@mdfivesum}{}
672     {\let\LWR@mdfive\pdfmdfivesum}
673 \@ifundefined{mdfivesum}{}
674     {\let\LWR@mdfive\mdfivesum}
675 \fi

```

22 pdf \LaTeX T1 and UTF-8 encoding

When using pdf \LaTeX , lwarp requires T1 font encoding, and recommends UTF-8 input encoding.

If some other input encoding is already defined, lwarp will try to use it instead, and hope for the best.

Xe \LaTeX and Lua \LaTeX are both UTF-8 by nature.

`\LWR@pdfencoding` Sets T1, and also utf8 if not already set.

```

676 \newcommand*{\LWR@pdfencoding}{%
677     \RequirePackage[T1]{fontenc}
678
679     \@ifpackageloaded{inputenc}{%
680         \@ifpackageloaded{inputenx}{%
681             \RequirePackage[utf8]{inputenc}
682         }
683     }
684 }

685 \ifPDFTeX% pdflatex or dvi latex
686     \LWR@pdfencoding
687 \fi
688
689 \ifpTeX
690     \LWR@pdfencoding
691 \fi

```

23 Unicode input characters

for HTML & PRINT: If using *pdflatex*, convert a minimal set of Unicode characters. Additional characters may be defined by the user, as needed.

A commonly-used multiply symbol is declared to be `\texttimes`.

The first arguments of `\newunicodechar` below are text ligatures in the source code, even though they are not printed in the following listing.

```

692 \ifpTeX
693 \else
694 \RequirePackage{newunicodechar}
695
696 \newunicodechar{*}{\texttimes}
697
698 \ifPDFTeX% pdflatex or dvi latex
699 \newunicodechar{ff}{ff}% Here, the first arguments are ligatures.
700 \newunicodechar{fi}{fi}
701 \newunicodechar{fl}{fl}
702 \newunicodechar{ffi}{ffi}
703 \newunicodechar{ffl}{ffl}
704 \newunicodechar{-}{---}
705 \newunicodechar{-}{--}
706 \fi
707
708 \fi

```

24 Avoid a bitmapped font

If DVI or PDF \LaTeX , and if the default Computer Modern is the selected font family, ensure that cm-super or lmodern is used to provide a vector font.

```

709 \ifxetexorluatex
710 \else
711   \ifdefstring{\f@family}{cmr}{
712     \IfFileExists{type1ec.sty}% found in cm-super
713     {}
714     {% cm-super not installed
715       \IfFileExists{lmodern.sty}{
716         \PackageInfo{lwarp}{cm-super not installed, loading lmodern}
717         \RequirePackage{lmodern}
718       }{
719         \PackageError{lwarp}
720         {%
721           Lwarp requires a vector font.\MessageBreak
722           Install and load cm-super, lmodern, or another\MessageBreak
723           Type-1 vector font before loading lwarp.\MessageBreak
724           Enter 'H' for possible solutions%
725         }
726         {%
727           Install cm-super or lmodern.\MessageBreak
728           If lmodern, load it before lwarp:\MessageBreak
729           \space\space\protect\usepackage{lmodern}\MessageBreak
730           \space\space\protect\usepackage{lwarp}%
731         }
732       }
733     }% cm-super not installed
734   }{}% f@family
735 \fi

```

25 Upright quotes

In PDF \TeX , preserve upright quotes in verbatim text. upquote also loads textcomp.

```

736 \ifPDFTeX
737 \RequirePackage{upquote}
738 \fi
739
740 \ifpTeX
741   \RequirePackage{upquote}
742 \fi

```

26 Miscellaneous tools

26.1 Variables

```
743 \newlength{\LWR@templengthone}
744 \newlength{\LWR@templengthtwo}
745 \newlength{\LWR@templengththree}
746 \newcounter{LWR@tempcountone}
```

26.2 Lengths and units

`\LWR@providelength` $\{\langle\text{lengthname}\rangle\}$ Provides the length if it isn't defined yet.

Used to provide source compatibility for lengths which will be ignored, but might or might not be already provided by other packages.

```
747 \newcommand*\LWR@providelength[1]{%
748   \ifdeflength{#1}{\newlength{#1}}%
749 }
```

`\LWR@convertto` $\{\langle\text{dest unit}\rangle\} \{\langle\text{length}\rangle\}$

Prints a length in the given units, without printing the unit itself.

```
750 \newcommand*\LWR@convertto[2]{\strip@pt\dimexpr #2*65536/\number\dimexpr 1#1}
```

`\LWR@printpercentlength` $\{\langle\text{smaller}\rangle\} \{\langle\text{larger}\rangle\}$

Prints a percent ratio of the two lengths.

```
751 \newcommand*\LWR@printpercentlength[2]{%
752   \setcounter{LWR@tempcountone}{100*\ratio{#1}{#2}}%
753   \arabic{LWR@tempcountone}%
754 }
```

26.3 Counters

`\defaddtcounter` $\{\langle\text{name}\rangle\} \{\langle\text{value}\rangle\}$

Locally add to a counter.

```
755 \providecommand*\defaddtcounter[2]{%
756   \defcounter{#1}{\value{#1}+#2}%
757 }
```

26.4 Patching

`\LWR@patcherror` $\{\langle packagename \rangle\} \{\langle macroname \rangle\}$

Prints an error if could not patch a macro.

```

758 \newcommand*\LWR@patcherror}[2]{%
759     \PackageError{lwarp}%
760     {%
761         Unable to patch package #1, macro #2.\MessageBreak
762         Lwarp may need to be updated%
763     }%
764     {Please contact the maintainer of the Lwarp package.}%
765 }
```

26.5 Chinese text isolation

`\LWR@isolate` $\{\langle text \rangle\}$ Isolates Chinese characters from the surrounding text. This is required to avoid extra spaces on either side of the Chinese characters, especially when written to a file.

```

766 \newcommand{\LWR@isolate}[1]{#1}%
767
768 \ifpackageloaded{ctexpatch}{
769     \renewcommand{\LWR@isolate}[1]{\null#1\null}%
770 }{}
771
772 \ifpackageloaded{xeCJK}{
773     \renewcommand{\LWR@isolate}[1]{\null#1\null}%
774 }{}
```

`\LWR@disablepinyin` Disable xpinyin during file, sideroc, and footnote generation. Set by xpinyin.

```

775 \newcommand*\LWR@disablepinyin{}
```

26.6 Inserting vertical space

`\LWR@forceemptyline` Extra vertical space in the HTML output. Use after `\LWR@stoppars`.

```

776 \newcommand*\LWR@forceemptyline{%
777     \LWR@origrule{0pt}{1\baselineskip}%
778     \LWR@orignewline%
779 }
```

26.7 Argument selection

`\LWR@firstoffour` $\{\langle first \rangle\} \{\langle second \rangle\} \{\langle third \rangle\} \{\langle fourth \rangle\}$

`\LWR@secondoffour` $\{\langle first \rangle\} \{\langle second \rangle\} \{\langle third \rangle\} \{\langle fourth \rangle\}$

`\LWR@thirddoffour` $\{\langle first \rangle\} \{\langle second \rangle\} \{\langle third \rangle\} \{\langle fourth \rangle\}$

`\LWR@fourthoffour` $\{\langle first \rangle\} \{\langle second \rangle\} \{\langle third \rangle\} \{\langle fourth \rangle\}$

Expands to the *n*th of the four arguments. Used for extra cross referencing.

```
780 \long\def\LWR@firstoffour#1#2#3#4{#1}
781 \long\def\LWR@secondoffour#1#2#3#4{#2}
782 \long\def\LWR@thirddoffour#1#2#3#4{#3}
783 \long\def\LWR@fourthoffour#1#2#3#4{#4}
```

26.8 Inside boxes

Greater than zero if currently inside a TeX box, thus should not use `\LWR@orignewpage`. See section 13.2.

```
784 \newcounter{LWR@texboxdepth}
785 \setcounter{LWR@texboxdepth}{0}
```

`\LWR@maybe@orignewpage` Only do `\LWR@orignewpage` if not inside a TeX box.

```
786 \newcommand*{\LWR@maybe@orignewpage}{%
787   \ifnumgreater{\value{LWR@texboxdepth}}{0}{{\LWR@orignewpage}%
788 }
```

26.9 Global boxes

`\LWR@gsavebox` $\{\langle macroname \rangle\} \{\langle contents \rangle\}$

From <https://tex.stackexchange.com/questions/288702/savebox-forgets-its-content-across-columns-inside-align>

```
789 \DeclareRobustCommand\LWR@gsavebox[1]{%
790   \@ifnextchar(%)
791     {\LWR@@gsavepicbox#1}{\@ifnextchar[\LWR@gsavebox#1]{\LWR@gsbox#1}}}%
792 \long\def\LWR@gsbox#1#2{\global\setbox#1\hbox{%
793   \color@setgroup#2\color@endgroup}}
794 \def\LWR@@gsavebox#1[#2]{%
795   \@ifnextchar [\LWR@@igsavebox#1[#2]]{\LWR@@igsavebox#1[#2][c]}}
796 \long\def\LWR@@igsavebox#1[#2][#3]#4{%
797   \LWR@gsbox#1{\@imakebox[#2][#3]{#4}}}
798 \def\LWR@@gsavepicbox#1(#2,#3){%
799   \@ifnextchar[%]
800     {\LWR@@igsavepicbox#1(#2,#3)}{\LWR@@igsavepicbox#1(#2,#3)[]}}
801 \long\def\LWR@@igsavepicbox#1(#2,#3)[#4]#5{%
802   \LWR@gsbox#1{\@imakepicbox(#2,#3)[#4]{#5}}}
```

Env LWR@glrbox $\{\langle\textit{macroname}\rangle\}$

```

803 \def\LWR@glrbox#1{%
804   \edef\reserved@a{%
805     \endgroup
806     \global\setbox#1\hbox{%
807       \begingroup\aftergroup}%
808     \def\noexpand\@currentvir{\@currentvir}%
809     \def\noexpand\@currentvline{\on@line}}%
810   \reserved@a
811   \@endpfalse
812   \color@setgroup
813   \ignorespaces}
814 \let\LWR@endglrbox\LWR@endlrbox

```

26.10 Converting a macro name to a cs name

$\backslash\textit{macroto csname}$ $\{\langle\textit{macro name with backslash}\rangle\}$

Results in the macro name without the leading backslash.

Ref: <https://tex.stackexchange.com/questions/42318/removing-a-backslash-from-a-character-sequence>

```

815 \newcommand*\backslashmacroto csname[1]{%
816   \ifcat\relax\noexpand#1%
817     \expandafter\expandafter\expandafter\@gobble\expandafter\string
818   \fi
819   #1%
820 }

```

26.11 LetLtxMacros

$\backslash\textit{LWR@LetLtxMacros}$ $\{\langle\textit{newcsname}\rangle\} \{\langle\textit{oldcsname}\rangle\}$

$\backslash\textit{LetLtxMacro}$ with cs names.

```

821 \newcommand*\backslashLWR@LetLtxMacros[2]{%
822   \expandafter\backslashLetLtxMacro\csname #1\expandafter\endcsname%
823   \csname#2\endcsname%
824 }

```

26.12 Absorbing a star

$\backslash\textit{LWR@absorbstar}$ $\{\langle\textit{csname}\rangle\}$

Modifies a macro to absorb a star. Used for `cleveref`, since `hyperref` is emulated, so the starred macros are not created by `cleveref`.

```

825 \newcommand*{\LWR@absorbstar}[1]{%
826   \LWR@LetLtxMacros{\LWR@origins@#1}{#1}%
827   \csdef{#1}{\@ifstar{\csuse{\LWR@origins@#1}}{\csuse{\LWR@origins@#1}}}
828   \expandafter\robustify\csname #1\endcsname
829 }

```

27 Operating-System portability

Prog	Unix	lwarp tries to detect which operating system is being used. UNIX / MAC OS / LINUX is the default (collectively referred to as “UNIX” in the configuration files), and MS-WINDOWS is supported as well.
Prog	Mac OS	
Prog	Linux	
Prog	MS-Windows	If MS-WINDOWS is not correctly detected, use the lwarp option <code>OSWindows</code> .
Prog	Windows	
Opt	<code>OSWindows</code>	When detected or specified, the operating-system path separator used by lwarp is modified, and the boolean <code>usingOSWindows</code> is set true. This boolean may be tested by the user for later use.

27.1 Literal characters

Literal characters to be used in `PrintLatexCmd` and `HTMLLatexCmd`. These are defined without @ to easily allow their inclusion in the user’s document.

The literal % character:

```
830 \let\LWRpercent\@percentchar
```

The literal \$ character:

```

831 \catcode'\$=12
832 \def\LWRdollar{$}
833 \catcode'\$=3

```

The literal & character:

```

834 \catcode'\&=12
835 \def\LWRamp{&}
836 \catcode'\&=4

```

The literal \ character. The ampersand is temporarily set to the escape character during the definition of the backslash macro.

```

837 \catcode'\&=0
838 &\catcode'\&=12
839 \def\LWRbackslash{\}
840 &\catcode'\&=0
841 \catcode'\&=4

```

The literal { character. The ampersand is temporarily set to the begin group character during the definition of the leftbrace macro.

```
842 \catcode'\&=1
843 \catcode'\{=12
844 \def\LWRleftbrace&{ }
845 \catcode'\{=1
846 \catcode'\&=4
```

The literal } character. The ampersand is temporarily set to the end group character during the definition of the leftbrace macro.

```
847 \catcode'\&=2
848 \catcode'\}=12
849 \def\LWRrightbrace{ }&
850 \catcode'\}=2
851 \catcode'\&=4
```

The literal # character:

```
852 \catcode'\#=12
853 \def\LWRhash{#}
854 \catcode'\#=6
```

`\LWRopquote` The operating system's quote mark, UNIX default. For WINDOWS, see `\LWR@setOSWindows`, below.

```
855 \def\LWRopquote{ ' }
```

`\LWRopseq` The operating system's sequential execution command, UNIX default. For WINDOWS, see `\LWR@setOSWindows`, below.

```
856 \def\LWRopseq{ \space\LWRamp\LWRamp\space\space }
```

27.2 Common portability code

`Bool usingOSWindows` Set if the OSWindows option is used, or if WINDOWS is automatically detected.

```
857 \newbool{usingOSWindows}
858 \boolfalse{usingOSWindows}
```

27.3 UNIX, LINUX, and MAC OS

`\OSPathSymbol` Symbol used to separate directories in a path.

```
859 \newcommand*\OSPathSymbol{/}
```

27.4 MS-WINDOWS

For MS-WINDOWS:

`\LWR@setOSWindows` Set defaults for the MS-WINDOWS operating system. `lwarp` attempts to auto-detect the operating system, and the `OSWindows` option may also be used to force MS-WINDOWS compatibility.

```
860 \newcommand*{\LWR@setOSWindows}
861 {
862 \booltrue{usingOSWindows}
863 \renewcommand*{\OSPathSymbol}{\@backslashchar}
864 \def\LWR@opquote{"}
865 \def\LWR@opseq{\space\LWR@amp\space\space}
866 }
```

Test for windows during compile. The user may also specify `OSWindows` package option in case this test fails.

```
867 \ifwindows
868 \LWR@setOSWindows
869 \fi
```

28 Package options

`Pkg kvoptions` Allows key/value package options.

```
870 \RequirePackage{kvoptions}
871 \SetupKeyvalOptions{family=LWR,prefix=LWR@}
```

`\lwarpsetup` A user interface to set the keys:

```
872 \newcommand{\lwarpsetup}[1]{\setkeys{LWR}{#1}}
```

`Bool warpingprint`

`Bool warpingHTML`

`Bool mathjax`

`Bool LWR@origmathjax`

Set to true/false depending on the package option selections for print/HTML/EPUB output and mathsvg/mathjax.

`LWR@origmathjax` remembers the original setting to be restored by `\displaymathnormal`.

```
873 \newbool{warpingprint}
874 \newbool{warpingHTML}
875 \newbool{mathjax}
876 \newbool{LWR@origmathjax}
```

defaults The default is print output, and svg math if the user chose HTML output.

```

877 \booltrue{warpingprint}%
878 \boolfalse{warpingHTML}%
879 \boolfalse{mathjax}%

```

Opt warpprint If the warpprint option is given, boolean warpingprint is true and boolean warpingHTML is false, and may be used for \ifbool tests.

```

880 \DeclareVoidOption{warpprint}{%
881   \PackageInfo{lwarp}{Using option 'warpprint'}
882   \booltrue{warpingprint}%
883   \boolfalse{warpingHTML}%
884 }

```

Opt warpHTML Anything in the warpHTML environment will be generated for HTML output only.

Opt warpHTML If the warpHTML option is given, boolean warpingHTML is true and boolean warpingprint is false, and may be used for \ifbool tests.

```

885 \DeclareVoidOption{warpHTML}{%
886   \PackageInfo{lwarp}{Using option 'warpHTML'}
887   \booltrue{warpingHTML}%
888   \boolfalse{warpingprint}%
889 }

```

Opt mathsvg Option mathsvg selects SVG math display: If the mathsvg option is given, boolean mathjax is false, and may be used for \ifbool tests.

```

890 \DeclareVoidOption{mathsvg}{%
891   \PackageInfo{lwarp}{Using option 'mathsvg'}
892   \boolfalse{mathjax}%
893   \boolfalse{LWR@origmathjax}%
894 }

```

Opt mathjax Option mathjax selects MATHJAX math display: If the mathjax option is given, boolean mathjax is true, may be used for \ifbool tests.

```

895 \DeclareVoidOption{mathjax}{%
896   \PackageInfo{lwarp}{Using option 'mathjax'}
897   \booltrue{mathjax}%
898   \booltrue{LWR@origmathjax}%
899 }

```

Opt BaseJobname Option BaseJobname sets the \BaseJobname for this document.

Default: \jobname

This is the \jobname of the printed version, even if currently compiling the HTML version. I.e. this is the \jobname without _html appended. This is used to set \HomeHTMLFilename if the user did not provide one.

```

900 \DeclareStringOption[\jobname]{BaseJobname}

```

Opt Default: <code>\jobname-images</code>	Option <code>ImagesDirectory</code> sets the name of the directory to use for the <code>lateximage</code> images.
	901 <code>\DeclareStringOption[\BaseJobname-images]{ImagesDirectory}</code>
Opt Default: <code>image-</code>	Option <code>ImagesName</code> sets the prefix to use for the <code>lateximage</code> images.
	902 <code>\DeclareStringOption[image-]{ImagesName}</code>
Opt Default: <code>lwarp.ist</code>	Selects a custom <code>.ist</code> file. A customized file should be based on <code>lwarp.ist</code> . See section 8.6.20.
	903 <code>\DeclareStringOption[lwarp.ist]{makeindexStyle}</code>
Opt Default: <code>lwarp.xdy</code>	Selects a custom <code>.xdy</code> file. A customized file should be based on <code>lwarp.xdy</code> . See section 8.6.21.
	904 <code>\DeclareStringOption[lwarp.xdy]{xindyStyle}</code>
Opt Default: <code>english</code>	Sets the <i>xindy</i> language to be assigned in <i>lwarpmk</i> 's configuration files. This is then used by <i>lwarpmk</i> while processing the index and glossary.
	905 <code>\DeclareStringOption[english]{xindyLanguage}</code>
Opt Default: <code>utf8</code>	Sets the <i>xindy</i> codepage to be assigned in <i>lwarpmk</i> 's configuration files. This is then used by <i>lwarpmk</i> while processing the index.
	906 <code>\DeclareStringOption[utf8]{xindyCodepage}</code>
Opt Default: <code><empty></code>	Selects a custom <code>xindex-*.lua</code> file. A customized file should be based on <code>xindex-cfg.lua</code> . See section 8.6.22.
	907 <code>\DeclareStringOption[]{xindexConfig}</code>
Opt Default: <code>UTF-8</code>	The option <code>pdftotextEnc</code> sets the encoding used by <i>pdftotext</i> . This is passed to <i>pdftotext</i> using its <code>-enc</code> option, and is used when converting L ^A T _E X PDF output with HTML tags into a plain-text file with HTML tags.
	908 <code>\DeclareStringOption[UTF-8]{pdftotextEnc}</code>
Opt	Tells <i>lwarp</i> to generate a local copy of <i>lwarpmk</i> called <code>lwarpmk.lua</code> . Useful for archiving for future use. This file may be made executable and acts just like <i>lwarpmk</i> .
	If <i>lwarpmk</i> option, creates a local copy of <i>lwarpmk.lua</i> :
	909 <code>\newbool{LWR@creatinglwarpmk}</code>
	910 <code>\boolfalse{LWR@creatinglwarpmk}</code>
	911
	912 <code>\DeclareVoidOption{lwarpmk}{</code>
	913 <code>\PackageInfo{lwarp}{Using option 'lwarpmk'}</code>
	914 <code>\booltrue{LWR@creatinglwarpmk}</code>
	915 <code>}</code>

Opt OSWindows Tells **lwarp** to use MS-WINDOWS compatibility. Auto-detection of the operating system is attempted, and this option is only necessary if the auto-detection fails. See the automatically-generated `lwarpmk.conf` file to find out whether the operating system was detected correctly.

```
916 \DeclareVoidOption{OSWindows}{
917     \PackageInfo{lwarp}{Using option 'OSWindows'}
918     \LWR@setOSWindows
919 }
```

Opt HomeHTMLFilename The filename of the homepage. The default is the jobname. This option is stored into `\LWR@HomeHTMLFilename`, and later transferred into `\HomeHTMLFilename` for internal use.

```
920 \DeclareStringOption[]{HomeHTMLFilename}
```

Opt HTMLFilename The filename prefix of web pages after the homepage. The default is empty, no prefix. This option is stored into `\LWR@HTMLFilename`, and later transferred into `\HTMLFilename` for internal use.

```
921 \DeclareStringOption[]{HTMLFilename}
```

Opt PrintLatexCmd The shell commands to use to compile the print document.

Default: `<automatic>`

```
922 \DeclareStringOption[]{PrintLatexCmd}
```

Opt HTMLLatexCmd The shell commands to use to compile the HTML document.

Default: `<automatic>`

```
923 \DeclareStringOption[]{HTMLLatexCmd}
```

Opt PrintIndexCmd The shell commands to use to compile the print indexes.

Default: `<empty>`

```
924 \DeclareStringOption[]{PrintIndexCmd}
```

Opt HTMLIndexCmd The shell commands to use to compile the HTML indexes.

Default: `<empty>`

```
925 \DeclareStringOption[]{HTMLIndexCmd}
```

Opt LatexmkIndexCmd The shell commands to be used by *latexmk* to compile the print indexes. Unlike `PrintIndexCmd` and `HTMLIndexCmd`, `LatexmkIndexCmd` does not include the filename, which will be provided by *latexmk*.

```
926 \DeclareStringOption[]{LatexmkIndexCmd}
```

Opt makeindex Tells **lwarp** to use *makeindex* for index generation. When `lwarpmk.conf` and `*.lwarpmkconf` are generated, `PrintIndexCmd` and `HTMLIndexCmd` will be set for *makeindex* with a single index file.

```
927 \DeclareBoolOption[false]{makeindex}
```

Opt xindy Tells *lwarp* to use *xindy* for index generation. When `lwarpmk.conf` and `*.lwarpmkconf` are generated, `PrintIndexCmd` and `HTMLIndexCmd` will be set for *xindy* with a single index file.

```
928 \DeclareBoolOption[false]{xindy}
```

Opt xindex Tells *lwarp* to use *xindex* for index generation. When `lwarpmk.conf` and `*.lwarpmkconf` are generated, `PrintIndexCmd` and `HTMLIndexCmd` will be set for *xindex* with a single index file.

```
929 \DeclareBoolOption[false]{xindex}
```

Opt IndexRef Tells *lwarp* how to display the index entries in HTMLoutput. See section 7.5.

Default: `cref`

```
930 \DeclareStringOption[cref]{IndexRef}
```

Opt GlossaryCmd The shell command to use to compile the glossary. The print or HTML version of the glossary filename will be appended to this command.

Default: `makeglossaries`

```
931 \DeclareStringOption[makeglossaries]{GlossaryCmd}
```

Opt latexmk Option `latexmk` tells *lwarpmk* to use *latexmk* when compiling documents.

```
932 \DeclareBoolOption[false]{latexmk}
```

Opt dvips Option `dvips` tells *lwarpmk* to use *dvips* when compiling DVI *latex* documents.

```
933 \DeclareBoolOption[false]{dvips}
```

Opt dvipdfm Option `dvipdfm` tells *lwarpmk* to use *dvipdfm* when compiling DVI *latex* documents.

```
934 \DeclareBoolOption[false]{dvipdfm}
```

Opt dvipdfmx Option `dvipdfmx` tells *lwarpmk* to use *dvipdfmx* when compiling DVI *latex* documents.

```
935 \DeclareBoolOption[false]{dvipdfmx}
```

Execute options Execute the package options, with the defaults which have been set just above:

```
936 \ProcessKeyvalOptions*\relax
```

28.1 Additional options support

Assign the `\BaseJobname` if the user hasn't provided one:

```
937 \providecommand*\BaseJobname{\LWR@BaseJobname}
```

Defaults unless already over-ridden by the user:

```

938 \ifcsempy{LWR@HomeHTMLFilename}{
939     \newcommand*{\HomeHTMLFilename}{\BaseJobname}
940 }{
941     \csedef{HomeHTMLFilename}{\LWR@HomeHTMLFilename}
942 }
943
944 \csedef{HTMLFilename}{\LWR@HTMLFilename}

```

Special handling for underscores in labels and filenames.

`\LWR@sanitized` The sanitized version of what was given to `\LWR@sanitize`. Characters are set to their detokenized versions. Required for underscores in labels and filenames.

```

945 \newcommand*{\LWR@sanitized}{}

```

`\LWR@sanitize` `{\text}`

Sanitizes the text and returns the result in `\LWR@sanitized`.

```

946 \newcommand*{\LWR@sanitize}[1]{%
947 \edef\LWR@sanitized{#1}%
948 \edef\LWR@sanitized{\detokenize\expandafter{\LWR@sanitized}}%
949 }

```

Sanitize some string options to neutralize underscores.

```

950 \LWR@sanitize{\LWR@BaseJobname}
951 \edef\LWR@BaseJobname{\LWR@sanitized}
952
953 \LWR@sanitize{\LWR@ImagesDirectory}
954 \edef\LWR@ImagesDirectory{\LWR@sanitized}
955
956 \LWR@sanitize{\LWR@ImagesName}
957 \edef\LWR@ImagesName{\LWR@sanitized}

```

`\LWR@PrintIndexCmd` and `\LWR@HTMLIndexCmd` are tested to see if they are empty. If so, they are set to a reasonable defaults for a single index using *makeindex*, then possibly set to defaults for *xindy* if the *lwarp xindy* option was selected, then likewise for *xindex* if the *xindex* option was selected.

```

958 \ifdefempty{\LWR@PrintIndexCmd}{
959     \renewcommand{\LWR@PrintIndexCmd}{%
960         makeindex -s \LWR@makeindexStyle \space \jobname.idx%
961     }
962     \ifbool{LWR@xindy}{
963         \renewcommand{\LWR@PrintIndexCmd}{%
964             xindy
965             -M \LWR@xindyStyle \space
966             -L \LWR@xindyLanguage \space
967             -C \LWR@xindyCodepage \space
968             \jobname.idx%
969         }

```

```

970     {}
971     \ifbool{LWR@index}{
972         \ifdefvoid{\LWR@indexConfig}{
973             \renewcommand{\LWR@PrintIndexCmd}{%
974                 xindex
975                 \jobname.idx%
976             }
977         }{
978             \renewcommand{\LWR@PrintIndexCmd}{%
979                 xindex
980                 -c \LWR@indexConfig \space
981                 \jobname.idx%
982             }
983         }
984     }{}
985 }{}
986
987 \ifdefempty{\LWR@HTMLIndexCmd}{
988     \renewcommand{\LWR@HTMLIndexCmd}{%
989         makeindex -s \LWR@makeindexStyle \space \jobname_html.idx%
990     }
991     \ifbool{LWR@xindy}{
992         \renewcommand{\LWR@HTMLIndexCmd}{%
993             xindy
994             -M \LWR@xindyStyle \space
995             -L \LWR@xindyLanguage \space
996             -C \LWR@xindyCodepage \space
997             \jobname_html.idx%
998         }
999     }{}
1000     \ifbool{LWR@index}{
1001         \ifdefvoid{\LWR@indexConfig}{
1002             \renewcommand{\LWR@HTMLIndexCmd}{%
1003                 xindex
1004                 \jobname_html.idx%
1005             }
1006         }{
1007             \renewcommand{\LWR@HTMLIndexCmd}{%
1008                 xindex
1009                 -c \LWR@indexConfig \space
1010                 \jobname_html.idx%
1011             }
1012         }
1013     }{}
1014 }{}
1015
1016 \ifdefempty{\LWR@LatexmkIndexCmd}{
1017     \renewcommand{\LWR@LatexmkIndexCmd}{%
1018         makeindex -s \LWR@makeindexStyle%
1019     }
1020     \ifbool{LWR@xindy}{
1021         \renewcommand{\LWR@LatexmkIndexCmd}{%
1022             xindy
1023             -M \LWR@xindyStyle \space
1024             -L \LWR@xindyLanguage \space

```

```

1025         -C \LWR@xindyCodepage%
1026     }
1027 }{}
1028 \ifbool{LWR@index}{
1029     \ifdefvoid{\LWR@indexConfig}{
1030         \renewcommand{\LWR@LatexmkIndexCmd}{%
1031             xindex
1032         }
1033     }{
1034         \renewcommand{\LWR@LatexmkIndexCmd}{%
1035             xindex
1036             -c \LWR@indexConfig
1037         }
1038     }
1039 }{}
1040 }{}

```

28.2 Conditional compilation

`\warpprintonly` {*<contents>*}

Only process the contents if producing printed output.

```
1041 \newcommand{\warpprintonly}[1]{\ifbool{warpingprint}{#1}{}}
```

`\warpHTMLonly` {*<contents>*}

Only process the contents if producing HTML output.

```
1042 \newcommand{\warpHTMLonly}[1]{\ifbool{warpingHTML}{#1}{}}
```

`Pkg` `comment` Provides conditional code blocks.

Attempts to use `versions` or `verbatim` fail in some cases, and do not provide much of a speed benefit even when they do work.

```
1043 \RequirePackage{comment}
```

`\LWR@includecomment` {*<env name>*} {*<partial filename>*}

`\LWR@excludecomment` {*<env name>*} {*<partial filename>*}

Use many `comment` cut files to avoid collision in case the user uses the `comment` package. Each filename is “comment_#2.cut”. Based on the `comment` package.

```

1044 \def\LWR@includecomment
1045 #1#2{\message{Lwarp: Including comment '#1'}%
1046     \csarg\def{After#1Comment}{\CloseAndInputCutFile}
1047     \csarg\def{#1}{\endgroup \message{Including '#1' comment.}%
1048         \def\CommentCutFile{comment_#2.cut} \SetUpCutFile \ProcessComment{#1}}%

```

```

1049     \CommentEndDef{#1}}
1050
1051 \def\LWR@excludcomment
1052 #1#2{\message{Lwarp: Excluding comment '#1'}%
1053     \csarg\def{#1}{\endgroup \message{Excluding '#1' comment.}%
1054         \begingroup
1055             \def\CommentCutFile{comment_#2.cut} \def\ProcessCutFile{}%
1056             \def\ThisComment####1{\ProcessComment{#1}}%
1057     \csarg\def{After#1Comment}{\CloseAndInputCutFile \endgroup}
1058     \CommentEndDef{#1}}

```

Env `warpall` Anything in the `warpall` environment will be generated for print or HTML outputs.

```

1059 \LWR@includcomment{warpall}{all}

```

Env `warpHTML` For HTML output:

```

1060 \ifbool{warpingHTML}
1061     {\LWR@includcomment{warpHTML}{html}}
1062     {\LWR@excludcomment{warpHTML}{html}}

```

Env `warpprint` Anything in the `warpprint` environment will be generated for print output only.

```

1063 \ifbool{warpingprint}
1064     {\LWR@includcomment{warpprint}{print}}
1065     {\LWR@excludcomment{warpprint}{print}}

```

Env `warpMathJax` Only if MATHJAX is being used along with HTML.

```

1066 \begin{warpprint}
1067 \LWR@excludcomment{warpMathJax}{mathjax}
1068 \end{warpprint}
1069
1070 \begin{warpHTML}
1071 \ifbool{mathjax}
1072     {\LWR@includcomment{warpMathJax}{mathjax}}
1073     {\LWR@excludcomment{warpMathJax}{mathjax}}
1074 \end{warpHTML}

```

Env `LWRcreatelwarpmk` Optionally generate a local copy of *lwarpmk*. Default to no.

```

1075 \ifbool{LWR@creatinglwarpmk}
1076     {\LWR@includcomment{LWRcreatelwarpmk}{lwarpmk}}
1077     {\LWR@excludcomment{LWRcreatelwarpmk}{lwarpmk}}

```

29 Required packages

These packages are automatically loaded by `lwarp` when generating HTML output. Some of them are also automatically loaded when generating print output, but some are not.

for HTML output: 1078 \begin{warpHTML}

Pkg fontspec Load fontspec if necessary:

```
1079 \ifxetexorluatex
1080 \@ifpackageloaded{fontspec}{\{
1081     \usepackage[no-math]{fontspec}
1082 }
```

The monospaced font is used for HTML tags, so turn off its TeX ligatures and common ligatures:

```
1083 \defaultfontfeatures[\rmfamily]{Ligatures={NoCommon,TeX}}
1084 \defaultfontfeatures[\sffamily]{Ligatures={NoCommon,TeX}}
1085 \defaultfontfeatures[\ttfamily]{Ligatures=NoCommon}
1086 \else
```

pdf_{flat} only: Only pre-loaded if pdf_{flat} is being used.

Pkg microtype

ligatures Older browsers don't display ligatures. Turn off letter ligatures, keeping L^AT_EX dash and quote ligatures, which may fail on older browsers but at least won't corrupt written words.

```
1087 \RequirePackage {microtype}
1088
1089 \microtypesetup{
1090     protrusion=false,
1091     expansion=false,
1092     tracking=false,
1093     kerning=false,
1094     spacing=false}
1095
1096 \DisableLigatures[f,q,t,T,Q]{encoding = *,family = *}
1097 \fi
1098 \end{warpHTML}
```

Pkg geometry Tactics to avoid unwanted page breaks and margin overflow:

- Uses a very long and wide page to minimize page breaks and margin overflow.
- Uses a scriptsize font.
- Uses extra space at the margin to avoid HTML tag overflow off the page.
- Forces a new PDF page before some environments.
- Forces line break between major pieces of long tags.

for HTML output: 1099 \begin{warpHTML}

If `geometry` has not yet been loaded, use the preexisting page and text sizes to be preserved for later reuse. These will be replaced by `lwarp \AtBeginDocument` with a very large page size to reduce HTML tag overflow off the page.

```

1100 \ifpackageloaded{geometry}
1101 {}{
1102     \RequirePackage[
1103         reset,
1104         paperwidth=\paperwidth,
1105         paperheight=\paperheight,
1106         textwidth=\textwidth,
1107         textheight=\textheight,
1108         left=\oddsidemargin,
1109         top=\topmargin,
1110         marginparsep=\marginparsep,
1111         marginparwidth=\marginparwidth,
1112     ]{geometry}
1113 }
```

Remember the original definitions for later reuse. If the `geometry` package is loaded by the user, `lwarp-geometry` will nullify the user-level originals.

```

1114 \LetLtxMacro\LWR@origgeometry\geometry
1115 \LetLtxMacro\LWR@orignewgeometry\newgeometry
1116 \LetLtxMacro\LWR@origrestoregeometry\restoregeometry
1117 \LetLtxMacro\LWR@origsavegeometry\savegeometry
1118 \LetLtxMacro\LWR@origloadgeometry\loadgeometry
```

Bool `LWR@allowanothergeometry` `geometry` may be loaded by the user before `lwarp`, after `lwarp`, or not at all. If before `lwarp`, it will have already been loaded by now and its page layout has already been saved. If `geometry` is loaded after `lwarp`, its layout will be set at that time and the user macros nullified. `\AtEndPreamble` this layout will be saved. If the user never loads `geometry`, `lwarp-geometry` will be loaded `\AtBeginDocument`, but it should not change the page layout set here. This is controlled by the boolean `LWR@allowanothergeometry`. Geometry may be adjusted throughout the preamble until `\AtEndPreamble`, when this boolean is set false.

```

1119 \newbool{LWR@allowanothergeometry}
1120 \booltrue{LWR@allowanothergeometry}
```

Use `\AtEndPreamble` to avoid class and option conflict by changing settings after other packages load, instead of using `geometry` package options:

```

1121 \AtEndPreamble{
```

Whatever `geometry` choices the user has made in the preamble, either before or after `lwarp` was loaded, are now saved for possible temporary reuse, such as by `lyluatex`.

See the `lwarp-geometry` section for what happens if `geometry` is loaded after `lwarp`.

```

1122 \LWR@origsavegeometry{LWR@usergeometry}
```

The user's paper size is saved for later reuse, such as by the `pdfpages` or `parallel` packages.

```

1123 \newlength{\LWR@userspaperwidth}
1124 \setlength{\LWR@userspaperwidth}{\paperwidth}
1125
1126 \newlength{\LWR@userspaperheight}
1127 \setlength{\LWR@userspaperheight}{\paperheight}
1128
1129 \newlength{\LWR@usersmarginparwidth}
1130 \setlength{\LWR@usersmarginparwidth}{\marginparwidth}
1131
1132 \newlength{\LWR@userstextwidth}
1133 \setlength{\LWR@userstextwidth}{\textwidth}
1134
1135 \newlength{\LWR@userstextheight}
1136 \setlength{\LWR@userstextwidth}{\textheight}

```

For `lwarp`, use a very large page and margins to help avoid letting HTML tags run off the edge:

```

1137 \LWR@origgeometry{
1138     reset,
1139     paperheight=190in,
1140     paperwidth=20in,
1141     left=2in,
1142     right=6in,
1143     top=1in,
1144     bottom=1in,
1145     heightrounded,%
1146 }

```

The `lwarp` page geometry is saved for future restore:

```

1147 \LWR@origsavegeometry{\LWR@lwarpgeometry}

```

No longer adjust the page layout when `lwarp-geometry` is loaded `\AtBeginDocument`:

```

1148 \boolfalse{\LWR@allowanothergeometry}%

```

`ltjsbook` and other classes can print vertically, and require these to be reset by `lwarp`:

```

1149 \setlength{\textheight}{0.8\paperheight}
1150 \setlength{\textwidth}{0.7\paperwidth}
1151
1152 \@twosidefalse
1153 \@mparswitchfalse
1154 }% \AtEndPreamble
1155
1156 \end{warpHTML}

```

for HTML & PRINT: 1157 \begin{warpall}

L^AT_EX3 command argument parsing

```
1158 \RequirePackage{xparse}
```

Pkg calc

```
1159 \RequirePackage{calc}
```

```
1160 \end{warpall}
```

for HTML output: 1161 \begin{warpHTML}

Pkg expl3

L^AT_EX3 programming

```
1162 \RequirePackage{expl3}
```

Pkg gettitlestring

Used to emulate \nameref.

```
1163 \RequirePackage{gettitlestring}
```

Pkg everyhook

everyhook is used to patch paragraph handling.

```
1164 \@ifundefined{bxjs@everypar}{}{\let\everypar\bxjs@everypar}
```

```
1165
```

```
1166 \RequirePackage{everyhook}
```

```
1167 \end{warpHTML}
```

for HTML & PRINT: 1168 \begin{warpall}

Pkg filecontents

Used to write helper files while creating the print version.

Recent versions of L^AT_EX (as of Fall 2019) now include the functionality of the filecontents package, but with a new optional argument used to specify whether to force the overwriting of an existing file. If an older L^AT_EX kernel is used, the original filecontents package is used, but it is patched to throw away the new optional argument.

```
1169 \@ifundefined{filec@ntents@opt}{% older kernel, discard optional args
```

```
1170
```

```
1171 \RequirePackage{filecontents}
```

```
1172
```

```
1173 \LetLtxMacro\LWR@orig@filec@ntents\filec@ntents
```

```
1174
```

```
1175 \@ifpackagelater{filecontents}{2011/10/08}
```

```
1176 {
```

For a newer version of the filecontents package, simply discard the optional argument.

```
1177      \renewcommand*{\filec@ntents}[1][\LWR@orig@filec@ntents]
1178    }
1179    {% patch older package for morewrites
```

For an older version of filecontents, discard the optional argument, and also patch to work with morewrites, per <https://tex.stackexchange.com/questions/312830/does-morewrites-not-support-filecontents-and-can-i-write-body-of-environment-us/312910>

```
1180      \newwrite\fcwrite
1181      \renewcommand*{\filec@ntents}[1][\%
1182        \def\chardef##1\write{\let\reserved@c\fcwrite}%
1183        \LWR@orig@filec@ntents%
1184      }
1185    }
1186
1187   }% older kernel
1188    {% newer kernel
```

For a newer kernel with a filecontents environment which accepts the optional overwrite argument, use the environment as-is.

```
1189}% newer kernel, filecontents env accepts optional args, do not load package

1190\end{warpall}
```

for HTML output: 1191 \begin{warpHTML}

Pkg xifthen

```
1192 \RequirePackage{xifthen}
```

Pkg verbatim

```
1193 \RequirePackage{verbatim}
```

Pkg refcount

Provides \setcounterref, \setcounterpageref, etc.

```
1194 \RequirePackage{refcount}
```

Pkg newfloat

```
1195 \RequirePackage{newfloat}
```

```
1196 \end{warpHTML}
```

for HTML & PRINT: 1197 \begin{warpall}

Pkg xstring There was a short-term bug in xstring regarding \IfInteger which affected lwarp's index generation. The updated version is requested here.



index

```
1198 \RequirePackage{xstring}[2019/02/01]
```

Pkg environ Used to encapsulate math environments for re-use in HTML <alt> text.

```
1199 \RequirePackage{environ}
```

```
1200 \end{warpall}
```

for HTML output: 1201 \begin{warpHTML}

Pkg printlen Used to convert lengths for image width/height options.

```
1202 \RequirePackage{printlen}
```

\LWR@printlength {<length>}

Prints a length using a locally-controlled unit and space. Rounding is used unless the length is small.

```
1203 \newrobustcmd*\LWR@printlength[1]{%
1204   \begingroup%
1205   \uselengthunit{PT}%
1206   \renewcommand*\unitspace{}%
1207   \ifdimless{#1}{10pt}{%
1208     \printlength{#1}%
1209   }{%
1210     \rndprintlength{#1}%
1211   }%
1212   \endgroup%
1213 }
```

```
1214 \end{warpHTML}
```

for PRINT output: 1215 \begin{warpprint}

Pkg varwidth Used for print-mode lateximage.

```
1216 \RequirePackage{varwidth}
```

```
1217 \end{warpprint}
```

30 Loading packages

for HTML & PRINT: 1218 \begin{warpall}

Remember the original `\RequirePackage`:

```
1219 \LetLtxMacro\LWR@origRequirePackage\RequirePackage
1220 \LetLtxMacro\LWR@origRequirePackageWithOptions\RequirePackageWithOptions
```

`\LWR@requirepackagenames` Stores the list of required package names.

```
1221 \newcommand*{\LWR@requirepackagenames}{}
```

`\LWR@parsedrequirepackagenames` Stores the parsed list of required package names after spaces are removed and `lwarp-` is prepended.

```
1222 \newcommand*{\LWR@parsedrequirepackagenames}{}
```

`\LWR@nullifycomment` Remove the preexisting comment environment. Certain packages define it for their own use.

```
1223 \newcommand*{\LWR@nullifycomment}{%
1224   \PackageInfo{lwarp}%
1225   {Nullifying the comment environment before loading \LWR@strresulttwo,}%
1226   \let\comment\relax%
1227   \let\endcomment\relax%
1228 }
```

`\LWR@findword` [*1: separator*] [*2: list*] [*3: index*] [*4: destination*]

Note that argument 4 is passed directly to `\StrBetween`.

```
1229 \newcommand*\LWR@findword[3][,]{%
1230   \StrBetween[#3,\numexpr#3+1]{#1#2#1}{#1}{#1}%
1231 }
```

`\LWR@checkloadfilename` {*filename*} Checks if this filename should be loaded after `lwarp`, or never at all.

The following should never be loaded:

```
1232 \newcommand*{\LWR@checkloadfilename}[1]{%
1233   \LWR@checkloadnever{#1}{ae}{cm-super, lmodern}
1234   \LWR@checkloadnever{#1}{aecc}{cm-super, lmodern}
1235   \LWR@checkloadnever{#1}{aeccpl}{cm-super, lmodern}
1236   \LWR@checkloadnever{#1}{alg}{algorithm2e, algorithmicx}
1237   \LWR@checkloadnever{#1}{algorithmic}{algorithm2e, algorithmicx}
1238   \LWR@checkloadnever{#1}{bitfield}{bytefield}
1239   \LWR@checkloadnever{#1}{caption2}{caption}
1240   \LWR@checkloadnever{#1}{ccaption}{caption}% might be preloaded by memoir
1241   \LWR@checkloadnever{#1}{colortab}{colortbl}
1242   \LWR@checkloadnever{#1}{csvtools}{datatool}
1243   \LWR@checkloadnever{#1}{doublespace}{setspace}
1244   \LWR@checkloadnever{#1}{epsf}{graphicx}
1245   \LWR@checkloadnever{#1}{fancyheadings}{fancyhdr}
1246   \LWR@checkloadnever{#1}{fncylab}{cleveref}
```

```

1247 \LWR@checkloadnever{#1}{formula}{siunitx}
1248 \LWR@checkloadnever{#1}{glossary}{glossaries}
1249 \LWR@checkloadnever{#1}{hyper}{hyperref}
1250 \LWR@checkloadnever{#1}{newthm}{ntheorem}
1251 \LWR@checkloadnever{#1}{pdfcpot}{microtype}
1252 \LWR@checkloadnever{#1}{picinpar}{floatflt, wrapfig}
1253 \LWR@checkloadnever{#1}{picins}{floatflt, wrapfig}
1254 \LWR@checkloadnever{#1}{rplain}{fancyhdr}
1255 \LWR@checkloadnever{#1}{si}{siunitx}
1256 \LWR@checkloadnever{#1}{sistyle}{siunitx}
1257 \LWR@checkloadnever{#1}{slashbox}{diagbox}
1258 \LWR@checkloadnever{#1}{statex}{statex2}
1259 \LWR@checkloadnever{#1}{tlenc}{fontenc, inputenc, inputenx}
1260 \LWR@checkloadnever{#1}{ucs}{inputenc, inputencx}
1261 \LWR@checkloadnever{#1}{wasysym}{textcomp, amssymb, amsfonts, mnsymbol, fdsymbol}
1262 \LWR@checkloadnever{#1}{bxcjkjatype}{upLaTeX, bxjsarticle, uarticle, utarticle}
1263 \LWR@checkloadnever{#1}{hangul}{kotex, xetexko, luatexko}

```

The following should only be loaded before `lwarp`:

```

1264 \LWR@checkloadbefore{#1}{ctex}
1265 \LWR@checkloadbefore{#1}{fontspec}
1266 \LWR@checkloadbefore{#1}{inputenc}
1267 \LWR@checkloadbefore{#1}{inputenx}
1268 \LWR@checkloadbefore{#1}{nfssect-cfr}
1269 \LWR@checkloadbefore{#1}{fontaxes}
1270 \LWR@checkloadbefore{#1}{kotex}
1271 \LWR@checkloadbefore{#1}{luatexja}
1272 \LWR@checkloadbefore{#1}{luatexja-fontspec}
1273 \LWR@checkloadbefore{#1}{luatexko}
1274 \LWR@checkloadbefore{#1}{morewrites}
1275 \LWR@checkloadbefore{#1}{newclue}
1276 \LWR@checkloadbefore{#1}{newunicodechar}
1277 \LWR@checkloadbefore{#1}{plext}
1278 \LWR@checkloadbefore{#1}{xeCJK}
1279 \LWR@checkloadbefore{#1}{xetexko}
1280 \LWR@checkloadbefore{#1}{zxjatype}
1281 }

```

`\LWR@lookforpackagename` $\{\langle index \rangle\}$

If HTML, and if this is an `lwarp`-supported package name, re-direct it to the `lwarp` version by renaming it `lwarp-` followed by the original name.

Looks index deep into the list of package names, `\LWR@requirepackagenames`, and builds `\LWR@parsedrequirepackagenames` which is the modified list of names.

```
1282 \newcommand*{\LWR@lookforpackagename}[1]{%
```

Find the index'th package name from the list:

```
1283 \LWR@findword{\LWR@requirepackagenames}{#1}[\LWR@strresult]%

```

Remove blanks. The original name with blanks is in LWR@strresult and the final name with no blanks goes into LWR@strresulttwo.

```
1284 \StrSubstitute[100]{\LWR@strresult}{ }{ }\LWR@strresulttwo}%
```

See if the package name was found:

```
1285 \IfStrEq{\LWR@strresulttwo}{}%
1286 {}% no filename
1287 {% yes filename was found
```

Possible adjustments before loading the package. Maybe nullify the comment environment if the new package will be redefining it for a new purpose.

```
1288 \ifdefstring{\LWR@strresulttwo}{easyReview}{\LWR@nullifycomment}{}%
1289 \ifdefstring{\LWR@strresulttwo}{changes}{\LWR@nullifycomment}{}%
```

If HTML, check if the package should be loaded before lwarp, or never at all:

```
1290 \ifbool{warpingHTML}{\LWR@checkloadfilename{\LWR@strresulttwo}}{}%
```

If HTML, and if found, and if an lwarp-equivalent name exists, use lwarp-* instead.

```
1291 \ifboolexpr{
1292   bool{warpingHTML} and
1293   test{\IfFileExists{lwarp-\LWR@strresulttwo.sty}}
1294 }%
1295 {% lwarp-* file found
1296   \ifdefvoid{\LWR@parsedrequirepackagenames}{%
1297     \edef\LWR@parsedrequirepackagenames{lwarp-\LWR@strresulttwo}%
1298   }{%
1299     \edef\LWR@parsedrequirepackagenames{%
1300       \LWR@parsedrequirepackagenames, lwarp-\LWR@strresulttwo%
1301     }%
1302   }%
1303 }%
1304 {%
```

Otherwise, use the current package name.

```
1305 \ifdefvoid{\LWR@parsedrequirepackagenames}{%
1306   \edef\LWR@parsedrequirepackagenames{\LWR@strresulttwo}%
1307 }{%
1308   \edef\LWR@parsedrequirepackagenames{%
1309     \LWR@parsedrequirepackagenames, \LWR@strresulttwo%
1310   }%
1311 }%
1312 }% no lwarp-* file
1313 }% yes filename
1314 }
```

`\RequirePackage` [*<1: options>*] {*<2: package names>*} [*<3: version>*]

For each of many package names in a comma-separated list, if an lwarp version of a package exists, select it instead of the L^AT_EX version.

```
1315 \RenewDocumentCommand{\RequirePackage}{o m o}{%
```

Redirect up to twenty names:¹⁷

```
1316 \renewcommand*{\LWR@requirepackagenames}{#2}%
1317 \renewcommand*{\LWR@parsedrequirepackagenames}{}%
1318 \LWR@lookforpackagename{1}%
1319 \LWR@lookforpackagename{2}%
1320 \LWR@lookforpackagename{3}%
1321 \LWR@lookforpackagename{4}%
1322 \LWR@lookforpackagename{5}%
1323 \LWR@lookforpackagename{6}%
1324 \LWR@lookforpackagename{7}%
1325 \LWR@lookforpackagename{8}%
1326 \LWR@lookforpackagename{9}%
1327 \LWR@lookforpackagename{10}%
1328 \LWR@lookforpackagename{11}%
1329 \LWR@lookforpackagename{12}%
1330 \LWR@lookforpackagename{13}%
1331 \LWR@lookforpackagename{14}%
1332 \LWR@lookforpackagename{15}%
1333 \LWR@lookforpackagename{16}%
1334 \LWR@lookforpackagename{17}%
1335 \LWR@lookforpackagename{18}%
1336 \LWR@lookforpackagename{19}%
1337 \LWR@lookforpackagename{20}%
```

\RequirePackage depending on the options and version:

```
1338 \IfValueTF{#1}%
1339 {% options given
1340   \IfValueTF{#3}% version given?
1341     {\LWR@origRequirePackage[#1]{\LWR@parsedrequirepackagenames}[#3]}%
1342     {\LWR@origRequirePackage[#1]{\LWR@parsedrequirepackagenames}}%
1343 }%
1344 {% no options given
1345   \IfValueTF{#3}% version given?
1346     {\LWR@origRequirePackage{\LWR@parsedrequirepackagenames}[#3]}%
1347     {\LWR@origRequirePackage{\LWR@parsedrequirepackagenames}}%
1348 }%
1349 }
1350 \LetLtxMacro\usepackage\RequirePackage

1351 \end{warpall}
```

for HTML output: 1352 \begin{warpHTML}

\LWR@ProvidesPackagePass {<pkgnam>} [<version>]

¹⁷This was originally nine names, but then I came across a package which used twelve...

Uses the original package, including options.

```

1353 \NewDocumentCommand{\LWR@ProvidesPackagePass}{m o}{
1354   \PackageInfo{lwarp}{%
1355     Using package ‘#1’,\MessageBreak
1356     and adding lwarp modifications, including options,\MessageBreak%
1357   }%
1358   \IfValueTF{#2}%
1359     {\ProvidesPackage{lwarp-#1}[#2]}%
1360     {\ProvidesPackage{lwarp-#1}}%
1361   \DeclareOption*{%
1362     \PassOptionsToPackage{\CurrentOption}{#1}%
1363   }%
1364   \ProcessOptions\relax%

```

If using `catoptions`, an error occurs if a package is loaded with an option then loaded again with no options. `lwarp` does this if a package is preloaded then later patched. To avoid an error while using `catoptions`, if a package has already been loaded, it is loaded again with its original options.

```

1365   \@ifpackageloaded{#1}{%
1366     \edef\LWR@tempone{\csuse{opt@#1.sty}}%
1367     \IfValueTF{#2}%
1368       {%
1369         \expandafter\LWR@origRequirePackage%
1370         \expandafter[\LWR@tempone]{#1}[#2]%
1371       }%
1372       {%
1373         \expandafter\LWR@origRequirePackage%
1374         \expandafter[\LWR@tempone]{#1}%
1375       }%
1376   }{%
1377     \IfValueTF{#2}%
1378       {\LWR@origRequirePackage{#1}[#2]}%
1379       {\LWR@origRequirePackage{#1}}%
1380   }%

```

In some cases, the following seems to be required to avoid an “unknown option” error, such as when loading `xcolor` with options.

```

1381   \DeclareOption*{%
1382     \ProcessOptions\relax%
1383 }

```

`\LWR@ProvidesPackageDropA` `{\langle name \rangle}{\langle date or -NoValue- \rangle}`

Declares the package. Factored for reuse.

```

1384 \newcommand*{\LWR@ProvidesPackageDropA}[2]{%
1385   \PackageInfo{lwarp}{%
1386     Replacing package ‘#1’ with the lwarp version,\MessageBreak
1387     and discarding options,%
1388   }%
1389   \IfValueTF{#2}

```

```

1390     {\ProvidesPackage{lwarp-#1}[#2]}
1391     {\ProvidesPackage{lwarp-#1}}
1392 }

```

`\LWR@ProvidesPackageDropB` Nullifies then processes the options.

Seems to be required when options contain curly braces, which were causing “Missing `\begin{document}`”.

```

1393 \newcommand*\LWR@ProvidesPackageDropB{%
1394 % \ProcessOptions\relax% original LaTeX code
1395 \let\ds@\empty%      from the original \ProcessOptions
1396 \edef\@curroptions{% lwarp modification to \ProcessOptions
1397 \@processoptions\relax% from the original \ProcessOptions
1398 }

```

`\LWR@ProvidesPackageDrop` `{\<pkgname>}` `[\<version>]`

Ignores the original package and uses lwarp’s version instead. Drops/discards all options.

```

1399 \NewDocumentCommand{\LWR@ProvidesPackageDrop}{m o}{

```

Declare the package:

```

1400 \LWR@ProvidesPackageDropA{#1}{#2}

```

Ignore all options:

```

1401 \DeclareOption*{}

```

Process the options:

```

1402 \LWR@ProvidesPackageDropB
1403 }

```

```

1404 \end{warpHTML}

```

31 File handles

Defines file handles for writes.

for HTML & PRINT: `1405 \begin{warpall}`

`\LWR@quickfile` For quick temporary use only. This is reused in several places.

```

1406 \newwrite\LWR@quickfile%

```

```

1407 \end{warpall}

```

for HTML output: 1408 \begin{warpHTML}

\LWR@lateximagesfile For <project>-images.txt:

1409 \newwrite\LWR@lateximagesfile

1410 \end{warpHTML}

32 Include a file

During HTML output, \include{<filename>} causes the following to occur:

1. lwarp creates <filename>_html_inc.tex whose contents are:
`\input <filename>.tex`
2. <filename>_html_inc.tex is then \included instead of <filename>.tex.
3. <filename>_html_inc.aux is automatically generated and used by L^AT_EX.

for HTML output: 1411 \begin{warpHTML}

\@include {<filename>} Modified to load _html_inc files.

(Below, \clearpage caused missing text, and was changed to \newpage.)

```

1412 \def\@include#1 {%
1413 \immediate\openout\LWR@quickfile #1_html_inc.tex% lwarp
1414 \immediate\write\LWR@quickfile{\string\input{#1.tex}}% lwarp
1415 \immediate\closeout\LWR@quickfile% lwarp
1416 \LWR@maybe@orignewpage% changed from clearpage
1417 \if@filesw
1418   \immediate\write\mainaux{\string\@input{#1_html_inc.aux}}% changed
1419 \fi
1420 \@tempswatrue
1421 \if@partsw
1422   \@tempswafalse
1423   \edef\reserved@b{#1}%
1424   \for\reserved@a:=\partlist\do
1425     {\ifx\reserved@a\reserved@b\@tempswatrue\fi}%
1426 \fi
1427 \if@tempswa
1428   \let\auxout\@partaux
1429   \if@filesw
1430     \immediate\openout\@partaux #1_html_inc.aux % changed
1431     \immediate\write\@partaux{\relax}%
1432   \fi
1433   \@input{#1_html_inc.tex}% changed
1434   \LWR@maybe@orignewpage% changed from clearpage
1435   \writeckpt{#1}%

```

```

1436     \if@filesw
1437         \immediate\closeout\@partaux
1438     \fi
1439 \else
1440     \deadcycles\z@
1441     \@nameuse{cp@#1}%
1442 \fi
1443 \let\@auxout\@mainaux%
1444 }

1445 \end{warpHTML}

```

33 Copying a file

for HTML output: 1446 \begin{warpHTML}

\LWR@copyfile {<source filename>} {<destination filename>}

Used to copy the .toc file to .sidetoc to re-print the toc in the sideroc navigation pane.

```

1447 \newwrite\LWR@copyoutfile % open the file to write to
1448 \newread\LWR@copyinfile % open the file to read from
1449
1450 \newcommand*{\LWR@copyfile}[2]{%
1451 \LWR@traceinfo{LWR@copyfile: copying #1 to #2}
1452
1453 \immediate\openout\LWR@copyoutfile=#2
1454 \openin\LWR@copyinfile=#1
1455 \begingroup\endlinechar=-1
1456 \makeatletter
1457
1458 \LWR@traceinfo{LWR@copyfile: about to loop}
1459
1460 \loop\unless\ifeof\LWR@copyinfile
1461 \LWR@traceinfo{LWR@copyfile: one line}
1462 \read\LWR@copyinfile to\LWR@fileline % Read one line and store it into \LWR@fileline
1463 % \LWR@fileline\par % print the content into the pdf
1464 % print the content:
1465 \immediate\write\LWR@copyoutfile{\unexpanded\expandafter{\LWR@fileline}}%
1466 \repeat
1467 \immediate\closeout\LWR@copyoutfile
1468 \LWR@traceinfo{LWR@copyfile: done}
1469 \endgroup
1470 }

1471 \end{warpHTML}

```

34 Debugging messages

HTML comments To have the HTML output include additional HTML comments, such as which `<div>` is closing, use

```
\booltrue{HTMLDebugComments}
```

debugging information To have debug information written to the log, use

```
\tracinglwarp
```

for HTML & PRINT: 1472 \begin{warpall}

Bool LWR@tracinglwarp True if tracing is turned on.

```
1473 \newbool{LWR@tracinglwarp}
```

\tracinglwarp Turns on the debug tracing messages.

```
1474 \newcommand{\tracinglwarp}{\booltrue{LWR@tracinglwarp}}
```

\LWR@traceinfo {*<text>*} If tracing is turned on, writes the text to the .log file.

```
1475 \newcommand{\LWR@traceinfo}[1]{%
1476 \ifbool{LWR@tracinglwarp}%
1477 {%
1478   \typeout{*** lwarp: #1}%
1479 }%
1480 {}%
1481 }
```

Bool HTMLDebugComments Add comments in HTML about closing `<div>`s, sections, etc.

Default: false

```
1482 \newbool{HTMLDebugComments}
1483 \boolfalse{HTMLDebugComments}
```

If \tracinglwarp, show where preamble hooks occur:

```
1484 \AfterEndPreamble{
1485 \LWR@traceinfo{AfterEndPreamble}
1486 }
1487
1488 \AtBeginDocument{
1489 \LWR@traceinfo{AtBeginDocument}
1490 }

1491 \end{warpall}
```

35 Defining print and HTML versions of macros and environments

The following refers to defining objects inside `lwarp`, and is not for the user's document.

Many macros and environments must be provided as both print and HTML versions.

While generating the print version of a document, the original macros as defined by \LaTeX and its packages are used as-is.

While generating the HTML version of a document, the original macro or environment is redefined to call a new HTML version or a copy of the original print version. The new HTML versions of macros and environments are used most of the time. Copies of the print versions are used inside a `lateximage` environment, which draws and remembers an image of the printed output, and also several other places.

The general structure for providing print and HTML versions of a macro or environment is as follows:

For a preexisting macro, not defined with `xparse`: An HTML version is provided with a special name, inside a `warpHTML` environment, then `\LWR@formatted` is used to redefine and patch various macros:

```
\begin{warpHTML}
\newcommand{\LWR@HTML@name}{...}% may also use xparse

\LWR@formatted{name}
\end{warpHTML}
```

`\LWR@formatted{name}` copies the original print version, then redefines `\name` to use either the print or HTML version depending on which mode `lwarp` is using. `xparse` may be used to define the new HTML version, even if the original did not use `xparse`. `expl3` syntax may be used as well.

For a preexisting environment, not defined with `xparse`: The process is similar. Note the use of `\LWR@formattedenv` instead of `\LWR@formatted`.

```
\begin{warpHTML}
\newenvironment{\LWR@HTML@name}{...}% may also use xparse

\LWR@formattedenv{name}
\end{warpHTML}
```

If the original used `xparse`: A copy must be made using a new name:

```

\begin{warpHTML}
\NewDocumentCommand{\LWR@print@name}{..}{..}% copy the original

\NewDocumentCommand{\LWR@HTML@name}{..}{..}% or use \newcommand

\LWR@formatted{name}
\end{warpHTML}

```

Similar for an environment, using \LWR@formattedenv. (\LWR@formatted and \LWR@formattedenv use \LetLtxMacro to copy the original print definition, which may not work with macros and environments created by xparse, so the print version must be manually recreated in the lwarp source.)

For a new macro or environment, not using xparse for the print version:

```

\begin{warpall}
\newcommand{\name}{...}% NOT xparse!
\end{warpall}

\begin{warpHTML}
\newcommand{\LWR@HTML@name}{...}% may use xparse for HTML

\LWR@formatted{name}
\end{warpHTML}

```

Similar for an environment. The plain \name or environment name is used for the printed version, and is placed inside warpall. xparse may be used for the \LWR@HTML@<name> version. expl3 syntax may be used for the print and HTML versions.

For a new macro or environment, using xparse: It is possible to use xparse for an entirely new macro or environment by defining the \LWR@print@<name> version with xparse, along with \name defined without xparse to refer directly to the \LWR@print version:

```

\begin{warpall}
\NewDocumentCommand{\LWR@print@name}{...} {...}% -or-
\NewDocumentEnvironment{\LWR@print@name}{...} {...} {...}

% Simply a call to \LWR@print@name:
\newcommand{\name}{\LWR@print@name}% -or-
\newenvironment{name}{\LWR@print@name}{\end\LWR@print@name}
\end{warpall}

\begin{warpHTML}
\NewDocumentCommand{\LWR@HTML@name}{...} {...}% -or-
\NewDocumentEnvironment{\LWR@HTML@name}{...} {...} {...}

\LWR@formatted{name}% -or-
\LWR@formattedenv{name}
\end{warpHTML}

```

In general, `\LWR@formatted` or `\LWR@formattedenv` are placed inside a `warpHTML` environment, and while producing an HTML document they do the following:

- Macros are modified:
 1. The pre-existing print version `\name` is saved as `\LWR@print@<name>`, unless `\LWR@print@<name>` is already defined.
 2. The original `\name` is redefined to call either the print or HTML version depending on which format is in use at the moment, as set by `\LWR@formatting`, which is defined as either “print” or “HTML”.
- When `lwarp` is producing a print document, the original definitions are used, as well as any new definitions defined in `warpall` above.
- When `lwarp` is generating HTML output, `\LWR@formatting` is set to “HTML”, and `\name` is directed to `\LWR@HTML@<name>`.
- When `lwarp` is generating HTML output but enters a `lateximage` environment, or for some other reason needs to draw images using the original print definitions, `\LWR@formatting` is changed to “print” and `\name` is then redirected to `\LWR@print@<name>`, which was the original `\name`.

Since arguments are not handled by the new `\name`, any star and other arguments are processed by the print or HTML version.

Expandable versions are also provided as well. These usually are necessary for anything which could appear inside a `tabular`, without which a “Misplaced `\omit`” error may occur.



Misplaced `\omit` error

```
\LWR@expandableformatted
\LWR@expandableformattedenv
```

(Older versions of `lwarp` used `\LetLtxMacro` for everything, but this could fail when using macros defined by `xparse`. This older system is still in use for many definitions.)

for HTML output: 1492 `\begin{warpHTML}`

`\LWR@formatting` Remembers if selected print/HTML formatting.

Used while `\LWR@restoreorigformatting`, such as in an `lateximage`. May be set to either “print” or “HTML”.

```
1493 \newcommand*{\LWR@formatting}{HTML}
```

`\LWR@formatted` `{\langle macroname \rangle}` No backslash in the macro name.

If not yet defined, defines `\LWR@print@<name>` as the original print-mode `\<name>`. Also redefines `\<name>` to use `\LWR@<format>@<name>`, where `<format>` is set by `\LWR@formatting`, and is print or HTML.

```
1494 \newcommand*{\LWR@formatted}[1]{%
1495   \ifcsundef\LWR@print@#1}{%
```

```

1496     \expandafter\LetLtxMacro\csname LWR@print@#1\expandafter\endcsname%
1497     \csname#1\endcsname%
1498   }{%
1499   \ifcsundef{#1}{%
1500     \expandafter\newrobustcmd\csname #1\endcsname{%
1501       \@nameuse{LWR@LWR@formatting @#1}%
1502     }%
1503   }{%
1504     \expandafter\renewrobustcmd\csname #1\endcsname{%
1505       \@nameuse{LWR@LWR@formatting @#1}%
1506     }%
1507   }%
1508 }

```

`\LWR@expandableformatted` `{<macroname>}` No backslash in the macro name.

An expandable version of `\LWR@formatted`.

```

1509 \newcommand*{\LWR@expandableformatted}[1]{%
1510   \ifcsundef{LWR@print@#1}{%
1511     \expandafter\LetLtxMacro\csname LWR@print@#1\expandafter\endcsname%
1512     \csname#1\endcsname%
1513   }{%
1514   \ifcsundef{#1}{%
1515     \expandafter\newcommand\csname #1\endcsname{%
1516       \@nameuse{LWR@LWR@formatting @#1}%
1517     }%
1518   }{%
1519     \expandafter\renewcommand\csname #1\endcsname{%
1520       \@nameuse{LWR@LWR@formatting @#1}%
1521     }%
1522   }%
1523 }

```

`\LWR@formattedenv` `{<environmentname>}`

If not yet defined, defines the environment `LWR@print@<name>` as the original `print-<name>`. Also redefines the environment `<name>` to use environment `LWR@<format>@<name>`, where `<format>` is set by `\LWR@formatting`, and is `print` or `HTML`.

```

1524 \newcommand*{\LWR@formattedenv}[1]{%
1525   \ifcsundef{LWR@print@#1}{%
1526     \expandafter\LetLtxMacro\csname LWR@print@#1\expandafter\endcsname%
1527     \csname#1\endcsname%
1528     \csletcs{endLWR@print@#1}{end#1}%
1529   }{%
1530   \DeclareDocumentEnvironment{#1}{}%
1531   {%
1532     \@nameuse{LWR@LWR@formatting @#1}%
1533   }%
1534   {%
1535     \@nameuse{endLWR@LWR@formatting @#1}%
1536   }%
1537 }

```

`\LWR@expandableformattedenv` $\{\langle environmentname \rangle\}$

An expandable version of `LWR@formattedenv`.

```

1538 \newcommand*{\LWR@expandableformattedenv}[1]{%
1539     \ifcsundef{LWR@print@#1}{%
1540         \expandafter\LetLtxMacro\csname LWR@print@#1\expandafter\endcsname%
1541         \csname#1\endcsname%
1542         \csletcs{endLWR@print@#1}{end#1}%
1543     }{%
1544         \DeclareExpandableDocumentEnvironment{#1}{}%
1545         {%
1546             \@nameuse{LWR@\LWR@formatting @#1}%
1547         }%
1548         {%
1549             \@nameuse{endLWR@\LWR@formatting @#1}%
1550         }%
1551     }

1552 \end{warpHTML}

```

36 HTML-conversion output modifications

These booleans modify the HTML output in various ways to improve conversion to EPUB or word processor imports.

for HTML & PRINT: 1553 `\begin{warpall}`

36.1 User-level controls

Bool `FormatEPUB` Changes HTML output for easy EPUB conversion via an external program. Removes per-file headers, footers, and nav. Adds footnotes per chapter/section.
Default: `false`

```

1554 \newbool{FormatEPUB}
1555 \boolfalse{FormatEPUB}

```

Bool `FormatWP` Changes HTML output for easier conversion by a word processor. Removes headers and nav, prints footnotes per section, and also forces single-file output and turns off HTML debug comments.
Default: `false`

```

1556 \newbool{FormatWP}
1557 \boolfalse{FormatWP}

```

Bool `WPMarkFloats` Adds
Default: `false`

```

    === begin table ===
    . . .
    === end ===

```

or

```

=== begin figure ===
. . .
=== end ===

```

around floats while formatting for word processors. This helps identify boundaries of floats to be manually converted to word-processor frames and captions.¹⁸

```

1558 \newbool{WPMarkFloats}
1559 \boolfalse{WPMarkFloats}

```

Bool WPMarkMinipages Adds

Default: false

```

=== begin minipage ===
. . .
=== end minipage ===

```

around minipages while formatting for word processors. This helps identify boundaries of minipages to be manually converted to word-processor frames.

```

1560 \newbool{WPMarkMinipages}
1561 \boolfalse{WPMarkMinipages}

```

Bool WPMarkTOC While formatting for word processors, adds

Default: true

```

=== table of contents ===

```

where the Table of Contents would have been. This helps identify where to insert the actual TOC.

If set false, the actual TOC is printed instead.

```

1562 \newbool{WPMarkTOC}
1563 \booltrue{WPMarkTOC}

```

Bool WPMarkLOFT While formatting for word processors, adds

Default: false

```

=== list of figures === and/or
=== list of tables ===

```

where each of these lists would have been. This helps identify where to insert the actual lists.

If set false, the actual lists are printed instead.

```

1564 \newbool{WPMarkLOFT}
1565 \boolfalse{WPMarkLOFT}

```

Bool WPMarkMath While formatting for word processors, prints math as \LaTeX code instead of creating SVG images or MATHJAX. This is useful for cut/paste into the *LibreOffice Writer TeXMaths* extension.

¹⁸Perhaps some day word processors will have HTML import options for identifying <figure> and caption tags for figures and tables.

```
1566 \newbool{WPMarkMath}
1567 \boolfalse{WPMarkMath}
```

Bool WPTitleHeading While formatting for word processors, true sets the document title to <h1>, which is expected for HTML documents, but also causes the lower-level section headings to start at **Heading 2** when imported into LIBREOffice. Set to false to cause the title to be plain text, and the section headings to begin at **Heading 1**.

Default: false

See table 10 on page 184.

```
1568 \newbool{WPTitleHeading}
1569 \boolfalse{WPTitleHeading}
```

```
1570 \end{warpall}
```

36.2 Heading adjustments

If formatting the HTML for a word processor, adjust heading levels.

If WPTitleHeading is true, adjust so that part is **Heading 1**.

If WPTitleHeading is false, use <h1> for the title, and set part to **Heading 2**.

for HTML output: 1571 \begin{warpHTML}

```
1572 \AtBeginDocument{
1573 \ifbool{FormatWP}{
1574 \@ifundefined{chapter}{
1575 \ifbool{WPTitleHeading}{% part and section starting at h2
1576 \renewcommand*{\LWR@tagtitle}{h1}
1577 \renewcommand*{\LWR@tagtitleend}{/h1}
1578 \renewcommand*{\LWR@tagpart}{h2}
1579 \renewcommand*{\LWR@tagpartend}{/h2}
1580 \renewcommand*{\LWR@tagsection}{h3}
1581 \renewcommand*{\LWR@tagsectionend}{/h3}
1582 \renewcommand*{\LWR@tagsubsection}{h4}
1583 \renewcommand*{\LWR@tagsubsectionend}{/h4}
1584 \renewcommand*{\LWR@tagsubsubsection}{h5}
1585 \renewcommand*{\LWR@tagsubsubsectionend}{/h5}
1586 \renewcommand*{\LWR@tagparagraph}{h6}
1587 \renewcommand*{\LWR@tagparagraphend}{/h6}
1588 \renewcommand*{\LWR@tagsubparagraph}{span class="subparagraph"}
1589 \renewcommand*{\LWR@tagsubparagraphend}{/span}
1590 }% WPTitleHeading
1591 {% not WPTitleHeading, part and section starting at h1
1592 \renewcommand*{\LWR@tagtitle}{div class="title"}
1593 \renewcommand*{\LWR@tagtitleend}{/div}
1594 \renewcommand*{\LWR@tagpart}{h1}
1595 \renewcommand*{\LWR@tagpartend}{/h1}
1596 \renewcommand*{\LWR@tagsection}{h2}
1597 \renewcommand*{\LWR@tagsectionend}{/h2}
1598 \renewcommand*{\LWR@tagsubsection}{h3}
1599 \renewcommand*{\LWR@tagsubsectionend}{/h3}
```

```

1600 \renewcommand*{\LWR@tagssubsubsection}{h4}
1601 \renewcommand*{\LWR@tagssubsubsectionend}{/h4}
1602 \renewcommand*{\LWR@tagparagraph}{h5}
1603 \renewcommand*{\LWR@tagparagraphend}{/h5}
1604 \renewcommand*{\LWR@tagsubparagraph}{h6}
1605 \renewcommand*{\LWR@tagsubparagraphend}{/h6}
1606 }% not WPTitleHeading
1607 }% chapter undefined
1608 {% chapter defined
1609 \ifbool{WPTitleHeading}{
1610 {% not WPTitleHeading, part and chapter starting at h1
1611 \renewcommand*{\LWR@tagtitle}{div class="title"}
1612 \renewcommand*{\LWR@tagtitleend}{/div}
1613 \renewcommand*{\LWR@tagpart}{h1}
1614 \renewcommand*{\LWR@tagpartend}{/h1}
1615 \renewcommand*{\LWR@tagchapter}{h2}
1616 \renewcommand*{\LWR@tagchapterend}{/h2}
1617 \renewcommand*{\LWR@tagsection}{h3}
1618 \renewcommand*{\LWR@tagsectionend}{/h3}
1619 \renewcommand*{\LWR@tagsubsection}{h4}
1620 \renewcommand*{\LWR@tagsubsectionend}{/h4}
1621 \renewcommand*{\LWR@tagssubsubsection}{h5}
1622 \renewcommand*{\LWR@tagssubsubsectionend}{/h5}
1623 \renewcommand*{\LWR@tagparagraph}{h6}
1624 \renewcommand*{\LWR@tagparagraphend}{/h6}
1625 \renewcommand*{\LWR@tagsubparagraph}{span class="subparagraph"}
1626 \renewcommand*{\LWR@tagsubparagraphend}{/span}
1627 }% not WPTitleHeading
1628 }% chapter defined
1629 }{}% FormatWP
1630 }% AtBeginDocument

1631 \end{warpHTML}

```

37 Remembering original formatting macros

for HTML output: 1632 \begin{warpHTML}

Remember original definitions of formatting commands. Will be changed to HTML commands for most uses. Will be temporarily restored to original meaning inside any lateximage environment. Also nullify unused commands.

Some packages redefine \#, which is used to generate HTML, so the original must be remembered here.

```

1633 \chardef\LWR@origpound='\#

1634 \let\LWR@origcomma\,
1635 \let\LWR@origthinspace\thinspace
1636 \let\LWR@orignegthinspace\negthinspace
1637 \let\LWR@origtilde~
1638 \let\LWR@origenskip\enskip

```

```
1639 \let\LWR@origquad\quad
1640 \let\LWR@origqquad\qquad
1641 \let\LWR@origofil\hfil
1642 \let\LWR@orighss\hss
1643 \let\LWR@origllap\llap
1644 \let\LWR@origrlap\rlap
1645 \let\LWR@origfilneg\hfilneg
1646 \let\LWR@origspace\hspace
1647
1648 \let\LWR@origrule\rule
1649
1650 \let\LWR@origmedskip\medskip
1651 \let\LWR@origbigskip\bigskip
1652
1653 \let\LWR@origtextellipsis\textellipsis

1654 \let\LWR@origvdots\vdots

1655 \let\LWR@orig@textquotedbl\textquotedbl
1656
1657 \LetLtxMacro\LWR@origttfamily\ttfamily
1658
1659 \LetLtxMacro\LWR@origem\em
1660
1661 \LetLtxMacro\LWR@orignormalfont\normalfont
1662
1663 \let\LWR@origonecolumn\onecolumn
1664
1665 \let\LWR@origsp\sp
1666 \let\LWR@origsb\sb
1667
1668 \LetLtxMacro\LWR@origunderline\underline

1669 \let\LWR@orignewpage\newpage
1670
1671 \let\LWR@origpagestyle\pagestyle
1672 \let\LWR@origthispagestyle\thispagestyle
1673 \LetLtxMacro\LWR@origpagenumbering\pagenumbering
1674
1675 \let\LWR@orignewline\newline
1676
1677 \AtBeginDocument{% in case packages change definition
1678 \let\LWR@orig@trivlist@trivlist
1679 \let\LWR@origtrivlist\trivlist
1680 \let\LWR@origendtrivlist\endtrivlist
1681 \LetLtxMacro\LWR@origitem\item
1682 \LetLtxMacro\LWR@origitemize\itemize
1683 \LetLtxMacro\LWR@endorigitemize\enditemize
1684 \LetLtxMacro\LWR@origenumerate\enumerate
1685 \LetLtxMacro\LWR@endorigenumerate\endenumerate
1686 \LetLtxMacro\LWR@origdescription\description
1687 \LetLtxMacro\LWR@endorigdescription\enddescription
1688 \let\LWR@orig@mklab\@mklab
1689 \let\LWR@origmakelabel\makelabel
1690 \let\LWR@orig@donoparitem\@donoparitem
```

```

1691 \LetLtxMacro\LWR@orig@item\@item
1692 \let\LWR@orig@nbitem\@nbitem
1693 }
1694
1695 \let\LWR@origpar\par
1696
1697 \LetLtxMacro\LWR@origfootnote\footnote
1698 \let\LWR@orig@mpfootnotetext\@mpfootnotetext
1699
1700
1701 \AtBeginDocument{% in case packages change definition
1702 \LetLtxMacro\LWR@orighline\hline%
1703 \LetLtxMacro\LWR@origcline\cline%
1704 }

1705 \end{warpHTML}

```

38 Accents

Native \LaTeX accents such as `\`` will work, but many more kinds of accents are available when using Unicode-aware \XeLaTeX and \LuaLaTeX . If using accents in section names which will become file names, it is recommended to use the \LaTeX accents such as `\`` and `\v` instead of Unicode accents. The \LaTeX accents will have the accents stripped when creating the filenames, whereas the Unicode accents will appear in the file names, which may cause issues with some operating systems.

for HTML output: 1706 \begin{warpHTML}

Without `\AtBeginDocument`, `\t` was being re-defined somewhere.

```
1707 \AtBeginDocument{
```

The following are restored for print when inside a `lateximage`.

For Unicode engines, only `\t` needs to be redefined:

```
1708 \LetLtxMacro\LWR@origtie\t
```

For \pdfLaTeX , additional work is required:

```

1709 \ifPDFTeX% pdflatex or dvi latex
1710 \LetLtxMacro\LWR@origgraveaccent\`
1711 \LetLtxMacro\LWR@origacuteaccent\'
1712 \LetLtxMacro\LWR@origcircumflexaccent\^
1713 \LetLtxMacro\LWR@origtildeaccent\~
1714 \LetLtxMacro\LWR@origmacronaccent\=
1715 \LetLtxMacro\LWR@origbreve\u
1716 \LetLtxMacro\LWR@origdotaccent\.
1717 \LetLtxMacro\LWR@origdiaeresisaccent\"
1718 \LetLtxMacro\LWR@origdoubleacuteaccent\H
1719 \LetLtxMacro\LWR@origcaronaccent\v

```

```

1720 \LetLtxMacro\LWR@origdotbelowaccent\d
1721 \LetLtxMacro\LWR@origcedillaaccent\c
1722 \LetLtxMacro\LWR@origmacronbelowaccent\b

```

The HTML redefinitions follow.

For pdfL^AT_EX, Unicode diacritical marks are used:

```

1723 \renewcommand*{\'}[1]{#1\HTMLUnicode{0300}}
1724 \renewcommand*{\'}[1]{#1\HTMLUnicode{0301}}
1725 \renewcommand*{\^}[1]{#1\HTMLUnicode{0302}}
1726 \renewcommand*{\~}[1]{#1\HTMLUnicode{0303}}
1727 \renewcommand*{\=}[1]{#1\HTMLUnicode{0304}}
1728 \renewcommand*{\u}[1]{#1\HTMLUnicode{0306}}
1729 \renewcommand*{\.}[1]{#1\HTMLUnicode{0307}}
1730 \renewcommand*{\"}[1]{#1\HTMLUnicode{0308}}
1731 \renewcommand*{\H}[1]{#1\HTMLUnicode{030B}}
1732 \renewcommand*{\v}[1]{#1\HTMLUnicode{030C}}
1733 \renewcommand*{\d}[1]{#1\HTMLUnicode{0323}}
1734 \renewcommand*{\c}[1]{#1\HTMLUnicode{0327}}
1735 \renewcommand*{\b}[1]{#1\HTMLUnicode{0331}}
1736 \fi

```

For all engines, a Unicode diacritical tie is used:

```

1737 \def\LWR@t#1#2{#1\HTMLUnicode{0361}#2}
1738 \renewcommand*{\t}[1]{\LWR@t#1}

```

`\LWR@restoreorigaccents` Called from `\restoreoriginalformatting` when a lateximage is begun.

```

1739 \ifPDFTeX% pdflatex or dvi latex
1740 \newcommand*{\LWR@restoreorigaccents}{%
1741   \LetLtxMacro\'\LWR@origgraveaccent%
1742   \LetLtxMacro\'\LWR@origacuteaccent%
1743   \LetLtxMacro\^\LWR@origcircumflexaccent%
1744   \LetLtxMacro\~\LWR@origtildeaccent%
1745   \LetLtxMacro\=\LWR@origmacronaccent%
1746   \LetLtxMacro\u\LWR@origbreve%
1747   \LetLtxMacro\.\LWR@origdotaccent%
1748   \LetLtxMacro"\LWR@origdiaeresisaccent%
1749   \LetLtxMacro\H\LWR@origdoubleacuteaccent%
1750   \LetLtxMacro\v\LWR@origcaronaccent%
1751   \LetLtxMacro\t\LWR@origtie%
1752   \LetLtxMacro\d\LWR@origdotbelowaccent%
1753   \LetLtxMacro\c\LWR@origcedillaaccent%
1754   \LetLtxMacro\b\LWR@origmacronbelowaccent%
1755 }%
1756 \else% XeLaTeX, LuaLaTeX:
1757 \newcommand*{\LWR@restoreorigaccents}{%
1758   \LetLtxMacro\t\LWR@origtie%
1759 }%
1760 \fi
1761 }% AtBeginDocument

1762 \end{warpHTML}

```

39 Configuration files

39.1 Decide whether to generate configuration files

Configuration files are only written if processing the print version of the document, and not processing a pstool image. pstool uses an additional compile for each image using the original document's preamble, which includes lwarp, so the lwarp configuration files are turned off if -pstool is part of the \jobname.

Default to no configuration files:

```
1763 \LWR@excludecomment{LWRwriteconf}{writeconf}
```

Generate configuration files if print mode and not -pstool:

for PRINT output:

```
1764 \begin{warpprint}
1765 \fullexpandarg%
1766 \IfSubStr*{\jobname}{-pstool}
1767   {
1768     \PackageInfo{lwarp}{%
1769       Jobname with -pstool is found.\MessageBreak
1770       Not generating lwarp configuration files,%
1771     }
1772   }
1773   {
1774     \PackageInfo{lwarp}{Generating lwarp configuration files,}%
1775     \LWR@includecomment{LWRwriteconf}{writeconf}
1776   }
1777 \end{warpprint}
```

39.2 <project>_html.tex

File *_html.tex Used to allow an HTML version of the document to exist alongside the print version.

Config file:

```
1778 \begin{LWRwriteconf}
1779 \immediate\openout\LWR@quickfile=\jobname_html.tex
1780 \immediate\write\LWR@quickfile{%
1781 \detokenize{\PassOptionsToPackage}%
1782 {warpHTML,BaseJobname=\jobname}{lwarp}%
1783 }
1784 \immediate\write\LWR@quickfile{%
1785 \detokenize{\input}\string{\jobname.tex}\string }%
1786 }
1787 \immediate\closeout\LWR@quickfile
1788 \end{LWRwriteconf}
```

39.3 lwarpmk configuration files

Config file: 1789 \begin{LWRwriteconf}

`\LWR@lwarpcnfversion` The version number of the configuration file, allowing *lwarpmk* to detect an obsolete configuration file format. Incremented by one each time the configuration file format changes. (This is NOT the same as the *lwarp* version number.)

```
1790 \newcommand*{\LWR@lwarpcnfversion}{2}% also in lwarpmk.lua
```

39.3.1 Helper macros

`\LWR@shellescapecmd` The LaTeX compile option for shell escape, if used.

```
1791 \ifshellescape
1792   \def\LWR@shellescapecmd{--shell-escape }
1793 \else
1794   \def\LWR@shellescapecmd{}
1795 \fi
```

`\LWR@compilecmd` $\{\langle engine \rangle\} \{\langle suffix \rangle\}$

Used to form the basic compilation command for a document, adding the optional shell escape.

Engine is *pdf_latex*, etc. Suffix is empty or `_html`

```
1796 \newcommand*{\LWR@compilecmd}[2]{%
1797   #1 \LWR@shellescapecmd \jobname#2%
1798 }
```

`\LWR@addcompilecmd` $\{\langle cmd \rangle\} \{\langle suffix \rangle\}$

Adds to the compilation command.

Cmd is *dvipdfmx*, etc. Suffix is empty or `_html`

```
1799 \newcommand*{\LWR@addcompilecmd}[2]{%
1800   \LWR@opseq
1801   #1 \jobname#2%
1802 }
```

`\LWR@unknownengine` Error message if not sure which L^AT_EX engine is being used.

```
1803 \newcommand*{\LWR@unknownengine}{%
1804   \PackageError{lwarp}%
1805     {Unknown LaTeX engine}%
1806     {%
1807       Lwarp only knows about pdflatex, dvi latex,
1808       xelatex, luatex, and upLATEX.%
1809     }%
1810 }
```

`\LWR@latexmkvar` $\{\langle varname \rangle\} \{\langle value \rangle\}$

Adds a *latexmk* variable assignment.

```
1811 \newcommand*{\LWR@latexmkvar}[2]{%
1812     -e
1813     \LWRopquote%
1814     \LWRdollar #1=q/#2/%
1815     \LWRopquote
1816 }
```

`\LWR@latexmkcmd` {*(latexmk options)*}

Sets a call to *latexmk* with the given options, possibly adding `--shell-escape`, and also adding the indexing program.

```
1817 \newcommand*{\LWR@latexmkcmd}[1]{%
1818     latexmk \space \LWR@shellescapecmd \space #1 \space
1819     -recorder \space
1820     \LWR@latexmkvar{makeindex}\LWR@LatexmkIndexCmd}%
1821 }
```

`\LWR@latexmkdvipdfm` {*(dvipdfm or dvipdfmx)*}

Adds the options settings for *dvipdfm* or *dvipdfmx*.

```
1822 \newcommand*{\LWR@latexmkdvipdfm}[1]{%
1823     -pdfdvi \space
1824     \LWR@latexmkvar{dvipdf}{%
1825         #1
1826         \@percentchar 0
1827         -o \@percentchar D
1828         \@percentchar S%
1829     }
1830 }
```

`\LWR@compileuplatex` Sets compile options for up^LA^TE^X with *ujarticle* or related classes.

```
1831 \newcommand*{\LWR@compileuplatex}{
1832     \def\LWR@tempprintlatexcmd{%
1833         \LWR@compilecmd{uplatex}{ }
1834         \LWR@addcompilecmd{dvipdfmx}{ }
1835     }
1836     \def\LWR@tempHTMLlatexcmd{%
1837         \LWR@compilecmd{uplatex}{_html}
1838         \LWR@addcompilecmd{dvipdfmx}{_html}
1839     }
1840 }
```

`\LWR@PrintLatexCmd` If not set by the user, the following sets the command to use to compile the source to PDF form.
`\LWR@HTMLLatexCmd`

If using *latexmk*, a complicated string is created, eventually resulting in something such as:

For *xelatex* with `--shell-escape`:

```
[[latexmk -xelatex --shell-escape -recorder
  -e '$makeindex = q/makeindex -s lwarp.ist/' <jobname>_html]]
```

For *dvipdfmx*:

```
[[latexmk -pdfdvi -e '$dvipdf=q/dvipdfmx %0 -o %D %S/'
  -recorder
  -e '$makeindex=q/makeindex -s lwarp.ist/' <jobname>_html]]
```

For the following, temporary values are computed, but the permanent values are only set if the originals were not assigned by the user.

```
1841 \ifbool{LWR@latexmk}{
```

For *latexmk* with *pdflatex* or *lualatex*:

```
1842   \ifpdf
```

For *latexmk* with *pdflatex*:

```
1843       \ifPDFTeX
1844       \def\LWR@latexcmd{\LWR@latexmkcmd{-pdf -dvi- -ps-}}
1845       \else
```

For *latexmk* with *lualatex*:

```
1846       \ifLuaTeX
1847       \def\LWR@latexcmd{\LWR@latexmkcmd{-lualatex}}
1848       \else
1849       \LWR@unknownengine
1850       \fi
1851   \fi
1852   \else% \ifpdf
```

For *latexmk* with *xelatex* or DVI *latex*:

```
1853       \ifXeTeX
```

For *latexmk* with *xelatex*:

```
1854       \def\LWR@latexcmd{\LWR@latexmkcmd{-xelatex}}
1855       \else% \ifXeTeX
```

For *latexmk* with DVI *latex*:

```
1856       \ifbool{LWR@dvipdfm}{
```

```

1857         \def\LWR@latexcmd{%
1858             \LWR@latexmkcmd{%
1859                 \LWR@latexmkdvipdfm{dvipdfm}%
1860             }
1861         }
1862     }{
1863         \ifbool{LWR@dvipdfmx}{
1864             \def\LWR@latexcmd{%
1865                 \LWR@latexmkcmd{%
1866                     \LWR@latexmkdvipdfm{dvipdfmx}%
1867                 }
1868             }
1869         }{
1870             \def\LWR@latexcmd{\LWR@latexmkcmd{-pdfps}}
1871         }
1872     }
1873     \fi
1874     \fi% \ifpdf

```

The final assignment if *latexmk*:

```

1875     \def\LWR@tempprintlatexcmd{\LWR@latexcmd \space \jobname}
1876     \def\LWR@tempHTMLlatexcmd{\LWR@latexcmd \space \jobname_html}
1877 }% latexmk

```

Without *latexmk*, the compiling command is simply the compiler name and the optional shell escape:

```

1878 {% not latexmk
1879     \ifpdf

```

For *pdflatex* or *lualatex*:

```

1880         \ifPDFTeX

```

For *pdflatex*:

```

1881         \def\LWR@tempprintlatexcmd{\LWR@compilecmd{pdflatex}{}}
1882         \def\LWR@tempHTMLlatexcmd{\LWR@compilecmd{pdflatex}{_html}}
1883     \else
1884         \ifLuaTeX

```

For *lualatex*:

```

1885         \def\LWR@tempprintlatexcmd{\LWR@compilecmd{lualatex}{}}
1886         \def\LWR@tempHTMLlatexcmd{\LWR@compilecmd{lualatex}{_html}}
1887     \else
1888         \LWR@unknownengine
1889     \fi
1890     \fi
1891     \else% \ifpdf

```

For DVI *latex* or *xelatex*:

```
1892         \ifXeTeX
```

For *xelatex*:

```
1893         \def\LWR@tempprintlatexcmd{\LWR@compilecmd{xelatex}{}}
1894         \def\LWR@tempHTMLlatexcmd{\LWR@compilecmd{xelatex}{_html}}
1895         \else
```

For DVI *latex*. Default to *dvips*, unless told to use *dvipdfm* or *dvipdfmx*:

```
1896         \ifbool{LWR@dvipdfm}{
```

For DVI *latex* with *dvipdfm*:

```
1897         \def\LWR@tempprintlatexcmd{%
1898             \LWR@compilecmd{latex}{}
1899             \LWR@addcompilecmd{dvipdfm}{}
1900         }
1901         \def\LWR@tempHTMLlatexcmd{%
1902             \LWR@compilecmd{latex}{_html}
1903             \LWR@addcompilecmd{dvipdfm}{_html}
1904         }
1905     }{
1906         \ifbool{LWR@dvipdfmx}{
```

For DVI *latex* with *dvipdfmx*:

```
1907         \def\LWR@tempprintlatexcmd{%
1908             \LWR@compilecmd{latex}{}
1909             \LWR@addcompilecmd{dvipdfmx}{}
1910         }
1911         \def\LWR@tempHTMLlatexcmd{%
1912             \LWR@compilecmd{latex}{_html}
1913             \LWR@addcompilecmd{dvipdfmx}{_html}
1914         }
1915     }{% dvips
```

For DVI *latex* with *dvips* and *ps2pdf*:

```
1916         \def\LWR@tempprintlatexcmd{%
1917             \LWR@compilecmd{latex}{}
1918             \LWR@addcompilecmd{dvips}{}
1919             \LWR@addcompilecmd{ps2pdf}{} .ps
1920         }
1921         \def\LWR@tempHTMLlatexcmd{%
1922             \LWR@compilecmd{latex}{_html}
1923             \LWR@addcompilecmd{dvips}{_html}
1924             \LWR@addcompilecmd{ps2pdf}{_html} .ps
1925         }
1926     }
1927 }
1928 \fi% \ifXeTeX
1929 \fi% \ifpdf
1930}% latexmk
```

For `ujarticle`, `utarticle`, and related, using `upLATEX` and `dvipdfmx`:

```

1931 \@ifclassloaded{ujarticle}{\LWR@compileuplatex}{}
1932 \@ifclassloaded{ujbook}{\LWR@compileuplatex}{}
1933 \@ifclassloaded{ujreport}{\LWR@compileuplatex}{}
1934 \@ifclassloaded{utarticle}{\LWR@compileuplatex}{}
1935 \@ifclassloaded{utbook}{\LWR@compileuplatex}{}
1936 \@ifclassloaded{utreport}{\LWR@compileuplatex}{}

```

Only make the setting permanent if the original was empty:

```

1937 \ifdefempty{\LWR@PrintLatexCmd}{
1938     \def\LWR@PrintLatexCmd{\LWR@tempprintlatexcmd}
1939 }{}
1940 \ifdefempty{\LWR@HTMLLatexCmd}{
1941     \def\LWR@HTMLLatexCmd{\LWR@tempHTMLlatexcmd}
1942 }{}

```

`\LWR@writeconf` {*filename*}

Common code for each of `lwarpmk.conf` and `<project>.lwarpmkconf`. Each entry is a variable name, the equal sign, and a quoted string inside `[[` and `]]`, which are *lua*'s long quote characters, allowing the use of single and double quotes inside.

```

1943 \newcommand{\LWR@writeconf}[1]{
1944     \ifcsdef{LWR@quickfile}{}{\newwrite{\LWR@quickfile}}
1945     \immediate\openout\LWR@quickfile=#1
1946     \immediate\write\LWR@quickfile{confversion = [[\LWR@lwarpcnfversion]]}
1947     \ifbool{usingOSWindows}{
1948         \immediate\write\LWR@quickfile{opsystem = [[Windows]]}
1949     }{
1950         \immediate\write\LWR@quickfile{opsystem = [[Unix]]}
1951     }
1952     \immediate\write\LWR@quickfile{sourcename = [[\jobname]]}
1953     \immediate\write\LWR@quickfile{homehtmlfilename = [[\HomeHTMLFilename]]}
1954     \immediate\write\LWR@quickfile{htmlfilename = [[\HTMLFilename]]}
1955     \immediate\write\LWR@quickfile{imagesdirectory = [[\LWR@ImagesDirectory]]}
1956     \immediate\write\LWR@quickfile{imagesname = [[\LWR@ImagesName]]}
1957     \immediate\write\LWR@quickfile{latexmk = [[\ifbool{LWR@latexmk}{true}{false}]]}
1958     \immediate\write\LWR@quickfile{printlatexcmd = [[\LWR@PrintLatexCmd]]}
1959     \immediate\write\LWR@quickfile{HTMLlatexcmd = [[\LWR@HTMLLatexCmd]]}
1960     \immediate\write\LWR@quickfile{printindexcmd = [[\LWR@PrintIndexCmd]]}
1961     \immediate\write\LWR@quickfile{HTMLindexcmd = [[\LWR@HTMLIndexCmd]]}
1962     \immediate\write\LWR@quickfile{latexmkindexcmd = [[\LWR@LatexmkIndexCmd]]}
1963     \immediate\write\LWR@quickfile{glossarycmd = [[\LWR@GlossaryCmd]]}
1964     \immediate\write\LWR@quickfile{pdftotextenc = [[\LWR@pdftotextEnc]]}
1965     \immediate\closeout\LWR@quickfile
1966 }
1967
1968 \end{LWRwriteconf}

```

39.3.2 lwarpmk.conf

File `lwarpmk.conf` `lwarpmk.conf` is automatically (re-)created by the `lwarp` package when executing `pdflatex <project.tex>`, or similar for *xelatex* or *lualatex*, in print-document generation mode, which is the default unless the `warpHTML` option is given. `lwarpmk.conf` is then used by the utility *lwarpmk*.

Config file:

```

1969 \begin{LWRwriteconf}
1970
1971 \AtBeginDocument{\LWR@writeconf{lwarpmk.conf}}
1972
1973 \end{LWRwriteconf}

```

39.3.3 <project>.lwarpmkconf

File `project.lwarpmkconf` A project-specific configuration file for *lwarpmk*.

The `makeindex` and `xindy` options have already been handled for `lwarp.conf`.

Config file:

```

1974 \begin{LWRwriteconf}
1975
1976 \AtBeginDocument{\LWR@writeconf{\jobname.lwarpmkconf}}
1977
1978 \end{LWRwriteconf}

```

39.4 lwarp.css

File `lwarp.css` This is the base css layer used by `lwarp`.

This must be present both when compiling the project and also when distributing the HTML files.

Config file:

```

1979 \begin{LWRwriteconf}
1980 \begin{filecontents*}[overwrite]{lwarp.css}
1981 /*
1982  CSS stylesheet for the LaTeX Lwarp package
1983  Copyright 2016-2020 Brian Dunn – BD Tech Concepts LLC
1984 */
1985
1986
1987 /* a fix for older browsers: */
1988 header, section, footer, aside, nav, main,
1989     article, figure { display: block; }
1990
1991
1992 A:link {color:#000080 ; text-decoration: none ; }
1993 A:visited {color:#800000 ; }
1994 A:hover {color:#000080 ; text-decoration: underline ;}
1995 A:active {color:#800000 ; }
1996

```

```

1997 a.tocbook {display: inline-block ; margin-left: 0em ;
1998     font-weight: bold ; margin-top: 1ex ; margin-bottom: 1ex ; }
1999 a.tocpart {display: inline-block ; margin-left: 0em ;
2000     font-weight: bold ;}
2001 a.tocchapter {display: inline-block ; margin-left: 0em ;
2002     font-weight: bold ;}
2003 a.tocsection {display: inline-block ; margin-left: 1em ;
2004     text-indent: -.5em ; font-weight: bold ; }
2005 a.tocsubsection {display: inline-block ; margin-left: 2em ;
2006     text-indent: -.5em ; }
2007 a.tocsubsubsection {display: inline-block ; margin-left: 3em ;
2008     text-indent: -.5em ; }
2009 a.tocparagraph {display: inline-block ; margin-left: 4em ;
2010     text-indent: -.5em ; }
2011 a.tocsubparagraph {display: inline-block ; margin-left: 5em ;
2012     text-indent: -.5em ; }
2013 a.tocfigure {margin-left: 0em}
2014 a.tocsubfigure {margin-left: 2em}
2015 a.toctable {margin-left: 0em}
2016 a.tocsubtable {margin-left: 2em}
2017 a.toctheorem {margin-left: 0em}
2018 a.toclstlisting {margin-left: 0em}
2019
2020 body {
2021     font-family: "DejaVu Serif", "Bitstream Vera Serif",
2022         "Lucida Bright", Georgia, serif;
2023     background: #FAF7F4 ;
2024     color: black ;
2025     margin: 0em ;
2026     padding: 0em ;
2027     font-size: 100% ;
2028     line-height: 1.2 ;
2029 }
2030
2031 p {margin: 1.5ex 0em 1.5ex 0em ;}
2032 table p {margin: .5ex 0em .5ex 0em ;}
2033
2034 /* Holds a section number */
2035 span.sectionnumber { margin-right: 0em }
2036
2037 /* Inserted in front of index lines */
2038 span.indexitem {margin-left: 0em}
2039 span.indexsubitem {margin-left: 2em}
2040 span.indexsubsubitem {margin-left: 4em}
2041 div.indexheading {margin-top: 2ex ; font-weight: bold}
2042
2043 div.hidden, span.hidden { display: none ; }
2044
2045 kbd, span.texttt {
2046     font-family: "DejaVu Mono", "Bitstream Vera Mono", "Lucida Console",
2047         "Nimbus Mono L", "Liberation Mono", "FreeMono", "Andale Mono",
2048         "Courier New", monospace;
2049     font-size: 100% ;
2050 }
2051

```

```
2052 pre { padding: 3pt ; }
2053
2054 span.strong, span.textbf, div.strong, div.textbf { font-weight: bold; }
2055
2056 span.textit, div.textit { font-style: italic; }
2057
2058 span.textmd, div.textmd { font-weight: normal; }
2059
2060 span.textup, div.textup {
2061     font-style: normal;
2062     font-variant: normal;
2063     font-variant-numeric: normal ;
2064 }
2065
2066 span.textsc, div.textsc {
2067     font-variant: small-caps;
2068     font-variant-numeric: oldstyle-nums ;
2069 }
2070
2071 span.textulc, div.textulc {
2072     font-variant: normal ;
2073     font-variant-numeric: normal ;
2074 }
2075
2076 span.textsl, div.textsl { font-style: oblique; }
2077
2078 span.textrm, div.textrm {
2079     font-family: "DejaVu Serif", "Bitstream Vera Serif",
2080     "Lucida Bright", Georgia, serif;
2081 }
2082
2083 span.textsf, div.textsf {
2084     font-family: "DejaVu Sans", "Bitstream Vera Sans",
2085     Geneva, Verdana, sans-serif ;
2086 }
2087
2088 /* nfssect-cfr lining figures */
2089 span.textln, div.textln {
2090     font-variant-numeric: lining-nums ;
2091 }
2092
2093 /* nfssect-cfr proportional figures */
2094 span.textp, div.textp {
2095     font-variant-numeric: proportional-nums ;
2096 }
2097
2098 /* nfssect-cfr tabular figures */
2099 span.textt, div.textt {
2100     font-variant-numeric: tabular-nums ;
2101 }
2102
2103 /* nfssect-cfr font weights */
2104 span.textdb, div.textdb {
2105     font-weight: 500 ;
2106 }
```

```
2107
2108 span.textsb, div.textsb {
2109     font-weight: 600 ;
2110 }
2111
2112 span.texteb, div.texteb {
2113     font-weight: 800 ;
2114 }
2115
2116 span.textub, div.textub {
2117     font-weight: 900 ;
2118 }
2119
2120 span.textlg, div.textlg {
2121     font-weight: 300 ;
2122 }
2123
2124 span.textel, div.textel {
2125     font-weight: 200 ;
2126 }
2127
2128 span.textul, div.textul {
2129     font-weight: 100 ;
2130 }
2131
2132
2133
2134 span.textcircled { border: 1px solid black ; border-radius: 1ex ; }
2135
2136 span.underline {
2137     text-decoration: underline ;
2138     text-decoration-skip: auto ;
2139 }
2140
2141 span.overline {
2142     text-decoration: overline ;
2143     text-decoration-skip: auto ;
2144 }
2145
2146 div.hrule { border-top: 1px solid silver }
2147
2148
2149 /* for vertical text: */
2150 div.verticalrl { writing-mode: vertical-rl }
2151 div.horizontalrb { writing-mode: horizontal-tb }
2152
2153
2154 /* for diagbox */
2155 div.diagboxtitleN { border-bottom: 1px solid gray }
2156 div.diagboxtitleS { border-top: 1px solid gray }
2157
2158 div.diagboxE {
2159     padding-left: 2em ;
2160     text-align: right ;
2161 }
```

```
2162
2163 div.diagboxW {
2164     padding-right: 2em ;
2165     text-align: left ;
2166 }
2167
2168
2169
2170 /* For realscripts */
2171 .supsubscript {
2172     display: inline-block;
2173     text-align:left ;
2174 }
2175
2176 .supsubscript sup,
2177 .supsubscript sub {
2178     position: relative;
2179     display: block;
2180     font-size: .7em;
2181     line-height: 1;
2182 }
2183
2184 .supsubscript sup {
2185     top: .3em;
2186 }
2187
2188 .supsubscript sub {
2189     top: .3em;
2190 }
2191
2192 div.attribution p {
2193     text-align: right ;
2194     font-size: 80%
2195 }
2196
2197 span.poemtitle {
2198     font-size: 120% ; font-weight: bold;
2199 }
2200
2201 pre.tabbing {
2202     font-family: "Linux Libertine Mono O", "Lucida Console",
2203                 "Droid Sans Mono", "DejaVu Mono", "Bitstream Vera Mono",
2204                 "Liberation Mono", "FreeMono", "Andale Mono",
2205                 "Nimbus Mono L", "Courier New", monospace;
2206 }
2207
2208 blockquote {
2209     display: block ;
2210     margin-left: 2em ;
2211     margin-right: 2em ;
2212 }
2213
2214 /* quotchap is for the quotchap package */
2215 div.quotchap {
2216     display: block ;
```

```
2217     font-style: oblique ;
2218     overflow-x: auto ;
2219     margin-left: 2em ;
2220     margin-right: 2em ;
2221 }
2222
2223 blockquote p, div.quotchap p {
2224     line-height: 1.5;
2225     text-align: left ;
2226     font-size: .85em ;
2227 }
2228
2229 /* qauthor is for the quotchap package */
2230 div.qauthor {
2231     display: block ;
2232     text-align: right ;
2233     margin-left: auto ;
2234     margin-right: 2em ;
2235     font-size: 80% ;
2236     font-variant: small-caps;
2237 }
2238
2239 div.qauthor p {
2240     text-align: right ;
2241 }
2242
2243 div.epigraph, div.dictum {
2244     line-height: 1.2;
2245     text-align: left ;
2246     padding: 3ex 1em 0ex 1em ;
2247 /*     margin: 3ex auto 3ex auto ; */ /* Epigraph centered */
2248     margin: 3ex 1em 3ex auto ; /* Epigraph to the right */
2249 /*     margin: 3ex 1em 3ex 1em ; */ /* Epigraph to the left */
2250     font-size: .85em ;
2251     max-width: 27em ;
2252 }
2253
2254 div.epigraphsource, div.dictumauthor {
2255     text-align:right ;
2256     margin-left:auto ;
2257 /*     max-width: 50% ; */
2258     border-top: 1px solid #A0A0A0 ;
2259     padding-bottom: 3ex ;
2260     line-height: 1.2;
2261 }
2262
2263 div.epigraph p, div.dictum p { padding: .5ex ; margin: 0ex ;}
2264 div.epigraphsource p, div.dictumauthor p { padding: .5ex 0ex 0ex 0ex ; margin: 0ex ;}
2265 div.dictumauthor { font-style:italic }
2266
2267
2268 /* copyrightbox package */
2269 div.copyrightbox { margin: .5ex .5em }
2270 div.copyrightbox p {margin: 0px .5em ; padding: 0px}
2271 div.copyrightboxnote {text-align: left ; font-size: 60%}
```

```
2272
2273
2274 /* lettrine package: */
2275 span.lettrine { font-size: 4ex ; float: left ; }
2276 span.lettrinetext { font-variant: small-caps ; }
2277
2278 /* ulem, soul, umoline packages: */
2279 span.uline {
2280     text-decoration: underline ;
2281     text-decoration-skip: auto ;
2282 }
2283
2284 span.uuline {
2285     text-decoration: underline ;
2286     text-decoration-skip: auto ;
2287     text-decoration-style: double ;
2288 }
2289
2290 span.uwave {
2291     text-decoration: underline ;
2292     text-decoration-skip: auto ;
2293     text-decoration-style: wavy ;
2294 }
2295
2296 span.sout {
2297     text-decoration: line-through ;
2298 }
2299
2300 span.oline {
2301     text-decoration: overline ;
2302     text-decoration-skip: auto ;
2303 }
2304
2305 span.xout {
2306     text-decoration: line-through ;
2307 }
2308
2309 span.dashuline {
2310     text-decoration: underline ;
2311     text-decoration-skip: auto ;
2312     text-decoration-style: dashed ;
2313 }
2314
2315 span.dotuline {
2316     text-decoration: underline ;
2317     text-decoration-skip: auto ;
2318     text-decoration-style: dotted ;
2319 }
2320
2321 span.letterspacing { letter-spacing: .2ex ; }
2322
2323 span.capsspacing {
2324     font-variant: small-caps ;
2325     letter-spacing: .1ex ;
2326 }
```

```
2327
2328 span.highlight { background: #F8E800 ; }
2329
2330
2331
2332
2333 html body {
2334     margin: 0 ;
2335     line-height: 1.2;
2336 }
2337
2338
2339 body div {
2340     margin: 0ex;
2341 }
2342
2343
2344 div.book, h1, h2, h3, h4, h5, h6, span.paragraph, span.subparagraph
2345 {
2346     font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
2347         "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
2348         "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
2349         "Times New Roman", serif;
2350     font-style: normal ;
2351     font-weight: bold ;
2352     text-align: left ;
2353 }
2354
2355 h1 { /* title of the entire website, used on each page */
2356     text-align: center ;
2357     font-size: 2.5em ;
2358     padding: .4ex 0em 0ex 0em ;
2359 }
2360
2361 div.book {
2362     text-align: center ;
2363     font-size: 2.325em ;
2364     padding: .4ex 0em 0ex 0em ;
2365 }
2366
2367 h2 { font-size: 2.25em }
2368 h3 { font-size: 2em }
2369 h4 { font-size: 1.75em }
2370 h5 { font-size: 1.5em }
2371 h6 { font-size: 1.25em }
2372 span.paragraph {font-size: 1em ; font-variant: normal ;
2373     margin-right: 1em ; }
2374 span.subparagraph {font-size: 1em ; font-variant: normal ;
2375     margin-right: 1em ; }
2376
2377 div.minisec {
2378     font-family: "DejaVu Sans", "Bitstream Vera Sans",
2379         Geneva, Verdana, sans-serif ;
2380     font-style: normal ;
2381     font-weight: bold ;
```

```
2382     text-align: left ;
2383 }
2384
2385 h1 {
2386     margin: 0ex 0em 0ex 0em ;
2387     line-height: 1.3;
2388     text-align: center ;
2389 }
2390
2391 h2 {
2392     margin: 1ex 0em 1ex 0em ;
2393     line-height: 1.3;
2394     text-align: center ;
2395 }
2396
2397 h3 {
2398     margin: 3ex 0em 1ex 0em ;
2399     line-height: 1.3;
2400 }
2401
2402 h4 {
2403     margin: 3ex 0em 1ex 0em ;
2404     line-height: 1.3;
2405 }
2406
2407 h5 {
2408     margin: 3ex 0em 1ex 0em ;
2409     line-height: 1.3;
2410 }
2411
2412 h6 {
2413     margin: 3ex 0em 1ex 0em ;
2414     line-height: 1.3;
2415 }
2416
2417
2418 div.titlepage {
2419     text-align: center ;
2420 }
2421
2422 .footnotes {
2423     text-align: left ;
2424     font-size: .85em ;
2425     margin: 3ex 2em 0ex 2em ;
2426     border-top: 1px solid silver ;
2427 }
2428
2429 .marginpar, .marginparblock {
2430     max-width: 50%;
2431     float: right ;
2432     clear: both ;
2433     text-align: left ;
2434     margin: 1ex 0.5em 1ex 1em ;
2435     padding: 1ex 0.5em 1ex 0.5em ;
2436     font-size: 85% ;
```

```
2437     border-top: 1px solid silver ;
2438     border-bottom: 1px solid silver ;
2439     overflow-x: auto ;
2440 }
2441
2442 .marginpar br { margin-bottom: 2ex ; }
2443
2444 div.marginblock, div.marginparblock {
2445     max-width: 50%;
2446     min-width: 10em; /* room for caption */
2447     float: right;
2448     text-align: left;
2449     margin: 1ex 0.5em 1ex 1em ;
2450     padding: 1ex 0.5em 1ex 0.5em ;
2451     overflow-x: auto;
2452 }
2453
2454 div.marginblock div.minipage,
2455 div.marginparblock div.minipage {
2456     display: inline-block ;
2457     margin: 0pt auto 0pt auto ;
2458 }
2459
2460 div.marginblock div.minipage p ,
2461 div.marginparblock div.minipage p
2462     { font-size: 85%}
2463
2464 div.marginblock br ,
2465 div.marginparblock br
2466     { margin-bottom: 2ex ; }
2467
2468 div.bodycontainer {
2469     float: left ;
2470     width: 80% ;
2471 }
2472
2473 div.bodywithoutsidetoc div.bodycontainer {
2474     float: none ;
2475     width: 100% ;
2476 }
2477
2478 section.textbody div.footnotes{
2479     margin: 3ex 2em .5ex 2em ;
2480     border-bottom: 2px solid silver ;
2481 }
2482
2483 .footnoteheader {
2484     border-top: 2px solid silver ;
2485     margin-top: 3ex ;
2486     padding-top: 1ex ;
2487     font-weight: bold ;
2488 }
2489
2490 .mpfootnotes {
2491     text-align: left ;
```

```
2492     font-size: .85em ;
2493     margin-left: 1em ;
2494     border-top: 1px solid silver ;
2495 }
2496
2497 /* Remove footnote top border in the title page. */
2498 div.titlepage div.mpfootnotes {
2499     border-top: none ;
2500 }
2501
2502
2503
2504 ul, ol {
2505     margin: 1ex 1em 1ex 0em;
2506     line-height: 1.2;
2507 }
2508
2509 body dir, body menu {
2510     margin: 3ex 1em 3ex 0em;
2511     line-height: 1.2;
2512 }
2513
2514 li { margin: 0ex 0em 1ex 0em; }
2515
2516 html {
2517     margin: 0;
2518     padding: 0;
2519 }
2520
2521 .programlisting {
2522     font-family: "DejaVu Mono", "Bitstream Vera Mono", "Lucida Console",
2523                 "Nimbus Mono L", "Liberation Mono", "FreeMono", "Andale Mono",
2524                 "Courier New", monospace;
2525     margin: 1ex 0ex 1ex 0ex ;
2526     padding: .5ex 0pt .5ex 0pt ;
2527     overflow-x: auto;
2528 }
2529
2530 section.textbody>pre.programlisting {
2531     border-top: 1px solid silver ;
2532     border-bottom: 1px solid silver ;
2533 }
2534
2535
2536 div.displaymath {
2537     text-align: center ;
2538 }
2539
2540 div.displaymathnumbered {
2541     text-align: right ;
2542     margin-left: 5% ;
2543     margin-right: 5% ;
2544     min-width: 2.5in ;
2545 }
2546
```

```
2547 @media all and (min-width: 400px) {
2548     div.displaymathnumbered {
2549         margin-left: 10% ;
2550         margin-right: 10% ;
2551     }
2552 }
2553
2554 @media all and (min-width: 800px) {
2555     div.displaymathnumbered {
2556         margin-right: 20% ;
2557     }
2558 }
2559
2560 @media all and (min-width: 1200px) {
2561     div.displaymathnumbered {
2562         margin-right: 30% ;
2563     }
2564 }
2565
2566
2567 .inlineprogramlisting {
2568     font-family: "DejaVu Mono", "Bitstream Vera Mono", "Lucida Console",
2569         "Nimbus Mono L", "Liberation Mono", "FreeMono", "Andale Mono",
2570         "Courier New", monospace;
2571     overflow-x: auto;
2572 }
2573
2574 span.listinglabel {
2575     display: inline-block ;
2576     font-size: 70% ;
2577     width: 4em ;
2578     text-align: right ;
2579     margin-right: 2em ;
2580 }
2581
2582 div.abstract {
2583     margin: 2em 5% 2em 5% ;
2584     padding: 1ex 1em 1ex 1em ;
2585     /* font-weight: bold ; */
2586     font-size: 90% ;
2587     text-align: left ;
2588 }
2589
2590 div.abstract dl {line-height:1.5;}
2591 div.abstract dt {color:#304070;}
2592
2593 div.abstracttitle{
2594     font-family: "URW Classico", Optima, "Linux Biolinum O",
2595         "Linux Libertine O", "Liberation Serif", "Nimbus Roman No 9 L",
2596         "FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
2597     font-weight:bold;
2598     font-size:1.25em;
2599     text-align: center ;
2600 }
2601
```

```
2602 span.abstractrunintitle{
2603     font-family: "URW Classico", Optima, "Linux Biolinum O",
2604         "Linux Libertine O", "Liberation Serif", "Nimbus Roman No 9 L",
2605         "FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
2606     font-weight:bold;
2607 }
2608
2609
2610 .verbatim {
2611     overflow-x: auto ;
2612 }
2613
2614 .alltt {
2615     overflow-x: auto ;
2616 }
2617
2618
2619 .bverbatim {
2620     margin: 1ex 0pt 1ex 0pt ;
2621     padding: .5ex 0pt .5ex 0pt ;
2622     overflow-x: auto ;
2623 }
2624
2625 .lverbatim {
2626     margin: 1ex 0pt 1ex 0pt ;
2627     padding: .5ex 0pt .5ex 0pt ;
2628     overflow-x: auto ;
2629 }
2630
2631 .fancyvrb {
2632     font-size:.85em ;
2633     margin: 3ex 0pt 3ex 0pt
2634 }
2635
2636 .fancyvrblabel {
2637     font-size: .85em ;
2638     text-align: center ;
2639     font-weight: bold ;
2640     margin-top: 1ex ;
2641     margin-bottom: 1ex ;
2642 }
2643
2644
2645 .verse {
2646     font-family: "Linux Libertine Mono O", "Lucida Console",
2647         "Droid Sans Mono", "DejaVu Mono", "Bitstream Vera Mono",
2648         "Liberation Mono", "FreeMono", "Andale Mono",
2649         "Nimbus Mono L", "Courier New", monospace;
2650     margin-left: 1em ;
2651 }
2652
2653
2654 div.singlespace { line-height: 1.2 ; }
2655 div.onehalfspace { line-height: 1.5 ; }
2656 div.doublespace { line-height: 2 ; }
```

```
2657
2658
2659 /* Word processor format output: */
2660 div.wpfigure { border: 1px solid red ; margin: .5ex ; padding: .5ex ; }
2661 div.wptable { border: 1px solid blue ; margin: .5ex ; padding: .5ex ; }
2662 div.wpminipage { border: 1px solid green ; margin: .5ex ; padding: .5ex ;}
2663
2664
2665
2666
2667 /* Minipage environments, vertically aligned to top, center, bottom: */
2668 .minipage, .fminipage, .fcolorminipage {
2669     /* display: inline-block ; */
2670     /* Mini pages which follow each other will be tiled. */
2671     text-align:left;
2672     margin: .25em .25em .25em .25em;
2673     padding: .25em .25em .25em .25em;
2674     display: inline-flex;
2675     flex-direction: column ;
2676     overflow: auto;
2677 }
2678
2679 .inlineminipage {
2680     display: inline-block ;
2681     text-align: left
2682 }
2683
2684 /* Paragraphs in the flexbox did not collapse their margins. */
2685 /* Have not yet researched this. */
2686 .minipage p {margin: .75ex 0em .75ex 0em ;}
2687
2688 .fbboxBlock .minipage, .colorbox .minipage, .colorboxBlock .minipage,
2689 .fcolorbox .minipage, .fcolorboxBlock .minipage
2690     {border: none ; background: none;}
2691
2692 .fbbox, .fbboxBlock { border: 1px solid black ; }
2693
2694 .fbbox, .fbboxBlock, .fcolorbox, .fcolorboxBlock, .colorbox, .colorboxBlock,
2695 .fminipage, .fcolorminipage
2696     {display: inline-block}
2697
2698 .shadowbox, .shabox {
2699     border: 1px solid black;
2700     box-shadow: 3px 3px 3px #808080 ;
2701     border-radius: 0px ;
2702     padding: .4ex .3em .4ex .3em ;
2703     margin: 0pt .3ex 0pt .3ex ;
2704     display: inline-block ;
2705 }
2706
2707 .doublebox {
2708     border: 3px double black;
2709     border-radius: 0px ;
2710     padding: .4ex .3em .4ex .3em ;
2711     margin: 0pt .3ex 0pt .3ex ;
```

```
2712 display: inline-block ;
2713 }
2714
2715 .ovalbox, .Ovalbox {
2716     border: 1px solid black;
2717     border-radius: 1ex ;
2718     padding: .4ex .3em .4ex .3em ;
2719     margin: 0pt .3ex 0pt .3ex ;
2720     display: inline-block ;
2721 }
2722
2723 .Ovalbox { border-width: 2px ; }
2724
2725 .framebox {
2726     border: 1px solid black;
2727     border-radius: 0px ;
2728     padding: .3ex .2em 0ex .2em ;
2729     margin: 0pt .1ex 0pt .1ex ;
2730     display: inline-block ;
2731 }
2732
2733
2734 /* mdframed, tcolorbox packages */
2735 .mdframed, .tcolorbox {
2736     padding: 0ex ;
2737     margin: 2ex 0em 2ex 0em ;
2738     border: 1px solid black ;
2739 }
2740
2741 .tcolorbox {
2742     border-radius: 10pt ;
2743     margin: 2ex 1em 2ex 1em ;
2744 }
2745
2746 .mdframed p, .tcolorbox p { padding: 0ex .5em 0ex .5em ; }
2747
2748 .mdframed dl, .tcolorbox dl { padding: 1ex .5em 0ex .5em ; }
2749
2750 .mdframedtitle, .tcolorboxtitle {
2751     padding: .5ex 0pt 0pt 0pt ;
2752     border-radius: 10pt 10pt 0pt 0pt ;
2753     display: block ;
2754     margin-bottom: 1ex ;
2755     border-bottom: 1px solid silver ;
2756 }
2757
2758 .tcolorboxsubtitle .tcolorbox {
2759     margin: 2ex 0em 2ex 0em ;
2760     border-radius: 0pt ;
2761 }
2762
2763 .mdframedsubtitle {
2764     display: block ;
2765 }
2766
```

```
2767 .mdframedsubsubtitle {
2768     display: block ;
2769 }
2770
2771 .mdtheorem {
2772     padding: 0ex .5em 0ex .5em ;
2773     margin: 3ex 5% 3ex 5% ;
2774 }
2775
2776
2777 /* framed package */
2778 .framed, pre.boxedverbatim, fcolorbox {
2779     margin: 3ex 0em 3ex 0em ;
2780     border: 1px solid black;
2781     border-radius: 0px ;
2782     padding: .3ex 1em 0ex 1em ;
2783     display: block ;
2784 }
2785
2786 .shaded {
2787     margin: 3ex 0em 3ex 0em ;
2788     padding: .3ex 1em .3ex 1em ;
2789     display: block ;
2790 }
2791
2792 .snugframed {
2793     margin: 3ex 0em 3ex 0em ;
2794     border: 1px solid black;
2795     border-radius: 0px ;
2796     display: block ;
2797 }
2798
2799 .framedleftbar {
2800     margin: 3ex 0em 3ex 0em ;
2801     border-left: 3pt solid black;
2802     border-radius: 0px ;
2803     padding: .3ex .2em .3ex 1em ;
2804     display: block ;
2805 }
2806
2807 .framedtitle {
2808     margin: 0em ;
2809     padding: 0em ;
2810     font-size: 130%
2811 }
2812
2813 .framedtitle p { padding: .3em }
2814
2815
2816 /* For the niceframe package: */
2817
2818 div.niceframe, div.curlyframe, div.artdecoframe, div.generalframe {
2819     padding: 1ex ;
2820     margin: 2ex auto ;
2821     border-radius: 2ex ;
```

```
2822 }
2823
2824 div.niceframe {
2825     border: 6px groove black ;
2826 }
2827
2828 div.curlyframe {
2829     border-left: 3px dotted black ;
2830     border-right: 3px dotted black ;
2831     border-radius: 6ex ;
2832 }
2833
2834 div.artdecoframe {
2835     border-left: 10px double black ;
2836     border-right: 10px double black ;
2837     border-radius: 6ex ;
2838 }
2839
2840 div.generalframe {
2841     border: 6px groove black ;
2842 }
2843
2844
2845
2846 dl {
2847     margin: 1ex 2em 1ex 0em;
2848     line-height: 1.3;
2849 }
2850
2851 dl dt {
2852     display: block ;
2853     float: left ;
2854     font-weight: bold;
2855     padding-right: 1em ;
2856 }
2857
2858 dl dd { display: block ; }
2859
2860 dl dd:after { content: "" ; display: block ; clear: both }
2861
2862 dl dd p { margin-top: 0em; }
2863
2864 dd ul, dd ol, dd dl { clear: both ; padding-top: 1ex }
2865
2866
2867 nav {
2868     font-family: "URW Classico", Optima, "Linux Biolinum O",
2869         "DejaVu Sans", "Bitstream Vera Sans",
2870         Geneva, Verdana, sans-serif ;
2871     margin-bottom: 4ex ;
2872 }
2873
2874 nav p {
2875     line-height: 1.2 ;
2876     margin-top: .5ex ;
```

```
2877     margin-bottom:.5ex;
2878     font-size: .9em ;
2879 }
2880
2881
2882
2883 img, img.hyperimage, img.borderimage {
2884     max-width: 600px;
2885     border: 1px solid silver;
2886     box-shadow: 3px 3px 3px #808080 ;
2887     padding: .5% ;
2888     margin: .5% ;
2889     background: none ;
2890 }
2891
2892 img.inlineimage{
2893     padding: 0px ;
2894     box-shadow: none ;
2895     border: none ;
2896     background: none ;
2897     margin: 0px ;
2898     display: inline-block ;
2899     border-radius: 0px ;
2900 }
2901
2902 img.logoimage{
2903     max-width: 300px ;
2904     box-shadow: 3px 3px 3px #808080 ;
2905     border: 1px solid black ;
2906     background:none ;
2907     padding:0 ;
2908     margin:.5ex ;
2909     border-radius: 10px ;
2910 }
2911
2912
2913 .section {
2914 /*
2915     To have each section float relative to each other:
2916 */
2917 /*
2918     display: block ;
2919     float: left ;
2920     position: relative ;
2921     background: white ;
2922     border: 1px solid silver ;
2923     padding: .5em ;
2924 */
2925     margin: 0ex .5em 0ex .5em ;
2926     padding: 0 ;
2927 }
2928
2929
2930 figure {
2931     margin: 5ex auto 5ex auto ;
```

```
2932     padding: 1ex 1em 1ex 1em ;
2933     overflow-x: auto ;
2934 }
2935
2936
2937 /* To automatically center images in figures: */
2938 /*
2939 figure img.inlineimage {
2940     margin: 0ex auto 0ex auto ;
2941     display: block ;
2942 }
2943 */
2944
2945 /* To automatically center minipages in figures: */
2946 /*
2947 figure div.minipage, figure div.minipage div.minipage {
2948     margin: 1ex auto 1ex auto ;
2949     display: block ;
2950 }
2951 */
2952
2953 figure figure { margin: 0pt }
2954
2955 figure div.minipage p { font-size: 85% ; }
2956
2957 figure.subfigure, figure.subtable {
2958     display: inline-block ; margin: 3ex 1em 3ex 1em ;
2959 }
2960
2961 div.figurecaption .minipage { margin:0 ; padding: 0 }
2962
2963 div.minipage figure { border: none ; box-shadow: none ; }
2964 div.minipage figure.table { margin: 0ex }
2965 div.minipage div.footnotes { margin: 1ex 2em 0ex 2em }
2966
2967 div.floatrow { text-align: center; }
2968
2969 div.floatrow figure { display: inline-block ; margin: 1ex 2% ; }
2970
2971 div.floatfoot { font-size: .85em ;
2972     border-top: 1px solid silver ; line-height: 1.2 ; }
2973
2974 div.figurecaption , .lstlistingtitle {
2975     font-size: .85em ;
2976     text-align: center ;
2977     font-weight: bold ;
2978     margin-top: 1ex ;
2979     margin-bottom: 1ex ;
2980 }
2981
2982 figure.subfigure div.figurecaption, figure.subtable div.figurecaption {
2983     border-bottom: none ; background: none ;
2984 }
2985
2986 div.nonfloatcaption {
```

```

2987     margin: 1ex auto 1ex auto ;
2988     font-size: .85em ;
2989     text-align: center ;
2990     font-weight: bold ;
2991 }
2992
2993 /* For a \RawCaption inside a minipage inside a figure's floatrow: */
2994 figure div.floatrow div.minipage div.figurecaption {
2995     border: none ;
2996     background: none ;
2997 }
2998
2999
3000 /* For packages such as float, rotfloat, and algorithm2e: */
3001
3002 figure.boxed, figure.boxruled {
3003     border: 1px solid black ;
3004 }
3005
3006 figure.ruled {
3007     border-top: 1px solid black ;
3008     border-bottom: 1px solid black ;
3009     border-left: 0px ;
3010     border-right: 0px ;
3011     border-radius: 0px ;
3012     background: none ;
3013     box-shadow: none ;
3014 }
3015
3016 figure.ruled div.figurecaption, figure.boxruled div.figurecaption {
3017     border-top: 1px solid silver ;
3018     border-bottom: 1px solid silver ;
3019 }
3020
3021
3022 table {
3023     margin: 1ex auto 1ex auto ;
3024     border-collapse: separate ;
3025     border-spacing: 0px ;
3026     line-height: 1.3 ;
3027 }
3028
3029 table > tbody > tr.hline > td {border-top: 1px solid #808080 ; margin-top: 0ex ;
3030     margin-bottom: 0ex ; } /* for \hline */
3031
3032 tr.tbrule td {border-top: 1px solid black ; margin-top: 0ex ;
3033     margin-bottom: 0ex ; } /* for \toprule, \bottomrule */
3034
3035 td {padding: .5ex .5em .5ex .5em ;}
3036
3037 table td.tdl { text-align: left ; vertical-align: middle ; }
3038 table td.tdc { text-align: center ; vertical-align: middle ; }
3039 table td.tdat { text-align: center ; vertical-align: middle ; padding: 0px ; margin: 0px ; }
3040 table td.tdbang { text-align: center ; vertical-align: middle ; }
3041 table td.tdr { text-align: right ; vertical-align: middle ; }

```

```

3042 table td.tdp { text-align: left ; vertical-align: bottom ; }
3043 table td.tdm { text-align: left ; vertical-align: middle ; }
3044 table td.tdb { text-align: left ; vertical-align: top ; }
3045 table td.tdP { text-align: center ; vertical-align: bottom ; }
3046 table td.tdM { text-align: center ; vertical-align: middle ; }
3047 table td.tdB { text-align: center ; vertical-align: top ; }
3048
3049 table td.tvertbarl { border-left: 1px solid black }
3050 table td.tvertbarldouble { border-left: 4px double black }
3051 table td.tvertbarr { border-right: 1px solid black }
3052 table td.tvertbarrdouble { border-right: 4px double black }
3053
3054 table td.tvertbarldash { border-left: 1px dashed black }
3055 table td.tvertbarldoubledash { border-left: 2px dashed black }
3056 table td.tvertbarrdash { border-right: 1px dashed black }
3057 table td.tvertbarrdoubledash { border-right: 2px dashed black }
3058
3059
3060 /* for cmidrules: */
3061 table td.tdrule {
3062     border-top: 1px solid #A0A0A0 ;
3063 }
3064
3065 table td.tdrulel {
3066     border-top-left-radius:.5em ;
3067     border-top: 1px solid #A0A0A0 ;
3068 }
3069
3070 table td.tdruler {
3071     border-top-right-radius:.5em ;
3072     border-top: 1px solid #A0A0A0 ;
3073 }
3074
3075 table td.tdrulelr {
3076     border-top-left-radius:.5em ;
3077     border-top-right-radius:.5em ;
3078     border-top: 1px solid #A0A0A0 ;
3079 }
3080
3081
3082 /* Margins of paragraphs inside table cells: */
3083 td.tdp p , td.tdprule p , td.tdP p , td.tdPrule p { padding-top: 1ex ;
3084     padding-bottom: 1ex ; margin: 0ex ; }
3085 td.tdm p , td.tmbrule p , td.tdM p , td.tdMrule p { padding-top: 1ex ;
3086     padding-bottom: 1ex ; margin: 0ex ; }
3087 td.tdb p , td.tdbrule p , td.tdB p , td.tdBrule p { padding-top: 1ex ;
3088     padding-bottom: 1ex ; margin: 0ex ; }
3089
3090 td.tdp , td.tdprule , td.tdP , td.tdPrule
3091     { padding: 0ex .5em 0ex .5em ; }
3092 td.tdm , td.tdmrule , td.tdM , td.tdMrule
3093     { padding: 0ex .5em 0ex .5em ; }
3094 td.tdb , td.tdbrule , td.tdB , td.tdBrule
3095     { padding: 0ex .5em 0ex .5em ; }
3096

```

```

3097
3098 /* table notes: */
3099 .tnotes {
3100     margin: 0ex 5% 1ex 5% ;
3101     padding: 0.5ex 1em 0.5ex 1em;
3102     font-size:.80em;
3103     text-align: left ;
3104 }
3105
3106 .minipage .tnotes {
3107     margin: 0pt ;
3108     padding: 0pt ;
3109 }
3110
3111 .tnotes dl dt p {margin-bottom:0px;}
3112
3113 .tnoteitemheader {margin-right: 1em;}
3114
3115
3116 /* for colortbl and cell color */
3117 div.cellcolor {
3118     width: 100% ;
3119     padding: .5ex .5em .5ex .5em ;
3120     margin: -.5ex -.5em -.5ex -.5em ;
3121 }
3122
3123
3124 /* for lyluatex */
3125 span.lylualatex {
3126     display: inline-block ;
3127 }
3128
3129 div.lylualatex p span.lateximagesource img {
3130     display: block ;
3131     margin-top: 3ex ;
3132     margin-bottom: 3ex ;
3133 }
3134
3135
3136 /* for bigdelim */
3137 .ldelim, .rdelim { font-size: 200% }
3138
3139
3140 /* center, flushleft, flushright environments */
3141 div.center{text-align:center;}
3142 div.center table {margin-left:auto;margin-right:auto;}
3143 div.flushleft{text-align:left;}
3144 div.flushleft table {margin-left:0em ; margin-right:auto;}
3145 div.flushright{text-align:right;}
3146 div.flushright table {margin-left:auto ; margin-right: 0em ;}
3147
3148
3149 /* Fancybox */
3150 div.Btrivlist table tr td {
3151     padding: .2ex 0em ;

```

```
3152 }
3153
3154
3155 /* program listing callouts: */
3156 span.callout {
3157     font-family: "DejaVu Sans", "Bitstream Vera Sans",
3158         Geneva, Verdana, sans-serif ;
3159     border-radius: .5em;
3160     background-color: black;
3161     color: white;
3162     padding: 0px .25em 0px .25em;
3163     margin: 0 ;
3164     font-weight: bold;
3165     font-size: .72em ;
3166 }
3167
3168 div.programlisting pre.verbatim span.callout{
3169     font-size: .85em ;
3170 }
3171
3172 span.verbatim {
3173     font-family: "DejaVu Mono", "Bitstream Vera Mono", "Lucida Console",
3174         "Nimbus Mono L", "Liberation Mono", "FreeMono", "Andale Mono",
3175         "Courier New", monospace;
3176 }
3177
3178
3179
3180 div.titlehead
3181 {
3182     text-align: left ;
3183     font-style: normal ;
3184     font-weight: normal ;
3185     font-style: normal ;
3186     font-size: .8em ;
3187     margin: 1ex 0em 1ex 0em ;
3188 }
3189
3190 div.subject
3191 {
3192     text-align: center ;
3193     font-style: normal ;
3194     font-weight: bold ;
3195     font-style: normal ;
3196     font-size: .8em ;
3197     margin: 1ex 0em 1ex 0em ;
3198 }
3199
3200 div.published
3201 {
3202     text-align: center ;
3203     font-variant: normal ;
3204     font-style: italic ;
3205     font-size: 1em ;
3206     margin: 1ex 0em 1ex 0em ;
```

```
3207 }
3208
3209 div.subtitle
3210 {
3211     text-align: center ;
3212     font-variant: normal ;
3213     font-style: italic ;
3214     font-size: 1.25em ;
3215     margin: 1ex 0em 1ex 0em ;
3216 }
3217
3218 div.subtitle p { margin: 1ex ; }
3219
3220 div.author
3221 {
3222     font-variant: normal ;
3223     font-style: normal ;
3224     font-size: 1em ;
3225     margin: 1ex 0em 1ex 0em ;
3226 }
3227
3228 div.oneauthor {
3229     display: inline-block ;
3230     margin: 0ex 1em 0ex 1em ;
3231 }
3232
3233 /*
3234 div.author table {
3235     margin: 1ex auto 0ex auto ;
3236     background: none ;
3237 }
3238
3239 div.author table tbody tr td { padding: .25ex ; }
3240 */
3241
3242 span.affiliation {font-size: .85em ; font-variant: small-caps; }
3243
3244 div.titledate {
3245     text-align: center ;
3246     font-size: .85em ;
3247     font-style: italic;
3248     margin: 1ex 0em 1ex 0em ;
3249 }
3250
3251
3252 nav.topnavigation{
3253     text-align: left ;
3254     padding: 0.5ex 1em 0.5ex 1em ;
3255 /*     margin: 2ex 0em 3ex 0em ; */
3256     margin: 0 ;
3257     border-bottom: 1px solid silver ;
3258     border-top: 1px solid silver ;
3259     clear:both ;
3260 }
3261
```

```
3262 nav.botnavigation{
3263     text-align: left ;
3264     padding: 0.5ex 1em 0.5ex 1em ;
3265 /*     margin: 3ex 0em 2ex 0em ; */
3266     margin: 0 ;
3267     border-top: 1px solid silver ;
3268     border-bottom: 1px solid silver ;
3269     clear:both ;
3270 }
3271
3272
3273 header {
3274     line-height: 1.2 ;
3275     font-size: 1em ;
3276     border-bottom: 1px solid silver ;
3277     margin: 0px ;
3278     padding: 2ex 1em 2ex 1em ;
3279     text-align:left ;
3280 }
3281
3282
3283 footer {
3284     font-size: .85em ;
3285     line-height: 1.2 ;
3286     margin-top: 1ex ;
3287     border-top: 1px solid silver ;
3288     padding: 2ex 1em 2ex 1em ;
3289     clear:both ;
3290     text-align:left ;
3291 }
3292
3293
3294 /* for \LinkHome, \LinkPrevious, and \LinkNext: */
3295 a.linkhome { font-weight:bold ; font-size: 1em ;}
3296
3297
3298 div.lateximagesource { padding: 0px ; margin: 0px ; display: none; }
3299
3300 img.lateximage{
3301     padding: 0pt ;
3302     margin: 0pt ;
3303     box-shadow: none ;
3304     border: none ;
3305     background: none ;
3306     max-width: 100% ;
3307     border-radius: 0ex ;
3308     border: none ;
3309 }
3310
3311
3312 /* The -1px right margin compensates for the 1px right border. */
3313 /* Without this -1px margin, the body container appears below instead */
3314 /* of floating to the side. */
3315 div.sidetoccontainer {
3316     font-family: "DejaVu Serif", "Bitstream Vera Serif",
```

```
3317     "Lucida Bright", Georgia, serif;
3318     float: left ;
3319     width: 20%;
3320     margin: 0pt -1px 3ex 0pt ;
3321     border-right: 1px solid silver;
3322     border-bottom: 1px solid silver;
3323     background: #FAF7F4 ;
3324     font-size:.9em ;
3325     border-radius: 0px 0px 20px 0px ;
3326 }
3327
3328 div.sidetoccontents {
3329     overflow-y: auto ;
3330     width: 100% ;
3331     text-align: left ;
3332 }
3333
3334
3335 nav.sidetoc p {line-height:1.2 ; margin: 1ex .5em 1ex .5em ;
3336     text-indent: 0 ; }
3337
3338 nav.sidetoc p a {color:black ; font-size: .7em ;}
3339
3340 div.sidetoctitle {font-size: 1.2em; font-weight:bold; text-align:center;
3341     border-bottom: 1px solid silver ;    }
3342
3343 nav.sidetoc a:hover {text-decoration: underline ; }
3344
3345
3346
3347 section.textbody { margin: 0ex 1em 0ex 1em ;}
3348
3349
3350 div.multicolsheading { -webkit-column-span: all;
3351     -moz-column-span: all; column-span: all; }
3352 div.multicols { -webkit-columns: 3 380px ;
3353     -moz-columns: 3 380px ; columns: 3 380px ; }
3354 div.multicols p {margin-top: 0ex}
3355
3356
3357 /* Used for xfrac and nicefrac: */
3358 span.numerator {
3359     font-size: 60% ;
3360     vertical-align: .4em ;
3361 }
3362
3363 span.denominator {
3364     font-size: 60%
3365 }
3366
3367
3368 /* Used for algorithm2e: */
3369 div.alg2evline{
3370     margin-left: 1em ;
3371     padding-left: 1em ;
```

```
3372     border-left: 1px solid black ;
3373     border-radius: 0px 0px 0px 1ex ;
3374 }
3375
3376 div.alg2evsline{
3377     margin-left: 1em ;
3378     padding-left: 1em ;
3379     border-left: 1px solid black ;
3380 }
3381
3382 div.alg2enoline{
3383     margin-left: 1em ;
3384     padding-left: 1em ;
3385 }
3386
3387 span.alg2elinenumber{
3388     margin-right: .5em ;
3389     font-size: 50% ;
3390     color: red ;
3391 }
3392
3393
3394 /* Used for algorithmicx: */
3395 span.floatright { float: right ; }
3396
3397
3398 /* keyfloat and tocdata: */
3399 .floatnotes {
3400     margin: 0ex 5% 0ex 5% ;
3401     padding: 0ex 1em 0ex 1em ;
3402     font-size:.80em ;
3403     text-align: left ;
3404 }
3405
3406 .authorartist{
3407     display:block ;
3408     font-size:.70em ;
3409     font-style: italic;
3410 }
3411
3412 nav .authorartist{ display:inline; }
3413
3414
3415
3416 /* Native LaTeX theorems: */
3417
3418 .theoremcontents {
3419     font-style: italic; margin-top: 3ex ; margin-bottom: 3ex ;
3420 }
3421
3422 .theoremlabel {
3423     font-style: normal; font-weight: bold ; margin-right: .5em ;
3424 }
3425
3426
```

```
3427
3428 /* theorem, amsthm, and ntheorem packages */
3429
3430 span.theoremheader,
3431 span.theoremheaderplain,
3432 span.theoremheaderdefinition,
3433 span.theoremheaderbreak,
3434 span.theoremheadermarginbreak,
3435 span.theoremheaderchangebreak,
3436 span.theoremheaderchange,
3437 span.theoremheadermargin
3438 {
3439     font-style:normal ; font-weight: bold ; margin-right: 1em ;
3440 }
3441
3442 span.amsthmnameplain,
3443 span.amsthmnamedefinition,
3444 span.amsthmnumberplain,
3445 span.amsthmnumberdefinition
3446 {
3447     font-style:normal ; font-weight: bold ;
3448 }
3449
3450
3451 span.amsthmnameremark,
3452 span.amsthmnumberremark
3453 {font-style:italic ; font-weight: normal ; }
3454
3455
3456 span.amsthmnoteplain,
3457 span.amsthmnotedefinition
3458 {font-style:normal ;}
3459
3460
3461 span.theoremheaderremark,
3462 span.theoremheaderproof,
3463 span.amsthmproofname
3464 {font-style:italic ; font-weight: normal ; margin-right: 1em ; }
3465
3466 span.theoremheadersc
3467 {
3468     font-style:normal ;
3469     font-variant: small-caps ;
3470     font-weight: normal ;
3471     margin-right: 1em ;
3472 }
3473
3474 .theoremdemark {float:right}
3475
3476 div.amsthmbodyplain, div.theorembodyplain, div.theorembodynonumberplain,
3477 div.theorembodybreak, div.theorembodynonumberbreak,
3478 div.theorembodymarginbreak,
3479 div.theorembodychangebreak,
3480 div.theorembodychange,
3481 div.theorembodymargin
```

```
3482 {
3483     font-style:italic;
3484     margin-top: 3ex ; margin-bottom: 3ex ;
3485 }
3486
3487 div.theorembodydefinition, div.theorembodyremark, div.theorembodyproof,
3488 div.theorembodyplainupright, nonumberplainuprightsc,
3489 div.amsthmbodydefinition, div.amsthmbodyremark,
3490 div.amsthmproof
3491 {
3492     font-style: normal ;
3493     margin-top: 3ex ; margin-bottom: 3ex ;
3494 }
3495
3496 span.amsthmnoteremark {}
3497
3498
3499 /* thmbox */
3500
3501 .thmbox {
3502     font-style: italic; margin-top: 3ex ; margin-bottom: 3ex ;
3503     border: 1px solid gray ;
3504     padding: 1ex ;
3505 }
3506
3507 .thmboxtitle {
3508     font-style: normal; font-weight: bold ; margin-right: .5em ;
3509     border-bottom: 1px solid gray ;
3510 }
3511
3512 span.thmboxproofname, span.thmboxexemplename {
3513     font-weight: bold ;
3514 }
3515
3516 div.thmboxproof, div.thmboxexample {
3517     font-size: 0.85em ;
3518     margin: 2ex ;
3519 }
3520
3521 div.thmboxleftbar {
3522     border-left: 2px solid black ;
3523     padding-left: 1em ;
3524 }
3525
3526
3527
3528 /* For the backnaur package: */
3529 div.backnaur {
3530     display: block ;
3531     margin: 2ex 2em 2ex 2em ;
3532 }
3533
3534 div.backnaur p {
3535     margin: .25ex 0ex .25ex 0ex ;
3536 }
```

```
3537
3538 div.backnaurprod {
3539     display: inline-block ;
3540     min-width: 8em ;
3541     text-align:right ;
3542 }
3543
3544 div.backnaurdesc {
3545     display: inline-block ;
3546 }
3547
3548
3549 /* For the notes package: */
3550 div.notesimportantnote, div.noteswarningnote, div.notesinformationnote {
3551     clear: both ;
3552     margin: 2ex 2em 2ex 2em ;
3553     border: 1px solid silver ;
3554 }
3555
3556 div.notesicon {
3557     float:left ;
3558     display: inline-block ;
3559     background: gold ;
3560     padding: 0ex 1em 0ex 1em ;
3561     margin-right: 1em ;
3562     font-weight: bold ;
3563 }
3564
3565 div.notescontents { font-style: italic }
3566
3567
3568 /* nolbreaks package: */
3569 span.nolbreaks { white-space: nowrap ; }
3570
3571
3572 /*
3573 For CSS LaTeX and related logos:
3574 Based on spacing demonstrated by the metafont package.
3575 */
3576
3577 .latexlogofont {
3578     font-family: "Linux Libertine O", "Nimbus Roman No 9 L",
3579                 "FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
3580     font-variant: normal ;
3581 }
3582
3583 .latexlogo {
3584     font-family: "Linux Libertine O", "Nimbus Roman No 9 L",
3585                 "FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
3586     font-size: 1.1em;
3587 }
3588
3589 .latexlogosup {
3590     text-transform: uppercase;
3591     letter-spacing: .03em ;
```

```
3592 font-size: 0.7em;
3593 vertical-align: 0.25em;
3594 margin-left: -0.4em;
3595 margin-right: -0.15em;
3596 }
3597
3598 .latexlogosub {
3599   text-transform: uppercase;
3600   vertical-align: -0.27ex;
3601   margin-left: -0.08em;
3602   margin-right: -0.07em;
3603   font-size: 1em;
3604 }
3605
3606 .latexlogotwoe {
3607   text-transform: none ;
3608   font-variant-numeric: oldstyle-nums ;
3609 }
3610
3611 .latexlogotwoesub {
3612   font-style:italic ;
3613   vertical-align: -0.27ex;
3614   margin-left: -0.11em;
3615   margin-right: -0.1em;
3616   font-size: 1em;
3617 }
3618
3619 .xelatexlogo {
3620   font-family: "Linux Libertine O", "Nimbus Roman No 9 L",
3621               "FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
3622   letter-spacing: .03em ;
3623   font-size: 1.1em;
3624 }
3625
3626 .xelatexlogosub {
3627   vertical-align: -0.27ex;
3628   margin-left: -0.0667em;
3629   margin-right: -.05em;
3630   font-size: 1em;
3631   letter-spacing: .03em ;
3632 }
3633
3634 .amslogo {
3635   font-family: "TeXGyreChorus","URW Chancery L",
3636               "Apple Chancery","ITC Zapf Chancery","Monotype Corsiva",
3637               "Linux Libertine O", "Nimbus Roman No 9 L", "FreeSerif",
3638               "Hoefler Text", Times, "Times New Roman", serif ;
3639   font-style: italic ;
3640 }
3641
3642 .lyxlogo {
3643   font-family: "URW Classico", Optima, "Linux Biolinum O",
3644               "DejaVu Sans", "Bitstream Vera Sans", Geneva,
3645               Verdana, sans-serif ;
3646 }
```

```
3647
3648
3649 /* Only display top and bottom navigation if a small screen: */
3650 /* Hide the sidetoc if a small screen: */
3651 nav.topnavigation { display:none; }
3652 nav.botnavigation { display:none; }
3653
3654 /* Only display the sidetoc's webpage title if a small screen */
3655 span.sidetocthetitle { display: none }
3656
3657 @media screen and (max-width: 50em) {
3658     div.sidetoccontainer {
3659         float: none ;
3660         width: 100% ;
3661         padding: 0 ;
3662         border-radius: 0 ;
3663         border-bottom: 1px solid black ;
3664         border-top: 1px solid black ;
3665         box-shadow: none ;
3666     }
3667     span.sidetocthetitle { display: inline }
3668     nav.topnavigation { display:block }
3669     nav.botnavigation { display:block }
3670     div.bodycontainer { width: 100% }
3671     .marginpar {
3672         max-width: 100%;
3673         float: none;
3674         display:block ;
3675         margin: 1ex 1em 1ex 1em ;
3676     }
3677 }
3678
3679 @media print {
3680     body {
3681         font-family: "Linux Libertine O",
3682             "DejaVu Serif", "Bitstream Vera Serif",
3683             "Liberation Serif", "Nimbus Roman No 9 L",
3684             "FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
3685     }
3686     div.sidetoccontainer { display:none; }
3687     nav.topnavigation { display: none; }
3688     nav.botnavigation { display: none; }
3689     div.bodycontainer { width: 100% }
3690 }
3691
3692 @media handheld {
3693     div.sidetoccontainer { display:none; }
3694     nav.topnavigation { display:block }
3695     nav.botnavigation { display:block }
3696     div.bodycontainer { width: 100% }
3697 }
3698
3699 @media projection {
3700     div.sidetoccontainer { display:none; }
3701     nav.topnavigation { display:block }
```

```

3702     nav.botnavigation { display:block }
3703     div.bodycontainer { width: 100% }
3704 }
3705 \end{filecontents*}
3706 % \end{Verbatim}% for syntax highlighting
3707 \end{LWRwriteconf}

```

39.5 lwarp_sagebrush.css

File lwarp_sagebrush.css An optional css which may be used for a semi-modern appearance.

If used, this must be present both when compiling the project and also when distributing the HTML files.

Config file:

```

3708 \begin{LWRwriteconf}
3709 \begin{filecontents*}[overwrite]{lwarp_sagebrush.css}
3710 @import url("lwarp.css") ;
3711
3712
3713 A:link {color:#105030 ; text-decoration: none ; }
3714 A:visited {color:#705030 ; text-shadow:1px 1px 2px #a0a0a0;}
3715 A:hover {color:#006000 ; text-decoration: underline ; text-shadow:0px 0px 2px #a0a0a0;}
3716 A:active {color:#00C000 ; text-shadow:1px 1px 2px #a0a0a0;}
3717
3718
3719
3720 div.book, h1, h2, h3, h4, h5, h6, span.paragraph, span.subparagraph
3721 {
3722     font-family: "URW Classico", Optima, "Linux Biolinum O",
3723         "Linux Libertine O", "Liberation Serif",
3724         "Nimbus Roman No 9 L", "FreeSerif",
3725         "Hoefler Text", Times, "Times New Roman", serif;
3726     font-variant: small-caps ;
3727     font-weight: normal ;
3728     color: #304070 ;
3729     text-shadow: 2px 2px 3px #808080;
3730 }
3731
3732 h1 { /* title of the entire website, used on each page */
3733     font-variant: small-caps ;
3734     color: #304070 ;
3735     text-shadow: 2px 2px 3px #808080;
3736     background-color: #F7F7F0 ;
3737     background-image: linear-gradient(to bottom, #F7F7F0, #C0C0C4);
3738 }
3739
3740 h1 {
3741     border-bottom: 1px solid #304070;
3742     /* border-top: 2px solid #304070; */
3743 }
3744
3745 h2 {
3746     border-bottom: 1px solid #304070;
3747     /* border-top: 2px solid #304070; */

```

```
3748     background-color: #F7F7F0 ;
3749     background-image: linear-gradient(to bottom, #F7F7F0, #DAD0C0);
3750 }
3751
3752
3753
3754 div.abstract {
3755     background: #f5f5eb ;
3756     background-image: linear-gradient(to bottom, #f5f5eb, #C8C8B8);
3757
3758     border: 1px solid silver;
3759     border-radius: 1em ;
3760 }
3761
3762 div.abstract dl {line-height:1.5;}
3763 div.abstract dt {color:#304070;}
3764
3765 div.abstracttitle{
3766     font-family: "URW Classico", Optima, "Linux Biolinum O",
3767         "Linux Libertine O", "Liberation Serif", "Nimbus Roman No 9 L",
3768         "FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
3769     font-weight:bold;
3770     font-variant: small-caps ;
3771     font-size:1.5em;
3772     border-bottom: 1px solid silver ;
3773     color: #304070 ;
3774     text-align: center ;
3775     text-shadow: 1px 1px 2px #808080;
3776 }
3777
3778 span.abstracrunintitle{
3779     font-family: "URW Classico", Optima, "Linux Biolinum O",
3780         "Linux Libertine O", "Liberation Serif", "Nimbus Roman No 9 L",
3781         "FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
3782     font-weight:bold;
3783 }
3784
3785
3786 div.epigraph, div.dictum {
3787     background: #f5f5eb ;
3788     background-image: linear-gradient(to bottom, #f5f5eb, #C8C8B8);
3789
3790     border: 1px solid silver ;
3791     border-radius: 1ex ;
3792     box-shadow: 3px 3px 3px #808080 ;
3793 }
3794
3795
3796 .example {
3797     background-color: #f5f5eb ;
3798     background-image: linear-gradient(to bottom, #f5f5eb, #C8C8B8);
3799
3800 }
3801
3802 div.exampletitle{
```

```
3803     font-family: "URW Classico", Optima, "Linux Biolinum O",
3804         "Linux Libertine O", "Liberation Serif", "Nimbus Roman No 9 L",
3805         "FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
3806     font-weight:bold;
3807     font-variant: small-caps ;
3808     border-bottom: 1px solid silver ;
3809     color: #304070 ;
3810     text-align: center ;
3811     text-shadow: 1px 1px 2px #808080;
3812 }
3813
3814
3815 .sidebar {
3816     background-color: #f5f5eb ;
3817     background-image: linear-gradient(to bottom, #f5f5eb, #C8C8B8);
3818
3819 }
3820
3821 div.sidebar{
3822     font-family: "URW Classico", Optima, "Linux Biolinum O",
3823         "Linux Libertine O", "Liberation Serif", "Nimbus Roman No 9 L",
3824         "FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
3825     font-weight:bold;
3826     font-variant: small-caps ;
3827     border-bottom: 1px solid silver ;
3828     color: #304070 ;
3829     text-align: center ;
3830     text-shadow: 1px 1px 2px #808080;
3831 }
3832
3833
3834 .fancyvrblabel {
3835     font-family: "URW Classico", Optima, "Linux Biolinum O",
3836         "Linux Libertine O", "Liberation Serif", "Nimbus Roman No 9 L",
3837         "FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
3838     font-weight:bold;
3839     font-variant: small-caps ;
3840     font-size: 1.5em ;
3841     color: #304070 ;
3842     text-align: center ;
3843     text-shadow: 1px 1px 2px #808080;
3844 }
3845
3846 div.minipage {
3847     background-color: #eeeeee7 ;
3848     border: 1px solid silver ;
3849     border-radius: 1ex ;
3850 }
3851
3852 table div.minipage { background: none ; border: none ; }
3853
3854 div.framebox div.minipage {border:none ; background:none}
3855
3856 section.textbody > div.minipage {
3857     box-shadow: 3px 3px 3px #808080 ;
```

```
3858 }
3859
3860 div.fboxBlock div.minipage { box-shadow: none ; }
3861
3862 .framed .minipage , .framedleftbar .minipage {
3863     border: none ;
3864     background: none ;
3865     padding: 0ex ;
3866     margin: 0ex ;
3867 }
3868
3869 figure.figure .minipage, div.figurecaption .minipage { border: none; }
3870
3871 div.marginblock div.minipage ,
3872 div.marginparblock div.minipage
3873     { border: none; }
3874
3875 figure , div.marginblock {
3876     background-color: #eeeeee7 ;
3877     border: 1px solid silver ;
3878     border-radius: 1ex ;
3879     box-shadow: 3px 3px 3px #808080 ;
3880 }
3881
3882 figure figure {
3883     border: 1px solid silver ;
3884     margin: 0em ;
3885     box-shadow: none ;
3886 }
3887
3888 /*
3889 div.figurecaption {
3890     border-top: 1px solid silver ;
3891     border-bottom: 1px solid silver ;
3892     background-color: #e8e8e8 ;
3893 }
3894 */
3895
3896
3897 div.table {
3898     box-shadow: 3px 3px 3px #808080 ;
3899 }
3900
3901 /*
3902 .tnotes {
3903     background: #e8e8e8;
3904     border: 1px solid silver;
3905 }
3906 */
3907
3908
3909 nav.topnavigation{
3910     background-color: #b0b8b0 ;
3911     background-image: linear-gradient(to bottom,#e0e0e0,#b0b8b0) ;
3912 }
```

```

3913
3914 nav.botnavigation{
3915     background-color: #b0b8b0 ;
3916     background-image: linear-gradient(to top,#e0e0e0,#b0b8b0) ;
3917 }
3918
3919
3920
3921 header{
3922     background-color: #F7F7F0 ;
3923     background-image: linear-gradient(to top, #F7F7F0, #b0b8b0);
3924 }
3925
3926 footer{
3927     background-color: #F7F7F0 ;
3928     background-image: linear-gradient(to bottom, #F7F7F0, #b0b8b0);
3929 }
3930
3931
3932
3933 div.sidetoccontainer {
3934     background-color: #F7F7F0 ;
3935     background-image: linear-gradient(to bottom, #F7F7F0, #C0C0C0);
3936     box-shadow: 3px 3px 3px #808080 ;
3937 }
3938
3939 div.sidetocitle {color: #304070 ; }
3940
3941 nav.sidetoc a:hover {
3942     color:#006000 ;
3943     text-decoration: none ;
3944     text-shadow:0px 0px 2px #a0a0a0;
3945 }
3946
3947
3948 @media screen and (max-width: 45em) {
3949     div.sidetoccontainer { border-radius: 0 ; }
3950 }
3951
3952
3953 \end{filecontents*}
3954 % \end{Verbatim}% for syntax highlighting
3955 \end{LWRwriteconf}

```

39.6 lwarp_formal.css

File `lwarp_formal.css` An optional css which may be used for a more formal appearance.

If used, this must be present both when compiling the project and also when distributing the HTML files.

Config file:

```

3956 \begin{LWRwriteconf}
3957 \begin{filecontents*}[overwrite]{lwarp_formal.css}
3958 @import url("lwarp.css") ;

```

```
3959
3960
3961
3962 A:link {color:#802020 ; text-decoration:none; }
3963 A:visited {color:#802020 ; text-shadow:none ;}
3964 A:hover {color:#400000 ; text-shadow:none ;}
3965 A:active {color:#C00000 ; text-shadow:none ;}
3966
3967
3968 body {
3969     font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
3970         "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
3971         "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
3972         "Times New Roman", serif;
3973     background: #fffcf5;
3974 }
3975
3976 span.textrm {
3977     font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
3978         "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
3979         "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
3980         "Times New Roman", serif;
3981 }
3982
3983 span.textsf {
3984     font-family: "DejaVu Sans", "Bitstream Vera Sans",
3985         Geneva, Verdana, sans-serif ;
3986 }
3987
3988
3989
3990 div.book, h1, h2, h3, h4, h5, h6, span.paragraph, span.subparagraph
3991 {
3992     font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
3993         "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
3994         "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
3995         "Times New Roman", serif;
3996     color: #800000 ;
3997     text-shadow: none ;
3998 }
3999
4000 h1, h2 {
4001     background-color: #fffcf5 ;
4002     background-image: none ;
4003     border-bottom: 1px solid #808080;
4004 /*     border-top: 2px solid #808080; */
4005 }
4006
4007 div.abstracttitle {
4008     font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
4009         "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
4010         "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
4011         "Times New Roman", serif;
4012     color: black ;
4013     text-shadow: none ;
```

```
4014 }
4015
4016 span.abstractrunintitle {
4017     font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
4018         "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
4019         "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
4020         "Times New Roman", serif;
4021     color: black ;
4022     text-shadow: none ;
4023 }
4024
4025 div.abstract { font-size: 100% }
4026
4027 .sidebar {
4028     background: #fffcf5;
4029     background-image: none ;
4030     margin: 2em 5% 2em 5%;
4031     padding: 0.5em 1em;
4032     border: none ;
4033     border-top : 1px solid silver;
4034     border-bottom : 1px solid silver;
4035     font-size: 90% ;
4036 }
4037
4038 div.sidebartitle{
4039     font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
4040         "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
4041         "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
4042         "Times New Roman", serif;
4043     color: #800000 ;
4044     text-shadow: none ;
4045     border: none ;
4046 }
4047
4048 .example {
4049     background: #fffcf5;
4050     background-image: none ;
4051     margin: 2em 5% 2em 5%;
4052     padding: 0.5em 1em;
4053     border: none ;
4054     border-top : 1px solid silver;
4055     border-bottom : 1px solid silver;
4056 }
4057
4058 div.exampletitle{
4059     font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
4060         "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
4061         "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
4062         "Times New Roman", serif;
4063     color: #800000 ;
4064     text-shadow: none ;
4065     border: none ;
4066 }
4067
4068 div.fancyvrblabel{
```

```
4069     font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
4070         "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
4071         "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
4072         "Times New Roman", serif;
4073     color: #800000 ;
4074     text-shadow: none ;
4075     border: none ;
4076 }
4077
4078
4079
4080 figure {
4081     margin: 5ex 5% 5ex 5% ;
4082     padding: 1ex 1em 1ex 1em ;
4083     background-color: #fffcf5 ;
4084     overflow-x: auto ;
4085     border: none ;
4086 /*     border-top: 1px solid silver; */
4087 /*     border-bottom: 1px solid silver; */
4088 }
4089
4090
4091 div.figurecaption , .lstlisting {
4092     border: none ;
4093 /*     border-top: 1px solid silver ; */
4094 /*     border-bottom: 1px solid silver ; */
4095     background-color: #fffcf5 ;
4096 }
4097
4098 .tnotes {
4099     background: #fffcf5 ;
4100     border-top: 1px solid silver ;
4101     border-bottom: 1px solid silver ;
4102 }
4103
4104 .theorem {
4105     background: none ;
4106 }
4107
4108 .minipage {
4109     background-color: #fffcf5 ;
4110     border: none ;
4111 }
4112
4113 div.floatrow figure { border: none ; }
4114
4115 figure figure { border: none ; }
4116
4117
4118 nav.toc, nav.lof, nav.lot, nav.lol {
4119     font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
4120         "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
4121         "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
4122         "Times New Roman", serif;
4123 }
```

```

4124
4125 div.sidetoccontainer {
4126     font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
4127         "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
4128         "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
4129         "Times New Roman", serif;
4130     background-image: linear-gradient(to bottom, #fffcf5, #C0C0C0);
4131 }
4132
4133 div.sidetocitle{
4134     color: #800000 ;
4135 }
4136
4137 header{
4138     background-color: #e0e0e0 ;
4139     background-image: linear-gradient(to top, #fffcf5, #b0b0b0);
4140     text-align:center ;
4141 }
4142
4143 footer{
4144     background-color: #e0e0e0 ;
4145     background-image: linear-gradient(to bottom, #fffcf5, #b0b0b0);
4146     padding: 2ex 1em 2ex 1em ;
4147     text-align:left ;
4148 }
4149
4150 nav.botnavigation {
4151     background: #dedcd5 ;
4152     border-top: 1px solid black ;
4153 }
4154 \end{filecontents*}
4155 % \end{Verbatim}% for syntax highlighting
4156 \end{LWRwriteconf}

```

39.7 sample_project.css

File sample_project.css The project-specific css file. Use with \CSSFilename.

If used, this must be present both when compiling the project and also when distributing the HTML files.

Config file:

```

4157 \begin{LWRwriteconf}
4158 \begin{filecontents*}[overwrite]{sample_project.css}
4159 /* ( --- Start of project.css --- ) */
4160 /* ( --- A sample project-specific CSS file for lwarp --- ) */
4161
4162 /* Uncomment one of the following: */
4163 @import url("lwarp.css") ;
4164 /* @import url("lwarp_formal.css") ; */
4165 /* @import url("lwarp_sagebrush.css") ; */
4166
4167 /* Project-specific CSS setting follow here. */
4168 /* . . . */
4169

```

```

4170 /* ( --- End of project.css --- ) */
4171 \end{filecontents*}
4172 % \end{Verbatim}% for syntax highlighting
4173 \end{LWRwriteconf}

```

39.8 lwarp.ist

File `lwarp.ist` Used to modify the index for `lwarp`.

This must be present when compiling the project, but does not need to be present when distributing the resulting HTML files.

The page compositor line is for memoir's `\specialindex`.

Config file:

```

4174 \begin{LWRwriteconf}
4175 \begin{filecontents*}[overwrite]{lwarp.ist}
4176 preamble
4177 "\begin{theindex}
4178   \providecommand*\lettergroupDefault[1]{}
4179   \providecommand*\lettergroup[1]{%
4180     \par\textbf{#1}\par
4181     \nopagebreak
4182   }
4183 "
4184 headings_flag 1
4185 heading_prefix "
4186   \lettergroup{"
4187 heading_suffix "}"
4188 delim_0 ", \hyperindexref{"
4189 delim_1 ", \hyperindexref{"
4190 delim_2 ", \hyperindexref{"
4191 delim_n "}, \hyperindexref{"
4192 delim_r "} -- \hyperindexref{"
4193 delim_t "}"
4194 page_compositor "."
4195 \end{filecontents*}
4196 % \end{Verbatim}% for syntax highlighting
4197 \end{LWRwriteconf}

```

39.9 lwarp.xdy

File `lwarp.xdy` Used to modify the index for `lwarp`.

This must be present when compiling the project, but does not need to be present when distributing the resulting HTML files.

See:

<https://tex.stackexchange.com/questions/80300/how-can-i-convince-hyperref-and-xindy-to-play-together-nicely>

Config file:

```

4198 \begin{LWRwriteconf}
4199 \begin{filecontents*}[overwrite]{lwarp.xdy}

```

```

4200 (require "tex/inputenc/latin.xdy")
4201 (merge-rule "\\PS *" "Postscript")
4202 (require "texindy.xdy")
4203 (require "page-ranges.xdy")
4204 (require "book-order.xdy")
4205 (define-location-class "arabic-page-numbers"
4206   ("arabic-numbers") :min-range-length 1)
4207 (require "makeindex.xdy")
4208 (define-attributes (("hyperindexref")))
4209 (markup-locref :open "\\hyperindexref{" :close "}" :attr "hyperpage")
4210 (markup-locref :open "\\hyperindexref{" :close "}" :attr "hyperpage")
4211 (markup-locref :open "\\textbf{\\hyperindexref{" :close "}" :attr "textbf")
4212 (markup-locref :open "\\textit{\\hyperindexref{" :close "}" :attr "textit")
4213 (define-location-class-order ("roman-page-numbers"
4214   "arabic-page-numbers"
4215   "alpha-page-numbers"
4216   "Roman-page-numbers"
4217   "Alpha-page-numbers"
4218   "see"
4219   "seealso"))
4220 \\end{filecontents*}
4221 % \\end{Verbatim}% for syntax highlighting
4222 \\end{LWRwriteconf}

```

39.10 lwarp_one_limage.cmd

File lwarp_one_limage.cmd Used by lwarp to help make lateximages when using WINDOWS.

This must be present when compiling the project, but does not need to be present when distributing the resulting HTML files.

The arguments are each of the three fields from <project>-images.txt, and also the base name of the source file.

MiKTeX does not allow file lwarp_one_limage.cmd to be created directly by *lwarpmk*, so lwarp_one_limage.txt is created instead, then copied to lwarp_one_limage.cmd by *lwarpmk*. This occurs each time *lwarpmk* used to create lateximages.

Config file:

```

4223 \\begin{LWRwriteconf}
4224 \\immediate\\openout\\LWR@quickfile=lwarp_one_limage.txt
4225 \\immediate\\write\\LWR@quickfile{%
4226   pdfseparate -f \\LWRpercent 1 -l \\LWRpercent 1 \\LWRpercent 4_html.pdf %
4227   \\LWR@ImagesDirectory\\OSPathSymbol lateximagetemp-\\LWRpercent\\LWRpercent d.pdf%
4228 }
4229 \\immediate\\write\\LWR@quickfile{%
4230   pdfcrop --hires \\LWR@ImagesDirectory\\OSPathSymbol lateximagetemp-\\LWRpercent 1.pdf %
4231   \\LWR@ImagesDirectory\\OSPathSymbol\\LWRpercent 3.pdf%
4232 }
4233 \\immediate\\write\\LWR@quickfile{%
4234   pdftocairo -svg -noshrink \\LWR@ImagesDirectory\\OSPathSymbol\\LWRpercent 3.pdf %
4235   \\LWR@ImagesDirectory\\OSPathSymbol\\LWRpercent 3.svg%
4236 }
4237 \\immediate\\write\\LWR@quickfile{%
4238   del \\LWR@ImagesDirectory\\OSPathSymbol\\LWRpercent 3.pdf%

```

```

4239 }
4240 \immediate\write\LWR@quickfile{%
4241     del \LWR@ImagesDirectory\OSPathSymbol lateximagetemp-\LWRpercent 1.pdf%
4242 }
4243 \immediate\write\LWR@quickfile{exit}
4244 \immediate\closeout\LWR@quickfile
4245 \end{LWRwriteconf}

```

39.11 lwarp_mathjax.txt

(Emulates or patches code by DAVIDE P. CERVONE.)

File `lwarp_mathjax.txt` The default MathJax script used by lwarp when using MATHJAX. A recent version of MathJax is used, as served by the recommended repository. Adjustments are made to allow L^AT_EX to control the equation tags and provide for starred macros.

`\MathJaxFilename` determines which script file is copied into the HTML pages, and defaults to `lwarp_mathjax.txt`. The script files must be present when compiling the project, but do not need to be present when distributing the resulting HTML files.

custom script To generate a custom script, such as to use a local repository, copy `lwarp_mathjax.txt` to a new file, make changes while keeping lwarp's adjustments for equation numbering and starred macros, and use `\MathJaxFilename` to select the new filename.

Config file:

```

4246 \begin{LWRwriteconf}
4247 \begin{filecontents*}[overwrite]{lwarp_mathjax.txt}
4248 <script>
4249 // Lwarp MathJax emulation code
4250 //
4251 // Based on code by Davide P. Cervone.
4252 // Equation numbering: https://github.com/mathjax/MathJax/issues/2427
4253 // Starred and ifnextchar macros: https://github.com/mathjax/MathJax/issues/2428
4254 //
4255 // Modified by Brian Dunn to adjust equation numbering and add subequations.
4256 //
4257 // LaTeX can use \seteqnumber{subequations?}{section}{number} before each equation.
4258 // subequations? is 0 usually, 1 if inside subequations.
4259 // section is a string printed as-is, or empty.
4260 // number is auto-incremented by MathJax between equations.
4261 //
4262 MathJax = {
4263   subequations: "0",
4264   section: "",
4265   loader: {
4266     load: ['[tex]/tagFormat']
4267   },
4268   startup: {
4269     ready() {
4270       // These would be replaced by import commands if you wanted to make
4271       // a proper extension.
4272       const Configuration = MathJax._.input.tex.Configuration.Configuration;
4273       const CommandMap = MathJax._.input.tex.SymbolMap.CommandMap;
4274       const Macro = MathJax._.input.tex.Symbol.Macro;
4275       const TexError = MathJax._.input.tex.TexError.default;

```

```

4276     const ParseUtil = MathJax._.input.tex.ParseUtil.default;
4277     const expandable = MathJax._.util.Options.expandable;
4278
4279     // Insert the replacement string into the TeX string, and check
4280     // that there haven't been too many maxro substitutions (prevents
4281     // infinite loops).
4282     const useArgument = (parser, text) => {
4283     parser.string = ParseUtil.addArgs(parser, text, parser.string.slice(parser.i));
4284     parser.i = 0;
4285     if (++parser.macroCount > parser.configuration.options.maxMacros) {
4286         throw new TexError('MaxMacroSub1',
4287             'MathJax maximum macro substitution count exceeded; ' +
4288             'is there a recursive macro call?');
4289     }
4290     }
4291
4292     // Create the command map for \ifstar, \ifnextchar, \seteqnumber
4293     new CommandMap('ifstar-ifnextchar-seteqnumber', {
4294         ifstar: 'IfstarFunction',
4295         ifnextchar: 'IfnextcharFunction',
4296         seteqnumber: 'SeteqnumberFunction'
4297     }, {
4298         // This function implements an ifstar macro.
4299         IfstarFunction(parser, name) {
4300             const resultstar = parser.GetArgument(name);
4301             const resultnostar = parser.GetArgument(name);
4302             const star = parser.GetStar(); // true if there is a *
4303             useArgument(parser, star ? resultstar : resultnostar);
4304         },
4305
4306         // This function implements an ifnextchar macro.
4307         IfnextcharFunction(parser, name) {
4308             let whichchar = parser.GetArgument(name);
4309             if (whichchar.match(/^(?:0x[0-9A-F]+|[0-9]+)$/i)) {
4310                 // $ syntax highlighting
4311                 whichchar = String.fromCharCode(parseInt(whichchar));
4312             }
4313             const resultnextchar = parser.GetArgument(name);
4314             const resultnotnextchar = parser.GetArgument(name);
4315             const gotchar = (parser.GetNext() === whichchar);
4316             useArgument(parser, gotchar ? resultnextchar : resultnotnextchar);
4317         },
4318
4319         // This function modifies the equation numbers.
4320         SeteqnumberFunction(parser, name) {
4321             // Get the macro parameters
4322             const star = parser.GetStar(); // true if there is a *
4323             const optBrackets = parser.GetBrackets(name); // contents of optional brackets
4324             const newsubequations = parser.GetArgument(name); // the subequations argument
4325             const neweqsection = parser.GetArgument(name); // the eq section argument
4326             const neweqnumber = parser.GetArgument(name); // the eq number argument
4327             MathJax.config.subequations=newsubequations; // a string with boolean meaning
4328             MathJax.config.section=neweqsection; // a string with numeric meaning
4329             parser.tags.counter = parser.tags.allCounter = neweqnumber;
4330         }

```

```

4331     });
4332
4333     // Create the ifstar-ifnextchar-setequnumber package
4334     Configuration.create('ifstar-ifnextchar-setequnumber', {
4335         handler: {macro: ['ifstar-ifnextchar-setequnumber']}
4336     });
4337
4338     MathJax.startup.defaultReady();
4339
4340     // For forward references:
4341     MathJax.startup.input[0].preFilters.add(({math}) => {
4342         if (math.inputData.recompile){
4343             MathJax.config.subequations = math.inputData.recompile.subequations;
4344             MathJax.config.section = math.inputData.recompile.section;
4345         }
4346     });
4347     MathJax.startup.input[0].postFilters.add(({math}) => {
4348         if (math.inputData.recompile){
4349             math.inputData.recompile.subequations = MathJax.config.subequations;
4350             math.inputData.recompile.section = MathJax.config.section;
4351         }
4352     });
4353 } // ready
4354 }, // startup
4355
4356 tex: {
4357     packages: {'[+]': ['tagFormat', 'ifstar-ifnextchar-setequnumber']},
4358     tags: "ams",
4359     tagFormat: {
4360         number: function (n) {
4361             if(MathJax.config.subequations==0)
4362                 return(MathJax.config.section + n);
4363             else
4364                 return(MathJax.config.section + String.fromCharCode(96+n));
4365         },
4366     },
4367 }
4368 }
4369 </script>
4370
4371 <script
4372     id="MathJax-script"
4373     src="https://cdn.jsdelivr.net/npm/mathjax@3/es5/tex-ctml.js"
4374 ></script>
4375 \end{filecontents*}
4376 % \end{Verbatim}% for syntax highlighting
4377 \end{LWRwriteconf}

```

39.12 lwarpmk.lua — lwarpmk option

Opt lwarpmk Creates a local copy of *lwarpmk*.

Prog lwarpmk Command-line utility to process lwarp files and images.

parallel processing lateximages and svg math images are generated using multiple processes in parallel. For UNIX and LINUX, every 32 images the wait command is issued to wait for the previous batch of images to finish processing before starting a new batch. For WINDOWS, every 32 images one task is dispatched with

```
START /B /WAIT /BELOWNORMAL
```

which causes the operating system to wait until this lesser-priority tasks finishes, hopefully also waiting for the normal priority tasks which were already in progress to also complete. Afterwards, the next batch of images is started.

The following is only generated if the `lwarpmk` option was given to `lwarp`.

```
4378 \begin{LWRcreate!lwarpmk}

4379 \begin{filecontents*}[overwrite]{lwarpmk.lua}
4380 #!/usr/bin/env texlua
4381
4382 -- Copyright 2016-2020 Brian Dunn
4383
4384
4385 printversion = "v0.88"
4386 requiredconfversion = "2" -- also at *lwarpmk.conf
4387
4388 function printhelp ()
4389 print ("lwarpmk: Use lwarpmk -h or lwarpmk --help for help.") ;
4390 end
4391
4392
4393 function printusage ()
4394 --
4395 -- Print the usage of the lwarpmk command:
4396 --
4397 print ( [[
4398
4399 lwarpmk print [-p project]: Compile the print version if necessary.
4400 lwarpmk print1 [-p project]: Forced single compile of the print version.
4401 lwarpmk printindex [-p project]: Process print indexes.
4402 lwarpmk printglossary [-p project]: Process the glossary for the print version.
4403 lwarpmk html [-p project]: Compile the HTML version if necessary.
4404 lwarpmk html1 [-p project]: Forced single compile of the HTML version.
4405 lwarpmk htmlindex [-p project]: Process HTML indexes.
4406 lwarpmk htmlglossary [-p project]: Process the glossary for the html version.
4407 lwarpmk again [-p project]: Touch the source code to trigger recompiles.
4408 lwarpmk limages [-p project]: Process the "lateximages" created by lwarp.sty.
4409 lwarpmk pdftohtml [-p project]:
4410     For use with latexmk or a Makefile:
4411     Converts project_html.pdf to project_html.html and individual HTML files.
4412     Finishes the HTML conversion even if there was a compile error.
4413 lwarpmk pdftosvg <list of file names>: Converts each PDF file to SVG.
4414 lwarpmk epstopdf <list of file names>: Converts each EPS file to PDF.
4415 lwarpmk clean [-p project]: Remove *.aux, *.toc, *.lof/t,
4416     *.idx, *.ind, *.log, *_html_inc.*, *.gl*,
4417     *_html.pdf, *_html.html, *_html.sidetoc
4418 lwarpmk cleanall [-p project]: Remove auxiliary files, project.pdf, *.html
```

```

4419 lwarpmk cleanimages: Removes all images from the "lateximages" directory.
4420 lwarpmk -v: Print the version number.
4421 lwarpmk -h: Print this help message.
4422 lwarpmk --help: Print this help message.
4423
4424 ]] )
4425 -- printconf ()
4426 end
4427
4428
4429 function splitfilename ( pathandfilename )
4430 --
4431 -- Separates out the path and extension from a filename.
4432 -- Returns path, filename with extension, and extension.
4433 -- Ex: thispath, thisfilename, thisextension = splitfilename ("path/to/filename.ext")
4434 --
4435 -- https://www.fhug.org.uk/wiki/wiki/doku.php?id=plugins:code\_snippets:
4436 --      split_filename_in_to_path_filename_and_extension
4437 --
4438     if lfs.attributes(pathandfilename,"mode") == "directory" then
4439         local strPath = pathandfilename:gsub("[\\/]$", "") -- $(syntax highlighting)
4440         return strPath.."\\", "", ""
4441     end
4442     pathandfilename = pathandfilename.."."
4443     return pathandfilename:match("^(.-)([\\\/]-)%."([\\\/%.]-%).?.$")
4444 end
4445
4446
4447 function splitfile (destfile,sourcefile)
4448 --
4449 -- Split one large sourcefile into a number of files,
4450 -- starting with destfile.
4451 -- The file is split at each occurrence of <!--|Start file|newfilename|*
4452 --
4453 print ("lwarpmk: Splitting " .. sourcefile .. " into " .. destfile) ;
4454 local sfile = io.open(sourcefile)
4455 io.output(destfile)
4456 for line in sfile:lines() do
4457     i,j,copen,cstart,newfilename = string.find (line,"(.*)|(.*)|(.*|)" ) ;
4458     if ( (i~= nil) and (copen == "<!--") and (cstart == "Start file")) then
4459         -- split the file
4460         io.output(newfilename) ;
4461     else
4462         -- not a splitpoint
4463         io.write (line .. "\n") ;
4464     end
4465 end -- do
4466 io.close(sfile)
4467 end -- function
4468
4469
4470 function cvalueerror ( line, linenum , cvalue )
4471 --
4472 -- Incorrect value, so print an error and exit.
4473 --

```

```
4474     print ("lwarpmk: ===")
4475     print ("lwarpmk: " .. linenumb .. " : " .. line ) ;
4476     print (
4477         "lwarpmk: incorrect variable value \"\" .. cvalue ..
4478         "\" in lwarpmk.conf.\n"
4479     ) ;
4480     print ("lwarpmk: ===")
4481 --     printconf () ;
4482     os.exit(1) ;
4483 end
4484
4485
4486 function printhowtorecompile ()
4487 -- Tells the user how to recompile to regenerate the configuration files.
4488     print ("lwarpmk: The configuration files lwarpmk.conf and "..sourcename.."lwarpmkconf" )
4489     print ("lwarpmk:  must be updated.  To do so, recompile" )
4490     print ("lwarpmk:  ", sourcename.."tex" )
4491     if ( printlatexcmd == "" ) then
4492         print ("lwarpmk:  using xe/luatex/pdflatex," )
4493     else
4494         print ("lwarpmk:  using the command:")
4495         print ("lwarpmk:  ", printlatexcmd )
4496     end
4497     print ("lwarpmk:  then use lwarpmk again.")
4498 end -- printhowtorecompile
4499
4500
4501 function ignoreconf ()
4502 -- Global argument index
4503 argindex = 2
4504 end
4505
4506 function loadconf ()
4507 --
4508 -- Load settings from the project's "lwarpmk.conf" file:
4509 --
4510 -- Default configuration filename:
4511 local conffile = "lwarpmk.conf"
4512 local confroot = "lwarpmk"
4513 -- Global argument index
4514 argindex = 2
4515 -- Optional configuration filename:
4516 if ( arg[argindex] == "-p" ) then
4517     argindex = argindex + 1
4518     confroot = arg[argindex]
4519     conffile = confroot.."lwarpmkconf"
4520     argindex = argindex + 1
4521 end
4522 -- Additional defaults:
4523 confversion = "0"
4524 opsystem = "Unix"
4525 imagesdirectory = "lateximages"
4526 imagesname = "image-"
4527 latexmk = "false"
4528 printlatexcmd = ""
```

```

4529 HTMLlatexcmd = ""
4530 printindexcmd = ""
4531 HTMLindexcmd = ""
4532 latexmkindexcmd = ""
4533 -- to be removed:
4534 -- indexprog = "makeindex"
4535 -- makeindexstyle = "lwarp.ist"
4536 -- xindylanguage = "english"
4537 -- xindycodepage = "utf8"
4538 -- xindystyle = "lwarp.xdy"
4539 -- pdftotextenc = "UTF-8"
4540 glossarycmd = "makeglossaries"
4541 -- Verify the file exists:
4542 if (lfs.attributes(conffile,"mode")==nil) then
4543     -- file not exists
4544     print ("lwarpmk: ===")
4545     print ("lwarpmk: File \" .. conffile ..\" does not exist.")
4546     print ("lwarpmk: Move to the project's source directory,")
4547     print ("lwarpmk: recompile using pdflatex, xelatex, or lualatex,")
4548     print ("lwarpmk: then try using lwarpmk again.")
4549     if ( arg[argindex] ~= nil ) then
4550         print (
4551             "lwarpmk: (\" .. confroot ..
4552             "\" does not appear to be a project name.)"
4553         )
4554     end
4555     print ("lwarpmk: ===")
4556     printhelp () ;
4557     os.exit(1) -- exit the entire lwarpmk script
4558 else -- file exists
4559     -- Read the file:
4560     print ("lwarpmk: Reading " .. conffile .. ".")
4561     local cfile = io.open(conffile)
4562     -- Scan each line, parsing each line as: name = [[string]]
4563     local linenum = 0
4564     for line in cfile:lines() do -- scan lines
4565         linenum = linenum + 1
4566         i,j,cvarname,cvalue = string.find (line,"([%w-_]*)s*=%s*%[[%^]]*)%]") ;
4567         -- Error if incorrect enclosing characters:
4568         if ( i == nil ) then
4569             print ("lwarpmk: ===")
4570             print ("lwarpmk: " .. linenum .. " : " .. line ) ;
4571             print ("lwarpmk: Incorrect entry in " .. conffile .. ".\n" ) ;
4572             print ("lwarpmk: ===")
4573             -- printconf () ;
4574             os.exit(1) ;
4575         end -- nil
4576         if ( cvarname == "confversion" ) then
4577             confversion = cvalue
4578         elseif ( cvarname == "opssystem" ) then
4579             -- Verify choice of opssystem:
4580             if ( (cvalue == "Unix") or (cvalue == "Windows") ) then
4581                 opssystem = cvalue
4582             else
4583                 cvalueerror ( line, linenum , cvalue )

```

```

4584     end
4585 elseif ( cvarname == "sourcename" ) then sourcename = cvalue
4586 elseif ( cvarname == "homehtmlfilename" ) then homehtmlfilename = cvalue
4587 elseif ( cvarname == "htmlfilename" ) then htmlfilename = cvalue
4588 elseif ( cvarname == "imagesdirectory" ) then imagesdirectory = cvalue
4589 elseif ( cvarname == "imagesname" ) then imagesname = cvalue
4590 elseif ( cvarname == "latexmk" ) then latexmk = cvalue
4591 elseif ( cvarname == "printlatexcmd" ) then printlatexcmd = cvalue
4592 elseif ( cvarname == "HTMLlatexcmd" ) then HTMLlatexcmd = cvalue
4593 elseif ( cvarname == "printindexcmd" ) then printindexcmd = cvalue
4594 elseif ( cvarname == "HTMLindexcmd" ) then HTMLindexcmd = cvalue
4595 elseif ( cvarname == "latexmkindexcmd" ) then latexmkindexcmd = cvalue
4596 elseif ( cvarname == "glossarycmd" ) then glossarycmd = cvalue
4597 elseif ( cvarname == "pdftotextenc" ) then pdftotextenc = cvalue
4598 else
4599     print ("lwarpmk: ===")
4600     print ("lwarpmk: " .. linenum .. " : " .. line ) ;
4601     print (
4602         "lwarpmk: Incorrect variable name \"\" .. cvarname .. "\" in " ..
4603         conffile .. ".\n"
4604     ) ;
4605     print ("lwarpmk: ===")
4606 --     printconf () ;
4607 os.exit(1) ;
4608 end -- cvarname
4609 end -- do scan lines
4610 io.close(cfile)
4611 end -- file exists
4612 -- Error if sourcename is "lwarp".
4613 -- This could happen if a local copy of lwarp has recently been recompiled.
4614 if sourcename=="lwarp" then
4615     print ("lwarpmk: ===")
4616     print ("lwarpmk: lwarp.sty has recently been recompiled in this directory,")
4617     print ("lwarpmk: and \"lwarpmk.conf\" is no longer set for your own project.")
4618     print ("lwarpmk: (Perhaps you are not in your project's directory?)")
4619     print ("lwarpmk: In your project directory, recompile your project")
4620     print ("lwarpmk: using pdf/luaxelatex <projectname>.")
4621     print ("lwarpmk: After a recompile, \"lwarpmk.conf\" will be set for your project,")
4622     print ("lwarpmk: and you may again use lwarpmk.")
4623     print ("lwarpmk: ===")
4624     os.exit(1)
4625 end -- sourcename of "lwarp"
4626 -- Select some operating-system commands:
4627 if opsystem=="Unix" then -- For Unix / Linux / Mac OS:
4628     rmname = "rm"
4629     mvname = "mv"
4630     cpname = "cp"
4631     touchnamepre = "touch"
4632     touchnamepost = ""
4633     newtouchname = "touch"
4634     dirslash = "/"
4635     opquote= "\"'"
4636     cmdgroupopenname = " ( "
4637     cmdgroupclosename = " ) "
4638     seqname = " && "

```

```
4639     bname = " &"
4640 elseif opsystem=="Windows" then -- For Windows
4641     rmname = "DEL"
4642     mvname = "MOVE"
4643     cpname = "COPY"
4644     touchnamepre = "COPY /b"
4645     touchnamepost = "+,,"
4646     newtouchname = "echo empty >"
4647     dirslash = "\\\"
4648     opquote= "\"
4649     cmdgroupopenname = ""
4650     cmdgroupclosename = ""
4651     seqname = " & "
4652     bname = ""
4653 else
4654     print ("lwarpmk: ===")
4655     print ("lwarpmk: Select Unix or Windows for opsystem." )
4656     print ("lwarpmk: ===")
4657     os.exit(1)
4658 end --- for Windows
4659 -- Warning if the operating system does not appear to be correct,
4660 -- in case files were transferred to another system.
4661 if ( (package.config:sub(1,1)) ~= dirslash ) then
4662     print ("lwarpmk: ===")
4663     print ("lwarpmk: It appears that lwarpmk.conf is for a different operating system." )
4664     printhowtorecompile ()
4665     print ("lwarpmk: ===")
4666     os.exit(1)
4667 end
4668 -- Error if the configuration file's version is not current:
4669 if ( confversion ~= requiredconfversion ) then
4670     print ("lwarpmk: ===")
4671     printhowtorecompile ()
4672     print ("lwarpmk: ===")
4673     os.exit(1)
4674 end
4675 end -- loadconf
4676
4677
4678 function executecheckerror ( executecommands , errormessage )
4679 --
4680 -- Execute an operating system call,
4681 -- and maybe exit with an error message.
4682 --
4683 local err
4684 err = os.execute ( executecommands )
4685 if ( err ~= 0 ) then
4686     print ("lwarpmk: ===")
4687     print ("lwarpmk: " .. errormessage )
4688     print ("lwarpmk: ===")
4689     os.exit(1)
4690 end
4691 end -- executecheckerror
4692
4693
```

```
4694 function refreshdate ()
4695 os.execute(touchnamepre .. " " .. sourcename .. ".tex " .. touchnamepost)
4696 end
4697
4698
4699
4700 function reruntoget (filesourse)
4701 --
4702 -- Scan the LaTeX log file for the phrase "Rerun to get",
4703 -- indicating that the file should be compiled again.
4704 -- Return true if found.
4705 --
4706 local fsource = io.open(filesourse)
4707 for line in fsource:lines() do
4708 if ( string.find(line,"Rerun to get") ~= nil ) then
4709     io.close(fsource)
4710     return true
4711 end -- if
4712 end -- do
4713 io.close(fsource)
4714 return false
4715 end
4716
4717
4718
4719 function onetime (latexcmd, fsuffix)
4720 --
4721 -- Compile one time, return true if should compile again.
4722 -- fsuffix is "" for print, "_html" for HTML output.
4723 --
4724 print("lwarpmk: Compiling with: " .. latexcmd)
4725 executecheckerror (
4726     latexcmd ,
4727     "Compile error."
4728 )
4729 return (reruntoget(sourcename .. fsuffix .. ".log") ) ;
4730 end
4731
4732
4733 function manytimes (latexcmd, fsuffix)
4734 --
4735 -- Compile up to five times.
4736 -- fsuffix is "" for print, "_html" for HTML output
4737 --
4738 if onetime(latexcmd, fsuffix) == true then
4739 if onetime(latexcmd, fsuffix) == true then
4740 if onetime(latexcmd, fsuffix) == true then
4741 if onetime(latexcmd, fsuffix) == true then
4742 if onetime(latexcmd, fsuffix) == true then
4743 end end end end end
4744 end
4745
4746
4747 function verifyfileexists (filename)
4748 --
```

```

4749 -- Exit if the given file does not exist.
4750 --
4751 if (lfs.attributes ( filename , "modification" ) == nil ) then
4752     print ("lwarpmk: ===")
4753     print ("lwarpmk: " .. filename .. " not found." ) ;
4754     print ("lwarpmk: ===")
4755     os.exit (1) ;
4756 end
4757 end
4758
4759
4760
4761 function pdftohtml ()
4762 --
4763 -- Convert <project>_html.pdf into HTML files:
4764 --
4765 -- Convert to text:
4766 print ("lwarpmk: Converting " .. sourcename
4767     .. "_html.pdf to " .. sourcename .. "_html.html")
4768 os.execute("pdftotext -enc " .. pdftotextenc .. " -nopgbrk -layout "
4769     .. sourcename .. "_html.pdf " .. sourcename .. "_html.html")
4770 -- Split the result into individual HTML files:
4771 splitfile (homehtmlfilename .. ".html" , sourcename .. "_html.html")
4772 end
4773
4774
4775 function removeaux ()
4776 --
4777 -- Remove auxiliary files:
4778 -- All .aux files are removed since there may be many bbl*.aux files.
4779 -- Also removes sourcename_html.pdf, sourcename_html.html,
4780 -- and sourcename_html.sidetoc, plus comment_*.cut.
4781 --
4782 os.execute ( rmname .. " *.aux " ..
4783     sourcename .. ".toc " .. sourcename .. "_html.toc " ..
4784     sourcename .. ".lof " .. sourcename .. "_html.lof " ..
4785     sourcename .. ".lot " .. sourcename .. "_html.lot " ..
4786     " *.idx " ..
4787     " *.ind " ..
4788     sourcename .. ".ps " .. sourcename .. "_html.ps " ..
4789     sourcename .. ".log " .. sourcename .. "_html.log " ..
4790     sourcename .. ".gl*" .. sourcename .. "_html.gl*" ..
4791     sourcename .. "_html.pdf " ..
4792     sourcename .. "_html.html " ..
4793     sourcename .. "_html.sidetoc " ..
4794     " *_html_inc.* " ..
4795     " comment_*.cut"
4796 )
4797 end
4798
4799 function checkhtmlpdfexists ()
4800 --
4801 -- Error if the HTML document does not exist.
4802 -- The lateximages are drawn from the HTML PDF version of the document,
4803 -- so "lwarpmk html" must be done before "lwarpmk limages".

```

```
4804 --
4805 local htmlpdffile = io.open(sourcename .. "_html.pdf", "r")
4806 if ( htmlpdffile == nil ) then
4807     print ("")
4808     print ("lwarpmk: ===")
4809     print ("lwarpmk: The HTML version of the document does not exist.")
4810     print ("lwarpmk: Enter \"lwarpmk html\" to compile the HTML version.")
4811     print ("lwarpmk: ===")
4812     os.exit(1)
4813 end
4814 io.close (htmlpdffile)
4815 end -- checkhtmlpdfexists
4816
4817
4818 function warnlimages ()
4819 --
4820 -- Warning of a missing <sourcename>-images.txt file:
4821     print ("lwarpmk: ===")
4822     print ("lwarpmk: \"\" .. sourcename .. "-images.txt\" does not exist.")
4823     print ("lwarpmk: Your project does not use SVG math or other lateximages,")
4824     print ("lwarpmk: or the file has been deleted somehow.")
4825     print ("lwarpmk: Use \"lwarpmk html\" to recompile your project")
4826     print ("lwarpmk: and recreate \"\" .. sourcename .. "-images.txt\".")
4827     print ("lwarpmk: If your project does not use SVG math or other lateximages,")
4828     print ("lwarpmk: then \"\" .. sourcename .. "-images.txt\" will never exist, and")
4829     print ("lwarpmk: \"lwarpmk limages\" will not be necessary.")
4830     print ("lwarpmk: ===")
4831 end -- warnlimages
4832
4833
4834 function warnlimagesrecompile ()
4835 -- Warning if must recompile before creating limages:
4836     print ("")
4837     print ("lwarpmk: ===")
4838     print ("lwarpmk: Cross-references are not yet correct.")
4839     print ("lwarpmk: The document must be recompiled before creating the lateximages.")
4840     print ("lwarpmk: Enter \"lwarpmk html\" again, then try \"lwarpmk limages\" again.")
4841     print ("lwarpmk: ===")
4842 end --warnlimagesrecompile
4843
4844
4845 function checklimages ()
4846 --
4847 -- Check <sourcename>.txt to see if need to recompile first.
4848 -- If any entry has a page number of zero, then there were incorrect images.
4849 --
4850 print ("lwarpmk: Checking for a valid \" .. sourcename .. "-images.txt file.")
4851 local limagesfile = io.open(sourcename .. "-images.txt", "r")
4852 if ( limagesfile == nil ) then
4853     warnlimages ()
4854     os.exit(1)
4855 end
4856 -- Track warning to recompile if find a page 0
4857 local pagezerowarning = false
4858 -- Scan <sourcename>.txt
```

```

4859 for line in limagesfile:lines() do
4860     -- lwimpage is the page number in the PDF which has the image
4861     -- lwimghash is true if this filename is a hash
4862     -- lwimghname is the lateximage filename root to assign for the image
4863     i,j,lwimpage,lwimghash,lwimghname = string.find (line,"|(.*)|(.*)|(.*)|")
4864     -- For each entry:
4865     if ( i~=nil ) then
4866         -- If the page number is 0, image references are incorrect
4867         -- and must recompile the source document:
4868         if ( lwimpage == "0" ) then
4869             pagezerowarning = true
4870         end
4871     end -- if i~=nil
4872 end -- do
4873 -- The last line should be |end|end|end|.
4874 -- If not, the compile must have aborted, and the images are incomplete.
4875 if ( lwimpage ~= "end" ) then
4876     warnlimagesrecompile()
4877     os.exit(1) ;
4878 end
4879 if ( pagezerowarning ) then
4880     warnlimagesrecompile()
4881     os.exit(1) ;
4882 end -- pagezerowarning
4883 end -- checklimages
4884
4885
4886 function createuniximage ( lwimgfullname )
4887 --
4888 -- Create one lateximage for Unix / Linux / Mac OS.
4889 --
4890 executecheckerror (
4891     cmdgroupopenname ..
4892     "pdfseparate -f " .. lwimpage .. " -l " .. lwimpage .. " " ..
4893     sourcename .. "_html.pdf " ..
4894     imagesdirectory .. dirslash .. "lateximagetemp-%d" .. ".pdf" ..
4895     seqname ..
4896     -- Crop the image:
4897     "pdfcrop -- hires " .. imagesdirectory .. dirslash .. "lateximagetemp-" ..
4898     lwimpage .. ".pdf " ..
4899     imagesdirectory .. dirslash .. lwimghname .. ".pdf" ..
4900     seqname ..
4901     -- Convert the image to svg:
4902     "pdftocairo -svg -noshrink " .. imagesdirectory .. dirslash .. lwimghname .. ".pdf " ..
4903     imagesdirectory .. dirslash .. lwimghname .. ".svg" ..
4904     seqname ..
4905     -- Remove the temporary files:
4906     rmname .. " " .. imagesdirectory .. dirslash .. lwimghname .. ".pdf" .. seqname ..
4907     rmname .. " " .. imagesdirectory .. dirslash .. "lateximagetemp-" .. lwimpage .. ".pdf" ..
4908     cmdgroupclosename .. " >/dev/null " .. bghname
4909     ,
4910     "File error trying to convert " .. lwimgfullname
4911 )
4912 -- Every 32 images, wait for completion at below normal priority,
4913 -- allowing other image tasks to catch up.

```

```

4914 numimageprocesses = numimageprocesses + 1
4915 if ( numimageprocesses > 32 ) then
4916     numimageprocesses = 0
4917     print ( "lwarpmk: waiting" )
4918     executecheckerror ( "wait" , "File error trying to wait.")
4919 end
4920 end -- createuniximage
4921
4922
4923 function createwindowsimage ( lwimgfullname )
4924 --
4925 -- Create one lateximage for Windows.
4926 --
4927 -- Every 32 images, wait for completion at below normal priority,
4928 -- allowing other image tasks to catch up.
4929 numimageprocesses = numimageprocesses + 1
4930 if ( numimageprocesses > 32 ) then
4931     numimageprocesses = 0
4932     thiswaitcommand = "/WAIT /BELOWNORMAL"
4933     print ( "lwarpmk: waiting" )
4934 else
4935     thiswaitcommand = ""
4936 end
4937 -- Execute the image generation command
4938 executecheckerror (
4939     "start /B " .. thiswaitcommand .. " \"\" lwarp_one_limage " ..
4940     lwimgpage .. " " ..
4941     lwimghash .. " " ..
4942     lwimgname .. " " ..
4943     sourcename .. " <nul >nul"
4944     ,
4945     "File error trying to create image."
4946 )
4947 end -- createwindowsimage
4948
4949
4950 function createonelateximage ( line )
4951 --
4952 -- Given the next line of <sourcename>.txt, convert a single image.
4953 --
4954 -- lwimgpage is the page number in the PDF which has the image
4955 -- lwimghash is true if this filename is a hash
4956 -- lwimgname is the lateximage filename root to assign for the image
4957 i,j,lwimgpage,lwimghash,lwimgname = string.find (line,"|(.*)|(.*)|(.*)|")
4958 -- For each entry:
4959 if ( (i~=nil) ) then
4960     -- Skip if the page number is 0:
4961     if ( lwimgpage == "0" ) then
4962         pagezerowarning = true
4963     -- Skip if the page number is "end":
4964     else if ( lwimgpage == "end" ) then
4965     else
4966         -- Skip is this image is hashed and already exists:
4967         local lwimgfullname = imagesdirectory .. dirslash .. lwimgname .. ".svg"
4968         if (

```

```

4969         (lwimghash ~= "true") or
4970         (lfs.attributes(lwimgfullname,"mode")==nil) -- file not exists
4971     )
4972     then -- not hashed or not exists:
4973         -- Print the name of the file being generated:
4974         print ( "lwarpmk: " .. lwimgname )
4975         -- Touch/create the dest so that only once instance tries to build it:
4976         executecheckerror (
4977             newtouchname .. " " .. lwimgfullname ,
4978             "File error trying to touch " .. lwimgfullname
4979         )
4980         -- Separate out the image into its own single-page pdf:
4981         if opsystem=="Unix" then
4982             createuniximage (lwimgfullname)
4983         elseif opsystem=="Windows" then
4984             createwindowsimage (lwimgfullname)
4985         end
4986     end -- not hashed or not exists
4987 end -- not page "end"
4988 end -- not page 0
4989 end -- not nil
4990 end -- createonelateximage
4991
4992
4993 function createlateximages ()
4994 --
4995 -- Create lateximages based on <sourcename>-images.txt:
4996 --
4997 -- See if the document must be recompiled first:
4998 checklimages ()
4999 -- See if the HTML version exists:
5000 checkhtmlpdfexists ()
5001 -- Attempt to create the lateximages:
5002 print ("lwarpmk: Creating lateximages.")
5003 local limagesfile = io.open(sourcename .. "-images.txt", "r")
5004 if ( limagesfile == nil ) then
5005     warnlimages ()
5006     os.exit(1)
5007 end
5008 -- Create the lateximages directory, ignore error if already exists
5009 err = os.execute("mkdir " .. imagesdirectory)
5010 -- For Windows, create lwarp_one_limage.cmd from lwarp_one_limage.txt:
5011 if opsystem=="Windows" then
5012     executecheckerror (
5013         cpname .. " lwarp_one_limage.txt lwarp_one_limage.cmd" ,
5014         "File error trying to copy lwarp_one_limage.txt to lwarp_one_limage.cmd"
5015     )
5016 end -- create lwarp_one_limage.cmd
5017 -- Track the number of parallel processes
5018 numimageprocesses = 0
5019 -- Track warning to recompile if find a page 0
5020 pagezerowarning = false
5021 -- Scan <sourcename>.txt
5022 for line in limagesfile:lines() do
5023     createonelateximage ( line )

```

```

5024 end -- do
5025 io.close(limagesfile)
5026 print ( "lwarpmk limages: ===")
5027 print ( "lwarpmk limages: Wait a moment for the images to complete" )
5028 print ( "lwarpmk limages:   before reloading the page." )
5029 print ( "lwarpmk limages: ===")
5030 print ( "lwarpmk limages: Done." )
5031 if ( pagezerowarning == true ) then
5032     print ( "lwarpmk limages: WARNING: Images will be incorrect." )
5033     print ( "lwarpmk limages:   Enter \"lwarpmk cleanlimages\", then" )
5034     print ( "lwarpmk limages:   recompile the document one more time, then" )
5035     print ( "lwarpmk limages:   repeat \"lwarpmk images\" again." )
5036 end -- pagezerowarning
5037 end -- function
5038
5039
5040 function convertepstopdf ()
5041 --
5042 -- Converts EPS files to PDF files.
5043 -- The filenames are arg[argindex] and up.
5044 -- arg[1] is the command "epstopdf".
5045 --
5046 ignoreconf ()
5047 for i = argindex , #arg do
5048     if (lfs.attributes(arg[i],"mode")==nil) then
5049         print ("lwarpmk: File \"" .. arg[i] .. "\" does not exist.")
5050     else
5051         print ("lwarpmk: Converting \"" .. arg[i] .. "\"")
5052         thispath, thisfilename, thisextension = splitfilename(arg[i])
5053         if ( thispath == nil ) then
5054             os.execute ( "epstopdf " .. arg[i] )
5055         else
5056             os.execute (
5057                 "epstopdf " ..
5058                 thispath .. thisfilename .. "." .. thisextension .. " " ..
5059                 thispath .. thisfilename .. ".pdf"
5060             )
5061         end
5062     end -- if
5063 end -- do
5064 end --function
5065
5066
5067 function convertpdfptosvg ()
5068 --
5069 -- Converts PDF files to SVG files.
5070 -- The filenames are arg[argindex] and up.
5071 -- arg[1] is the command "pdftosvg".
5072 --
5073 ignoreconf ()
5074 for i = argindex , #arg do
5075     if (lfs.attributes(arg[i],"mode")==nil) then
5076         print ("lwarpmk: File \"" .. arg[i] .. "\" does not exist.")
5077     else
5078         print ("lwarpmk: Converting \"" .. arg[i] .. "\"")

```

```
5079     thispath, thisfilename, thisextension = splitfilename(arg[i])
5080     if ( thispath == nil ) then
5081         os.execute ( "pdftocairo -svg " .. arg[i] )
5082     else
5083         os.execute (
5084             "pdftocairo -svg " ..
5085             thispath .. thisfilename .. "." .. thisextension .. " " ..
5086             thispath .. thisfilename .. ".svg"
5087         )
5088     end
5089 end -- if
5090 end -- do
5091 end --function
5092
5093
5094 -- Force an update and conclude processing:
5095 function updateanddone ()
5096 print ("lwarpmk: Forcing an update of " .. sourcename .. ".tex.")
5097 refreshdate ()
5098 print ("lwarpmk: " .. sourcename .. ".tex is ready to be recompiled.")
5099 print ("lwarpmk: Done.")
5100 end -- function
5101
5102
5103 -- Start of the main code: --
5104
5105
5106 -- lwarpmk --version :
5107
5108 if (arg[1] == "--version") then
5109 print ( "lwarpmk: " .. printversion )
5110
5111 else -- not --version
5112
5113
5114 -- print intro:
5115
5116 print ("lwarpmk: " .. printversion .. " Automated make for the LaTeX Lwarp package.")
5117
5118
5119 -- lwarpmk print:
5120
5121 if arg[1] == "print" then
5122 loadconf ()
5123 if ( latexmk == "true" ) then
5124     print ("lwarpmk: Compiling with: " .. printlatexcmd)
5125     executecheckerror (
5126         printlatexcmd ,
5127         "Compile error."
5128     )
5129     print ("lwarpmk: Done.")
5130 else -- not latexmk
5131     verifyfileexists (sourcename .. ".tex") ;
5132     -- See if up to date:
5133     if (
```

```
5134      ( lfs.attributes ( sourcename .. ".pdf" , "modification" ) == nil ) or
5135      (
5136          lfs.attributes ( sourcename .. ".tex" , "modification" ) >
5137          lfs.attributes ( sourcename .. ".pdf" , "modification" )
5138      )
5139  ) then
5140      -- Recompile if not yet up to date:
5141      manytimes(printlatexcmd, "")
5142      print ("lwarpmk: Done.") ;
5143  else
5144      print ("lwarpmk: " .. sourcename .. ".pdf is up to date.") ;
5145  end
5146 end -- not latexmk
5147
5148
5149 -- lwarpmk print1:
5150
5151 elseif arg[1] == "print1" then
5152     loadconf ()
5153     verifyfileexists (sourcename .. ".tex") ;
5154     onetime(printlatexcmd, "")
5155     print ("lwarpmk: Done.") ;
5156
5157
5158 -- lwarpmk printindex:
5159 -- Compile the index then touch the source
5160 -- to trigger a recompile of the document:
5161
5162 elseif arg[1] == "printindex" then
5163     loadconf ()
5164     os.execute ( printindexcmd )
5165     print ("lwarpmk: -----")
5166     updateanddone ()
5167
5168
5169 -- lwarpmk printglossary:
5170 -- Compile the glossary then touch the source
5171 -- to trigger a recompile of the document:
5172
5173 elseif arg[1] == "printglossary" then
5174     loadconf ()
5175     print ("lwarpmk: Processing the glossary.")
5176
5177     os.execute(glossarycmd .. " " .. sourcename)
5178     updateanddone ()
5179
5180
5181 -- lwarpmk html:
5182
5183 elseif arg[1] == "html" then
5184     loadconf ()
5185     if ( latexmk == "true" ) then
5186         print ("lwarpmk: Compiling with: " .. HTMLlatexcmd)
5187         executecheckerror (
5188             HTMLlatexcmd ,
```

```
5189         "Compile error."
5190     )
5191     pdftohtml ()
5192     print ("lwarpmk: Done.")
5193 else -- not latexmk
5194     verifyfileexists ( sourcename .. ".tex" ) ;
5195     -- See if exists and is up to date:
5196     if (
5197         ( lfs.attributes ( homehtmlfilename .. ".html" , "modification" ) == nil ) or
5198         (
5199             lfs.attributes ( sourcename .. ".tex" , "modification" ) >
5200             lfs.attributes ( homehtmlfilename .. ".html" , "modification" )
5201         )
5202     ) then
5203         -- Recompile if not yet up to date:
5204         manytimes(HTMLlatexcmd, "_html")
5205         pdftohtml ()
5206         print ("lwarpmk: Done.")
5207     else
5208         print ("lwarpmk: " .. homehtmlfilename .. ".html is up to date.")
5209     end
5210 end -- not latexmk
5211
5212
5213 -- lwarpmk html1:
5214
5215 elseif arg[1] == "html1" then
5216     loadconf ()
5217     verifyfileexists ( sourcename .. ".tex" ) ;
5218     onetime(HTMLlatexcmd, "_html")
5219     pdftohtml ()
5220     print ("lwarpmk: Done.")
5221
5222
5223 -- lwarpmk pdftohtml:
5224 elseif arg[1] == "pdftohtml" then
5225     loadconf ()
5226     pdftohtml ()
5227
5228
5229 -- lwarpmk htmlindex:
5230 -- Compile the index then touch the source
5231 -- to trigger a recompile of the document:
5232
5233 elseif arg[1] == "htmlindex" then
5234     loadconf ()
5235     os.execute ( HTMLindexcmd )
5236     print ("lwarpmk: -----")
5237     updateanddone ()
5238
5239
5240 -- lwarpmk htmlglossary:
5241 -- Compile the glossary then touch the source
5242 -- to trigger a recompile of the document.
5243 -- The <sourcename>.xdy file is created by the glossaries package.
```

```
5244
5245 elseif arg[1] == "htmlglossary" then
5246 loadconf ()
5247 print ("lwarpmk: Processing the glossary.")
5248 os.execute(glossarycmd .. " " .. sourcename .. "_html")
5249 updateanddone ()
5250
5251
5252 -- lwarpmk limages:
5253 -- Scan the <sourcename>.txt file to create lateximages.
5254
5255 elseif arg[1] == "limages" then
5256 loadconf ()
5257 print ("lwarpmk: Processing images.")
5258 createlateximages ()
5259 print ("lwarpmk: Done.")
5260
5261
5262 -- lwarpmk again:
5263 -- Touch the source to trigger a recompile.
5264
5265 elseif arg[1] == "again" then
5266 loadconf ()
5267 updateanddone ()
5268
5269
5270 -- lwarpmk clean:
5271 -- Remove project.aux, .toc, .lof, .lot, .log, *.idx, *.ind, *_html_inc.*, .gl*
5272
5273 elseif arg[1] == "clean" then
5274 loadconf ()
5275 removeaux ()
5276 print ("lwarpmk: Done.")
5277
5278
5279 -- lwarpmk cleanall
5280 -- Remove project.aux, .toc, .lof, .lot, .log, *.idx, *.ind, *_html_inc.*, .gl*
5281 -- and also project.pdf, project.dvi, *.html
5282
5283 elseif arg[1] == "cleanall" then
5284 loadconf ()
5285 removeaux ()
5286 os.execute ( rmname .. " " ..
5287     sourcename .. ".pdf " .. sourcename .. "_html.pdf " ..
5288     sourcename .. ".dvi " .. sourcename .. "_html.dvi " ..
5289     "*.html"
5290 )
5291 print ("lwarpmk: Done.")
5292
5293
5294 -- lwarpmk cleanlimages
5295 -- Remove images from the imagesdirectory.
5296
5297 elseif arg[1] == "cleanlimages" then
5298 loadconf ()
```

```

5299 os.execute ( rmname .. " " .. imagesdirectory .. dirslash .. "*" )
5300 print ("lwarpmk: Done.")
5301
5302 -- lwarpmk epstopdf <list of file names>
5303 -- Convert EPS files to PDF using epstopdf
5304 elseif arg[1] == "epstopdf" then
5305 convertepstopdf ()
5306 print ("lwarpmk: Done.")
5307
5308
5309 -- lwarpmk pdftosvg <list of file names>
5310 -- Convert PDF files to SVG using pdftocairo
5311 elseif arg[1] == "pdftosvg" then
5312 convertpdftosvg ()
5313 print ("lwarpmk: Done.")
5314
5315
5316 -- lwarpmk with no argument :
5317
5318 elseif (arg[1] == nil) then
5319 printhelp ()
5320
5321
5322 -- lwarpmk -v:
5323
5324 elseif (arg[1] == "-v" ) then
5325 -- The version number has already been printed
5326 -- by the lwarpmk intro.
5327
5328 -- lwarpmk -h or lwarpmk --help :
5329
5330 elseif (arg[1] == "-h" ) or (arg[1] == "--help") then
5331 printusage ()
5332
5333
5334 -- Unknown command:
5335
5336 else
5337 printhelp ()
5338 print ("\nlwarpmk: ***** Unknown command \"\"..arg[1]..\"\". *****\n")
5339 end
5340
5341 end -- not --version
5342 \end{filecontents*}
5343 % \end{Verbatim}% for syntax highlighting

5344 \end{LWRcreatelwarpmk}

```

40 Stacks

for HTML output: 5345 \begin{warphTML}



Stacks are used to remember how to close sections and list items. Before a new section is started, previously nested sections and items must be closed out (un-nested) in proper order. Note that starting a new section may close several levels of previously nested items at the same time. For example, starting a new `\section` would close any currently open subsection, subsubsection, and paragraph. General environments are not nested on the stack since they have their own close mechanism. List environments are nested, and items inside those environments are nested one level deeper still. List environments may be nested inside other list environments, and list items are nested inside list environments as well. Thus, the stack may have items which are not necessarily in order, since a description may contain an enumerate, for example. Depths to be recorded in `\LWR@closedepthone`, etc.

40.1 Assigning depths

initial depths for empty stack entries:

```
5346 \newcommand*\LWR@depthnone}{-5}
```

All sectioning depths are deeper than `LWR@depthfinished`:

```
5347 \newcommand*\LWR@depthfinished}{-4}
5348 \newcommand*\LWR@depthbook}{-2}
5349 \newcommand*\LWR@depthpart}{-1}
5350 \newcommand*\LWR@depthchapter}{0}
5351 \newcommand*\LWR@depthsection}{1}
5352 \newcommand*\LWR@depthsubsection}{2}
5353 \newcommand*\LWR@depthsubsubsection}{3}
5354 \newcommand*\LWR@depthparagraph}{4}
5355 \newcommand*\LWR@depthsubparagraph}{5}
```

Used by `\itemize`, `\enumerate`, `\description`:

```
5356 \newcommand*\LWR@depthlist}{6}
```

Used by `\item`:

```
5357 \newcommand*\LWR@depthlistitem}{7}
5358 \let\LWR@depthdescitem\LWR@depthlistitem
```

40.2 Closing actions

A stack to record the action to take to close each nesting level: Add more levels of stack if necessary for a very deeply nested document, adding to `\pushclose` and `\popclose` as well.

```
5359 \newcommand*\LWR@closeone}{% top of the stack
5360 \newcommand*\LWR@closetwo}{%
5361 \newcommand*\LWR@closethree}{%
5362 \newcommand*\LWR@closefour}{%
```

```

5363 \newcommand*{\LWR@closefive}{}
5364 \newcommand*{\LWR@closesix}{}
5365 \newcommand*{\LWR@closeseven}{}
5366 \newcommand*{\LWR@closeeight}{}
5367 \newcommand*{\LWR@closenine}{}
5368 \newcommand*{\LWR@closeten}{}
5369 \newcommand*{\LWR@closeeleven}{}
5370 \newcommand*{\LWR@closetwelve}{}

```

40.3 Closing depths

A stack to record the depth of each level:



Note that nested L^AT_EX structures may push depths which are non-sequential.

Ex:

```

\begin{itemize}
  \item{A}
  \begin{description}
    \item{B}
  \end{description}
\end{itemize}

```

```

5371 \newcommand*{\LWR@closedepthone}{\LWR@depthnone}% top of the stack
5372 \newcommand*{\LWR@closedepthtwo}{\LWR@depthnone}
5373 \newcommand*{\LWR@closedepththree}{\LWR@depthnone}
5374 \newcommand*{\LWR@closedepthfour}{\LWR@depthnone}
5375 \newcommand*{\LWR@closedepthfive}{\LWR@depthnone}
5376 \newcommand*{\LWR@closedepthsix}{\LWR@depthnone}
5377 \newcommand*{\LWR@closedepthseven}{\LWR@depthnone}
5378 \newcommand*{\LWR@closedeptheight}{\LWR@depthnone}
5379 \newcommand*{\LWR@closedepthnine}{\LWR@depthnone}
5380 \newcommand*{\LWR@closedephten}{\LWR@depthnone}
5381 \newcommand*{\LWR@closedeptheleven}{\LWR@depthnone}
5382 \newcommand*{\LWR@closedephtwelve}{\LWR@depthnone}

```

40.4 Pushing and popping the stack

`\LWR@pushclose {<sectiontype>}`

Pushes one return action and its L^AT_EX depth onto the stacks.

```

5383 \NewDocumentCommand{\LWR@pushclose}{m}
5384 {%
5385 \global\let\LWR@closetwelve\LWR@closeeleven%
5386 \global\let\LWR@closeeleven\LWR@closeten%
5387 \global\let\LWR@closeten\LWR@closenine%
5388 \global\let\LWR@closenine\LWR@closeeight%

```

```

5389 \global\let\LWR@closeeight\LWR@closeseven%
5390 \global\let\LWR@closeseven\LWR@closesix%
5391 \global\let\LWR@closesix\LWR@closefive%
5392 \global\let\LWR@closefive\LWR@closefour%
5393 \global\let\LWR@closefour\LWR@closethree%
5394 \global\let\LWR@closethree\LWR@closetwo%
5395 \global\let\LWR@closetwo\LWR@closeone%
5396 \global\csletcs{LWR@closeone}{LWR@printclose#1}%
5397 \global\let\LWR@closedepthtwelve\LWR@closedeptheleven%
5398 \global\let\LWR@closedeptheleven\LWR@closedephten%
5399 \global\let\LWR@closedephten\LWR@closedepthnine%
5400 \global\let\LWR@closedepthnine\LWR@closedeptheight%
5401 \global\let\LWR@closedeptheight\LWR@closedepthseven%
5402 \global\let\LWR@closedepthseven\LWR@closedepthsix%
5403 \global\let\LWR@closedepthsix\LWR@closedepthfive%
5404 \global\let\LWR@closedepthfive\LWR@closedepthfour%
5405 \global\let\LWR@closedepthfour\LWR@closedepththree%
5406 \global\let\LWR@closedepththree\LWR@closedepthtwo%
5407 \global\let\LWR@closedepthtwo\LWR@closedepthone%
5408 \global\csletcs{LWR@closedepthone}{LWR@depth#1}%
5409 }

```

\LWR@popclose Pops one action and its depth off the stacks.

```

5410 \newcommand*{\LWR@popclose}
5411 {%
5412 \global\let\LWR@closeone\LWR@closetwo%
5413 \global\let\LWR@closetwo\LWR@closethree%
5414 \global\let\LWR@closethree\LWR@closefour%
5415 \global\let\LWR@closefour\LWR@closefive%
5416 \global\let\LWR@closefive\LWR@closesix%
5417 \global\let\LWR@closesix\LWR@closeseven%
5418 \global\let\LWR@closeseven\LWR@closeeight%
5419 \global\let\LWR@closeeight\LWR@closenine%
5420 \global\let\LWR@closenine\LWR@closeten%
5421 \global\let\LWR@closeten\LWR@closeeleven%
5422 \global\let\LWR@closeeleven\LWR@closetwelve%
5423 \global\let\LWR@closedepthone\LWR@closedepthtwo%
5424 \global\let\LWR@closedepthtwo\LWR@closedepththree%
5425 \global\let\LWR@closedepththree\LWR@closedepthfour%
5426 \global\let\LWR@closedepthfour\LWR@closedepthfive%
5427 \global\let\LWR@closedepthfive\LWR@closedepthsix%
5428 \global\let\LWR@closedepthsix\LWR@closedepthseven%
5429 \global\let\LWR@closedepthseven\LWR@closedeptheight%
5430 \global\let\LWR@closedeptheight\LWR@closedepthnine%
5431 \global\let\LWR@closedepthnine\LWR@closedephten%
5432 \global\let\LWR@closedephten\LWR@closedeptheleven%
5433 \global\let\LWR@closedeptheleven\LWR@closedepthtwelve%
5434 }

5435 \end{warpHTML}

```

41 Data arrays

These macros are similar to the `arrayjobx` package, except that `\LWR@setexpararray`'s argument is expanded only once when assigned.

`name` has no backslash, `index` can be a number or a text name, and an empty value must be `\relax` instead of empty.

To assign an empty value:

```
\LWR@setexpararray{name}{index}{}
```

for HTML output: 5436 `\begin{warpHTML}`

```
\LWR@setexpararray {<name>} {<index>} {<contents>}
```

```
5437 \NewDocumentCommand{\LWR@setexpararray}{m m m}{%
5438   \let\LWR@temp@par\par%
5439   \let\par\relax%
5440   \edef\LWR@thisexpararrayname{#1#2}%
5441   \ifstrempy{#3}%
5442     {\csdef{\LWR@thisexpararrayname}{}}%
5443     {\csdef{\LWR@thisexpararrayname}{#3}}%
5444   \let\par\LWR@temp@par%
5445 }
```


```
\LWR@getexpararray {<name>} {<index>}
```

```
5446 \newcommand*{\LWR@getexpararray}[2]{%
5447   \@nameuse{#1#2}%
5448 }
```

```
5449 \end{warpHTML}
```

42 Localizing catcodes

for HTML & PRINT: 5450 `\begin{warppall}`

 **Misplaced alignment tab character &** Place `\StartDefiningTabulars` and `\StopDefiningTabulars` before and after defining macros or environments which include the tabular & character in their definitions.

The catcode of & must be changed before the definitions begin, and must be restored afterwards. Doing so avoids the error

Misplaced alignment tab character &.

`\StartDefiningTabulars` Place before defining something with & in it.

```
5451 \newcommand{\StartDefiningTabulars}{%
5452   \LWR@traceinfo{StartDefiningTabulars}%
```

```

5453 \warpHTMLonly{\catcode'\&=\active}%
5454 }

```

`\StopDefiningTabulars` Place after defining something with `&` in it.

```

5455 \newcommand{\StopDefiningTabulars}{%
5456 \LWR@traceinfo{StopDefiningTabulars}%
5457 \warpHTMLonly{\catcode'\&=4}%
5458 }

```

Bool `LWR@mathmacro` True if currently defining math macros. Used to disable svg math hashing and MathJax math contents while defining a macro using inline math. Begin a macro, it is not guaranteed that the contents are static, and so the image must be unique. The contents also almost certainly will not be parsed correctly by MathJax.

```

5459 \newbool{LWR@mathmacro}
5460 \boolfalse{LWR@mathmacro}

```

`\StartDefiningMath` Place before defining something with `$` in it.

```

5461 \newcommand{\StartDefiningMath}{%
5462 \LWR@traceinfo{StartDefiningMath}%
5463 \warpHTMLonly{\catcode'\$=\active}%
5464 }

```

`\StopDefiningMath` Place after defining something with `$` in it.

```

5465 \newcommand{\StopDefiningMath}{%
5466 \LWR@traceinfo{StopDefiningMath}%
5467 \warpHTMLonly{\catcode'\$=3}% math shift
5468 }

5469 \end{warpall}

```

43 Localizing dynamic math

Inline svg math usually uses a hash of its contents to generate `lateximages` which are reusable for multiple instances with the same contents. If the contents may change for each use, such as depending on the current value of a counter, then `\inlinemathother` must be used before the inline math expression, and `\inlinemathnormal` must be used after.

For MathJax, the inline math expression is usually printed for MathJax to interpret. When marked as dynamic math, the following inline math expression will be displayed as an unhashed inline svg image instead.

For existing code and packages, it may be possible to patch macros after they have been defined, using the `xpatch` package, which is pre-loaded by `lwarp`:

```

\patchcmd{\macroname}
  {$math expression$}
  {\inlinemathother$math expression$\inlinemathnormal}
  {}
  {\typeout{Error patching macroname.}}

```

for HTML & PRINT: 5470 \begin{warpall}

Bool LWR@dynamicmath True to mark inline math which is dynamic in nature, thus should not be hashed for reuse.
 Default: false

```

5471 \newbool{LWR@dynamicmath}
5472 \boolfalse{LWR@dynamicmath}

```

\inlinemathother Place before using \$... \$ or \ (... \) if the contents of the math are not static, depending on counters or dynamic macros.

```

5473 \newcommand{\inlinemathother}{%
5474 \LWR@traceinfo{inlinemathother}%
5475 \booltrue{LWR@dynamicmath}%
5476 }

```

\inlinemathnormal Place after using \$... \$ or \ (... \) with dynamic contents.

```

5477 \newcommand{\inlinemathnormal}{%
5478 \LWR@traceinfo{inlinemathnormal}%
5479 \boolfalse{LWR@dynamicmath}%
5480 }

```

```

5481 \end{warpall}

```

44 HTML entities

for HTML output: 5482 \begin{warpHTML}

HTML Unicode entities:

```

5483 \let\LWR@origampersand\&

```

\HTMLentity {<entitytag>}

```

5484 \newcommand*{\HTMLentity}[1]{%
5485 % \LWR@traceinfo{HTMLentity \detokenize{#1}}%
5486 \begingroup%
5487 \LWR@FBcancel%
5488 \LWR@origampersand#1;%
5489 \endgroup%
5490 % \LWR@traceinfo{HTMLentity done}%
5491 }

```

\HTMLUnicode {*<hex_unicode>*}

5492 \newcommand*{\HTMLUnicode}[1]{\HTMLentity{\LWR@origpound{ }x#1}}

\&

5493 \renewrobustcmd*{\&}{\HTMLentity{amp}}

\textless

5494 \let\LWR@origtextless\textless

5495 \renewrobustcmd*{\textless}{\HTMLentity{lt}}

\textgreater

5496 \let\LWR@origtextgreater\textgreater

5497 \renewrobustcmd*{\textgreater}{\HTMLentity{gt}}

5498 \end{warpHTML}

45 HTML filename generation

The filename of the homepage is set to \HomeHTMLFilename.html. The filenames of additional sections start with \HTMLFilename, to which is appended a section number or a simplified section name, depending on FileSectionNames.

for HTML & PRINT: 5499 \begin{warpall}

\BaseJobname The \jobname of the printed version, even if currently compiling the HTML version. I.e. this is the \jobname without _html appended. This is used to set \HomeHTMLFilename if the user did not provide one.

5500 \providecommand*{\BaseJobname}{\jobname}

\HTMLFilename The prefix for all generated HTML files other than the home page, defaulting to empty. See section 7.6.1.

5501 \providecommand*{\HTMLFilename}{}

\HomeHTMLFilename The filename of the home page, defaulting to the \BaseJobname. See section 7.6.1.

5502 \providecommand*{\HomeHTMLFilename}{\BaseJobname}

\SetHTMLFileNumber {*<number>*}

Sets the file number for the next file to be generated. 0 is the home page. Use just before the next sectioning command, and set it to one less than the desired number

of the next section. May be used to generate numbered groups of nodes such as 100+ for one chapter, 200+ for another chapter, etc.

```
5503 \newcommand*{\SetHTMLFileNumber}[1]{%
5504     \setcounter{LWR@htmlfilenumber}{#1}%
5505 }
```

Bool **FileSectionNames** Selects how to create HTML file names.

Defaults to use section names in the filenames.

```
5506 \newbool{FileSectionNames}
5507 \booltrue{FileSectionNames}
```

```
5508 \end{warpall}
```

for HTML output: 5509 \begin{warpHTML}

Updated each time a new HTML file is begun. Used to provide HTML previous/next web page links.

```
5510 \newcounter{LWR@HTMLpagenum}
5511 \setcounter{LWR@HTMLpagenum}{0}
```

Ctrl **LWR@htmlseqfilenumber** A sequential count of the number of each HTML file as it is being created. Number 0 is the home page. Unlike `\LWR@htmlfilenumber`, this one is known to increment by one for each file. This is used to generate previous /next links for each web page, via labels called `\BaseJobname-autofile-*`, and the last page is also labelled `\BaseJobname-autofile-last`.

```
5512 \newcounter{LWR@htmlseqfilenumber}
5513 \setcounter{LWR@htmlseqfilenumber}{0}
```

Bool **LWR@setseqfilelabel** At each new HTML file, this is false until a sectional unit is used, at which point this is set true and a label is placed. In this way, the previous/next labels will point to a named section.

```
5514 \newbool{LWR@setseqfilelabel}
5515 \setbool{LWR@setseqfilelabel}{false}
```

Ctrl **LWR@htmlfilenumber** Records the number of each HTML file as it is being created. Number 0 is the home page. This might not be sequential, as the user may use `\SetHTMLFileNumber` to create groups of numbered nodes.

```
5516 \newcounter{LWR@htmlfilenumber}
5517 \setcounter{LWR@htmlfilenumber}{0}
```

\LWR@htmlsectionfilename `{\htmlfilenumber or name}`

Prints the filename for a given section: `\HTMLFilename{}filenumber/name.html`

```

5518 \newcommand*{\LWR@htmlsectionfilename}[1]{%
5519 \LWR@traceinfo{\LWR@htmlsectionfilename A !\detokenize{#1}!}%
5520 \begingroup%

```

Disable CJK xpinyin while generating file names.

```

5521 \LWR@disablepinyin%

```

Section 0 or empty is given the home filename. The filename must be detokenized for underscores.

```

5522 % \LWR@traceinfo{about to assign temp}%
5523 \LWR@sanitize{#1}%
5524 \LWR@traceinfo{about to compare with ??}%
5525 \ifdefstring{\LWR@sanitized}{??}
5526     {\LWR@traceinfo{found ??}}%
5527     {\LWR@traceinfo{not found ??}}%
5528 \LWR@traceinfo{about to compare with zero or empty}%
5529 \ifboolexpr{
5530     test {\ifdefstring{\LWR@sanitized}{0}} or
5531     test {\ifdefstring{\LWR@sanitized}{}} or
5532     test {\ifdefstring{\LWR@sanitized}{??}}
5533 }
5534 {%
5535     \LWR@traceinfo{\LWR@htmlsectionfilename B \HomeHTMLFilename.html}%
5536     \HomeHTMLFilename.html%
5537 }%

```

For a L^AT_EX section named “Index” or “index” without a prefix, create a filename with a trailing -0 to avoid colliding with the HTML filename index.html:

```

5538 {%
5539     \LWR@traceinfo{\LWR@htmlsectionfilename C \LWR@sanitized}%
5540     \ifboolexpr{
5541         test{\ifdefvoid{\HTMLFilename}} and
5542         (
5543             test{\ifdefstring{\LWR@sanitized}{Index}} or
5544             test{\ifdefstring{\LWR@sanitized}{index}}
5545         )
5546     }%
5547     {%
5548         \LWR@traceinfo{Adding a zero to the index filename.}%
5549         \LWR@sanitized-0.html%
5550     }%

```

Otherwise, create a filename with the chosen prefix:

```

5551     {%
5552         \HTMLFilename\LWR@isolate{\LWR@sanitized}.html%
5553     }%
5554 }%
5555 \LWR@traceinfo{\LWR@htmlsectionfilename Z}%
5556 \endgroup%
5557 }

```

`\LWR@htmlrefsectionfilename` {*⟨label⟩*}

Prints the filename for the given label

```
5558 \newcommand*{\LWR@htmlrefsectionfilename}[1]{%
5559     \LWR@traceinfo{\LWR@htmlrefsectionfilename: !\detokenize{#1}!}%
```

`\LWR@nullfonts` to allow math in a section name.

```
5560     \begingroup%
5561     \LWR@nullfonts%
5562     \LWR@htmlsectionfilename{\LWR@htmlfileref{#1}}%
5563     \endgroup%
5564     \LWR@traceinfo{\LWR@htmlrefsectionfilename: done}%
5565 }
```

```
5566 \end{warpHTML}
```

46 Homepage link

for HTML & PRINT: 5567 `\begin{warpall}`

`\linkhomename` Holds the default name for the home link.

```
5568 \newcommand{\linkhomename}{Home}
```

```
5569 \end{warpall}
```

for HTML output: 5570 `\begin{warpHTML}`

`\LinkHome` May be used wherever you wish to place a link back to the homepage. The filename must be detokenized for underscores.

```
5571 \newcommand*{\LinkHome}{%
5572     \LWR@subhyperrefclass{\HomeHTMLFilename.html}{\linkhomename}{linkhome}%
5573 }
```

```
5574 \end{warpHTML}
```

for PRINT output: 5575 `\begin{warpprint}`

`\LinkHome` May be used wherever you wish to place a link back to the homepage. For print output, if `hyperref` is available a hyperlink to the first page is used, named by `\linkhomename`. If `hyperref` is not available, a `pageref` is used instead.

`\BaseJobname` is included in the link label in case multiple documents are cross-referenced.

```

5576 \AtBeginDocument{
5577 \ifundefined{hyperref}{
5578   \newcommand*\LinkHome{%
5579     \linkhomenam\ --- page \pageref{\BaseJobname-page-LWRfirstpage}%
5580   }
5581 }{
5582   \newcommand*\LinkHome{%
5583     \hyperref[\BaseJobname-page-LWRfirstpage]{\linkhomenam}%
5584   }
5585 }
5586 }
5587
5588 \AfterEndPreamble{\label{\BaseJobname-page-LWRfirstpage}}

5589 \end{warpprint}

```

for HTML output: 5590 \begin{warppHTML}

\LWR@topnavigation Creates a link to the homepage at the top of the page for use when the window is too narrow for the sideroc.

```

5591 \newcommand*\LWR@topnavigation{%
5592   \LWRhtmlclassline{nav}{topnavigation}{\LinkHome}
5593 }

```

\LWR@botnavigation Creates a link to the homepage at the bottom of the page for use when the window is too narrow for the sideroc.

```

5594 \newcommand*\LWR@botnavigation{%
5595   \LWRhtmlclassline{nav}{botnavigation}{\LinkHome}
5596 }

```

```

5597 \end{warppHTML}

```

47 Previous/next navigation links

for HTML & PRINT: 5598 \begin{warppall}

\linkpreviousname What to call the link to the previous web page.

```

5599 \newcommand*\linkpreviousname{Previous}

```

\linknextname What to call the link to the next web page.

```

5600 \newcommand*\linknextname{Next}

```

```

5601 \end{warppall}

```

for PRINT output: 5602 \begin{warpprint}

`\LinkPrevious` Creates a link to the previous web page if there is one.

```
5603 \newcommand*{\LinkPrevious}{}
```

`\LinkNext` Creates a link to the next web page if there is one.

```
5604 \newcommand*{\LinkNext}{}

5605 \end{warpprint}
```

for HTML output: 5606 `\begin{warppHTML}`

`\LinkPrevious` Creates a link to the previous web page if there is one.

The links refer to the L^AT_EX labels `\Basejobname-autofile-*`

```
5607 \newcommand*{\LinkPrevious}{%
5608   \ifnumless{\value{LWR@htmlseqfilenumber}}{1}}{}{%
5609     \setcounter{LWR@tempcountone}{\value{LWR@htmlseqfilenumber}-1}%
5610     \LWR@subhyperrefclass{%
5611       \LWR@htmlrefsectionfilename{%
5612         \BaseJobname-autofile-\arabic{LWR@tempcountone}%
5613       }%
5614     }{\linkpreviousname}{linkhome}%
5615   }%
5616 }
```

`\LinkNext` Creates a link to the next web page if there is one.

The links refer to the L^AT_EX labels `\Basejobname-autofile-*`
and the last is the label `\Basejobname-autofile-last`

```
5617 \newcommand*{\LinkNext}{%
5618   \ifcsdef{r@\BaseJobname-autofile-last@lwarp}{%
5619     \edef\LWR@tempone{%
5620       \LWR@htmlfileref{\BaseJobname-autofile-\arabic{LWR@htmlseqfilenumber}}}%
5621     }%
5622     \edef\LWR@temptwo{%
5623       \LWR@htmlfileref{\BaseJobname-autofile-last}%
5624     }%
5625     \ifdefequal{\LWR@tempone}{\LWR@temptwo}}{}{%
5626       \setcounter{LWR@tempcountone}{\value{LWR@htmlseqfilenumber}+1}%
5627       \LWR@subhyperrefclass{%
5628         \LWR@htmlrefsectionfilename{%
5629           \BaseJobname-autofile-\arabic{LWR@tempcountone}%
5630         }%
5631       }{\linknextname}{linkhome}%
5632     }%
5633   }{}%
5634 }

5635 \end{warppHTML}
```

48 \LWRPrintStack diagnostic tool



Diagnostics tool: Prints the L^AT_EX nesting depth values for the stack levels. \LWR@startpars is used before printing the stack, so that \LWRPrintStack may be called from anywhere in the normal text flow.

for HTML output: 5636 \begin{warpHTML}

\LWRPrintStack Prints the closedepth stack.

```
5637 \newcommand*{\LWR@subprintstack}{
5638 \LWR@closedepthone\ \LWR@closedepthtwo\ \LWR@closedepththree\
5639 \LWR@closedepthfour\ \LWR@closedepthfive\ \LWR@closedepthsix\
5640 \LWR@closedepthseven\ \LWR@closedeptheight\ \LWR@closedepthnine\
5641 \LWR@closedepthten\ \LWR@closedeptheleven\ \LWR@closedepthtwelve\
5642 }
5643
5644 \newcommand*{\LWRPrintStack}{
5645 \LWR@startpars
5646 \LWR@subprintstack
5647 }

5648 \end{warpHTML}
```

for PRINT output: 5649 \begin{warpprint}

```
5650 \newcommand*{\LWRPrintStack}{}

5651 \end{warpprint}
```

49 Closing stack levels

for HTML output: 5652 \begin{warpHTML}

Close one nested level:

```
5653 \newcommand*{\LWR@closeoneprevious}{%
5654
5655 \LWR@closeone
5656
5657 \LWR@popclose
5658 }
```

\LWR@closeprevious {*<sectintype>*} Close everything up to the given depth:

```
5659 \newcommand*{\LWR@closeprevious}[1]{
5660 \LWR@traceinfo{%
5661   \LWR@closeprevious to depth \csuse{\LWR@depth#1}, %
5662   depths are \LWR@subprintstack%
5663 }%
```

Close any pending paragraph:

```
5664 \LWR@stoppars%
```

Close anything nested deeper than the desired depth. First close anything deeper, then at most one of the same level.

```
5665 \whileboolexpr{test{\ifnumcomp{\LWR@closedepthone}{>}{\csuse{\LWR@depth#1}}}}%
5666 {%
5667   \LWR@traceinfo{\LWR@closeprevious: closing out depth \LWR@closedepthone}%
5668   \LWR@closeoneprevious%
5669 }%
5670 \ifboolexpr{test{\ifnumcomp{\LWR@closedepthone}{=}{\csuse{\LWR@depth#1}}}}%
5671 {%
5672   \LWR@traceinfo{\LWR@closeprevious: closing out depth \LWR@closedepthone}%
5673   \LWR@closeoneprevious%
5674 }{}%
5675 \LWR@traceinfo{\LWR@closeprevious: done, depths are \LWR@subprintstack}%
5676 }

5677 \end{warpHTML}
```

50 PDF pages and styles

for HTML output: 5678 \begin{warpHTML}

`\LWR@forcenewpage` New PDF page a before major environment.

This is used just before major environments, such as verse. Reduces the chance of an environment overflowing the HTML PDF output page.

```
5679 \newcommand{\LWR@forcenewpage}{%
5680 \LWR@traceinfo{\LWR@forcenewpage}%
5681 \ifinner\else%
5682 \LWR@stoppars\LWR@maybe@orignewpage\LWR@startpars%
5683 \fi%
5684 }
```

`\pagestyle`, etc. are nullified for HTML output.

`\pagestyle` {*style*}

```
5685 \renewcommand*{\pagestyle}[1]{}%
```

`\thispagestyle` {*style*}

```
5686 \renewcommand*{\thispagestyle}[1]{}%
```

`\markboth` $\{\langle left \rangle\} \{\langle right \rangle\}$

5687 `\renewcommand*\markboth[2]{}`

`\markright` $\{\langle right \rangle\}$

5688 `\renewcommand*\markright[1]{}`

`\raggedbottom`

5689 `\renewcommand*\raggedbottom{}`

`\flushbottom`

5690 `\renewcommand*\flushbottom{}`

`\sloppy`

5691 `\renewcommand*\sloppy{}`

`\fussy`

5692 `\renewcommand*\fussy{}`

`\pagenumbering` $\ast \{\langle commands \rangle\}$

5693 `\RenewDocumentCommand{\pagenumbering}{s m}{}`

5694 `\end{warpHTML}`

51 HTML tags, spans, divs, elements

for HTML output: 5695 `\begin{warpHTML}`

51.1 Mapping L^AT_EX sections to HTML sections

```
5696 \newcommand*\LWR@tagtitle{h1}
5697 \newcommand*\LWR@tagtitleend{/h1}
5698 \newcommand*\LWR@tagbook{div class="book"}
5699 \newcommand*\LWR@tagbookend{/div}
5700 \newcommand*\LWR@tagpart{h2}
5701 \newcommand*\LWR@tagpartend{/h2}
5702 \newcommand*\LWR@tagchapter{h3}
5703 \newcommand*\LWR@tagchapterend{/h3}
5704 \newcommand*\LWR@tagsection{h4}
5705 \newcommand*\LWR@tagsectionend{/h4}
```

```

5706 \newcommand*\LWR@tagsubsection}{h5}
5707 \newcommand*\LWR@tagsubsectionend}{/h5}
5708 \newcommand*\LWR@tagsubsubsection}{h6}
5709 \newcommand*\LWR@tagsubsubsectionend}{/h6}
5710 \newcommand*\LWR@tagparagraph{\span class="paragraph"}
5711 \newcommand*\LWR@tagparagraphend}{/span}
5712 \newcommand*\LWR@tagsubparagraph{\span class="subparagraph"}
5713 \newcommand*\LWR@tagsubparagraphend}{/span}
5714
5715 \newcommand*\LWR@tagregularparagraph}{p}

```

51.2 Babel-French tag modifications

Adjust babel-french for HTML spaces. So far, this only works for *pdf_latex* and *xelatex*.

(Emulates or patches code by DANIEL FLIPO.)

```

5716 \providecommand*\LWR@FBcancel{}
5717
5718 \AtBeginDocument{%

```

In some circumstances, \NoAutoSpacing may be defined when \frenchbsetup is not.

```

5719 \ifundefined{NoAutoSpacing}%
5720   {}%
5721   {%
5722     \LetLtxMacro\LWR@FBcancel\NoAutoSpacing%
5723   }%
5724
5725 \ifundefined{frenchbsetup}%
5726   {}%
5727   {%
5728     \frenchbsetup{FrenchFootnotes=false}%
5729 %
5730     \renewrobustcmd*\FBcolonspace{%
5731       \begingroup%
5732       \LWR@FBcancel%
5733       \LWR@origampersand{}nbsp;%
5734       \endgroup%
5735     }%
5736     \renewrobustcmd*\FBthinspace{%
5737       \begingroup%
5738       \LWR@FBcancel%
5739       \LWR@origampersand\LWR@origpound{x202f;% \,
5740       \endgroup%
5741     }%
5742     \renewrobustcmd*\FBguillspace{%
5743       \begingroup%
5744       \LWR@FBcancel%
5745       \LWR@origampersand{}nbsp;% ~, for \og xyz \fg{}
5746       \endgroup%
5747     }%

```

```

5748 \DeclareDocumentCommand{\FBmedkern}{}{%
5749     \begingroup%
5750     \LWR@FBcancel%
5751     \LWR@origampersand\LWR@origpound{x202f;% \,
5752     \endgroup%
5753 }%
5754 \DeclareDocumentCommand{\FBthickkern}{}{%
5755     \begingroup%
5756     \LWR@FBcancel%
5757     \LWR@origampersand{ }nbsp;% ~
5758     \endgroup%
5759 }%
5760 \renewrobustcmd*{~}{\HTMLentity{nbsp}}% was overwritten by babel-french
5761 \iffBunicode%
5762 \else%
5763     \DeclareTextSymbol{\FBtextellipsis}{LY1}{133}%
5764     \DeclareTextCommandDefault{\FBtextellipsis}{\textellipsis\xspace}%
5765 \fi%
5766 }%
5767 }

```

51.3 HTML output formatting

Helps format the output HTML code for human readability.

`\LWR@indentHTML` Newline and indent the output HTML code.

```

5768 \newcommand*{\LWR@indentHTML}{%
5769     \LWR@orignewline\LWR@origrule{2em}{0pt}%
5770 }

```

`\LWR@indentHTMLtwo` Newline and indent the output HTML code.

```

5771 \newcommand*{\LWR@indentHTMLtwo}{%
5772     \LWR@orignewline\LWR@origrule{4em}{0pt}%
5773 }

```

51.4 HTML tags

`\LWR@htmltagc` `{\tag}` Break ligatures and use upright apostrophes in HTML tags.

`\protect` is in case the tag appears in TOC, LOF, LOT.

```

5774 \newcommand*{\LWR@htmltagc}[1]{%
5775     \LWR@traceinfo{\LWR@htmltagc !\detokenize{#1}!}%
5776     \begingroup%
5777     \LWR@FBcancel%
5778     \ifmmode\else\protect\LWR@print@normalfont\protect\LWR@origttfamily\fi%
5779     \protect\LWR@origtextless%
5780     \LWR@isolate{#1}%

```

```

5781 \protect\LWR@origtextgreater%
5782 \endgroup%
5783 }

```

`\LWR@spanwarnformat` {*{object}*}

Warns if the given object is used inside a span.

```

5784 \newcommand*\LWR@spanwarnformat}[1]{%
5785     \ifnumcomp{\value{LWR@spandepth}}{>}{0}{%
5786         \PackageWarning{lwarp}{%
5787             A #1 is being used inside a span.\MessageBreak
5788             Formatting may be lost,%
5789         }%
5790     }{}%
5791 }

```

`\LWR@spanwarninvalid` {*{object}*}

Warns if the given object is used inside a span.

```

5792 \newcommand*\LWR@spanwarninvalid}[1]{%
5793     \ifnumcomp{\value{LWR@spandepth}}{>}{0}{%
5794         \PackageWarning{lwarp}{%
5795             A #1 is being used inside a span.\MessageBreak
5796             This generates invalid HTML,%
5797         }%
5798     }{}%
5799 }

```

Env `LWR@nestspan` Disable minipage, \parbox, and HTML <div>s inside a .

⚠ `\begin{LWR@nestspan}` must follow the opening tag to allow a paragraph to start if the span is at the beginning of a new paragraph.

⚠ `\end{LWR@nestspan}` must follow the or a <p> may appear inside the span.

```

5800 \newcommand*\LWR@nestspanitem{%
5801     \if@newlist\else{\LWR@htmltagc{br /}}\fi%
5802     \LWR@origitem%
5803 }
5804
5805 \newenvironment*LWR@nestspan
5806 {%
5807     \LWR@traceinfo{LWR@nestspan starting}%
5808     \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}%
5809     {%
5810         \LWR@traceinfo{LWR@nestspan: inside a lateximage}%
5811     }%
5812     {% not in a lateximage
5813         \LWR@traceinfo{LWR@nestspan: NOT inside a lateximage}%
5814         \addtocounter{LWR@spandepth}{1}%

```

Nullify several objects inside the span:

```

5815 \RenewDocumentEnvironment{minipage}{O{t} o O{t} m}%
5816 {\LWR@spanwarnformat{minipage or \protect\parbox}}%
5817 {}%
5818 \RenewDocumentEnvironment{BlockClass}{o m}%
5819 {\LWR@spanwarnformat{multi-paragraph object}}%
5820 {}%
5821 \renewcommand{\BlockClassSingle}[2]{%
5822 {\LWR@spanwarnformat{multi-paragraph object}}%
5823 ##2%
5824 }%
5825 \renewcommand{\LWR@forcenewpage}{}%
5826 \renewcommand{\LWR@liststart}{%
5827 \let\item\LWR@nestspanitem%
5828 }%
5829 \renewcommand{\LWR@listend}{\LWR@htmltagc{br /}\LWR@htmltagc{br /}}%
5830 \renewenvironment{quote}{\LWR@htmltagc{br /}\LWR@htmltagc{br /}}%
5831 \renewenvironment{quotation}{\LWR@htmltagc{br /}\LWR@htmltagc{br /}}%
5832}% not in a lateximage
5833 \LWR@traceinfo{LWR@nestspan starting: done}%
5834}% starting env
5835}% ending env
5836 \LWR@traceinfo{LWR@nestspan ending}%
5837 \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}%
5838 {}%
5839 {\addtocounter{LWR@spandepth}{-1}}%
5840 \LWR@traceinfo{LWR@nestspan ending: done}%
5841 }
5842
5843 \AfterEndEnvironment{LWR@nestspan}{\global\let\par\LWR@closeparagraph}

```

`\LWR@htmlspan` `{\langle tag \rangle}{\langle text \rangle}`



`\LWR@spandepth` is used to ensure that paragraph tags are not generated inside a span. The exact sequence of when to add and subtract the counter is important to correctly handle the paragraph tags before and after the span.

```

5844 \NewDocumentCommand{\LWR@htmlspan}{m +m}{%
5845 \LWR@ensuredoingapar%
5846 \LWR@htmltagc{#1}%
5847 \begin{LWR@nestspan}%
5848 #2%
5849 \LWR@htmltagc{/#1}%
5850 \end{LWR@nestspan}%
5851 }

```

`\LWR@htmlspanclass` `[\langle style \rangle]{\langle class \rangle}{\langle text \rangle}`

```

5852 \NewDocumentCommand{\LWR@htmlspanclass}{o m +m}{%
5853 \LWR@traceinfo{LWR@htmlspanclass |#1|#2|}%
5854 \LWR@ensuredoingapar%
5855 \LWR@subhtmltagc{span}[#1][#2]%
5856 \begin{LWR@nestspan}%

```

```

5857 #3%
5858 \LWR@htmltagc{/span}%
5859 \LWR@traceinfo{LWR@htmlspanclass done}%
5860 \end{LWR@nestspan}%
5861 }

```

`\LWR@htmltag {<tag>}`

Print an HTML tag: <tag>

```

5862 \newcommand*{\LWR@htmltag}[1]{%
5863 % \LWR@traceinfo{LWR@htmltagb !\detokenize{#1}!}%
5864 \LWR@htmltagc{#1}%
5865 % \LWR@traceinfo{LWR@htmltagb: done}%
5866 }

```

51.5 Block tags and comments

In the following, `\origttfamily` breaks ligatures, which may not be used for HTML codes:

```

\LWR@htmlopencomment
\LWR@htmlclosecomment
5867 \newcommand*{\LWR@htmlopencomment}{%
5868 {%
5869 % \LWR@traceinfo{LWR@htmlopencomment}%
5870 \begingroup%
5871 \LWR@FBcancel%
5872 \ifmmode\else\protect\LWR@print@normalfont\protect\LWR@origttfamily\fi%
5873 \LWR@print@mbox{\LWR@origtextless{}}!-\/-%
5874 \endgroup%
5875 }%
5876 }
5877
5878 \newcommand*{\LWR@htmlclosecomment}{%
5879 {%
5880 % \LWR@traceinfo{LWR@htmlclosecomment}%
5881 \begingroup%
5882 \LWR@FBcancel%
5883 \ifmmode\else\protect\LWR@print@normalfont\protect\LWR@origttfamily\fi%
5884 \LWR@print@mbox{-\/-\LWR@origtextgreater{}}%
5885 \endgroup%
5886 }%
5887 }

```

`\LWR@htmlcomment {<comment>}`

```

5888 \newcommand{\LWR@htmlcomment}[1]{%
5889 \LWR@htmlopencomment}%
5890 {%
5891 \LWR@print@normalfont%

```

```

5892 \LWR@origttfamily% break ligatures
5893 #1%
5894 }%
5895 \LWR@htmlclosecomment{}}

```

`\LWR@htmlblockcomment` {*<comment>*}

```

5896 \newcommand{\LWR@htmlblockcomment}[1]
5897 {\LWR@stoppars\LWR@htmlcomment{#1}\LWR@startpars}

```

`\LWR@htmlblocktag` {*<tag>*} print a stand-alone HTML tag

```

5898 \newcommand*{\LWR@htmlblocktag}[1]{%
5899 \LWR@stoppars%
5900 \LWR@htmltag{#1}%
5901 \LWR@startpars%
5902 }

```

51.6 Div class and element class

`\LWR@subhtmllementclass` {*<element>*} [*<style>*] {*<class>*}

Factored and reused in several places.

The trailing spaces allow more places for a line break.

The use of `\textquotedbl` instead of " provides improved compatibility with xeCJK.

```

5903 \NewDocumentCommand{\LWR@subhtmllementclass}{m O{} m}{%
5904 \LWR@traceinfo{\LWR@subhtmllementclass !#1!#2!#3!}%
5905 \ifblank{#2}%
5906 {% empty option
5907 \LWR@htmltag{%
5908 #1 % space
5909 class=\textquotedbl#3\textquotedbl\ % space
5910 }%
5911 }%
5912 {% non-empty option
5913 \LWR@htmltag{%
5914 #1\LWR@indentHTML%
5915 class=\textquotedbl#3\textquotedbl\LWR@indentHTML%
5916 style=\textquotedbl#2\textquotedbl\LWR@orignewline%
5917 }%
5918 }%
5919 \LWR@traceinfo{\LWR@subhtmllementclass done}%
5920 }

```

`\LWR@htmllementclass` {*<element>*} {*<class>*} [*<style>*]

```

5921 \NewDocumentCommand{\LWR@htmllementclass}{m o m}{%
5922 \LWR@stoppars%

```

```

5923 \LWR@forceemptyline%
5924 \LWR@subhtmllementclass{#1}[#2]{#3}%
5925 \LWR@startpars%
5926 }

```

\LWR@htmllementclassend {<element>} {<class>}

```

5927 \newcommand*{\LWR@htmllementclassend}[2]{%
5928 \LWR@stoppars%
5929 \LWR@htmltag{/#1}%
5930 \ifbool{HTMLDebugComments}{%
5931     \LWR@htmlcomment{End of #1 ‘‘#2’’}%
5932 }{}%
5933 \LWR@startpars%
5934 }

```

\LWR@htmldivclass [<style>] {<class>}

```

5935 \NewDocumentCommand{\LWR@htmldivclass}{o m}{%
5936 \LWR@htmllementclass{div}[#1]{#2}%
5937 }

```

\LWR@htmldivclassend {<class>}

```

5938 \newcommand*{\LWR@htmldivclassend}[1]{%
5939 \LWR@htmllementclassend{div}[#1]%
5940 }

```

51.7 Single-line elements

A single-line element, without a paragraph tag for the line of text:

\LWR@htmllementclassline {<element>} [<style>] {<class>} {<text>}

```

5941 \NewDocumentCommand{\LWR@htmllementclassline}{m o m +m}{%
5942 \LWR@stoppars
5943 \LWR@forceemptyline%
5944 \LWR@subhtmllementclass{#1}[#2]{#3}%
5945 #4%
5946 \LWR@htmltag{/#1}
5947 \LWR@startpars
5948 }

```

51.8 HTML5 semantic elements

\LWR@htmllement {<element>}

```

5949 \newcommand*{\LWR@htmllement}[1]{%
5950 \LWR@htmlblocktag{#1}
5951 }

```

`\LWR@htmlElementend` $\{\langle element \rangle\}$

```
5952 \newcommand*{\LWR@htmlElementend}[1]{%
5953 \LWR@stoppars
5954 \LWR@htmltag{/#1}
5955 \LWR@startpars
5956 }
5957
5958 \end{warpHTML}
```

51.9 High-level block and inline classes

These are high-level commands which allow the creation of arbitrary block or inline sections which may be formatted with css.

Nullified versions are provided for print mode.

For other direct-formatting commands, see section 92.

Env `BlockClass` $[\langle style \rangle] \{\langle class \rangle\}$ High-level interface for `<div>` classes.

Ex: `\begin{BlockClass}{class} text \end{BlockClass}`

for PRINT output:

```
5959 \begin{warpprint}
5960 \NewDocumentEnvironment{BlockClass}{o m}{}{}%
5961 \end{warpprint}
```

for HTML output:

```
5962 \begin{warpHTML}
5963
5964 \NewDocumentEnvironment{LWR@print@BlockClass}{o m}{}{}%
5965
5966 \NewDocumentEnvironment{LWR@HTML@BlockClass}{o m}%
5967   {\LWR@htmldivclass[#1]{#2}}
5968   {\LWR@htmldivclassend[#2]}
5969
5970 \LWR@formattedenv{BlockClass}
5971 \end{warpHTML}
```

`\BlockClassSingle` $\{\langle class \rangle\} \{\langle text \rangle\}$ A single-line `<div>`, without a paragraph tag for the line of text.

for HTML & PRINT:

```
5972 \begin{warpall}
5973 \newcommand{\BlockClassSingle}[2]{#2}
5974 \end{warpall}
```

for HTML output:

```
5975 \begin{warpHTML}
5976 \newcommand{\LWR@HTML@BlockClassSingle}[2]{%
5977   \LWR@htmlElementclassline{div}{#1}{#2}%
5978 }
5979
5980 \LWR@formatted{BlockClassSingle}
5981 \end{warpHTML}
```

`\InlineClass` (`<WP style>`) [`<style>`] {`<class>`} {`<text>`}

High-level interface for inline span classes.

(`<WP style>`) is css styling to add when formatting for a word processor import.

[`<style>`] is the css styling to add when not formatting for a word processor.

for PRINT output: 5982 `\begin{warpprint}`
 5983 `\NewDocumentCommand{\InlineClass}{D{()}}{} o m +m}{#4}%`
 5984 `\end{warpprint}`

for HTML output: 5985 `\begin{warppHTML}`
 5986 `\NewDocumentCommand{\LWR@print@InlineClass}{D{()}}{} o m +m}{#4}%`
 5987
 5988 `\NewDocumentCommand{\LWR@HTML@InlineClass}{D{()}}{} o m +m}{%`
 5989 `\ifbool{FormatWP}{%`
 5990 `\LWR@htmlspanclass[#1]{#3}{#4}%`
 5991 `}%`
 5992 `\LWR@htmlspanclass[#2]{#3}{#4}%`
 5993 `}%`
 5994 `}`
 5995
 5996 `\LWR@formatted{InlineClass}`
 5997 `\end{warppHTML}`

Env `LWR@BlockClassWP` {`<WPstyle>`} {`<HTMLstyle>`} {`<class>`} Low-level interface for `<div>` classes with an automatic float ID. These are often used when `\ifbool{FormatWP}`.

The use of `\textquotedbl` instead of " provides improved compatibility with `xeCJK`.

for PRINT output: 5998 `\begin{warpprint}`
 5999 `\NewDocumentEnvironment{LWR@BlockClassWP}{m m m}{}}%`
 6000 `\end{warpprint}`

for HTML output: 6001 `\begin{warppHTML}`
 6002 `\NewDocumentEnvironment{LWR@print@LWR@BlockClassWP}{m m m}{}}%`
 6003 `\NewDocumentEnvironment{LWR@HTML@LWR@BlockClassWP}{m m m}%`
 6004 `{%`
 6005 `\LWR@stoppars%`
 6006 `\ifbool{FormatWP}{%`
 6007 `{%`
 6008 `\addtocounter{LWR@thisautoidWP}{1}%`
 6009
 6009 `\LWR@htmltag%`
 6010 `div class=\textquotedbl#3\textquotedbl\ % space`
 6011 `id=\textquotedbl%`
 6012 `\LWR@print@mbbox{autoidWP-\arabic{LWR@thisautoidWP}}%`
 6013 `\textquotedbl%`
 6014 `\ifblank{#1}{}{ style=\textquotedbl#1\textquotedbl}%`
 6015 `}%`
 6016 `}% FormatWP`
 6017 `{% not FormatWP`
 6018 `\LWR@htmltag%`

```

6019      div class=\textquotedbl#3\textquotedbl%
6020      \ifblank{#2}{{ style=\textquotedbl#2\textquotedbl}%
6021      }%
6022 }% not FormatWP
6023 \LWR@startpars%
6024 }
6025 {\LWR@htmldivclassend{#3}}
6026
6027 \LWR@formattedenv{\LWR@BlockClassWP}
6028 \end{warpHTML}

```

51.10 Closing HTML tags

for HTML output: 6029 \begin{warpHTML}

Sections H1, H2, etc. do not need a closing HTML tag, but we add a comment for readability:

```

6030 \newcommand*{\LWR@printclosebook}
6031   {\ifbool{HTMLDebugComments}{\LWR@htmlcomment{Closing book}}{}}
6032 \newcommand*{\LWR@printclosepart}
6033   {\ifbool{HTMLDebugComments}{\LWR@htmlcomment{Closing part}}{}}
6034 \newcommand*{\LWR@printclosechapter}
6035   {\ifbool{HTMLDebugComments}{\LWR@htmlcomment{Closing chapter}}{}}
6036 \newcommand*{\LWR@printclosesection}
6037   {\ifbool{HTMLDebugComments}{\LWR@htmlcomment{Closing section}}{}}
6038 \newcommand*{\LWR@printclosesubsection}
6039   {\ifbool{HTMLDebugComments}{\LWR@htmlcomment{Closing subsection}}{}}
6040 \newcommand*{\LWR@printclosesubsubsection}
6041   {\ifbool{HTMLDebugComments}{\LWR@htmlcomment{Closing subsubsection}}{}}
6042 \newcommand*{\LWR@printcloseparagraph}
6043   {\ifbool{HTMLDebugComments}{\LWR@htmlcomment{Closing paragraph}}{}}
6044 \newcommand*{\LWR@printclosesubparagraph}
6045   {\ifbool{HTMLDebugComments}{\LWR@htmlcomment{Closing subparagraph}}{}}

```

Lists require closing HTML tags:

```

6046 \newcommand*{\LWR@printcloselistitem}
6047   {\LWR@htmltag{/li}}
6048 \newcommand*{\LWR@printclosedescitem}
6049   {\LWR@htmltag{/dd}}
6050 \newcommand*{\LWR@printcloseitemize}
6051   {\LWR@htmltag{/ul}}
6052 \newcommand*{\LWR@printcloseenumerate}
6053   {\LWR@htmltag{/ol}}
6054 \newcommand*{\LWR@printclosedescription}
6055   {\LWR@htmltag{/dl}}

6056 \end{warpHTML}

```

52 Paragraph handling

These commands generate the HTML paragraph tags when allowed and required.

Paragraph tags are or are not allowed depending on many conditions. Section 53 has high-level commands which allow paragraph-tag generation to start/stop. Even when allowed (`\LWR@doingstartpars`), tags are not generated until a \LaTeX paragraph is being used (`\LWR@doingapar`). `LWR@lateximagedepth` is used to prevent nesting tags inside a `lateximage`. `LWR@spandepth` is used to prevent nesting paragraph tags inside a paragraph, which became important inside `\fbox` commands and other spans.

for HTML output: 6057 `\begin{warpHTML}`

Ctrl `LWR@spandepth` Do not create paragraph tags inside of an HTML span.

```
6058 \newcounter{LWR@spandepth}
6059 \setcounter{LWR@spandepth}{0}
```

Bool `LWR@doingstartpars` Tells whether paragraphs may be generated.

```
6060 \newbool{LWR@doingstartpars}
6061 \boolfalse{LWR@doingstartpars}
```

Bool `LWR@doingapar` Tells whether have actually generated and are currently processing paragraph text.

```
6062 \newbool{LWR@doingapar}
6063 \global\boolfalse{LWR@doingapar}
```

`\LWR@ensuredoingapar` If are about to print something visible, and if allowed to start a new paragraph, ensure that are `LWR@doingapar`, so that paragraph tags are placed:

```
6064 \newcommand*{\LWR@ensuredoingapar}{%
6065 \ifbool{LWR@doingstartpars}%
6066 {\global\booltrue{LWR@doingapar}}%
6067 }%
6068 }
```

`\PN@parnotes@auto` Redefined by `parnotes` to print paragraph notes at the end of each paragraph.

```
6069 \def\PNN@parnotes@auto{}
```

`\LWR@openparagraph`

```
6070 \newcommand*{\LWR@openparagraph}
6071 {%
```

See if paragraph handling is enabled:

```
6072 \ifbool{LWR@doingstartpars}%
6073 {% handling pars
```

See if have already started a lateximage or a . If so, do not generate nested paragraph tags.

```
6074 \ifboolexpr{
6075     test {\ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}} or
6076     test {\ifnumcomp{\value{LWR@spandepth}}{>}{0}}
6077 }% nested par tags?
```

If so: Do nothing if already started a lateximage page. Cannot nest a lateximage. Also do nothing if already inside a . Do not nest paragraph tags inside a .

```
6078 {}% no nested par tags
```

Else: No lateximage or has been started yet, so it's OK to generate paragraph tags.

```
6079 {% yes nest par tags
```

If parnotes is used, paragraph notes are inserted before starting the next paragraph:

```
6080 \PN@parnotes@auto%
```

The opening paragraph tag:

```
6081 \LWR@htmltagc{\LWR@tagregularparagraph}\LWR@orignewline%
```

Now have started a paragraph.

```
6082 \global\booltrue{LWR@doingapar}%
```

At the end of each paragraph, generate closing tag and do regular /par stuff. (Attempting to use the `everyhook` cr hook for `\LWR@closeparagraph` does not work well.)

```
6083 \let\par\LWR@closeparagraph%
6084 }% end of yes nest par tags
6085 }% end of handling pars
6086 {}% not handling pars
6087 }
```

`\LWR@closeparagraph@br` Add an HTML break if in a span, and not in a lateximage, and not in tabular metadata. Factored from `\LWR@closeparagraph`.

```
6088 \newcommand*{\LWR@closeparagraph@br}
6089 {%
6090     \ifboolexpr{
6091         test {\ifnumcomp{\value{LWR@spandepth}}{>}{0}} and
6092         test {\ifnumcomp{\value{LWR@lateximagedepth}}{=}{0}} and
6093         not bool {LWR@intabularmetadata}
6094     }%
6095     {\unskip\LWR@htmltagc{br /}}%
6096     {}%
6097 }
```

\LWR@closeparagraph

```
6098 \newcommand*{\LWR@closeparagraph}
6099 {%
6100 % \LWR@traceinfo{\LWR@closeparagraph}%
```

See if paragraph handling is enabled:

```
6101 \ifbool{\LWR@doingapar}%
```

If currently in paragraph mode:

```
6102 {% handling pars
```

See if already started a lateximage or a :

```
6103     \ifboolexpr{
6104         test {\ifnumcomp{\value{\LWR@lateximagedepth}}{>}{0}} or
6105         test {\ifnumcomp{\value{\LWR@spandepth}}{>}{0}}
6106     }%
```

Add a parbreak if in a span, not in a lateximage, and not in table metadata.

```
6107     {% no nested par tags
6108         \LWR@closeparagraph@br%
6109     }% no nested par tags
```

If have not already started a lateximage or a :

```
6110     {% yes nest par tags
```

Print a closing tag and some extra vertical space.

(The fill seems to be required to force the caption package to create flush left caption text in the HTML.)

```
6111     \@hspacer{\fill}% \hspace*{\fill}
6112     \leavevmode\LWR@orignewline%
6113     \LWR@htmltagc{/\LWR@tagregularparagraph}%
```

No longer doing a paragraph:

```
6114     \global\boolfalse{\LWR@doingapar}%
```

Disable the special minipage & \hspace interaction until a new minipage is found:

```
6115     \global\boolfalse{\LWR@minipagethispar}%
```

If parnotes is used, paragraph notes are inserted after ending the previous paragraph:

```
6116     \PN@parnotes@auto%
6117 }% end of yes nest par tags
6118 }% end of handling pars
```

Add a parbreak if in a span, not in a lateximage, and not in table metadata.

```
6119 {% not handling pars
6120     \LWR@closeparagraph@br%
6121 }% not handling pars
```

In most cases, finish with a \LaTeX `\par`, but in the case of paragraphs between lines in a tabular fetch the next token instead:

```
6122 \ifboolexpr{%
6123     not bool {LWR@doingapar} and
6124     test {\ifnumcomp{\value{LWR@tabulardepth}}{>}{0}} and
6125     test {
6126         \ifnumcomp{\value{LWR@tabulardepth}}{=}{\value{LWR@tabularpardepth}}
6127     } and
6128     bool {LWR@intabularmetadata} and
6129     not bool {LWR@tableparcell} and
6130     test {\ifnumcomp{\value{LWR@lateximagedepth}}{=}{0}}
6131 }%
6132 {%
6133     \LWR@getmynexttoken%
6134 }{%
6135     \LWR@origpar%
6136 }%
6137 }

6138 \end{warpHTML}
```

53 Paragraph start/stop handling

These commands allow/disallow the generation of HTML paragraph tags.

Section 52 has the commands which actually generate the tags.

The everyhook package is used to generate the opening paragraph tags. The closing tags are generated by `\par`.

for HTML output: 6139 `\begin{warpHTML}`

`\LWR@startpars` Begin handling HTML paragraphs. This allows an HTML paragraph to start, but one has not yet begun.

```
6140 \newcommand*{\LWR@startpars}%
6141 {%
6142 % \LWR@traceinfo{\LWR@startpars}%
```

Ignore if inside a lateximage or ``:

```
6143 \ifboolexpr{
6144     test {\ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}} or
6145     test {\ifnumcomp{\value{LWR@spandepth}}{>}{0}}
```

```
6146 }%
6147 {}%
6148 {%
```

See if currently handling HTML paragraphs:

```
6149 \ifbool{LWR@doingstartpars}%
```

If already in paragraph mode, do nothing.

```
6150 {}%
```

If not currently in paragraph mode:

```
6151 {%
```

At the start of each paragraph, generate an opening tag:

```
6152 \PushPreHook{par}{\LWR@openparagraph}%
```

At the end of each paragraph, generate closing tag then do regular /par actions:

```
6153 \let\par\LWR@closeparagraph
6154
6155 }% an intentionally blank line
```

Are now handling paragraphs, but have not yet actually started one:

```
6156 \global\setbool{LWR@doingstartpars}{true}%
```

No <par> tag yet to undo:

```
6157 \global\boolfalse{LWR@doingapar}%
6158 }% nestspan
6159 % \LWR@traceinfo{LWR@startpars: done}%
6160 }
```

\LWR@stoppars Stop handling HTML paragraphs. Any currently open HTML paragraph is closed, and no more will be opened.

```
6161 \newcommand*{\LWR@stoppars}%
6162 {%
```

Ignore if inside a lateximage or :

```
6163 \ifboolexpr{
6164   test {\ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}} or
6165   test {\ifnumcomp{\value{LWR@spandepth}}{>}{0}}
6166 }%
6167 {}%
6168 {%
```

See if currently handling HTML paragraphs:

```
6169 \ifbool{LWR@doingapar}%
```

if currently in an HTML paragraph:

```
6170 {%
```

Print a closing tag:

```
6171 \leavevmode\LWR@orignewline%
6172 \LWR@htmltagc{/LWR@tagregularparagraph}%
6173 \LWR@orignewline%
```

No longer have an open HTML paragraph:

```
6174 \global\boolfalse{LWR@doingapar}%
```

Disable the special minipage & \hspace interaction until a new minipage is found:

```
6175 \global\boolfalse{LWR@minipagethispar}
6176 }%
```

If was not in an HTML paragraph:

```
6177 {}%
```

See if currently allowing HTML paragraphs:

```
6178 \ifbool{LWR@doingstartpars}%
```

If so: clear the par hook to no longer catch paragraphs:

```
6179 {\ClearPreHook{par}}%
```

Else: Do nothing:

```
6180 {}%
```

No longer in paragraph mode:

```
6181 \global\setbool{LWR@doingstartpars}{false}%
```

No <p> tag to undo:

```
6182 \global\boolfalse{LWR@doingapar}%
6183 }% nestspan
6184 }
```

```
6185 \end{warpHTML}
```

54 Indentfirst

Pkg indentfirst indentfirst redefines \@afterindentfalse to be \@afterindenttrue. This is reversed \AtBeginDocument here.

for HTML output: 6186 \begin{warpHTML}

```
6187 \AtBeginDocument{
6188   \def\@afterindentfalse{\let\if@afterindent\iffalse}
6189   \@afterindentfalse
6190 }
6191 \let\LWR@afterindent@syntaxhighlight\fi syntax highlighting

6192 \end{warpHTML}
```

55 Page headers and footers

for HTML & PRINT: 6193 \begin{warpall}

In the following, catcode is manually changed back and forth without groups, since new macros are being defined which must not be contained within the groups.

```
6194 \newcommand{\LWR@firstpagetop}{} % for the home page alone
6195 \newcommand{\LWR@firstpagebottom}{} % for the home page alone
6196 \newcommand{\LWR@pagetop}{} % for all other pages
6197 \newcommand{\LWR@pagebottom}{}%
```

\HTMLFirstPageTop {*<text and logos>*}

```
6198 \newcommand{\HTMLFirstPageTop}[1]{%
6199   \renewcommand{\LWR@firstpagetop}{#1}%
6200 }
```

\HTMLFirstPageBottom {*<text and logos>*}

```
6201 \newcommand{\HTMLFirstPageBottom}[1]{%
6202   \renewcommand{\LWR@firstpagebottom}{#1}%
6203 }
```

\HTMLPageTop {*<text and logos>*}

```
6204 \newcommand{\HTMLPageTop}[1]{%
6205   \renewcommand{\LWR@pagetop}{#1}%
6206 }
```

\HTMLPageBottom {*<text and logos>*}

```

6207 \newcommand{\HTMLPageBottom}[1]{%
6208     \renewcommand{\LWR@pagebottom}{#1}%
6209 }

6210 \end{warpall}

```

56 CSS

for HTML output: 6211 \begin{warpHTML}

`\LWR@currentcss` The css filename to use. This may be changed mid-document using `\CSSFilename`, allowing different css files to be used for different sections of the document.

```
6212 \newcommand*{\LWR@currentcss}{lwarp.css}
```

`\CSSFilename` {*<new-css-filename.css>*} Assigns the css file to be used by the following HTML pages.

```

6213 \newcommand*{\CSSFilename}[1]{%
6214 \renewcommand*{\LWR@currentcss}{#1}%
6215 \@onelevel@sanitize\LWR@currentcss%
6216 }
6217
6218 \end{warpHTML}

```

for PRINT output: 6219 \begin{warpprint}
6220 \newcommand*{\CSSFilename}[1]{}
6221 \end{warpprint}

57 MathJax script

for HTML output: 6222 \begin{warpHTML}

Default: `lwarp_mathjax.txt`

`\LWR@mathjaxfilename` The MathJax script filename to use. This file is copied into the head of each HTML page. This may be changed mid-document using `\MathJaxFilename`, allowing the use of a custom MathJax script, such as for a local repository, or different MathJax script files to be used for different sections of the document.

```
6223 \newcommand*{\LWR@mathjaxfilename}{lwarp_mathjax.txt}
```

`\MathJaxFilename` {*<filename>*} Assigns the MathJax script file to be used by the following HTML pages.

```

6224 \newcommand*{\MathJaxFilename}[1]{%
6225     \renewcommand*{\LWR@mathjaxfilename}{#1}%

```

```

6226 \@onelevel@sanitize\LWR@mathjaxfilename%
6227 }
6228
6229 \end{warpHTML}

```

for PRINT output:

```

6230 \begin{warpprint}
6231 \newcommand*{\MathJaxFilename}[1]{}
6232 \end{warpprint}

```

58 Title, HTML meta author, HTML meta description

for HTML output:

```

6233 \begin{warpHTML}

```

`\title` `{\langle title \rangle}` Modified to remember `\thetitle`, which is used to set the HTML page titles.

```

6234 \let\LWR@origtitle\title
6235
6236 \renewcommand*{\title}[1]{%
6237   \LWR@origtitle{#1}%
6238   \begingroup%
6239     \renewcommand{\thanks}[1]{}%
6240     \protected@xdef\thetitle{#1}%
6241   \endgroup%
6242 }
6243 \end{warpHTML}

```

for HTML & PRINT:

```

6244 \begin{warpall}

```

`\HTMLTitle` `{\langle Title name \rangle}` The Title to place into an HTML meta tag. The default is to use the document `\title`'s setting.

```

6245 \providecommand{\thetitle}{\BaseJobname}
6246
6247 \newcommand{\theHTMLTitle}{\thetitle}
6248
6249 \newcommand{\HTMLTitle}[1]{\renewcommand{\theHTMLTitle}{#1}}

```


`\HTMLAuthor` `{\langle author name \rangle}` The author to place into an HTML meta tag. If none given, the default is `\theauthor`, which is empty unless the `titling` package is used.

```

6250 \providecommand{\theauthor}{}
6251
6252 \newcommand{\theHTMLAuthor}{\theauthor}
6253
6254 \newcommand{\HTMLAuthor}[1]{\renewcommand{\theHTMLAuthor}{#1}}

```

This is placed inside an HTML meta tag at the start of each file. This may be changed mid-document using `\HTMLDescription`, allowing different HTML descriptions to be used for different sections of the document.

 **HTML author** Do not use double quotes, and do not exceed 150 characters.

`\HTMLDescription` `{\langle New HTML meta description.\rangle}` Assigns the HTML file's description meta tag.

```
6255 \newcommand{\LWR@currentHTMLDescription}{}
6256
6257 \newcommand{\HTMLDescription}[1]{%
6258 \renewcommand{\LWR@currentHTMLDescription}{#1}
6259 }
6260
6261 \end{warpall}
```

59 Footnotes

lwarp uses native \LaTeX footnote code, although with its own `\box` to avoid the \LaTeX output routine. The usual functions mostly work as-is.


footnote numbering To have footnote numbers reset each time footnotes are printed:

```
\setcounter{footnoteReset}{1}
```

For **bigfoot**, **manyfoot**, or **perpage**:

```
\MakePerPage{footnoteX}
— or —
\MakeSortedPerPage{footnoteX}
```

The footnotes are reset when they are printed, according to section level as set by `FootnoteDepth`, which is not necessarily by HTML page. This is recommended for `\alph`, `\Alph`, or `\fnsymbol` footnotes, due to the limited number of symbols which are available.

 **MathJax**, **\footnotemark** If using **MATHJAX**, after each math expression with a `\footnotemark`, adjust the footnote counter by the number of `\footnotemarks`:

```
\[ (math expression with two instances of \footnotemark) \]
\warpHTMLonly{\addtocounter{footnote}{2}}
```

Similarly for endnotes, but *not* sidenotes.

Also for **MATHJAX**, `\footnotename` is used for a `\footnotemark` if the actual footnote number is not known. To redefine it, provide it before loading **lwarp**:

```
\providecommand{\footnotename}{something}
\usepackage{lwarp}
```

Similar for sidenotes. For endnotes:

```
\def\endnotename{something}% \def allows name to start with "end"
```

For the **pagenote** package, there is no `\pagenotename` to define, since there is no `\pagenotemark` command.

footmisc The footmisc stable option is emulated by lwarp.



sectioning commands

When using footnotes in sectioning commands, to generate consistent results between print and HTML, use the footmisc package with the stable option, provide a short toc entry, and \protect the \footnote:

```
\usepackage[stable]{footmisc}
...
\subsection[Subsection Name]
{Subsection Name\protect\footnote{A footnote.}}
```

memoir with footmisc



memoir

If using memoir class, with which lwarp preloads footmisc, the stable option must be declared before lwarp is loaded:

```
\PassOptionsToPackage{stable}{footmisc}
\usepackage{lwarp}
...
```

Do not use a starred sectioning command. As an alternative, it may be possible to adjust \secnumdepth instead.

Several kinds of footnotes are used: in a regular page, in a minipage, or as thanks in the titlepage. Each of these is handle differently.

59.1 Regular page footnotes

In HTML documents, footnotes are placed at the bottom of the web page or the section, depending on FootnoteDepth, using the L^AT_EX box \LWR@footnotebox. Using this instead of the original \footins box avoids having footnotes be printed by the output routine, since footnotes should be printed per HTML page instead of per PDF page.

See section 59.4 for the implementation.

59.2 Minipage footnotes

See section 59.5 for how minipage footnotes are gathered. See section 91.4 for how minipage footnotes are placed into the document.

59.3 Titlepage thanks

See section 66.7 for titlepage footnotes.

59.4 Regular page footnote implementation

for HTML & PRINT: 6262 \begin{warpall}

Ctrl FootnoteDepth Determines how deeply to place footnotes in the HTML files, similar to tocdepth. The
Default: 3

default of 3 places footnotes before each \subsubsection or higher. See table 11 for a table of L^AT_EX section headings.

```
6263 \newcounter{FootnoteDepth}
6264 \setcounter{FootnoteDepth}{3}
```

Ctr footnoteReset If non-zero, the footnote counter is reset to this value each time the footnotes are printed, as controlled by FootnoteDepth. For the manyfoot and bigfoot packages, additional counters such as footnote<suffix>Reset will be defined as well. These counters may be set non-zero by the user, and are also set if the perpage's \MakePerPage or \MakeSortedPerPage macros are used for the footnote or footnote<suffix> counters.

Default: 0

(The name is not capitalized because it is made from the counter's name with "Reset" appended.)

```
6265 \newcounter{footnoteReset}
6266 \setcounter{footnoteReset}{0}
```

```
6267 \end{warpall}
```

for HTML output: 6268 \begin{warpHTML}

\LWR@footnotetext Patch L^AT_EX footnotes to use a new \box instead of an insert for lwarp footnotes. This avoids having the original \footins appear at the bottom of a lateximage, which is on its own new page.

```
6269 \newbox\LWR@footnotetext
```

Much of the following has unneeded print-mode formatting removed.

\@makefnmark {<text>}

```
6270 \long\def\@makefnmark#1{\textsuperscript{\@thefnmark}~#1}
```

\@makefnmark

```
6271 \def\@makefnmark{%
6272   \textsuperscript{\@thefnmark}%
6273 }
```

Footnotes may be in regular text, in which case paragraphs are tagged, or in a table data cell or lateximage, in which case paragraph tags must be added manually.

In a lateximage during HTML output, the lateximage is placed inside a print-mode minipage, but the footnotes are broken out by:

```
\def\@mpfn{footnote}
\def\@thempfn{\thefootnote}
\let\@footnotetext\LWR@footnotetext
```

`\LWR@@footnotetext {<text>} {<footnote box name>}`

Factored to allow multiple footnote boxes for manyfoot.

```
6274 \long\def\LWR@@footnotetext#1#2{%
6275 \LWR@traceinfo{LWR@footnotetext}%
6276 \global\setbox\csname #2\endcsname=\vbox{%
```

Add to any current footnotes:

```
6277 \unvbox\csname #2\endcsname%
```

Remember the footnote number for \ref:

```
6278 \protected@edef\@currentlabel{%
6279 \csname p@footnote\endcsname\@thefnmark%
6280 }% @currentlabel
```

Open a group:

```
6281 \color@begingroup%
```

Disable CJK xpinyin while generating footnotes.

```
6282 \LWR@disablepinyin%
```

Use HTML superscripts in the footnote even when the main text is inside a lateximage, because the footnote will be in HTML:

```
6283 \renewrobustcmd{\textsuperscript}[1]{\LWR@htmlspan{sup}{##1}}%
```

Use paragraph tags if in a tabular data cell or a lateximage:

```
6284 \ifthenelse{%
6285 \boolean{LWR@doingstartpars} \AND%
6286 \cnttest{\value{LWR@lateximagedepth}}{=}{0}%
6287 }%
6288 {}%
6289 {\LWR@htmltagc{\LWR@tagregularparagraph}\LWR@orignewline}%
```

Append the footnote to the list:

```
6290 \@makefntext{#1}%
```

Closing paragraph tag:

```
6291 \ifthenelse{%
6292 \boolean{LWR@doingstartpars} \AND%
6293 \cnttest{\value{LWR@lateximagedepth}}{=}{0}%
6294 }%
6295 {\par}%
6296 {%
6297 \LWR@htmltagc{/LWR@tagregularparagraph}%
```

```
6298      \LWR@orignewline%
6299    }%
```

Close the group:

```
6300    \color@endgroup%
6301 }% vbox
```

Paragraph handling:

```
6302 \LWR@ensuredoingapar%
6303 }%
```

```
\LWR@footnotetext {<text>}
```

```
6304 \long\def\LWR@footnotetext#1{\LWR@@footnotetext{#1}{LWR@footnotebox}}
```

```
\@footnotetext {<text>}
```

```
6305 \LetLtxMacro\@footnotetext\LWR@footnotetext
```

59.5 Minipage footnote implementation

Patch L^AT_EX minipage footnotes to use a new `\box` instead of an insert for `lwarp` minipage footnotes. This avoids having the original `\@mpfootins` appear at the bottom of a `lateximage`, which is on its own new page.

```
6306 \newbox\LWR@mpfootnotes
```

```
\@mpfootnotetext {<text>}
```

```
6307 \long\def\@mpfootnotetext#1{%
6308   \LWR@traceinfo{@mpfootnotetext}%
6309   \global\setbox\LWR@mpfootnotes\vbox{%
6310     \unvbox\LWR@mpfootnotes%
6311     \reset@font\footnotesize%
6312     \hsize\columnwidth%
6313     \@parboxrestore%
6314     \protected@edef\@currentlabel%
6315       {\csname p@mpfootnote\endcsname\@thefnmark}%
6316     \color@begingroup%
```

Use paragraph tags if in a tabular data cell or a `lateximage`:

```
6317   \ifthenelse{%
6318     \boolean{LWR@doingstartpars} \AND%
6319     \cnttest{\value{LWR@lateximagedepth}}{=}{0}%
6320   }%
6321   {}%
6322   {\LWR@htmltagc{\LWR@tagregularparagraph}\LWR@orignewline}%

```

```

6323 \makefnstext{%
6324 \ignorespaces#1%
6325 }%

```

Don't add the closing paragraph tag if are inside a lateximage:

```

6326 \ifthenelse{\cnttest{\value{LWR@lateximagedepth}}{>}{0}}{%
6327 {}%
6328 {%
6329 \leavevmode\LWR@orignewline%
6330 \LWR@htmltagc{/LWR@tagregularparagraph}%
6331 \LWR@origpar%
6332 }%
6333 \color@endgroup%
6334 }% vbox

```

Paragraph handling:

```

6335 \LWR@ensuredoingapar%
6336 \LWR@traceinfo{@mpfootnotetext: done}%
6337 }

```

`\thempfootnote` Redefined to remove the `\itshape`, which caused an obscure compiling error in some situations.

```

6338 \AtBeginDocument{
6339 \def\thempfootnote{\@alph{c@mpfootnote}}
6340 }

```

59.6 Printing pending footnotes

`\LWR@printpendingfootnotes` $\{ \langle footnote\ counter\ name \rangle \}$

```

6341 \newcommand*{\LWR@printpendingfootnotes}[1]{%
6342 \expandafter\ifvoid\csname LWR@#1box\endcsname\else
6343 \LWR@forcenewpage
6344 \begin{BlockClass}{footnotes}
6345 \null
6346 \unvbox\csuse{LWR@#1box}
6347 \setbox\csuse{LWR@#1box}=\vbox{}
6348 \end{BlockClass}
6349 \ifltxcounter{#1Reset}{%
6350 \ifnumgreater{\value{#1Reset}}{0}{%
6351 \setcounter{#1}{\value{#1Reset}}%
6352 \addtocounter{#1}{-1}%
6353 }{}%
6354 }{}%
6355 \fi
6356 }

```

`\LWR@printpendingfootnotes` Enclose the footnotes in a class, print, then clear. For `manynotes`, new footnotes may be added via `\appto`.

```
6357 \newcommand*{\LWR@printpendingfootnotes}{%
6358     \LWR@@printpendingfootnotes{footnote}%
6359 }
```

`\LWR@maybeprintpendingfootnotes` `{<depth>}` Used to print footnotes before sections only if formatting for an EPUB or word processor:

```
6360 \newcommand*{\LWR@maybeprintpendingfootnotes}[1]{%
6361     \ifboolexpr{
6362         not test{\ifnumcomp{#1}{>}{\value{FootnoteDepth}}} or
6363         bool{FormatEPUB} or
6364         bool{FormatWP}
6365     }%
6366     {\LWR@printpendingfootnotes}%
6367 }%
6368 }
```

`\LWR@printpendingmpfootnotes` Enclose the minipage footnotes in a class, print, then clear.

```
6369 \newcommand*{\LWR@printpendingmpfootnotes}{%
6370     \ifvoid\LWR@mpfootnotes\else
6371         \LWR@forcenewpage
6372         \begin{BlockClass}{footnotes}
6373         \null
6374         \unvbox\LWR@mpfootnotes
6375         \setbox\LWR@mpfootnotes=\vbox{}
6376         \end{BlockClass}
6377     \fi
6378 }

6379 \end{warpHTML}
```

60 Marginpars

`\marginpar` [*<left>*] [*<right>*] `\marginpar` may contain paragraphs, but in order to remain inline with the surrounding text `lwarp` nullifies block-related macros inside the `\marginpar`. Paragraph breaks are converted to `
` tags.

`\marginparBlock` [*<left>*] [*<right>*] To include block-related macros, use `\marginparBlock`, which takes the same arguments but creates a `<div>` instead of a ``. A line break will occur in the text where the `\marginBlock` occurs.

for HTML output: 6380 `\begin{warpHTML}`

`\marginpar` [*<left>*] [*<right>*]

```

6381 \renewcommand{\marginpar}[2][\%
6382 \ifbool{FormatWP}%
6383 {%
6384 \begin{LWR@BlockClassWP}{width:2in; float:right; margin:10pt}}{\marginblock}
6385 #2
6386 \end{LWR@BlockClassWP}
6387 }%
6388 {%
6389 \LWR@htmlspanclass{\marginpar}{#2}%
6390 }%
6391 }

```

`\marginparBlock` [*<left>*] [*<right>*]

For use when the marginpar will be more than one paragraph, and/or contains more than simple text.

HTML version.

```

6392 \newcommand{\marginparBlock}[2][\%
6393 \LWR@stoppars%
6394 \ifbool{FormatWP}%
6395 {%
6396 \begin{LWR@BlockClassWP}{width:2in; float:right; margin:10pt}}{\marginblock}
6397 #2
6398 \end{LWR@BlockClassWP}
6399 }%
6400 \begin{BlockClass}[width:2in; float:right; margin:10pt]{marginparblock}
6401 #2
6402 \end{BlockClass}
6403 }%
6404 \LWR@startpars%
6405 }

```

`\reversemarginpar`

```

6406 \renewcommand*{\reversemarginpar}{}

```

`\normalmarginpar`

```

6407 \renewcommand*{\normalmarginpar}{}

6408 \end{warphTML}

```

for PRINT output: 6409 \begin{warpprint}

`\marginparBlock` [*<left>*] [*<right>*]

For use when the marginpar will be more than one paragraph, and/or contains more than simple text.

Print version.

```
6410 \LetLtxMacro\marginparBlock\marginpar
```

```
6411 \end{warpprint}
```

61 Splitting HTML files

- Files are split according to FileDepth and CombineHigherDepths.
- Filenames are sanitized by \LWR@filenamenoblanks.
- \LWR@newhtmlfile finishes an HTML page, adds a comment to tell where and how to split the file, then starts a new HTML page.

for HTML & PRINT: 6412 \begin{warppall}

Ctrl FileDepth *{\section depth}* determines how deeply to break into new HTML files, similar to tocdepth. The default of -5 produces one large HTML file.

```
6413 \newcounter{FileDepth}
```

```
6414 \setcounter{FileDepth}{-5}
```

Bool CombineHigherDepths Combile higher-level sections together into one file?

```
6415 \newbool{CombineHigherDepths}
```

```
6416 \booltrue{CombineHigherDepths}
```

\FilenameLimit Maximum length of the generated filenames.

```
6417 \newcommand*{\FilenameLimit}{80}
```

```
6418 \end{warppall}
```

for HTML output: 6419 \begin{warphTML}

\LWR@thisfilename The currently-active filename or number. At first, this is the homepage.

```
6420 \AtBeginDocument{
```

```
6421 \ifbool{FileSectionNames}%
```

```
6422   {\newcommand*{\LWR@thisfilename}{\HomeHTMLFilename}}
```

```
6423   {\newcommand*{\LWR@thisfilename}{0}}
```

```
6424 }
```

\LWR@thisnewfilename The filename being sanitized.

```
6425 \newcommand*{\LWR@thisnewfilename}{}
```

`\LWR@simplifiname` * $\langle expression \rangle$ Simplify `\LWR@thisnewfilename`.

If starred, detokenizes the input expression. If found, changes the expression to a single detokenized dash.

```

6426 \NewDocumentCommand{\LWR@simplifiname}{s m}{%
6427 \IfBooleanTF{#1}{%
6428   \StrSubstitute{\LWR@thisnewfilename}%
6429     {\detokenize{#2}}%
6430     {\detokenize{-}}[\LWR@thisnewfilename]%
6431 }{%
6432   \StrSubstitute{\LWR@thisnewfilename}%
6433     {#2}%
6434     {\detokenize{-}}[\LWR@thisnewfilename]%
6435 }
6436 }
```

`\LWR@simplifycustom` User-defined filename simplifications. Redefine with `\newcommand`.

```

6437 \newcommand*{\LWR@simplifycustom}{}

```

`\FilenameSimplify` * $\langle phrase \rangle$ Assign a user-defined filename simplification. Appends to `\LWR@simplifycustom`.

```

6438 \NewDocumentCommand{\FilenameSimplify}{s m}{%
6439 \IfBooleanTF{#1}{%
6440   \appto{\LWR@simplifycustom}{%
6441     \LWR@simplifiname*{#2}%
6442   }%
6443 }{%
6444   \appto{\LWR@simplifycustom}{%
6445     \LWR@simplifiname{#2}%
6446   }%
6447 }%
6448 }
```

`\LWR@avoiddupfilenames` Instructions for how to avoid duplicate filenames. This is used in a warning in `\LWR@filenamenoblanks`, and in an error in `\LWR@newhtmlfile`.

```

6449 \newcommand*{\LWR@avoiddupfilenames}{%
6450   To avoid duplicate filenames, use the optional\MessageBreak
6451   short Table of Contents entry:\MessageBreak
6452   \space\space\protect\section[Unique name, no math]{Name with math}%
6453   \MessageBreak
6454   or use \protect\texorpdfstring, from the hyperref package:\MessageBreak
6455   \space\space%
6456   \protect\section{\MessageBreak
6457     \space\space\space\space\protect\texorpdfstring\MessageBreak
6458     \space\space\space\space\space\space%
6459     {Name with math}\Unique name, no math}\MessageBreak
6460   \space\space}
6461 }
```

\LWR@filenamenoblanks $\{\langle filename \rangle\}$

Convert blanks into dashes, removes short words, store result in \LWR@thisfilename.

Also see \LWR@nullfonts for nullified macros.

```
6462 \newcommand*{\LWR@filenamenoblanks}[1]{%
6463 \begingroup
```

Locally temporarily disable direct-formatting commands, not used in filenames:

```
6464 \LWR@nullfonts%
6465 \renewcommand*{\LWR@htmltagc}[1]{}%
```

```
6466 \edef\LWR@thisnewfilename{#1}%
```

Replaces common macros with hyphens. (& is done by \LWR@nullfonts.)

```
6467 \RenewDocumentCommand{\LWR@subsingledollar}{s m m}{}%
6468 \LWR@simplifiname{\_}
6469 \LWR@simplifiname{\#}
6470 \LWR@simplifiname{\textbackslash}
6471 \LWR@simplifiname{\protect}
6472 \LWR@simplifiname{\ }
6473 \LWR@simplifiname{\textless}
6474 \LWR@simplifiname{\textgreater}
```

```
6475 \edef\LWR@thisnewfilename{\detokenize\expandafter{\LWR@thisnewfilename}}%
```

Warn if there is dollar math in the section name:

```
6476 \ifbool{FileSectionNames}{%
6477   \IfSubStr{\LWR@thisnewfilename}{\LWRdollar}{%
6478     \PackageWarning{lwarp}
6479     {%
6480       This section name:\MessageBreak
6481       \space\space‘\detokenize\expandafter{#1}’\MessageBreak
6482       at the line number listed below,\MessageBreak
6483       is using $dollar-delimited math$,
6484       which generates\MessageBreak
6485       complicated file names. It is better to use\MessageBreak
6486       \space\space%
6487       \protect\section{Name with \protect\(\parenthesis math\protect\)}%
6488       \MessageBreak
6489       The math then will be removed from the file name.\MessageBreak
6490       \MessageBreak
6491       \LWR@avoiddupfilenames%
6492       \MessageBreak
6493       This section is found before or%
6494     }
6495   }{}%
6496 }
```

```
6497 \LWR@traceinfo{LWR@filenamenoblanks edef: !\LWR@thisnewfilename!}%
6498 \fullexpandarg%
```

Convert spaces into hyphens:

```
6499 \LWR@simplifyname*{ }
```

Convert punctutation into hyphens:

```
6500 \LWR@simplifyname*{*}
6501 \LWR@simplifyname*{(}
6502 \LWR@simplifyname*{)}
6503 \LWR@simplifyname*{.}
6504 \LWR@simplifyname*{!}
6505 \LWR@simplifyname*{,}
6506 \LWR@simplifyname*{' }
6507 \LWR@simplifyname*{+}
6508 \LWR@simplifyname*{/}
6509 \LWR@simplifyname*{:}
6510 \LWR@simplifyname*{;}
6511 \LWR@simplifyname*{=}
6512 \LWR@simplifyname*{?}
6513 \LWR@simplifyname*{@}
6514 \LWR@simplifyname*{^}
6515 \LWR@simplifyname*{&}
6516 \LWR@simplifyname*{"}
6517 \LWR@simplifyname*{<}
6518 \LWR@simplifyname*{>}
```

```
6519 \LWR@simplifyname{\LWRbackslash}
```

Braces are removed entirely to avoid extra dashes in the result.

```
6520 \StrSubstitute{\LWR@thisnewfilename}%
6521   {\LWRleftbrace}{ }[\LWR@thisnewfilename]%
6522 \StrSubstitute{\LWR@thisnewfilename}%
6523   {\LWRrightbrace}{ }[\LWR@thisnewfilename]%
```

```
6524 \LWR@simplifyname{\LWRpercent}
6525 \LWR@simplifyname{\LWRdollar}
```

```
6526 \LWR@simplifyname*{|}
6527 \LWR@simplifyname*{^}
6528 \LWR@simplifyname*{~}
6529 \LWR@simplifyname*{[}
6530 \LWR@simplifyname*{]}
6531 \LWR@simplifyname*{' }
```

Convert short words:

```
6532 \LWR@simplifyname*{-s-}
6533 \LWR@simplifyname*{-S-}
6534 \LWR@simplifyname*{-a-}
```

```

6535 \LWR@simplifyname*{-A-}
6536 \LWR@simplifyname*{-an-}
6537 \LWR@simplifyname*{-AN-}
6538 \LWR@simplifyname*{-to-}
6539 \LWR@simplifyname*{-TO-}
6540 \LWR@simplifyname*{-by-}
6541 \LWR@simplifyname*{-BY-}
6542 \LWR@simplifyname*{-of-}
6543 \LWR@simplifyname*{-OF-}
6544 \LWR@simplifyname*{-and-}
6545 \LWR@simplifyname*{-AND-}
6546 \LWR@simplifyname*{-for-}
6547 \LWR@simplifyname*{-FOR-}
6548 \LWR@simplifyname*{-the-}
6549 \LWR@simplifyname*{-THE-}

```

Convert custom words:

```

6550 \LWR@simplifycustom%

```

If pdfL^AT_EX and not utf8 encoding, don't try to convert emdash, endash:

```

6551 \ifPDFTeX% pdflatex or dvi latex
6552 \ifdefstring{\inputencodingname}{utf8}{%
6553     \LWR@simplifyname*{-}
6554 %      emdash
6555     \LWR@simplifyname*{-}
6556 %      endash
6557 }{}%
6558 \else% not PDFTeX
6559     \LWR@simplifyname*{-}
6560     \LWR@simplifyname*{-}
6561 \fi%

```

Convert multiple hyphens:

```

6562 \LWR@simplifyname*{-----}
6563 \LWR@simplifyname*{----}
6564 \LWR@simplifyname*{---}
6565 \LWR@simplifyname*{--}

```

If starts with a dash, remove the leading dash:

```

6566 \IfBeginWith{\LWR@thisnewfilename}{\detokenize{-}}{%
6567     \StrGobbleLeft{\LWR@thisnewfilename}{1}[\LWR@thisnewfilename]%
6568 }{}%

```

If ends with a dash, remove the trailing dash:

```

6569 \IfEndWith{\LWR@thisnewfilename}{\detokenize{-}}{%
6570     \StrGobbleRight{\LWR@thisnewfilename}{1}[\LWR@thisnewfilename]%
6571 }{}%

```

Limits the length of the filename:

```
6572 \StrLeft{\LWR@thisnewfilename}{\FilenameLimit}[\LWR@thisnewfilename]%
```

Return the global result:

```
6573 \global\let\LWR@thisfilename\LWR@thisnewfilename%
6574 \endgroup%
6575 \LWR@traceinfo{\LWR@filenamenoblanks: result is \LWR@thisfilename}%
6576 }
```

Ctrl Remembers which autopage label was most recently generated. Used to avoid duplicates.
LWR@previousautopagelabel

```
6577 \newcounter{\LWR@previousautopagelabel}
6578 \setcounter{\LWR@previousautopagelabel}{-1}
```

File *_html.aux A new entry in the *_html.aux file is used to help cross-references:

```
\newlabel{autopage-<nnn>}{\<x>}{\<y>}}
```

\LWR@newautopagelabel {<pagenumber counter>}

\BaseJobname is added to the label in case xr or xr-hyper are used.

```
6579 \newcommand*{\LWR@newautopagelabel}[1]{%
6580 \ifnumequal{\value{\LWR@previousautopagelabel}}{\value{page}}%
6581 {}% no action if this autopage label has already been defined
6582 {%
6583   \label{\BaseJobname-autopage-\arabic{#1}}%
6584   \setcounter{\LWR@previousautopagelabel}{\value{page}}
6585 }%
6586 }
```

61.1 Sanitizing expressions for HTML

Math expressions are converted to lateximages, and some math environments may contain &, <, or >, which should not be allowed inside an HTML <alt> tag, so must convert them to HTML entities.

\LWR@replacestrings {\<search>} {\<replace>}

Replaces strings inside \tmpb.

Modified from the original by PETR OLSAK, from the opmac package.

```
6587 \bgroup
6588 \catcode'\!=3 \catcode'\?=3
6589
6590 \long\gdef\LWR@replacestrings@addto#1#2{%
```

```

6591 \expandafter\def\expandafter#1\expandafter{#1#2}%
6592 }
6593
6594 \gdef\LWR@replacestrings#1#2{%
6595 \long\def\LWR@replacestringsA##1#1{\def\tmpb{##1}\LWR@replacestringsB}%
6596 \long\def\LWR@replacestringsB##1#1{%
6597 \ifx!##1\relax \else\LWR@replacestrings@addto\tmpb{#2##1}%
6598 \expandafter\LWR@replacestringsB\fi%
6599 }%
6600 \expandafter\LWR@replacestringsA\tmpb?#1!#1% from pysyntax.tex by Petr Krajník
6601 \long\def\LWR@replacestringsA##1?{%
6602 \def\tmpb{##1}%
6603 }\expandafter\LWR@replacestringsA\tmpb%
6604 }
6605 \egroup

```

`\LWR@subHTMLsanitize` `\LWR@strresult` must first be set by `\LWR@HTMLsanitize`, `\LWR@HTMLsanitizeexpand`, or `\CustomizeMathJax`.

```

6606 \catcode'\#=12
6607 \catcode'\&=12
6608 \newcommand{\LWR@subHTMLsanitize}{%

```

The `&`, `<`, and `>` may be interpreted by the browser:

```

6609 \edef\tmpb{\detokenize\expandafter{\LWR@strresult}}%
6610 \LWR@replacestrings{&}{&};%
6611 \LWR@replacestrings{<}{<};%
6612 \LWR@replacestrings{>}{>};%

```

The double quote occasionally causes problems.

```

6613 \LWR@replacestrings{"}{&quot;};%

```

MathJax allows expressions to be defined with `\newcommand`. These expressions would appear with `##` for each argument, and each must be changed to a single `#`. This must be done after all the above changes. Attempting another conversion after this causes an error upon further expansion.

```

6614 \LWR@replacestrings{##}{#}%
6615 \edef\LWR@strresult{\detokenize\expandafter{\tmpb}}%
6616 }
6617 \catcode'\#=6
6618 \catcode'\&=4

```

`\LWR@HTMLsanitize` `{\text}`

```

6619 \newrobustcmd{\LWR@HTMLsanitize}[1]{%

```

Cancel French `babel` character handling, and fully expand the strings:

```

6620 \begingroup%
6621 \LWR@FBcancel%
6622 \fullexpandarg%
6623 \protect\StrSubstitute{\detokenize{#1}}%
6624     {\detokenize{\&}}{\detokenize{\&}}[\LWR@strresult]%
6625 \LWR@subHTMLsanitize%
6626 \LWR@strresult%
6627 \endgroup%
6628 }

```

`\LWR@HTMLsanitizeexpand` {*<text>*}

This version expands the argument before sanitizing it.

```

6629 \newrobustcmd{\LWR@HTMLsanitizeexpand}[1]{%

```

Cancel French **babel** character handling, and fully expand the strings:

```

6630 \begingroup%
6631 \LWR@FBcancel%
6632 \fullexpandarg%

```

The difference between this and `\LWR@HTMLsanitize` (without “expand”) is the following `\expandafter`:

```

6633 \protect\StrSubstitute{\detokenize\expandafter{#1}}%
6634     {\detokenize{\&}}{\detokenize{\&}}[\LWR@strresult]%
6635 \LWR@subHTMLsanitize%
6636 \LWR@strresult%
6637 \endgroup%
6638 }

```

61.2 Customizing MATHJAX

`\LWR@customizedMathJax` Additional MATHJAX definitions to be added to the start of each HTML page.

```

6639 \newcommand*{\LWR@customizedMathJax}{}

```

Bool Used to issue only one warning about using a `\CustomizeMathJax` per macro.

`\LWR@warnedcustomizemathjax`

```

6640 \newbool{\LWR@warnedcustomizemathjax}
6641 \boolfalse{\LWR@warnedcustomizemathjax}

```

`\LWR@subcustomizedmathjax` {*<macro definition>*}

```

6642 \newcommand*{\LWR@subcustomizedmathjax}[1]{%
6643     \begingroup%
6644     \LWR@FBcancel%
6645     \fullexpandarg%
6646     \protect\StrSubstitute{\detokenize{#1}}%

```

```

6647     {\detokenize{\&}}{\detokenize{\&}}[\LWR@strresult]%
6648     \LWR@subHTMLsanitize%
6649     \xdef\LWR@customizedMathJax{%
6650         \LWR@customizedMathJax%
6651         \LWR@strresult%
6652     }%
6653     \endgroup%
6654 }
6655 \onlypreamble\LWR@subcustomizedmathjax

```

`\CustomizeMathJax` {*macro definition*}

A warning is issued if a very long argument is given.

```

6656 \newcommand*{\CustomizeMathJax}[1]{%
6657     \ifbool{\LWR@warnedcustomizemathjax}{}%
6658         \StrLen{\detokenize{#1}}[\LWR@tempone]%
6659         \ifnumgreater{\LWR@tempone}{200}{%
6660             \AtEndDocument{%
6661                 \PackageWarningNoLine{lwarp}{%
6662                     To ensure faster MathJax compilation, place each\MessageBreak
6663                     custom macro in its own \protect\CustomizeMathJax.\MessageBreak
6664                     See the Lwarp documentation regarding customizing\MessageBreak
6665                     MathJax%
6666                 }%
6667             }%
6668             \booltrue{\LWR@warnedcustomizemathjax}%
6669         }{}%
6670     }%
6671     \appto\LWR@customizedMathJax{\LWRbackslash{}}%
6672     \LWR@subcustomizedmathjax{#1}%
6673     \appto\LWR@customizedMathJax{\LWRbackslash}\par}%
6674 }
6675 \onlypreamble\CustomizeMathJax

```

`\LWR@infoprocessingmathjax` {*package name*}

```

6676 \newcommand*{\LWR@infoprocessingmathjax}[1]{%
6677     \typeout{---}
6678     \typeout{Package lwarp: Processing MathJax customizations for #1.}
6679     \typeout{\space\space This may take a moment.}
6680     \typeout{---}
6681 }

```

defaults Default customizations:

In the MATHJAX code, footnotes are only referenced. For equations, they are also generated in the HTML when the L^AT_EX math is generated inside the HTML comment. For other math environments, the `\footnotemark`/`\footnotetext` method must be used. See section 8.5.4 regarding `\footnotemark`.



`\footnotemark`

For footnotes, `\footnotename` is used in most cases, however for equation the footnote is picked up from L^AT_EX in `\LWR@doendequation`.

First, `\footnotename` for MATHJAX is copied from L^AT_EX.

```

6682 \providecommand{\footnotename}{footnote}
6683
6684 % due to warpMathJax:
6685 \end{warpHTML}
6686
6687 \begin{warpMathJax}
6688 \xdef\LWR@customizedMathJax{\LWR@customizedMathJax%
6689     \LWRbackslash{
6690         \LWRbackslash{newcommand%
6691             \{\LWRbackslash{footnotename\}%
6692             \{\footnotename\}%
6693             \LWRbackslash}\par%
6694     }
6695 \end{warpMathJax}

```

`\LWRfootnote` is set per equation if a footnote is detected in the equation's math expression, otherwise it defaults to `\footnotename`.

```

6696 \begin{warpMathJax}
6697 \CustomizeMathJax{\def\LWRfootnote{1}}
6698 \CustomizeMathJax{\newcommand{\footnote}[2][\LWRfootnote]{\mathrm{#1}}}
6699 \CustomizeMathJax{\newcommand{\footnotemark}[1][\LWRfootnote]{\mathrm{#1}}}
6700 \end{warpMathJax}

6701 \begin{warpMathJax}
6702 \CustomizeMathJax{\newcommand\ensuremath[1]{#1}}
6703 \CustomizeMathJax{% absorb two optional arguments
6704     \newcommand{\LWRframebox}[2][\fbox{#2}}
6705     \newcommand{\framebox}[1][\LWRframebox}
6706 }
6707 \CustomizeMathJax{\newcommand{\setlength}[2]{} }
6708 \CustomizeMathJax{\newcommand{\addtolength}[2]{} }
6709 \CustomizeMathJax{\newcommand{\setcounter}[2]{} }
6710 \CustomizeMathJax{\newcommand{\addtocounter}[2]{} }
6711 \CustomizeMathJax{\newcommand{\cline}[1]{} }
6712 \CustomizeMathJax{\newcommand{\directlua}[1]{\text{(directlua)}}}
6713 \CustomizeMathJax{\newcommand{\luatexdirectlua}[1]{\text{(directlua)}}}
6714 \end{warpMathJax}
6715
6716 \begin{warpHTML}% due to warpMathJax

```

`\LWR@customizeMathJax` Prints MathJax commands to the HTML output.

```

6717 \newcommand{\LWR@customizeMathJax}{%
6718 \ifbool{mathjax}{

6719 \LWR@stoppars
6720 \LWR@htmlcomment{MathJax customizations:}
6721
6722 \typeout{---}
6723 \typeout{Package lwarp:}
6724 \typeout{Processing MathJax customizations. If this takes too long,}

```

```

6725 \typeout{see the Lwarp manual regarding customizing MathJax.}
6726 \begin{BlockClass}{hidden}
6727 \LWR@stoppars
6728 \LWR@customizedMathJax
6729 \LWR@startpars
6730 \end{BlockClass}
6731 \typeout{Done.}
6732 \typeout{---}
6733
6734 \LWR@startpars
6735 }{}
6736 }

6737 \end{warpHTML}

```

for PRINT output: 6738 \begin{warpprint}

\CustomizeMathJax The print-mode version:

```
6739 \newcommand*{\CustomizeMathJax}[1]{}

```

\FilenameSimplify * $\langle expression \rangle$

```

6740 \NewDocumentCommand{\FilenameSimplify}{s m}{}

6741 \end{warpprint}

```

for HTML output: 6742 \begin{warpHTML}

\LWR@createfooter If specified, create the first or later web page footer.

```

6743 \newcommand*{\LWR@createfooter}{%
6744   \ifnumless{\value{\LWR@htmlseqfilenumber}}{1}{%
6745     \ifdefempty{\LWR@firstpagebottom}{}%
6746       \LWR@html element{footer}
6747
6748       \LWR@firstpagebottom
6749
6750       \LWR@html elementend{footer}
6751     }%
6752   }{%
6753     \ifdefempty{\LWR@pagebottom}{}%
6754       \LWR@html element{footer}
6755
6756       \LWR@pagebottom
6757
6758       \LWR@html elementend{footer}
6759     }%
6760   }%
6761 }

```

\LWR@newhtmlfile $\langle section name \rangle$

Finishes the current HTML page with footnotes, footer, navigation, then starts a new HTML page with an HTML comment telling where to split the page and what the new filename and CSS are, then adds navigation, side TOC, header, and starts the text body.

```
6762 \newcommand*{\LWR@newhtmlfile}[1]{
6763 \LWR@traceinfo{\LWR@newhtmlfile}
```

At the bottom of the ending file:

```
6764 \LWR@html@elementclassend{section}{textbody}
6765 \LWR@html@elementclassend{div}{bodycontainer}
6766 \LWR@html@elementclassend{div}{bodyandsidetoc}
6767
6768 \LWR@printpendingfootnotes
6769
```

No footer between files if EPUB:

```
6770 \ifbool{FormatEpub}{\LWR@createfooter}
```

No bottom navigation if are finishing the home page or formatting for EPUB or a word-processor.

```
6771 \ifthenelse{\boolean{FormatEpub}\OR\boolean{FormatWP}}
6772   {}
6773   {\ifnumcomp{\value{\LWR@htmlfilenumber}}{>}{0}{\LWR@botnavigation}{}}
```

End of this HTML file:

```
6774 \LWR@stoppars
6775 \LWR@htmltag{/body}\LWR@orignewline
6776 \LWR@htmltag{/html}\LWR@orignewline
6777 \LWR@traceinfo{\LWR@newhtmlfile: about to \LWR@orignewpage}
6778 \LWR@maybe@orignewpage

6779 \addtocounter{\LWR@htmlfilenumber}{1}%
6780 \addtocounter{\LWR@htmlseqfilenumber}{1}%
```

If using a filename based on section name, create a version without blanks. The filename without blanks will be placed into \LWR@thisfilename. Duplicates will be detected using MD5 hashes.

If not using a filename, the file number will be used instead.

```
6781 \ifbool{FileSectionNames}%
6782 {%
```

Convert the section name to a filename with blanks and common words removed. The resulting filename is in \LWR@thisfilename.

```
6783   \LWR@filenamenoblanks{#1}%
```

Create a macro name from the MD5 hash of the file name, to detect duplicates:

```
6784 \edef\LWR@hashedname{\LWR@mdfive{\LWR@thisfilename}}%
```

If the macro name is not yet defined, this filename is unique.

```
6785 \ifcsundef\LWR@filename\LWR@hashedname}{%
```

If the filename is unique, create a macro using the hashed name, to be used to test for additional duplicates in the future.

```
6786 \csdef\LWR@filename\LWR@hashedname}{}%
6787 }
```

If the filename is not unique, create an error.

```
6788 \PackageError{lwarp}%
6789 {%
6790     The section name:\MessageBreak
6791     ‘‘#1’’,\MessageBreak
6792     at the line number listed below,\MessageBreak
6793     generates the filename\MessageBreak
6794     ‘‘\LWR@thisfilename’’,\MessageBreak
6795     which appears to be a duplicate. There is a\MessageBreak
6796     previous section with an identical or similar name.\MessageBreak
6797     While generating file names, Lwarp sanitizes math,\MessageBreak
6798     most symbols, and a few common short words,\MessageBreak
6799     and this may cause a conflict.\MessageBreak
6800     Enter ‘H’ for possible solutions%
6801 }%
6802 {%
6803     \LWR@avoiddupfilenames%
6804 }%
6805 }%
6806 }%
```

If using file numbers instead of names, the name is set to the next file number.

```
6807 {\renewcommand*{\LWR@thisfilename}{\arabic{\LWR@htmlfilenumber}}}
```

Include an HTML comment to instruct lwarpmk where to split the files apart. Uses pipe-separated fields for `split_html.gawk`. Uses monospaced font with ligatures disabled for everything except the title.

```
6808 \LWR@traceinfo{\LWR@newhtmlfile: about to print start file}%
```

`\LWR@nullfonts` to allow math in a section name.

```
6809 \begingroup%
6810 \LWR@nullfonts%
6811 \LWR@htmlblockcomment{%
6812 |Start file|}%
6813 \LWR@htmlsectionfilename{\LWR@thisfilename}}%
```

```
6814 }
6815 \endgroup%
```

At the top of the starting file:

```
6816 \LWR@stoppars
6817
```

Start a new file with the given section name:

```
6818 \LWR@filestart[#1]
6819
```

Track the PDF page numbers of the HTML output:

```
6820 \setcounter{LWR@latestautopage}{\value{page}}%
6821 \LWR@newautopagelabel{LWR@latestautopage}%
```

No navigation between files if formatting for an EPUB or word processor:

```
6822 \ifthenelse{\boolean{FormatEPUB}\OR\boolean{FormatWP}}
6823     {}
6824     {\LWR@topnavigation}
6825
```

No header if between files if formatting for an EPUB or word processor:

```
6826 \ifthenelse{\boolean{FormatEPUB}\OR\boolean{FormatWP}}
6827     {}
6828     {
6829         \ifdefempty{LWR@pagetop}{}{
6830             \LWR@html element{header}
6831
6832             \LWR@pagetop
6833
6834             \LWR@html elementend{header}
6835         }
6836     }
6837
```

The container for the sidetoc and text body:

```
6838 \LWR@html elementclass{div}{bodyandsidetoc}
```

No sideroc if formatting for an EPUB or word processor:

```
6839 \ifthenelse{\boolean{FormatEPUB}\OR\boolean{FormatWP}}
6840     {}
6841     {\LWR@sidetoc}
6842
```

Start of the <textbody>:

```
6843 \LWR@html\elementclass{div}{bodycontainer}
6844 \LWR@html\elementclass{section}{textbody}
```

Not yet found a new section in this file. Once one is found, a label will be placed for previous/next links.

```
6845 \boolfalse{LWR@setseqfilelabel}
```

Print title only if there is one. Skip if formatting for an EPUB or word processor:

```
6846 \ifthenelse{\boolean{FormatEPUB}\OR\boolean{FormatWP}}{%
6847   }{%
6848   {%
6849     \ifcvoid{thetitle}{}{%
6850       \LWR@printthetitle%
6851     }%
6852   }%
```

Keep paragraph tags disabled for now:

```
6853 \LWR@stoppars
6854
```

If using MATHJAX, print the customizations here.

```
6855 \LWR@customizeMathJax

6856 \LWR@traceinfo{LWR@newhtmlfile: done}
6857 }

6858 \end{warpHTML}
```

62 Sectioning

Sectioning and cross-references have been emulated from scratch, rather than try to patch several layers of existing L^AT_EX code and packages. Formatting is handled by css, so the emulated code has much less work to do than the print versions.

Unicode



accents in filenames

Section names and the resulting filenames with accented characters are partially supported, depending on the ability of *pdf_latex* to generate characters and *pdf_totext* to read them. If extra symbols appear in the text, it may be that *pdf_latex* is actually producing a symbol over or under a character, resulting in *pdf_totext* picking up the accent symbol separately.

X_YL^AT_EX and Lua^AT_EX directly support accented section and file names, but it may be necessary to use L^AT_EX accents instead of native Unicode accents. L^AT_EX accents will have the accents stripped when creating file names, whereas using Unicode accents will create filenames which include accents, which may cause issues with some operating systems.

for HTML output: 6859 \begin{warpHTML}

62.1 User-level starred section commands

`\ForceHTMLPage` For HTML output, forces the next section to be on its own HTML page, if `FileDepth` allows, even if starred. For use with `\printindex` and others which generate a starred section which should be on its own HTML page. Also see `\ForceHTMLTOC`.

For print output, no effect.

```
6860 \newbool{LWR@forcinghtmlpage}
6861 \boolfalse{LWR@forcinghtmlpage}
6862
6863 \newcommand*{\ForceHTMLPage}{%
6864 \global\booltrue{LWR@forcinghtmlpage}%
6865 }
```

`\ForceHTMLTOC` For HTML output, forces the next section to have a TOC entry, even if starred. For use with `\printindex` and others which generate a starred section which should be in the TOC so that it may be accessed via HTML. Not necessary if used with `tocbibind`. Also see `\ForceHTMLPage`.

For print output, no effect.

```
6866 \newbool{LWR@forcinghtmltoc}
6867 \boolfalse{LWR@forcinghtmltoc}
6868
6869 \newcommand*{\ForceHTMLTOC}{%
6870 \global\booltrue{LWR@forcinghtmltoc}%
6871 }
```

```
6872 \end{warpHTML}
```


for PRINT output:

```
6873 \begin{warpprint}
6874 \newcommand*{\ForceHTMLPage}{}
6875 \newcommand*{\ForceHTMLTOC}{}
6876 \end{warpprint}
```

for HTML output:

```
6877 \begin{warpHTML}
```

62.2 Book class commands

`\mainmatter`  Declare the main matter section of the document. Does not reset the page number, which must be consecutive arabic numbers for the HTML conversion.

```
6878 \newbool{LWR@mainmatter}
6879 \DeclareDocumentCommand{\mainmatter}{}{}%
6880 \booltrue{LWR@mainmatter}%
6881 }
```

`\frontmatter` Declare the front matter section of the document, using arabic numbering for the internal numbering. Does not reset the page number.

```
6882 \DeclareDocumentCommand{\frontmatter}{}{%
6883 \boolfalse{LWR@mainmatter}%
6884 }
```

`\backmatter` Declare the back matter section of the document. Does not reset the page number.

```
6885 \DeclareDocumentCommand{\backmatter}{}{%
6886 \boolfalse{LWR@mainmatter}
6887 }
```

62.3 Sectioning support macros

`\LWR@sectionnumber` {<*section type*>}

Typeset a section number and its trailing space with css formatting:

```
6888 \newcommand*{\LWR@sectionnumber}[1]{%
6889 \InlineClass{sectionnumber}{#1}%
6890 }
```

`autosec` A tag used by the toc and index.

`\LWR@createautosec` {<*section type*>}

Create an autosection tag.

The use of `\textquotedbl` instead of " provides improved compatibility with xeCJK.

```
6891 \newcommand*{\LWR@createautosec}[1]{%
6892 \LWR@htmltag{%
6893   #1 % space
6894   id=\textquotedbl\LWR@print@mbox{autosec-\arabic{page}}\textquotedbl%
6895 }%
6896 }
```

`\LWR@pushoneclose` {<*sectiontype*>} Stacks the new sectioning level's closing tag, to be used when this section is closed some time later.



`\LWR@stoppars` must be executed first.

```
6897 \NewDocumentCommand{\LWR@pushoneclose}{m}{%
6898 \LWR@traceinfo{\LWR@pushoneclose #1}%
6899   \LWR@pushclose{#1}%
6900 }
```

`\LWR@startnewdepth` {<*sectiontype*>}

Closes currently stacked tags of a lesser level, then opens the new nesting level by saving this new sectioning level's closing tag for later use.



`\LWR@stoppars` must be executed first.

```
6901 \NewDocumentCommand{\LWR@startnewdepth}{m}{%
```

Close any stacked sections up to this new one.

```
6902 \LWR@closeprevious{#1}%
```

Push a new section depth:

```
6903 \LWR@pushoneclose{#1}%
6904 }
```

`\LWR@prevFileDepth` Remembers the previous `\LWR@FileDepth`.

Initialized to a deep level so that any section will trigger a new HTML page after the home page.

```
6905 \newcounter{\LWR@prevFileDepth}
6906 \setcounter{\LWR@prevFileDepth}{\LWR@depthsubparagraph}
```

`\@secCNTformat` $\{\langle sectiontype \rangle\}$

```
6907 \def\@secCNTformat#1{\csname the#1\endcsname\quad}
```

`\simplechapterdelim` Used by `tocbibind` and `anonchap`.

```
6908 \newcommand*\simplechapterdelim{}
```

`\@chapCNTformat` $\{\langle sectiontype \rangle\}$

`\let` to `\@secCNTformat` by default, but may be redefined by `\simplechapter` and `\restorechapter` from `tocbibind` or `anonchap`.

```
6909 \let\@chapCNTformat\@secCNTformat
```

`\@partCNTformat` $\{\langle sectiontype \rangle\}$

`\let` to `\@secCNTformat` by default, but may be redefined by `ctex`.

```
6910 \let\@partCNTformat\@secCNTformat
```

`\@partnameformat` Prints “Part” for part sections.

Nullified by `ctex`.

```
6911 \newcommand*\@partnameformat{\LWR@isolate{\partname}~}%
```

`\LWR@printchaptername` Print `\chaptername` in most cases, but this is nullified for `ctexbook`, `komascript`, `ujt*` classes.

```
6912 \newcommand*{\LWR@printchaptername}{%
6913   \ifdefvoid{\chaptername}{\chaptername~}%
6914 }
```

Ctr `LWR@currentautosec` Records the page number when the section was created. (If a math expression is included in the section name, and SVG math is used, the corresponding `lateximage` will cause the page number to change by the time the following `autosec` label is created, thus the initial page number is recorded here.)

```
6915 \newcounter{LWR@currentautosec}
6916 \setcounter{LWR@currentautosec}{1}
```

`\LWR@section` * [*<TOC name>*] {*<name>*} {*<sectiontype>*}

The common actions for the high-level sectioning commands.

```
6917 \DeclareDocumentCommand{\LWR@section}{m m m m}{%
6918   \IfValueTF{#2}%
6919     {\LWR@traceinfo{LWR@section: starting #4 #2}}%
6920     {\LWR@traceinfo{LWR@section: starting #4 #3}}%
```

Warn if starting a section inside a ``:

```
6921   \LWR@spanwarninvalid{section}%

6922 \LWR@maybeprintpendingfootnotes{\csuse{LWR@depth#4}}%
6923 \LWR@stoppars%
6924 \LWR@startnewdepth{#4}%
```

Cancel special minipage horizontal space interaction:

```
6925 \global\boolfalse{LWR@minipagethispar}%
```

Start a new HTML file unless starred, and if is a shallow sectioning depth.

Exception: Also start a new HTML file for `\part*`, for appendix.

Generate a new \LaTeX page so that toc and index page number points to the section:

```
6926 \LWR@traceinfo{LWR@section: testing whether to start a new HTML file}%
6927 \IfBooleanT{#1}{\LWR@traceinfo{LWR@section: starred}}%
6928 \ifbool{LWR@forcinghtmlpage}{\LWR@traceinfo{LWR@section: forcinghtmlpage}}{}%
6929 \ifthenelse{%
6930   \(%
6931     \(\NOT\equal{#1}{\BooleanTrue}\)\OR%
6932     \(\cnttest{\@nameuse{LWR@depth#4}}{=}{\LWR@depthpart}\)\OR%
6933     \(\boolean{LWR@forcinghtmlpage}\)%
6934   \)%
6935   \AND%
6936   \cnttest{\@nameuse{LWR@depth#4}}{<=}{\value{FileDepth}}%
```

```

6937 \AND%
6938 \(%
6939 \NOT\boolean{CombineHigherDepths}\OR%
6940 \cnttest{\@nameuse{LWR@depth#4}}{<=}{\value{LWR@prevFileDepth}}%
6941 \)%
6942 \AND%

6943 \(% phantomsection
6944 \NOT\isempty{#3}%
6945 \OR%
6946 \(\NOT\equal{#1}{\BooleanTrue}\)%
6947 \)%
6948 }%

```

If so: start a new HTML file:

```

6949 {% new file
6950 \LWR@traceinfo{LWR@section: new HTML file}%

```

See if there was an optional TOC name entry:

```

6951 \IfNoValueTF{#2}%

```

If no optional entry

```

6952 {\LWR@newhtmlfile{#3}}%

```

If yes an optional entry

```

6953 {\LWR@newhtmlfile{#2}}%
6954 }% new file

```

Else: No new HTML file:

```

6955 {% not new file

```

Generate a new \LaTeX page so that toc and index page number points to the section:

```

6956 \LWR@traceinfo{LWR@section: not a new HTML file, about to LWR@orignewpage}%
6957 \LWR@maybe@orignewpage%
6958 }% not new file
6959

```

Remember this section's name for \nameref:

```

6960 \IfValueT{#3}{%
6961 \LWR@traceinfo{LWR@section: about to LWR@setlatestname}%
6962 \IfValueTF{#2}{\LWR@setlatestname{#2}}{\LWR@setlatestname{#3}}%
6963 }%

```

Print an opening comment with the level and the name; ex: “section” “Introduction”
Footnotes may be used in section names, which would also appear in the HTML section

opening comments, so the short toc entry is used if possible, and a limited opening comment is made if the sectional unit is starred.

```

6964 \ifbool{HTMLDebugComments}{%
6965     \begingroup%
6966     \LWR@nullfonts%
6967     \IfBooleanTF{#1}% starred
6968     {\LWR@htmlcomment{Opening #4*}}%
6969     {%
6970         \IfNoValueTF{#2}% short TOC
6971         {\LWR@htmlcomment{Opening #4 ‘#3’}}%
6972         {\LWR@htmlcomment{Opening #4 ‘#2’}}%
6973     }\LWR@orignewline%
6974     \endgroup%
6975 }{}

```

For inline sections paragraph and subparagraph, start a new paragraph now:

```

6976 \ifthenelse{%
6977     \cnttest{\@nameuse{LWR@depth#4}}{>=}{\LWR@depthparagraph}%
6978 }%
6979     {\LWR@startpars}%
6980     {}%

```

Create the opening tag with an autosec:

```

6981 \LWR@traceinfo{LWR@section: about to LWR@createautosec}%
6982 \LWR@createautosec{\@nameuse{LWR@tag#4}}%

```

```

6983 \setcounter{LWR@currentautosec}{\value{page}}%

```

Check if starred:

```

6984 \IfBooleanTF{#1}%
6985 {%
6986     \LWR@traceinfo{LWR@section: starred}%

```

Starred, but also forcing a toc entry, so add unnumbered toc name or regular name:

```

6987     \ifbool{LWR@forcinghtmltoc}%
6988     {%
6989         \addcontentsline{toc}{#4}{%
6990             \IfValueTF{#2}{\LWR@isolate{#2}}{\LWR@isolate{#3}}%
6991         }%
6992     }%
6993     {}%
6994 }% starred

```

Not starred, so step counter and add to toc:

```

6995 {% not starred

```

Only add a numbered toc entry if section number is not too deep:

```

6996 \ifthenelse{%
6997     \cnttest{\@nameuse{LWR@depth#4}}{<=}{\value{secnumdepth}}%
6998 }%
6999 {% if secnumdepth

```

If in the main matter, step the counter and add the toc entry. For article class, `lwarp` assumes that all is mainmatter.

```

7000 \LWR@traceinfo{LWR@section: about to test main matter}%
7001 \ifbool{LWR@mainmatter}%
7002 {%
7003     \LWR@traceinfo{LWR@section: yes mainmatter}%
7004     \refstepcounter{#4}%

```

Add main matter numbered toc entry with the toc name or the regular name:

```

7005 \LWR@traceinfo{LWR@section: about to addcontentsline}%
7006 \addcontentsline{toc}{#4}%
7007 {%
7008     \protect\numberline{%
7009         \@nameuse{pre#4name}%
7010         \@nameuse{the#4}%
7011         \@nameuse{post#4name}%
7012     }%
7013     {%
7014         \ignorespaces%
7015         \IfValueTF{#2}{\LWR@isolate{#2}}{\LWR@isolate{#3}}\protect\relax%
7016     }%
7017 }%
7018 \LWR@traceinfo{LWR@section: finished addcontentsline}%
7019 }% end of if main matter

```

If not main matter, add unnumbered toc name or regular name:

```

7020 {% not main matter
7021     \LWR@traceinfo{LWR@section: no main matter}%
7022     \addcontentsline{toc}{#4}{%
7023         \IfValueTF{#2}{\LWR@isolate{#2}}{\LWR@isolate{#3}}%
7024     }%
7025 }% end of not main matter
7026 }% end of secnumdepth

```

Deeper than secnumdepth, so add an unnumbered toc entry:

```

7027 {%
7028     \addcontentsline{toc}{#4}{%
7029         \IfValueTF{#2}{\LWR@isolate{#2}}{\LWR@isolate{#3}}%
7030     }%
7031 }%

```

For part, print “Part”:

```

7032 \ifbool{LWR@mainmatter}%
7033 {%

```

```

7034 \ifthenelse{%
7035     \(\cnttest{\@nameuse{LWR@depth#4}}{<=}%
7036     {\value{secnumdepth}}\)\ AND%
7037     \(\cnttest{\@nameuse{LWR@depth#4}}{=}{\LWR@depthpart}\)%
7038 }%
7039 {\@partnameformat}%
7040 {}%

```

Print the section number:

```

7041 \LWR@traceinfo{LWR@section: about to print section number}%
7042 \ifthenelse{%
7043     \cnttest{\@nameuse{LWR@depth#4}}{<=}{\value{secnumdepth}}%
7044 }%
7045 {%
7046     \ifstrequal{#4}{part}%
7047     {\protect\LWR@sectionnumber{\@partcntformat{#4}}}%
7048     {%
7049         \ifstrequal{#4}{chapter}%
7050         {%
7051             \LWR@printchaptername%
7052             \protect\LWR@sectionnumber{\@chapcntformat{#4}}%
7053         }%
7054         {\protect\LWR@sectionnumber{\@secntformat{#4}}}%
7055     }%
7056 }%
7057 {}%
7058 \LWR@traceinfo{LWR@section: finished print section number}%
7059 }{}%
7060 }% not starred

```

Print the section name:

```

7061 \LWR@traceinfo{LWR@section: about to print the section name}%
7062 \LWR@isolate{#3}%

```

Close the heading tag, such as /H2:

```

7063 \LWR@traceinfo{LWR@section: about to close the heading tag}%
7064 \LWR@htmltag{\@nameuse{LWR@tag#4end}}%
7065 \LWR@orignewline%

```

Generate a L^AT_EX label.

Track the PDF page numbers of the HTML output.

```

7066 \LWR@traceinfo{LWR@section: about to create the LaTeX label}%
7067 \setcounter{LWR@latestautopage}{\value{page}}%
7068 \LWR@newautopagelabel{LWR@currentautosec}\LWR@orignewline%

```

If this is the first section found in this file, create a label for previous/next links:

```

7069 \ifbool{LWR@setseqfilelabel}{}{%
7070   \label{\BaseJobname-autofile-\arabic{LWR@htmlseqfilenumber}}%
7071   \booltrue{LWR@setseqfilelabel}%
7072 }%

```

Start paragraph handing unless is an inline paragraph or subparagraph:

```

7073 \ifthenelse{%
7074   \cnttest{\@nameuse{LWR@depth#4}}{<}{\LWR@depthparagraph}%
7075 }%
7076   {\LWR@startpars}%
7077   {}%

```

If not starred, remember the previous depth to possibly trigger a new HTML page.

HOWEVER, allow a \part* to start a new HTML page. This is used by appendix.

A starred section does not trigger a new HTML page at the beginning of this macro, so it should not affect it here at the end either. This became an issue when a \listoftables was tested in the middle of the document. The \chapter* for the list was not allowing a new HTML page for the section following it while CombineHigherDepths was true.

```

7078 \ifthenelse{%
7079   \NOT\equal{#1}{\BooleanTrue}\OR%
7080   \cnttest{\@nameuse{LWR@depth#4}}{=}{\LWR@depthpart}%
7081 }%
7082   {% not starred
7083     \setcounter{LWR@prevFileDepth}{\@nameuse{LWR@depth#4}}%
7084   }% not starred
7085   {}%

```

Reset to defaults if not a phantomsection:

```

7086 \ifstrempy{#3}%
7087   {}%
7088   {%
7089     \global\boolfalse{LWR@forcinghtmlpage}%
7090     \global\boolfalse{LWR@forcinghtmltoc}%
7091   }%
7092 %
7093 \LWR@traceinfo{LWR@section: done}%
7094 }

```

62.4 Pre- and post- sectioning names

\prebookname Usually null, but is used by uj* and ut* Japanese classes.

\postbookname

```

7095 \providecommand*{\prebookname}{}
7096 \providecommand*{\postbookname}{}

```

\prepartname Usually null, but is used by uj* and ut* Japanese classes.

\postpartname

```
7097 \providecommand*\prepartname{}{}
7098 \providecommand*\postpartname{}{}
```

`\prechaptername` Usually null, but is used by `uj*` and `ut*` Japanese classes.
`\postchaptername`

```
7099 \providecommand*\prechaptername{}{}
7100 \providecommand*\postchaptername{}{}
```

`\presectionname` Always null, but provided here for algorithmic simplicity in `\LWR@section`.
`\postsectionname`

```
7101 \providecommand*\presectionname{}{}
7102 \let\postsectionname\presectionname
7103
7104 \let\presubsectionname\presectionname
7105 \let\postsubsubsectionname\postsectionname
7106
7107 \let\presubsubsectionname\presectionname
7108 \let\postsubsubsectionname\postsectionname
7109
7110 \let\preparagraphname\presectionname
7111 \let\postparagraphname\postsectionname
7112
7113 \let\presubparagraphname\presectionname
7114 \let\postsubparagraphname\postsectionname
```

62.5 `\section` and friends

For memoir, a second optional argument is allowed.

For `hybpbmsec`, a second optional argument or either parenthesis argument is allowed.

Each of these additional arguments are for headers or PDF bookmarks, and are ignored for HTML output.

`\part` * (`<2:PDF name>`) [`<3:TOC name>`] [`<4:PDF name>`] (`<5:PDF name>`) {`<6:name>`}

```
7115 \newcommand{\part@preamble}{}% for koma-script
7116
7117 \DeclareDocumentCommand{\part}{s d() o o d() m}{%
7118   \LWR@section{#1}{#3}{#6}{part}%
7119
7120   \part@preamble% for koma-script
7121   \renewcommand{\part@preamble}{}%
7122 }
```

`\chapter` * (`<2:PDF name>`) [`<3:TOC name>`] [`<4:PDF name>`] (`<5:PDF name>`) {`<6:name>`}

```
7123 \let\@printcites\relax% for quotchap package
7124
7125 \newcommand{\chapter@preamble}{}% for koma-script
```

```

7126
7127 \@ifundefined{chapter}
7128 {}
7129 {%
7130   \DeclareDocumentCommand{\chapter}{s d() o o d() m}{%
7131     \LWR@section{#1}{#3}{#6}{chapter}%
7132
7133     \@printcites% for quotchap package
7134
7135     \chapter@preamble% for koma-script
7136     \renewcommand{\chapter@preamble}{}%
7137   }
7138 }

```

`\section` * (*<2:PDF name>*) [*<3:TOC name>*] [*<4:PDF name>*] (*<5:PDF name>*) {*<6:name>*}

```

7139 \DeclareDocumentCommand{\section}{s d() o o d() m}{%
7140   \LWR@section{#1}{#3}{#6}{section}%
7141 }

```

`\subsection` * (*<2:PDF name>*) [*<3:TOC name>*] [*<4:PDF name>*] (*<5:PDF name>*) {*<6:name>*}

```

7142 \DeclareDocumentCommand{\subsection}{s d() o o d() m}{%
7143   \LWR@section{#1}{#3}{#6}{subsection}%
7144 }

```

`\subsubsection` * (*<2:PDF name>*) [*<3:TOC name>*] [*<4:PDF name>*] (*<5:PDF name>*) {*<6:name>*}

```

7145 \DeclareDocumentCommand{\subsubsection}{s d() o o d() m}{%
7146   \LWR@section{#1}{#3}{#6}{subsubsection}%
7147 }

```

`\paragraph` * (*<2:PDF name>*) [*<3:TOC name>*] [*<4:PDF name>*] (*<5:PDF name>*) {*<6:name>*}

```

7148 \DeclareDocumentCommand{\paragraph}{s d() o o d() m}{%
7149   \LWR@section{#1}{#3}{#6}{paragraph}%
7150 }

```

`\subparagraph` * (*<2:PDF name>*) [*<3:TOC name>*] [*<4:PDF name>*] (*<5:PDF name>*) {*<6:name>*}

```

7151 \DeclareDocumentCommand{\subparagraph}{s d() o o d() m}{%
7152   \LWR@section{#1}{#3}{#6}{subparagraph}%
7153 }

```

```

7154 \end{warpHTML}

```

63 Starting a new file

for HTML & PRINT: 7155 \begin{warppall}

`\HTMLLanguage` Default language for the HTML lang tag.

```

7156 \newcommand*\LWR@currentHTMLLanguage}{en-US}
7157
7158 \newcommand*\HTMLLanguage}[1]{%
7159     \renewcommand*\LWR@currentHTMLLanguage}{#1}%
7160 }
```

`\theHTMLTitleSeparator` May be used inside `\theHTMLTitleSection` to separate the website's overall HTML title and the particular page's section name.

```

7161 \ifPDFTeX% pdflatex or dvi latex
7162     \ifdefstring{\inputencodingname}{utf8}{%
7163         \newcommand*\theHTMLTitleSeparator}{ -\ }% EMDash
7164     }{%
7165         \newcommand*\theHTMLTitleSeparator}{ -\ }% hyphen
7166     }%
7167 \else%
7168     \ifpTeX
7169         \newcommand*\theHTMLTitleSeparator}{ -\ }% hyphen
7170     \else
7171         \newcommand*\theHTMLTitleSeparator}{ -\ }% EMDash
7172     \fi%
7173 \fi%
```

`\HTMLTitleBeforeSection` Sets the HTML page's meta title tag to show the website title before the section name.

```

7174 \newcommand*\HTMLTitleBeforeSection}{%
7175     \def\theHTMLTitleSection{%
7176         \theHTMLTitle\theHTMLTitleSeparator\theHTMLSection%
7177     }%
7178 }
```

`\HTMLTitleAfterSection` Sets the HTML page's meta title tag to show the section name before the website title.

```

7179 \newcommand*\HTMLTitleAfterSection}{%
7180     \def\theHTMLTitleSection{%
7181         \theHTMLSection\theHTMLTitleSeparator\theHTMLTitle%
7182     }%
7183 }
```

`\theHTMLTitleSection` Forms the HTML page's meta title tag. The default is to show the website title before the section name.

```

7184 \HTMLTitleBeforeSection
```

`\theHTMLSection` The section name is passed to `\LWR@filestart`, which then sets `\theHTMLSection` for use inside `\theHTMLTitleSection` to create an HTML meta title tag.

```

7185 \newcommand*\theHTMLSection){}
```

```
7186 \end{warpall}
```

for HTML output: 7187 \begin{warpHTML}

\LWR@filestart [*<section name>*] Creates the opening HTML tags.

```
7188 \newcommand*{\LWR@filestart}[1][\%
7189 \LWR@traceinfo{\LWR@filestart !#1!}%
```

Locally temporarily disable direct-formatting commands:

```
7190 \begingroup%
7191 \LWR@nullfonts%
```

Save the section name for use while creating the HTML meta title tag:

```
7192 \edef\theHTMLSection{#1}%
```

Remove extra material:

```
7193 \StrSubstitute{\theHTMLSection}{\protect}{\detokenize{-}}[\theHTMLSection]
7194 \StrSubstitute{\theHTMLSection}{\detokenize{----}}{\detokenize{-}}[\theHTMLSection]
7195 \StrSubstitute{\theHTMLSection}{\detokenize{---}}{\detokenize{-}}[\theHTMLSection]
7196 \StrSubstitute{\theHTMLSection}{\detokenize{--}}{\detokenize{-}}[\theHTMLSection]
7197 \StrSubstitute{\theHTMLSection}{\detokenize{--}}{\detokenize{-}}[\theHTMLSection]
```

If starts with a dash, remove the leading dash:

```
7198 \IfBeginWith{\theHTMLSection}{\detokenize{-}}{%
7199   \StrGobbleLeft{\theHTMLSection}{1}[\theHTMLSection]%
7200 }{%}
```

Create the page's HTML header:

```
7201 \LWR@htmltag{!DOCTYPE html}\LWR@orignewline
```

The language is user-adjustable:

```
7202 \LWR@htmltag{%
7203   html lang=\LWR@orig@textquotedbl\LWR@currentHTMLLanguage\LWR@orig@textquotedbl%
7204 }\LWR@orignewline
```

Start of the meta data:

```
7205 \LWR@htmltag{head}\LWR@orignewline
```

Charset is fixed at UTF-8:

```
7206 \LWR@htmltag{%
7207   meta charset=\LWR@orig@textquotedbl{UTF-8}\LWR@orig@textquotedbl /%
7208 }\LWR@orignewline
```

Author:

```

7209 \ifthenelse{\equal{\theHTMLAuthor}{}}%
7210     {}%
7211     {%
7212         \LWR@htmltag{%
7213             meta name=\LWR@orig@textquotedbl{}author\LWR@orig@textquotedbl\ % space
7214             content=\LWR@orig@textquotedbl\theHTMLAuthor\LWR@orig@textquotedbl\ /%
7215             }\LWR@orig@textquotedbl\ %
7216         }%

```

lwarp is the generator:

```

7217 \LWR@htmltag{%
7218     meta % space
7219     name=\LWR@orig@textquotedbl{}generator\LWR@orig@textquotedbl\ % space
7220     content=\LWR@orig@textquotedbl{}LaTeX Lwarp package\LWR@orig@textquotedbl\ /%
7221 }\LWR@orig@textquotedbl\ %

```

If there is a description, add it now:

```

7222 \ifdefempty{\LWR@currentHTMLDescription}{}%
7223     \LWR@htmltag{%
7224         meta name=\LWR@orig@textquotedbl{}description\LWR@orig@textquotedbl\ % space
7225         content=\LWR@orig@textquotedbl\LWR@currentHTMLDescription\LWR@orig@textquotedbl\ /%
7226         }\LWR@orig@textquotedbl\ %
7227 }%

```

Mobile-friendly viewport:

```

7228 \LWR@htmltag{%
7229     meta % space
7230     name=\LWR@orig@textquotedbl{}viewport\LWR@orig@textquotedbl\ % space
7231     content=\LWR@orig@textquotedbl{}width=device-width, initial-scale=1.0\LWR@orig@textquotedbl\ /%
7232 }\LWR@orig@textquotedbl\ %

```

IE patch:

```

7233 \LWR@htmltag{!-/-[if lt IE 9]}\LWR@orig@textquotedbl\ %
7234 \LWR@htmltag{%
7235     script % space
7236     src=\LWR@orig@textquotedbl{}%
7237     http://html5shiv.googlecode.com/svn/trunk/html5.js%
7238     \LWR@orig@textquotedbl\ %
7239 }%
7240 \LWR@htmltag{/script}\LWR@orig@textquotedbl\ %
7241 \LWR@htmltag{![endif]-/-}\LWR@orig@textquotedbl\ %

```

The page's title, if there is one. A section name is also added if given.

```

7242 \ifthenelse{\equal{\theHTMLTitle}{}}%
7243     {}%
7244     {%
7245         \LWR@htmltag{title}%

```

```

7246     \ifdefempty{\theHTMLSection}%
7247         {\theHTMLTitle}%
7248         {\theHTMLTitleSection}%
7249     \LWR@htmltag{/title}\LWR@orignewline%
7250 }%
```

The page's stylesheet:

```

7251 \LWR@htmltag{%
7252     link % space
7253     rel=\LWR@orig@textquotedbl{}stylesheet\LWR@orig@textquotedbl\ % space
7254     type=\LWR@orig@textquotedbl{}text/css\LWR@orig@textquotedbl\ % space
7255     href=\LWR@orig@textquotedbl\LWR@currentcss\LWR@orig@textquotedbl\ /%
7256 }%
7257 \LWR@orignewline
```

Optional MATHJAX support. The HTML tags must be turned off during the verbatim input, and the paragraph handling which was turned on at the end of verbatim input must be immediately turned off again.

```

7258 \ifbool{mathjax}%
7259 {%
7260     \begingroup%
7261     \LWR@restoreoriglists%
7262     \boolfalse{LWR@verbtags}%

7263     \IfFileExists{\LWR@mathjaxfilename}%
7264     {\verbatiminput{\LWR@mathjaxfilename}}%
7265     {%
7266         \PackageError{lwarp}%
7267         {%
7268             \protect\MathJaxFilename\space specified the file\MessageBreak
7269             \space\space\LWR@mathjaxfilename\MessageBreak
7270             which does not exist%
7271         }%
7272         {Specify an existing file, or remove \protect\MathJaxFilename.}%
7273     }%

7274     \booltrue{LWR@verbtags}%
7275     \endgroup%
7276     \LWR@stoppars%
7277 }% end of mathjax
7278 }%
```

End of the header:

```

7279 \LWR@htmltag{/head}\LWR@orignewline
```

Start of the body:

```

7280 \LWR@htmltag{body}\LWR@orignewline
7281 \endgroup
7282 \LWR@traceinfo{LWR@filestart: done}
7283 }
```

```
7284 \end{warpHTML}
```

64 Starting HTML output

for HTML output: 7285 \begin{warpHTML}

\LWR@LwarpStart Executed at the beginning of the entire document.

The use of \textquotedbl instead of " improves compatibility with xeCJK.

```
7286 \catcode'\$=\active
7287 \newcommand*{\LWR@LwarpStart}
7288 {%
7289 \LWR@traceinfo{\LWR@LwarpStart}
```

If formatting for a word processor, force filedepth to single-file only, force HTML debug comments off.

```
7290 \ifbool{FormatWP}{%
7291   \setcounter{FileDepth}{-5}%
7292   \boolfalse{HTMLDebugComments}%
7293 }{}
```

Expand and detokenize \HomeHTMLFilename and \HTMLFilename:

```
7294 \edef\LWR@strresult{\HomeHTMLFilename}
7295 \edef\HomeHTMLFilename{\detokenize\expandafter{\LWR@strresult}}
7296 \edef\LWR@strresult{\HTMLFilename}
7297 \edef\HTMLFilename{\detokenize\expandafter{\LWR@strresult}}
```

Force onecolumn and empty page style:

```
7298 \LWR@origonecolumn%
7299 \LWR@origpagestyle{empty}%
```

No black box for overfull lines:

```
7300 \overfullrule=0pt
```

Reduce chance of line overflow when HTML tags are added:

```
7301 \LWR@print@footnotesize%
```

In PDF output, don't allow line breaks to interfere with HTML tags:

```
7302 \LWR@print@raggedright%
7303 \LetLtxMacro{\}{\LWR@endofline}%
```

Spread the lines for *pdftotext* to read them well:

```
7304 \linespread{1.3}%
```

For *pdftotext* to reliably identify paragraph splits:

```
7305 \setlength{\parindent}{0pt}
7306 \setlength{\parskip}{2ex}
```

For the lateximage record file:

```
7307 \immediate\openout\LWR@lateximagesfile=\BaseJobname-images.txt
```

Removes space around the caption in the HTML:

```
7308 \setlength{\belowcaptionskip}{0ex}
7309 \setlength{\abovecaptionskip}{0ex}
```

Redefine the plain page style to be empty when used by index pages:

```
7310 \renewcommand{\ps@plain}{} 
```

Plug in some new actions. This is done just before the document start so that they won't be over-written by some other package.

Float captions:

```
7311 \let\LWR@origcaption\caption
```

Not yet started any paragraph handling:

```
7312 \global\boolfalse{LWR@doingapar}
7313 \global\boolfalse{LWR@doingstartpars}
```

Document and page settings:

```
7314 \mainmatter
7315 \LWR@origpagenumbering{arabic}
```

Start a new HTML file and a header:

```
7316 \LWR@traceinfo{LWR@lwarpStart: Starting new file.}
7317 \LWR@filestart
7318 \LWR@traceinfo{LWR@lwarpStart: Generating first header.}
```

```
7319 \ifdefempty{\LWR@firstpagetop}{}{%
7320   \LWR@htmltag{header}\LWR@orignewline
7321   \LWR@startpars
7322   \LWR@firstpagetop
7323   \LWR@stoppars
7324   \LWR@htmltag{/header}\LWR@orignewline
7325 }%
```

```
7326 \LWR@htmlclass{div}{bodywithoutsidetoc}
7327 \LWR@htmlclass{div}{bodycontainer}
7328 \LWR@traceinfo{LWR@lwarpStart: Generating textbody.}
7329 \LWR@htmlclass{section}{textbody}
```

Create a label for previous/next links, and remember it has been done:

```
7330 \booltrue{LWR@setseqfilelabel}%
7331 \label{\BaseJobname-autofile-\arabic{LWR@htmlseqfilenumber}}
```

Patch the `itemize`, `enumerate`, and `description` environments and `\item`. This works with the native L^AT_EX environments, as well as those provided by `enumitem`, `enumerate`, and `paralist`.

```
7332 \LWR@patchlists
```

Ensure that math mode is active to call lwarp's patches:

```
7333 \catcode'\$=\active
```

Required for `\nameref` to work with svg math:

```
7334 \immediate\write\@mainaux{\catcode'\string\$\active}%
7335 \LetLtxMacro\LWR@syntaxhighlighttone$% balance for editor syntax highlighting
```

Allow HTML paragraphs to begin:

```
7336 \LWR@startpars
```

If using MATHJAX, disable `\ensuremath` by printing a nullified definition at the start of each file, and add further customizations:

```
7337 \LWR@customizeMathJax
```

First autopage label in case a figure occurs early.

```
7338 \setcounter{LWR@latestautopage}{\value{page}}%
7339 \LWR@newautopagelabel{LWR@currentautosec}%
```

```
7340 \LWR@traceinfo{LWR@lwarpStart: done}
7341 }
7342 \catcode'\$=3% math shift until lwarp starts
```

```
7343 \end{warpHTML}
```

65 Ending HTML output

for HTML output: 7344 \begin{warpHTML}

`\LWR@requesttoc` {*<boolean>*} {*<suffix>*} Requests that a TOC, LOF, or LOT be generated.

```
7345 \newcommand*{\LWR@requesttoc}[2]{%
7346 \ifbool{#1}
7347 {
```

```

7348 \expandafter\newwrite\@nameuse{tf@#2}
7349 \immediate\openout \@nameuse{tf@#2} \jobname.#2\relax
7350 }{}
7351 }

```

\LWR@LwarpEnd Final stop of all HTML output:

```

7352 \newcommand*{\LWR@LwarpEnd}
7353 {
7354 \LWR@stoppars
7355 \LWR@closeprevious{finished}

```

At the bottom of the ending file:

Close the textbody:

```

7356 \label{\BaseJobname-autofile-last}
7357 \LWR@htmlElementclassend{section}{textbody}
7358 \LWR@htmlElementclassend{div}{bodycontainer}
7359 \LWR@htmlElementclassend{div}{bodyandsidetoc}

```

Print any pending footnotes:

```

7360 \LWR@printpendingfootnotes

```

Create the footer if not EPUB

```

7361 \ifbool{FormatEPUB}{\LWR@createfooter}

```

No bottom navigation if are finishing the home page, or if formatting for an EPUB or word processor.

Presumably has a table-of-contents.

```

7362 \ifthenelse{\boolean{FormatEPUB}\OR\boolean{FormatWP}}
7363   {}
7364   {
7365     \ifnumcomp{\value{LWR@htmlfilenumber}}{>}{0}{\LWR@botnavigation}{}
7366   }

```

```

7367 \LWR@stoppars% final stop of all paragraphs

```

Finish the HTML file:

```

7368 \LWR@htmltag{/body}\LWR@orignewline
7369 \LWR@htmltag{/html}\LWR@orignewline

```

Seems to be required sometimes:

```

7370 \LWR@maybe@orignewpage
7371 }

```

`\enddocument` If labels have not changed, mark successful completion of the `lateximages.txt` file. Executed as everything is being shut down.

```

7372 \xpatchcmd{\enddocument}
7373     {%
7374         \if@tempswa
7375         \@latex@warning@no@line{Label(s) may have changed.
7376         Rerun to get cross-references right}%
7377         \fi
7378     }
7379     {%
7380         \if@tempswa
7381         \@latex@warning@no@line{Label(s) may have changed.
7382         Rerun to get cross-references right}%
7383         \else
7384         \immediate\write\LWR@lateximagesfile{%
7385             |end|end|end|
7386         }%
7387         \fi
7388     }
7389     {}
7390     {
7391         \AtEndDocument{
7392             \PackageWarningNoLine{lwarp}
7393             {%
7394                 Could not patch \protect\enddocument.\MessageBreak
7395                 If labels have changed, be sure to recompile before\MessageBreak
7396                 creating lateximages with\MessageBreak
7397                 \space\space lwarpmk limages,\MessageBreak
7398                 or the images may be corrupt%
7399             }
7400         }
7401     }

7402 \end{warpHTML}

```



66 Title page

package support **load order** `lwarp` supports the native L^AT_EX titling commands, and also supports the packages `authblk` and `titling`. If both are used, `authblk` should be loaded before `titling`.

`\published` and `\subtitle` If using the `titling` package, additional `titlepage` fields for `\published` and `\subtitle` may be added by using `\AddSubtitlePublished` in the preamble. See section 66.8.

affiliation `lwarp` provides for the `\author` macro an additional `\affiliation` macro to provide an affiliation and other additional information for each author in the title page. The affiliation information is removed when using `titlingpage`'s `\theauthor` in the main text.

reusing titlepage information The `titling` package maintains the definitions of `\thetitle`, `\theauthor`, etc., after the title has been typeset. These commands are to be used to refer to the document's title and author, etc., in the main text. These definitions have the `\thanks` and

-  `\theauthor`, `authblk` `\affiliation` removed, and for `\author` the `\and` is replaced to generate a simple inline list of authors separated by commas. Note: `\theauthor` does not work well with `authblk` unless the traditional L^AT_EX syntax is used.
- `custom titlepages` `\printtitle`, `\printauthor`, etc., are provided for use inside a custom titlepage or titlingpage environment, and these retain the `\thanks` and `\affiliation`.
- `\printthanks` `\printthanks` has been added to force the printing of thanks inside a titlingpage environment when `\maketitle` is not used.
-  `\thanks` Inside a `\titlepage` or `\titlingpage` environment, use `\thanks` instead of `\footnote` for acknowledgements, etc.

66.1 Setting the title, etc.

The following provide setting commands for both HTML and print outputs.

`\author` `\and` `{\author}` While using `\maketitle` and print mode, the author is treated as a single-column tabular and the `\and` feature finishes the current tabular then starts a new one for the next author. Each author thus is placed into its own tabular, and an affiliation may be placed on its own line such as

```
\author{Name \\ Affiliation \and Second Name \\ Second Affiliation}
```


For HTML, the entire author block is placed inside a `<div>` of class `author`, and each individual author is inside a `<div>` of class `oneauthor`.

`\@title` `\@author` `\@date` `\@title`, `\@author`, and `\@date` store the values as originally assigned, including any `\thanks`, `\and`, or `\affiliation`. These are low-level macros intended to be used by other macros only inside a titlepage or titlingpage, and are used by `\maketitle`. The author is printed inside a single-column tabular, which becomes multiple single-column tabulars if multiples authors are included. For HTML, these tabulars become side-by-side `<div>`s of class `oneauthor`, all of which are combined into one `<div>` of class `author`.


`\printtitle` `\printauthor` `\printdate` `\printtitle`, etc. are user-level macros intended to be used in custom titlepage or titlingpage environments in cases where `\maketitle` is not desired. These commands preserve the `\thanks`, etc., and should not be used in the main text.

`\thetitle` `\theauthor` `\thedata` `\thetitle`, `\theauthor`, and `\thedata` are available if `titling` has been loaded, and are sanitized user-level versions from which have been removed the `\thanks` and `\affiliation`, and `\and` is changed for inline text usage. The author is printed inline without `\affiliation` or `\thanks`, with `\and` placing commas between multiple authors. Thus, these commands are to be used in the main text whenever the user wishes to refer to the document's title and such. One practical use for this is to place the authors at the bottom of each HTML page, such as:

```
\HTMLPageBottom{
  \begin{center}\textcopyright~20xx \theauthor\end{center}
}
```

-  `\theauthor`, `authblk` `\theauthor` does not work well if `authblk` is used. If `\theauthor` is important, it is

recommended to use the standard L^AT_EX syntax for `\author`, optionally with `lwarp`'s `\affiliation` macro as well.

 **affiliations** After `\maketitle` has completed, `\theauthor` retains the definition of the author, but `\and` is changed to become a comma and a space, intending to print the authors names separated by spaces. This fails when affiliations are included on their own table rows.

`\affiliation` A solution, provide here, is to define a macro `\affiliation` which, during `\maketitle`, starts a new row and adds the affiliation, but after `\maketitle` is finished `\affiliation` is re-defined to discard its argument, thus printing only the author names when `\author` is later used inline.

66.2 `\if@titlepage`

for HTML & PRINT: 7403 `\begin{warpall}`

`\if@titlepage` Some classes do not provide `\if@titlepage`. In this case, provide it and force it false.

```
7404 \ifcsvoid{@titlepagefalse}{
7405   \newif\if@titlepage
7406   \@titlepagefalse
7407 }{}

7408 \end{warpall}
```

66.3 Changes for `\affiliation`

`\affiliation` `{\text}`

Adds the affiliation to the author for use in `\maketitle`.

Inside `titlepage`, this macro prints its argument. Outside, it is null.

for HTML & PRINT: 7409 `\begin{warpall}`
7410 `\providerobustcmd{\affiliation}[1]{}{}`
7411 `\end{warpall}`

for PRINT output: 7412 `\begin{warpprint}`

```
7413 \AtBeginEnvironment{titlepage}{
7414 \renewrobustcmd{\affiliation}[1]{\ \textsc{\small#1}}
7415 }
7416
7417 \AtBeginDocument{
7418 \ifpackageloaded{titling}{
7419 \AtBeginEnvironment{titlingpage}{
7420 \renewrobustcmd{\affiliation}[1]{\ \textsc{\small#1}}
7421 }
7422 }{}% titling loaded
7423 }% AtBeginDocument
```

```
7424 \end{warpprint}
```

for HTML output: 7425 \begin{warpHTML}

Env titlepage Sets up a <div> of class titlepage. Provided even for memoir class, since it is used by \maketitle.

```
7426 \DeclareDocumentEnvironment{titlepage}{}
7427 {
7428 \renewrobustcmd{\affiliation}[1]{\ \ \InlineClass{affiliation}{##1}}
7429 \LWR@printpendingfootnotes
7430 \LWR@forcenewpage
7431 \BlockClass{titlepage}
7432 }
7433 {
7434 \endBlockClass
7435 \LWR@printpendingfootnotes
7436 }

7437 \end{warpHTML}
```

66.4 Printing the thanks

\printthanks Forces the \thanks to be printed. This is necessary in a titlingpage environment when \maketitle was not used.

for PRINT output: 7438 \begin{warpprint}
7439 \newcommand*{\printthanks}{\@thanks}
7440 \end{warpprint}

for HTML output: 7441 \begin{warpHTML}
7442 \newcommand*{\printthanks}{\LWR@stoppars\@thanks\LWR@startpars}
7443 \end{warpHTML}

66.5 Printing the title, etc. in HTML

The following are for printing the title, etc. in a titlepage or a titlingpage in HTML:

for HTML output: 7444 \begin{warpHTML}

\printtitle

```
7445 \newcommand*{\printtitle}
7446 {%
7447 \LWR@stoppars%
7448 \LWR@htmltag{\LWR@tagtitle}%
7449 \@title%
7450 \LWR@htmltag{\LWR@tagtitleend}%
7451 \LWR@startpars%
7452 }
```

`\LWR@printthetitle` A private version which prints the title without footnotes, used to title each HTML page.

```
7453 \newcommand*{\LWR@printthetitle}
7454 {%
7455     \LWR@stoppars%
7456     \LWR@htmltag{\LWR@tagtitle}%
7457     \thetitle%
7458     \LWR@htmltag{\LWR@tagtitleend}%
7459     \LWR@startpars%
7460 }
```

`\printauthor` HTML version.

```
7461 \newcommand*{\printauthor}{
```

The entire author block is contained in a <div> named author:

```
7462 \begin{BlockClass}{author}
```

`\and` finishes one author and starts the next:

```
7463 \renewcommand{\and}{%
7464 \end{BlockClass}
7465 \begin{BlockClass}{oneauthor}
7466 }
```

Individual authors are contained in a <div> named oneauthor:

```
7467 \begin{BlockClass}{oneauthor}
7468 \@author
7469 \end{BlockClass}
7470 \end{BlockClass}
7471 }
```

`\printdate`

```
7472 \newcommand*{\printdate}{%
7473 \begin{BlockClass}{titledate}
7474 \@date
7475 \end{BlockClass}
7476 }
```

```
7477 \end{warpHTML}
```

66.6 Printing the title, etc. in print form

The following are for printing the title, etc. in a titlepage or a titlingpage in print form:

for PRINT output: 7478 `\begin{warpprint}`

`\printtitle`

```
7479 \newcommand*{\printtitle}{\Huge\@title}}
```

`\printauthor` **Print mode.**

```
7480 \newcommand*{\printauthor}
7481   {{\large\begin{tabular}[t]{c}\@author\end{tabular}}}
```

`\printdate`

```
7482 \newcommand*{\printdate}{\small\textit{\@date}}

7483 \end{warpprint}
```

66.7 \maketitle for HTML output

An HTML `<div>` of class `titlepage` is used.

`\thanks` are a form of footnotes used in the title page. See section 59 for other kinds of footnotes.

See `\thanksmarkseries{series}`, below, to set the style of the footnote marks.

for HTML output: `7484 \begin{warppHTML}`

```
7485 \@ifclassloaded{memoir}
7486 {
7487   \newcommand{\LWR@setfootnoteseries}{%
7488     \renewcommand\thefootnote{\@arabic\c@footnote}%
7489   }
7490 }{% not memoir
7491 \if@titlepage
7492   \newcommand{\LWR@setfootnoteseries}{%
7493     \renewcommand\thefootnote{\@arabic\c@footnote}%
7494   }
7495 \else
7496   \newcommand{\LWR@setfootnoteseries}{%
7497     \renewcommand\thefootnote{\@fnsymbol\c@footnote}%
7498   }
7499 \fi
7500 }% not memoir
```

`\LWR@maketitlesetup` **Patches \thanks macros.**

```
7501 \newcommand*{\LWR@maketitlesetup}{%
```

Redefine the footnote mark:

```
7502 \LWR@setfootnoteseries%
7503 \def\@makefnmark{\textsuperscript{\thefootnote}}
```

`\thefootnote` \Rightarrow `\nameuse{arabic}{footnote}`, or
`\thefootnote` \Rightarrow `\nameuse{fnsymbol}{footnote}`

Redefine the footnote text:

```
7504 \long\def\@makefntext##1{%
```

Make the footnote mark and some extra horizontal space for the tags:

```
7505 \textsuperscript{\@thefnmark}~%
```

`\makethanksmark` \Rightarrow `\thanksfootmark` \Rightarrow `\tmark` \Rightarrow
`\@thefnmark` \Rightarrow `\itshape` a (or similar)

Print the text:

```
7506 ##1%
7507 }%
7508 }
```

`\@fnsymbol` `{\langle counter\rangle}`

Re-defined to use an HTML entity for the double vertical bar symbol. The original definition used `\|` which was not being seen by *pdftotext*.

```
7509 \def\LWR@HTML@fnsymbol#1{%
7510   \ifcase#1\or *\or
7511   \HTMLentity{dagger}\or
7512   \HTMLentity{Dagger}\or
7513   \HTMLentity{sect}\or
7514   \HTMLentity{para}\or
7515   \HTMLunicode{2016}\or
7516   **\or
7517   \HTMLentity{dagger}\HTMLentity{dagger} \or
7518   \HTMLentity{Dagger}\HTMLentity{Dagger} \else
7519   \@ctrerr\fi%
7520 }
7521 \LWR@formatted{@fnsymbol}
```

`\maketitle` HTML mode. Creates an HTML titlepage div and typesets the title, etc.

Code from the titling package is adapted, simplified, and modified for HTML output.

```
7522 \renewcommand*\maketitle{%
```

An HTML titlepage `<div>` is used for all classes.

```
7523 \begin{titlepage}
```

Set up special patches:

```
7524 \LWR@maketitlesetup
```

Typeset the title, etc:

```
7525 \@maketitle
```

Immediately generate any \thanks footnotes:

```
7526 \LWR@stoppars\@thanks\LWR@startpars
```

Close the HTML titlepage div and cleanup:

```
7527 \end{titlepage}
7528 \setcounter{footnote}{0}%
7529 \global\let\thanks\relax
7530 \global\let\maketitle\relax
7531 \global\let\@maketitle\relax
7532 \global\let\@thanks\@empty
7533 \global\let\@author\@empty
7534 \global\let\@date\@empty
7535 \global\let\@title\@empty
7536 \global\let\title\relax
7537 \global\let\author\relax
7538 \global\let\date\relax
7539 \global\let\and\relax
7540 }
```

\@maketitle HTML mode. Typesets the title, etc.:

```
7541 \DeclareDocumentCommand{\@maketitle}{}{%
7542   \LWR@stoppars%
7543   \LWR@htmltag{\LWR@tagtitle}%
7544   \@title%
7545   \LWR@htmltag{\LWR@tagtitleend}%
7546   \LWR@startpars%
7547   \begin{BlockClass}{author}%
```

For IEEEtran class:

```
7548   \renewcommand*{\cr}{}%
7549   \renewcommand*{\crcr}{}%
7550   \renewcommand*{\noalign}{}%

7551   \renewcommand{\and}{%
7552     \end{BlockClass}%
7553     \begin{BlockClass}{oneauthor}%
7554   }%
7555   \begin{BlockClass}{oneauthor}%
7556     \@author%
7557   \end{BlockClass}%
7558 \end{BlockClass}%
7559 \begin{BlockClass}{titledate}%
7560   \@date%
7561 \end{BlockClass}%
7562 }
```

`\LWR@titlingmaketitle` `\maketitle` for use inside an HTML titlingpage environment.

```
7563 \newcommand*{\LWR@titlingmaketitle}{%
```

Keep pending footnotes out of the title block:

```
7564 \LWR@stoppars\@thanks\LWR@startpars
```

Set up special patches:

```
7565 \LWR@maketitlesetup
```

Typeset the title, etc:

```
7566 \@maketitle
```

Immediately generate any `\thanks` footnotes:

```
7567 \LWR@stoppars\@thanks\LWR@startpars
```

```
7568 }
```


```
7569 \end{warpHTML}
```

66.8 `\published` and `\subtitle`

`\subtitle` and `\published` To add `\subtitle` and `\published` to the titlepage, load the titling package and use `\AddSubtitlePublished` in the preamble.

The default `lwarp.css` has definitions for the `published` and `subtitle` classes.

If `titling` is loaded, `\AddSubtitlePublished` creates a number of additional macros, and also assigns some of the titling hooks. If `titling` is not loaded, `\AddSubtitlePublished` creates null macros.

 **titling hooks** Do not use `\AddSubtitlePublished` if the user has patched the titling hooks for some other reason. Portions are marked `\warpprintonly` to reduce extra tags in HTML. Similarly, `BlockClass` has no effect in print mode. Thus, the following may be marked `warppall`.

for HTML & PRINT: `7570 \begin{warppall}`

`\AddSubtitlePublished` Adds `\published` and `\subtitle`, and related.

```
7571 \newcommand*{\AddSubtitlePublished}{%
7572 \ifpackageloaded{titling}{% yes titling package
7573   \newcommand{\@published}{}%
7574   \newcommand{\published}[1]{\gdef\@published{##1}}%
7575   \renewcommand*{\maketitlehooka}{\printpublished}%
7576   \newcommand*{\printpublished}{%
7577     \warpprintonly{\begin{center}\unskip}%
7578     \begin{BlockClass}{published}%
```

```

7579      \warpprintonly{\large\itshape}%
7580      \@published%
7581      \end{BlockClass}%
7582      \warpprintonly{\end{center}}%
7583  }%
7584  \newcommand{\@subtitle}{}%
7585  \newcommand{\subtitle}[1]{\gdef\@subtitle{##1}}%
7586  \renewcommand*{\maketitlehookb}{\printsubtitle}%
7587  \newcommand*{\printsubtitle}{%
7588      \warpprintonly{\begin{center}\unskip}%
7589      \begin{BlockClass}{subtitle}%
7590      \warpprintonly{\Large\itshape}%
7591      \@subtitle%
7592      \end{BlockClass}%
7593      \warpprintonly{\end{center}}%
7594  }%
7595 }% yes titling package
7596 {% no titling package

7597  \def\@published{}%
7598  \DeclareDocumentCommand{\published}{m}{\gdef\@published{##1}}%
7599  \DeclareDocumentCommand{\printpublished}{}{}%
7600  \def\@subtitle{}%
7601  \DeclareDocumentCommand{\subtitle}{m}{\gdef\@subtitle{##1}}%
7602  \DeclareDocumentCommand{\printsubtitle}{}{}%
7603 }% no titling package
7604 }% \AddSubtitlePublished

7605 \end{warppall}

```

67 Abstract

The following code replaces the \LaTeX default, and will itself be replaced later if the `abstract` package is loaded.

for HTML output: 7606 \begin{warppHTML}

\abstractname User-redefinable title for the abstract.

Also over-written by the `babel` package.

```
7607 \providecommand*{\abstractname}{Abstract}
```

Some classes allow an optional name, so it is allowed here.

Env abstract

```

7608 \DeclareDocumentEnvironment{abstract}{0{\abstractname}}
7609 {
7610     \LWR@forcenewpage

```

```

7611 \BlockClass{abstract}
7612 \BlockClassSingle{abstracttitle}{#1}
7613 }
7614 {
7615 \endBlockClass
7616 }

7617 \end{warpHTML}

```

68 Quote and verse

68.1 Attributions

`\attribution {<name>}`

For use with quote, quotation, verse:

Ex: "A quotation." `\attribution{\textsc{Author Name}}\textsl{Book Title}`

for HTML & PRINT:

```

7618 \begin{warpall}
7619 \newcommand{\attribution}[1]{
7620 \begin{flushright}
7621 \unskip
7622 #1
7623 \end{flushright}%
7624 }
7625 \end{warpall}

```

for HTML output:

```

7626 \begin{warpHTML}
7627 \newcommand{\LWR@HTML@attribution}[1]{%
7628 \LWR@stoppars%
7629 \begin{BlockClass}{attribution}
7630 #1
7631 \end{BlockClass}
7632 \LWR@startpars%
7633 }
7634 \LWR@formatted{attribution}
7635 \end{warpHTML}

```

68.2 Quotes, quotations

for HTML output: `7636 \begin{warpHTML}`

Env quote

```

7637 \newenvironment*{\LWR@HTML@quote}
7638 {
7639 \LWR@forcenewpage
7640 \LWR@htmlblocktag{blockquote}

```

```

7641 }
7642 {\LWR@htmlblocktag{/blockquote}}
7643
7644 \LWR@formattedenv{quote}

```

Env quotation

```

7645 \newenvironment*{LWR@HTML@quotation}
7646 {
7647     \LWR@forcenewpage
7648     \LWR@htmlblocktag{blockquote}
7649 }
7650 {\LWR@htmlblocktag{/blockquote}}
7651
7652 \LWR@formattedenv{quotation}

7653 \end{warpHTML}

```

68.3 Verse

When using `verse` or `memoir`, always place a `\\` after each line.

`\attrib` The documentation for the `verse` and `memoir` packages suggest defining an `\attrib` command, which may already exist in current documents, but it will only work for print output. `lwarp` provides `\attribution`, which works for both print and HTML output. To combine the two so that `\attrib` is used for print and `\attribution` is used for HTML:

```

\begin{warpHTML}
\let\attrib\attribution
\end{warpHTML}

```

Len `\vleftskip` These lengths are used by `verse` and `memoir` to control the left margin, and they may already be set by the user for print output. New lengths `\HTMLvleftskip` and `\HTMLleftmargini` are provided to control the margins in HTML output. These new lengths may be set by the user before any verse environment, and persist until they are manually changed again. One reason to change `\HTMLleftmargini` is if there is a wide `\flagverse` in use, such as the word “Chorus”, in which case the value of `\HTMLleftmargini` should be set to a wide enough length to contain “Chorus”. The default is wide enough for a stanza number.

⚠ spacing Horizontal spacing relies on *pdftotext*’s ability to discern the layout (`-layout` option) of the text in the HTML-tagged PDF output. For some settings of `\HTMLleftmargini` or `\HTMLleftskip` the horizontal alignment may not work out exactly, in which case a

⚠ verse margin label may be shifted by one space. During translation to HTML, the stanza numbers are kept out of the left margin, which would have caused *pdftotext* to shift everything over.

68.3.1 L^AT_EX core verse environment

for HTML output: 7654 `\begin{warpHTML}`

Env verse

```

7655 \newenvironment{LWR@HTML@verse}
7656         {\let\\newline% lwarp
7657         \list{ }\itemsep \z@
7658         \itemindent -1.5em%
7659         \listparindent\itemindent
7660         \rightmargin \leftmargin
7661         \advance\leftmargin 1.5em}%
7662         \item\relax}
7663         {\endlist}
7664
7665 \LWR@formattedenv{verse}

7666 \end{warpHTML}

```

for HTML & PRINT: 7667 \begin{warpall}

68.3.2 verse and memoir

The following lengths are used by verse and memoir. They may be set in either print or HTML output, but are only used in HTML. This allows the user to set \leftskip and \leftmargini for print output, and optionally select different values for HTML.

Len \HTMLvleftskip Sets \vleftskip inside a verse environment in HTML.

```

7668 \newlength{\HTMLvleftskip}
7669 \setlength{\HTMLvleftskip}{1em}

```

Len \HTMLleftmargini Sets \leftmargini inside a verse environment in HTML.

```

7670 \newlength{\HTMLleftmargini}
7671 \setlength{\HTMLleftmargini}{4.5em}

7672 \end{warpall}

```

69 Verbatim and tabbing

for HTML & PRINT: 7673 \begin{warpall}

Len \VerbatimHTMLWidth Width to use in HTML Verbatim environment.

This width is used when placing line numbers to the right. Ignored during print output.

```

7674 \newlength{\VerbatimHTMLWidth}
7675 \setlength{\VerbatimHTMLWidth}{4in}
7676 \end{warpall}

```

for HTML output: 7677 \begin{warpHTML}

Bool LWR@verbtags Used to temporarily turn off verbatim tags while doing \verbatiminput in the HTML head.

```
7678 \newbool{LWR@verbtags}
7679 \booltrue{LWR@verbtags}
```

\LWR@atbeginverbatim [*1: style*] [*2: negative \baselineskip \vspace*] [*3: class*]

Encloses a verbatim environment with the given css class.

The use of \textquotedbl instead of " improves compatibility with xeCJK.

```
7680 \newcommand*{\LWR@atbeginverbatim}[3]{}
7681 {%
```

Avoid excessive space between lines:

```
7682 \setlength{\parskip}{0ex}%
```

Stop generating HTML paragraph tags:

```
7683 \LWR@stoppars%
```

Create a new pre of the given class. The tags may temporarily be turned off for internal use, such as loading the MATHJAX script.

```
7684 \ifbool{LWR@verbtags}{%
7685   \LWR@htmltag{pre class=\textquotedbl#3\textquotedbl%
7686     \ifthenelse{\equal{#1}{}}{}{{ style=\textquotedbl#1\textquotedbl}%
7687   }}%
7688   \LWR@orignewline% pre
7689   \leavevmode\unskip\LWR@print@vspace*{-#2\baselineskip}%
7690 }{%}
```

Use a mono-spaced font to preserve horizontal positioning. If horizontal alignment is important for the user, use a mono-spaced font in the css for the verse class.

```
7691 \begingroup%
```

```
7692 % \LWR@print@normalsize%
7693 \LWR@print@normalfont%
7694 \LWR@origttfamily%
7695 \LWR@print@small%
```

Since inside a <pre>, restore the original list processing:

```
7696 \LWR@restoreoriglists%
```

Turn off babel-french extra space before punctuation:

```
7697 \LWR@FBcancel%
```

Do not produce HTML tags for \hspace inside a verse par. Restore plain L^AT_EX \hspace functionality:

```
7698 \LWR@select@print@hspace%
7699 }
```

```
\LWR@afterendverbatim {(negative \baselineskip \vspace)}
```

Finishes enclosing a verbatim environment.

```
7700 \newcommand*\LWR@afterendverbatim}[1]{%
7701 \endgroup%
7702 \par%
```

At the end of the environment, close the pre:

```
7703 \ifbool{LWR@verbtags}{%
7704   \LWR@print@vspace*{-#1\baselineskip}%
7705   \noindent\LWR@htmltag{/pre}\LWR@orignewline% pre
7706 }{}
```

Resume regular paragraph handling:

```
7707 \LWR@startpars%
7708 }
```

```
\verbatiminput {(filename)}
```

Patch \verbatiminput to add HTML tags:

```
7709 \newcommand{\LWR@HTML@verbatim@input}[2]{%
7710   \ifbool{LWR@verbtags}{\LWR@forcenewpage}{}%
7711   \LWR@atbeginverbatim{2.5}{Verbatim}%
7712   \LWR@print@verbatim@input{#1}{#2}%
7713   \LWR@afterendverbatim{1.5}%
7714 }
7715
7716 \LWR@formatted{verbatim@input}
```

Env verbatim

```
7717 \AfterEndPreamble{
7718 \LWR@traceinfo{Patching verbatim.}
7719 \AtBeginEnvironment{verbatim}{%
7720   \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}%
7721     {}%
7722     {%
7723       \LWR@forcenewpage%
7724       \LWR@atbeginverbatim{2.5}{verbatim}%
7725     }%
7726 }
7727 \AfterEndEnvironment{verbatim}{%
```

```

7728 \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}%
7729 {}%
7730 {%
7731 \LWR@afterendverbatim{1}%
7732 }%
7733 }
7734 }

```

Env `tabbing` The `tabbing` environment works, except that `svg` math and `lateximages` do not yet work inside the environment.

 **math in tabbing** If math is used inside `tabbing`, place `tabbing` inside a `lateximage` environment, which will render the entire environment as a single `svg` image.

```

7735 \newcommand*{\LWR@HTML@tabbing}{%
7736 \LWR@forcenewpage%
7737 \LWR@atbeginverbatim{3}{tabbing}%
7738 \let\enskip\LWR@origenskip%
7739 \let\quad\LWR@origquad%
7740 \let\qqquad\LWR@origqqquad%
7741 \let~\LWR@origtilde%
7742 \let\,\LWR@origcomma%
7743 \let\thinspace\LWR@origthinspace%
7744 \let\negthinspace\LWR@orignegthinspace%
7745 \LWR@print@tabbing%
7746 }
7747
7748 \newcommand*{\LWR@HTML@endtabbing}{%
7749 \LWR@print@endtabbing%
7750 \LWR@afterendverbatim{1}%
7751 }
7752
7753 \LWR@formatted{tabbing}
7754 \LWR@formatted{endtabbing}

7755 \end{warpHTML}

```

70 Theorems

`\newtheorem` $\{\langle text \rangle\} [\langle counter \rangle] \text{--- or ---} [\langle oldname \rangle] \{\langle text \rangle\}$

A few minor changes are made to supply HTML tags.

- The entire theorem is placed into a `<div>` of class `theoremcontents`.
- The label for each theorem is placed inside a `` of class `theoremlabel`.
- The contents are placed inside a `<div>` of class `theoremcontents`.

for HTML output: 7756 `\begin{warpHTML}`

```
\@begintheorem {<name>} {<number>}
```

```
7757 \renewcommand{\@begintheorem}[2]{%
7758 \LWR@forcenewpage
7759 \BlockClass{theoremcontents}
7760 \trivlist
7761 \item[\InlineClass{theoremlabel}{#1\ #2\ }]\itshape
7762 }
```

```
\@opargbegintheorem {<name>} {<number>} {<oparg>}
```

```
7763 \renewcommand{\@opargbegintheorem}[3]{%
7764 \LWR@forcenewpage
7765 \BlockClass{theoremcontents}
7766 \trivlist
7767 \item[\InlineClass{theoremlabel}{#1\ #2\ (#3)\ }]\itshape
7768 }
```

```
\@endtheorem
```

```
7769 \renewcommand*\@endtheorem{%
7770 \endtrivlist
7771 \endBlockClass% theoremcontents
7772 }
```

```
7773 \end{warpHTML}
```

71 Lists


The environments `itemize`, `enumerate`, and `description` are patched when `lwarp` is started. These patches support the standard L^AT_EX environments, as well as those of `enumerate`, `enumitem`, and `paralist`, and at least the French version of `babel`. Additional patches are done on a package-specific basis.

The L^AT_EX source for `itemize` and `enumerate` are found in `source2e`, but the source for `description` is found in `article.cls`, etc.

empty item To have an empty item, use `\mbox{}` or a trailing backslash. This forces a new line in print output, matching the new line which will appear in HTML output. Ex:

```
begin{itemize}
item \mbox{}
    \begin{itemize}
...
    \end{itemize}
item \
    \begin{itemize}
...
    \end{itemize}
```

`\makelabel` While inside a list environment, `lwarp` nullifies a number of TeX horizontal skip and fill commands, allowing the user to define `\makelabel` for print mode while HTML mode ignores those commands.

 **label font** When defining `\makelabel` in a list environment, use `\textbf` etc. instead of `\bfseries`.

71.1 List environment

for HTML output: 7774 `\begin{warptHTML}`

`\LWR@printcloseitem` May be locally redefined by `enumerate` or `description`.

```
7775 \newcommand*\LWR@printcloseitem{\LWR@printcloseitemize}
```

`\LWR@printopenitem` May be locally redefined by `enumerate` or `description`.

```
7776 \newcommand*\LWR@printopenitem{\ul style="\LWR@print@mbbox{list-style-type:none}"}
```

`\@mklab` Removes PDF spacing.

```
7777 \AtBeginDocument{
7778 \def\@mklab#1{%
7779   \hfil %
7780   #1}
7781 \let\makelabel\@mklab
7782 }
```

`\@donoparitem` Modified for HTML output by replacing TeX boxes with plain text. Also removes PDF spacing.

```
7783 \def\@donoparitem{%
7784   \@noparitemfalse
7785   \global\setbox\@labels\hbox{\hskip -\leftmargin
7786   \unhbox\@labels
7787   \hskip \leftmargin}%
7788   \if@minipage\else
7789     \@tempskipa\lastskip
7790     \vskip -\lastskip
7791     \advance\@tempskipa\@outerparskip
7792     \advance\@tempskipa -\parskip
7793     \vskip\@tempskipa
7794   \fi
7795 }
```

`\@item` Modified for HTML output by replacing TeX boxes with plain text. Also removes PDF spacing.

```
7796 \def\LWR@HTML@item[#1]{%
```

```

7797 \LWR@traceinfo{@item}
7798 \if@noparitem
7799 \@donoparitem
7800 \else
7801 % \if@inlabel
7802 % \indent
7803 % \par
7804 % \fi
7805 \ifhmode
7806 % \unskip\unskip
7807 % \par
7808 \fi
7809 \if@newlist
7810 \if@nobreak
7811 \@nbitem
7812 \else
7813 % \addpenalty\@beginparpenalty
7814 % \addvspace\@topsep
7815 % \addvspace{-\parskip}%
7816 \fi
7817 \else
7818 % \addpenalty\@itempenalty
7819 % \addvspace\itemsep
7820 \fi
7821 \global\@inlabeltrue
7822 \fi
7823 % \everypar{%
7824 % \@minipagefalse
7825 % \global\@newlistfalse

7826 % \if@inlabel
7827 % \global\@inlabelfalse

7828 % {\setbox\z@\lastbox
7829 % \ifvoid\z@
7830 % \kern-\itemindent
7831 % \fi}%

7832 % \box\@labels
7833 % \penalty\z@
7834 % \fi

7835 % \if@nobreak
7836 % \@nobreakfalse
7837 % \clubpenalty \@M
7838 % \else
7839 % \clubpenalty \@clubpenalty
7840 % \everypar{}%
7841 % \fi}%

7842 \if@noitemarg
7843 \@noitemargfalse
7844 \if@nmbrlist

```

```

7845      \refstepcounter\@listctr
7846      \fi
7847      \fi

7848      \makelabel{#1} % extra space
7849 %      \sbox\@tempboxa{\makelabel{#1}}%
7850 %      \global\setbox\@labels\hbox{%
7851 %          \unhbox\@labels
7852 %          \hskip \itemindent
7853 %          \hskip -\labelwidth
7854 %          \hskip -\labelsep
7855 %          \ifdim \wd\@tempboxa >\labelwidth
7856 %              \box\@tempboxa

7857 %      \else
7858 %          \hbox to\labelwidth {\unhbox\@tempboxa}%
7859 %      \fi
7860 %      \hskip \labelsep}%
7861 \ignorespaces%
7862 }

```

`\@nbitem`

```

7863 \def\@nbitem{%
7864 %     \@tempskipa\@outerparskip
7865 %     \advance\@tempskipa -\parskip
7866 %     \addvspace\@tempskipa
7867 }

```

`\LWR@listitem` [*label*]

Handles `\item` inside a list, `itemize`, or `enumerate`.

See `\LWR@openparagraph` where extra `\hspace` is used to leave room for the label while inside a list during paragraph construction.

```

7868 \newcommand*\LWR@listitem{%
7869 \LWR@stoppars%
7870 \LWR@startnewdepth{listitem}%
7871 \LWR@htmltag{li}%
7872 \LWR@startpars%
7873 \LWR@origitem%
7874 }

```

`\LWR@nulllistfills` Nullifies various TeX fill commands, in case they are used inside `\makelabel`. Problems are caused when these are nullified all the time.

```

7875 \newcommand*\LWR@nulllistfills{%
7876 \renewcommand*\hss{}%
7877 \renewcommand*\llap}[1]{##1}%
7878 \renewcommand*\rlap}[1]{##1}%
7879 \renewcommand*\hfil{}%

```

```

7880 \renewcommand*{\hfilneg}{}%
7881 \renewcommand*{\hfill}{}%
7882 }

```

Env `list` [*<label>*] [*<commands>*]

```

7883 \newcommand*{\LWR@liststart}{%
7884 \LWR@traceinfo{\LWR@liststart}%
7885 \LWR@stoppars%
7886 \LWR@pushoneclose{list}%
7887 \LWR@htmltag{\LWR@printopenlist}\LWR@orignewline%
7888 \LWR@startpars%
7889 \setlength{\topsep}{0pt}%
7890 \setlength{\partopsep}{0pt}%
7891 \setlength{\itemsep}{0pt}%
7892 \setlength{\parsep}{0pt}%
7893 \setlength{\leftmargin}{0pt}%
7894 \setlength{\rightmargin}{0pt}%
7895 \setlength{\listparindent}{0pt}%
7896 \setlength{\itemindent}{0pt}%
7897 \setlength{\labelsep}{1em}%
7898 \LWR@nulllistfills%
7899 }

7900 \newcommand*{\LWR@listend}{%
7901 \LWR@traceinfo{\LWR@listend}%
7902 \LWR@stoppars%
7903 \LWR@closeprevious{list}%
7904 \LWR@startpars%
7905 }

```

71.2 Itemize

`\LWR@itemizeitem` [*<label>*]

Handles `\item` inside an itemize or enumerate.

See `\LWR@openparagraph` where extra `\hspace` is used to leave room for the label while inside a list during paragraph construction.

```

7906 \newcommand*{\LWR@itemizeitem}{%
7907 \LWR@stoppars%
7908 \LWR@startnewdepth{listitem}%
7909 \LWR@htmltag{li}%
7910 \LWR@startpars%
7911 \LWR@origitem%
7912 }

```

Env `itemize` [*<options>*]

```

7913 \newcommand*{\LWR@itemizestart}{%

```

```

7914 \renewcommand*{\LWR@printcloselist}{\LWR@printcloseitemize}
7915 \renewcommand*{\LWR@printopenlist}{\ul style="\LWR@print@mbx{list-style-type:none}}
7916 \let\item\LWR@itemizeitem%
7917 \LWR@nulllistfills%
7918 }

```

71.3 Enumerate

An HTML unordered list is used with customized L^AT_EX-generated labels.

Env `enumerate` [*(options)*]

```

7919 \newcommand*{\LWR@enumeratestart}{%
7920 \renewcommand*{\LWR@printcloselist}{\LWR@printcloseitemize}
7921 \renewcommand*{\LWR@printopenlist}{\ul style="\LWR@print@mbx{list-style-type:none}}
7922 \let\item\LWR@itemizeitem%
7923 \LWR@nulllistfills%
7924 }

```

71.4 Description

`\LWR@descitem` [*(label)*] Handles an `\item` inside a description.

```

7925 \newcommand*{\LWR@descitem}[1][]%
7926 {%
7927 \LWR@stoppars%
7928 \LWR@setlatestname{#1}%
7929 \LWR@startnewdepth{descitem}%

```

While creating the label, encase it inside tags and disable `\hspace`, which is used by the standard classes to add space to the labels.

```

7930 \begingroup%
7931 \let\LWR@orig@desc@makelabel\makelabel
7932 \renewcommand*{\makelabel}[1]{%
7933   \LWR@htmltag{dt}%
7934   \LWR@orig@desc@makelabel{#1}%
7935   \LWR@htmltag{/dt}%
7936 }
7937 \LWR@select@html@nohspace%
7938 \LWR@origitem[1]%
7939 \endgroup%
7940 \LWR@orignewline%
7941 \LWR@htmltag{dd}%
7942 \LWR@startpars%
7943 }

```

Env `description` [*(options)*]

```

7944 \newcommand*\LWR@descriptionstart}{%
7945 \renewcommand*\LWR@printcloselist}{\LWR@printclosedescription}
7946 \renewcommand*\LWR@printopenlist}{dl}
7947 \let\item\LWR@descitem%
7948 \LWR@nulllistfills%
7949 }

```

71.5 Patching the lists

`\LWR@patchlists` Patches list environments.

`\LWR@patchlists` remembers `\item` as defined by whatever packages have been loaded, then patches the `itemize`, `enumerate`, and `description` environments and `\item`. This works with the native \LaTeX environments, as well as those provided by `enumitem`, `enumerate`, and `paralist`.

```

7950 \newcommand*\LWR@patchlists}{%
7951   \LetLtxMacro\item\LWR@listitem%
7952   \LetLtxMacro\@item\LWR@HTML@item%
7953   \renewcommand*\@trivlist}{%
7954     \LWR@traceinfo{@trivlist start}%
7955     \LWR@liststart%
7956     \LWR@orig@trivlist%
7957     \LWR@traceinfo{@trivlist done}%
7958   }%
7959   \renewcommand*\@trivlist}{%
7960     \LWR@traceinfo{trivlist}%
7961     \LWR@origtrivlist%
7962   }%
7963   \renewcommand*\@endtrivlist}{%
7964     \LWR@traceinfo{endtrivlist start}%
7965     \LWR@origendtrivlist\LWR@listend%
7966     \LWR@traceinfo{endtrivlist done}%
7967   }%
7968   \renewcommand*\@itemize}{%
7969     \LWR@itemizestart\LWR@origitemize%
7970   }%
7971   \renewcommand*\@enumerate}{%
7972     \LWR@enumeratestart\LWR@origenumerate%
7973   }%
7974   \renewcommand*\@description}{%
7975     \LWR@descriptionstart\LWR@origdescription%
7976   }%
7977 }

```

`\LWR@restoreoriglists` Restores the original `trivlist` environment.

```

7978 \newcommand*\LWR@restoreoriglists}{%
7979   \LWR@traceinfo{\LWR@restoreoriglists}%
7980   \LetLtxMacro\item\LWR@origitem%
7981   \LetLtxMacro\@item\LWR@orig@item%
7982   \let\@trivlist\LWR@orig@trivlist%

```

```

7983 \let\trivlist\LWR@origtrivlist%
7984 \let\endtrivlist\LWR@origendtrivlist%
7985 \LetLtxMacro\itemize\LWR@origitemize%
7986 \LetLtxMacro\enditemize\LWR@endorigitemize%
7987 \LetLtxMacro\enumerate\LWR@origenumerate%
7988 \LetLtxMacro\endenumerate\LWR@endorigenumerate%
7989 \LetLtxMacro\description\LWR@origdescription%
7990 \LetLtxMacro\enddescription\LWR@endorigdescription%
7991 \let\@mklab\LWR@orig@mklab%
7992 \let\makelabel\LWR@origmakelabel%
7993 \let\@donoparitem\LWR@orig@donoparitem%
7994 \let\@nbitem\LWR@orig@nbitem%
7995 }

7996 \end{warpHTML}

```

72 Tabular

This is arguably the most complicated part of the entire package. Numerous tricks are employed to handle the syntax of the \LaTeX core and the various tabular-related packages.

72.1 Limitations

Tabular mostly works as expected, but pay special attention to the following, especially if working with environments, macros inside tabulars, multirows, siunitx S columns, or the packages multirow, longtable, supertabular, or xtab.

Defining macros and environments:

⚠ Misplaced alignment
tab character &

- When defining environments or macros which include tabular and instances of the & character, it may be necessary to make & active before the environment or macro is defined, then restore & to its default catcode after, using the following commands. These are ignored in print mode.

```

\StartDefiningTabulars
<define macros or environments using tabular and & here>
\StopDefiningTabulars

```

⚠ floatrow

This includes before and after defining any macro which used \ttabbox from floatrow.

⚠ tabular inside another
environment

- When creating a new environment which contains a tabular environment, lwarp's emulation of the tabular does not automatically resume when the containing environment ends, resulting in corrupted HTML rows. To fix this, use \ResumeTabular as follows. This is ignored in print mode.

```

\StartDefiningTabulars % because & is used in a
definition
\newenvironment{outerenvironment}
{
\tabular{cc}
left & right \\
}
{
\TabularMacro\ResumeTabular
left & right \\
\endtabular
}
\StopDefiningTabulars

```

Cell contents:

- ⚠ macro in a table
- Using a custom macro inside a tabular data cell may result in an extra HTML data cell tag, corrupting the HTML table. To avoid this, use `\TabularMacro` just before the macro. This is ignored in print mode.
- ```
\TabularMacro\somemacro & more row contents \\
```

### Column specifiers:

- @ and !
- Only one each of @ and ! is used at each column, and they are used in that order.
- \multirow
- In `\multirow` cells, the print version may have extra instances of <, >, @, and ! cells on the second and later rows in the `\multirow` which do not appear in the HTML version.
- ⚠ \newcolumnntype
- `\newcolumnntype` is ignored; unknown column types are set to l.

### Rules:

- vertical rules
- Doubled `\hlines`, `\midrules`, and vertical rules are supported.
  - Vertical rules next to either side of an @ or ! column are displayed on both sides of the column.
- width and trim
- Width options are honored. Trim options are converted to rounded top corners. Trim corners are not rounded with @ or ! columns, and full-width rules ignore trim. When given an optional width, each cell is styled to create the custom border. Without an optional width, the entire row is given a class to assign the standard border.
- combined rules
- If you wish to use `\cmidrule` followed by `\bottomrule`, it may be necessary to use:

```
\cmidrule{2-3} \\[-2ex]
\bottomrule
```

The optional `-2ex` is ignored in HTML, but improves the visual formatting in the print output.
- ⚠ \warpprintonly
- ⚠ Misplaced \noalign
- For `\toprule` and `\bottomrule`, when combined with a `warpprint` or `warppHTML` environment, if a “Misplaced `\noalign`” error occurs, change

```
This & That \endhead
```

to

```
\warpprintonly{This & That \endhead}
```

and likewise with the other `\end` headings. Keep the `\endfirsthead` row unchanged, as it is still relevant to HTML output.

#### Other:

longtable headings

⚠ S columns

- `tabularx` ignores the width, but `X` columns do produce paragraph columns or multicolumns.
- For `longtable`, place headings and footings which do not apply to HTML inside `\warpprintonly{}`.
- For `S` columns (from the `siunitx` package), while producing print output, anything non-numeric must be placed inside `{ }` braces, including commands such as `\multirow`. While producing HTML output, though, anything placed inside braces is not seen by `lwarp`'s tabular handling algorithm. To resolve this problem, make a copy of the row, with one version for print output, containing the extra braces, and another version for HTML output, without the extra braces, such as:

```
\warpprintonly{1 & 2 & {\multirow{2}{2cm}{Text}} & 3 \\}
\warppHTMLonly{1 & 2 & \multirow{2}{2cm}{Text} & 3 \\}
```

⚠ tabular inside a `<span>`

- In  $\text{\LaTeX}$ , a `tabular` may be placed inside a `minipage`, but in HTML a `<table>` may not be inside a `<span>`. If this situation is detected, a warning is printed instructing the user to isolate the `<span>` using `\warpprintonly` or the `warpprint` environment.

for HTML output: `7997 \begin{warppHTML}`

## 72.2 Temporary package-related macros

These macros are temporary placeholders for macros defined by various packages. If the relevant package is not loaded, these placeholders are used instead.

### 72.2.1 `arydshln`

Emulated by the original  $\text{\LaTeX}$  non-dashed versions.

```
7998 \LetLtxMacro\hdashline\hline
7999 \LetLtxMacro\cdashline\cline
8000 \LetLtxMacro\firsthdashline\hline
8001 \LetLtxMacro\lasthdashline\hline
```

## 72.3 Token lookahead

Used by `\LWR@futurenonSPACElet` to look at the next token.

`\LWR@mynexttoken`

```
8002 \newcommand\LWR@mynexttoken\relax
```

\futurelet copies the next token then executes a function to analyze it.

\LWR@futurenonSPACElet does the same, but ignores intervening white space

Based on the `booktabs` style:

\LWR@futurenonSPACElet

```
8003 \def\LWR@futurenonSPACElet#1{\def\LWR@cs{#1}%
8004 \afterassignment\LWR@fnsLone\let\nexttoken= }
8005
8006 \def\LWR@fnsLone{\expandafter\futurelet\LWR@cs\LWR@fnsLtwo}
8007
8008 \def\LWR@fnsLtwo{%
8009 \expandafter\ifx\LWR@cs\@sptoken\let\next=\LWR@fnsLthree%
8010 \else\let\next=\nexttoken\fi\next}
8011
8012 \def\LWR@fnsLthree{\afterassignment\LWR@fnsLone\let\next= }
```

\LWR@getmynexttoken Looks ahead and copies the next token into \LWR@mynexttoken.

```
8013 \newcommand*{\LWR@getmynexttoken}{%
8014 \LWR@traceinfo{\LWR@getmynexttoken}%
8015 % nothing must follow this next line
8016 \LWR@futurenonSPACElet\LWR@mynexttoken\LWR@tabledatacolumnTag
8017 }
```

## 72.4 Tabular variables

In order to support nested tabulars, each of these is used locally. For local counters, `etoolbox`'s `\defcounter` and `lwarp`'s new `\defaddtocounter` are used.

Bool LWR@startedrow True if should print a row tag before this column.

```
8018 \newbool{LWR@startedrow}
8019 \boolfalse{LWR@startedrow}
```

Bool LWR@tabularcelladded True if have added a data cell for this position.

```
8020 \newbool{LWR@tabularcelladded}
8021 \boolfalse{LWR@tabularcelladded}
```

Ctr LWR@hlines Number of \hlines or \midrules above the next row.

```
8022 \newcounter{LWR@hlines}
```

Ctr LWR@hdashedlines Number of \arydshln dashed lines above the next row.

```
8023 \newcounter{LWR@hdashedlines}
```

Bool LWR@doingtbrule True if the next row will have a top/bottom rule above it.

```
8024 \newbool{LWR@doingtbrule}
8025 \boolfalse{LWR@doingtbrule}
```

Bool LWR@doingcmidrule True if the next row will have a cmidrule above it.

This is used by \LWR@tabularfinishrow to force a final empty row to create the border for the \cmidrule.

```
8026 \newbool{LWR@doingcmidrule}
8027 \boolfalse{LWR@doingcmidrule}
```

Bool LWR@tableparcell True if are handling a paragraph inside a table cell, so must close the paragraph tag before moving on.

```
8028 \newbool{LWR@tableparcell}
```

Bool LWR@skippingmrowcell True if are doing an empty \multirow cell, and thus there is no data tag to close.

```
8029 \newbool{LWR@skippingmrowcell}
```

Bool LWR@skippingmcolrowcell True if are doing an empty \multicolumnrow cell, and thus there is no data tag to close, and do not print @ and ! columns.

```
8030 \newbool{LWR@skippingmcolrowcell}
```

Bool LWR@usedmultirow Used to error if used \multirow or \multicolumnrow without using \mrowcell or \mcolrowcell.

```
8031 \newbool{LWR@usedmultirow}
```

Bool LWR@foundmrowcell Used to error if used \multirow or \multicolumnrow without using \mrowcell or \mcolrowcell.

```
8032 \newbool{LWR@foundmrowcell}
```

Bool LWR@skipatbang True if just finished a \multicolumn so should not create the trailing @ or ! columns table data cells.

```
8033 \newbool{LWR@skipatbang}
```

Bool LWR@emptyatbang True if finishing a row and should print empty @ or ! column table data cells.

```
8034 \newbool{LWR@emptyatbang}
```

Bool LWR@intabularmetadata True if are in a tabular but not in a data cell. Used to prevent extra HTML breaks if not inside table data.

```
8035 \newbool{LWR@intabularmetadata}
8036 \boolfalse{LWR@intabularmetadata}
```

Bool LWR@exitingtabular When \end is found, turns off the next opening data tag.

```
8037 \newbool{LWR@exitingtabular}
```

|                  |                     |                                                                                                                                                                                                     |
|------------------|---------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Bool             | LWR@tabularmutemods | Mutes HTML output for @, !, < and >.                                                                                                                                                                |
|                  |                     | This is used while printing the final row to generate \bottomrules.                                                                                                                                 |
|                  |                     | 8038 \newbool{LWR@tabularmutemods}                                                                                                                                                                  |
| Bool             | LWR@validtablecol   | True if found a valid table column type.                                                                                                                                                            |
|                  |                     | 8039 \newbool{LWR@validtablecol}                                                                                                                                                                    |
| Bool             | LWR@opttablecol     | True if found a table column optional argument.                                                                                                                                                     |
|                  |                     | 8040 \newbool{LWR@opttablecol}                                                                                                                                                                      |
|                  |                     | Used to add a style to a table data cell:                                                                                                                                                           |
|                  |                     | 8041 \newbool{LWR@tdhavecellstyle}                                                                                                                                                                  |
| Ctr              | LWR@tabularDepth    | Tracks whether & is being used inside a tabular.                                                                                                                                                    |
|                  |                     | 8042 \newcounter{LWR@tabulardepth}                                                                                                                                                                  |
|                  |                     | 8043 \setcounter{LWR@tabulardepth}{0}                                                                                                                                                               |
| Ctr              | LWR@tabularpardepth | Tracks whether should look ahead at the next token when encountering a \par while processing tabular contents.                                                                                      |
|                  |                     | When LWR@tabularpardepth is deeper than LWR@tabulardepth then lwarp has started looking at the contents of the tabular, and thus any \pars encountered must be followed by another token lookahead. |
|                  |                     | 8044 \newcounter{LWR@tabularpardepth}                                                                                                                                                               |
|                  |                     | 8045 \setcounter{LWR@tabularpardepth}{0}                                                                                                                                                            |
|                  |                     | 8046 \newcommand*{\LWR@colsresult}{}%temp storage for column format results                                                                                                                         |
|                  |                     | 8047 \newcommand*{\LWR@pposition}{}%                                                                                                                                                                |
|                  |                     | 8048 \newcommand*{\LWR@pleft}{}%                                                                                                                                                                    |
|                  |                     | 8049 \newcommand*{\LWR@pright}{}%                                                                                                                                                                   |
| LWR@tablecolspec |                     | Holds the parsed column specification, of total width LWR@tabletotalLaTeXcols, not counting @ and ! columns.                                                                                        |
|                  |                     | Will contain a string such as llrrccpc, exactly one letter per L <sup>A</sup> T <sub>E</sub> X table column, without @, !, >, <, or the vertical bar.                                               |
|                  | \LWR@strresult      | Holds the result of Str functions.                                                                                                                                                                  |
|                  |                     | 8050 \providecommand*{\LWR@strresult}{}%                                                                                                                                                            |
|                  |                     | 8051 \providecommand*{\LWR@strresulttwo}{}%                                                                                                                                                         |
|                  | \LWR@origcolspec    | Holds the original column specs given to tabular.                                                                                                                                                   |
|                  |                     | 8052 \newcommand*{\LWR@origcolspec}{}%                                                                                                                                                              |

Ctrl LWR@tablecolspecwidth Holds the number of tokens in the table columns specification.

This includes one for each @, !, <, > column, and also one for each of the parameters of p, @, !, <, > columns, and three for each D column.

(This is not the total # of L<sup>A</sup>T<sub>E</sub>X columns in the table.)

```
8053 \newcounter{LWR@tablecolspecwidth}
```

Ctrl LWR@tablecolspecindex While parsing the L<sup>A</sup>T<sub>E</sub>X table column specification, starts at 1 and is incremented per token of the specification.

```
8054 \newcounter{LWR@tablecolspecindex}
```

Ctrl LWR@tableLaTeXcolindex While producing the table, resets to 1 at the start of the table and also at each end of line, and is incremented by 1 by each ampersand.

```
8055 \newcounter{LWR@tableLaTeXcolindex}
```

Ctrl LWR@tabletotalLaTeXcols While parsing a table column specification, begins at 0 and increments by 1 per L<sup>A</sup>T<sub>E</sub>X table column. Eventually holds the final number of L<sup>A</sup>T<sub>E</sub>X table columns in each row, not counting @ and ! columns. (In HTML, @ and ! cells become their own columns, but are not included in LWR@tabletotalLaTeXcols.)

```
8056 \newcounter{LWR@tabletotalLaTeXcols}
```

Ctrl LWR@tabletotalLaTeXcolsnext Holds the next L<sup>A</sup>T<sub>E</sub>X table column index while parsing, equal to one more than LWR@tabletotalLaTeXcols.

```
8057 \newcounter{LWR@tabletotalLaTeXcolsnext}
```

LWR@colatspec A data array of specifications for @ columns. The leftmost's index is leftedge, the others are counter values. See section 41.

LWR@colbangspec A data array of specifications for ! columns. The leftmost's index is leftedge, the others are counter values. See section 41.

LWR@colbeforespec A data array of specifications for > columns.

LWR@colafterspec A data array of specifications for < columns.

LWR@colbarspec A data array of specifications for vertical rules.

Ctrl LWR@cellcolordepth Counts how many cell color <div>s were added to the current tabular data cell.

```
8058 \newcounter{LWR@cellcolordepth}
```

#### 72.4.1 Multicolumn variables

```
8059 \newcounter{LWR@tablemulticolswidth}
```

Indexes into the multicolumn specification:

```
8060 \newcounter{LWR@tablemulticolspos}
```

Remembers multicolumn vertical rules if found in the column spec.

```
8061 \newcounter{LWR@mcolvertbarsl}
8062 \newcounter{LWR@mcolvertbarsr}
8063 \newcounter{LWR@mcolvertbarsldash}
8064 \newcounter{LWR@mcolvertbarsrdash}
8065 \newbool{LWR@mcolvertbaronleft}
```

#### 72.4.2 Longtable variables

Bool LWR@starredlongtable Per the caption package, step the counter if longtable\*.

```
8066 \newbool{LWR@starredlongtable}
8067 \boolfalse{LWR@starredlongtable}
```

#### 72.4.3 Midrule variables

Ctr LWR@midrulecounter Indexes across the LWR@midrules and LWR@trim<l/r>rules data arrays.

```
8068 \newcounter{LWR@midrulecounter}
```

### 72.5 Handling &, @, !, and bar

For technical discussion regarding problems redefining \&, See:

<http://tex.stackexchange.com/questions/11638/>

where-do-i-find-futurelets-nasty-behaviour-documented/11860#11860

\LWR@instertatbangcols

```
8069 \newcommand*{\LWR@insertatbangcols}{%
8070 \ifbool{LWR@skipatbang}%
8071 {}%
8072 {%
8073 \LWR@printatbang{at}{\arabic{LWR@tableLaTeXcolindex}}%
8074 \LWR@printatbang{bang}{\arabic{LWR@tableLaTeXcolindex}}%
8075 }%
8076 }
```

\LWR@closetabledatacell If LWR@skippingmrowcell or LWR@skippingmcolrowcell then there is no data tag to close. Otherwise, close any paragraphs, then close the data tag.

```
8077 \newcommand*{\LWR@closetabledatacell}{%
8078 \booltrue{LWR@intabularmetadata}%
8079 \ifbool{LWR@exitingtabular}%
8080 {%
```

```

8081 \LWR@stoppars%
8082 }%
8083 {% not exiting tabular
8084 \ifboolexpr{bool{LWR@skippingmrowcell} or bool{LWR@skippingmcolrowcell}}%
8085 {%

```

```

8086 \LWR@stoppars%

```

If not skipping a \multicolumnrow cell, insert the @ and ! columns after this non-existent column.

```

8087 \ifbool{LWR@skippingmcolrowcell}%
8088 {}%
8089 {\LWR@insertatbangcols}%
8090 }%
8091 {% not skippingmrowcell

```

Insert any < then any @ and ! column contents, unless muted for the \bottomrule or a \multicolumn:

```

8092 \unskip%
8093 \ifboolexpr{%
8094 bool{LWR@tabularmutemods} or
8095 bool{LWR@skipatbang} or
8096 bool{LWR@emptyatbang}
8097 }%
8098 {}%
8099 {%
8100 \LWR@getexparray{LWR@colafterspec}%
8101 {\arabic{LWR@tableLaTeXcolindex}}%
8102 }%

```

Close paragraphs:

```

8103 \LWR@stoppars%
8104 \boolfalse{LWR@tableparcell}%

```

Close the table data cell.

Close any color <div>s.

```

8105 \whileboolexpr{test {\ifnumcomp{\value{LWR@cellcolordepth}}{>}{0}}}{%
8106 \LWR@htmltag{/div}\LWR@orignewline%
8107 \defaddtocounter{LWR@cellcolordepth}{-1}%
8108 }%

```

Skip the @ and ! cells if are closing a multicolumn cell.

```

8109 \leavevmode\unskip\LWR@htmltag{/td}\LWR@orignewline%
8110 \global\booltrue{LWR@tabularcelladded}%
8111 \LWR@insertatbangcols%
8112 }% not skipping mrowcell
8113 }% not exiting tabular

```

```

8114 \boolfalse{LWR@skippingmrowcell}%
8115 \boolfalse{LWR@skippingmcolrowcell}%
8116 \boolfalse{LWR@skipatbang}%

```

Color control. Column is set by >{} for each cell, so it must be cleared here.

```

8117 \def\LWR@cellHTMLcolor{}%
8118 \def\LWR@columnHTMLcolor{}%
8119 \defcounter{LWR@cellcolordepth}{0}%
8120 }

```

When not used inside a tabular, & performs its original function as recorded here (with catcode 4).

```

8121 \let\LWR@origampmacro&

8122 \end{warpHTML}

```

### 72.5.1 Handling &

for HTML output: 8123 \begin{warpHTML}

& Will behave depending on whether it is being used inside tabular.

& is redefined to test whether it is inside a tabular environment, in which case it performs special processing for HTML conversion. If not, it behaves normally.

```

8124 \newcommand*{\LWR@tabularampersand}{%
8125 \LWR@traceinfo{\LWR@tabularampersand}%
8126 \ifnumcomp{\value{LWR@tabulardepth}}{>}{0}%
8127 {%

```

If not skipping a multirow cell, close the current data cell.

```

8128 \unskip%
8129 \LWR@closetabledatacell%

```

Move to the next column.

```

8130 \defaddtocounter{LWR@tableLaTeXcolindex}{1}%

```

Have not yet added data in this column:

```

8131 \global\boolfalse{LWR@tabularcelladded}%

```

Look at the next token to decide multi or single column data tag.

```

8132 \LWR@getmynexttoken%
8133 }%

```

If not inside a tabular, performs the original action:

```
8134 {%
8135 \LWR@origampmacro%
8136 }%
8137 }
```

& is left with its original catcode for now.

tikz package seems to require & be left alone until after tikz has been loaded. Also, cleveref uses the ampersand in one of its options.

& is made active inside a tabular.

& is left alone when in math alignments.

### 72.5.2 Filling an unfinished row

`\LWR@tabularfinishrow` Adds empty table cells if necessary to finish the row.

At the end of the table, if any bottom rules are requested then an empty row must be generated to form the borders which show the rules.

```
8138 \newcommand*{\LWR@tabularfinishrow}{%
```

If not exiting the tabular, or doing a rule, or have already started a row, finish this row:

```
8139 \ifboolexpr{%
8140 not bool {LWR@exitingtabular} or%
8141 bool{LWR@doingtbrule} or%
8142 bool{LWR@doingcmidrule} or%
8143 test{\ifnumcomp{\value{LWR@hlines}}{>}{0}} or%
8144 test{\ifnumcomp{\value{LWR@hdashedlines}}{>}{0}} or%
8145 bool{LWR@startedrow}%
8146 }{%
```

To temporarily turn off `LWR@exitingtabular` so that table data tags will still be generated:

If generating a final row for the `\bottomrule` borders, turn off the @, !, <, and > column output:

```
8147 \ifbool{LWR@exitingtabular}{%
8148 \booltrue{LWR@tabularmutemods}%
8149 }{%
8150 \boolfalse{LWR@tabularmutemods}%
8151 }%
```

Locally reenable the table data tags until finished with the final row:

```
8152 \boolfalse{LWR@exitingtabular}%
```

Generate table data tags and ampersands until the right edge:

```

8153 \whileboolexpr{%
8154 test {
8155 \ifnumcomp{\value{LWR@tableLaTeXcolindex}}{<}
8156 {\value{LWR@tabletotalLaTeXcols}}
8157 } or %
8158 (%
8159 bool{LWR@intabularmetadata} and%
8160 not bool{LWR@tabularcelladded} and%
8161 test {
8162 \ifnumcomp{\value{LWR@tableLaTeXcolindex}}{=}
8163 {\value{LWR@tabletotalLaTeXcols}}
8164 }%
8165)%
8166 }%
8167 {%
8168 \LWR@tabledatasinglecolumnntag%

```

The following is essentially `\LWR@tabularampersand` with `LWR@emptyatbang` added to empty the following cells:

```

8169 \LWR@closetabledatacell%
8170 \defaddtocounter{LWR@tableLaTeXcolindex}{1}%
8171 \global\boolfalse{LWR@tabularcelladded}%
8172 \booltrue{LWR@emptyatbang}%

```

Starts the next cell:

```

8173 \ifnumcomp{\value{LWR@tableLaTeXcolindex}}{<}
8174 {\value{LWR@tabletotalLaTeXcols}}%
8175 {\LWR@getmynexttoken}%
8176 {}%
8177 }%

```

Reenable the original `LWR@exitingtabular` to close the entire table:

```

8178 \ifbool{LWR@tabularmutemods}{%
8179 \booltrue{LWR@exitingtabular}%
8180 }{%
8181 \boolfalse{LWR@exitingtabular}%
8182 }%
8183 \boolfalse{LWR@tabularmutemods}%

8184 \boolfalse{LWR@emptyatbang}%
8185 }{}% ifboolexpr
8186 }

```

## 72.6 Handling \\

Inside tabular, `\\` is redefined to `\LWR@tabularendofline`

Throws away options `\\[dim]` or `\\*`

\LWR@tabularendofline

8187 \NewDocumentCommand{\LWR@tabularendofline}{s o}{%

Finish the row:

```
8188 \ifnumcomp{\value{\LWR@tableLaTeXcolindex}}{<}
8189 {\value{\LWR@tabletotalLaTeXcols}}%
8190 {\LWR@tabularfinishrow}%
8191 {\LWR@closetabledatacell}%
8192 \LWR@htmltag{/tr}\LWR@orignewline%
```

xcolor row color support:

8193 \@rowcolor%

No longer inside a data cell:

8194 \booltrue{\LWR@intabularmetadata}%

Not yet started a table row:

8195 \boolfalse{\LWR@startedrow}%

Additional setup:

```
8196 \defcounter{\LWR@hlines}{0}%
8197 \defcounter{\LWR@hdashedlines}{0}%
8198 \boolfalse{\LWR@doingtbrule}%
8199 \boolfalse{\LWR@doingcmidrule}%
8200 \LWR@clearmidrules%
```

8201 \def\LWR@rowHTMLcolor{ }%

Start at first column:

8202 \defcounter{\LWR@tableLaTeXcolindex}{1}%

Have not yet added data in this column:

8203 \global\boolfalse{\LWR@tabularcelladded}%

Allow TeX to flush the pending paragraph. Not doing so causes a slowdown for very large tables.

```
8204 \LWR@stoppars%
8205 \LWR@origpar%
```

Look at the next token to decide between single column data tag or a special case:

```
8206 \LWR@getmynexttoken%
8207 }
```

## 72.7 Looking ahead in the column specifications

`\LWR@columnspeclookahead` `{⟨offset⟩}`

Looks offset tokens ahead in the column specification, setting `\LWR@strresulttwo`.

The `w` column alignment will be seen as a single unit such as `{c}`.

```
8208 \newcommand*{\LWR@columnspeclookahead}[1]{%
8209 \setcounter{LWR@tempcountone}{\value{LWR@tablecolspecindex}}%
8210 \addtocounter{LWR@tempcountone}{#1}%
8211 \fullexpandarg%
8212 \StrChar{\LWR@origcolspec}{\arabic{LWR@tempcountone}}[\LWR@strresulttwo]%

```

Get the contents of the first group in `\LWR@strresulttwo`:

```
8213 \exploregroups%
8214 \StrChar{\LWR@strresulttwo}{1}[\LWR@strresulttwo]%
8215 \noexploregroups%
8216 }

```

## 72.8 Parsing @, >, <, !, bar columns

Holds the parsed argument for @, >, <, or ! columns:

```
8217 \newcommand*{\LWR@colparameter}{}

```

`\LWR@parseatcolumn` Handles `@{text}` columns.

```
8218 \newcommand*{\LWR@parseatcolumn}{%

```

Move to the next token after the '@':

```
8219 \LWR@traceinfo{at column}%
8220 \defaddtocounter{LWR@tablecolspecindex}{1}%

```

Read the next token into `\LWR@colparameter`, expanding once:

```
8221 \LWR@traceinfo{about to read the next token:}%
8222 \expandarg%
8223 \StrChar{\LWR@origcolspec}%
8224 {\arabic{LWR@tablecolspecindex}}[\LWR@colparameter]%
8225 \fullexpandarg%

```

Store the result into a data array, expanding once out of `\LWR@colparameter`:

```
8226 \LWR@traceinfo{have now read the next token}%
8227 \ifnumcomp{\value{LWR@tabletotalLaTeXcols}}{=}{0}%
8228 {% left edge of the table:
8229 \LWR@traceinfo{at the left edge}%
8230 \LWR@setexparray{LWR@colatspec}%

```

```

8231 {leftedge}%
8232 {\xandafter\@firstofone\LWR@colparameter}%
8233 \LWR@traceinfo{at the left edge: %
8234 \LWR@getexparray{LWR@colatspec}{leftedge}}%
8235 }%
8236 {% not at the left edge:
8237 \LWR@traceinfo{not at the left edge}%
8238 \LWR@setexparray{LWR@colatspec}%
8239 {\arabic{LWR@tabletotalLaTeXcols}}%
8240 {\xandafter\@firstofone\LWR@colparameter}%
8241 \LWR@traceinfo{at \arabic{LWR@tabletotalLaTeXcols}: %
8242 \LWR@getexparray{LWR@colatspec}{\arabic{LWR@tabletotalLaTeXcols}}}%
8243 }%
8244 \let\LWR@colparameter\relax%
8245 \booltrue{LWR@validtablecol}%
8246 }

```

`\LWR@parsebangcolumn` Handles `!\{text\}` columns.

```

8247 \newcommand*{\LWR@parsebangcolumn}{%

```

Move to the next token after the '!':

```

8248 \LWR@traceinfo{bang column}%
8249 \defaddtocounter{LWR@tablecolspecindex}{1}%

```

Read the next token into `\LWR@colparameter`, expanding once:

```

8250 \LWR@traceinfo{about to read the next token:}%
8251 \expandarg%
8252 \StrChar{\LWR@origcolspec}%
8253 {\arabic{LWR@tablecolspecindex}}[\LWR@colparameter]%
8254 \fullexpandarg%

```

Store the result into a data array, expanding once out of `\LWR@colparameter`:

```

8255 \LWR@traceinfo{have now read the next token}%
8256 \ifnumcomp{\value{LWR@tabletotalLaTeXcols}}{=}{0}%
8257 {% left edge of the table:
8258 \LWR@traceinfo{at the left edge}%
8259 \LWR@setexparray{LWR@colbangspec}%
8260 {leftedge}%
8261 {\xandafter\@firstofone\LWR@colparameter}%
8262 }%
8263 {% not at the left edge:
8264 \LWR@traceinfo{not at the left edge}%
8265 \LWR@setexparray{LWR@colbangspec}%
8266 {\arabic{LWR@tabletotalLaTeXcols}}%
8267 {\xandafter\@firstofone\LWR@colparameter}%
8268 \LWR@traceinfo{bang \arabic{LWR@tabletotalLaTeXcols}: \LWR@colparameter!}%
8269 }%
8270 \let\LWR@colparameter\relax%
8271 \booltrue{LWR@validtablecol}%
8272 }

```

`\LWR@parsebeforecolumn` Handles `>{text}` columns.

```
8273 \newcommand*{\LWR@parsebeforecolumn}{%
```

Move to the next token after the `'>'`:

```
8274 \defaddtocounter{LWR@tablecolspecindex}{1}%
```

Read the next token, expanding once into `\LWR@colparameter`:

```
8275 \expandarg%
8276 \StrChar{\LWR@origcolspec}%
8277 {\arabic{LWR@tablecolspecindex}}[\LWR@colparameter]%
8278 \fullexpandarg%
```

Store the result into a data array, expanding once out of `\LWR@colparameter`:

```
8279 \LWR@setexparray{LWR@colbeforespec}%
8280 {\arabic{LWR@tabletotalLaTeXcolsnext}}%
8281 {\expandafter\@firstofone\LWR@colparameter}%
8282 \let\LWR@colparameter\relax%
8283 \booltrue{LWR@validtablecol}%
8284 }
```

`\LWR@parseaftercolumn` Handles `<{text}` columns.

```
8285 \newcommand*{\LWR@parseaftercolumn}{%
```

Move to the next token after the `'<'`:

```
8286 \defaddtocounter{LWR@tablecolspecindex}{1}%
```

Read the next token, expanding once into `\LWR@colparameter`:

```
8287 \expandarg%
8288 \StrChar{\LWR@origcolspec}%
8289 {\arabic{LWR@tablecolspecindex}}[\LWR@colparameter]%
8290 \fullexpandarg%
```

Store the result into a data array, expanding once out of `\LWR@colparameter`:

```
8291 \LWR@setexparray{LWR@colafterspec}%
8292 {\arabic{LWR@tabletotalLaTeXcols}}%
8293 {\expandafter\@firstofone\LWR@colparameter}%
8294 \let\LWR@colparameter\relax%
8295 \booltrue{LWR@validtablecol}%
8296 }
```

`\LWR@parsebarcolumn` Handles vertical rules.

```
8297 \newcommand*{\LWR@parsebarcolumn}{%
8298 \LWR@traceinfo{LWR@parsebarcolumn}%
```

Remember the bar at this position:

```

8299 \ifnumcomp{\value{LWR@tabletotalLaTeXcols}}{=}{0}%
8300 {% left edge of the table:
8301 \edef\LWR@tempone{\LWR@getexparray{LWR@colbarspec}{leftedge}}%
8302 \ifdefstring{\LWR@tempone}{tvertbarl}%
8303 {\LWR@setexparray{LWR@colbarspec}{leftedge}{tvertbarldouble}}%
8304 {\LWR@setexparray{LWR@colbarspec}{leftedge}{tvertbarl}}%
8305 }%
8306 {% not at the left edge:
8307 \edef\LWR@tempone{%
8308 \LWR@getexparray{LWR@colbarspec}{\arabic{LWR@tabletotalLaTeXcols}}%
8309 }%
8310 \ifdefstring{\LWR@tempone}{tvertbarr}%
8311 {%
8312 \LWR@setexparray{LWR@colbarspec}%
8313 {\arabic{LWR@tabletotalLaTeXcols}}{tvertbarrdouble}%
8314 }%
8315 {%
8316 \LWR@setexparray{LWR@colbarspec}%
8317 {\arabic{LWR@tabletotalLaTeXcols}}{tvertbarr}%
8318 }%
8319 }%
8320 \booltrue{LWR@validtablecol}%
8321 }
```

`\LWR@parsecoloncolumn` Handles vertical rules.

```

8322 \newcommand*{\LWR@parsecoloncolumn}{%
8323 \LWR@traceinfo{LWR@parsecoloncolumn}%
```

Remember the bar at this position:

```

8324 \ifnumcomp{\value{LWR@tabletotalLaTeXcols}}{=}{0}%
8325 {% left edge of the table:
8326 \edef\LWR@tempone{\LWR@getexparray{LWR@colbarspec}{leftedge}}%
8327 \ifdefstring{\LWR@tempone}{tvertbarldash}%
8328 {\LWR@setexparray{LWR@colbarspec}{leftedge}{tvertbarldoubledash}}%
8329 {\LWR@setexparray{LWR@colbarspec}{leftedge}{tvertbarldash}}%
8330 }%
8331 {% not at the left edge:
8332 \edef\LWR@tempone{%
8333 \LWR@getexparray{LWR@colbarspec}{\arabic{LWR@tabletotalLaTeXcols}}%
8334 }%
8335 \ifdefstring{\LWR@tempone}{tvertbarrdash}%
8336 {\LWR@setexparray{LWR@colbarspec}%
8337 {\arabic{LWR@tabletotalLaTeXcols}}{tvertbarrdoubledash}}%
8338 {\LWR@setexparray{LWR@colbarspec}%
8339 {\arabic{LWR@tabletotalLaTeXcols}}{tvertbarrdash}}%
8340 }%
8341 \booltrue{LWR@validtablecol}%
8342 }
```

`\LWR@parsesemicoloncolumn` Handles vertical rules.

```
8343 \newcommand*{\LWR@parsesemicoloncolumn}{%
```

Treat ; as a : column:

```
8344 \LWR@parsecoloncolumn%
```

Skip the following width token:

```
8345 \defaddtocounter{LWR@tablecolspecindex}{1}%
8346 }
```

## 72.9 Parsing ‘l’, ‘c’, or ‘r’ columns

`\LWR@parsenormalcolumn` {*<thiscolumn>*}

Add to the accumulated column specs, advance counters, and pre-clear another column of at, before, and after specs.

```
8347 \newcommand*{\LWR@parsenormalcolumn}[1]{%
8348 \defaddtocounter{LWR@tabletotalLaTeXcols}{1}%
8349 \defaddtocounter{LWR@tabletotalLaTeXcolsnext}{1}%

8350 \LWR@setexparray{LWR@tablecolspec}{\arabic{LWR@tabletotalLaTeXcols}}{#1}%

8351 \LWR@traceinfo{normal column \arabic{LWR@tabletotalLaTeXcols}: #1}%
8352 \LWR@setexparray{LWR@colatspec}{\arabic{LWR@tabletotalLaTeXcolsnext}}{}}%
8353 \LWR@setexparray{LWR@colbangspec}{\arabic{LWR@tabletotalLaTeXcolsnext}}{}}%
8354 \LWR@setexparray{LWR@colbeforespec}{\arabic{LWR@tabletotalLaTeXcolsnext}}{}}%
8355 \LWR@setexparray{LWR@colafterspec}{\arabic{LWR@tabletotalLaTeXcolsnext}}{}}%
8356 \LWR@setexparray{LWR@colbarspec}{\arabic{LWR@tabletotalLaTeXcolsnext}}{}}%
8357 \booltrue{LWR@validtablecol}%
8358 }
```

## 72.10 Parsing ‘p’, ‘m’, or ‘b’ columns

`\LWR@parsepcolumn` {*<thiscolumn>*} The width will be ignored.

```
8359 \newcommand*{\LWR@parsepcolumn}[1]{%
```

Converts to the given column type:

```
8360 \LWR@parsenormalcolumn{#1}%
```

Skips the following width token:

```
8361 \defaddtocounter{LWR@tablecolspecindex}{1}%
8362 }
```

## 72.11 Parsing ‘w’ columns

`\LWR@parsewcolumn` The width will be ignored.

```
8363 \newcommand*{\LWR@parsewcolumn}{%
8364 \LWR@columnspeclookahead{1}%
8365 \expandafter\LWR@parsenormalcolumn\expandafter{\LWR@strresulttwo}%
```

Skips the following width and alignment tokens:

```
8366 \defaddtocounter{\LWR@tablecolspecindex}{2}%
8367 }
```

## 72.12 Parsing ‘\*’ columns

`\LWR@parsestarcolumn` Star columns should already have been expanded, so this should never be used.

```
8368 \newcommand*{\LWR@parsestarcolumn}{%
8369 \defaddtocounter{\LWR@tablecolspecindex}{2}%
8370 }
```

## 72.13 Parsing ‘D’ columns

From the `dcolumn` package.

`\LWR@parseDcolumn` `{\thiscolumn}` The three parameters will be ignored.

```
8371 \newcommand*{\LWR@parseDcolumn}[1]{%
```

Converts to the given column type.

```
8372 \LWR@parsenormalcolumn{#1}%
```

Skips the following three parameters.

```
8373 \defaddtocounter{\LWR@tablecolspecindex}{3}%
8374 }
```

## 72.14 Expanding the star column specifications

`\LWR@starcount` Internal count for duplicating star columns.

```
8375 \newcount\LWR@starcount
```

\LWR@expcolspec Temporary storage used to build the expanded column specifier.

```
8376 \newcommand*{\LWR@expcolspec}{}
```

Ctrl LWR@splitstarindex Indexes into the column specifiers.

```
8377 \newcounter{LWR@splitstarindex}
```

Ctrl LWR@splitstarcopies Number of copies.

```
8378 \newcounter{LWR@splitstarcopies}
```

\LWR@splitstarcontents Contents to duplicate.

```
8379 \newcommand*{\LWR@splitstarcontents}{}
```

\expandcolspec Expands \LWR@origcolspec for star columns.

```
8380 \newcommand*{\expandcolspec}{%
```

Find the position of any star token.

```
8381 \StrPosition{\LWR@origcolspec}{*}[\LWR@tempone]%
```

Expand until no stars are found:

```
8382 \whileboolexpr{ test {\ifnumgreater{\LWR@tempone}{0}}}%
8383 {%
```

Begin with any characters to the left of the star.

```
8384 \setcounter{LWR@splitstarindex}{\LWR@tempone}%
8385 \addtocounter{LWR@splitstarindex}{-1}%
8386 \StrLeft{\LWR@origcolspec}{\value{LWR@splitstarindex}}[\LWR@expcolspec]%
```

Move past the star to remember its number of copies.

```
8387 \addtocounter{LWR@splitstarindex}{2}%
8388 \StrChar{\LWR@origcolspec}{\value{LWR@splitstarindex}}[\LWR@tempone]%
8389 \setcounter{LWR@splitstarcopies}{\expandafter\@firstofone\LWR@tempone}%
```

Move past the number of copies and remember the contents.

```
8390 \addtocounter{LWR@splitstarindex}{1}%
8391 \StrChar{\LWR@origcolspec}{\value{LWR@splitstarindex}}[\LWR@splitstarcontents]%
```

For each copy, append the contents.

```
8392 \ifnumgreater{\value{LWR@splitstarcopies}}{0}%
8393 {%
8394 \LWR@starcount=\value{LWR@splitstarcopies}%
8395 \loop
8396 \appto\LWR@expcolspec{%
```

Table 12: Tabular baseline

|   |     |     |     |   |
|---|-----|-----|-----|---|
| l | p   | m   | b   | r |
|   |     |     | bot |   |
|   |     | mid | bot |   |
| l | par | mid | bot | r |
|   | par | mid |     |   |
|   | par |     |     |   |

(Remove the enclosing braces.)

```
8397 \expandafter\@firstofone\LWR@splitstarcontents%
8398 }%
8399 \advance \LWR@starcount -1
8400 \ifnum \LWR@starcount>0 \repeat
8401 }{ }%
```

Remove any token to the left, and append the rightmost remaining tokens.

```
8402 \StrGobbleLeft{\LWR@origcolspec}{\value{\LWR@splitstarindex}}[\colspecremainder]%
8403 \appto{\LWR@expcolspec}{\colspecremainder}%
```

Remember the final result.

```
8404 \edef\LWR@origcolspec{\LWR@expcolspec}%
```

See if more stars exist.

```
8405 \StrPosition{\LWR@origcolspec}{*}[\LWR@tempone]%
8406 }%
8407 }
```

72.15 Parsing the column specifications


 **tabular baselines** HTML CSS cannot exactly match the  $\LaTeX$  concept of a baseline for a table row. Table 12 shows the  $\LaTeX$  results for various vertical-alignment choices, with the baseline of the first column drawn across all the columns for comparison. See the p column specification in table 13 for details.

Table 13 describes how each kind of column is converted to HTML.

```
\LWR@parsetablecols {\colspecs}
```

Scans the column specification left to right.

Builds `\LWR@tablecolspec` with the final specification, one  $\LaTeX$  column per entry. The final number of  $\LaTeX$  columns in each row is stored in `LWR@tabletotalLaTeXcols`,

Table 13: Tabular HTML column conversions

---

|                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|--------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>l, r, c:</b>          | Converted to table cells without paragraph tags.<br>Uses css <code>vertical-align:middle</code> so that top or bottom-aligned cells may go above or below this cell.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>p:</b>                | Converted to table cells with paragraph tags. Ref: Table 12, $\text{\LaTeX}$ places the top line of a parbox aligned with the rest of the text line, so css <code>vertical-align:bottom</code> is used to have the HTML result appear with the paragraph extending below the L, R, C cells at the middle, if possible. This may be confusing as a P cell may not top-align with an L,R,C cell in the HTML conversion, especially in the presence of a B cell, and two P cells side-by-side will be aligned at the bottom instead of the top. Some adjustment of the css may be desired, changing <code>td.tdp</code> , <code>td.tdP</code> , <code>td.tdprule</code> , and <code>td.tdPrule</code> to <code>vertical-align: middle</code> . Another possibility is to change L,R,C, and P to <code>vertical-align: top</code> and not worry about the alignment of B and M cells or trying to approximate $\text{\LaTeX}$ baselines. |
| <b>m:</b>                | With paragraph tags, css <code>vertical-align:middle</code> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>b:</b>                | With paragraph tags, css <code>vertical-align:top</code> so that the bottom of the text is closest to the middle of the text line.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>P, M, B:</b>          | Horizontally-centered versions.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>S:</b>                | Converted to 'r'. Ignores optional argument. From the <code>siunitx</code> package.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>D:</b>                | Converted to 'c'. From the <code>dcolumn</code> package.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>@, !, &gt;, &lt;:</b> | One each, in that order.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b> :</b>                | Vertical rule.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Unknown:</b>          | Converted to 'l'.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>\newcolumn:</b>       | Currently treated as unknown.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

---

which is the number of & and \\ in each line, but which does not include @, !, <, > specifications in the count.

```
8408 \newcommand*{\LWR@parsetablecols}[1]{%
8409 \LWR@traceinfo{\LWR@parsetablecols}%
```

Remember the original supplied column spec:

```
8410 \renewcommand*{\LWR@origcolspec}{#1}%
```

Remove spaces:

```
8411 \expandarg%
8412 \StrSubstitute{\LWR@origcolspec}{ }{ }[\LWR@origcolspec]%
```

Expand any star columns:

```
8413 \expandcolspec%
```

The parsed column spec data array, `LWR@tablecolspec`, will be overwritten with new values.

Total number of columns found so far. Also pre-initialize the first several columns of specs:

```
8414 \defcounter{\LWR@tabletotalLaTeXcols}{0}%
8415 \defcounter{\LWR@tabletotalLaTeXcolsnext}{1}%
8416 \LWR@setexparray{\LWR@colatspec}{leftedge}{}%
8417 \LWR@setexparray{\LWR@colatspec}{1}{}%
8418 \LWR@setexparray{\LWR@colatspec}{2}{}%
8419 \LWR@setexparray{\LWR@colatspec}{3}{}%
8420 \LWR@setexparray{\LWR@colbangspec}{leftedge}{}%
8421 \LWR@setexparray{\LWR@colbangspec}{1}{}%
8422 \LWR@setexparray{\LWR@colbangspec}{2}{}%
8423 \LWR@setexparray{\LWR@colbangspec}{3}{}%
8424 \LWR@setexparray{\LWR@colbeforespec}{1}{}%
8425 \LWR@setexparray{\LWR@colbeforespec}{2}{}%
8426 \LWR@setexparray{\LWR@colbeforespec}{3}{}%
8427 \LWR@setexparray{\LWR@colafterspec}{1}{}%
8428 \LWR@setexparray{\LWR@colafterspec}{2}{}%
8429 \LWR@setexparray{\LWR@colafterspec}{3}{}%
8430 \LWR@setexparray{\LWR@colbarspec}{leftedge}{}%
8431 \LWR@setexparray{\LWR@colbarspec}{1}{}%
8432 \LWR@setexparray{\LWR@colbarspec}{2}{}%
8433 \LWR@setexparray{\LWR@colbarspec}{3}{}%
```

Starting at the first column specification:

```
8434 \defcounter{\LWR@tablecolspecindex}{1}%
```

Place the colspecs string length into `\LWR@strresult`, and remember the number of characters in the column specification:

```

8435 \expandarg%
8436 \StrLen{\LWR@origcolspec}[\LWR@strresult]%
8437 \fullexpandarg%
8438 \LWR@traceinfo{original column spec length: \LWR@strresult}%
8439 \defcounter{\LWR@tablecolspecwidth}{\LWR@strresult}%

```

Haven't seen any optional arguments so far

```

8440 \boolfalse{\LWR@opttablecol}%

```

Scan through the column specifications:

```

8441 \whileboolexpr{%
8442 not test{%
8443 \ifnumcomp{\value{\LWR@tablecolspecindex}}{>}%
8444 {\value{\LWR@tablecolspecwidth}}%
8445 }%
8446 }%
8447 {%

```

Place the next single-character column type into \LWR@strresult:

```

8448 \expandarg%
8449 \StrChar{\LWR@origcolspec}{\arabic{\LWR@tablecolspecindex}}[\LWR@strresult]%
8450 \LWR@traceinfo{position \arabic{\LWR@tablecolspecindex}: \LWR@strresult}%
8451 \fullexpandarg%

```

Not yet found a valid column type:

```

8452 \boolfalse{\LWR@validtablecol}%

```

Skip over any optional arguments, such as siunitx S column:

```

8453 \IfStrEq{\LWR@strresult}{l}{\booltrue{\LWR@opttablecol}}{}%

```

Throw away anything found inside the optional argument:

```

8454 \ifbool{\LWR@opttablecol}%
8455 {}% inside an optional argument
8456 {% not an optional tabular argument

```

Not inside an optional argument, so consider the column type:

```

8457 \IfStrEq{\LWR@strresult}{l}{\LWR@parsenormalcolumn{l}}{}%
8458 \IfStrEq{\LWR@strresult}{c}{\LWR@parsenormalcolumn{c}}{}%
8459 \IfStrEq{\LWR@strresult}{r}{\LWR@parsenormalcolumn{r}}{}%
8460 \IfStrEq{\LWR@strresult}{L}{\LWR@parsenormalcolumn{l}}{}%
8461 \IfStrEq{\LWR@strresult}{C}{\LWR@parsenormalcolumn{c}}{}%
8462 \IfStrEq{\LWR@strresult}{R}{\LWR@parsenormalcolumn{r}}{}%
8463 \IfStrEq{\LWR@strresult}{J}{\LWR@parsenormalcolumn{l}}{}%

8464 \IfStrEq{\LWR@strresult}{S}{\LWR@parsenormalcolumn{c}}{}%
8465 \IfStrEq{\LWR@strresult}{s}{\LWR@parsenormalcolumn{c}}{}%

```

```

8466 \IfStrEq{\LWR@strresult}{\detokenize{@}}{\LWR@parseatcolumn}{}%
8467 \IfStrEq{\LWR@strresult}{!}{\LWR@parsebangcolumn}{}%
8468 \IfStrEq{\LWR@strresult}{>}{\LWR@parsebeforecolumn}{}%
8469 \IfStrEq{\LWR@strresult}{<}{\LWR@parseaftercolumn}{}%
8470 \IfStrEq{\LWR@strresult}{|}{\LWR@parsebarcolumn}{}%
8471 \IfStrEq{\LWR@strresult}{:}{\LWR@parsecoloncolumn}{}%
8472 \IfStrEq{\LWR@strresult}{;}{\LWR@parsesemicoloncolumn}{}%

8473 \IfStrEq{\LWR@strresult}{p}{\LWR@parsepcolumn{p}}{%
8474 \IfStrEq{\LWR@strresult}{m}{\LWR@parsepcolumn{m}}{%
8475 \IfStrEq{\LWR@strresult}{b}{\LWR@parsepcolumn{b}}{%

8476 \IfStrEq{\LWR@strresult}{w}{\LWR@parsewcolumn}{}%
8477 \IfStrEq{\LWR@strresult}{W}{\LWR@parsewcolumn}{}%

```

A star column:

```

8478 \IfStrEq{\LWR@strresult}{*}{\LWR@parsestarcolumn}{}%

```

From the dcolumn package:

```

8479 \IfStrEq{\LWR@strresult}{D}{\LWR@parseDcolumn{c}}{%

```

From the tabularx package. X column has no parameter, but will be given paragraph tags.

```

8480 \IfStrEq{\LWR@strresult}{X}{\LWR@parsenormalcolumn{X}}{%

```

---

Many people define centered versions “P”, “M”, and “B”:

```

\newcolumnntype{P}[1]{>{\centering\arraybackslash}p{#1}}

```

---

```

8481 \IfStrEq{\LWR@strresult}{P}{\LWR@parsepcolumn{P}}{%
8482 \IfStrEq{\LWR@strresult}{M}{\LWR@parsepcolumn{M}}{%
8483 \IfStrEq{\LWR@strresult}{B}{\LWR@parsepcolumn{B}}{%

```

If this column was an invalid column type, convert it to an l column:

```

8484 \ifbool{LWR@validtablecol}{}%
8485 \LWR@traceinfo{invalid column type: \LWR@strresult}%
8486 \LWR@parsenormalcolumn{l}%
8487 }%
8488 }% not an optional column argument

```

If read the closing bracket, no longer inside the optional argument:

```

8489 \IfStrEq{\LWR@strresult}{] }{\boolfalse{LWR@opttablecol}}{%

```

Move to the next character:

```

8490 \defaddtocounter{LWR@tablecolspecindex}{1}%
8491 }% whiledo
8492 }%

```

## 72.16 colortbl and xcolor tabular color support

These macros provide a minimal emulation of some colortbl macros which might appear between table cells. If colortbl is loaded, these macros will be replaced with functional versions.

For each of the HTML colors below, the text for the HTML color is set if requested, but the macro is empty if none has been set.

`\rownum` Reserve a counter register.

```
8493 \ifundefined{rownum}{\newcount\rownum}{}
```

`\@rowcolors` Emulated in case xcolor is not used.

```
8494 \newcommand*{\@rowcolors}{}

```

`\@rowc@lors` Emulated in case xcolor is not used.

```
8495 \newcommand*{\@rowc@lors}{}

```

`\LWR@xcolorrowHTMLcolor` Emulated xcolor row color.

```
8496 \newcommand*{\LWR@xcolorrowHTMLcolor}{}

```

`\LWR@columnHTMLcolor` HTMLstyle code for the column color.

```
8497 \def\LWR@columnHTMLcolor{}

```

`\LWR@rowHTMLcolor` HTMLstyle code for the row color.

```
8498 \def\LWR@rowHTMLcolor{}

```

`\LWR@cellHTMLcolor` HTMLstyle code for the cell color.

```
8499 \def\LWR@cellHTMLcolor{}

```

`\LWR@ruleHTMLcolor` HTMLstyle code for the rule color.

```
8500 \newcommand*{\LWR@ruleHTMLcolor}{}

```

`\rowcolor` [*<model>*] {*<color>*} [*<left overhang>*] [*<right overhang>*] Print version. The HTML version is in `lwarp-colortbl`. Used before starting a tabular data cell, thus `\LWR@getmynexttoken`.

```
8501 \newcommand*{\rowcolor}{\LWR@getmynexttoken}%
```

`\arrayrulecolor` [*<model>*] {*<color>*}

`\arrayrulecolornexttoken` [*<model>*] {*<color>*}

Print versions for use outside and inside a tabular:

```
8502 \newcommand{\arrayrulecolor}[2][named]{}
8503 \newcommand{\arrayrulecolornexttoken}[2][named]{\LWR@getmynexttoken}
```

`\doublerulesepcolor` [*<model>*] {*<color>*}

`\doublerulesepcolornexttoken` [*<model>*] {*<color>*}

Print versions for use inside and outside a tabular:

```
8504 \newcommand{\doublerulesepcolor}[2][named]{}
8505 \newcommand{\doublerulesepcolornexttoken}[2][named]{\LWR@getmynexttoken}
```

## 72.17 Starting a new row

`\LWR@maybenewtablerow` If have not yet started a new table row, begin one now. Creates a new row tag, adding a class for `hline` or `tbrule` if necessary.

```
8506 \newcommand*{\LWR@maybenewtablerow}
8507 {%
8508 \ifbool{\LWR@startedrow}%
8509 {}% started the row
8510 {}% not started the row
```

Remember that now have started the row:

```
8511 \booltrue{\LWR@startedrow}%
```

Create the row tag, with a class if necessary.

```
8512 \booltrue{\LWR@intabularmetadata}%
8513 \ifboolexpr{%
8514 test{\ifnumcomp{\value{\LWR@hlines}}{>}{0}} or%
8515 test{\ifnumcomp{\value{\LWR@hdashedlines}}{>}{0}}}%
8516 {%
8517 {\LWR@htmltag{tr class="hline" }%
8518 \LWR@originewline%
8520 }%
8521 {}% not doing hline
```

```

8522 \ifbool{LWR@doingtbrule}%
8523 {%
8524 \ifdefvoid{\LWR@ruleHTMLcolor}{%
8525 \LWR@htmltag{tr class="tbrule"}%
8526 }{%
8527 \LWR@htmltag{%
8528 tr class="tbrule" % space
8529 style="border-top: 1px solid % space
8530 \LWR@origpound\LWR@ruleHTMLcolor "%
8531 }%
8532 }%
8533 \LWR@orignewline%
8534 }%
8535 {\LWR@htmltag{tr}\LWR@orignewline}%
8536 }% end of not doing hline
8537 }% end of not started the row
8538 }

```

## 72.18 Printing vertical bar tags

`\LWR@printbartag {<index>}`

Adds to a tabular data cell an HTML class name for a left/right vertical bar.

```

8539 \newcommand*{\LWR@printbartag}[1]{%
8540 \LWR@traceinfo{\LWR@printbartag !#1!}%
8541 \ifboolexpr{bool{LWR@tabularmutemods} or bool{LWR@emptyatbang}}%
8542 {}% muting or empty
8543 {% not muting
8544 \edef\LWR@tempone{\LWR@getexparray{LWR@colbarspec}{#1}}%
8545 \ifdefempty{\LWR@tempone}{}{ \LWR@tempone}%
8546 }% not muting
8547 \LWR@traceinfo{\LWR@printbartag done}%
8548 }

```

## 72.19 Printing @ or ! tags

`\LWR@printatbang {<at — or — bang>} {<index>}`

```

8549 \newcommand*{\LWR@printatbang}[2]{%

```

Fetch the column at or bang spec:

```

8550 \xdef\LWR@atbangspec{\LWR@getexparray{LWR@col#1spec}{#2}}%
8551 \LWR@traceinfo{atbang: #2 !\LWR@atbangspec!}%

```

Only generate if is not empty;

```

8552 \ifdefempty{\LWR@atbangspec}%
8553 {}%

```

```

8554 {% not empty
8555 \LWR@htmltag{%
8556 td class="td#1%
8557 \LWR@subaddcmidruletrim{}}}%
8558 \LWR@printbartag{#2}%
8559 "%
8560 \LWR@tdstartstyles%
8561 \LWR@addcmidrulewidth%
8562 \LWR@addcdashline%
8563 \LWR@addtabularrulecolors%
8564 \LWR@tdendstyles%
8565 }%

```

Create an empty cell if muting for the \bottomrule:

```

8566 \ifboolexpr{bool{LWR@tabularmutemods} or bool{LWR@emptyatbang}}}%
8567 {}%
8568 {\LWR@atbangspec}%
8569 %
8570 \LWR@htmltag{/td}\LWR@orignewline%
8571 \global\booltrue{LWR@tabularcelladded}%
8572 }% not empty
8573 }%

```

\LWR@addleftmostbartag

```

8574 \newcommand*{\LWR@addleftmostbartag}{%
8575 \ifnumcomp{\value{LWR@tableLaTeXcolindex}}{=}{1}{%
8576 \LWR@printbartag{leftedge}%
8577 }{}%
8578 }

```

\LWR@tabularleftedge

```

8579 \newcommand*{\LWR@tabularleftedge}{%
8580 \ifnumcomp{\value{LWR@tableLaTeXcolindex}}{=}{1}{%
8581 {%
8582 \LWR@printatbang{at}{leftedge}%
8583 \LWR@printatbang{bang}{leftedge}%
8584 }% left edge
8585 {}% not left edge
8586 }

```

## 72.20 Data opening tag

\LWR@thiscolspec Temporary storage.

```

8587 \newcommand*{\LWR@thiscolspec}{}

```

\LWR@tabledatasinglecolumn tag Print a table data opening tag with style for alignment and color.

```

8588 \newcommand*{\LWR@tabledatasinglecolumnntag}%
8589 {%
8590 \LWR@traceinfo{\LWR@tabledatasinglecolumnntag}%
8591 \LWR@maybenewtablerow%

```

Don't start a new paragraph tag if have already started one:

```

8592 \ifbool{\LWR@intabularmetadata}%
8593 {%

```

If have found the end of tabular command, do not create the next data cell:

```

8594 \ifbool{\LWR@exitingtabular}{}%
8595 {% not exiting tabular

```

Print the @ and ! contents before first column:

```

8596 \LWR@tabularleftedge%

```

Fetch the current column's alignment character into \LWR@strresult:

```

8597 \xdef\LWR@strresult{%
8598 \LWR@getexparray{\LWR@tablecolspec}{\arabic{\LWR@tableLaTeXcolindex}}%
8599 }%

```

print the start of a new table data cell:

```

8600 \LWR@traceinfo{\LWR@tabledatasinglecolumnntag: about to print td tag}%
8601 \LWR@htmltag{%
8602 td class="td%

```

append this column's spec:

```

8603 \LWR@strresult%

```

If this column has a cmidrule, add “rule” to the end of the HTML class tag. Also add vertical bar tags.

```

8604 \LWR@addcmidruletrim%
8605 \LWR@addleftmostbartag%
8606 \LWR@printbartag{\arabic{\LWR@tableLaTeXcolindex}}%
8607 "%

```

Add styles for rules, alignment:

```

8608 \LWR@tdstartstyles%
8609 \LWR@addcmidrulewidth%
8610 \LWR@addcdashline%

```

```

8611 \xdef\LWR@thiscolspec{%
8612 \LWR@getexparray{\LWR@tablecolspec}%
8613 {\arabic{\LWR@tableLaTeXcolindex}}%
8614 }%
8615 \LWR@addformatwpalignment{\LWR@thiscolspec}%

```

Add styles for cell and rule colors:

```

8616 \LWR@addtabulararrowcolor%
8617 \LWR@addtabularrulecolors%

8618 \LWR@tdendstyles%
8619 }% HTML td
8620 \LWR@traceinfo{LWR@tabledatasinglecolumntag: done printing td tag}%

```

If this is a p, m, b, or X column, allow paragraphs:

```

8621 \ifboolexpr{%
8622 test{ \ifdefstring{LWR@strresult}{p} } or
8623 test{ \ifdefstring{LWR@strresult}{m} } or
8624 test{ \ifdefstring{LWR@strresult}{b} } or
8625 test{ \ifdefstring{LWR@strresult}{P} } or
8626 test{ \ifdefstring{LWR@strresult}{M} } or
8627 test{ \ifdefstring{LWR@strresult}{B} } or
8628 test{ \ifdefstring{LWR@strresult}{X} }
8629 }%
8630 {% allow pars
8631 \LWR@traceinfo{LWR@tabledatasinglecolumntag: about to LWR@startpars}%
8632 \booltrue{LWR@tableparcell}%
8633 \LWR@startpars%
8634 \LWR@traceinfo{LWR@tabledatasinglecolumntag: done with LWR@startpars}%
8635 }% allow pars
8636 }% no pars

```

Print the > contents unless muted for the \bottomrule:

```

8637 \ifboolexpr{bool{LWR@tabularmutemods} or bool{LWR@emptyatbang}}%
8638 {%
8639 {%
8640 \LWR@gettexpparray{LWR@colbeforespec}{\arabic{LWR@tableLaTeXcolindex}}%
8641 }%
8642 \boolfalse{LWR@intabularmetadata}%
8643 }% not exiting tabular
8644 }{% in tabular metadata
8645 \LWR@traceinfo{LWR@tabledatasinglecolumntag: done}%
8646 }%

```

## 72.21 Midrules

- LWR@midrules** LWR@midrules is a data array (section 41) of columns each containing a non-zero width if a midrule should be created for this column.
- LWR@trimlrules** LWR@trimlrules is a data array (section 41) of columns containing l if a midrule should be left trimmed for each column.
- LWR@trimrrules** LWR@trimrrules is a data array (section 41) of columns containing r if a midrule should be right trimmed for each column.
- LWR@cdashlines** LWR@cdashlines is a data array (section 41) of columns each containing a Y if an

arydshln package "cdashed line" should be created for this column.

Len \LWR@heavyrulewidth The default width of the rule.

```
8647 \newlength{\LWR@heavyrulewidth}
8648 \setlength{\LWR@heavyrulewidth}{.08em}
```

Len \LWR@lightrulewidth The default width of the rule.

```
8649 \newlength{\LWR@lightrulewidth}
8650 \setlength{\LWR@lightrulewidth}{.05em}
```

Len \LWR@cmidrulewidth The default width of the rule.

```
8651 \newlength{\LWR@cmidrulewidth}
8652 \setlength{\LWR@cmidrulewidth}{.03em}
```

Len \LWR@thiscmidrulewidth The width of the next rule, defaulting to \LWR@cmidrulewidth.

If not \LWR@cmidrulewidth, a style will be used to generate the custom width.

Assigned from the LWR@midrules array.

```
8653 \newlength{\LWR@thiscmidrulewidth}
8654 \setlength{\LWR@thiscmidrulewidth}{\LWR@cmidrulewidth}
```

\LWR@clearmidrules Start new midrules. Called at beginning of tabular and also at \.

Clears all LWR@midrules and LWR@trimrules markers for this line.

```
8655 \newcommand*{\LWR@clearmidrules}
8656 {%
8657 \defcounter{LWR@midrulecounter}{1}%
8658 \whileboolexpr{%
8659 not test{%
8660 \ifnumcomp{\value{LWR@midrulecounter}}{>}%
8661 {\value{LWR@tabletotalLaTeXcols}}%
8662 }%
8663 }%
8664 {%
8665 \LWR@setexparray{LWR@midrules}{\arabic{LWR@midrulecounter}}{0pt}%
8666 \setlength{\LWR@thiscmidrulewidth}{\LWR@cmidrulewidth}%
8667 \LWR@setexparray{LWR@trimrules}{\arabic{LWR@midrulecounter}}{}%
8668 \LWR@setexparray{LWR@trimrrules}{\arabic{LWR@midrulecounter}}{}%
8669 \LWR@setexparray{LWR@cdashlines}{\arabic{LWR@midrulecounter}}{N}%
8670 \defaddtocounter{LWR@midrulecounter}{1}%
8671 }%
8672 }
```

\LWR@subcmidrule {<width>} {<trim>} {<leftcolumn>} {<rightcolumn>}

Marks LWR@midrules data array elements to be non-zero widths from left to right columns. Also marks trimming for the L and/or R columns.

LWR@doingcmidrule is set to force an empty row at the end of the tabular to create the rule.

```

8673 \newcommand*{\LWR@subcmidrule}[4]{%
8674 \defcounter{LWR@midrulecounter}{#3}%
8675 \whilebool{expr}%
8676 not test {%
8677 \ifnumcomp{\value{LWR@midrulecounter}}{>}{#4}%
8678 }%
8679 }%
8680 {%
8681 \LWR@setexparray{LWR@midrules}{\arabic{LWR@midrulecounter}}{#1}%
8682 \defaddtocounter{LWR@midrulecounter}{1}%
8683 }% whiledo
8684 \IfSubStr{#2}{l}{\LWR@setexparray{LWR@trimlrules}{#3}{l}}{}%
8685 \IfSubStr{#2}{r}{\LWR@setexparray{LWR@trimrrules}{#4}{r}}{}%
8686 \booltrue{LWR@doingcmidrule}%
8687 }
```

`\LWR@docmidrule`  $\langle width \rangle$   $\langle trim \rangle$   $\langle leftcolumn-rightcolumn \rangle$

Marks LWR@midrules array elements to be a non-zero width from left to right columns. Also marks trimming for the L and/or R columns.

```

8688 \NewDocumentCommand{\LWR@docmidrule}
8689 {O{\LWR@cmidrulewidth} D{}} >\SplitArgument{1}{-}m}
8690 {\LWR@subcmidrule{#1}{#2}{#3}}
```

`\LWR@subcdashline`  $\langle leftcolumn \rangle$   $\langle rightcolumn \rangle$

Marks LWR@cdashlines data array elements to be Y from left to right columns.

LWR@doingcmidrule is set to force an empty row at the end of the tabular to create the rule.

```

8691 \newcommand*{\LWR@subcdashline}[2]{%
8692 \defcounter{LWR@midrulecounter}{#1}%
8693 \whilebool{expr}%
8694 not test {%
8695 \ifnumcomp{\value{LWR@midrulecounter}}{>}{#2}%
8696 }%
8697 }%
8698 {%
8699 \LWR@setexparray{LWR@cdashlines}{\arabic{LWR@midrulecounter}}{Y}%
8700 \defaddtocounter{LWR@midrulecounter}{1}%
8701 }% whiledo
8702 \booltrue{LWR@doingcmidrule}%
8703 }
```

`\LWR@docdashline`  $\langle leftcolumn-rightcolumn \rangle$

Marks LWR@cdashlines data array elements to be Y from left to right columns.

```

8704 \NewDocumentCommand{\LWR@docdashline}
8705 {>\SplitArgument{1}{-}}m}%
8706 {%
8707 \LWR@subcdashline#1%
8708 }

```

`\LWR@tdstartstyles` Begins possibly adding a table data cell style.

```

8709 \newcommand*{\LWR@tdstartstyles}{\boolfalse{\LWR@tdhavecellstyle}}

```

`\LWR@tdaddstyle` Starts adding a table data cell style.

```

8710 \newcommand*{\LWR@tdaddstyle}{%
8711 \ifbool{\LWR@tdhavecellstyle}%
8712 {; }%
8713 { style="}%
8714 \booltrue{\LWR@tdhavecellstyle}%
8715 }

```

`\LWR@tdendstyles` Finishes possibly adding a table data cell style. Prints the closing quote.

```

8716 \newcommand*{\LWR@tdendstyles}{%
8717 \ifbool{\LWR@tdhavecellstyle}%
8718 {%
8719 "%
8720 \boolfalse{\LWR@tdhavecellstyle}%
8721 }{}%
8722 }

```

`\LWR@subaddcmidruletrim` `{\lefttrim}` `{\righttrim}` Adds a `\cmidrule` with optional trim.

```

8723 \newcommand*{\LWR@subaddcmidruletrim}[2]{%
8724 \setlength{\LWR@templengthone}{%
8725 \LWR@getexparray{\LWR@midrules}{\arabic{\LWR@tableLaTeXcolindex}}}%
8726 }%
8727 \ifdimcomp{\LWR@templengthone}{>}{\opt}%
8728 {%

```

Print the class with left and right trim letters appended:

```

8729 \LWR@origtilde tdrule#1#2%

```

Remember the width of the rule:

```

8730 \setlength{\LWR@thiscmidrulewidth}{\LWR@templengthone}%
8731 }%
8732 {%
8733 \setlength{\LWR@thiscmidrulewidth}{\opt}%
8734 }%
8735 }

```

`\LWR@addcmidruletrim` Adds left or right trim to a `\cmidrule`.

```
8736 \newcommand*{\LWR@addcmidruletrim}{%
8737 \LWR@subaddcmidruletrim%
8738 {\LWR@getexparray{\LWR@trimlrules}{\arabic{\LWR@tableLaTeXcolindex}}}%
8739 {\LWR@getexparray{\LWR@trimrrules}{\arabic{\LWR@tableLaTeXcolindex}}}%
8740 }
```

`\LWR@addrulewidth` `{\langle thiswidth \rangle}{\langle defaultwidth \rangle}`

If not default width, add a custom style with width and color depending on `thiswidth`.

Must be placed between `\LWR@tdstartstyles` and `\LWR@tdendstyles`.

```
8741 \newcommand{\LWR@addrulewidth}[2]{%
```

Only add a custom width if `thiswidth` is different than the `defaultwidth`, or if a color is being used:

```
8742 \ifboolexpr{%
8743 test{\ifdimcomp{#1}{=}{0pt}} or
8744 (
8745 (test{\ifdimcomp{#1}{=}{#2}} and not bool{FormatWP})
8746 and (test {\ifdefvoid{\LWR@ruleHTMLcolor}})
8747)
8748 }%
8749 {\}% default width and color
8750 {\}% custom width and/or color
```

Ensure that the width is wide enough to display in the browser:

```
8751 \LWR@forceminwidth{#1}%
```

Begin adding another style:

```
8752 \LWR@tdaddstyle%
```

The style itself:

```
8753 border-top:\LWR@printlength{\LWR@atleastonept} solid % space
```

If default gray, the darkness of the color depends on the thickness of the rule:

```
8754 \ifdefvoid{\LWR@ruleHTMLcolor}{%
8755 \ifdimcomp{#1}{<}{\LWR@lightrulewidth}%
8756 {\LWR@origpound{A0A0A0}}%
8757 {\% lightrule or heavier
8758 \ifdimcomp{#1}{<}{\LWR@heavyrulewidth}%
8759 {\LWR@origpound{808080}}%
8760 {black}%
8761 }% lightrule or heavier
8762 }{%
8763 \LWR@origpound\LWR@ruleHTMLcolor%
```

```

8764 }%
8765 }% custom width and/or color
8766 }

```

`\LWR@addcmidrulewidth` Adds a style for the rule width.

Must be placed between `\LWR@tdstartstyles` and `\LWR@tdendstyles`.

```

8767 \newcommand{\LWR@addcmidrulewidth}{%
8768 \LWR@addrulewidth{\LWR@thiscmidrulewidth}{\LWR@cmidrulewidth}%
8769 }

```

`\LWR@addcdashline` Must be placed between `\LWR@tdstartstyles` and `\LWR@tdendstyles`.

```

8770 \newcommand{\LWR@addcdashline}{%
8771 \edef\LWR@tempone{%
8772 \LWR@getexparray{\LWR@cdashlines}{\arabic{\LWR@tableLaTeXcolindex}}%
8773 }%
8774 \ifdefstring{\LWR@tempone}{Y}{%
8775 \LWR@tdaddstyle%
8776 border-top: 1pt dashed %
8777 \ifdefvoid{\LWR@ruleHTMLcolor}%
8778 {black}%
8779 {\LWR@origpound\LWR@ruleHTMLcolor}%
8780 }{}%
8781 }

```

`\LWR@WPcell` {*⟨text-align⟩*} {*⟨vertical-align⟩*}

```

8782 \newcommand*{\LWR@WPcell}[2]{%
8783 \LWR@tdaddstyle%
8784 \LWR@print@mbbox{text-align:#1}; \LWR@print@mbbox{vertical-align:#2}%
8785 }

```

`\LWR@addformatwpalignment` If `FormatWP`, adds a style for the alignment.

Must be placed between `\LWR@tdstartstyles` and `\LWR@tdendstyles`.

```

8786 \newcommand*{\LWR@addformatwpalignment}[1]{%
8787 \ifbool{FormatWP}{%
8788 \IfSubStr{#1}{l}{\LWR@WPcell{left}{middle}}{%
8789 \IfSubStr{#1}{c}{\LWR@WPcell{center}{middle}}{%
8790 \IfSubStr{#1}{r}{\LWR@WPcell{right}{middle}}{%
8791 \IfSubStr{#1}{p}{\LWR@WPcell{left}{bottom}}{%
8792 \IfSubStr{#1}{m}{\LWR@WPcell{left}{middle}}{%
8793 \IfSubStr{#1}{b}{\LWR@WPcell{left}{top}}{%
8794 \IfSubStr{#1}{P}{\LWR@WPcell{center}{bottom}}{%
8795 \IfSubStr{#1}{M}{\LWR@WPcell{center}{middle}}{%
8796 \IfSubStr{#1}{B}{\LWR@WPcell{center}{top}}{%
8797 }{}%
8798 }

```

## 72.22 Cell colors

`\LWR@addtabulararrowcolor` Adds a cell's row color style, if needed.

No color is added for the final row of empty cells which finishes each tabular.

```

8799 \newcommand*{\LWR@addtabulararrowcolor}{%
8800 \ifbool{\LWR@tabularmutemods}{}%
8801 \ifdefvoid{\LWR@rowHTMLcolor}{%
8802 \ifdefvoid{\LWR@xcolorrowHTMLcolor}{}%
8803 {% xcolor row color
8804 \LWR@tdaddstyle%
8805 background:\LWR@origpound\LWR@xcolorrowHTMLcolor%
8806 }%
8807 }%
8808 {% explicit row color
8809 \LWR@tdaddstyle%
8810 background:\LWR@origpound\LWR@rowHTMLcolor%
8811 }%
8812 }%
8813 }
```

`\LWR@addtabularhrulecolor` Adds a cell's horizontal rule color, if needed.

```

8814 \newcommand*{\LWR@addtabularhrulecolor}{%
```

If either form of horizontal rule is requested:

```

8815 \ifboolexpr{%
8816 test{\ifnumcomp{\value{\LWR@hlines}}{>}{0}} or%
8817 test{\ifnumcomp{\value{\LWR@hdashedlines}}{>}{0}} or%
8818 bool{\LWR@doingtbrule}%
8819 }{%
```

If there is a no custom color:

```

8820 \ifdefvoid{\LWR@ruleHTMLcolor}%
8821 {%
8822 \ifnumcomp{\value{\LWR@hlines}}{>}{1}%
8823 {%
8824 \LWR@tdaddstyle%
8825 border-top: 4px double%
8826 }% else
8827 \ifnumcomp{\value{\LWR@hdashedlines}}{>}{1}%
8828 {%
8829 \LWR@tdaddstyle%
8830 border-top: 2px dashed%
8831 }% else
8832 \ifnumcomp{\value{\LWR@hdashedlines}}{=}{1}%
8833 {%
8834 \LWR@tdaddstyle%
8835 border-top: 1px dashed%
8836 }{}%
8837 }%
8838 }
```

If no color and not doubled or dashed, then add nothing, since a simpler rule is the default.

```
8837 }%
```

If there is a custom color:

```
8838 {%
8839 \ifnumcomp{\value{LWR@hlines}}{>}{1}%
8840 {%
8841 \LWR@tdaddstyle%
8842 border-top: 4px double \LWR@origpound\LWR@ruleHTMLcolor%
8843 }{% else
8844 \ifnumcomp{\value{LWR@hdashedlines}}{>}{1}%
8845 {%
8846 \LWR@tdaddstyle%
8847 border-top: 2px dashed \LWR@origpound\LWR@ruleHTMLcolor%
8848 }{% else
8849 \ifnumcomp{\value{LWR@hdashedlines}}{=}{1}%
8850 {%
8851 \LWR@tdaddstyle%
8852 border-top: 1px dashed \LWR@origpound\LWR@ruleHTMLcolor%
8853 }{% else
8854 \LWR@tdaddstyle%
8855 border-top: 1px solid \LWR@origpound\LWR@ruleHTMLcolor%
8856 }}}%
8857 }%
8858 }{%}%
8859 }
```

`\LWR@addtabularrulecolors` Adds a cell's rule color styles, if needed.

No color is added for the final row of empty cells which finishes each tabular.

```
8860 \newcommand*{\LWR@addtabularrulecolors}{%
```

Custom horizontal rule color:

```
8861 \LWR@addtabularhrulecolor%
```

No vertical rules if finishing the tabular with a row of empty cells:

```
8862 \ifbool{LWR@tabularmutemods}{}%
```

If at the leftmost cell, possibly add a leftmost vertical rule:

```
8863 \ifnumequal{\value{LWR@tableLaTeXcolindex}}{1}{%
```

Fetch the left edge's vertical bar specification:

```
8864 \edef\LWR@tempone{\LWR@gettexpparray{LWR@colbarspec}{leftedge}}%
```

Add a custom style if a vertical bar was requested:

```

8865 \ifdefstring{\LWR@tempone}{tvertbarl}{%
8866 \LWR@tdaddstyle%
8867 border-left: 1px solid % space
8868 \LWR@vertruleHTMLcolor%
8869 }{}%
8870 \ifdefstring{\LWR@tempone}{tvertbarldouble}{%
8871 \LWR@tdaddstyle%
8872 border-left: 4px double % space
8873 \LWR@vertruleHTMLcolor%
8874 }{}%
8875 \ifdefstring{\LWR@tempone}{tvertbarldash}{%
8876 \LWR@tdaddstyle%
8877 border-left: 1px dashed % space
8878 \LWR@vertruleHTMLcolor%
8879 }{}%
8880 \ifdefstring{\LWR@tempone}{tvertbarldoubledash}{%
8881 \LWR@tdaddstyle%
8882 border-left: 2px dashed % space
8883 \LWR@vertruleHTMLcolor%
8884 }{}%
8885 }{}%

```

Possibly add a right vertical rule for this cell:

```

8886 \edef\LWR@tempone{%
8887 \LWR@getexparray{\LWR@colbarspec}{\arabic{\LWR@tableLaTeXcolindex}}%
8888 }%
8889 \ifdefstring{\LWR@tempone}{tvertbarr}{%

```

Add a custom style if a vertical bar was requested:

```

8890 \LWR@tdaddstyle%
8891 border-right: 1px solid \LWR@vertruleHTMLcolor%
8892 }{}%
8893 \ifdefstring{\LWR@tempone}{tvertbarrdouble}{%
8894 \LWR@tdaddstyle%
8895 border-right: 4px double \LWR@vertruleHTMLcolor%
8896 }{}%
8897 \ifdefstring{\LWR@tempone}{tvertbarrdash}{%
8898 \LWR@tdaddstyle%
8899 border-right: 1px dashed \LWR@vertruleHTMLcolor%
8900 }{}%
8901 \ifdefstring{\LWR@tempone}{tvertbarrdoubledash}{%
8902 \LWR@tdaddstyle%
8903 border-right: 2px dashed \LWR@vertruleHTMLcolor%
8904 }{}%
8905 }%
8906 }

```

`\LWR@subaddtabularcellcolor`  $\{\langle HTML\ color\rangle\}$

```

8907 \newcommand*{\LWR@subaddtabularcellcolor}[1]{%
8908 \LWR@htmltag{div class="cellcolor" style="%
8909 background:\LWR@origpound{}}{#1 %

```

```

8910 " }%
8911 \defaddtocounter{LWR@cellcolordepth}{1}%
8912 }

```

`\LWR@addtabularcellcolor` Adds a cell color style, if needed.

```

8913 \newcommand*{\LWR@addtabularcellcolor}{%
8914 \ifdefvoid{\LWR@cellHTMLcolor}%
8915 {%
8916 \ifdefvoid{\LWR@rowHTMLcolor}%
8917 {%
8918 \ifdefvoid{\LWR@xcolorrowHTMLcolor}%
8919 {%
8920 \ifdefvoid{\LWR@columnHTMLcolor}%
8921 {}%
8922 {\LWR@subaddtabularcellcolor{\LWR@columnHTMLcolor}}%
8923 }%
8924 {\LWR@subaddtabularcellcolor{\LWR@xcolorrowHTMLcolor}}%
8925 }%
8926 {\LWR@subaddtabularcellcolor{\LWR@rowHTMLcolor}}%
8927 }%
8928 {\LWR@subaddtabularcellcolor{\LWR@cellHTMLcolor}}%
8929 }

```

## 72.23 Multicolumns

### 72.23.1 Parsing multicolumns

`\LWR@printmccoltype`  $\langle colspec \rangle$  Print any valid column type found. Does not print @, !, >, or < columns or their associated tokens.

This is printed as part of the table data tag's class.

```

8930 \newcommand*{\LWR@printmccoltype}[1]{%
8931 \LWR@traceinfo{lwr@printmccoltype -#1-}%

```

Get one token of the column spec:

```

8932 \StrChar{#1}{\arabic{LWR@tablemulticolspos}}[\LWR@strresult]%

```

Add to the HTML tag depending on which column type is found:

```

8933 \IfStrEq{\LWR@strresult}{l}{l}{l}%
8934 \IfStrEq{\LWR@strresult}{c}{c}{c}%
8935 \IfStrEq{\LWR@strresult}{r}{r}{r}%
8936 \IfStrEq{\LWR@strresult}{p}{p}{p}%
8937 \IfStrEq{\LWR@strresult}{m}{m}{m}%
8938 \IfStrEq{\LWR@strresult}{b}{b}{b}%
8939 \IfStrEq{\LWR@strresult}{P}{P}{P}%
8940 \IfStrEq{\LWR@strresult}{M}{M}{M}%
8941 \IfStrEq{\LWR@strresult}{B}{B}{B}%

```

```

8942 \IfStrEq{\LWR@strresult}{w}{w}{}%
8943 \IfStrEq{\LWR@strresult}{W}{W}{}%

8944 \IfStrEq{\LWR@strresult}{S}{c}{}%
8945 \IfStrEq{\LWR@strresult}{s}{c}{}%

8946 \IfStrEq{\LWR@strresult}{X}{p}{}%

8947 \IfStrEq{\LWR@strresult}{|}{}%
8948 {%
8949 \ifbool{LWR@mcolvertbaronleft}%
8950 {\defaddtocounter{LWR@mcolvertbarsl}{1}}% left edge
8951 {\defaddtocounter{LWR@mcolvertbarsr}{1}}% not left edge
8952 }%
8953 {%
8954 \IfStrEq{\LWR@strresult}{:}{}%
8955 {%
8956 \ifbool{LWR@mcolvertbaronleft}%
8957 {\defaddtocounter{LWR@mcolvertbarsldash}{1}}% left edge
8958 {\defaddtocounter{LWR@mcolvertbarsrdash}{1}}% not left edge
8959 }%
8960 {%
8961 \IfStrEq{\LWR@strresult}{;}{}%
8962 {%
8963 \ifbool{LWR@mcolvertbaronleft}%
8964 {\defaddtocounter{LWR@mcolvertbarsldash}{1}}% left edge
8965 {\defaddtocounter{LWR@mcolvertbarsrdash}{1}}% not left edge
8966 }%
8967 {\boolfalse{LWR@mcolvertbaronleft}}%
8968 }%
8969 }%
8970 \LWR@traceinfo{lwarp@printmccoltype done}%
8971 }

```

`\LWR@multicolpartext` `{⟨num parameters⟩}` Print the data with paragraph tags, advance to bypass the given number of parameters.

```

8972 \newcommand*{\LWR@multicolpartext}[1]{%
8973 \LWR@startpars%
8974 \LWR@multicoltext%
8975 \defaddtocounter{LWR@tablemulticolspos}{#1}%
8976 \LWR@stoppars%
8977 }

```

`\LWR@multicolother` `{⟨colspec⟩}` For @, !, >, <, print the next token without paragraph tags:

```

8978 \newcommand*{\LWR@multicolother}[1]{%
8979 \defaddtocounter{LWR@tablemulticolspos}{1}%
8980 \StrChar{#1}\arabic{LWR@tablemulticolspos}\LWR@strresult%
8981 \LWR@strresult%

```

A valid column data type was found:

```
8982 \booltrue{LWR@validtablecol}%
8983 }
```

\LWR@multicolskip Nothing to print for this column type.

```
8984 \newcommand*{\LWR@multicolskip}{%
```

A valid column data type was found:

```
8985 \booltrue{LWR@validtablecol}%
8986 }
```

\LWR@printmccoldata {<colspec>} Print the data for any valid column type found.

```
8987 \newcommand*{\LWR@printmccoldata}[1]{%
8988 \LWR@traceinfo{lwarp@printmccoldata -#1}%
```

Not yet found a valid column type:

```
8989 \boolfalse{LWR@validtablecol}%
```

Get one token of the column spec, into a local copy in case nested.

```
8990 \StrChar{#1}{\arabic{LWR@tablemulticolspos}}[\LWR@strresult]%
8991 \edef\LWR@printmccoldataatoken{\LWR@strresult}%
```

Print the text depending on which column type is found. Also handles @, >, < as it comes to them.

```
8992 \IfStrEq{\LWR@printmccoldataatoken}{l}{\LWR@multicoltext}{}%
8993 \IfStrEq{\LWR@printmccoldataatoken}{c}{\LWR@multicoltext}{}%
8994 \IfStrEq{\LWR@printmccoldataatoken}{r}{\LWR@multicoltext}{}%
8995 \IfStrEq{\LWR@printmccoldataatoken}{D}{}%
8996 \defaddtocounter{LWR@tablemulticolspos}{3}% skip parameters
8997 \LWR@multicoltext%
8998 }{}%
```

```
8999 \IfStrEq{\LWR@printmccoldataatoken}{p}{\LWR@multicolpartext{2}}{%
9000 \IfStrEq{\LWR@printmccoldataatoken}{m}{\LWR@multicolpartext{2}}{%
9001 \IfStrEq{\LWR@printmccoldataatoken}{b}{\LWR@multicolpartext{2}}{%
9002 \IfStrEq{\LWR@printmccoldataatoken}{P}{\LWR@multicolpartext{2}}{%
9003 \IfStrEq{\LWR@printmccoldataatoken}{M}{\LWR@multicolpartext{2}}{%
9004 \IfStrEq{\LWR@printmccoldataatoken}{B}{\LWR@multicolpartext{2}}{%
```

```
9005 \IfStrEq{\LWR@printmccoldataatoken}{w}{\LWR@multicolpartext{3}}{%
9006 \IfStrEq{\LWR@printmccoldataatoken}{W}{\LWR@multicolpartext{3}}{%
```

```
9007 \IfStrEq{\LWR@printmccoldataatoken}{S}{\LWR@multicoltext}{}%
9008 \IfStrEq{\LWR@printmccoldataatoken}{s}{\LWR@multicoltext}{}%
```

```

9009 \IfStrEq{\LWR@printmccoldatoken}{X}{\LWR@multicolpartext{1}}{%
9010 \IfStrEq{\LWR@printmccoldatoken}{|}{\LWR@multicolskip}{}%
9011 \IfStrEq{\LWR@printmccoldatoken}{:}{\LWR@multicolskip}{}%
9012 \IfStrEq{\LWR@printmccoldatoken}{;}{}%
9013 \LWR@multicolskip%
9014 \defaddtocounter{LWR@tablemulticolspos}{1}% skip parameter
9015 }{%
9016 \IfStrEq{\LWR@printmccoldatoken}{\detokenize@}{\LWR@multicolother{#1}}{%
9017 \IfStrEq{\LWR@printmccoldatoken}{\detokenize!}{\LWR@multicolother{#1}}{%
9018 \IfStrEq{\LWR@printmccoldatoken}{\detokenize>}{\LWR@multicolother{#1}}{%
9019 \IfStrEq{\LWR@printmccoldatoken}{\detokenize<}{\LWR@multicolother{#1}}{%

```

If an invalid column type:

```

9020 \ifbool{LWR@validtablecol}{\LWR@multicoltext}{}%

```

Tracing:

```

9021 \LWR@traceinfo{lw@printmccoldata done}%
9022 }

```

`\parsemulticolumnalignment` {<1: *colspec*>} {<2: *printresults*>}

Scan the multicolumn specification and execute the printfunction for each entry.

Note that the spec for a p{spec} column, or @, >, <, is a token list which will NOT match l, c, r, or p.

```

9023 \newcommand*{\LWR@parsemulticolumnalignment}[2]{%
9024 \defcounter{LWR@tablemulticolspos}{1}%
9025 \StrLen{#1}[\LWR@strresult]%
9026 \defcounter{LWR@tablemulticolswidth}{\LWR@strresult}%

```

Scan across the tokens in the column spec:

```

9027 \whilebool{expr{%
9028 not test {%
9029 \ifnumcomp{\value{LWR@tablemulticolspos}}{>}%
9030 {\value{LWR@tablemulticolswidth}}%
9031 }%
9032 }%
9033 {%

```

Execute the assigned print function for each token in the column spec:

```

9034 #2{#1}%

```

Move to the next token in the column spec:

```

9035 \defaddtocounter{LWR@tablemulticolspos}{1}%
9036 }%
9037 }

```

### 72.23.2 Multicolumn factored code

\LWR@addmulticolvertrulecolor

```
9038 \newcommand*{\LWR@addmulticolvertrulecolor}{%
```

No vertical rules if finishing the tabular with a row of empty cells:

```
9039 \ifbool{\LWR@tabularmutemods}{}{%
```

Left side:

```
9040 \ifnumcomp{\value{\LWR@mcolvertbarsl}}{=}{1}{%
9041 \LWR@tdaddstyle%
9042 border-left: 1px solid \LWR@vertruleHTMLcolor%
9043 }{}%
9044 \ifnumcomp{\value{\LWR@mcolvertbarsl}}{>}{1}{%
9045 \LWR@tdaddstyle%
9046 border-left: 4px double \LWR@vertruleHTMLcolor%
9047 }{}%
9048 \ifnumcomp{\value{\LWR@mcolvertbarsldash}}{=}{1}{%
9049 \LWR@tdaddstyle%
9050 border-left: 1px dashed \LWR@vertruleHTMLcolor%
9051 }{}%
9052 \ifnumcomp{\value{\LWR@mcolvertbarsldash}}{>}{1}{%
9053 \LWR@tdaddstyle%
9054 border-left: 2px dashed \LWR@vertruleHTMLcolor%
9055 }{}%
```

Right side:

```
9056 \ifnumcomp{\value{\LWR@mcolvertbarsr}}{=}{1}{%
9057 \LWR@tdaddstyle%
9058 border-right: 1px solid \LWR@vertruleHTMLcolor%
9059 }{}%
9060 \ifnumcomp{\value{\LWR@mcolvertbarsr}}{>}{1}{%
9061 \LWR@tdaddstyle%
9062 border-right: 4px double \LWR@vertruleHTMLcolor%
9063 }{}%
9064 \ifnumcomp{\value{\LWR@mcolvertbarsrdash}}{=}{1}{%
9065 \LWR@tdaddstyle%
9066 border-right: 1px dashed \LWR@vertruleHTMLcolor%
9067 }{}%
9068 \ifnumcomp{\value{\LWR@mcolvertbarsrdash}}{>}{1}{%
9069 \LWR@tdaddstyle%
9070 border-right: 2px dashed \LWR@vertruleHTMLcolor%
9071 }{}%
9072 }%
9073 }
```

```
9074 \newcommand{\LWR@multicoltext}{}%
```

To find multicolumn right trim:

```
9075 \newcounter{LWR@lastmulticolumn}
```

```
\LWR@domulticolumn [\langle 1: vpos \rangle] [\langle 2: #rows \rangle] {\langle 3: numLaTeXcols \rangle} {\langle 4: numHTMLcols \rangle} {\langle 5: colspec \rangle}
{\langle 6: text \rangle}
```

```
9076 \NewDocumentCommand{\LWR@domulticolumn}{o o m m m +m}{%
```

```
9077 \LWR@traceinfo{\LWR@domulticolumn -#1- -#2- -#4- -#5-}%
```

Remember the text to be inserted, and remember that a valid column type was found:

```
9078 \renewcommand{\LWR@multicoltext}{%
```

```
9079 #6%
```

```
9080 \booltrue{LWR@validtablecol}%
```

```
9081 }%
```

Compute the rightmost column to be included. This is used to create the right trim.

```
9082 \defcounter{LWR@lastmulticolumn}{\value{LWR@tableLaTeXcolindex}}%
```

```
9083 \defaddtocounter{LWR@lastmulticolumn}{#3}%
```

```
9084 \defaddtocounter{LWR@lastmulticolumn}{-1}%
```

Row processing:

```
9085 \LWR@maybenewtablerow%
```

Begin the opening table data tag:

```
9086 \LWR@htmltag{%
```

```
9087 td colspan="#4" %
```

```
9088 \IfValueT{#2}{ % rows?
```

```
9089 rowspan="#2" %
```

```
9090 }%
```

```
9091 class="td%
```

Print the column type and vertical bars:

```
9092 \defcounter{LWR@mcolvertbarsl}{0}%
```

```
9093 \defcounter{LWR@mcolvertbarsr}{0}%
```

```
9094 \defcounter{LWR@mcolvertbarsldash}{0}%
```

```
9095 \defcounter{LWR@mcolvertbarsrdash}{0}%
```

```
9096 \booltrue{LWR@mcolvertbaronleft}%
```

```
9097 \LWR@parsemulticolumnalignment{#5}{\LWR@printmcoltype}%
```

If this column has a `cmidrule`, add “rule” to the end of the HTML class tag.

If this position had a “Y” then add “rule” for a horizontal rule:

```
9098 \LWR@subaddcmidruletrim%
```

```
9099 {%
```

```
9100 \LWR@getexparray{LWR@trimlrules}%
```

```

9101 {\arabic{LWR@tableLaTeXcolindex}}%
9102 }%
9103 {%
9104 \LWR@getexparray{LWR@trimrrules}%
9105 {\arabic{LWR@lastmulticolumn}}%
9106 }%

```

Also add vertical bar class.

```

9107 \ifnumcomp{\value{LWR@mcolvertbarsl}}{=}{1}{ tvertbarl}{}%
9108 \ifnumcomp{\value{LWR@mcolvertbarsl}}{>}{1}{ tvertbarldouble}{}%
9109 \ifnumcomp{\value{LWR@mcolvertbarsr}}{=}{1}{ tvertbarr}{}%
9110 \ifnumcomp{\value{LWR@mcolvertbarsr}}{>}{1}{ tvertbarrdouble}{}%
9111 \ifnumcomp{\value{LWR@mcolvertbarsldash}}{=}{1}{ tvertbarldash}{}%
9112 \ifnumcomp{\value{LWR@mcolvertbarsldash}}{>}{1}%
9113 { tvertbarldoubledash}{}%
9114 \ifnumcomp{\value{LWR@mcolvertbarsrdash}}{=}{1}{ tvertbarrdash}{}%
9115 \ifnumcomp{\value{LWR@mcolvertbarsrdash}}{>}{1}%
9116 { tvertbarrdoubledash}{}%

```

Close the class tag's opening quote:

```

9117 "%
9118 \LWR@tdstartstyles%

```

Style for vertical position:

```

9119 \IfValueT{#1}{% vpos?
9120 \ifstrequal{#1}{b}%
9121 {%
9122 \LWR@tdaddstyle%
9123 \LWR@print@mbbox{vertical-align:bottom}%
9124 }{%
9125 \ifstrequal{#1}{t}%
9126 {%
9127 \LWR@tdaddstyle%
9128 \LWR@print@mbbox{vertical-align:top}%
9129 }{%
9130 }% vpos?

```

Style for row colors:

```

9131 \LWR@addtabulararrowcolor%

```

Other styles:

```

9132 \LWR@addcmidrulewidth%
9133 \LWR@addcdashline%
9134 \LWR@addtabularhrulecolor%
9135 \LWR@addmulticolvertrulecolor%
9136 \LWR@addformatwpalignment{#5}%
9137 \LWR@tdendstyles%
9138 }% end of the opening table data tag

```

```

9139 \boolfalse{LWR@intabularmetadata}%
9140 \LWR@parsemulticolumnalignment{#5}{\LWR@printmccoldata}%
9141 }

```

### 72.23.3 Multicolumn

`\LWR@htmlmulticolumn`  $\{\langle numcols \rangle\} \{\langle alignment \rangle\} \{\langle text \rangle\}$

```

9142 \NewDocumentCommand{\LWR@htmlmulticolumn}{m m +m}%
9143 {%

```

Figure out how many extra HTML columns to add for @ and ! columns:

```

9144 \LWR@tabularhtmlcolumns{\arabic{LWR@tableLaTeXcolindex}}{#1}%

```

Create the multicolumn tag:

```

9145 \LWR@domulticolumn{#1}{\arabic{LWR@tabhtmlcoltotal}}{#2}{#3}%

```

Move to the next L<sup>A</sup>T<sub>E</sub>X column:

```

9146 \defaddtocounter{LWR@tableLaTeXcolindex}{#1}%
9147 \defaddtocounter{LWR@tableLaTeXcolindex}{-1}%

```

Skip any trailing @ or ! columns for this cell:

```

9148 \booltrue{LWR@skipatbang}%
9149 }

```

### 72.23.4 Longtable captions

`longtable` captions use `\multicolumn`.

Per the caption package. User-redefinable float type.

```

9150 \providecommand*{\LTcaptype}{table}

```

`\LWR@longtabledatacaptiontag`  $* [\langle toc entry \rangle] \{\langle caption \rangle\}$

```

9151 \NewDocumentCommand{\LWR@longtabledatacaptiontag}{s o +m}
9152 {%

```

Remember the latest name for `\nameref`:

```

9153 \IfValueTF{#2}{% optional given?
9154 \ifblank{#2}% optional empty?
9155 {\LWR@setlatestname{#3}}% empty
9156 {\LWR@setlatestname{#2}}% given and non-empty
9157 }% optional given
9158 {\LWR@setlatestname{#3}}% no optional

```

Create a multicolumn across all the columns:

Figure out how many extra HTML columns to add for @ and ! columns found between the first and the last column:

```
9159 \LWR@tabularhtmlcolumns{1}{\arabic{LWR@tabletotalLaTeXcols}}%
```

Create the multicolumn tag:

```
9160 \LWR@domulticolumn{\arabic{LWR@tabletotalLaTeXcols}}%
9161 {\arabic{LWR@tabhtmlcoltotal}}%
9162 {P}%
9163 {% \LWR@domulticolumn
9164 \IfBooleanTF{#1}% star?
```

Star version, show a caption but do not make a LOT entry:

```
9165 {% yes star
9166 \LWR@figcaption%
9167 \LWR@isolate{#3}%
9168 \endLWR@figcaption%
9169 }%
9170 {% No star:
```

Not the star version:

Don't step the counter if \caption[] {A caption.}

```
9171 \ifbool{LWR@starredlongtable}%
9172 {%
9173 \ifblank{#2}% TOC entry
9174 }%
9175 {%
9176 \refstepcounter{LTcaption}%
9177 \protected@edef\@currentlabel{%
9178 \@nameuse{p@LTcaption}\@nameuse{theLTcaption}%
9179 }%
9180 }%
9181 }{}%
```

Create an HTML caption. Afterwards, maybe make a LOT entry.

```
9182 \LWR@figcaption%
9183 \LWR@isolate{\@nameuse{fnum@LTcaption}}%
9184 \CaptionSeparator%
9185 \LWR@isolate{#3}%
9186 \endLWR@figcaption%
```

See if an optional caption was given:

```
9187 \ifblank{#2}% TOC entry empty
```

if the optional caption was given, but empty, do not form a TOC entry

```
9188 {}%
```

If the optional caption was given, but might only be []:

```
9189 {% TOC entry not empty
9190 \IfNoValueTF{#2}% No TOC entry?
```

The optional caption is []:

```
9191 {% No TOC entry
9192 \addcontentsline%
9193 {\@nameuse{ext@LTcapttype}}%
9194 {LTcapttype}%
9195 {%
9196 \protect\numberline%
9197 {\LWR@isolate{\@nameuse{p@LTcapttype}}\@nameuse{theLTcapttype}}%
9198 {\ignorespaces \LWR@isolate{#3}\protect\relax}%
9199 }%
9200 }% end of No TOC entry
```

The optional caption has text enclosed:

```
9201 {% yes TOC entry
9202 \addcontentsline%
9203 {\@nameuse{ext@LTcapttype}}%
9204 {LTcapttype}%
9205 {%
9206 \protect\numberline%
9207 {\LWR@isolate{\@nameuse{p@LTcapttype}}\@nameuse{theLTcapttype}}%
9208 {\ignorespaces \LWR@isolate{#2}\protect\relax}%
9209 }%
9210 }% end of yes TOC entry
9211 }% end of TOC entry not empty
9212 }% end of no star
```

Skip any trailing @ or ! columns for this cell:

```
9213 \booltrue{LWR@skipatbang}%
9214 }% end of \LWR@domulticolumn
9215 \defaddtocounter{LWR@tableLaTeXcolindex}{\value{LWR@tabletotalLaTeXcols}}%
9216 \defaddtocounter{LWR@tableLaTeXcolindex}{-1}
9217
9218 }
```

### 72.23.5 Counting HTML tabular columns

The L<sup>A</sup>T<sub>E</sub>X specification for a table includes a number of columns separated by the & character. These columns differ in content from line to line. Additional virtual columns may be specified by the special @ and ! columns. These columns are identical from line to line, but may be skipped during a multicolumn cell.

For HTML output, @ and ! columns are placed into their own tabular columns. Thus, a L<sup>A</sup>T<sub>E</sub>X \multicolumn command may span several additional @ and ! columns in HTML

output. These additional columns must be added to the total number of columns spanned by an HTML multi-column data cell.

```
9219 \newcounter{LWR@tabhtmlcolindex}
9220 \newcounter{LWR@tabhtmlcolend}
9221 \newcounter{LWR@tabhtmlcoltotal}
```

```
\LWR@subtabularhtmlcolumns {<index>}
```

Factored from `\LWR@tabularhtmlcolumns`, which follows.

```
9222 \newcommand*{\LWR@subtabularhtmlcolumns}[1]{%
```

Temporarily define a macro equal to the @ specification for this column:

```
9223 \edef\LWR@atbangspec{\LWR@getexparray{LWR@colatspec}{#1}}%
```

If the @ specification is not empty, add to the count:

```
9224 \ifdefempty{\LWR@atbangspec}%
9225 {}%
9226 {\defaddtocounter{LWR@tabhtmlcoltotal}{1}}%
```

Likewise for the ! columns:

```
9227 \edef\LWR@atbangspec{\LWR@getexparray{LWR@colbangspec}{#1}}%
9228 \ifdefempty{\LWR@atbangspec}%
9229 {}%
9230 {\defaddtocounter{LWR@tabhtmlcoltotal}{1}}%
9231 }
```

```
\LWR@tabularhtmlcolumns {<starting LATEX column>} {<number LATEX columns>}
```

Compute the total number of HTML columns being spanned, considering the starting L<sup>A</sup>T<sub>E</sub>X table column and the number of L<sup>A</sup>T<sub>E</sub>X tabular columns being spanned. Any @ and ! columns within this span are included in the total count. The resulting number of HTML columns is returned in the counter `LWR@tabhtmlcoltotal`.

```
9232 \newcommand*{\LWR@tabularhtmlcolumns}[2]{%
```

Count the starting index, compute ending index, and begin with the count being the L<sup>A</sup>T<sub>E</sub>X span, to which additional @ and ! columns may be added:

```
9233 \defcounter{LWR@tabhtmlcolindex}{#1}%
9234 \defcounter{LWR@tabhtmlcoltotal}{#2}%
9235 \defcounter{LWR@tabhtmlcolend}{#1}%
9236 \defaddtocounter{LWR@tabhtmlcolend}{#2}%
```

If at the left edge, add the at/bang columns for the left edge:

```
9237 \ifnumcomp{\value{LWR@tabhtmlcolindex}}{=}{1}{%
9238 \LWR@subtabularhtmlcolumns{leftedge}%
9239 }{ }%
```

Walk across the L<sup>A</sup>T<sub>E</sub>X columns looking for @ and ! columns:

```

9240 \whileboolexpr{%
9241 test {%
9242 \ifnumcomp{\value{LWR@tabhtmlcolindex}}{<}{\value{LWR@tabhtmlcolend}}%
9243 }%
9244 }%
9245 {%
9246 \LWR@subtabularhtmlcolumns{\arabic{LWR@tabhtmlcolindex}}%
9247 \defaddtocounter{LWR@tabhtmlcolindex}{1}%
9248 }% whiledo
9249 }

9250 \end{warpHTML}

```

## 72.24 Multirow if not loaded

A default definition in case `multirow` is not loaded. This is used during table parsing.

```

9251 \begin{warpHTML}
9252 \newcommand{\multirow}[2][c]{}
9253 \end{warpHTML}

```

## 72.25 Multicolumnrow

A print-mode version is defined here, and is also used during HTML output while inside a `lateximage`.

See section 379 for the HTML versions.

**for HTML & PRINT:** 9254 \begin{warpall}

```

\multicolumnrow {<1:cols>}{<2:halign>}[<3:vpos>]{<4:numrows>}[<5:bigstruts>]{<6:width>}[<7:fixup>]
 {<8:text>}

```

For discussion of the use of `\DeclareExpandableDocumentCommand`, see:

<https://tex.stackexchange.com/questions/168434/problem-with-abbreviation-of-multirow-and-multicolumn-latex>

`\AtBeginDocument` to adjust after the user may have loaded `multirow`, which requires several tests to determine which version is loaded and thus which options are available.

```

9255 \AtBeginDocument{

```

`\@ifundefined{@xmultirow}` determines if `multirow` was never loaded.

Null action if not loaded:

```

9256 \@ifundefined{@xmultirow}
9257 {

```

```

9258 \DeclareExpandableDocumentCommand{\LWR@print@multicolumnrow}%
9259 {+m +m +O{c} +m +O{0} +m +O{0pt} +m}%
9260 {}%
9261 }% no version of multirow was loaded
9262 {% \xmultirow defined, so some version of multirow was loaded

```

`\@ifpackageloaded{multirow}` determines if v2.0 or later of `multirow` was used, which included the `\ProvidesPackage` macro.

The print version:

```

9263 \@ifpackageloaded{multirow}{% v2.0 or newer
9264 \ifpackagelater{multirow}{2016/09/01}% 2016/09/27 for v2.0
9265 {% v2.0+:
9266 \DeclareExpandableDocumentCommand{\LWR@print@multicolumnrow}%
9267 {+m +m +O{c} +m +O{0} +m +O{0pt} +m}%
9268 {\multicolumn{#1}{#2}{\xmultirow[#3][#4][#5][#6][#7][#8]}}%
9269 }
9270 {% loaded but older, probably not executed:
9271 \DeclareExpandableDocumentCommand{\LWR@print@multicolumnrow}%
9272 {+m +m +O{c} +m +O{0} +m +O{0pt} +m}%
9273 {\multicolumn{#1}{#2}{\xmultirow{#4}[#5][#6][#7][#8]}}%
9274 }
9275 }% packageloaded{multirow}

```

If not `\@ifpackageloaded{multirow}` but `\xmultirow` is defined, then this must be v1.6 or earlier, which did not `\ProvidesPackage{multirow}`, and did not have the `vposn` option.

```

9276 {% v1.6 or older did not \ProvidePackage
9277 \DeclareExpandableDocumentCommand{\LWR@print@multicolumnrow}%
9278 {+m +m +O{c} +m +O{0} +m +O{0pt} +m}%
9279 {\multicolumn{#1}{#2}{\xmultirow{#4}[#5][#6][#7][#8]}}%
9280 }
9281
9282 }% \@ifundefined{@xmultirow}
9283
9284 \providecommand*\multicolumnrow{\LWR@print@multicolumnrow}
9285
9286 }% AtBeginDocument

9287 \end{warpall}

```

## 72.26 Utility macros inside a table

**for HTML output:** 9288 `\begin{warpHTML}`

Used to prevent opening a tabular data cell if the following token is one which does not create tabular data:

```

9289 \newcommand*\LWR@donothing{}

```

In case `array` is not loaded:

```
9290 \let\firsthline\relax
9291 \let\lasthline\relax
9292 \newcommand*\firsthline{}
9293 \newcommand*\lasthline{}
```

In case `bigdelim` is not loaded:

```
9294 \newcommand*\ldelim{}
9295 \newcommand*\rdelim{}

9296 \end{warpHTML}
```

## 72.27 Special-case tabular markers


**for HTML & PRINT:** 9297 \begin{warpall}

`\TabularMacro` Place this just before inserting a custom macro in a table data cell. Doing so tells `lwarp` not to automatically start a new HTML table data cell yet. See section [8.10.1](#).

```
9298 \newcommand*\TabularMacro{}

9299 \end{warpall}
```

`\ResumeTabular` Used to resume tabular entries after resuming an environment.

 **tabular inside another environment** When creating a new environment which contains a tabular environment, `lwarp`'s emulation of the tabular does not automatically resume when the containing environment ends, resulting in corrupted HTML rows. To fix this, use `\ResumeTabular` as follows. This is ignored in print mode.

```
\StartDefiningTabulars % because & is used in a definition
\newenvironment{outerenvironment}
{
 \tabular{cc}
 left & right \\\
}
{
 \TabularMacro\ResumeTabular
 left & right \\\
 \endtabular
}
\StopDefiningTabulars
```

**for HTML output:** 9300 \begin{warpHTML}

```
9301 \newcommand*\ResumeTabular{%
9302 \boolfalse{LWR@exitingtabular}%
```

```

9303 \boolfalse{LWR@tabularmutemods}%
9304 \LWR@getmynexttoken%
9305 }

```

```

9306 \end{warpHTML}

```

**for PRINT output:** 9307 \begin{warpprint}

```

9308 \newcommand*{\ResumeTabular}{}

```

```

9309 \end{warpprint}

```

## 72.28 Checking for a new table cell

**for HTML output:** 9310 \begin{warpHTML}

`\LWR@tabledatacolumnntag` Open a new HTML table cell unless the next token is for a macro which does not create data, such as `\hline`, `\toprule`, etc:

```

9311 \newcommand*{\LWR@tabledatacolumnntag}%
9312 {%
9313 \LWR@traceinfo{LWR@tabledatacolumnntag}%

```

`\show\LWR@mynexttoken` to see what tokens to look for

If not any of the below, start a new table cell:

```

9314 \global\let\LWR@mynextaction\LWR@tabledatasinglecolumnntag%

```

If exiting the tabular:

```

9315 \ifdefequal{\LWR@mynexttoken}{\end}%
9316 {\booltrue{LWR@exitingtabular}}{}%

```

`longtable` can have a caption in a cell

```

9317 \ifdefequal{\LWR@mynexttoken}{\caption}%
9318 {\global\let\LWR@mynextaction\LWR@donothing}{}%

```

Look for other things which would not start a table cell:

```

9319 \ifdefequal{\LWR@mynexttoken}{\multicolumn}%
9320 {\global\let\LWR@mynextaction\LWR@donothing}{}%
9321 \ifdefequal{\LWR@mynexttoken}{\multirow}%
9322 {\global\let\LWR@mynextaction\LWR@donothing}{}%
9323 \ifdefequal{\LWR@mynexttoken}{\multicolumnrow}%
9324 {\global\let\LWR@mynextaction\LWR@donothing}{}%
9325 \ifdefequal{\LWR@mynexttoken}{\noalign}%
9326 {\global\let\LWR@mynextaction\LWR@donothing}{}%

```

If an `\mrowcell`, this is a cell to be skipped over:

```
9327 \ifdefequal{\LWR@mynexttoken}{\mrowcell}%
9328 {\global\let\LWR@mynextaction\LWR@donothing}{}}%
```

If an `\mcolrowcell`, this is a cell to be skipped over:

```
9329 \ifdefequal{\LWR@mynexttoken}{\mcolrowcell}%
9330 {\global\let\LWR@mynextaction\LWR@donothing}{}}%
```

```
9331 \ifdefequal{\LWR@mynexttoken}{\TabularMacro}%
9332 {\global\let\LWR@mynextaction\LWR@donothing}{}}%
```

```
9333 \ifdefequal{\LWR@mynexttoken}{\hline}%
9334 {\global\let\LWR@mynextaction\LWR@donothing}{}}%
```

```
9335 \ifdefequal{\LWR@mynexttoken}{\firsthline}%
9336 {\global\let\LWR@mynextaction\LWR@donothing}{}}%
```

```
9337 \ifdefequal{\LWR@mynexttoken}{\lasthline}%
9338 {\global\let\LWR@mynextaction\LWR@donothing}{}}%
```

```
9339 \ifdefequal{\LWR@mynexttoken}{\toprule}%
9340 {\global\let\LWR@mynextaction\LWR@donothing}{}}%
```

```
9341 \ifdefequal{\LWR@mynexttoken}{\midrule}%
9342 {\global\let\LWR@mynextaction\LWR@donothing}{}}%
```

```
9343 \ifdefequal{\LWR@mynexttoken}{\cmidrule}%
9344 {\global\let\LWR@mynextaction\LWR@donothing}{}}%
```

```
9345 \ifdefequal{\LWR@mynexttoken}{\morecmidrules}%
9346 {\global\let\LWR@mynextaction\LWR@donothing}{}}%
```

```
9347 \ifdefequal{\LWR@mynexttoken}{\specialrule}%
9348 {\global\let\LWR@mynextaction\LWR@donothing}{}}%
```

```
9349 \ifdefequal{\LWR@mynexttoken}{\cline}%
9350 {\global\let\LWR@mynextaction\LWR@donothing}{}}%
```

```
9351 \ifdefequal{\LWR@mynexttoken}{\bottomrule}%
9352 {\global\let\LWR@mynextaction\LWR@donothing}{}}%
```

```
9353 \ifdefequal{\LWR@mynexttoken}{\hhline}%
9354 {\global\let\LWR@mynextaction\LWR@donothing}{}}%
```

```
9355 \ifdefequal{\LWR@mynexttoken}{\rowcolor}%
9356 {\global\let\LWR@mynextaction\LWR@donothing}{}}%
```

```
9357 \ifdefequal{\LWR@mynexttoken}{\arrayrulecolor}%
9358 {\global\let\LWR@mynextaction\LWR@donothing}{}}%
```

```

9359 \ifdefequal{\LWR@mynexttoken}{\doublerulesepcolor}%
9360 {\global\let\LWR@mynextaction\LWR@donothing}{}%

9361 \ifdefequal{\LWR@mynexttoken}{\warpprintonly}%
9362 {\global\let\LWR@mynextaction\LWR@donothing}{}%

9363 \ifdefequal{\LWR@mynexttoken}{\warpHTMLonly}%
9364 {\global\let\LWR@mynextaction\LWR@donothing}{}%

9365 \ifdefequal{\LWR@mynexttoken}{\ldelim}%
9366 {\global\let\LWR@mynextaction\LWR@donothing}{}%

9367 \ifdefequal{\LWR@mynexttoken}{\rdelim}%
9368 {\global\let\LWR@mynextaction\LWR@donothing}{}%

```

For arydshln:

```

9369 \ifdefequal{\LWR@mynexttoken}{\hdashline}%
9370 {\global\let\LWR@mynextaction\LWR@donothing}{}%

9371 \ifdefequal{\LWR@mynexttoken}{\cdashline}%
9372 {\global\let\LWR@mynextaction\LWR@donothing}{}%

9373 \ifdefequal{\LWR@mynexttoken}{\firsthdashline}%
9374 {\global\let\LWR@mynextaction\LWR@donothing}{}%

9375 \ifdefequal{\LWR@mynexttoken}{\lasthdashline}%
9376 {\global\let\LWR@mynextaction\LWR@donothing}{}%

```

Ignore an empty line between rows:

```

9377 \ifdefequal{\LWR@mynexttoken}{\par}%
9378 {\global\let\LWR@mynextaction\LWR@donothing}{}%

```

No action for an \end token.

Add similar to the above for any other non-data tokens which might appear in the table.

Start the new table cell if was not any of the above:

```


9379 \LWR@traceinfo{\LWR@tabledatacolumnstag: about to do mynext}%
9380 \LWR@mynextaction%
9381 \LWR@traceinfo{\LWR@tabledatacolumnstag: done}%
9382 }

9383 \end{warpHTML}

```

## 72.29 \mrowcell

**for HTML & PRINT:** 9384 \begin{warpall}

 **\mrowcell** The user must insert `\mrowcell` into any `\multirow` cells which must be skipped. This command has no action during print output.

```
9385 \newcommand*{\mrowcell}{}


```

```
9386 \end{warpall}

```

## 72.30 `\mcolrowcell`

**for HTML & PRINT:** 9387 `\begin{warpall}`

 **\mcolrowcell** The user must insert `\mcolrowcell` into any `\multicolumnrow` cells which must be skipped. This command has no action during print output.

```
9388 \newcommand*{\mcolrowcell}{}

```

```
9389 \end{warpall}

```

## 72.31 HTML tabular environment

**for HTML output:** 9390 `\begin{warpHTML}`

These are default definitions in case `booktabs` is not loaded, and are not expected to be used, but must exist as placeholders. `memoir` may have already loaded `booktabs`.

```
9391 \providecommand*\toprule[1][\hline]
9392 \providecommand*\midrule[1][\hline]
9393 \providecommand*\cmidrule{\cline}
9394 \providecommand*\bottomrule[1][\hline]
9395 \providecommand*\addlinespace[1]{}
9396 \providecommand*\morecmidrules{}
9397 \providecommand*\specialrule[3]{\hline}

```

`\noalign` `{\text{}}` Redefined for use inside `tabular`.

```
9398 \LetLtxMacro\LWR@orignoalign\noalign
9399
9400 \newcommand{\LWR@tabularnoalign}[1]{%
9401 \advance\rownum\m@ne%
9402 \LetLtxMacro\LWR@save@xcolorrowHTMLcolor\LWR@xcolorrowHTMLcolor%
9403 \renewcommand*\LWR@xcolorrowHTMLcolor{}%
9404 \multicolumn{value{\LWR@tabletotalLaTeXcols}}{l}{#1} \\\
9405 \LetLtxMacro\LWR@xcolorrowHTMLcolor\LWR@save@xcolorrowHTMLcolor%
9406 % \@rowc@lors%
9407 \LWR@getmynexttoken%
9408 }

```

`\LWR@HTMLhline` The definition of `\hline` depends on whether `tabls` has been loaded. If so, optional space below the line may be specified, but will be ignored.

```

9409 \AtBeginDocument{
9410
9411 \ifpackageloaded{lwarp-tables}
9412 {
9413 \newcommand*\LWR@HTMLhline[1][{}]{%
9414 \ifbool{FormatWP}%
9415 {\LWR@docmidrule{1-\arabic{LWR@tabletotalLaTeXcols}}}%
9416 {\defaddtocounter{LWR@hlines}{1}}%
9417 \LWR@getmynexttoken}%
9418 }
9419 {
9420 \newcommand*\LWR@HTMLhline{%
9421 \ifbool{FormatWP}%
9422 {\LWR@docmidrule{1-\arabic{LWR@tabletotalLaTeXcols}}}%
9423 {\defaddtocounter{LWR@hlines}{1}}%
9424 \LWR@getmynexttoken}%
9425 }
9426
9427 }% AtBeginDocument

```

`\LWR@HTMLcline` `{\langle columns \rangle}`

```

9428 \NewDocumentCommand{\LWR@HTMLcline}{m}%
9429 {\LWR@docmidrule{#1}\LWR@getmynexttoken}%

```

`\LWR@tabular@warpprintonly` `{\langle contents \rangle}`

Only process the contents if producing printed output. Modified inside a `tabular` to grab the next token.

```

9430 \newcommand{\LWR@tabular@warpprintonly}[1]{%
9431 \ifbool{warpingprint}{#1}{}%
9432 \LWR@getmynexttoken%
9433 }

```

`\LWR@nullifyNoAutoSpacing` For `babel-french`, turn off auto spacing at the start of the `tabular`, then nullify the autospacing commands inside the `tabular`, since they were not compatible with the `tabular` column parsing code, which uses `xstring`.

```

9434 \AtBeginDocument{
9435 \ifundefined{NoAutoSpacing}%
9436 {% no babel-french
9437 \newcommand*\LWR@nullifyNoAutoSpacing{}
9438 }% no babel-french
9439 {% yes babel-french
9440 \newcommand*\LWR@nullifyNoAutoSpacing{%
9441 \NoAutoSpacing%
9442 \renewcommand*\LWR@nullifyNoAutoSpacing{}%
9443 \renewcommand*\LWR@FBcancel{}%
9444 }

```

```
9445 }% yes babel-french
9446 }% AtBeginDocument
```

```
Env tabular <direction> [<verticalposition>] {<colspecs>}
```

The `<direction>` is from `plext` for Japanese documents, and is ignored.

```
9447 \StartDefiningTabulars
9448
9449 \NewDocumentCommand{\LWR@HTML@tabular}{d<> o m}
9450 {%
9451 \LWR@traceinfo{\LWR@HTML@tabular started}%
```



**`<table>` inside `<span>`** In L<sup>A</sup>T<sub>E</sub>X, a `tabular` may be placed inside a `minipage`, but in HTML a `<table>` may not be inside a `<span>`. Since there may be several nested `<span>`s, with an unknown number of other objects between, it is hard to undo all these `<span>`s before the `<table>` then redo them after. The browser probably compensates for this situation, but formatting may be lost inside the `<table>` because several things are neutralized inside a `<span>`. Furthermore, in the HTML output, the entire `<table>` is placed on a single line of HTML code, since the line breaking commands are neutralized inside a `<span>`. Since this is such a sloppy situation, a warning is issued here instructing the user to please isolate the `<span>` to print-only.

```
9452 \LWR@spanwarnformat{tabular}%
9453 \addtocounter{\LWR@tabulardepth}{1}%
```

Not yet started a table row:

```
9454 \boolfalse{\LWR@startedrow}%
```

Not yet doing any rules:

```
9455 \defcounter{\LWR@hlines}{0}%
9456 \defcounter{\LWR@hdashedlines}{0}%
9457 \boolfalse{\LWR@doingtbrule}%
9458 \boolfalse{\LWR@doingcmidrule}%
```

For `babel-french`, turn off auto spacing one time, then nullify the autospacing commands since were not compatible with the `tabular` parsing code.

```
9459 \LWR@nullifyNoAutoSpacing%
```

Have not yet found the end of `tabular` command. Unmute the `@` and `!` columns.

```
9460 \boolfalse{\LWR@exitingtabular}%
9461 \boolfalse{\LWR@tabularmutemods}%
```

Error if failed to use `\mrowcell` or `\mcolrowcell` when needed.

```
9462 \boolfalse{\LWR@usedmultirow}%
9463 \boolfalse{\LWR@foundmrowcell}%
```

```
9464 \renewcommand*{\LWR@multicoltext}{}%
```

Create the table tag:

```
9465 \booltrue{\LWR@intabularmetadata}%
9466 \LWR@traceinfo{\LWR@tabular: About to \LWR@forecenenewpage.}%
9467 \LWR@forcenenewpage
9468 \LWR@htmlblocktag{table}%
```

Parse the table columns:

```
9469 \LWR@parsetablecols{#3}%
```

Table col spec is: \LWR@tablecolspec which is a string of llccrr, etc.

Do not place the table inside a paragraph:

```
9470 \LWR@stoppars%
```

Track column #:

```
9471 \defcounter{\LWR@tableLaTeXcolindex}{1}%
```

Have not yet added data in this column:

```
9472 \global\boolfalse{\LWR@tabularcelladded}%
```

Start looking for midrules:

```
9473 \LWR@clearmidrules%
```

\\ becomes a macro to end the table row:

```
9474 \LetLtxMacro{\}\{\LWR@tabularendoffline}%
```

\warpprintonly inside a tabular must grab the next token.

```
9475 \LetLtxMacro\warpprintonly\LWR@tabular@warpprintonly%
```

The following adjust for colortbl.

```
9476 \LetLtxMacro\arrayrulecolor\arrayrulecolornexttoken%
9477 \LetLtxMacro\doublerulesepcolor\doublerulesepcolornexttoken%
9478 \def\LWR@columnHTMLcolor{}%
9479 \def\LWR@rowHTMLcolor{}%
9480 \def\LWR@cellHTMLcolor{}%
9481 \@rowcolors%
```

The vertical rules are set to the color active at the start of the tabular. \arrayrulecolor will then affect horizontal rules inside the tabular, but not the vertical rules.

```
9482 \ifdefvoid{\LWR@ruleHTMLcolor}%
9483 {\edef\LWR@vertruleHTMLcolor{black}}%
9484 {\edef\LWR@vertruleHTMLcolor{\LWR@origpound\LWR@ruleHTMLcolor}}%
```

Tracking the depth of cell color <div>s:

```
9485 \defcounter{LWR@cellcolordepth}{0}%
```

The following may appear before a data cell is created, so after doing their actions, we look ahead with `\LWR@getmynexttoken` to see if the next token might create a new data cell:

The optional parameter for `\hline` supports the `tabs` package.

```
9486 \LWR@traceinfo{LWR@@HTML@tabular: redefining macros}%
9487 \LetLtxMacro\noalign\LWR@tabularnoalign%
9488 \LetLtxMacro\hline\LWR@HTMLhline%
9489 \LetLtxMacro\cline\LWR@HTMLcline%

9490 \DeclareDocumentCommand{\hdashline}{o}{%
9491 \ifbool{FormatWP}%
9492 {\LWR@docdashline{1-\arabic{LWR@tabletotalLaTeXcols}}}%
9493 {\defaddtocounter{LWR@hdashedlines}{1}}}%
9494 \LWR@getmynexttoken%
9495 }%

9496 \DeclareDocumentCommand{\cdashline}{m}{%
9497 \LWR@docdashline{##1}\LWR@getmynexttoken%
9498 }%

9499 \DeclareDocumentCommand{\firsthdashline}{o}{%
9500 \ifbool{FormatWP}%
9501 {\LWR@docdashline{1-\arabic{LWR@tabletotalLaTeXcols}}}%
9502 {\defaddtocounter{LWR@hdashedlines}{1}}}%
9503 \LWR@getmynexttoken%
9504 }%

9505 \DeclareDocumentCommand{\lasthdashline}{o}{%
9506 \ifbool{FormatWP}%
9507 {\LWR@docdashline{1-\arabic{LWR@tabletotalLaTeXcols}}}%
9508 {\defaddtocounter{LWR@hdashedlines}{1}}}%
9509 \LWR@getmynexttoken%
9510 }%
```

The following create data cells and will have no more data in this cell, so we do not want to look ahead for a possible data cell, so do not want to use `\LWR@getmynexttoken`.

```
9511 \renewcommand{\multicolumn}{\LWR@htmlmulticolumn}%
9512 \renewcommand*\mrowcell{%
9513 \LWR@maybenewtablerow%
9514 \LWR@tabularleftedge%
9515 \booltrue{LWR@skippingmrowcell}%
9516 \booltrue{LWR@foundmrowcell}%
9517 }%
9518 \renewcommand*\mcolrowcell{%
9519 \LWR@maybenewtablerow%
9520 \booltrue{LWR@skippingmcolrowcell}%
9521 \booltrue{LWR@foundmrowcell}%
9522 }
```

```

9522 }%
9523 \LetLtxMacro\caption\LWR@longtabledatacaptiontag%

```

Reset for new processing:

```

9524 \boolfalse{LWR@tableparcell}%
9525 \boolfalse{LWR@skippingmrowcell}%
9526 \boolfalse{LWR@skippingmcolrowcell}%
9527 \boolfalse{LWR@skipatbang}%
9528 \boolfalse{LWR@emptyatbang}%

```

Set & for its special meaning inside the tabular:

```

9529 \StartDefiningTabulars%
9530 \protected\gdef&{\LWR@tabularampersand}%

```

Locally force any minipages to be fullwidth, until the end of the tabular:

```

9531 \booltrue{LWR@forceminipagefullwidth}%

```

Nest one level deeper of tabular paragraph handling:

```

9532 \addtocounter{LWR@tabularpardepth}{1}%

```

Look ahead for a possible table data cell:

```

9533 \LWR@traceinfo{LWR@HTML@tabular: about to LWR@getmynexttoken}%
9534 \LWR@getmynexttoken%
9535 }%

```

Ending the environment:

```

9536 \newcommand*{\LWR@HTML@endtabular}
9537 {%
9538 \LWR@traceinfo{LWR@HTML@endtabular}%

```

Unnest one level of tabular paragraph handling:

```

9539 \addtocounter{LWR@tabularpardepth}{-1}%
9540 \ifboolexpr{%
9541 test {%
9542 \ifnumcomp{\value{LWR@tableLaTeXcolindex}}{<}%
9543 {\value{LWR@tabletotalLaTeXcols}}
9544 } or %
9545 (%
9546 bool{LWR@intabularmetadata} and%
9547 not bool{LWR@tabularcelladded} and%
9548 test {%
9549 \ifnumcomp{\value{LWR@tableLaTeXcolindex}}{=}%
9550 {\value{LWR@tabletotalLaTeXcols}}%
9551 }%
9552)%
9553 }%
9554 {%

```

```

9555 \LWR@tabularfinishrow%
9556 }%
9557 {%
9558 \LWR@closetabledatacell%
9559 }%
9560 \LWR@htmlblocktag{/tr}%

```

xcolor row color support:

```

9561 \@rowcolor%

9562 \LWR@htmlblocktag{/table}%
9563 \boolfalse{LWR@intabularmetadata}%

```

Unnest one level of tabular:

```

9564 \addtocounter{LWR@tabulardepth}{-1}%

```

Restore & to its usual meaning:

```

9565 \ifnumequal{\value{LWR@tabulardepth}}{0}{%
9566 \protected\gdef&{\LWR@origampmacro}%
9567 \StopDefiningTabulars%
9568 }{%

```

Error if used \multirow or \multicolumnrow without using \mrowcell or \mcolrowcell.

```

9569 \ifbool{LWR@usedmultirow}{%
9570 \ifbool{LWR@foundmrowcell}%
9571 {%
9572 {%
9573 \PackageError{lwarp}%
9574 {%
9575 When using \protect\multirow, \protect\multicolumnrow, \MessageBreak
9576 or the bigdelim package, \MessageBreak
9577 place \protect\mrowcell\space or \protect\mcolrowcell\MessageBreak
9578 in empty cells which are to be skipped.\MessageBreak
9579 See the Lwarp package documentation:\MessageBreak
9580 "Special cases and limitations" -> "Tabular"
9581 }%
9582 {%
9583 See the Lwarp package documentation:\MessageBreak
9584 "Special cases and limitations" -> "Tabular".
9585 }%
9586 }%
9587 }{%

```

```

9588 \LWR@traceinfo{LWR@HTML@endtabular finished}%
9589 }
9590
9591 \csletcs{LWR@HTML@endtabular*}{LWR@HTML@endtabular}
9592
9593 \StopDefiningTabulars

```

siunitx may redefine tabular, so set the following later:

```

9594 \AtBeginDocument{
9595 \LetLtxMacro\LWR@origendtabular\endtabular
9596 \csletcs{LWR@origendtabular*}{endtabular*}
9597 \LWR@formatted{@tabular}
9598 \LWR@formatted{endtabular}
9599 \LWR@formatted{endtabular*}
9600 }

9601 \end{warpHTML}

```

## 73 Cross-references

Sectioning commands have been emulated from scratch, so the cross-referencing commands are custom-written for them. Emulating both avoids several layers of patches.

File `*_html.aux` A new entry in `*_html.aux` is used to remember section name, file, and lateximage depth and number for each label:

```

\newlabel{<labelname>@lwarp}{{<section name>}{<filename>}
 {<imagedepth>}{<imagenumber>}}

```

Table 14 shows the data structures related to cross-referencing.

for HTML output: 9602 \begin{warpHTML}

### 73.1 Setup

`\@currentlabelname` To remember the most recently defined section name, description, or caption, for `\nameref`.

```

9603 \def\@currentlabelname{\linkhomename}%

```

`\LWR@stripperperiod` `{<text>}` [`<.>`]

Removes a trailing period.

```

9604 \def\LWR@stripperperiod#1.\ltx@empty#2\@nil{#1}%

```

`\LWR@setlatestname` `{<object name>}`

Removes `\label`, strips any final period, and remembers the result.

```

9605 \newcommand*{\LWR@setlatestname}[1]{%

```

Table 14: Cross-referencing data structures

| Original L <sup>A</sup> T <sub>E</sub> X:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | (print and HTML) |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|
| <p><b>\refstepcounter:</b> Steps the counter and sets \currentlabel.</p> <p><b>\@currentlabel:</b> \p@&lt;ctr&gt;\the&lt;ctr&gt; Updated by \refstepcounter.</p> <p><b>\label:</b> Writes to the .aux file:<br/> <code>\newlabel{&lt;label&gt;}{\@currentlabel}{\thepage}}</code></p> <p><b>\newlabel:</b> When the .aux file is read, sets \r@&lt;label&gt;.</p> <p><b>\r@&lt;label&gt;:</b> Set to: {\@currentlabel}{\thepage}</p> <p><b>\ref:</b> Returns the first part of \r@&lt;label&gt;.</p> <p><b>\pageref:</b> Returns the second part of \r@&lt;label&gt;.</p>                                                                                                                                                                                                                                                                                   |                  |
| <b>Added by lwarp:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | (HTML only)      |
| <p><b>\label:</b> Adds HTML tags (section 73.3), and another .aux entry (section 73.2). If memoir is used, its \@mem@old@label points to lwarp's version, and cleveref patches.</p> <p><b>\newlabel:</b> Unchanged. When the .aux file is read, sets \r@&lt;label&gt;@lwarp.</p> <p><b>\r@&lt;label&gt;@lwarp:</b> Set to: {{section_name}{file_name}{depth}{number}}:</p> <p><b>\LWR@nameref:</b> The section name for this label.</p> <p><b>\LWR@htmlfileref:</b> The filename or name for this label.</p> <p><b>\LWR@lateximagedepthref:</b> The lateximagedepth for this label.</p> <p><b>\LWR@lateximagenumberref:</b> The lateximagenumber for this label.</p> <p><b>\nameref:</b> Emulated from hyperref for lwarp. See section 73.4.</p> <p><b>\ref and \nameref:</b> Adds HTML tags. See section 73.4.</p>                                         |                  |
| <b>Added by amsmath:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | (print and HTML) |
| <p><b>\label:</b> Execution is delayed until the math environment is completed.</p> <p><b>\ltx@label:</b> L<sup>A</sup>T<sub>E</sub>X \label, (HTML: patched by lwarp,) later patched by cleveref.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                  |
| <b>Added by cleveref:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | (print and HTML) |
| <p><b>\refstepcounter:</b> Added: sets \cref@currentlabel.</p> <p><b>\cref@currentlabel:</b> (&lt;type&gt;=&lt;ctr&gt; unless an alias is used):<br/> <code>[&lt;type&gt;][\varabic{&lt;ctr&gt;}][&lt;parent ctrs&gt;]{\p@&lt;ctr&gt;\the&lt;ctr&gt;}</code> Also see section 59.4 for use with footnotes.</p> <p><b>\label:</b> Writes to the .aux file:<br/> <code>\newlabel{&lt;label&gt;@cref}{\cref@currentlabel}{\thepage}}</code></p> <p><b>\newlabel:</b> Unchanged. When the .aux file is read, sets \r@&lt;label&gt;@cref.</p> <p><b>\r@&lt;label&gt;@cref:</b> Set to: {\cref@currentlabel}{\thepage}</p> <p><b>Utility functions:</b> See \cref@getlabel, \cref@gettype, \cref@getcounter, \cref@getprefix.</p> <p><b>Cross-referencing names:</b> \crefname and \Crefname assign human-readable names for references to this counter type.</p> |                  |
| <b>Additionally patched by lwarp:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | (HTML only)      |
| <p><b>\cref, etc.:</b> Modified for lwarp. See section 188.</p> <p><b>\label inside math:</b> See section 80.7.1.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                  |
| <b>Footnotes:</b> See \noteentry in section 59.4.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                  |

Remove `\label` and other commands from the name, the strip any final period. See `getttitlestring`.

```

9606 \GetTitleStringExpand{#1}%
9607 \edef\@currentlabelname{\detokenize\expandafter{\GetTitleStringResult}}%
9608 \edef\@currentlabelname{%
9609 \expandafter\LWR@stripperperiod\@currentlabelname%
9610 \ltx@empty.\ltx@empty\@nil%
9611 }%
9612 }
```

## 73.2 New lwarp labels.

File `*_html.aux` A new entry in `*_html.aux` is used to remember section name, file, and lateximage depth and number for each label:

```

\newlabel{<labelname>@lwarp}{<section name>}{<filename>}
 {<imagedepth>}{<imagenumber>}}
```

See:

<http://tex.stackexchange.com/questions/57194/extract-section-number-from-equation-reference>

`\LWR@setref`  $\{\langle args\ list\rangle\}\{\langle selector\rangle\}\{\langle label\rangle\}$

`\@setref` without the `\null` (`\hbox`), and without the warning messages. Each caused problems with `lwarp` references. The regular reference will cause the warning.

```

9613 \def\LWR@setref#1#2#3{%
9614 \ifx#1\relax%
9615 ??%
9616 \else%
9617 \expandafter#2#1%
9618 \fi}
```

`\LWR@nameref`  $\{\langle label\rangle\}$  Returns the section name for this label:

```

9619 \newcommand*\LWR@nameref}[1]{%
9620 \expandafter\LWR@setref\csname r@#1@lwarp\endcsname\LWR@firstoffour{#1}%
9621 }
```

`\LWR@htmlfileref`  $\{\langle label\rangle\}$  Returns the file number or name for this label:

```

9622 \newcommand*\LWR@htmlfileref}[1]{%
9623 \expandafter\LWR@setref\csname r@#1@lwarp\endcsname\LWR@secondoffour{#1}%
9624 }
```

`\LWR@lateximagedepthref`  $\{\langle label\rangle\}$  Returns the `lateximagedepth` for this label:

```

9625 \newcommand*{\LWR@lateximagedepthref}[1]{%
9626 \expandafter\LWR@setref\csname r@#1@lwarp\endcsname\LWR@thirdofffour{#1}%
9627 }

```

`\LWR@lateximagenumberref`  $\langle label \rangle$  Returns the lateximagenumber for this label:

```

9628 \newcommand*{\LWR@lateximagenumberref}[1]{%
9629 \expandafter\LWR@setref\csname r@#1@lwarp\endcsname\LWR@fourthofffour{#1}%
9630 }

```

`\LWR@write@lwarplabel`  $\langle label \rangle$  Sanitize the name and then creates the label:

```

9631 \newcommand*{\LWR@write@lwarplabel}[1]{%
9632 \LWR@traceinfo{\LWR@write@lwarplabel !#1!}%
9633 \LWR@setlatestname{\@currentlabelname}%
9634 \@bsphack%
9635 \protected@write\@auxout{%
9636 {%
9637 \string\newlabel{#1@lwarp}{%
9638 {\@currentlabelname}%
9639 {%
9640 \ifbool{FileSectionNames}%
9641 {\LWR@thisfilename}%
9642 {\arabic{LWR@htmlfilenumber}}}%
9643 }%
9644 {\arabic{LWR@lateximagedepth}}%
9645 {\arabic{LWR@lateximagenumber}}}%
9646 }%
9647 }%
9648 \@esphack%
9649 }

```

### 73.3 Labels

`\LWR@label@subcreatetag` Creates the tag from `\LWR@sanitized`.

```

9650 \newcommand*{\LWR@label@subcreatetag}{%
9651 \LWR@htmltag{a \LWR@print@mbox{id="\LWR@sanitized"}}%
9652 \LWR@htmltag{/a}%
9653 }

```

`\LWR@label@inmathcomment`

```

9654 \newcommand*{\LWR@label@inmathcomment}{%
9655 \ifbool{expr{bool{mathjax} or (bool{FormatWP} and bool{WPMarkMath}) }}%
9656 {%

```

The combined L<sup>A</sup>T<sub>E</sub>X & HTML label is printed in a `\mbox` field:

```

9657 \mbox{%

```

Shift the label over to the right side of the environment to avoid over-printing the math:

```
9658 \ifdef{\totwidth@}{\ifbool{LWR@amsmultline}}{\hspace*{\totwidth@}}{}}%
```

Temporarily end the HTML comment, insert the L<sup>A</sup>T<sub>E</sub>X & HTML label, then resume the HTML comment. \@firstofone is required to remove extra braces introduced by the amsmath package.)

```
9659 \LWR@htmlclosecomment%
9660 \LWR@label@subcreatetag%
9661 \LWR@htmlopencomment%
9662 }% mbox
9663 }% mathjax
9664 {%
9665 \LWR@label@subcreatetag%
9666 }%
9667 }
```

`\LWR@label@createtag {<label>}` Creates an HTML id tag.

Used by `\LWR@new@label` and `\hyperdef`.

`\detokenize` is used to allow underscores in the labels.

```
9668 \newcommand*{\LWR@label@createtag}[1]{%
9669 \LWR@traceinfo{\LWR@label@createtag !#1!}%
```

Create an HTML id tag unless are inside a lateximage, since it would appear in the image:

```
9670 \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}%
9671 }{%
9672 {% not lateximage
```

If not doing a lateximage, create an HTML ID tag.

```
9673 \LWR@sanitize{#1}%
9674 \ifbool{LWR@insidemathcomment}%
9675 {% inside HTML math comment
9676 \LWR@label@inmathcomment%
9677 }% inside HTML math comment
9678 {% not inside HTML math comment
9679 \ifbool{LWR@doingstartpars}%
9680 {% pars allowed
9681 \ifbool{LWR@doingapar}%
9682 {% par started
9683 \LWR@label@subcreatetag%
9684 }% par started
9685 {% par not started
9686 \LWR@stoppars%
9687 \LWR@label@subcreatetag%
9688 \LWR@startpars%
9689 }% par not started
```

```

9690 }% pars allowed
9691 {% pars not allowed
9692 \LWR@label@subcreatetag%
9693 }% pars not allowed
9694 }% not inside HTML math comment
9695 }% not lateximage
9696 }

```

`\LWR@new@label`  $\{\langle label \rangle\}$

`\label` during HTML output when not in SVG math mode, removing extra spaces around the label, as done by a regular  $\LaTeX$  `\label`.

This is also used during a `lateximage`, including SVG math, since the special label handling is required, but `\LWR@label@createtag` does not generate HTML tags inside a `lateximage`.

If `memoir` is used, it's `\@mem@old@label` is pointed here.

`cleveref` later encases this to add its own cross-referencing, and also patches `memoir`.

```

9697 \NewDocumentCommand{\LWR@new@label}{m}{%
9698 \LWR@traceinfo{\LWR@new@label: starting}%
9699 \LWR@traceinfo{\LWR@new@label: !#1!}%
9700 % \@bsphack%

```

Create a traditional  $\LaTeX$  label, as modified by `cleveref`:

```

9701 \LWR@orig@label{#1}%

```

Create a special label which holds the section number, `LWR@htmlfilenumber`, `LWR@lateximagedepth`, and `LWR@lateximagenumber`:

```

9702 \LWR@traceinfo{%
9703 LWR@new@label: filesectionnames is %
9704 \ifbool{FileSectionNames}{true}{false}%
9705 }%
9706 \LWR@traceinfo{%
9707 LWR@new@label: LWR@thisfilename is !\LWR@thisfilename!%
9708 }%
9709 \LWR@traceinfo{%
9710 LWR@new@label: LWR@htmlfilenumber is \arabic{LWR@htmlfilenumber}%
9711 }%
9712 \LWR@write@lwarplabel{#1}%
9713 \LWR@label@createtag{#1}%
9714 % \@esphack%
9715 \LWR@traceinfo{\LWR@new@label: done}%
9716 }

```

## 73.4 References

`\LWR@addlinktitle`

```

9717 \newcommand*{\LWR@addlinktitle}{%
9718 \ifdefvoid{\LWR@ThisAltText}{ }{ % space
9719 title="\LWR@ThisAltText" % space
9720 \gdef\LWR@ThisAltText{}}%
9721 }%
9722 }

```

`\LWR@startref {<label>}` (Common code for `\ref` and `\nameref`.)

Open an HTML tag reference to a filename, # character, and a label.

```

9723 \newcommand*{\LWR@startref}[1]
9724 {%
9725 \LWR@sanitize{#1}%
9726 \LWR@traceinfo{\LWR@startref A: !#1!}%

```

Create the filename part of the link:

```

9727 \LWR@htmltag{a href="%
9728 \LWR@traceinfo{\LWR@startref B}%
9729 \LWR@print@mbox{\LWR@htmlrefsectionfilename{#1}}%
9730 \LWR@traceinfo{\LWR@startref C}%
9731 \LWR@origpound%

```

Create the destination id:

See if `LWR@lateximagedepth` is unknown:

```

9732 \LWR@traceinfo{\LWR@startref D: !#1!}%
9733 \ifcsundef{r@#1@lwarp}%

```

“??” if `LWR@lateximagedepth` is unknown, so create a link with an unknown destination:

```

9734 {%
9735 \LWR@traceinfo{\LWR@startref D0: ??}%
9736 ??%
9737 }%

```

If `LWR@lateximagedepth` is known. Use a `lateximage` if the depth is greater than zero, or a regular link otherwise:

```

9738 {%
9739 \ifthenelse{\cnttest{\LWR@lateximagedepthref{#1}}{>}{0}}%
9740 {%
9741 lateximage-\BaseJobname-\LWR@lateximagenumberref{#1}%
9742 }%
9743 {%
9744 \LWR@traceinfo{\LWR@startref D3}%

```

`\detokenize` is used to allow underscores in the labels:

```

9745 \LWR@print@mbox{\LWR@sanitized}%
9746 }%
9747 }%
9748 \LWR@traceinfo{\LWR@startref E}%

```

Closing quote:

```

9749 "%

```

Maybe add a title:

```

9750 \LWR@addlinktitle%
9751 }%
9752 \LWR@traceinfo{\LWR@startref F}%
9753 }

```

`\LWR@subnewref`  $\{ \langle label \rangle \} \{ \langle label \text{ or } sub@label \rangle \}$

Factored for the `subfig` package. Uses the original label for the hyper-reference, but prints its own text, such as “1(b)”.

```

9754 \NewDocumentCommand{\LWR@subnewref}{m m}{%
9755 \LWR@traceinfo{\LWR@subnewref #1 #2}%
9756 \LWR@startref{#1}%
9757 \LWR@print@ref{#2}%
9758 \LWR@htmltag{/a}%
9759 }

```

`\ref`  $* \{ \langle label \rangle \}$  `\ref` is redefined to `\LWR@HTML@ref`, except inside the text part of a `\hyperref`, where it is redefined to `\LWR@ref@ignorestar`.

`\LWR@HTML@ref`  $* \{ \langle label \rangle \}$  Create an internal document reference link, or without a link if starred per `\hyperref`.

`\hyperref` defines a starred version. Since `\hyperref` is only emulated, the starred version is defined here for print mode, in case `\ref` is used inside `svg math`:

```

9760 \LWR@absorbstar{ref}%

```

The HTML version:

```

9761 \NewDocumentCommand{\LWR@HTML@ref}{s m}{%
9762 \LWR@traceinfo{\LWR@HTML@ref !#2!}%
9763 \IfBooleanTF{#1}%
9764 {\LWR@print@ref{#2}}%
9765 {\LWR@subnewref{#2}{#2}}%
9766 }
9767
9768 \LWR@formatted{ref}

```

For MATHJAX:

```

9769 \CustomizeMathJax{\let\LWRref\ref}
9770 \CustomizeMathJax{\renewcommand{\ref}{\ifstar\LWRref\LWRref}}

```

`\pagerefPageFor` Text for page references.

```

9771 \newcommand*{\pagerefPageFor}{see }

```

`\pageref` \* `{\label}` Create an internal document reference, or just the unlinked number if starred, per `hyperref`.

```

9772 \NewDocumentCommand{\LWR@new@pageref}{s m}{%
9773 \IfBooleanTF{#1}%
9774 {(\pagerefPageFor\LWR@print@ref{#2})}%
9775 {(\cpageref{#2})}%
9776 }

```

`\nameref` `{\label}`

```

9777 \newrobustcmd*{\nameref}[1]{%
9778 \LWR@traceinfo{nameref}%
9779 \LWR@startref{#1}%
9780 \LWR@traceinfo{nameref B}%
9781 \LWR@nameref{#1}%
9782 \LWR@traceinfo{nameref C}%
9783 \LWR@htmltag{/a}%
9784 \LWR@traceinfo{nameref: done}%
9785 }

```

`\Nameref` `{\label}` In print, adds the page number. In HTML, does not.

```

9786 \LetLtxMacro\Nameref\nameref

```

## 73.5 Hyper-references



Note that the code currently only sanitizes the underscore character. Additional characters should be rendered inert as well. See the `hyperref.sty` definition of `\gdef\hyper@normalise` for an example.

Pkg `hyperref`



Do not tell other packages that `hyperref` is emulated. Some packages patch various commands if `hyperref` is present, which will probably break something, and the emulation already handles whatever may be emulated anyhow.

```

9787 % DO NOT TELL OTHER PACKAGES TO ASSUME HYPERREF, lest they attempt to patch it:
9788 % \EmulatesPackage{hyperref}[2015/08/01]% Disabled. Do not do this.

```

Emulates `hyperref`:

`\@currentHref` Added to support backref.

```
9789 \AtBeginDocument{
9790 \def\@currentHref{\BaseJobname-autopage-\theLWR@currentautosec}
9791 }
```

`\LWR@linkcatcodes` Sets catcodes before processing macros which have hyperlinks as arguments.

```
9792 \newcommand*\LWR@linkcatcodes{%
9793 \catcode'\#=12%
9794 \catcode'\%=12%
9795 \catcode'\&=12%
9796 \catcode'\~=12%
9797 \catcode'_ =12%
```

For babel-french:

```
9798 \LWR@FBcancel%
9799 }
```

`\LWR@linkmediacatcodes` Sets catcodes before processing macros which have hyperlinks as arguments. Modified for multimedia links.

```
9800 \newcommand*\LWR@linkmediacatcodes{%
9801 \catcode'\#=12%
9802 \catcode'\%=12%
9803 % \catcode'\&=12% left alone for splitting flash variables
9804 \catcode'\~=12%
9805 \catcode'_ =12%
```

For babel-french:

```
9806 \LWR@FBcancel%
9807 }
```

`\LWR@subhyperref` `{\langle URL \rangle}`

Starts a link for `\LWR@hrefb`. A group must have been opened first, with nullified catcodes. The text name is printed afterwards, after the group is closed and catcodes restored.

```
9808 \NewDocumentCommand{\LWR@subhyperref}{m}{%
9809 \LWR@traceinfo{\LWR@subhyperref !#1!}%
9810 \LWR@sanitize{#1}%
9811 \LWR@htmltag{%
9812 a href="\LWR@sanitized" % space
9813 \LWR@addlinktitle % space
9814 target="_{}blank" % space
9815 }%
9816 }
```

`\LWR@subhyperreftext` `{\langle text \rangle}`

Finishes the hyperref for \LWR@hrefb. Catcodes must have been restored already. To be used after \LWR@subhyperref, and after its group has been closed.

```

9817 \newcommand{\LWR@subhyperreftext}[1]{%
9818 #1%
9819 \LWR@htmltag{/a}%
9820 \LWR@ensuredoingapar%
9821 }
```

\LWR@subhyperrefclass {<URL>} {<text>} {<htmlclass>}

```

9822 \NewDocumentCommand{\LWR@subhyperrefclass}{m +m m}{%
9823 \LWR@htmltag{%
9824 a % space
9825 href="\begingroup\@sanitize#1\endgroup" % space
9826 class="#3" % space
9827 \LWR@addlinktitle % space
9828 }\LWR@orignewline%
9829 #2%
9830 \LWR@htmltag{/a}%
9831 \LWR@ensuredoingapar%
9832 }
```

\LWR@href [<options>] {<URL>}

Create a link with accompanying text:

```

9833 \DeclareDocumentCommand{\LWR@hrefb}{O{} m}{%
9834 \LWR@ensuredoingapar%
9835 \LWR@subhyperref{#2}%
9836 \endgroup% restore catcodes
9837 \LWR@subhyperreftext%
9838 }
9839
9840 \newrobustcmd*{\LWR@href}{%
9841 \begingroup%
9842 \LWR@linkcatcodes%
9843 \LWR@hrefb%
9844 }
```

\LWR@nolinkurl {<URL>}

Print the name of the link without creating the link:

```

9845 \newcommand*{\LWR@nolinkurlb}[1]{%
9846 \LWR@ensuredoingapar%
9847 \def\LWR@templink{#1}%
9848 \@onelevel@sanitize\LWR@templink%
9849 \LWR@templink%
9850 \endgroup%
9851 }
9852
9853 \newrobustcmd*{\LWR@nolinkurl}{%

```

```

9854 \begingroup%
9855 \LWR@linkcatcodes%
9856 \LWR@nolinkurlb%
9857 }

```

`\LWR@url` `{\langle URL\rangle}`

Create a link whose text name is the address of the link.

The `url` package may redefine `\url`, so it is `\let` to `\LWR@url` here and also redefined by `lwarp-url`.

```

9858 \DeclareDocumentCommand{\LWR@urlb}{m}{%
9859 \LWR@ensuredoingapar%
9860 \def\LWR@templink{#1}%
9861 \@onelevel@sanitize\LWR@templink%
9862 \LWR@href{\LWR@templink}{\LWR@templink}%
9863 \endgroup%
9864 }
9865
9866 \newrobustcmd*{\LWR@url}{%
9867 \begingroup%
9868 \LWR@linkcatcodes%
9869 \LWR@urlb%
9870 }

```

`\LWR@subinlineimage` `{\langle alt\rangle tag}{\langle class\rangle}{\langle filename\rangle}{\langle extension\rangle}{\langle CSS style\rangle}`

Factored from `lateximage`.

```

9871 \newcommand*{\LWR@subinlineimage}[5]{%
9872 \ifblank{#1}%
9873 {%
9874 \LWR@htmltag{img \LWR@indentHTML
9875 src="#3.#4" \LWR@indentHTML
9876 alt="#3" \LWR@indentHTML
9877 style="#5" \LWR@indentHTML
9878 class="#2" \LWR@orignewline
9879 }%
9880 }%
9881 {%
9882 \LWR@htmltag{img \LWR@indentHTML
9883 src="#3.#4" \LWR@indentHTML
9884 alt="#1" \LWR@indentHTML
9885 style="#5" \LWR@indentHTML
9886 class="#2" \LWR@orignewline
9887 }%
9888 }%
9889 }

9890 \end{warpHTML}

```

Table 15: Float data structures

---

For each `<type>` of float (figure, table, etc.) there exists the following:

---

**counter `<type>`:** A counter called `<type>`, such as figure, table.

**`\<type>name`:** Name. `\figurename` prints “Figure”, etc.

**`\ext@<type>`:** File extension. `\ext@figure` prints “lof”, etc.

**`\fps@<type>`:** Placement.

**`\the<type>`:** Number. `\thetable` prints the number of the table, etc.

**`\p@<type>`:** Parent’s number. Prints the number of the [within] figure, etc.

**`\fnum@<type>`:** Prints the figure number for the caption.  
`\<type>name \the<type>`, “Figure 123”.

**`\<type>`:** Starts the float environment. `\figure` or `\begin{figure}`

**`\end<type>`:** Ends the float environment. `\endfigure` or `\end{figure}`

**`\tf@<ext>`:** The L<sup>A</sup>T<sub>E</sub>X file identifier for the output file.

**`LWR@have<type>`:** A boolean remembering whether a `\listof` was requested for a float of this type.

**File with extension `lo<f,t,a-z>`:** An output file containing the commands to build the `\listof<type>` “table-of-contents” structure.

**Cross-referencing names:** For `cleveref`’s `\cref` and related, `\crefname` and `\Crefname` assign human-readable names for references to this float type.

---

## 74 Floats

Floats are supported, although partially through emulation.

Table 15 shows the data structure associated with each `<type>` of float.

### 74.1 Float environment

for HTML output: 9891 `\begin{warHTML}`

`\LWR@floatbegin` `{\<type>}` `[\<placement>]` Begins a `\newfloat` environment.

9892 `\NewDocumentCommand{\LWR@floatbegin}{m o}{%`

Warn if starting a float inside a `<span>`:

9893 `\LWR@spanwarninvalid{float}%`

```

9894 \ifbool{FormatWP}{\newline}{}%
9895 \LWR@stoppars%

```

There is a new float, so increment the unique float counter:

```

9896 \addtocounter{LWR@thisautoid}{1}%
9897 \booltrue{LWR@freezethisautoid}%

9898 \begingroup%

```

Settings while inside the environment:

```

9899 \LWR@print@raggedright%

```

Open an HTML figure tag. The figure is assigned a class equal to its type, and another class according to the float package style, if used. Note that `\csuse` returns an empty string if `\LWR@floatstyle@<type>` is not defined.

```

9900 \LWR@htmltag{%
9901 figure id="\LWR@print@mbox{autoid-\arabic{LWR@thisautoid}}" % space
9902 class="#1 \@nameuse{LWR@floatstyle@#1}"%
9903 }%
9904 \ifbool{FormatWP}{%
9905 \LWR@orignewline%
9906 \LWR@BlockClassWP{#1}{\wp#1}%
9907 }{}%

```

Update the caption type:

```

9908 \renewcommand*{\@capttype}{#1}%

```

Mark the float for a word processor conversion:

```

9909 \LWR@startpars%
9910 \ifboolexpr{bool{FormatWP} and bool{WPMarkFloats}}{%
9911
9912 === begin #1 ===
9913
9914 }{}%

```

After each `\LWR@floatbegin`, look for `\centering`, etc next, using `\LWR@floatalignment`.

```

9915 }

```

For koma-script. The following does not work for tables.

```

9916 \AtBeginDocument{
9917
9918 \@ifpackageloaded{tocbasic}{
9919
9920 \appto\figure@atbegin{%
9921 \LWR@futurenonSPACElet\LWR@mynexttoken\LWR@floatalignment%

```

```

9922 }
9923
9924 }{}% tocbasic
9925
9926 }% AtBeginDocument

```

`\@xfloat` Support packages which create floats directly.  
`\@xdblfloat` Look for `\centering`, etc using `\LWR@floatalignment`.

```

9927 \AtBeginDocument{
9928 \def\@xfloat #1[#2]{%
9929 \LWR@floatbegin{#1}[#2]
9930 \LWR@futurenonspacel\@LWR@mynexttoken\LWR@floatalignment%
9931 }
9932 \def\@xdblfloat #1[#2]{%
9933 \LWR@floatbegin{#1}[#2]
9934 \LWR@futurenonspacel\@LWR@mynexttoken\LWR@floatalignment%
9935 }
9936 }

```

`\LWR@floatend` Ends a `\newfloat` environment.

```

9937 \newcommand*{\LWR@floatend}{%

```

If saw a `\centering`, finish the center environment:

```

9938 \LWR@endfloatalignment%

```

Mark the float end for a word processor conversion:

```

9939 \ifbool{FormatWP}{\bool{FormatWP} and \bool{WPMarkFloats}}{%
9940
9941 === end ===
9942
9943 }{}%
9944 \LWR@stoppars%

```

Close an HTML figure tag:

```

9945 \ifbool{FormatWP}{\endLWR@BlockClassWP}{}%
9946 \LWR@html\elementend{figure}%
9947 \endgroup%
9948 \boolfalse{LWR@freezethisautoid}%
9949 \LWR@startpars%
9950 \ifbool{FormatWP}{\newline}{}%
9951 }

```

`\end@float` Support packages which create floats directly.  
`\end@dblfloat`

```

9952 \AtBeginDocument{
9953 \let\end@float\LWR@floatend
9954 \let\end@dblfloat\LWR@floatend
9955 }

```

## 74.2 Float tracking

**Ctr** `LWR@thisautoid` A sequential counter for all floats and theorems. This is used to identify the float or theorem then reference it from the List of Figures and List of Tables.

```
9956 \newcounter{LWR@thisautoid}
```

**Ctr** `LWR@thisautoidWP` A sequential counter for all word processor conversion <div>s. This is used to convince `LIBREOffice` to form a frame around this element.

```
9957 \newcounter{LWR@thisautoidWP}
```

**Bool** `LWR@freezethisautoid` Prevents multiple increments of `\LWR@thisautoid` inside a float.

```
9958 \newbool{LWR@freezethisautoid}
9959 \boolfalse{LWR@freezethisautoid}
```

`\LWR@forcenewautoidanchor` Adds a new <autoid> anchor.

```
9960 \newcommand*{\LWR@forcenewautoidanchor}{%
9961 \addtocounter{LWR@thisautoid}{1}%
9962 \ifbool{LWR@doingapar}%
9963 {%
9964 \LWR@htmltag{a id="\LWR@print@mbox{autoid-\arabic{LWR@thisautoid}}" }%
9965 \LWR@htmltag{/a }%
9966 }%
9967 {%
9968 \LWR@stoppars%
9969 \LWR@htmltag{a id="\LWR@print@mbox{autoid-\arabic{LWR@thisautoid}}" }%
9970 \LWR@htmltag{/a }%
9971 \LWR@startpars%
9972 }%
9973 }
```

`\LWR@newautoidanchor` Sometimes adds a new <autoid> anchor.

```
9974 \newcommand*{\LWR@newautoidanchor}{%
9975 \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}%
9976 }{%
9977 {\ifbool{LWR@freezethisautoid}}{\LWR@forcenewautoidanchor}}%
9978 }
```

`\@captype` Remembers which float type is in use.

```
9979 \newcommand*{\@captype}{}
```

`\LWR@floatalignmentname` Set to center, flushleft, or flushright if saw `\centering`, `\raggedright`, or `\raggedleft`.

```
9980 \newcommand*{\LWR@floatalignmentname}{}
```

`\LWR@floatalignment` If sees a `\centering`, `\raggedleft`, or `\raggedright`, creates a center, flushright, or flushleft environment.

```

9981 \newcommand*{\LWR@floatalignment}{%
9982 \ifdefstrequal{\LWR@mynexttoken}{\centering}{%
9983 \center%
9984 \renewcommand*{\LWR@floatalignmentname}{center}%
9985 }{}%
9986 \ifdefstrequal{\LWR@mynexttoken}{\raggedright}{%
9987 \flushleft%
9988 \renewcommand*{\LWR@floatalignmentname}{flushleft}%
9989 }{}%
9990 \ifdefstrequal{\LWR@mynexttoken}{\raggedleft}{%
9991 \flushright%
9992 \renewcommand*{\LWR@floatalignmentname}{flushright}%
9993 }{}%
9994 }
```

`\LWR@endfloatalignment` Closes an environment from `\LWR@floatalignment`.

```

9995 \newcommand*{\LWR@endfloatalignment}{%
9996 \ifdefvoid{\LWR@floatalignmentname}%
9997 {}%
9998 {\@nameuse{end\LWR@floatalignmentname}}%
9999 \renewcommand*{\LWR@floatalignmentname}{}%
10000 }
```

### 74.3 Caption inside a float environment

`\CaptionSeparator` How to separate the float number and the caption text, if not defined by the user. In most cases, `caption`'s settings are used instead.

```

10001 \AtBeginDocument{\providecommand*{\CaptionSeparator}{:~}}
```

`\@caption`  $\{\langle posn \rangle\} [\langle name \rangle] \{\langle long name \rangle\}$

`\@makecaption`  $\{\langle name and num \rangle\} \{\langle text \rangle\}$

Prints the float type and number, the caption separator, and the caption text.

`\@caption` is provided here in case `caption` is not loaded, and is based on the `nameref` package.

```

10002 \AtBeginDocument{
10003 \@ifpackageloaded{caption}{}{
10004 \let\LWR@orig@caption\@caption%
10005 \long\def\@caption#1[#2]{%
```

Warn if using a caption inside a `<span>`:

```

10006 \LWR@spanwarnformat{caption}%
```

```

10007 \LWR@setlatestname{#2}%
10008 \LWR@orig@caption{#1}[\{#2\}]% also takes third argument
10009 }%
10010
10011 \renewcommand{\@makecaption}[2]{%
10012 \LWR@traceinfo{\@makecaption}%
10013 \caption@begin{\@capttype}%
10014 \LWR@isolate{#1}%
10015 \edef\LWR@tempone{#1}%
10016 \ifdefvoid{\LWR@tempone}{\}\CaptionSeparator}%
10017 \LWR@isolate{#2}%
10018 \caption@end%
10019 \LWR@traceinfo{\@makecaption: done}%
10020 }%
10021 }
10022 }

```

## 74.4 Caption and LOF linking and tracking

When a new HTML file is marked in the L<sup>A</sup>T<sub>E</sub>X PDF file, or at the start of a new section, the L<sup>A</sup>T<sub>E</sub>X page number at that point is stored in LWR@latestautopage, (and the associated filename is remembered by the special L<sup>A</sup>T<sub>E</sub>X labels). This page number is used to generate an autopage HTML <id> in the HTML output at the start of the new HTML file or section. Meanwhile, there is a float counter used to generate an HTML autoid <id> at the start of the float itself in the HTML file. The autopage and autoid values to use for each float are written to the .lof, etc. files just before each float's entry. These values are used by \l@figure, etc. to create the HTML links in the List of Figures, etc.

Ctrl LWR@nextautoid Tracks autoid for floats. Tracks autopage for floats.  
Ctrl LWR@nextautopage These are updated per float as the .lof, .lot file is read.

```

10023 \newcounter{LWR@nextautoid}
10024 \newcounter{LWR@nextautopage}

```

\LWRsetnextfloat {<autopage>} {<float autoid>}

File \*\_html.lof This is written to the \*\_html.lof or \*\_html.lot file just before each float's usual entry. The autopage and the float's autoid are remembered for \l@figure to use when creating the HTML links.  
File \*\_html.lot

```

10025 \newcommand*\LWRsetnextfloat}[2]{%
10026 \setcounter{LWR@nextautopage}{#1}%
10027 \setcounter{LWR@nextautoid}{#2}%
10028 }

```

Ctrl LWR@latestautopage The HTML output's PDF page number at the start of a new HTML file or section.  
\LWRsetnextfloat is written with this and the autoid by the modified \addcontentsline just before each float's entry.

```
10029 \newcounter{LWR@latestautopage}
10030 \setcounter{LWR@latestautopage}{1}
```

Env LWR@figcaption An HTML <figcaption> is not allowed in places where L<sup>A</sup>T<sub>E</sub>X does allow a figure caption, such as inside a longtable where the tabular has already started, or inside a center environment. Therefore, a <div> of class figurecaption is used instead.

```
10031 \newenvironment*{LWR@figcaption}
10032 {%
10033 \ifbool{FormatWP}{%
10034 \BlockClass[font-style:italic]{figurecaption}%
10035 }{\LWR@print\vspace*{\baselineskip}}
10036 }{%
10037 \BlockClass{figurecaption}%
10038 }%
10039 }%
10040 {\endBlockClass}
```

\LWR@HTML@caption@begin {<type>}

Low-level code to create HTML tags for captions.

The print versions are from the caption package, if loaded.

```
10041 \newcommand*{\LWR@HTML@caption@begin}[1]
10042 {%
10043 \LWR@traceinfo{LWR@HTML@caption@begin}%
```

Keep par and minipage changes local:

```
10044 \begingroup%
```

No need for a minipage or \parbox inside the caption:

```
10045 \RenewDocumentEnvironment{minipage}{O{t} o O{t} m}{\}{\}%
10046 \RenewDocumentCommand{\parbox}{O{t} O{ } O{t} m +m}{##5}%
```

Enclose the original caption code inside an HTML tag:

```
10047 \LWR@figcaption%
10048 \LWR@traceinfo{LWR@HTML@caption@begin: about to LWR@origcaption@begin}%
10049 \LWR@print@caption@begin{#1}%
10050 \LWR@traceinfo{LWR@HTML@caption@begin: done}%
10051 }
```

\LWR@HTML@caption@end Low-level patches to create HTML tags for captions.

```
10052 \newcommand*{\LWR@HTML@caption@end}
10053 {%
10054 \LWR@traceinfo{LWR@HTML@caption@end}%
10055 \LWR@print@caption@end%
```

Closing tag:

```

10056 \endLWR@figcaption%
10057 \endgroup%
10058 % \leavevmode% avoid bad space factor (0) error
10059 \LWR@traceinfo{LWR@HTML@caption@end: done}%
10060 }

```

`\caption@begin` Low-level patches to create HTML tags for captions. These are assigned `\AtBeginDocument` so that other packages which modify captions will have already been loaded before saving the print-mode version.

Print versions are provided here in case `caption` is not loaded.

```

10061 \AtBeginDocument{
10062 \providecommand{\caption@begin}[1]{}
10063 \LWR@formatted{caption@begin}
10064
10065 \providecommand{\caption@end}{}
10066 \LWR@formatted{caption@end}
10067 }

```

`\captionlistentry` Tracks the float number for this caption used outside a float. Patched to create an HTML anchor.

```

10068 \AtBeginDocument{%
10069 \@ifpackageloaded{caption}{
10070 \let\LWR@origcaptionlistentry\captionlistentry
10071
10072 \renewcommand*{\captionlistentry}{%
10073 \LWR@ensuredoingapar%
10074 \LWR@origcaptionlistentry%
10075 }

10076 \def\LWR@LTcaptionlistentry{%
10077 \LWR@ensuredoingapar%
10078 \LWR@forcenewautoidanchor%
10079 \bgroup%
10080 \@ifstar{\egroup\LWR@LT@captionlistentry}% gobble *
10081 {\egroup\LWR@LT@captionlistentry}%
10082 }%
10083
10084 \def\LWR@LT@captionlistentry#1{%
10085 \caption@listentry\@firstoftwo[\LTcaption]{#1}%
10086 }%
10087 }% caption loaded
10088 {% caption not loaded
10089 \newcommand{\captionlistentry}[2][]{}%
10090 \newcommand{\LWR@LT@captionlistentry}[2][]{}%
10091 }
10092 }% AtBeginDocument

```

`\addcontentsline` Patched to write the autopage and autoid before each float's entry. No changes if writing `.toc`. For a theorem, automatically defines `\ext@<type>` as needed, to mimic and reuse the float mechanism.

f

```

10093 \let\LWR@origaddcontentsline\addcontentsline
10094
10095 \renewcommand*{\addcontentsline}[3]{%
10096 \ifstrequal{#1}{toc}{}% not TOC

10097 \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}%
10098 }{%
10099 {\LWR@newautoidanchor}%

10100 \ifcsvoid{ext@#2}{\csdef{ext@#2}{#1}}{%

10101 \addtocontents{\@nameuse{ext@#2}}{%
10102 \protect\LWRsetnextfloat%
10103 {\arabic{LWR@latestautopage}}%
10104 {\arabic{LWR@thisautoid}}%
10105 }%
10106 }% not TOC
10107 \LWR@origaddcontentsline{#1}{#2}{#3}%
10108 }
```

Pkg `capt-of` Either package provides `\captionof`, which is later patched at the beginning of the document.  
Pkg `caption`

`\captionof` Patched to handle paragraph tags.

```

10109 \RequirePackage{capt-of}
10110
10111 \AtBeginDocument{
10112 \let\LWR@origcaptionof\captionof
10113
10114 \renewcommand*{\captionof}{%
10115 \LWR@stoppars%
10116 \LWR@origcaptionof%
10117 }
10118 }% AtBeginDocument

10119 \end{warpHTML}
```

## 75 Table of Contents, LOF, LOT

This section controls the generation of the TOC, LOF, and LOT.

The `.toc`, `.lof`, and `.lot` files are named by the source code `\jobname`.

In HTML, the printed tables are placed inside a `<div>` of class `toc`, `lof`, or `lot`.

A “sideroc” is provided which prints a subset of the TOC on the side of each page other than the homepage.

The regular L<sup>A</sup>T<sub>E</sub>X infrastructure is used for TOC, along with some patches to generate HTML output.

for HTML output: 10120 `\begin{warpHTML}`

## 75.1 Reading and printing the toc

`\LWR@myshorttoc` `{\<toc/lof/lot/sidetoc>}`

Reads in and prints the TOC/LOF/LOT at the current position. While doing so, makes the @ character into a normal letter to allow formatting commands in the section names.

Unlike in regular L<sup>A</sup>T<sub>E</sub>X, the file is not reset after being read, since the sideroc may be referred to again in each HTML page.

```
10121 \newcommand*{\LWR@myshorttoc}[1]{%
10122 \LWR@traceinfo{\LWR@myshorttoc: #1}%
10123 \LWR@ensuredoingapar%
```

Only if the file exists:

```
10124 \IfFileExists{\jobname.#1}{%
10125 \LWR@traceinfo{\LWR@myshorttoc: loading}%
```



Many of the commands in the file will have @ characters in them, so @ must be made a regular letter.

```
10126 \begingroup%
10127 \makeatletter%
```

Disable CJK xpinyin while generating the sideroc.

```
10128 \LWR@disablepinyin%
```

Read in the toc file:

```
10129 \@input{\jobname.#1}%
10130 \endgroup%
10131 }%
10132 {}%
10133 \LWR@traceinfo{\LWR@myshorttoc: done}%
10134 }
```

`\LWR@subtableofcontents` `{\<toc/lof/lot>} {\<sectionstarname>}`

Places a TOC/LOF/LOT at the current position.

```
10135 \NewDocumentCommand{\LWR@subtableofcontents}{m m}{%
```

Closes previous levels:

```
10136 \@ifundefined{chapter}%
10137 {\LWR@closeprevious{section}}%
10138 {\LWR@closeprevious{chapter}}%
```

Prints any pending footnotes so that they appear above the potentially large toc:

```
10139 \LWR@printpendingfootnotes%
```

Place the list into its own chapter (if defined) or section:

```
10140 \@ifundefined{chapter}{\section*{#2}}{\chapter*{#2}}%
```

Create a new HTML nav containing the TOC/LOF/LOT:

```
10141 \LWR@htmlclass{nav}{#1}%
```

Create the actual list:

```
10142 \LWR@myshorttoc{#1}%
```

Close the nav:

```
10143 \LWR@htmlclassend{nav}{#1}%
10144 }
```

```
\@starttoc {<ext>}
```

Patch \@starttoc to encapsulate the toc inside HTML tags:

```
10145 \let\LWR@orig@starttoc\@starttoc
10146
10147 \renewcommand{\@starttoc}[1]{
10148 \LWR@htmlclass{nav}{#1}%
10149 \LWR@orig@starttoc{#1}%
10150 \LWR@htmlclassend{nav}{#1}%
10151 }
```

Bool LWR@copiedsidetoc Used to only copy the toc file to the sidetoc a single time.

(listings and perhaps other packages would re-use \tableofcontents for their own purposes, causing the sidetoc to be copied more than once, and thus end up empty.)

```
10152 \newbool{LWR@copiedsidetoc}
10153 \boolfalse{LWR@copiedsidetoc}
```

\tableofcontents Patch \tableofcontents, etc. to print footnotes first. newfloat uses \listoffigures for all future float types.

```

10154 \AtBeginDocument{
10155
10156 \let\LWR@origtableofcontents\tableofcontents
10157
10158 \renewcommand*{\tableofcontents}{%

```

Do not print the table of contents if formatting for a word processor, which will presumably auto-generate its own updated table of contents:

```

10159 \ifbool{FormatWP} and bool{WPMarkTOC}}{
10160
10161 === table of contents ===
10162
10163 }
10164 {

```

Copy the .toc file to .sidetoc for printing the sideroc. The original .toc file is renewed when \tableofcontents is finished.

```

10165 \ifbool{LWR@copiedsidetoc}}{%
10166 \LWR@copyfile{\jobname.toc}{\jobname.sidetoc}%
10167 \booltrue{LWR@copiedsidetoc}%
10168 }%
10169 \LWR@printpendingfootnotes
10170 \LWR@origtableofcontents
10171 }
10172 }% \tableofcontents
10173
10174 }% AtBeginDocument

```

#### \listoffigures

```

10175 \let\LWR@origlistoffigures\listoffigures
10176
10177 \renewcommand*{\listoffigures}{
10178 \ifbool{FormatWP} and bool{WPMarkLOFT}}{
10179
10180 === list of figures ===
10181
10182 }
10183 {
10184 \LWR@printpendingfootnotes
10185 \LWR@origlistoffigures
10186 }
10187 }

```

#### \listoftables

```

10188 \let\LWR@origlistoftables\listoftables
10189
10190 \renewcommand*{\listoftables}{
10191 \ifbool{FormatWP} and bool{WPMarkLOFT}}{
10192

```

```

10193 === list of tables ===
10194
10195 }
10196 {
10197 \LWR@printpendingfootnotes
10198 \LWR@origlistoftables
10199 }
10200 }

```

## 75.2 High-level toc commands

`\listof`  $\{\langle type \rangle\} \{\langle title \rangle\}$

Emulate the `\listof` command from the `float` package (section 255). Used to create lists of custom float types. Also used to redefine the standard L<sup>A</sup>T<sub>E</sub>X `\listoffigures` and `\listoftables` commands.

```

10201 \NewDocumentCommand{\listof}{m +m}{%
10202 \@ifundefined{l@#1}{%
10203 \csdef{l@#1}##1##2{\hypertocfloat{1}{#1}{\@nameuse{ext@#1}}{##1}{##2}}%
10204 }{%
10205 \LWR@subtableofcontents{\@nameuse{ext@#1}}{#2}%
10206 \expandafter\newwrite\csname tf@#1\endcsname\endcsname%
10207 \immediate\openout \csname tf@#1\endcsname\endcsname%
10208 \jobname.\@nameuse{ext@#1}\relax%
10209 }

```

## 75.3 Side toc

The “side toc” is a table-of-contents positioned to the side.

It may be renamed by redefining `\sidetocname`, and may contain paragraphs.

css may be used to format the sideroc:

---

*CSS related to sideroc:*

**div.sidetoccontainer:** The entire sideroc.

**div.sidetoctitle:** The title.

**div.sidetoccontents:** The table of contents.

---

```

10210 \end{warpHTML}

```

**for HTML & PRINT:** 10211 `\begin{warpall}`

**ctr** `SideTOCDepth` Controls how deep the side-TOC gets. Use a standard L<sup>A</sup>T<sub>E</sub>X section level similar to `tocdepth`. Warn if parts of the website may be inaccessible.

```

10212 \newcounter{SideTOCDepth}
10213 \setcounter{SideTOCDepth}{1}
10214
10215 \AtEndDocument{%
10216 \ifnumcomp{\value{SideTOCDepth}}{<}{\value{FileDepth}}{
10217 \PackageWarningNoLine{lwarp}
10218 {%
10219 SideTOCDepth is less than FileDepth,\MessageBreak
10220 so some website pages may be inaccessible%
10221 }
10222 }{}
10223 }

```

`\sitetocname` Holds the default name for the sideroc.

```

10224 \newcommand{\sitetocname}{Contents}

10225 \end{warpall}

```

**for HTML output:** 10226 \begin{warpHTML}

`\LWR@sitetoc` Creates the actual side-TOC.

```

10227 \newcommand*{\LWR@sitetoc}{%
10228 \LWR@forcenewpage
10229 \LWR@stoppars
10230 }

```

The entire sideroc is placed into a nav of class sideroc.

```

10231 \LWR@html elementclass{div}{sideroccontainer}
10232 \LWR@html elementclass{nav}{sideroc}
10233
10234 \setcounter{tocdepth}{\value{SideTOCDepth}}
10235

```

The title is placed into a <div> of class sidetoc title, and may contain paragraphs.

```

10236 \begin{BlockClass}{sidetoc title}
10237 \ifcvoid{thetitle}{}{\InlineClass{sidetoc thetitle}{\thetitle}\par}
10238 \sitetocname
10239 \end{BlockClass}

```

The table of contents is placed into a <div> of class sideroc contents.

```

10240 \begin{BlockClass}{sideroc contents}
10241 \LinkHome
10242
10243 \LWR@myshorttoc{sideroc}
10244 \end{BlockClass}
10245 \LWR@html elementclassend{nav}{sideroc}
10246 \LWR@html elementclassend{div}{sideroccontainer}
10247 }

```

## 75.4 Low-level toc line formatting

`\numberline`  $\{\langle number \rangle\}$

(Called from each line in the .aux, .lof files.)

Record this section number for further use:

```
10248 \newcommand*{\LWR@numberline}[1]{%
10249 \LWR@sectionnumber{#1}\quad%
10250 }
10251
10252 \let\LTxMacro\numberline\LWR@numberline
```

`\LWR@maybetocdata` Replaced by `tocdata`. Adds author name.

```
10253 \newcommand*{\LWR@maybetocdata}{}
```

`\hypertoc`  $\{\langle 1: depth \rangle\} \{\langle 2: type \rangle\} \{\langle 3: name \rangle\} \{\langle 4: page \rangle\}$

Called by `\l@section`, etc. to create a hyperlink to a section.

The autopage label is always created just after the section opens.

**#1** is depth

**#2** is section, subsection, etc.

**#3** the text of the caption

**#4** page number

```
10254 \NewDocumentCommand{\hypertoc}{m m +m m}{%
10255 \LWR@traceinfo{hypertoc !#1!#2!#3!#4!}%
```

Respond to `tocdepth`:

```
10256 \ifnumcomp{#1}{>}{\value{tocdepth}}{%
10257 }{%
10258 }{%
10259 \LWR@startpars%
```

Create an HTML link to `<filename>#autosec-(page)`, with the name, of the given HTML class.

`\BaseJobname` is added to the label in case `xr` or `xr-hyper` are used.

```
10260 \LWR@subhyperrefclass{%
10261 \LWR@htmlrefsectionfilename{\BaseJobname-autopage-#4}%
10262 \LWR@origpound\LWR@print@mbbox{autosec-#4}%
10263 }{#3}{toc#2}%
```

```

10264 \LWR@maybetocdata%

10265 \LWR@stoppars%
10266 }%
10267 \LWR@traceinfo{hypertoc done}%
10268 }

```

Ctrl lofdepth TOC depth for figures.

```

10269 \@ifclassloaded{memoir}{%
10270 \newcounter{lofdepth}
10271 \setcounter{lofdepth}{1}
10272 }

```

Ctrl lotdepth TOC depth for tables.

```

10273 \@ifclassloaded{memoir}{%
10274 \newcounter{lotdepth}
10275 \setcounter{lotdepth}{1}
10276 }

```

\hypertocfloat {<1: depth>} {<2: type>} {<3: ext of parent>} {<4: caption>} {<5: page>}

**#1** is depth

**#2** is figure, table, etc.

**#3** is lof, lot, of the parent.

**#4** the text of the caption

**#5** page number

```

10277 \newcommand{\hypertocfloat}[5]{%

```

If some float-creation package has not yet defined the float type's lofdepth counter, etc, define it here:

```

10278 \@ifundefined{c@#3depth}{%
10279 \newcounter{#3depth}%
10280 \setcounter{#3depth}{1}%
10281 }{}%

```

Respond to lofdepth, etc.:

```

10282 \LWR@traceinfo{hypertocfloat depth is #1 #3depth is \arabic{#3depth}}%
10283 \ifthenelse{\cnttest{#1}{<=}}{\arabic{#3depth}}{}%
10284 {%
10285 \LWR@startpars%

```

Create an HTML link to filename#autoid-(float number), with text of the caption, of the given HTML class.

\BaseJobname is added to the label in case xr or xr-hyper are used.

```

10286 \LWR@subhyperrefclass{%
10287 \LWR@htmlrefsectionfilename{%
10288 \BaseJobname-autopage-\arabic{LWR@nextautopage}%
10289 }%
10290 \LWR@origpound\LWR@print@box{autoid-\arabic{LWR@nextautoid}}}%
10291 {#4}{toc#2}%

10292 \LWR@maybetocdata%

10293 \LWR@stoppars%
10294 }%
10295 {}%
10296 }
```

Automatically called by \contentsline:

\l@book {<name>} {<page>}

Uses \DeclareDocumentCommand in case the class does not happen to have a \book.

```
10297 \DeclareDocumentCommand{\l@book}{m m}{\hypertoc{-2}{book}{#1}{#2}}
```

\l@part {<name>} {<page>}

Uses \DeclareDocumentCommand in case the class does not happen to have a \part.

```
10298 \DeclareDocumentCommand{\l@part}{m m}{\hypertoc{-1}{part}{#1}{#2}}
```

\l@chapter {<name>} {<page>}

Uses \DeclareDocumentCommand in case the class does not happen to have a \chapter.

```

10299 \@ifundefined{chapter}
10300 {}
10301 {
10302 \DeclareDocumentCommand{\l@chapter}{m m}
10303 {\hypertoc{0}{chapter}{#1}{#2}}
10304 }
```

\l@section {<name>} {<page>}

```
10305 \renewcommand{\l@section}[2]{\hypertoc{1}{section}{#1}{#2}}
```

\l@subsection {<name>} {<page>}

```
10306 \renewcommand{\l@subsection}[2]{\hypertoc{2}{subsection}{#1}{#2}}
```

```

\l@subsubsection {\langle name\rangle} {\langle page\rangle}

10307 \renewcommand{\l@subsubsection}[2]{\hypertoc{3}{subsubsection}{#1}{#2}}

\l@paragraph {\langle name\rangle} {\langle page\rangle}

10308 \renewcommand{\l@paragraph}[2]{\hypertoc{4}{paragraph}{#1}{#2}}

\l@subparagraph {\langle name\rangle} {\langle page\rangle}

10309 \renewcommand{\l@subparagraph}[2]{\hypertoc{5}{subparagraph}{#1}{#2}}

\l@figure {\langle name\rangle} {\langle page\rangle}

10310 \renewcommand{\l@figure}[2]{\hypertocfloat{1}{figure}{lof}{#1}{#2}}

\l@table {\langle name\rangle} {\langle page\rangle}

10311 \renewcommand{\l@table}[2]{\hypertocfloat{1}{table}{lot}{#1}{#2}}

10312 \end{warpHTML}

```

## 76 Index and glossary

See:

[http://tex.stackexchange.com/questions/187038/  
how-to-mention-section-number-in-index-created-by-imakeidx](http://tex.stackexchange.com/questions/187038/how-to-mention-section-number-in-index-created-by-imakeidx)

Index links are tracked by the counter LWR@autoindex. This counter is used to create a label for each index entry, and a reference to this label for each entry in the index listing. This method allows each index entry to link directly to its exact position in the document.

**for HTML output:** 10313 \begin{warpHTML}

```

10314 \newcounter{LWR@autoindex}
10315 \setcounter{LWR@autoindex}{0}
10316
10317 \newcounter{LWR@autoglossary}
10318 \setcounter{LWR@autoglossary}{0}

```

\IndexPageSeparator    User-adjustable delimiters for page and range separators in the \*.ind files.  
\IndexRangeSeparator

```

10319 \newcommand*\IndexPageSeparator}{, }
10320 \newcommand*\IndexRangeSeparator}{--}

```

Env theindex

```

10321 \ifundefined{chapter}
10322 {\newcommand*\LWR@indexsection[1]{\section*{#1}}}
10323 {\newcommand*\LWR@indexsection[1]{\chapter*{#1}}}
10324
10325
10326 \AtBeginDocument{
10327
10328 \renewenvironment*{theindex}{%
10329 \LWR@indexsection{\indexname}%
10330 \let\item\LWR@indexitem%
10331 \let\subitem\LWR@indexsubitem%
10332 \let\subsubitem\LWR@indexsubsubitem%
10333 }{}
10334
10335 }% AtBeginDocument

```

`\LWR@indexitem` [*<index key>*]      The optional argument is added to support `repeatindex`.

```

10336 \newcommand*\LWR@indexitem[1][\@empty]{
10337
10338 \InlineClass{indexitem}{\LWR@htmlcomment{}}#1%
10339 }

```

`\LWR@indexsubitem`

```

10340 \newcommand*\LWR@indexsubitem{
10341
10342 \InlineClass{indexsubitem}{\LWR@htmlcomment{}}%
10343 }

```

`\LWR@indexsubsubitem`

```

10344 \newcommand*\LWR@indexsubsubitem{
10345
10346 \InlineClass{indexsubsubitem}{\LWR@htmlcomment{}}%
10347 }

```

`\LWR@index@modifyentry` {*<indexing term>*}

If using *xindex*, modifies the pipe character to become `\hyperindexformat`. The indexing term is split into two argument at the pipe, then fed to `\LWR@index@modifyentrysub`.

```

10348 \NewDocumentCommand{\LWR@index@modifyentry}{>{\SplitArgument{1}{|}}m}
10349 {\LWR@index@modifyentrysub#1}

```

Handle left and right parenthesis range argument, or add a `hyperindexformat` clause.

```

10350 \newcommand*\LWR@index@modifyentrysub[2]{%
10351 \edef\LWR@tempone{#1}%
10352 \edef\LWR@temptwo{#2}%

```

```

10353 \IfValueTF{#2}{%
10354 \ifx#2(%
10355 \appto\LWR@tempone{|}%
10356 \else%
10357 \ifx#2)%
10358 \appto\LWR@tempone{|}%
10359 \else%
10360 \appto\LWR@tempone{%
10361 |hyperindexformat\LWRleftbrace%
10362 \LWRbackslash#2%
10363 \LWRrightbrace%
10364 }%
10365 \fi%
10366 \fi%
10367 }%
10368 {}%
10369 }

```

`\@wrindex {<indexing term>}` Redefined to write the LWR@autoindex counter instead of page.

If using *xindex*, the first line is a comment including a special phrase which tricks *xindex* into thinking that *hyperref* was used.

```

10370 \newbool{LWR@xindex@tricked}
10371 \boolfalse{LWR@xindex@tricked}
10372
10373 \def\LWR@wrindex#1{%
10374 \ifbool{LWR@xindex}{%
10375 \ifbool{LWR@xindex@tricked}{%
10376 \protected@write\@indexfile{%
10377 {%
10378 \LWRpercent\space hyperpage\LWRrightbrace%
10379 \LWRpercent\space trick xindex to assume hyperref%
10380 }%
10381 \global\booltrue{LWR@xindex@tricked}%
10382 }%
10383 \LWR@xindex@modifyentry{#1}%
10384 }{%
10385 \def\LWR@tempone{#1}%
10386 }%
10387 \addtocounter{LWR@autoindex}{1}%
10388 \label{LWRindex-\arabic{LWR@autoindex}}%
10389 \protected@write\@indexfile{%
10390 {\string\indexentry{\LWR@tempone}{\arabic{LWR@autoindex}}}%
10391 \endgroup%
10392 \esphack%
10393 }
10394
10395 \AtBeginDocument{
10396 \let\@wrindex\LWR@wrindex
10397 }

```

`\@wrglossary {<term>}` Redefined to write the LWR@latestautopage counter instead of page.

```

10398 \def\@wrglossary#1{%
10399 \addtocounter{LWR@autoglossary}{1}%
10400 \LWR@new@label{LWRglossary-\theLWR@autoglossary}%
10401 \protected@write\@glossaryfile{%
10402 {\string\glossaryentry{#1}{\theLWR@autoglossary}}%
10403 \endgroup%
10404 \@esphack%
10405 }

```

`\LWR@indexnameref@anonref`  $\{\langle LWR@autoindex \rangle\}$

Displays a reference link where there no `\ref` available.

```

10406 \newcommand*\LWR@indexnameref@anonref[1]{%
10407 \LWR@startref{LWRindex-#1}%
10408 (*)%
10409 \LWR@htmltag{/a}%
10410 }

```

`\LWR@indexnameref@ref`  $\{\langle LWR@autoindex \rangle\}$

Creates `\ref`-style index references. To avoid an unwanted space if there is nothing to reference, the reference is checked first.

```

10411 \newcommand*\LWR@indexnameref@ref[1]{%
10412 \edef\LWR@thisref{\csuse{r@LWRindex-#1}}%
10413 \ifdefvoid{\LWR@thisref}{}%
10414 \edef\LWR@thisref{\expandafter\@firstoftwo\LWR@thisref}%
10415 \ifdefvoid{\LWR@thisref}%
10416 {\LWR@indexnameref@anonref{#1}}%
10417 {\ref{LWRindex-#1}}%
10418 }%
10419 }

```

`\LWR@indexnameref@refnameref`  $\{\langle LWR@autoindex \rangle\}$

Creates `\ref`-style index references. To avoid an unwanted space if there is nothing to reference, the reference is checked first. For links to starred or ?? objects, only the name is used.

```

10420 \newcommand*\LWR@indexnameref@refnameref[1]{%
10421 \edef\LWR@thisref{\csuse{r@LWRindex-#1}}%
10422 \ifdefvoid{\LWR@thisref}{}%
10423 \edef\LWR@thisref{\expandafter\@firstoftwo\LWR@thisref}%
10424 \ifdefvoid{\LWR@thisref}{}%
10425 \ifdefstring{\LWR@thisref}{(*)}%
10426 {}%
10427 {\ref{LWRindex-#1} }% space
10428 }%
10429 }%
10430 \nameref{LWRindex-#1}%
10431 }

```

`\LWR@indexnameref@cref`  $\{\langle LWR@autoindex \rangle\}$

Creates `\cref`-style index references. If no numbered reference is available, a `\nameref` is used instead. If the reference is `??`, which will be changed by `\LWR@indexnameref` to become `(*)`, then the link is changed to show `(*)`.

```

10432 \newcommand*{\LWR@indexnameref@cref}[1]{%
10433 \edef\LWR@thisref{\csuse{r@LWRindex-#1}}%
10434 \ifdefvoid{\LWR@thisref}{%
10435 \nameref{LWRindex-#1}%
10436 }{%
10437 \edef\LWR@thisref{\expandafter\@firstoftwo\LWR@thisref}%
10438 \ifdefvoid{\LWR@thisref}{%
10439 \nameref{LWRindex-#1}%
10440 }{%
10441 \ifdefstring{\LWR@thisref}{(*)}{%
10442 \LWR@indexnameref@anonref{#1}%
10443 }{%
10444 \cref{LWRindex-#1}%
10445 }%
10446 }%
10447 }%
10448 }
```

`\LWR@indexnameref@crefnameref`  $\{\langle LWR@autoindex \rangle\}$

Creates `\cref`-style index references. If no numbered reference is available, a `\nameref` is used instead. If the reference is `??`, which will be changed by `\LWR@indexnameref` to become `(*)`, then the link is changed to show only the name.

```

10449 \newcommand*{\LWR@indexnameref@crefnameref}[1]{%
10450 \edef\LWR@thisref{\csuse{r@LWRindex-#1}}%
10451 \ifdefvoid{\LWR@thisref}%
10452 {}%
10453 {%
10454 \edef\LWR@thisref{\expandafter\@firstoftwo\LWR@thisref}%
10455 \ifdefvoid{\LWR@thisref}%
10456 {}%
10457 {%
10458 \ifdefstring{\LWR@thisref}{(*)}%
10459 {}%
10460 {\cref{LWRindex-#1}} % space
10461 }%
10462 }%
10463 \nameref{LWRindex-#1}%
10464 }
```

`\LWR@indexnameref`  $\{\langle LWR@autoindex \rangle\}$

Creates a hyperlink based on the given entry's autoindex.

```

10465 \newcommand*{\LWR@indexnameref}[1]{%
10466 {% group
```

Temporarily redefine caption's \caption@xref because it was printing ?? in the indexes, and also causing error on expansion:

```

10467 \ifdef{\caption@xref}{%
10468 \renewcommand*\caption@xref}[2]{(*)}%
10469 }{%

10470 \ifdefstring{\LWR@IndexRef}{ref}{%
10471 \LWR@indexnameref@ref{#1}%
10472 }{%
10473 \ifdefstring{\LWR@IndexRef}{nameref}{%
10474 \nameref{\LWRindex-#1}%
10475 }{%
10476 \ifdefstring{\LWR@IndexRef}{refnameref}{%
10477 \LWR@indexnameref@refnameref{#1}%
10478 }{%
10479 \ifdefstring{\LWR@IndexRef}{cref}{%
10480 \LWR@indexnameref@cref{#1}%
10481 }{%
10482 \ifdefstring{\LWR@IndexRef}{crefnameref}{%
10483 \LWR@indexnameref@crefnameref{#1}%
10484 }{%
10485 \ifdefstring{\LWR@IndexRef}{autoref}{%
10486 \LWR@indexnameref@cref{#1}%
10487 }{% text string
10488 \LWR@startref{\LWRindex-#1}%
10489 \LWR@IndexRef%
10490 \LWR@htmltag{/a}%
10491 }}}}%
10492 }% group
10493 }

```

`\LWR@doindexentrysubsub` {<range start: *LWR@autoindex*, or macros.>} {<range end or blank>}

Creates a hyperlink, or handles \see, \textbf, etc.

```

10494 \newrobustcmd{\LWR@doindexentrysubsub}[2]{%
10495 \IfInteger{#1}%
10496 {\LWR@indexnameref{#1}}%
10497 {#1}%
10498 \IfValueT{#2}{%
10499 \IndexRangeSeparator%
10500 \IfInteger{#2}%
10501 {\LWR@indexnameref{#2}}%
10502 {#2}%
10503 }%
10504 }

```

`\LWR@doindexentrysub` {<range delimiter>} {<*LWR@autoindex* or macros, possible a range>}

```


10505 \NewDocumentCommand{\LWR@doindexentrysub}{m >\SplitArgument{1}{#1}m}
10506 {\LWR@doindexentrysubsub#2}

```

`\LWR@doindexentry` {*<LWR@autoindex or macros, possible a range>*}

```
10507 \newcommand*{\LWR@doindexentry}[1]{%
10508 \relax% required
10509 \expandafter\LWR@doindexentrysub\expandafter{\IndexRangeSeparator}{#1}%
10510 }
```

`\LWR@hyperindexrefnullified` Handles macros commonly seen inside an `\index` entry. Each macro is redefined to create and format a link to its entry.

 **index formatting** To handle additional macros:

`\appto\LWR@hyperindexrefnullified{...}`

```
10511 \newcommand{\LWR@hyperindexrefnullified}{%
10512 \renewrobustcmd{\emph}[1]{\LWR@HTML@emph{\LWR@doindexentry{##1}}}%
10513 \renewrobustcmd{\textbf}[1]{\LWR@HTML@textbf{\LWR@doindexentry{##1}}}%
10514 \renewrobustcmd{\textit}[1]{\LWR@HTML@textit{\LWR@doindexentry{##1}}}%
10515 \renewrobustcmd{\textlg}[1]{\LWR@HTML@textlg{\LWR@doindexentry{##1}}}%
10516 \renewrobustcmd{\textrm}[1]{\LWR@HTML@textrm{\LWR@doindexentry{##1}}}%
10517 \renewrobustcmd{\textsf}[1]{\LWR@HTML@textsf{\LWR@doindexentry{##1}}}%
10518 \renewrobustcmd{\texttt}[1]{\LWR@HTML@texttt{\LWR@doindexentry{##1}}}%
10519 \renewrobustcmd{\textup}[1]{\LWR@HTML@textup{\LWR@doindexentry{##1}}}%
10520 \renewrobustcmd{\textsc}[1]{\LWR@HTML@textsc{\LWR@doindexentry{##1}}}%
10521 \renewrobustcmd{\textulc}[1]{\LWR@HTML@textulc{\LWR@doindexentry{##1}}}%
10522 \renewrobustcmd{\textsi}[1]{\LWR@HTML@textsi{\LWR@doindexentry{##1}}}%
10523 \renewrobustcmd{\textit}[1]{\LWR@HTML@textit{\LWR@doindexentry{##1}}}%
10524 \renewrobustcmd{\textsl}[1]{\LWR@HTML@textsl{\LWR@doindexentry{##1}}}%
10525 }
```

`\hyperindexref` {*<list of LWR@autoindex, commas, and ranges>*}

`\hyperindexref{LWR@autoindex}` is inserted into `*.ind` by the *makeindex* style file `lwarp.ist` or the *xindy* style file `lwarp.xdy`. For *xindex*, `\hyperpage` is inserted, which is `\let` to `\hyperindexref`. For *gindex*, `\addindexitem` and related are inserted, which are defined to use `\hyperindexref`.

The argument is split at commas, and also for ranges, then passed to `\LWR@hyperindexrefsub`.

```
10526 \newcommand*{\hyperindexref}[1]{%
10527 \relax% required
10528 \expandafter\LWR@hyperindexref@comma\expandafter{\IndexPageSeparator}{#1}%
10529 }
```

`\LWR@hyperindexref@comma` {*<separator>*} {*<list of args>*}

The list is split at commas, and passed to `\LWR@hyperindexref@@comma`.

```
10530 \NewDocumentCommand{\LWR@hyperindexref@comma}
10531 {m >\SplitList{#1}} m}
10532 {%
```

Used to place the separator between each entry, but not before the first.

```
10533 \def\LWR@hyperindexref@thiscomma{}%
10534 \def\LWR@hyperindexref@nextcomma{#1}%
```

Each comma-delimited entry is now passed individually to \LWR@hyperindexref@@comma.

```
10535 \ProcessList{#2}\LWR@hyperindexref@@comma%
10536 }
```

\LWR@hyperindexref@@comma {*<arg, perhaps with a range>*}

A comma separator is placed if not the first item, then the range is parsed.

```
10537 \newcommand*{\LWR@hyperindexref@@comma}[1]{%
10538 \LWR@hyperindexref@thiscomma%
10539 \renewcommand{\LWR@hyperindexref@thiscomma}{\LWR@hyperindexref@nextcomma}%
10540 \expandafter\LWR@hyperindexref@range\expandafter{\IndexRangeSeparator}{#1}%
10541 }
```

\LWR@hyperindexref@range {*<range delimiter>*} {*<arg>*}

```
10542 \NewDocumentCommand{\LWR@hyperindexref@range}
10543 {m >{\SplitArgument{1}{#1}} m}
10544 {\LWR@hyperindexrefsub#2}
```

\LWR@hyperindexrefsub {*<range start: LWR@autoindex>*} {*<range end, or -NoValue->*}

Handles the start and end of a range, if applicable.

```
10545 \newcommand*{\LWR@hyperindexrefsub}[2]{%
10546 \LWR@hyperindexrefsubtwo{#1}%
10547 \IfValueT{#2}{%
10548 \IndexRangeSeparator%
10549 \LWR@hyperindexrefsubtwo{#2}%
10550 }%
10551 }
```

\LWR@hyperindexrefsubtwo {*<LWR@autoindex>*}

```
10552 \newcommand*{\LWR@hyperindexrefsubtwo}[1]{%
```

In long index lines with numerous entries, *makeindex* can insert a newline before the page number, resulting in an extra space before the first digit. If the first character is a space, remove it first.

```
10553 \edef\LWR@tempone{#1}%
10554 \IfBeginWith{\LWR@tempone}{ }{%
10555 \StrGobbleLeft{\LWR@tempone}{1}[\LWR@tempone]%
10556 }{ }%
```

If a numeric entry, create a link. If not numeric, such as `\see`, use the entry as-is. `\emph`, `\textit`, etc. have been redefined above to create and format the entry.

```

10557 \IfInteger{\LWR@tempone}%
10558 {\LWR@indexnameref{\LWR@tempone}}%
10559 {%
10560 \begingroup%
10561 \LWR@hyperindexrefnullified%
10562 #1%
10563 \endgroup%
10564 }%
10565 }
```

`\hyperpage` Emulate `hyperref`.

```
10566 \LetLtxMacro\hyperpage\hyperindexref
```

`\nohyperpage` Emulate `hyperref`.

```
10567 \def\nohyperpage#1{}
```

`\hyperindexformat` Emulate `hyperref`.

```

10568 \def\hyperindexformat#1#2{%
10569 #1{\hyperpage{#2}}%
10570 }%

10571 \end{warpHTML}
```

**for PRINT output:** A null command for print mode, in case `hyperref` was not used:

```

10572 \begin{warpprint}
10573 \newcommand{\hyperindexref}[1]{#1}
10574 \end{warpprint}
```

**for HTML & PRINT:** For the `glossaries` package, try to prevent an error where `\glo@name` was not found:

```

10575 \begin{warppall}
10576 \providecommand{\glo@name}{}
10577 \end{warppall}
```

## 77 Bibliography presentation

**for HTML output:** 10578 `\begin{warpHTML}`

`\bibliography` `{\filenames}` At one time this was modified to read `\BaseJobname.bbl`, which meant the HTML version could not resolve until the print version was also present. This also confused `multibib`. It has been reverted to the original to use `\jobname.bbl`.

`\@biblabel`  $\{\langle text-refnumber \rangle\}$

```
10579 \renewcommand{\@biblabel}[1]{[#1]\quad}
```

Env thebibliography To emphasize document titles in the bibliography, the following redefines `\em` inside thebibliography to gather everything until the next closing brace, then display these tokens with `\textit`.

*Adapted from* `embracedef.sty`, which is by TAKAYUKI YATO:

<https://gist.github.com/zr-tex8r/b72555e3e7ad2f0a37f1>

```
10580 \AtBeginDocument{
10581
10582 \AtBeginEnvironment{thebibliography}{
10583
10584 \providecommand*\LWR@newem}[1]{\textit{#1}}
10585
10586 \renewrobustcmd{\em}{%
10587 \begingroup
10588 \gdef\LWR@em@after{\LWR@em@finish\LWR@newem}%
10589 \afterassignment\LWR@em@after
10590 \toks@\bgroup
10591 }
10592
10593 \def\LWR@em@finish#1{%
10594 \xdef\LWR@em@after{\noexpand#1\the\toks@}}%
10595 \endgroup
10596 \LWR@em@after\egroup
10597 }
10598
10599 }% \AtBeginEnvironment{thebibliography}
10600
10601 }% \AtBeginDocument

10602 \end{warpHTML}
```

## 78 Restoring original formatting

for HTML output: `10603 \begin{warpHTML}`

`\LWR@restoreMathJaxformatting` A few macros (ref: `tcolorbox`) must be treated separately while printing the HTML comment for a MATHJAX expression. These are set here, to which other functions may be appended.

```
10604 \newcommand*\LWR@restoreMathJaxformatting{}{}
```

`\LWR@restoreorigformatting` Used to temporarily restore the print-mode meaning of a number of formatting, graphics, and symbols-related macros while generating SVG math or a `lateximage`.

Must be used inside a group.

Sets `\LWR@formatting` to print until the end of the group.

A number of packages will `\appto` additional actions to this macro.

Various packages add to this macro using `\appto`.

```
10605 \newcommand*{\LWR@restoreorigformatting}{%
10606 \LWR@traceinfo{\LWR@restoreorigformatting}%
```

Numerous macros change their print/HTML meaning depending on `\LWR@formatting`:

```
10607 \renewcommand*{\LWR@formatting}{print}%
10608 \linespread{1}%

10609 \let\par\LWR@origpar%

10610 \LWR@select@print@hspace%

10611 \LetLtxMacro\hfil\LWR@origfil%
10612 \let\hss\LWR@orighss%
10613 \let\llap\LWR@origllap%
10614 \let\rlap\LWR@origrlap%
10615 \let\hfilneg\LWR@origfilneg%

10616 \let\,\LWR@origcomma% disable HTML short unbreakable space
10617 \let\thinspace\LWR@origthinspace% disable HTML short unbreakable space
10618 \let\negthinspace\LWR@orignegthinspace% disable HTML negative short unbreakable space
10619 \let\textellipsis\LWR@origtextellipsis%

10620 \let\vdots\LWR@origvdots%

10621 \let\textless\LWR@origtextless%
10622 \let\textgreater\LWR@origtextgreater%

10623 \let\&\LWR@origampersand%

10624 \LetLtxMacro\em\LWR@origem%
10625 \LetLtxMacro\normalfont\LWR@orignormalfont%
10626 \let\sp\LWR@origsp%
10627 \let\sb\LWR@origsb%
10628 \LetLtxMacro\underline\LWR@origunderline%
10629 \let~\LWR@origtilde%
10630 \let\enskip\LWR@origenskip%
10631 \let\quad\LWR@origquad%
10632 \let\qquad\LWR@origqqquad%
```

`\endtabular` must be restored to its original, instead of relying on `lwarp`'s `\LWR@formatted` mechanism:

```
10633 \LetLtxMacro\endtabular\LWR@origendtabular%
10634 \csletcs{endtabular*}{\LWR@origendtabular*}%
```

```

10635 \LetLtxMacro\noalign\LWR@orignoalign%
10636 \LetLtxMacro\hline\LWR@orighline%

10637 \let\newline\LWR@orignewline%
10638 \LetLtxMacro\includegraphics\LWR@origincludegraphics%

10639 \LetLtxMacro\@ensuredmath\LWR@origensuredmath%

10640 \let\math\LWR@orig@math%
10641 \let\endmath\LWR@orig@endmath%
10642 \let\displaymath\LWR@orig@displaymath%
10643 \let\enddisplaymath\LWR@orig@enddisplaymath%
10644 %
10645 \LWR@restoreorigaccents%
10646 \LWR@restoreoriglists%
10647 %
10648 \LWR@FBcancel%

```

To enable MATHJAX-specific nullification, used for tcolorbox:

```

10649 \ifboolexpr{bool{mathjax} or (bool{FormatWP} and bool{WPMarkMath}) }%
10650 {\LWR@restoreMathJaxformatting}%
10651 {}%
10652 }

10653 \end{warpHTML}

```

## 79 Nullifying filename formatting

The following are used to nullify certain macros and environments while converting section names to file names.

**for HTML output:** 10654 \begin{warpHTML}

Also commonly used are \@empty, \@gobble, and \@firstofone.

```
10655 \newcommand*{\LWR@dash}{-}
```

`\LWR@nullfonts` Removes formatting during filename operations, file references, and HTML comments.



**Use only inside a group.**

The following are *not* made robust, since they must be expanded to their nullified versions.

```

10656 \catcode'\$=\active% redefining $ below
10657 \catcode'_ =12% redefining _ below
10658 \newcommand*{\LWR@nullfonts}{%

```

## Various built-in symbols.

```

10659 \renewcommand*{\$}{-}%
10660 \renewcommand*{\%}{-}%
10661 \renewcommand*{_}{-}%
10662 \renewcommand*{\}{-}%
10663 \renewcommand*{\{ }{-}%
10664 \renewcommand*{\&}{-}% used to be 'and'
10665 \renewcommand*{\#}{-}%
10666 \renewcommand*{\,}{-}%
10667 \renewcommand*{\~}{-}%
10668 %
10669 % accents:
10670 \renewcommand*{\`}[1]{##1}%
10671 \renewcommand*{\'}[1]{##1}%
10672 \renewcommand*{\^}[1]{##1}%
10673 \renewcommand*{\~}[1]{##1}%
10674 \renewcommand*{\=}[1]{##1}%
10675 \renewcommand*{\u}[1]{##1}%
10676 \renewcommand*{\.}[1]{##1}%
10677 \renewcommand*{\"}[1]{##1}%
10678 \renewcommand*{\H}[1]{##1}%
10679 \renewcommand*{\V}[1]{##1}%
10680 \renewcommand*{\d}[1]{##1}%
10681 \renewcommand*{\c}[1]{##1}%
10682 \renewcommand*{\b}[1]{##1}%
10683 \renewcommand*{\t}[1]{##1}%
10684 %
10685 \let\newline\LWR@dash%
10686 \let\textasciicircum\LWR@dash%
10687 \let\textasciitilde\LWR@dash%
10688 \let\textasteriskcentered\LWR@dash%
10689 \let\textbackslash\LWR@dash%
10690 \let\textbar\LWR@dash%
10691 \let\textbardbl\LWR@dash%
10692 \let\textbigcircle\LWR@dash%
10693 \let\textbraceleft\LWR@dash%
10694 \let\textbraceright\LWR@dash%
10695 \let\textbullet\LWR@dash%
10696 \let\textcopyright\LWR@dash%
10697 \let\textdagger\LWR@dash%
10698 \let\textdaggerdbl\LWR@dash%
10699 \let\textdollar\LWR@dash%
10700 \let\textellipsis\LWR@dash%
10701 \let\textemdash\LWR@dash%
10702 \let\textendash\LWR@dash%
10703 \let\textexclamdown\LWR@dash%
10704 \let\textgreater\LWR@dash%
10705 \let\textless\LWR@dash%
10706 \let\textordfeminine\LWR@dash%
10707 \let\textordmasculine\LWR@dash%
10708 \let\textparagraph\LWR@dash%
10709 \let\textperiodcentered\LWR@dash%
10710 \let\textpertenthousand\LWR@dash%
10711 \let\textperthousand\LWR@dash%

```

```

10712 \let\textquestiondown\LWR@dash%
10713 \let\textquotedblleft\LWR@dash%
10714 \let\textquotedblright\LWR@dash%
10715 \let\textquoteleft\LWR@dash%
10716 \let\textquoteright\LWR@dash%
10717 \let\textregistered\LWR@dash%
10718 \let\textsection\LWR@dash%
10719 \let\textsterling\LWR@dash%
10720 \let\texttrademark\LWR@dash%
10721 \let\textunderscore\LWR@dash%
10722 \let\textvisiblespace\LWR@dash%
10723 \let\copyright\LWR@dash%
10724 \let\dag\LWR@dash%
10725 \let\ddag\LWR@dash%
10726 \let\dots\LWR@dash%
10727 \let\P\LWR@dash%
10728 \let\pounds\LWR@dash%
10729 \let\S\LWR@dash%
10730 %
10731 \renewcommand*{\aa}{a}%
10732 \renewcommand*{\AA}{A}%
10733 \renewcommand*{\AE}{AE}%
10734 \renewcommand*{\ae}{ae}%
10735 \renewcommand*{\dh}{d}%
10736 \renewcommand*{\DH}{D}%
10737 \renewcommand*{\DJ}{D}%
10738 \renewcommand*{\dj}{d}%
10739 \renewcommand*{\IJ}{IJ}%
10740 \renewcommand*{\ij}{ij}%
10741 \renewcommand*{\L}{L}%
10742 \renewcommand*{\l}{l}%
10743 \renewcommand*{\NG}{NG}%
10744 \renewcommand*{\ng}{ng}%
10745 \renewcommand*{\O}{O}%
10746 \renewcommand*{\o}{o}%
10747 \renewcommand*{\oe}{oe}%
10748 \renewcommand*{\OE}{OE}%
10749 \renewcommand*{\ss}{ss}%
10750 \renewcommand*{\SS}{SS}%
10751 \renewcommand*{\th}{th}%
10752 \renewcommand*{\TH}{TH}%
10753 %
10754 \let\guillemotleft\@empty%
10755 \let\guilsinglleft\@empty%
10756 \let\quotedblbase\@empty%
10757 \let\textquotedbl\@empty%
10758 \let\guillemotright\@empty%
10759 \let\guilsinglright\@empty%
10760 \let\quotesinglbase\@empty%

10761 \renewcommand*{\HTMLunicode}[1]{}%
10762 \renewcommand*{\HTMLentity}[1]{}%

10763 \renewcommand{\textsuperscript}[1]{##1}%
10764 \renewcommand{\textsubscript}[1]{##1}%

```

```

10765 \renewcommand{\underline}[1]{##1}%
10766 \RenewDocumentCommand{\hspace}{s m}{}%
10767 \RenewDocumentCommand{\LWR@htmlspanclass}{o m +m}{##3}%
10768 \DeclareExpandableDocumentCommand{\InlineClass}{D{()}{}}{ o m +m}{##4}%

```

Nullify math macros.

```

10769 \def\(<##1\>){}%
10770 \def\[<##1\>]{}%
10771 \RenewDocumentCommand{\LWR@subsingledollar}{s m m m}{}%

```

Nullify logos:

```

10772 \renewcommand*{\TeX}{TeX}%
10773 \renewcommand*{\LaTeX}{LaTeX}%
10774 \renewcommand*{\LaTeXe}{LaTeX2e}%
10775 \renewcommand*{\LuaTeX}{LuaTeX}%
10776 \renewcommand*{\LuaLaTeX}{LuaLaTeX}%
10777 \renewcommand*{\XeTeX}{XeTeX}%
10778 \renewcommand*{\XeLaTeX}{XeLaTeX}%
10779 \renewcommand*{\ConTeXt}{ConTeXt}%
10780 \renewcommand*{\BibTeX}{BibTeX}%
10781 \renewcommand*{\MakeIndex}{MakeIndex}%
10782 \renewcommand*{\AmS}{AmS}%
10783 \renewcommand*{\MiKTeX}{MiKTeX}%
10784 \renewcommand*{\LyX}{LyX}%

```

Use the simpler form with `\texorpdfstring`:

```

10785 \def\texorpdfstring{\expandafter\@secondoftwo}%
10786 }
10787 \catcode'\$=3%
10788 \catcode'_ =8%

```

`\FilenameNullify {<redefinitions>}`

Adds more nullifying definitions for filename generation.

```

10789 \newcommand*{\FilenameNullify}[1]{%
10790 \appto{\LWR@nullfonts}{#1}%
10791 }

10792 \end{warpHTML}

```

## 80 Math

### 80.1 Limitations

See [Math](#), section 8.7.

## 80.2 HTML alt tag names

Redefinable names for the HTML alt tags, for translation according to the reader's native language.

**for HTML & PRINT:** 10793 \begin{warpall}

`\AltTextOpen` The opening part of HTML alt tag for an image. The default is a left parenthesis.

Default: (

```
10794 \newcommand*\AltTextOpen\{ (}
```

`\AltTextClose` The closing part of HTML alt tag for an image. The default is a right parenthesis.

Default: )

```
10795 \newcommand*\AltTextClose\{) }
```

`\ImageAltText` The HTML alt tag for an image.

Default: image

```
10796 \newcommand*\ImageAltText\{ image }
```

`\MathImageAltText` The HTML alt tag for an SVG math image.

Default: "math image"

```
10797 \newcommand*\MathImageAltText\{ math image }
```

`\LWR@ThisAltText` The HTML alt tag for the next image. Cleared after use, and also after each `lateximage`, `\LWR@subsingledollar`, and each use of `MATHJAX`.

```
10798 \newcommand*\LWR@ThisAltText\{ }
```

`\ThisAltText` { *text* }

Assigns the HTML alt tag for the next image generated by `lwarp`, such as a `lateximage`, `picture`, or `svg math`.

```
10799 \newcommand*\ThisAltText[1]{%
10800 \renewcommand*\LWR@ThisAltText\{#1}%
10801 }
```

`\PackageDiagramAltText` Appended to the `lateximage` HTML alt tag for the images generated by many packages.

Default: "diagram"

```
10802 \newcommand*\PackageDiagramAltText\{ diagram }
```

```
10803 \end{warpall}
```

### 80.3 Inline and display math

**for HTML output:** 10804 `\begin{warpHTML}`

**Ctrl LWR@externalfilecnt** Counter for the external files which are generated and then referenced from the HTML:

10805 `\newcounter{LWR@externalfilecnt}`

**Bool LWR@indisplaymathimage** True if processing display math for svg output. Inside a `lateximage`, display math is only set to print-mode output if `LWR@indisplaymathimage` is false. Used to avoid nullifying display math before it has been completed.

10806 `\newbool{LWR@indisplaymathimage}`

**Bool LWR@insidemathcomment** True while inside an HTML comment which is displaying a math environment. Used to undo the comment for a moment while creating a `\label`, so that the label's HTML tags will be seen by HTML.

10807 `\newbool{LWR@insidemathcomment}`

10808 `\boolfalse{LWR@insidemathcomment}`

**Bool LWR@xfakebold** True if `xfakebold \setBold` is in use.

10809 `\newbool{LWR@xfakebold}`

10810 `\boolfalse{LWR@xfakebold}`

**`\LWR@orig@setBold`** Redefined by `lwarp-xfakebold`.

10811 `\newcommand*{\LWR@orig@setBold}{}{}`

**`\LWR@orig@unsetBold`** Redefined by `lwarp-xfakebold`.

10812 `\newcommand*{\LWR@orig@unsetBold}{}{}`

**`\LWR@applyxfakebold`** Redefined by `lwarp-xfakebold`.

10813 `\newcommand*{\LWR@applyxfakebold}{}{}`

**`\LWR@setcurrentfont`** Sets the actual  $\LaTeX$  font to that which was selected for HTML output. Ex: In HTML mode, `\bfseries` sets `\LWR@f@series` to “bf”. This sets the PDF output here for use inside a `lateximage`.

10814 `\newcommand*{\LWR@setcurrentfont}{%`

10815 `\LWR@traceinfo{Using font family \LWR@f@family}%`

10816 `\@nameuse{LWR@print@\LWR@f@family family}%`

10817 `\LWR@traceinfo{Using font series \LWR@f@series}%`

10818 `\@nameuse{LWR@print@\LWR@f@series series}%`

10819 `\LWR@traceinfo{Using font shape \LWR@f@shape}%`

10820 `\@nameuse{LWR@print@\LWR@f@shape shape}%`

10821 `\LWR@traceinfo{Using font caps shape \LWR@f@shapecaps}%`

10822 `\@nameuse{LWR@print@\LWR@f@shapecaps shape}%`

10823 }

`\$` Plain dollar signs appearing in the HTML output may be interpreted by MATHJAX to be math shifts. For a plain text dollar `\$`, use an HTML entity to avoid it being interpreted by MATHJAX, unless are inside a lateximage, in which case it will not be seen by MATHJAX.

```
10824 \let\LWR@origtextdollar\$
10825
10826 \renewcommand*{\$}{%
10827 \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}%
10828 {\LWR@origtextdollar}%
10829 {\HTMLUnicode{00024}}%
10830 }
```

File `lwarp_baseline_marker.png` A marker to be used to help *pdfcrop* identify the inline math baseline and width. If either `graphicx` or `graphics` is loaded, this marker is placed at the lower left and lower right corners of the inline math. *pdfcrop* is then able to identify the width of the image, and also the height of an image such as a horizontal dash which does not otherwise touch the baseline.

File `lwarp_baseline_marker.eps`

A marker with alpha or opacity of 0% is not registered by *pdfcrop*, so the marker is a small square block of 1% alpha, which seems to work while still being effectively invisible in the final SVG image.

If `graphicx` is loaded, this marker is sized as a tiny 1 sp square. If `graphics` is loaded, this marker is used at its default size of around .25 pt. If neither `graphics` package is loaded, the marker is replaced by a 10 sp horizontal space, and there is no assistance for determining baseline or width of the inline math image. The best results are obtained when using `graphicx`.

`\LWR@addbaselinemarker` Places a small marker in an svg inline image. If `graphics` or `graphicx` are loaded, the marker is a mostly transparent image. If neither is loaded, no marker is used.

```
10831 \AtBeginDocument{
10832
10833 \ifpdf
10834 \newcommand*\LWR@baselinename{\lwarp_baseline_marker.png}
10835 \else
10836 \ifXeTeX
10837 \newcommand*\LWR@baselinename{\lwarp_baseline_marker.png}
10838 \else
10839 \newcommand*\LWR@baselinename{\lwarp_baseline_marker.eps}
10840 \fi
10841 \fi
10842
10843 \IfFileExists{\LWR@baselinename}%
10844 {
10845 \@ifpackageloaded{graphicx}{
10846 \newcommand*\LWR@addbaselinemarker{%
10847 \LWR@originincludegraphics{\LWR@baselinename}%
10848 }
10849 }{
10850 \@ifpackageloaded{graphics}{
10851 \newcommand*\LWR@addbaselinemarker{%
10852 \LWR@originincludegraphics{\LWR@baselinename}%

```

```

10853 }
10854 }{
10855 \newcommand*{\LWR@addbaselinemarker}{%
10856 \global\booltrue{LWR@warnbaselinemarker}%
10857 }
10858 \AtEndDocument{
10859 \ifbool{LWR@warnbaselinemarker}{
10860 \PackageWarningNoLine{lwarp}{%
10861 Load graphicx or graphics for improved\MessageBreak
10862 SVG math sizing and baselines%
10863 }
10864 }{}
10865 }
10866 }
10867 }
10868 }{% lwarp_baseline_marker.png or .eps is not present
10869 \newcommand*{\LWR@addbaselinemarker}{%
10870 \global\booltrue{LWR@warnbaselinemarker}%
10871 }
10872 \AtEndDocument{
10873 \ifbool{LWR@warnbaselinemarker}{
10874 \PackageWarningNoLine{lwarp}{%
10875 File \LWR@baselinename\space is not installed\MessageBreak
10876 alongside the lwarp-*.sty files, so\MessageBreak
10877 SVG math sizing and baselines may not be accurate}
10878 }{}
10879 }
10880 }
10881
10882 }% AtBeginDocument

```

Bool LWR@warnbaselinemarker True if the math baseline marker was ever called for, but `graphics` or `graphicx` were not loaded.

```

10883 \newbool{LWR@warnbaselinemarker}
10884 \boolfalse{LWR@warnbaselinemarker}

```

Bool LWR@unknownmathsize If Tikz or other objects are used inside math mode, the resulting image may exceed the TeX box, resulting in an incorrect measurement of the size of the resulting image. If this is so, the HTML styles for image size and depth will be neutralized.

```

10885 \newbool{LWR@unknownmathsize}

```

\LWR@singledollarmeasure { *$expression$* }

Measures the size of the image of the math expression.

(In some circumstances `svg math` is used even if `MATHJAX` is preferred.)

**SVG math:** \LWR@originsuredmath is part of argument #4.

**SVG math \ensuremath:** \LWR@originsuredmath is part of argument #4.

**SVG dynamic math:** \LWR@originsuredmath is part of argument #4.

**Mathjax:** Argument #4 is the contents of the math expression without `\LWR@origensuredmath`. This case is handled above.

**Mathjax \ensuremath:** `\LWR@origensuredmath` is part of argument #4.

**Mathjax dynamic math:** Argument #4 is the contents of the math expression without `\LWR@origensuredmath`, so `\LWR@origensuredmath` is added below.

**\ifmmode:** Included “just in case”.

Factored from `\LWR@subsingledollarsvg`.

```
10886 \newcommand*{\LWR@singledollarmeasure}[1]{%
10887 \begingroup%
```

Temporarily disable formatting while measuring the image parameters:

```
10888 \LWR@restoreorigformatting%
10889 \RenewDocumentEnvironment{lateximage}{s o s o o}{\}{}% inside group
10890 \LWR@print@normalsize%
```

Temporarily set font for the HTML PDF output:

```
10891 \LWR@setcurrentfont%
```

`lateximagedepth` must be nested to avoid generating paragraph tags.  $\mathcal{M}\mathcal{S}$  math modifies the `\text` macro such that `\addtocounter` does not always occur as expected. Lower-level code is used instead.

```
10892 \global\advance\c@LWR@lateximagedepth 1\relax%
```

Typeset the math in a box. While doing so, some macros or environments may set `LWR@unknownmathsize`, in which case this will be used to cancel the HTML styles being generated here.

```
10893 \boolfalse{LWR@unknownmathsize}%
10894 \ifmmode%
10895 \global\sbox{\LWR@singledollarbox}{#1}%
10896 \else%
10897 \ifbool{LWR@dynamicmath}{%
10898 \ifbool{mathjax}{%
10899 \global\sbox{\LWR@singledollarbox}%
10900 {\LWR@origensuredmath{#1}}%
10901 }{%
10902 \global\sbox{\LWR@singledollarbox}{#1}%
10903 }%
10904 }{%
10905 \global\sbox{\LWR@singledollarbox}{#1}%
10906 }%
10907 \fi%
```

Add a small and almost transparent marker at the depth of the image.

A math minus sign has the same depth as a plus, even though it does not draw anything below the baseline. This means that *pdfcrop* would crop the image without depth. The marker below the baseline is seen by *pdfcrop* and preserves the depth.

```

10908 \global\sbox{\LWR@singledollarbox}{%
10909 \usebox{\LWR@singledollarbox}%
10910 \raisebox{-\dp\LWR@singledollarbox}{%
10911 \LWR@addbaselinemarker%
10912 }%
10913 }%

```

More low-level code to undo the counter change.

```

10914 \global\advance\c@LWR@lateximagedepth -1\relax% Due to AmS \text macro.

```

Measure the depth:

```

10915 \setlength{\LWR@singledollardepth}{%
10916 \LateximageFontScale\dp\LWR@singledollarbox%
10917 }%

```

Make the length a global change:

```

10918 \global\LWR@singledollardepth=\LWR@singledollardepth%

```

Likewise for width:

```

10919 \setlength{\LWR@singledollarwidth}{%
10920 \LateximageFontScale\wd\LWR@singledollarbox%
10921 }%
10922 \global\LWR@singledollarwidth=\LWR@singledollarwidth%

```

Likewise for total height:

```

10923 \setlength{\LWR@singledollarheight}{%
10924 \LateximageFontScale\ht\LWR@singledollarbox%
10925 }%
10926 \addtolength{\LWR@singledollarheight}{%
10927 \LateximageFontScale\dp\LWR@singledollarbox%
10928 }%
10929 \global\LWR@singledollarheight=\LWR@singledollarheight%

10930 \endgroup%
10931 }

```

```
\LWR@subsingledollarsvg * {<2: alt text>} {<3: add'l hashing>} {<4: math expression>}
```

For inline math. Uses svg math. The image is measured and adjusted to the baseline of the HTML output, and placed inside a `lateximage`.

(In some circumstances svg math is used even if MATHJAX is preferred.)

Factored from `\LWR@subsingledollar`.

```
10932 \newcommand*{\LWR@subsingledollarsvg}[4]{%
```

Measure the depth, width, and height of the math image:

```
10933 \LWR@singledollarmeasure{#4}%
```

Set a style for the the height or width. The em unit is used so that the math scales according to the user's selected font size.

Start with the greater of the width or the height, biased towards the width:

```
10934 \ifdimgreater{\LWR@singledollarwidth}{.7\LWR@singledollarheight}{%
10935 \def\LWR@singledollarstyle{%
10936 width:\LWR@convertto{em}{\the\LWR@singledollarwidth} em%
10937 }%
10938 }{%
10939 \def\LWR@singledollarstyle{%
10940 height:\LWR@convertto{em}{\the\LWR@singledollarheight} em%
10941 }%
10942 }%
```

If a very narrow width, use the height.

```
10943 \ifdimless{\LWR@singledollarwidth}{.2em}%
10944 {%
10945 \def\LWR@singledollarstyle{%
10946 height:\LWR@convertto{em}{\the\LWR@singledollarheight} em%
10947 }%
10948 }%
10949 {}%
```

If very wide and short, use the width:

```
10950 \ifdimless{\LWR@singledollarheight}{.2em}%
10951 {%
10952 \def\LWR@singledollarstyle{%
10953 width:\LWR@convertto{em}{\the\LWR@singledollarwidth} em%
10954 }%
10955 }%
10956 {}%
```

If there is significant text depth, add the depth to the style.

```
10957 \ifdimgreater{\LWR@singledollardepth}{0.05ex}{%
10958 \def\LWR@singledollardepthstyle{%
10959 \ ; % extra space
10960 \LWR@print@mbbox{%
10961 vertical-align:-\LWR@convertto{em}{\the\LWR@singledollardepth} em%
10962 } % extra space
10963 }%
10964 }{%
10965 \def\LWR@singledollardepthstyle{%
10966 }%
```

If using certain *Tikz* actions inside *math*, the resulting image may exceed the *TeX* boundaries, so the *HTML* size styles may be incorrect, and must be neutralized.

```

10967 \ifbool{LWR@unknownmathsize}{%
10968 \def\LWR@singledollarstyle{}%
10969 \def\LWR@singledollardepthstyle{}%
10970 }{}%
```

Create the *lateximage* using the alternate tag and the computed size and depth. The star causes *lateximage* to use an MD5 hash as the filename. When hashing, also include the current font and color in the hash.

```

10971 \ifbool{LWR@dynamicmath}{%
10972 \LWR@traceinfo{subsingledollar: dynamic}%
10973 \begin{lateximage}% no hashing
10974 [\MathImageAltText]% alt tag
10975 []% no add'l hashing
10976 [\LWR@singledollarstyle \LWR@singledollardepthstyle]% CSS
10977 }{% not dynamic math
10978 \LWR@traceinfo{subsingledollar: static}%
10979 \IfValueTF{#1}{% #1 True
10980 \LWR@findcurrenttextcolor% sets \LWR@tempcolor
```

Support for *xfakebold*:

```

10981 \ifbool{LWR@xfakebold}%
10982 {\def\LWR@tempone{Y}}%
10983 {\def\LWR@tempone{N}}%

10984 \begin{lateximage}% use hashing
10985 [#2]% alt
10986 *% do not add open/closing braces
10987 [% addl' hashing
10988 #3%
10989 FM\LWR@f@family%
10990 SR\LWR@f@series%
10991 SH\LWR@f@shape%
10992 SHC\LWR@f@shapecaps%
10993 CL\LWR@tempcolor%
10994 FB\LWR@tempone% xfakebold
10995]%
10996 [\LWR@singledollarstyle \LWR@singledollardepthstyle]% CSS
10997 }{% #1 False
10998 \begin{lateximage}% no hashing
10999 [#2]% alt
11000 []% no add'l hashing
11001 [\LWR@singledollarstyle \LWR@singledollardepthstyle]% CSS
11002 }%
11003 }% not dynamic math
```

Place small and almost transparent markers on the baseline at the left and right edges of the image. These markers are seen by *pdfcrop*, and force vertically-centered objects such as a dash to be raised off the baseline in the cropped image, and also force the total width and left/right margins to be correct. (Except that in some fonts a

character may exceed the bounding box, and thus may appear wider than expected when converted to an image.)

```
11004 \LWR@addbaselinemarker%
```

Support for `xfakebold`:

```
11005 \LWR@applyxfakebold%
```

Typeset the contents:

```
11006 \usebox{\LWR@singledollarbox}%
```

The closing baseline marker:

```
11007 \LWR@addbaselinemarker%
```

```
11008 \end{lateximage}%
```

```
11009 %
```

```
11010 }
```

```
\LWR@subsingledollar *{\langle 2: alt text \rangle}{\langle 3: add'l hashing \rangle}{\langle 4: math expression \rangle}
```

For inline math. Uses MathJax, or for SVG math the image is measured and adjusted to the baseline of the HTML output, and placed inside a `lateximage`.

**SVG math:** `\LWR@origensuredmath` is part of argument #4.

**SVG math \ensuremath:** `\LWR@origensuredmath` is part of argument #4.

**SVG dynamic math:** `\LWR@origensuredmath` is part of argument #4.

**Mathjax:** Argument #4 is the contents of the math expression without `\LWR@origensuredmath`. This case is handled above.

**Mathjax \ensuremath:** `\LWR@origensuredmath` is part of argument #4.

**Mathjax dynamic math:** Argument #4 is the contents of the math expression without `\LWR@origensuredmath`, so `\LWR@origensuredmath` is added below.

[image filename hashing](#) If starred, a hashed filename is used. If so, the hash is based on the `alt` tag and also the additional hashing argument.

This may be used to provide an expression with a simple `alt` tag but also enough additional information to provide a unique hash.

An example is when the expression is a complicated `TEX` expression, which would not copy/paste well. A simplified tag may be used, while the complicated expression is duplicated in the additional hashing argument.

Another example is when the expression is simple, but the image depends on options. These options may be decoded into text form and included in the additional hashing

argument in order to make the hash unique according to the set of options, even if the simple alt tag is still the same.

```

11011 \newlength{\LWR@singledollarwidth}
11012 \newlength{\LWR@singledollarheight}
11013 \newlength{\LWR@singledollardepth}
11014
11015 \newsavebox{\LWR@singledollarbox}
11016
11017 \NewDocumentCommand{\LWR@subsingledollar}{s m m m}{%
11018 \LWR@traceinfo{\LWR@subsingledollar}%

11019 \ifnumcomp{\value{\LWR@lateximagedepth}}{>}{0}%
11020 {%
11021 \LWR@traceinfo{\LWR@subsingledollar: already in a lateximage}%
11022 #4% contents
11023 }%
11024 {% not in a lateximage
11025 \begingroup%
```

Support for xfakebold:

```

11026 \LWR@applyxfakebold%
```

MathJax cannot parse the often complicated T<sub>E</sub>X expressions which appear in the various uses of `\ensuredmath`. `\ensuremath` forces the alt tag to “(math image)”, as translated according to `\MathImageAltText`. If this is the case, force the use of a `lateximage` even if MathJax. Likewise for `siunitx` if `parse-numbers=false`.

If MathJax, or if formatting math for a word processor, and not `\ensuredmath`, and not a dynamic math expression, print the math expression:

```

11027 \ifbool{expr}{%
11028 (
11029 bool{mathjax} or
11030 (bool{FormatWP} and bool{WPMarkMath})
11031) and
11032 (not test {
11033 \ifstrequal {#2}% from \ensuredmath
11034 {\AltTextOpen\MathImageAltText\AltTextClose}
11035 }
11036) and
11037 (not bool{\LWR@dynamicmath})
11038 }%
```

For MATHJAX, print the math between `\(` and `\)`:

```

11039 {%
11040 \LWR@traceinfo{\LWR@subsingledollar: Mathjax}%
11041 {%
11042 \textbackslash(
11043 \LWR@HTMLsanitize{#4}%
11044 \textbackslash)%
11045 }%
```

```
11046 }% mathjax
```

For SVG, print the math inside a `lateximage`, with an `<alt>` tag of the  $\LaTeX$  code, and a CSS style to control the baseline adjustment.

```
11047 {% not mathjax
11048 \LWR@traceinfo{%
11049 LWR@subsingledollar: NOT mathjax, or is ensuremath, or is dynamic%
11050 }%
11051 \LWR@subsingledollarsvg{#1}{#2}{#3}{#4}%
11052 }% not mathjax
11053 \endgroup%
11054 }% not in a lateximage
```

Clear the single-use alt text:

```
11055 \gdef\LWR@ThisAltText{}%
11056 \LWR@traceinfo{LWR@subsingledollar: done}%
11057 }
```

```
11058 \LetLtxMacro\LWR@origdollar$
11059 \LetLtxMacro\LWR@secondorigdollar$% balance for editor syntax highlighting
```

```
11060 \LetLtxMacro\LWR@origopenparen\(
11061 \LetLtxMacro\LWR@origcloseparen\
11062 \LetLtxMacro\LWR@origopenbracket\
11063 \LetLtxMacro\LWR@origclosebracket\]
```

**\$** Redefine the dollar sign to place math inside a `lateximage`, or use `MATHJAX`:  
**\$\$**

```
11064 \begingroup
11065 \catcode'\$=\active%
11066 \protected\gdef$\@ifnextchar$\LWR@doubledollar\LWR@singledollar}%
```

Used by `chemformula` to escape single-dollar math:

```
11067 \protected\gdef\LWR@newsingledollar{\@ifnextchar$\LWR@doubledollar\LWR@singledollar}%
```

`\LWR@doubledollar` Redefine the double dollar sign to place math inside a `lateximage`, or use `MATHJAX`:

```
11068 \protected\gdef\LWR@doubledollar$#1$${%
```

If `MATHJAX` or formatting for a word processor, print the  $\LaTeX$  expression:

```
11069 \ifboolexpr{bool{mathjax} or (bool{FormatWP} and bool{WPMarkMath}) }{%
```

For `MATHJAX`, print the math between `\[` and `\]`:

```
11070 {
11071
11072 \textbackslash[%
11073 \LWR@HTMLsanitize{#1}%
```

```

11074 \textbackslash]
11075
11076 }% mathjax

```

For SVG, print the math inside a `lateximage`, with an `<alt>` tag of the L<sup>A</sup>T<sub>E</sub>X code:

```

11077 {% not mathjax
11078 \begin{BlockClass}{displaymath}%
11079 \LWR@newautoidanchor%
11080 \booltrue{LWR@indisplaymathimage}%
11081 \begin{lateximage}%
11082 [%
11083 \textbackslash{[] % extra space
11084 \LWR@HTMLsanitize{#1} % extra space
11085 \textbackslash{]]}%
11086]%
11087 *% do not add open/closing braces

```

Support for `xfakebold`:

```

11088 \LWR@applyxfakebold%

11089 \LWR@origdollar\LWR@origdollar#1\LWR@origdollar\LWR@origdollar%
11090 \end{lateximage}%
11091 \end{BlockClass}%
11092 }% not mathjax

```

Clear the single-use `alt` text:

```

11093 \gdef\LWR@ThisAltText{%
11094 }%

```

`\LWR@singledollar` {*<alt text>*} {*<math expression>*}

```

11095 \protected\gdef\LWR@singledollar#1${%
11096 \ifbool{mathjax}{%
11097 \LWR@subsingledollar*%
11098 {% alt tag
11099 \textbackslash(%
11100 \LWR@HTMLsanitize{#1} % extra space
11101 \textbackslash)%
11102 }%
11103 {singledollar}% add'l hashing
11104 {#1}% contents
11105 }{% not mathjax
11106 \LWR@subsingledollar*%
11107 {% alt tag
11108 \textbackslash(%
11109 \LWR@HTMLsanitize{#1} % extra space
11110 \textbackslash)%
11111 }%
11112 {singledollar}% add'l hashing
11113 {\LWR@origensuredmath{#1}}}% contents
11114 }% not mathjax

```

Clear the single-use alt text:

```
11115 \gdef\LWR@ThisAltText{%
11116 }
```

\( Redefine to the above dollar macros.

```
\[
11117 \AtBeginDocument{
11118 \protected\gdef\(<#1\){$#1$}
11119 \protected\gdef\[<#1\]{$$#1$$}
11120 }
11121
11122 \endgroup

11123 \AtBeginDocument{
11124 \LetLtxMacro\LWR@openbracketnormal\[
11125 \LetLtxMacro\LWR@closebracketnormal\]
11126 }
```

\@ensuredmath {*<expression>*}

If MathJax, a `lateximage` is used, since `\ensuremath` is often used for complex `TEX` expressions which MathJax may not render. If `svg math`, a hashed file is used with a simple alt tag, but additional hashing provided by the contents.

```
11127 \LetLtxMacro\LWR@origensuredmath\@ensuredmath
11128
11129 \renewcommand{\@ensuredmath}[1]{%
11130 \ifbool{mathjax}{%
11131 \LWR@subsingledollar*\AltTextOpen\MathImageAltText\AltTextClose}%
11132 {%
11133 \protect\LWR@HTMLsanitize{\detokenize\expandafter{#1}}}%
11134 }%
11135 {%
11136 \relax%
11137 \LWR@origensuredmath{#1}%
11138 }%
11139 }{% SVG math
```

If already inside a `lateximage` in math mode, continue as-is.

```
11140 \ifmmode%
11141 \LWR@origensuredmath{#1}%
11142 \else%
```

Create an inline math `lateximage` with a simple alt tag and additional hashing according to the contents.

```
11143 \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}%
11144 {\LWR@origensuredmath{#1}}%
11145 {%
11146 \LWR@subsingledollar*%
```

```

11147 {\AltTextOpen\MathImageAltText\AltTextClose}%
11148 {\protect\LWR@HTMLsanitize{\detokenize\expandafter{#1}}}%
11149 {\LWR@origensuredmath{#1}}}%
11150 }%
11151 \fi%
11152 }%

```

Clear the single-use alt text:

```

11153 \gdef\LWR@ThisAltText{}%
11154 }

```

Remember then remove the old math and displaymath environments:

```

11155 \let\LWR@orig@math\math
11156 \let\LWR@orig@endmath\endmath
11157 \let\LWR@orig@displaymath\displaymath
11158 \let\LWR@orig@enddisplaymath\enddisplaymath
11159
11160 \let\math\relax
11161 \let\endmath\relax
11162 \let\displaymath\relax
11163 \let\enddisplaymath\relax

```

Env math Set math mode then typeset the body of what was between the begin/end. See the environ package for \BODY.

```

11164 \NewEnviron{math}{\expandafter\(\BODY\)}

```

Env LWR@displaymathnormal Set math mode then typeset the body of what was between the begin/end. See the environ package for \BODY.

```

11165 \NewEnviron{LWR@displaymathnormal}{\expandafter\[\BODY\]\@ignoretrue}

```

Set the default displaymath to the normal version:

```

11166 \LetLtxMacro\[\LWR@openbracketnormal%
11167 \LetLtxMacro\]\LWR@closebracketnormal%
11168 \LetLtxMacro\displaymath\LWR@displaymathnormal%
11169 \LetLtxMacro\enddisplaymath\endLWR@displaymathnormal%

```

Env LWR@displaymathother A version of displaymath which can handle complicated objects, but does not supply MATHJAX or HTML alt tags.

```

11170 \newenvironment{LWR@displaymathother}
11171 {%
11172 \begin{BlockClass}{displaymath}%
11173 \LWR@newautoidanchor%
11174 \booltrue{LWR@indisplaymathimage}%
11175 \begin{lateximage}%
11176 [\MathImageAltText]%

```

```

11177 \LWR@origdollar\LWR@origdollar%
11178 }
11179 {%
11180 \LWR@origdollar\LWR@origdollar%
11181 \end{lateximage}%
11182 \end{BlockClass}%
11183 }

```

Env LWR@equationother A version of displaymath which can handle complicated objects, but does not supply MATHJAX or HTML alt tags.

```

11184 \newenvironment{LWR@equationother}
11185 {%
11186 \begin{BlockClass}{displaymathnumbered}%
11187 \LWR@newautoanchor%
11188 \booltrue{LWR@indisplaymathimage}%
11189 \begin{lateximage}[\MathImageAltText]%
11190 \LWR@origequation%
11191 }
11192 {%
11193 \LWR@origendequation%
11194 \end{lateximage}%
11195 \end{BlockClass}%
11196 }

```

## 80.4 MATHJAX support

Ctrl LWR@nextequation Used to add one to compute the next equation number.

```

11197 \newcounter{LWR@nextequation}

```

Determining how to set MATHJAX section and equation numbers. Adjusts for various kinds of \theequation to determine \theMathJaxsection and \theMathJaxequation.

```

11198 \newcommand\LWR@article@theequation{\@arabic\c@equation}
11199
11200 \newcommand\LWR@book@theequation
11201 {\ifnum \c@chapter>\z@ \thechapter.\fi \@arabic\c@equation}
11202
11203
11204 \newcommand\LWR@chapter@theequation{\thechapter.\arabic{equation}}
11205 \newcommand\LWR@section@theequation{\thesection.\arabic{equation}}
11206 \newcommand\LWR@subsection@theequation{\thesubsection.\arabic{equation}}
11207
11208 \AtBeginDocument{
11209 % default per article class:
11210 \newcommand*\theMathJaxsubequations{}\{0\}
11211 \newcommand*\theMathJaxsection{}\{
11212 \newcommand*\theMathJaxequation{}\arabic{equation}}
11213
11214 \ifdefstrequal{\theequation}{\LWR@article@theequation}
11215 {}{

```

```

11216 \ifdefstrequal{\theequation}{\LWR@book@theequation}{
11217 \renewcommand*{\theMathJaxsection}{\ifnum \c@chapter>\z@ \thechapter.\fi}
11218 }{
11219 \ifdefstrequal{\theequation}{\LWR@subsection@theequation}{
11220 \renewcommand*{\theMathJaxsection}{\thesubsection{}}.}
11221 }{
11222 \ifdefstrequal{\theequation}{\LWR@section@theequation}{
11223 \renewcommand*{\theMathJaxsection}{\thesection{}}.}
11224 }{
11225 \ifdefstrequal{\theequation}{\LWR@chapter@theequation}{
11226 \renewcommand*{\theMathJaxsection}{\thechapter{}}.}
11227 }{% unknown format
11228 \PackageWarningNoLine{lwarp}
11229 {%
11230 Unknown equation tag format for \protect\theequation.\MessageBreak
11231 Article-style equation numbering will be used%
11232 }
11233 }}}}
11234 }

```

`\LWR@synchronmathjax` Sets the MATHJAX equation format and number for the following equations.

These MATHJAX commands are printed inside “\(" and “\)” characters. They are printed to HTML output, not interpreted by L<sup>A</sup>T<sub>E</sub>X.

```

11235 \newcommand*{\LWR@synchronmathjax}{%

```

Tell MATHJAX that the next equation number is the current L<sup>A</sup>T<sub>E</sub>X equation number.

Before each equation, `lwarp` inserts into the HTML code:

```
\seteqnumber{subequations?}{section}{number}
```

**subequations?** is 0 usually, 1 if inside `amsmath` subequations.

**section** is a string printed as-is, or empty.

**number** is auto-incremented by MATHJAX between equations.

Place the MATHJAX command inside “\(" and “\)” characters, to be printed to HTML, not interpreted by L<sup>A</sup>T<sub>E</sub>X.

```

11236 \LWR@stoppars%
11237 \InlineClass{hidden}{
11238 \textbackslash(%
11239 \textbackslash{}\seteqnumber%
11240 \{\theMathJaxsubequations\}%
11241 \{\theMathJaxsection\}%
11242 \{\theMathJaxequation\}%
11243 \textbackslash)%
11244 }
11245 \LWR@startpars%
11246 }

```

`\LWR@hidelatexequation`  $\{\langle environment \rangle\} \{\langle contents \rangle\}$

Creates the L<sup>A</sup>T<sub>E</sub>X version of the equation inside an HTML comment.

```
11247 \NewDocumentCommand{\LWR@hidelatexequation}{m +m}{%
```

Stop HTML paragraph handling and open an HTML comment:

```
11248 \LWR@stoppars
11249 \LWR@htmlopencomment
11250
```

Start the L<sup>A</sup>T<sub>E</sub>X math environment inside the HTML comment:

```
11251 \begingroup
11252 \@nameuse{\LWR@orig#1}
```

While in the math environment, restore various commands to their L<sup>A</sup>T<sub>E</sub>X meanings.

```
11253 \LWR@restoreorigformatting
11254 \booltrue{\LWR@insidemathcomment}
```

See `\LWR@htmlmathlabel` in section 80.7.1.

Print the contents of the equation:

```
11255 #2
```

End the L<sup>A</sup>T<sub>E</sub>X math environment inside the HTML comment:

```
11256 \@nameuse{\LWR@origend#1}
11257 \endgroup
11258
```

Close the HTML comment and resume HTML paragraph handling:

```
11259 \LWR@htmlclosecomment
11260 \boolfalse{\LWR@insidemathcomment}
11261 \LWR@startpars
11262 }
```

`\LWR@addmathjax`  $\{\langle environment \rangle\} \{\langle contents \rangle\}$

Given the name of a math environment and its contents, create a MATHJAX instance. The contents are printed to HTML output, not interpreted by L<sup>A</sup>T<sub>E</sub>X.

```
11263 \NewDocumentCommand{\LWR@addmathjax}{m +m}{%
```

Enclose the MATHJAX environment inside printed “\ (“ and “\)” characters.

```
11264 \LWR@origtilde\LWR@orignewline
11265 \textbackslash{}\begin\{#1\}
```

Print the contents, sanitizing for HTML special characters.

```
11266 \LWR@HTMLsanitizeexpand{\detokenize\expandafter{#2}}
```

Close the MATHJAX environment:

```
11267 \textbackslash{}end\{#1\}
11268 \LWR@orignewline
11269 }
```

## 80.5 Equation environment

Remember existing equation environment, after redefined by amsmath, if loaded.

```
11270 \AtBeginDocument{
11271 \let\LWR@origequation\equation
11272 \let\LWR@origendequation\endequation
11273 \csletcs{LWR@origequation*}{equation*}
11274 \csletcs{LWR@origendequation*}{endequation*}
11275 }
```

```
\LWR@doequation {<env contents>} {<env name>}
```

For SVG math output, the contents are typeset using the original equation inside a `lateximage`, along with an `<alt>` tag containing a detokenized copy of the  $\LaTeX$  source for the math.

For MATHJAX output, the contents are typeset in an original equation environment placed inside a HTML comment, with special processing for `\labels`. The contents are also printed to the HTML output for processing by the MATHJAX script.

```
11276 \newcommand*{\LWR@doequation}[2]{%
11277
```

If mathjax or FormatWP, print the  $\LaTeX$  expression:

```
11278 \ifboolexpr{bool{mathjax} or (bool{FormatWP} and bool{WPMarkMath}) }{%
```

MATHJAX output:

```
11279 {
```

Print commands to synchronize MATHJAX's equation number and format to the current  $\LaTeX$  chapter/section and equation number:

```
11280 \LWR@syncmathjax%
```

Print the  $\LaTeX$  math inside an HTML comment:

```
11281 \LWR@hidelatexequation{#2}{#1}
11282 }
```

SVG output: Create the `lateximage` along with an HTML `<alt>` tag having an equation number, the  $\LaTeX$  equation environment commands, and the contents of the environment's `\BODY`.

```
11283 {% not mathjax
```

Begin the `lateximage` with an `<alt>` tag containing the math source:

```
11284 \ifstrequal{#2}{equation*}{%
11285 \begin{BlockClass}{displaymath}%
11286 }{%
11287 \begin{BlockClass}{displaymathnumbered}%
11288 }%
11289 \LWR@newautoidanchor%
11290 \booltrue{LWR@indisplaymathimage}%
11291 \begin{lateximage}[%
11292 \ifstrequal{#2}{equation*}{%
11293 \ifdefequal{LWR@equationtag}{\theequation}{%
11294 % no tag was given
11295 }{%
11296 (\LWR@equationtag) % tag was given
11297 }%
11298 }{%
11299 (\LWR@equationtag) % automatic numbering
11300 }%
11301 \textbackslash{begin\{#2\}} % extra space
11302 \LWR@HTMLsanitizeexpand{\detokenize\expandafter{#1}} % extra space
11303 \textbackslash{end\{#2\}}%
11304 }*% alt tag
```

Support for `xfakebold`:

```
11305 \LWR@applyxfakebold%
```

Create the actual  $\LaTeX$ -formatted equation inside the `lateximage` using the contents of the environment.

```
11306 \@nameuse{LWR@orig#2}%
11307 #1% contents collected by \collect@body
11308 \@nameuse{LWR@origend#2}%
11309 \end{lateximage}%
11310 \end{BlockClass}%
11311 }% not mathjax
```

Clear the single-use `alt` text:

```
11312 \gdef\LWR@ThisAltText{%
11313 }
```

After the environment, if `MATHJAX`, print the math to the HTML output for `MATHJAX` processing. If a footnote is used, sync the footnote counter before, then `unsync` after for non-equation environments, as defined next.

```
11314 \newcommand*{LWR@doendequation}[1]{%
```

```

11315 \ifbool{expr{bool{mathjax} or (bool{FormatWP} and bool{WPMarkMath}) }}%
11316 {%
11317 \IfSubStr{\detokenize\expandafter{\BODY}}{\detokenize{note}}{%
11318 \InlineClass{hidden}{\LWR@syncnotenumbers}%
11319 \LWR@addmathjax{#1}{\BODY}%
11320 \InlineClass{hidden}{\LWR@syncnotenames}%
11321 }{%
11322 \LWR@addmathjax{#1}{\BODY}%
11323 }%
11324 }{%}%
11325

```

Clear the single-use alt text:

```

11326 \gdef\LWR@ThisAltText{}%
11327 }

```

The following are used to synchronize footnote marks and related to MATHJAX if *\*note\** is used inside the MATHJAX expression. The counter is read from L<sup>A</sup>T<sub>E</sub>X then defined into MATHJAX for use during the following equation. After the equation, the MATHJAX value is returned to the text from `\footnotename`. Other notes may be added by appending to `\LWR@syncnotenumbers` and `\LWR@syncnotenames`.

`\LWR@synconenotenum`  $\{\langle MATHJAX \text{ variable} \rangle\} \{\langle mark \rangle\}$

```

11328 \newcommand*{\LWR@synconenotenum}[2]{%
11329 \textbackslash(
11330 \textbackslash{def\textbackslash{#1}\{#2\}
11331 \textbackslash)
11332 }

```

`\LWR@syncnotenumbers` Assignments to make.

```

11333 \newcommand*{\LWR@syncnotenumbers}{\LWR@synconenotenum{\LWRfootnote}{\thefootnote}}

```

`\LWR@synconenotename`  $\{\langle MATHJAX \text{ variable} \rangle\} \{\langle text \rangle\}$

```

11334 \newcommand*{\LWR@synconenotename}[2]{%
11335 \textbackslash(
11336 \textbackslash{def\textbackslash{#1}\{#2\}
11337 \textbackslash)
11338 }

```

`\LWR@syncnotenames` Assignments to make.

```

11339 \newcommand*{\LWR@syncnotenames}{\LWR@synconenotename{\LWRfootnote}{\footnotename}}

```

Remove existing equation environment:

```

11340 \AtBeginDocument{

```

```

11341 \let\equation\relax
11342 \let\endequation\relax
11343 \csletcs{equation*}{relax}
11344 \csletcs{endequation*}{relax}
11345 }

```

Env `equation` The new equation environment is created with `\NewEnviron` (from the `environ` package), which stores the contents of its environment in a macro called `\BODY`.

```

11346 \AtBeginDocument{
11347 \NewEnviron{equation}%
11348 {\LWR@doequation{\BODY}{equation}}%
11349 [\LWR@doendequation{equation}]
11350
11351 \LetLtxMacro\LWR@equationnormal\equation
11352 \LetLtxMacro\endLWR@equationnormal\endequation
11353 }% AtBeginDocument

```

Env `equation*`

```

11354 \AtBeginDocument{
11355 \NewEnviron{equation*}%
11356 {\LWR@doequation{\BODY}{equation*}}%
11357 [\LWR@doendequation{equation*}]
11358
11359 \csletcs{LWR@equationnormalstar}{equation*}
11360 \csletcs{LWR@endequationnormalstar}{endequation*}
11361 }% AtBeginDocument

```

Remember the “less” version of `equation`, which uses `MATHJAX` and `alt` tags, but does not support complicated contents such as some `Tikz` expressions.

```

11362 \AtBeginDocument{
11363 \LetLtxMacro\LWR@equationless\equation
11364 \LetLtxMacro\endLWR@equationless\endequation
11365 \csletcs{LWR@equationlessstar}{equation*}
11366 \csletcs{LWR@endequationlessstar}{endequation*}
11367 }

```

## 80.6 `\displaymathnormal` and `\displaymathother`

`\displaymathnormal` By default, or when selecting `\displaymathnormal`, `MATHJAX` math display environments print their contents as text into `HTML`, and `svg` display math environments render their contents as `svg` images and use their contents as the `alt` tag of `HTML` output. To do so, the contents are loaded into a macro for reuse. In some cases, such as complicated `Tikz` pictures, compilation will fail.

`\displaymathother` When selecting `\displaymathother`, it is assumed that the contents are more complicated than “pure” math. An example is an elaborate `Tikz` picture, which will not render in `MATHJAX` and will not make sense as an `HTML alt` tag. In this mode, `MATHJAX` is turned off, math display environments become `svg` images, even if `MATHJAX` is

**MathJax unsupported  
complicated alt tag**

selected, and the HTML alt tags become simple messages. The contents are internally processed as an environment instead of a macro argument, so complicated objects such as *Tikz* pictures are more likely to compile successfully.

`\displaymathnormal` Use when display math environments have simple math which is to sent to MATHJAX or included in HTML alt tags.

```
11368 \newcommand*{\displaymathnormal}{%
11369 \ifbool{LWR@origmathjax}{\booltrue{mathjax}}{\boolfalse{mathjax}}%
11370 \LetLtxMacro\[\LWR@openbracketnormal%
11371 \LetLtxMacro\]\LWR@closebracketnormal%
11372 \LetLtxMacro\displaymath\LWR@displaymathnormal%
11373 \LetLtxMacro\enddisplaymath\endLWR@displaymathnormal%
11374 \LetLtxMacro\equation\LWR@equationnormal%
11375 \LetLtxMacro\endequation\endLWR@equationnormal%
11376 \csletcs{equation*}{LWR@equationnormalstar}%
11377 \csletcs{endequation*}{LWR@endequationnormalstar}%
11378 }
```

`\displaymathother` Use when display math environments have complicated objects which will not work with MathJax or should not be included in HTML alt tags. Complicated contents are more likely to compile correctly.

```
11379 \newcommand*{\displaymathother}{%
11380 \boolfalse{mathjax}%
11381 \LetLtxMacro\displaymath\LWR@displaymathother%
11382 \LetLtxMacro\enddisplaymath\endLWR@displaymathother%
11383 \LetLtxMacro\[\LWR@displaymathother%
11384 \LetLtxMacro\]\endLWR@displaymathother%
11385 \LetLtxMacro\equation\LWR@equationother%
11386 \LetLtxMacro\endequation\endLWR@equationother%
11387 \csletcs{equation*}{\displaymath}%
11388 \csletcs{endequation*}{\enddisplaymath}%
11389 }
```

```
11390 \end{warpHTML}
```

**for PRINT output:** 11391 \begin{warpprint}

Print-mode versions:

```
11392 \newcommand*{\displaymathnormal}{}
11393 \newcommand*{\displaymathother}{}

11394 \end{warpprint}
```

**for HTML output:** 11395 \begin{warpHTML}

## 80.7 AMS Math environments

### 80.7.1 Support macros

Bool LWR@amsmultline True if processing a multiline environment.

To compensate for multiline-specific code, LWR@amsmultline is used to add extra horizontal space in \LWR@htmlmathlabel if is used in an amsmath environment which is not a multiline environment and not an equation.

```
11396 \newbool{LWR@amsmultline}
11397 \boolfalse{LWR@amsmultline}
```

\LWR@beginhideamsmath Starts hiding L<sup>A</sup>T<sub>E</sub>X math inside an HTML comment.

```
11398 \newcommand*{\LWR@beginhideamsmath}{
11399 \LWR@stoppars
11400 \LWR@origtilde\LWR@orignewline
11401 \LWR@htmlopencomment
11402
11403 \begingroup
11404 \LWR@restoreorigformatting
11405 \booltrue{LWR@insidemathcomment}
11406 }
```

\LWR@endhideamsmath Ends hiding L<sup>A</sup>T<sub>E</sub>X math inside an HTML comment.

```
11407 \newcommand*{\LWR@endhideamsmath}{
11408 \endgroup
11409
11410 \LWR@htmlclosecomment
11411 \boolfalse{LWR@insidemathcomment}
11412 \LWR@orignewline
11413 \LWR@startpars
11414 }
```

### 80.7.2 Environment patches

The amsmath environments already collect their contents in \@envbody for further processing. eqnarray is not an  $\mathcal{AMS}$  package, and thus requires special handling.

For svg math: Each environment is encapsulated inside a lateximage environment, along with a special optional argument of \LWR@amsmathbody or \LWR@amsmathbodynumbered telling lateximage to use as the HTML <alt> tag the environment's contents which were automatically captured by the  $\mathcal{AMS}$  environment.

For MATHJAX: Each environment is syched with L<sup>A</sup>T<sub>E</sub>X's equation numbers, typeset with L<sup>A</sup>T<sub>E</sub>X inside an HTML comment, then printed to HTML output for MATHJAX to process.

Env eqnarray This environmnet is not an  $\mathcal{AMS}$  environment and thus its body is not automatically captured, so the `environ` package is used to capture the environment into `\BODY`.

```
11415 \let\LWR@origeqnarray\eqnarray
11416 \let\LWR@origendeqnarray\endeqnarray
```

To remember whether the starred environment was used, and thus whether to number the equations:

```
11417 \newbool{LWR@numbereqnarray}
11418 \booltrue{LWR@numbereqnarray}
```

Common code used by `eqnarray` and `Beqnarray` (from `fancybox`):

```
11419 \newcommand{\LWR@eqnarrayfactor}{%
```

If `mathjax` or `FormatWP`, print the  $\text{\LaTeX}$  expression:

```
11420 \ifboolexpr{bool{mathjax} or (bool{FormatWP} and bool{WPMarkMath}) }%
11421 {%
```

If `MATHJAX`, the environment contents (the `\BODY`) are executed in a `HTML` comment to trigger the correct equation number increment (if not starred), then are included verbatim in the output for `MATHJAX` to interpret:

```
11422 \LWR@syncmathjax%
11423 \boolfalse{LWR@amsmultline}%
11424 \ifbool{LWR@numbereqnarray}%
11425 {%
```

If numbering the equations, execute a copy inside an `HTML` comment block:

```
11426 \LWR@beginhideamsmath%
11427 \LWR@origeqnarray%
11428 \BODY%
11429 \LWR@origendeqnarray%
11430 \LWR@endhideamsmath%
```

Then print the (sanitized) contents to the output for `MATHJAX` to interpret:

```
11431 \LWR@addmathjax{eqnarray}{\BODY}%
11432 }%
11433 {% not LWR@numbereqnarray
```

If not numbering equations, just create the contents for `MATHJAX`:

```
11434 \LWR@addmathjax{eqnarray*}{\BODY}%
11435 }% LWR@numbereqnarray
11436 }% mathjax
11437 {% not mathjax
11438 \ifbool{LWR@numbereqnarray}%
11439 {%
```

For numbered svg equations, first create a lateximage with an alt attribute containing sanitized copy of the source code:

```

11440 \begin{BlockClass}{displaymathnumbered}%
11441 \LWR@newautoidanchor%
11442 \booltrue{LWR@indisplaymathimage}%
11443 \begin{lateximage}[(\LWR@startingequationtag--\LWR@equationtag)%
11444 \LWR@addmathjax{eqnarray}{\BODY}]*%
```

Support for xfakebold:

```

11445 \LWR@applyxfakebold%
```

Create the image contents using an actual eqnarray:

```

11446 \LWR@origeqnarray%
11447 \BODY%
11448 \LWR@origendeqnarray%
11449 \end{lateximage}%
11450 \end{BlockClass}%
11451 }%
11452 {% not LWR@numbereqnarray
```

If not numbered, do the same, but an extra \nonumber seems to be required:

```

11453 \begin{BlockClass}{displaymath}%
11454 \LWR@newautoidanchor%
11455 \booltrue{LWR@indisplaymathimage}%
11456 \begin{lateximage}[\LWR@addmathjax{eqnarray*}{\BODY}]*%
```

Support for xfakebold:

```

11457 \LWR@applyxfakebold%

11458 \def\@eqnocr{\nonumber\@seqnocr}
11459 \csuse{LWR@origeqnarray}%
11460 \BODY%
11461 \nonumber\csuse{LWR@origendeqnarray}%
11462 \end{lateximage}%
11463 \end{BlockClass}%
11464 }% LWR@numbereqnarray
11465 }% not mathjax
```

Default to number equations in the future:

```

11466 \booltrue{LWR@numbereqnarray}%
```

Clear the single-use alt text:

```

11467 \gdef\LWR@ThisAltText{}%
11468 }
```

eqnarray itself is made with a blank line before and after to force it to be on its own line:

```
11469 \RenewEnviron{eqnarray}
11470 {%
11471
11472 \LWR@eqnarrayfactor
11473
11474 }
```

The starred version is patched to turn off the numbering:

```
11475 \csgpreto{eqnarray*}{\boolfalse{LWR@numbereqnarray}}

11476 \end{warpHTML}
```

## 81 Lateximages

### 81.1 Description

**Env lateximage** A lateximage is a piece of the document which is typeset in L<sup>A</sup>T<sub>E</sub>X then included in the HTML output as an image. This is used for math if svg math is chosen, and also for the picture, tikzpicture, and other environments.

Before typesetting the lateximage a large number of formatting, graphics, and symbols-related macros are temporarily restored to their print-mode meaning by \LWR@restoreorigformatting. (See section 78.)

A lateximage is typeset on its own PDF page inside an HTML comment which starts on the preceeding page and ends on following page, and instructions are written to lateximage.txt for *lwarpmk* to extract the lateximage from the page of the PDF file then generate an accompanying .svg file image file. Meanwhile, instructions to show this image are placed into the HTML file after the comment.

An HTML <span> is created to hold both the HTML comment, which will have the *pdftotext* conversion, and also the link to the final .svg image.

A L<sup>A</sup>T<sub>E</sub>X label is used to remember which PDF page has the image. A label is used because footnotes, endnotes, and pagenotes may cause the image to appear at a later time. The label is declared along with the image, and so it correctly remembers where the image finally ended up.

**HTML alt tag** The HTML alt tag is set to the L<sup>A</sup>T<sub>E</sub>X source for svg math, some chemistry expressions, and perhaps some other expressions which make sense for text copy/paste. In some other cases, the alt tag is set according to the package name.

When creating an SVG math image, its HTML alt tag may be set to the math expression, which may be hashed for image reuse. In the case of \ensuremath or after \inlinemathother, where the contents require a unique image for each instance of the

same expression, the `alt` tag is set to `\MathImageAltText`, along with `\AltTextOpen` and `\AltTextClose`, and the image is not reused.

This `alt` expression is visible in the browser if images are not loaded, and appears when the text is copied and pasted. The default is “`math image`”, and it may be changed according to the document’s language. This may be set in the preamble, or changed as necessary inside the document, where it will affect the following `svg math images`.

For many packages, the output is placed inside a `lateximage` with an `HTML alt` tag set to the package name followed by `\PackageDiagramAltText`. For example:

```
(-xy- diagram)
```

This expression is visible in the browser if images are not loaded, and appears when the text is copied and pasted. The default is “`diagram`”, and may it be changed according to the document’s language. This may be set in the preamble, or changed as necessary inside the document, where it will affect the following package diagrams.

**svg image font size** For the `lateximage` environment, the size of the math and text used in the `svg image` may be adjusted by setting `\LateximageFontSizeName` to a font size name — *without the backslash*, which defaults to:

```
\renewcommand{\LateximageFontSizeName}{normalsize}
```

For inline `svg math`, font size is instead controlled by `\LateximageFontScale`, which defaults to:

```
\newcommand*{\LateximageFontScale}{.75}
```

## 81.2 Support counters and macros

**for HTML output:** 11477 `\begin{warphTML}`

Ctrl LWR@lateximagenumber Sequence the images.

```
11478 \newcounter{LWR@lateximagenumber}
11479 \setcounter{LWR@lateximagenumber}{0}
```

Ctrl LWR@lateximagedepth Do not create `\lateximage` inside of `\lateximage`.

```
11480 \newcounter{LWR@lateximagedepth}
11481 \setcounter{LWR@lateximagedepth}{0}
```

A few utility macros to write special characters:

```
11482 \edef\LWR@hashmark{\string#} % for use in \write
11483 \edef\LWR@percent{\@percentchar} % for use in \write
```

Ctrl LWR@LIPage Used to reference the PDF page number of a `lateximage` to be written into `<project>-images.txt`.


```
11484 \newcounter{LWR@LIPage}

11485 \end{warphTML}
```

### 81.3 Font size

**for HTML & PRINT:** 11486 `\begin{warpall}`

`\LateximageFontSizeName` Declares how large to write text in `\lateximages`. The `.svg` file text size should blend well with the surrounding HTML text size.

 **no backslash** *Do not include the leading backslash in the name.*

```
11487 \newcommand*{\LateximageFontSizeName}{normalsize}
```

`\LateximageFontScale` Declares how large to scale inline SVG math images. The `.svg` file text size should blend well with the surrounding HTML text size. The default is 1, but it may be redefined as needed depending on the HTML font.

```
11488 \newcommand*{\LateximageFontScale}{1}
```

```
11489 \end{warpall}
```

### 81.4 Equation numbers

**for HTML output:** 11490 `\begin{warpHTML}`

**Ctrl LWR@startingequation** For use with `\lateximage` and multi-line numbered equations. Remembers the next equation number so that it may be printed in the alt tag.

```
11491 \newcounter{LWR@startingequation}
11492
11493 \ifundefined{chapter}
11494 {
11495 \renewcommand{\theLWR@startingequation}{%
11496 \arabic{LWR@startingequation}%
11497 }
11498 }
11499 {% chapter defined
11500 \renewcommand{\theLWR@startingequation}{%
11501 \ifnumcomp{\value{chapter}}{>}{0}{\arabic{chapter}.}{}%
11502 \arabic{LWR@startingequation}%
11503 }
11504 }
```

**Bool LWR@isstartingequation** True for the first equation tag, false for later tags in the same environment.

```
11505 \newbool{LWR@isstartingequation}
```

**\LWR@startingequationtag** Prints the starting equation number or tag.

```
11506 \let\LWR@startingequationtag\theLWR@startingequation
```

`\LWR@equationtag` Prints the ending equation number or tag.

This is reset by `\lateximage`, may be temporarily overwritten by `\tag` calling `\LWR@rememberetag`.

```
11507 \newcommand*\LWR@equationtag{}
```

Only if `svg math`, patch `\tag` after packages have loaded, in case someone else modified `\tag`.

```
11508 \AtBeginDocument{
11509
11510 \ifbool{mathjax}{}% not mathjax
```

`\LWR@rememberetag` `{\tag}`

For use inside the math environments while using `svg math`. Sets `\theLWR@startingequation` and `\theequation` to the given tag.

```
11511 \NewDocumentCommand{\LWR@rememberetag}{m}{%
11512 \ifbool{LWR@isstartingequation}%
11513 {%
11514 \global\boolfalse{LWR@isstartingequation}%
11515 \xdef\LWR@startingequationtag{#1}%
11516 }{%
11517 \xdef\LWR@equationtag{#1}%
11518 }%
11519 }% not mathjax
11520 }% AtBeginDocument
```

## 81.5 HTML alt tags

`\LWR@amsmathbody` `{\envname}` For use inside the optional argument to a `\lateximage` to add the contents of a AMS math environment to the `<alt>` tag.

```
11521 \newcommand*\LWR@amsmathbody[1]
11522 {%
11523 \textbackslash\{begin\}\{#1\} % extra space
11524 \LWR@HTMLsanitizeexpand{\detokenize\expandafter{\the\@envbody}}%
11525 \textbackslash\{end\}\{#1\}%
11526 }
```

`\LWR@amsmathbodynumbered` `{\envname}` For use inside the optional argument to a `\lateximage` to add the contents of a AMS math environment to the `alt` tag, prefixed by the equation numbers.

```
11527 \newcommand*\LWR@amsmathbodynumbered[1]
11528 {%
11529 \ifnumcomp{\value{LWR@startingequation}}{=}{\value{equation}}%
11530 {(\LWR@equationtag)}%
11531 {(\LWR@startingequationtag--\LWR@equationtag)} % extra space
11532 \LWR@amsmathbody{#1} % extra space
11533 }
```

## 81.6 lateximage environment

`\LWR@lateximage@oneimageb`  $\{\langle 1: alt\ text\rangle\}\{\langle 2: filename\rangle\}\{\langle 3: CSS\ style\rangle\}$  Creates the image for the lateximage.

```

11534 \newcommand{\LWR@lateximage@oneimageb}[3]{%
11535 \LWR@subinlineimage{#1}{lateximage}%
11536 {%
11537 \LWR@print@mbox{%
11538 \LWR@ImagesDirectory\OSPathSymbol%
11539 #2%
11540 }%
11541 }\svg}{#3}%
11542 }
```

`\LWR@lateximage@oneimage`  $\{\langle 1: alt\ text\rangle\}\{\langle 2: filename\rangle\}\{\langle 3: CSS\ style\rangle\}\{\langle 4: delimit?\rangle\}$

Creates an image for the lateximage, whose alt text depends on the circumstances.

```

11543 \newcommand{\LWR@lateximage@oneimage}[4]{%
11544 \ifdefvoid{\LWR@ThisAltText}{%
11545 \IfBooleanTF{#4}{%
11546 \LWR@lateximage@oneimageb{#1}{#2}{#3}%
11547 }{%
11548 \LWR@lateximage@oneimageb%
11549 {\AltTextOpen#1\AltTextClose}%
11550 {#2}{#3}%
11551 }%
11552 }{%
11553 \LWR@lateximage@oneimageb%
11554 {\AltTextOpen\LWR@ThisAltText\AltTextClose}%
11555 {#2}{#3}%
11556 }%
11557 }
```

Env `lateximage` \*  $[\langle 2: <alt>\ tag\rangle]\ast[\langle 4: add'l\ hashing\rangle][\langle 5: CSS\ style\rangle]$

Typesets the contents and then renders the result as an svg file. Star #1 causes the image to be hashed for reuse. Star #3 causes the alt tag to not include `\AltTextOpen` and `\AltTextClose`, for use with math expressions.

The optional `<alt>` tag is included in the HTML code for use with copy/paste.

**image filename hashing** If starred, a hashed filename is used. If so, the hash is based on the alt tag and also the additional hashing argument.

This may be used to provide an expression with a simple alt tag but also enough additional information to provide a unique hash.

An example is when the expression is a complicated TEX expression, which would not copy/paste well. A simplified tag may be used, while the complicated expression is duplicated in the additional hashing argument.

Another example is when the expression is simple, but the image depends on options. These options may be decoded into text form and included in the additional hashing argument in order to make the hash unique according to the set of options, even if the simple alt tag is still the same.

File \*\_html.aux A new label is placed into the file \*\_html.aux:

```
\newlabel{LWRlateximage-<BaseJobname>-<number>}{<x>}{<y>}}
```

This is used to find the image in the PDF file, according to its name.

File \*-images.txt A list of images to generate is created in <jobname>-images.txt. Each line has three pipe-delimited fields, containing the PDF page number from <jobname>\_html.pdf, where the image is located, a boolean indicating whether the image is hashed, and the filename of the image. The last line has “end” in each field, and is used to detect an incomplete compile.

```
11558 \catcode'\$=\active%
11559
11560 \NewDocumentEnvironment{lateximage}{s O{\ImageAltText} s O{} O{}}
11561 {%
11562 \LWR@traceinfo{lateximage: starting on \jobname.pdf page \arabic{page}}%
11563 \LWR@traceinfo{lateximage: entering depth is \arabic{LWR@lateximagedepth}}%
```

Nested lateximages remain one large lateximage:

```
11564 \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}%
```

If nesting inside an already-existing lateximage, simply record one more level. *AMS* packages redefine \addtocounter to do nothing if inside a \text, so lower-level TeX macros are used for tracking nested lateximages.

```
11565 {%
11566 % \addtocounter{LWR@lateximagedepth}{1}%
11567 % \global\advance\c@LWR@lateximagedepth 1\relax% Due to AmS \text macro.
11568 }%
```

Otherwise, this is the outer-most lateximage:

```
11569 {% start of outer-most lateximage
```

Remember the next equation number to be allocated, in case it must be printed in a multi-equation environment:

```
11570 \LWR@traceinfo{lateximage: starting outer-most lateximage}%
11571 \setcounter{LWR@startingequation}{\value{equation}}%
11572 \addtocounter{LWR@startingequation}{1}%
11573 \booltrue{LWR@isstartingequation}%
11574 \let\LWR@startingequationtag\theLWR@startingequation%
```

The default equation tag, unless overwritten by \tag:

```
11575 \let\LWR@equationtag\theequation%
```

Starting a new lateximage:

```
11576 \addtocounter{LWR@lateximagenumber}{1}%
11577 \LWR@traceinfo{lateximage: LWR@lateximagenumber is \arabic{LWR@lateximagenumber}}%
```

While inside a lateximage, locally do not use mathjax:

```
11578 \boolfalse{mathjax}%
```

Be sure that are doing a paragraph:

```
11579 \LWR@ensuredoingapar%
```

Next file:

```
11580 \addtocounter{LWR@externalfilecnt}{1}%
11581 \LWR@traceinfo{lateximage: LWR@externalfilecnt is \arabic{LWR@externalfilecnt}}%
```

Figure out what the next page number will be. \setcounterpageref assigns LWR@LPage to the page number for the reference LWR@lateximage-BaseJobname-XXX:

```
11582 \setcounterpageref{LWR@LPage}{%
11583 LWR@lateximage-\BaseJobname-\arabic{LWR@lateximagenumber}%
11584 }%
11585 \LWR@traceinfo{lateximage: LWR@LPage is \arabic{LWR@LPage}}%
```

Create an HTML span which will hold the comment which contains the *pdftotext* translation of the image's page, and also will hold the link to the .svg file:

```
11586 \LWR@htmltag{span\LWR@indentHTML%
11587 id="lateximage-\BaseJobname-\arabic{LWR@lateximagenumber}"\LWR@indentHTML
11588 class="lateximagesource"\LWR@originewline
11589 }%
```

Write instructions to the <ImagesDirectory>.txt file:

```
11590 \LWR@traceinfo{lateximage: about to write to \BaseJobname-images.txt}%
11591 \IfBooleanTF{#1}% starred
11592 {% hash
```

Compute and save the hashed file name for later use:

```
11593 \ifdefvoid{\LWR@ThisAltText}{%
11594 \IfBooleanTF{#3}{%
11595 \edef\LWR@hashedname{%
11596 \LWR@mdfive{\detokenize\expandafter{#2}-!-#4}%
11597 }%
11598 }{%
11599 \edef\LWR@hashedname{%
11600 \LWR@mdfive{\detokenize\expandafter{\AltTextOpen#2\AltTextClose}-!-#4}%
11601 }%
11602 }%
11603 }
```

```

11604 \edef\LWR@hashedname{%
11605 \LWR@mdfive{\detokenize\expandafter{\AltTextOpen\LWR@ThisAltText\AltTextClose}}-!-#4}%
11606 }%
11607 }%
11608 \LWR@traceinfo{lateximage: hash is \LWR@hashedname}%

```

Write the page, hashing, and hashed name:

```

11609 \immediate\write\LWR@lateximagesfile{%
11610 |\arabic{LWR@LPage}|true|\LWR@hashedname|}%
11611 }%
11612 }% hash
11613 {% no hash

```

No hash, so write the page, no hashing, and the image number:

```

11614 \LWR@traceinfo{lateximage: hash false}%
11615 \immediate\write\LWR@lateximagesfile{%
11616 |\arabic{LWR@LPage}|false|\LWR@ImagesName\arabic{LWR@externalfilecnt}}|}%
11617 }%
11618 }% no hash

```

Place an open comment tag. This will hide any traces of the lateximage PDF page which were picked up by *pdftotext*.

```

11619 \LWR@traceinfo{lateximage: about to create open comment}%
11620 \LWR@htmlopencomment%

```

One level deeper. At this outer-most lateximage, it is known that this is not being used inside an  $\mathcal{AMS}$  \text, since the outer-most level will never be in math mode.

```

11621 \addtocounter{LWR@lateximagedepth}{1}%

```

Start the new PDF page:

```

11622 \LWR@traceinfo{lateximage: about to create a new page}%
11623 \LWR@maybeorignewpage%

```

If the current page is larger, typeset the image in a “standard” width page and font size:

```

11624 \LWR@traceinfo{lateximage: about to create minipage}%
11625 \ifdimless{\linewidth}{6in}{%
11626 \LWR@print@minipage{\linewidth}%
11627 }{%
11628 \LWR@print@minipage{6in}%
11629 }%
11630 \@nameuse{LWR@print@LateximageFontSizeName}%

```

Temporarily restore formatting to its PDF definitions: Do not produce HTML tags for \hspace, etc. inside a lateximage.

```

11631 \LWR@traceinfo{lateximage: about to temporarily restore formatting}%
11632 \LWR@restoreorigformatting%

```

Use full-page footnotes instead of minipage footnotes. These become HTML footnotes.

```
11633 \def\@mpfn{footnote}%
11634 \def\thempfn{\thefootnote}%
11635 \LetLtxMacro\@footnotetext\LWR@footnotetext%
```

Create the LWR`lateximage`<number> label:

```
11636 \LWR@traceinfo{lateximage: about to create label}%
11637 \LWR@orig@label{\LWR@lateximage-\BaseJobname-\arabic{\LWR@lateximagenumber}}}%
11638 \LWR@traceinfo{lateximage: finished creating the label}%
```

Adjust the rule color to match HTML:

```
11639 \ifdefvoid{\LWR@ruleHTMLcolor}{}{%
11640 \LWR@print@arrayrulecolor[HTML]{\LWR@ruleHTMLcolor}%
11641 }%
```

Enable print-mode math functions:

```
11642 \LetLtxMacro$\LWR@origdollar%
11643 \catcode'\$=3% math shift
11644 \LetLtxMacro\(\LWR@origopenparen%
11645 \LetLtxMacro\)\LWR@origcloseparen%
```

Only enable print-mode display math if are not already inside display math:

```
11646 \ifbool{\LWR@indisplaymathimage}{}{% not in display math
11647 \LetLtxMacro\[\LWR@origopenbracket%
11648 \LetLtxMacro\]\LWR@origclosebracket%
11649 \let\equation\LWR@origequation%
11650 \let\endequation\LWR@origendequation%
11651 \csletcs{equation*}{\LWR@origequation*}%
11652 \csletcs{endequation*}{\LWR@origendequation*}%
11653 }% not in display math
```

For chemformula:

```
11654 \LetLtxMacro\LWR@newsingledollar$%
11655 \LetLtxMacro\LWR@newsingledollar$% syntax highlighting

11656 }% end of outer-most lateximage
11657 \LWR@traceinfo{lateximage: finished start of environment}%
11658 }% end of \begin{lateximage}
```

`\endlateximage` When the environment closes:

```
11659 {% start of \end{lateximage}
11660 \LWR@traceinfo{lateximage: starting end of lateximage}%
```

Nested more than one deep?

```
11661 \LWR@traceinfo{lateximage: internal depth was \arabic{\LWR@lateximagedepth}}%
11662 \ifnumcomp{\value{\LWR@lateximagedepth}}{>}{1}%
```

If nesting inside an already existing lateximage, simply record one less level. Uses a lower-level T<sub>E</sub>X macro due to  $\mathcal{A}\mathcal{M}\mathcal{S}$  \text change of \addtocounter.

```
11663 {%
11664 \LWR@traceinfo{lateximage: unnesting}%
11665 \global\advance\c@LWR@lateximagedepth -1\relax%
11666 }%
```

If this is the outer-most lateximage:

```
11667 {% end of outer-most lateximage
```

Finish the lateximage minipage and start a new PDF page:

```
11668 \LWR@traceinfo{lateximage: ending outer-most lateximage}%
11669 \endLWR@print@minipage%
11670 \LWR@maybe@orignewpage%
```

Close the HTML comment which encapsulated any traces of the lateximage picked up by *pdf<sub>totext</sub>*:

```
11671 \LWR@print@vspace*{.5\baselineskip}%
11672 \LWR@htmlclosecomment%
11673 \LWR@traceinfo{lateximage: The page after the image is \arabic{page}}%
```

Create a link to the lateximage, allowing its natural height:

```
11674 \IfBooleanTF{#1}% starred
11675 {% hash
11676 \LWR@lateximage@oneimage{#2}{\LWR@hashedname}{#5}{#3}%
11677 }% hash
11678 {% no hash
11679 \LWR@lateximage@oneimage{#2}{\LWR@ImagesName\theLWR@externalfilecnt}{#5}{#3}%
11680 }% no hash
```

Be sure that are doing a paragraph:

```
11681 \LWR@ensuredoingapar%
```

Close the HTML span which has the *pdf<sub>totext</sub>* comment and also the link to the .svg image:

```
11682 \LWR@htmltag{/span}%
11683 \ifbool{HTMLDebugComments}{%
11684 \LWR@htmlcomment{End of lateximage}%
11685 }{%}
```

Undo one lateximage level. This is not inside an  $\mathcal{A}\mathcal{M}\mathcal{S}$  \text, so regular \addtocounter may be used here.

```
11686 \addtocounter{LWR@lateximagedepth}{-1}%
```

Clear the single-use alt text:

```

11687 \gdef\LWR@ThisAltText{}%
11688}% end of outer-most lateximage
11689 \LWR@traceinfo{lateximage: exiting depth is \arabic{LWR@lateximagedepth}}%
11690 \LWR@traceinfo{lateximage: done}%
11691}%
11692 \catcode'\$=3% math shift
11693 \end{warpHTML}

```

**for PRINT output:** 11694 \begin{warpprint}

Env lateximage \* [ $\langle$ alt $\rangle$  tag] \* [*add'l hashing*] [*css style*]

varwidth is used to create a box of the natural width of its contents.

```

11695 \NewDocumentEnvironment{lateximage}{s o s o o}
11696 {\begin{varwidth}[b]{\linewidth}}
11697 {\end{varwidth}}

11698 \end{warpprint}

```

## 82 center, flushleft, flushright

**for HTML output:** 11699 \begin{warpHTML}

Env center Replace center functionality with css tags:

```

11700 \newenvironment*{LWR@HTML@center}
11701 {
11702 \LWR@forcenewpage
11703 \ifbool{FormatWP}
11704 {\BlockClass[\LWR@print@mbx{text-align:center}]{center}}
11705 {\BlockClass{center}}
11706 }
11707 {\endBlockClass}
11708
11709 \LWR@formattedenv{center}

```

Env flushright

```

11710 \newenvironment*{LWR@HTML@flushright}
11711 {
11712 \LWR@forcenewpage
11713 \ifbool{FormatWP}
11714 {\BlockClass[\LWR@print@mbx{text-align:right}]{flushright}}
11715 {\BlockClass{flushright}}
11716 }
11717 {\endBlockClass}
11718
11719 \LWR@formattedenv{flushright}

```

Env flushleft

```

11720 \newenvironment*{LWR@HTML@flushleft}
11721 {
11722 \LWR@forcenewpage
11723 \ifbool{FormatWP}
11724 {\BlockClass[\LWR@print@mbbox{text-align:left}]{flushleft}}
11725 {\BlockClass{flushleft}}
11726 }
11727 {\endBlockClass}
11728
11729 \LWR@formattedenv{flushleft}

```

`\centering`, `\raggedleft`, and `\raggedright` usually have no effect on the HTML output, but they may be used to compare with the next token to identify their use at the start of a float. See `\LWR@floatalignment`.

`\centering`

```

11730 \newcommand*{\LWR@HTML@centering}{%
11731 \ifbool{HTMLDebugComments}{%
11732 \LWR@htmlcomment{centering}%
11733 }{}%
11734 }
11735 \LWR@formatted{centering}

```

`\raggedleft`

```

11736 \newcommand*{\LWR@HTML@raggedleft}{%
11737 \ifbool{HTMLDebugComments}{%
11738 \LWR@htmlcomment{raggedleft}%
11739 }{}%
11740 }
11741 \LWR@formatted{raggedleft}

```

`\raggedright`

```

11742 \newcommand*{\LWR@HTML@raggedright}{%
11743 \ifbool{HTMLDebugComments}{%
11744 \LWR@htmlcomment{raggedright}%
11745 }{}%
11746 }
11747 \LWR@formatted{raggedright}

```

`\leftline` {*⟨text⟩*}

```

11748 \renewcommand{\leftline}[1]{\begin{flushleft}#1\end{flushleft}}

```

`\centerline` {*⟨text⟩*}

```

11749 \renewcommand{\centerline}[1]{\begin{center}#1\end{center}}

```

```
\rightline {<text>}
```

```
11750 \renewcommand{\rightline}[1]{\begin{flushright}#1\end{flushright}}
```

```
11751 \end{warpHTML}
```

## 83 Preloaded packages

**for HTML output:** 11752 \begin{warpHTML}

If the given package was loaded before or by lwarp, load the lwarp version as well.

```
\LWR@PreloadedPackage {<packagename>}
```

```
11753 \newcommand*{\LWR@PreloadedPackage}[1]{%
11754 \ifpackageloaded{#1}%
11755 {%
11756 \AtBeginDocument{
11757 \LWR@origRequirePackage{lwarp-#1}%
11758 }
11759 }%
11760 {}%
11761 }
```

If inputtrc was loaded before lwarp, as is usually done, explicitly load the lwarp patches now:

```
11762 \LWR@PreloadedPackage{inputtrc}
```

If textcomp was loaded before lwarp, perhaps as part of the font-related packages, explicitly load the lwarp patches now:

```
11763 \LWR@PreloadedPackage{textcomp}
```

If xunicode was loaded before lwarp, perhaps as part of the font-related packages, explicitly load the lwarp patches now:

```
11764 \LWR@PreloadedPackage{xunicode}
```

If graphics or graphicx were loaded before lwarp, perhaps by xunicode, explicitly load the lwarp patches now:

```
11765 \LWR@PreloadedPackage{graphics}
```

```
11766 \LWR@PreloadedPackage{graphicx}
```

fontaxes must be preloaded so that lwarp may patch it for HTML.

```
11767 \LWR@PreloadedPackage{fontaxes}
```

`nfssex-cfr` may be preloaded by `cfm-lm` or related font packages.

```
11768 \LWR@PreloadedPackage{nfssex-cfr}
```

`ulem` may be preloaded by `ctex`, `ctexart`, and related classes.

```
11769 \LWR@PreloadedPackage{ulem}
```

`xetexko-vertical` may be preloaded by `xetexko`.

```
11770 \LWR@PreloadedPackage{xetexko-vertical}
```

`geometry` is preloaded by `lwarp`, and perhaps by various classes.

```
11771 \LWR@PreloadedPackage{geometry}
```

`plext` is preloaded by some CJK classes.

```
11772 \LWR@PreloadedPackage{plext}
```

`stfloats` is preloaded by `ltj*` classes.

```
11773 \LWR@PreloadedPackage{stfloats}
```

`lltjtext` is preloaded by `ltj*` classes.

```
11774 \LWR@PreloadedPackage{lltjtext}
```

`luatexko` must be loaded before `lwarp`.


```
11775 \LWR@PreloadedPackage{luatexko}
```


```
11776 \end{warpHTML}
```

## 84 siunitx

**Pkg** `siunitx` The `lwarp` core passes a few options to `siunitx`.

**fractions** Due to *pdf<sub>tot</sub>text* limitations, fraction output is replaced by symbol output for `per-mode` and `quotient-mode`.

 **math mode required** Some units will require that the expression be placed inside math mode.

 **tabular** Tabular S columns are rendered as simple c columns, and tabular s columns are not supported. These may be replaced by c columns with each cell contained in `\num` or `\si`.

For math mode with `svg` display, the original `siunitx` code is used while generating the `svg` image. For text mode, `lwarp` uses an emulation which provides a very effective HTML interpretation of `siunitx`. For math expressions while using `MATHJAX`, a limited

 **MathJax**

emulation is used. Most functions work reasonably well, but many options cannot be emulated. `siunitx` macros with more than one optional value cannot absorb the second optional value, and complicated parsing such as for `\ang` is not supported. The result usually looks fine, and otherwise is enough to get the meaning across.

lwarp's MATHJAX emulation for `siunitx` is meant to be a stop-gap measure until an extension is included in MATHJAX. As of this writing, the third-party `siunitx` extension for MATHJAX is not currently hosted at any public CDN, thus `siunitx` is not usable with this extension unless a local copy of this extension is created first. See `\MathJaxFilename` to select a custom MathJax script, but lwarp's emulation would have to be disabled as well.

Document modifications required for MATHJAX:

#### custom units

- Custom units may be added with `\CustomizeMathJax`. See the lwarp-siunitx code for examples.

#### ⚠ unit spacing

- Units work better using `~` between units instead of using periods.

#### ⚠ \square, \cubic

- To square or cube compound units, enclose the following compound units in braces:

`\cubic{\centi\meter}`

Single units do not require braces.

Also see [MATHJAX option](#), section 8.7.4.

for HTML output: 11777 `\begin{warphTML}`

Options for `siunitx`:

```


11778 \newrobustcmd{\LWR@siunitx@textcelsius}{\HTMLentity{deg}C}
11779 \newrobustcmd{\LWR@siunitx@textdegree}{\HTMLentity{deg}}
11780 \newrobustcmd{\LWR@siunitx@textprime}{\HTMLunicode{2032}}
11781 \newrobustcmd{\LWR@siunitx@textdblprime}{\HTMLunicode{2033}}
11782 \newrobustcmd{\LWR@siunitx@textplanckbar}{\text{\textit{\HTMLunicode{0127}}}}
11783
11784 \appto\LWR@restoreorigformatting{%
11785 \renewrobustcmd{\LWR@siunitx@textcelsius}{\text{\ensuremath{^\circ}C}}%
11786 \renewrobustcmd{\LWR@siunitx@textdegree}{\text{\ensuremath{^\circ}}}%
11787 \renewrobustcmd{\LWR@siunitx@textprime}{\text{\ensuremath{^\prime}}}%
11788 \renewrobustcmd{\LWR@siunitx@textdblprime}{\text{\ensuremath{^\prime\prime}}}%
11789 \renewrobustcmd{\LWR@siunitx@textplanckbar}{\text{\ensuremath{\hbar}}}%
11790 }
11791
11792 \PassOptionsToPackage{
11793 detect-mode=true,
11794 per-mode=symbol,% fraction is not seen by pdftotext
11795 text-celsius = {\LWR@siunitx@textcelsius},
11796 text-degree = {\LWR@siunitx@textdegree},
11797 text-arcminute = {\LWR@siunitx@textprime} ,
11798 text-arcsecond = {\LWR@siunitx@textdblprime} ,
11799 }{siunitx}

11800 \end{warphTML}

```

## 85 Graphics print-mode modifications

### 85.1 General limitations

 **scale** Avoid using the `\includegraphics scale` option. Change:

```
\includegraphics[scale=<xx>]{...}
```

to:

```
\includegraphics[width=<yy>\linewidth]{...}
```

**`\includegraphics` file formats** For `\includegraphics` with `.pdf` or `.eps` files, the user must provide a `.pdf` or `.eps` image file for use in print mode, and also a `.svg`, `.png`, or `.jpg` version of the same image for use in HTML.

```
\includegraphics{filename} % print:.pdf/.eps HTML:.svg, etc.
```

For print output, `lwarp` will automatically choose the `.pdf` or `.eps` format if available, or some other format otherwise. For HTML, one of the other formats is used instead.

If a `.pdf` or `.eps` image is referred to with its file extension, the extension will be changed to `.svg` for HTML:

```
\includegraphics{filename.pdf} % uses .svg in html
\includegraphics{filename.eps} % uses .svg in html
```

Prog `pdftocairo` To convert a PDF image to SVG, use the utility *pdftocairo*:  
**PDF to SVG**

```
Enter ⇒ pdftocairo -svg filename.pdf
```

Prog `lwarpmk pdftosvg` For a large number of images, use *lwarpmk*:

```
Enter ⇒ lwarpmk pdftosvg *.pdf (or a list of filenames)
```

Prog `lwarpmk epstopdf` For EPS images converted to PDF using the package `epstopdf`, use

Prog `epstopdf`  
**epstopdf package**

```
Enter ⇒ lwarpmk pdftosvg *.PDF
```

to convert to SVG images.





**DVI latex** When using DVI *latex*, it is necessary to convert EPS to PDF and then to SVG:

```
Enter ⇒ lwarpmk epstopdf *.eps (or a list of filenames)
```

```
Enter ⇒ lwarpmk pdftosvg *.pdf (or a list of filenames)
```

**PNG and JPG** For PNG or JPG while using *pdflatex*, *lualatex*, or *xelatex*, the same file may be used in both print or HTML versions, and may be used with a file extension, but will also be used without the file extension if it is the only file of its base name.

**GIF** GIF files may be used for HTML, but another format must also be provided for print output.

- file extension priorities** If a file extension is not used, for HTML the file extension priorities are: SVG, GIF, PNG, then JPG.
-  **graphics vs. graphicx** If using the older `graphics` syntax, use both optional arguments for `\includegraphics`. A single optional parameter is interpreted as the newer `graphicx` syntax. Note that viewports are not supported by `lwarp`—the entire image will be shown.
-  **viewport**
-  **viewport units** For `\includegraphics`, avoid `px` and `%` units for width and height, or enclose them inside `warpHTML` environments. For font-proportional image sizes, use `ex` or `em`. For fixed-sized images, use `cm`, `mm`, `in`, `pt`, or `pc`. Use the keys `width=.5\linewidth`, or similar for `\textwidth` or `\textheight` to give fixed-sized images proportional to a 6 by 9 inch text area. Do not use the `scale` option, since it is not well supported by HTML browsers.
- options** `\includegraphics` accepts `width` and `height`, `origin`, `rotate` and `scale`, plus new `class` and `alt` keys.
- HTML class** With HTML output, `\includegraphics` accepts an optional `class=xyz` keyval combination, and if this is given then the HTML output will include that class for the image. The class is ignored for print output.
- HTML alt tags** Likewise, the `\includegraphics alt` key adds an HTML `alt` tag to an image, and is ignored for print output. If not assigned, each image is given an `alt` tag according to `\ImageAltText`.
- `\rotatebox`** `\rotatebox` accepts the optional `origin` key.
-  **browser support** `\rotatebox`, `\scalebox`, and `\reflectbox` depend on modern browser support. The CSS3 standard declares that when an object is transformed the whitespace which they occupied is preserved, unlike  $\text{\LaTeX}$ , so expect some ugly results for scaling and rotating.

## 85.2 Print-mode modifications

**for PRINT output:** For print output, accept and then discard the new `class` key:

```
11801 \begin{warpprint}
11802 \define@key{Gin}{class}{}
11803 \define@key{Gin}{alt}{}

```

Print-mode additions for the `overpic` package. See section 404 for the HTML version.

```
11804 \AtBeginDocument{
11805 \ifpackageloaded{overpic}{
11806 \newcommand*\overpicfontsize{12}
11807 \newcommand*\overpicfontskip{14}
11808 }{}
11809 }
11810 \end{warpprint}

```

## 86 xcolor boxes

Pkg xcolor A few new definitions are provided for enhanced HTML colored boxes, and `\fcolorbox` is slightly modified. Print-mode version are also provided.

Print-mode versions of new xcolor definitions. These are defined inside `warpall` because they are also used for HTML while inside a `lateximage`. They are defined `\AtBeginDocument` so that the xcolor originals may first be loaded and saved for reuse.

The framed versions are modified to allow a background color of none, in which case only the frame is drawn, allowing the background page color to show.

for HTML & PRINT: 11811 `\begin{warpall}`

After xparse may have been loaded ...

11812 `\AtBeginDocument{`

... and *only* if xcolor was loaded:

11813 `\ifpackageloaded{xcolor}{`

11814 `\LWR@traceinfo{patching xcolor}`

The print version:

`\colorboxBlock` `\colorboxBlock` is the same as `\colorbox`:

11815 `\LetLtxMacro\colorboxBlock\colorbox`

The original definition is reused by the new versions:

11816 `\LetLtxMacro\LWR@orig@print@fcolorbox\fcolorbox`

`\fcolorbox` [*framemodel*] [*framecolor*] [*boxmodel*] [*boxcolor*] [*text*]

In print mode, `\fcolorbox` is modified to accept a background color of none.

(`\fcolorbox` is particular about its optional arguments, thus the elaborate combinations of `\ifthenelse`.)

11817 `\newsavebox{\LWR@colorminipagebox}`

11818

11819 `\NewDocumentCommand{\LWR@print@fcolorbox}{o m o m +m}{%`

11820 `\LWR@traceinfo{\LWR@print@fcolorbox #2 #4}%`

Pre-load the contents into an LR box so that they can be used inside a `\fcolorbox`:

11821 `\begin{lrbox}{\LWR@colorminipagebox}%`

11822 `#5%`

11823 `\end{lrbox}%`

Sort out the various optional arguments and the background color of none. In each case, the LRbox is placed inside a \fcolorbox.

The current color is remembered, then set to the frame, then the current color is used for the contents.

```

11824 \ifstrequal{#4}{none}%
11825 {% #4 none
11826 \LWR@traceinfo{background is none}%
11827 {% scope the \colorlet
11828 \colorlet{LWR@currentcolor}{.}%
11829 \color{#2}%
11830 \fbox{%
11831 \color{LWR@currentcolor}%
11832 \usebox{LWR@colorminipagebox}%
11833 }% fbox
11834 }% colorlet
11835 }% #4 none
11836 {% #4 not none
11837 \LWR@traceinfo{background not none}%
11838 \IfValueTF{#1}%
11839 {%
11840 \IfValueTF{#3}%
11841 {\LWR@orig@print@fcolorbox[#1][#2][#3][#4]{\usebox{LWR@colorminipagebox}}}%
11842 {\LWR@orig@print@fcolorbox[#1][#2][#4]{\usebox{LWR@colorminipagebox}}}%
11843 }%
11844 {% no value #1
11845 \IfValueTF{#3}%
11846 {\LWR@orig@print@fcolorbox[#2][#3][#4]{\usebox{LWR@colorminipagebox}}}%
11847 {\LWR@orig@print@fcolorbox[#2][#4]{\usebox{LWR@colorminipagebox}}}%
11848 }% no value #1
11849 }% #4 not none
11850 \LWR@traceinfo{LWR@print@fcolorbox done}%
11851 }

11852 \renewrobustcmd*{\fcolorbox}{\LWR@print@fcolorbox}%

```

\fcolorboxBlock [*framemodel*] [*framecolor*] [*boxmodel*] [*boxcolor*] [*text*]

In print mode, \fcolorboxBlock is the same as \fcolorbox.

```

11853 \newcommand*{\LWR@print@fcolorboxBlock}{\LWR@print@fcolorbox}

11854 \newrobustcmd*{\fcolorboxBlock}{\LWR@print@fcolorboxBlock}

```

Env fcolorminipage [*1:framemodel*] [*2:framecolor*] [*3:boxmodel*] [*4:boxcolor*] [*5:align*] [*6:height*] [*7:inner-align*] [*8:width*]

In print mode, becomes a \fcolorbox containing a minipage:

```

11855 \NewDocumentEnvironment{LWR@print@fcolorminipage}{o m o m O{c} O{ } o m}
11856 {%
11857 \LWR@traceinfo{*** fcolorminipage: #2 #4 #8}%

```

Pre-load the contents into an LR box so that they can be used inside a `\fcolorbox`:

```
11858 \begin{lrbox}{\LWR@colorminipagebox}%
```

If inner alignment is not given, use the outer alignment instead:

```
11859 \IfValueTF{#7}%
11860 {\begin{minipage}[#5][#6][#7]{#8}}%
11861 {\begin{minipage}[#5][#6][#5]{#8}}%
11862 }%
11863 {%
11864 \end{minipage}%
11865 \end{lrbox}%
11866 \LWR@traceinfo{*** starting end fcolorminipage #1 #2 #3 #4 #8}%
```

Sort out the various optional arguments and the background color of none. In each case, the LRbox is placed inside a `\fcolorbox`.

The current color is remembered, then set to the frame, then the current color is used for the contents.

```
11867 \ifstrequal{#4}{none}%
11868 {% #4 none
11869 {% scope the \colorlet
11870 \colorlet{\LWR@currentcolor}{.}%
11871 \color{#2}%
11872 \fbox{%
11873 \color{\LWR@currentcolor}%
11874 \usebox{\LWR@colorminipagebox}%
11875 }% fbox
11876 }% colorlet
11877 }% #4 none
11878 {% #4 not none
11879 \IfValueTF{#1}%
11880 {%
11881 \IfValueTF{#3}%
11882 {\LWR@orig@print@fcolorbox[#1][#2][#3]{#4}{\usebox{\LWR@colorminipagebox}}}%
11883 {\LWR@orig@print@fcolorbox[#1][#2][#4]{\usebox{\LWR@colorminipagebox}}}%
11884 }%
11885 {% no value #1
11886 \IfValueTF{#3}%
11887 {\LWR@orig@print@fcolorbox[#2][#3]{#4}{\usebox{\LWR@colorminipagebox}}}%
11888 {\LWR@orig@print@fcolorbox[#2][#4]{\usebox{\LWR@colorminipagebox}}}%
11889 }% no value #1
11890 }% #4 not none
11891 \LWR@traceinfo{*** finished end fcolorminipage}%
11892 }

11893 \NewDocumentEnvironment{fcolorminipage}{}
11894 {\LWR@print@fcolorminipage}
11895 {\endLWR@print@fcolorminipage}

11896 \LWR@traceinfo{xcolor patches done}
11897 {}% xcolor loaded
```

```

11898 }% AtBeginDocument

11899 \end{warpall}

```

## 87 chemmacros environments

`\makepolymerdelims` and redox reactions must be enclosed in a `lateximage` during HTML output. These environments are provided here in print mode, and in the `chemmacros` code in HTML mode, as a high-level semantic syntax which automatically embeds the contents in a `lateximage` with an appropriate `alt` tag.

**for PRINT output:** 11900 `\begin{warpprint}`

```

11901 \AtBeginDocument{
11902 \ifpackageloaded{chemmacros}{

```

Env `polymerdelims`

```

11903 \DeclareDocumentEnvironment{polymerdelims}{}
11904 {}{}

```

Env `redoxreaction` `{\space above}` `{\space below}`

For print output, extra space is include above and below the image, and a `lateximage` is not necessary. This extra space must be enforced, even inside a float, so zero-width rules are used.

For the HTML version, see section 180.4.

```

11905 \DeclareDocumentEnvironment{redoxreaction}{m m}
11906 {\rule{0pt}{#1}}{\rule[-#2]{0pt}{#2}}

11907 }{}% chemmacros
11908 }% AtBeginDocument

11909 \end{warpprint}

```

## 88 cleveref

**loading order** `cleveref` and `lwarp-cleveref` with its associated macro patches are automatically preloaded at the end of the preamble via `\AtEndPreamble` and `\AfterEndPreamble`. This is done because the HTML conversion requires `cleveref`. The user's document may not require `cleveref`, thus the user may never explicitly load it, so during HTML output `lwarp` loads it last. If the user's document preamble uses `cleveref` options, or functions such as `\crefname`, then `cleveref` may be loaded in the user's preamble near the end, and `lwarp`'s additional loading of `cleveref` will have no effect.

`\AtEndPreamble` forces `cleveref` to be loaded last, if it has not yet been loaded by the user.

**for HTML output:** 11910 \begin{warpHTML}  
 11911  
 11912 \AtEndPreamble{  
 11913     \RequirePackage{cleveref}  
 11914 }  
 11915  
 11916 \end{warpHTML}

## 89 Preexisting label and reference definitions

Remember and patch some label-related definitions. These will be further encased and patched by other packages later.

\label and \pageref do NOT change their behavior according to print or HTML output, and thus do not use the \LWR@formatted system.

**for HTML output:** 11917 \begin{warpHTML}  
 11918  
 11919 \LetLtxMacro\LWR@orig@label\label% includes memoir, before cleveref  
 11920 \LetLtxMacro\label\LWR@new@label  
 11921  
 11922 \LetLtxMacro\LWR@orig@pageref\pageref  
 11923 \LetLtxMacro\pageref\LWR@new@pageref  
 11924  
 11925 \end{warpHTML}

## 90 picture environment

Env `picture` The picture environment is enclosed inside a \lateximage.

**for HTML output:** 11926 \begin{warpHTML}

Env `picture`

```
11927 \BeforeBeginEnvironment{picture}{\begin{lateximage}[picture]}
11928
11929 \AfterEndEnvironment{picture}{\end{lateximage}}

11930 \end{warpHTML}
```

## 91 Minipages and Boxes

A css flexbox is used for minipages and parboxes, allowing external and internal vertical positioning.

 **inline** A line of text with an inline minipage or \parbox will have the minipage or \parbox

placed onto its own line, because a paragraph is a block element and cannot be made inline-block.

**placement** minipages and \parboxes will be placed side-by-side in HTML unless you place a \newline between them.

**side-by-side** Side-by-side minipages may be separated by \quad, \qquad, \enskip, \hspace, \hfill, or a \rule. When inside a center environment, the result is similar in print and HTML. Paragraph tags are suppressed between side-by-side minipages and these spacing commands, but not at the start or end of the paragraph.

⚠ **minipage in a span** There is limited support for minipages inside an HTML <span>. An HTML <div> cannot appear inside a <span>. While in a <span>, minipages, and \parboxes, and any enclosed lists have limited HTML tags, resulting in an “inline” format, without markup except for HTML breaks. Use \newline or \par for an HTML break.

⚠ **minipage size** When using minipage, \parbox, and fminipage, a virtual 6 × 9 inch text area is used for \linewidth, \textwidth, and \textheight, both for sizing the minipage, and also for its contents.

**if width is \linewidth** If a minipage or \parbox is assigned a width of exactly \linewidth, in HTML it is automatically given no HTML width, thus allowed to fill the line as needed, similar to how it appears in print output.

**full-width if HTML** A new macro \minipagefullwidth requests that, during HTML output, the next single minipage or \parbox be generated without an HTML width attribute, allowing it to be the full width of the display rather than the declared print-output width. This may be useful where the printed version's width makes no sense in HTML.

⚠ **tabular, multicols** Inside a tabular or multicols environment, where the width depends on the browser window, \minipagefullwidth is effectively used by default for every minipage or \parbox inside the environment. \UseMinipageWidths may be used to tell lwarp to honor the specified widths of all following minipages and \parboxes until the end of the local scope, and \IgnoreMinipageWidths may be used to tell lwarp to ignore the specified widths.

⚠ **multicol** Inside a multicols, \linewidth is divided by the specified number of columns.

⚠ **text alignment** Nested minipages adopt their parent's text alignment in HTML, whereas in regular L<sup>A</sup>T<sub>E</sub>X PDF output they do not. Use a flushleft or similar environment in the child minipage to force a text alignment.

**for HTML output:** 11931 \begin{warpHTML}

## 91.1 Computed lengths

Len \LWR@minipagewidth Used to convert the width into printable units.

11932 \newlength{\LWR@minipagewidth}

Len \LWR@minipageheight Used to convert the height into printable units.

```
11933 \newlength{\LWR@minipageheight}
```

## 91.2 Virtual page size

Ctrl LWR@virtualpagedepth Used to only reset the line width at the outermost minipage.

```
11934 \newcounter{LWR@virtualpagedepth}
11935 \setcounter{LWR@virtualpagedepth}{0}
```

Env LWR@setvirtualpage \* [*columns*]

If not nesting a minipage, adjust `\linewidth`, `\textwidth`, and `\textheight` for a virtual  $6 \times 9$  page, and start on a new PDF page to help prevent page overflows.

If starred, force a new page in the PDF before generating more HTML. This may be done to reduce the chance of page overflow when starting a new minipage.

The optional number of columns defaults to 1.

```
11936 \NewDocumentEnvironment{LWR@setvirtualpage}{s O{1}}{%
11937 \ifnumequal{\value{LWR@virtualpagedepth}}{0}{%
11938 \IfBooleanT{#1}{\LWR@maybe@orignewpage}%
11939 \setlength{\linewidth}{6in/#2}%
11940 \setlength{\textwidth}{6in}%
11941 \setlength{\textheight}{9in}%
11942 }{%
11943 \addtocounter{LWR@virtualpagedepth}{1}%
11944 }
11945 \addtocounter{LWR@virtualpagedepth}{-1}}
```

## 91.3 Footnote handling

Also see section 59 for other forms of footnotes. Minipage footnotes are gathered in section 59.5, and then placed into the document in section 91.4.

## 91.4 Minipage handling

Bool LWR@minipagefullwidth Should the next minipage have no HTML width?

```
11946 \newbool{LWR@minipagefullwidth}
11947 \boolfalse{LWR@minipagefullwidth}
```

Bool LWR@forceminipagefullwidth Should the next minipage have no HTML width? Used to force full width for all minipages in an environment such as `tabular` or `multicols`, where the actual width depends on the browser width. Controlled by `\useminipagewidths` and `\ignoreminipagewidths`.

```
11948 \newbool{LWR@forceminipagefullwidth}
11949 \boolfalse{LWR@forceminipagefullwidth}
```

`\minipagefullwidth` Requests that the next minipage have no width tag in HTML:

**for HTML output:** 11950 `\newcommand*{\minipagefullwidth}{\global\booltrue{LWR@minipagefullwidth}}`

`\UseMinipageWidths` Locally requests that minipage widths be honored.

11951 `\newcommand*{\UseMinipageWidths}{\boolfalse{LWR@forceminipagefullwidth}}`

`\IgnoreMinipageWidths` Locally requests that minipage widths be ignored.

11952 `\newcommand*{\IgnoreMinipageWidths}{\booltrue{LWR@forceminipagefullwidth}}`

11953 `\end{warppHTML}`

**for PRINT output:** 11954 `\begin{warpprint}`  
 11955 `\newcommand*{\minipagefullwidth}{}`  
 11956 `\newcommand*{\UseMinipageWidths}{}`  
 11957 `\newcommand*{\IgnoreMinipageWidths}{}`  
 11958 `\end{warpprint}`

**for HTML output:** 11959 `\begin{warppHTML}`

**Bool** `LWR@minipagethispar` Has a minipage been seen this paragraph? If true, prevents paragraph tags around horizontal space between minipages.

11960 `\newbool{LWR@minipagethispar}`

11961 `\boolfalse{LWR@minipagethispar}`

**Env** `minipage` [*<vert position>*] [*<height>*] [*<inner vert position>*] [*<width>*]

The vertical positions may be 'c', 't', or 'b'. The inner position may also be 's'.

When using `\linewidth`, `\textwidth`, or `\textheight`, these are scaled proportionally to a 6×9 inch text area.

11962 `\NewDocumentEnvironment{LWR@HTML@sub@minipage}{m m m m}`

11963 `{%`

11964 `\LWR@traceinfo{minipage}%`

Start an environment, in which width and height is computed based on a virtual page size instead of the extra-large PDF page used during HTML tag generation.

11965 `\begin{LWR@setvirtualpage}*%`

Save the requested width now that `\linewidth`, etc. are adjusted to virtual size.

11966 `\setlength{\LWR@minipagewidth}{#4}%`

11967 `\ifnumequal{\value{LWR@virtualpagedepth}}{1}{%`

11968 `\addtolength{\LWR@minipagewidth}{3em}% room for frames`

11969 `}%%`

11970 `\LWR@traceinfo{computed width is \LWR@printlength{\LWR@minipagewidth}}%`

Compute height:

```
11971 \setlength{\LWR@minipageheight}{\textheight}% default unless specified
11972 \ifblank{#2}{\setlength{\LWR@minipageheight}{#2}}%
```

L<sup>A</sup>T<sub>E</sub>X wants to start a paragraph for the virtual minipage, then start a paragraph again for the contents of the minipage, so cancel the paragraph tag handling until the minipage has begun.

```
11973 \ifbool{FormatWP}{\newline}{}%
11974 \LWR@stoppars%
```

If FormatWP, add a text frame:

```
11975 \ifbool{FormatWP}{%
11976
11977 \addtocounter{LWR@thisautoidWP}{1}%
11978 \LWR@htmltag{%
11979 div id="\LWR@print@mbox{autoidWP-\arabic{LWR@thisautoidWP}}" %
11980 class="wpmminipage"%
11981 }%
11982
11983 }{}}%
```

Create the <div> tag with optional alignment style:

```
11984 \LWR@traceinfo{minipage: creating div class}%
11985 \LWR@htmltag{div class="minipage" style="%
11986 \ifthenelse{equal{#1}{t}}{\LWR@print@mbox{vertical-align:bottom} ; }{}%
11987 \ifthenelse{equal{#1}{c}}{\LWR@print@mbox{vertical-align:middle} ; }{}%
11988 \ifthenelse{equal{#1}{b}}{\LWR@print@mbox{vertical-align:top} ; }{}%
11989 \ifthenelse{equal{#3}{t}}{\LWR@print@mbox{justify-content:flex-start} ; }{}%
11990 \ifthenelse{equal{#3}{c}}{\LWR@print@mbox{justify-content:center} ; }{}%
11991 \ifthenelse{equal{#3}{b}}{\LWR@print@mbox{justify-content:flex-end} ; }{}%
11992 \ifthenelse{equal{#3}{s}}{\LWR@print@mbox{justify-content:space-between} ; }{}%
```

Print the width and optional height styles:

```
11993 \LWR@traceinfo{minipage: about to print the width of \LWR@printlength{\LWR@minipagewidth}}%
11994 \ifbool{LWR@minipagefullwidth}%
11995 {\global\boolfalse{LWR@minipagefullwidth}}%
11996 {%
11997 \ifbool{LWR@forceminipagefullwidth}%
11998 {%
11999 {%
12000 \ifdimequal{#4}{\linewidth}%
12001 {%
12002 {width:\LWR@printlength{\LWR@minipagewidth} ; }%
12003 }%
12004 }%
12005 }%
12006 \LWR@traceinfo{minipage: about to print the height}%
12007 \ifblank{#2}{\height:\LWR@printlength{\LWR@minipageheight} ; }%
12008 "%
```

Finish with an empty line to start the contents on a new line.

```
12008
12009 % The preceding empty line is required.
```

Set the user-accessible line and text width and height values inside the virtual minipage. These do not affect the actual size of the PDF output, but are used by any reference to `\linewidth`, etc. inside the virtual minipage being created here. `\LWR@minipagewidth` was the original then padded by 3em, which is restored here. This is done instead of settings back to #4, in case #4 was `\linewidth`, which was changed to 6in above.

```
12010 \ifnumequal{\value{LWR@virtualpagedepth}}{1}{%
12011 \addtolength{\LWR@minipagewidth}{-3em}% undo frame padding
12012 }{}%
12013 \setlength{\linewidth}{\LWR@minipagewidth}%
```

`\raggedright` cancels hyphenation, which will be done by HTML instead.

```
12014 \LWR@print@raggedright%
```

Set minipage footnotes:

```
12015 \def\@mpfn{mpfootnote}%
12016 \def\thempfn{\thempfootnote}\c@mpfootnote\z@%
12017 \let\@footnotetext\@mpfootnotetext%
```

Resume paragraph tag handling for the contents of the minipage:

```
12018 \LWR@startpars%
12019 \ifboolexpr{bool{FormatWP} and bool{WPMarkMinipages}}{%
12020
12021 === begin minipage ===
12022
12023 }{}%
12024 \LWR@traceinfo{minipage: finished starting the minipage}%
12025 }% finished \minipage
12026 {% \endminipage
```

Print pending minipage footnotes:

```
12027 \LWR@printpendingmpfootnotes%
```

End the environment with closing tag:

```
12028 \ifboolexpr{bool{FormatWP} and bool{WPMarkMinipages}}{%
12029
12030 === end minipage ===
12031
12032 }{}%
12033 \LWR@stoppars%
12034
12035 \ifbool{FormatWP}{%
12036
12037 \LWR@htmlElementend{div}%
```

```

12038
12039 }{}%
12040 \LWR@htmldivclassend{minipage}%
12041
12042 \end{LWR@setvirtualpage}%
12043 \LWR@startpars%
12044 \ifbool{FormatWP}{\newline}{}%

```

Prevent paragraph tags around horizontal white space until the start of the next paragraph:

```

12045 \global\booltrue{LWR@minipagethispar}%
12046 \LWR@traceinfo{LWR@minipage: done}%
12047 }
12048
12049 \NewDocumentEnvironment{LWR@HTML@minipage}{O{t} O{} O{t} m}
12050 {\LWR@HTML@sub@minipage{#1}{#2}{#3}{#4}}
12051 {\endLWR@HTML@sub@minipage}
12052
12053 \LWR@formattedenv{minipage}

```

## 91.5 \parbox, \mbox, \makebox, \framebox, \fbox, \raisebox

for HTML output:

```
\parbox [pos] [height] [inner-pos] {width} {text}
```

A parbox uses the minipage code:

```

12054 \NewDocumentCommand{\LWR@HTML@parbox}{O{t} O{} O{t} m +m}
12055 {
12056 \LWR@traceinfo{parbox of width #4}%
12057 \begin{minipage}[#1][#2][#3]{#4}%
12058 #5
12059 \end{minipage}%
12060 }
12061
12062 \LWR@formatted{parbox}

```

\mbox {*text*}      Nullified for HTML.

```

12063 \newcommand*{\LWR@HTML@mbox}[1]{#1}
12064
12065 \LWR@formatted{mbox}

```

\LWR@makebox@paren {*width*} , {*height*}

Adds to the style in \LWR@temptwo.

```

12066 \NewDocumentCommand{\LWR@makebox@paren}{m m}{%
12067 \IfValueTF{#2}{%
12068 \setlength{\LWR@tempwidth}{#1\unitlength}%

```

```

12069 \setlength{\LWR@tempheight}{#2\unitlength}%
12070 \appto{\LWR@temptwo}{%
12071 \LWR@print@mbx{width:\LWR@printlength{\LWR@tempwidth}} ; % space
12072 \LWR@print@mbx{height:\LWR@printlength{\LWR@tempheight}} ; % space
12073 }%
12074 }{%
12075 \PackageError{lwarp}%
12076 {(width,height) is missing a comma ',' character}%
12077 {\protect\makebox\space and \protect\framebox\space accept
12078 a size in the format (width,height).}%
12079 }%
12080 }

```

`\LWR@makebox@align` {*<alignment character>*}

Adds to the style in `\LWR@temptwo`.

```

12081 \newcommand*{\LWR@makebox@align}[1]{%
12082 \def\LWR@align{center}%
12083 \ifstrequal{#1}{l}{\def\LWR@align{left}}{%
12084 \ifstrequal{#1}{r}{\def\LWR@align{right}}{%
12085 \ifstrequal{#1}{s}{\def\LWR@align{justify}}{%
12086 \appto{\LWR@temptwo}{%
12087 \LWR@print@mbx{text-align:\LWR@align} ; %
12088 }%
12089 }

```

`\makebox` (*<width,height>*) [*<width>*] [*<pos>*] {*<text>*}

```

12090 \NewDocumentCommand{\LWR@HTML@makebox}{>\SplitArgument{1}{,}}d() o o +m{%

```

Build the style depending on arguments:

```

12091 \begin{LWR@setvirtualpage}%
12092 \def\LWR@temptwo{%
12093 \IfValueTF{#1}%
12094 {% (width,height) ..
12095 \LWR@makebox@paren #1%
12096 \IfValueT{#2}%
12097 {% (width,height) [posn]
12098 \LWR@makebox@align{#2}%
12099 }%
12100 }%
12101 {% [width]
12102 \IfValueT{#2}% [width]
12103 {%
12104 \setlength{\LWR@tempwidth}{#2}%
12105 \ifdimgreater{\LWR@tempwidth}{0pt}{%
12106 \appto{\LWR@temptwo}{%
12107 width:\LWR@printlength{\LWR@tempwidth} ; % space
12108 }%
12109 }{%
12110 }%
12111 }%

```

```

12112 \IfValueT{#3}%
12113 {% [width] [posn]
12114 \LWR@makebox@align{#3}%
12115 }%
12116 \InlineClass[%
12117 \LWR@print@mbx{display:inline-block} ; %
12118 \LWR@temptwo%
12119]%
12120 {makebox}%
12121 {#4}%
12122 \end{LWR@setvirtualpage}%
12123 }
12124 \LWR@formatted{makebox}

```

`\framebox` (*<width,height>*) [*<width>*] [*<pos>*] {*<text>*}

```

12125 \NewDocumentCommand{\LWR@HTML@framebox}{d() o o +m}{%
12126 \fbox{\makebox{#1}[#2][#3]{#4}}%
12127 }
12128
12129 \LWR@formatted{framebox}

```

`\LWR@forceminwidth` {*<length>*}

Sets `\LWR@atleastonept` to be at least 1pt.

```

12130 \newlength{\LWR@atleastonept}
12131
12132 \newcommand*{\LWR@forceminwidth}[1]{%
12133 \setlength{\LWR@atleastonept}{#1}%
12134 \ifthenelse{%
12135 \lengthtest{\LWR@atleastonept>0pt}\AND%
12136 \lengthtest{\LWR@atleastonept<1pt}%
12137 }{%
12138 {\setlength{\LWR@atleastonept}{1pt}}%
12139 }%
12140 }

```

`\LWR@fboxstyle` Prints the HTML attributes for a black border and padding.

`\LWR@forceminwidth` must be used first in order to set the border width.

```

12141 \newcommand*{\LWR@fboxstyle}{%
12142 \LWR@findcurrenttextcolor%
12143 border:\LWR@printlength{\LWR@atleastonept} solid \LWR@origpound\LWR@tempcolor ; %
12144 padding:\LWR@printlength{\fboxsep} ; %
12145 color:\LWR@origpound\LWR@tempcolor%
12146 }

```

`\fbox` {*<text>*}

Creates a framed inline span enclosing the text.

Create a new HTML version, but don't use it until after xcolor may have loaded:

```
12147 \newcommand{\LWR@HTML@fbox}[1]{%
12148 \LWR@traceinfo{HTML fbox}%
12149 \LWR@forceminwidth{\fboxrule}%
12150 \InlineClass[%
12151 \LWR@print@mbbox{display:inline-block} ; %
12152 \LWR@fboxstyle%
12153]{fbox}{#1}%
12154 }
```

xcolor \lets things to \fbox when it is loaded, and this must remain even for HTML output while in a lateximage, so \fbox is not modified until \AtBeginDocument:

```
12155 \AtBeginDocument{\LWR@formatted{fbox}}
```

`\fboxBlock` `{\text}` Creates a framed HTML <div> of the text.

First, a print-mode version. This is newly defined for print mode, so it is defined inside warpall.

**for HTML & PRINT:**

```
12156 \end{warpHTML}
12157 \begin{warpall}
12158 \let\fboxBlock\fbox
12159 \end{warpall}
12160
12161 \begin{warpHTML}
```

**for HTML output:** Next, an HTML version:

```
12162 \newcommand{\LWR@HTML@fboxBlock}[1]{%
12163 \LWR@forceminwidth{\fboxrule}%
12164 \LWR@stoppars%
12165 \begin{BlockClass}%
12166 \LWR@fboxstyle%
12167]{fboxBlock}
12168 #1
12169 \end{BlockClass}
12170 \LWR@startpars%
12171 }
12172
12173 \LWR@formatted{fboxBlock}
12174
12175 \end{warpHTML}
```

Env `fminipage` `[\align] [\height] [\align] {\width}`

Creates a framed HTML <div> around its contents.

**for HTML & PRINT:** Print version:

```
12176 \begin{warpall}
12177
12178 \newsavebox{\LWR@fminipagebox}
12179
```

```
12180 \NewDocumentEnvironment{LWR@print@fminipage}{0{t} o 0{t} m}
12181 {%
```

An outer minipage will be used for vertical alignment. An inner minipage will be framed with \fbox.

If the optional inner alignment is not given, use the outer instead:

```
12182 \IfValueTF{#3}%
12183 {\def\LWR@thisalign{#3}}
12184 {\def\LWR@thisalign{#1}}%
```

Form the outer minipage depending on whether a height was given. Make the outer minipage larger to compensate for the frame.

```
12185 \IfValueTF{#2}%
12186 {\minipage[#1][#2+2\fboxsep+2\fboxrule][\LWR@thisalign]{#4+2\fboxsep+2\fboxrule}}%
12187 {\minipage[#1]{#4+2\fboxsep+2\fboxrule}}%
```

Capture the contents of the environment:

```
12188 \begin{lrbox}{\LWR@fminipagebox}%
```

Nest the contents inside an inner minipage of the desired size:

```
12189 \IfValueTF{#2}%
12190 {\minipage[#1][#2][\LWR@thisalign]{#4}}%
12191 {\minipage[#1]{#4}}%
12192 }
12193 {%
```

Close the inner minipage and the LR box with the contents:

```
12194 \endminipage%
12195 \end{lrbox}%
```

Create a frame around the contents of the environment:

```
12196 \fbox{\usebox{\LWR@fminipagebox}}%
```

The entire thing is placed inside the outer minipage:

```
12197 \endminipage%
12198 }
12199
12200 \let\LTxMacro\fminipage\LWR@print@fminipage
12201 \let\LTxMacro\endfminipage\endLWR@print@fminipage
12202 % \newenvironment{fminipage}{\LWR@print@fminipage}{\endLWR@print@fminipage}
12203
12204 \end{warpall}
```

HTML version:

for HTML output:

```

12205 \begin{warphTML}
12206
12207 \NewDocumentEnvironment{LWR@HTML@fminipage}{O{t} o O{t} m}
12208 {%
12209 \LWR@traceinfo{fminipage #1 #2 #3 #4}%

```

Locally change to the virtual page size before processing the requested sizes:

```

12210 \begin{LWR@setvirtualpage}*%
12211 \setlength{\LWR@tempwidth}{#4}%
12212 \IfValueT{#2}{\setlength{\LWR@tempheight}{#2}}%

```

Use a rule of at least one pixel in width:

```

12213 \LWR@forceminwidth{\fboxrule}%

12214 \LWR@stoppars%

12215 \begin{BlockClass}[%
12216 \LWR@fboxstyle ; %
12217 \IfValueT{#2}{height:\LWR@printlength{\LWR@tempheight} ; }%
12218 \ifbool{LWR@minipagefullwidth}%
12219 {\global\boolfalse{LWR@minipagefullwidth}}%
12220 {%
12221 \ifbool{LWR@forceminipagefullwidth}%
12222 {}%
12223 {%
12224 \ifdimequal{\LWR@tempwidth}{\linewidth}%
12225 {}%
12226 {width:\LWR@printlength{\LWR@tempwidth} ; }%
12227 }%
12228 }%
12229]{fminipage}%
12230 }
12231 {%
12232 \end{BlockClass}%
12233 \end{LWR@setvirtualpage}%

```

Prevent paragraph tags around horizontal white space until the start of the next paragraph:

```

12234 \global\booltrue{LWR@minipagethispar}%
12235 \LWR@traceinfo{fminipage done}%
12236 }
12237
12238 \LWR@formattedenv{fminipage}

```

`\raisebox` {<raiselen>} [<height>] [<depth>] {<text>}

```

12239 \NewDocumentCommand{\LWR@HTML@raisebox}{m o o m}{%
12240 #4%
12241 }
12242
12243 \LWR@formatted{raisebox}

```

```
12244 \end{warpHTML}
```

## 92 Direct formatting

⚠ **\bfseries, etc.** `\textbf`, etc. are supported, but `\bfseries`, etc. work only in some situations.

⚠ **HTML special chars** `&`, `<`, and `>` have special meanings in HTML. If `\&`, `\textless`, and `\textgreater` are used, proper HTML entities will be used, but there may be HTML parsing problems if these special characters occur unescaped in program listings or other verbatim text.

**program listings** For program listings, the `listings` package is supported, and its `literate` option is used to convert `&`, `<`, and `>` to proper HTML entities.

**verbatim** The various verbatim-related environments do not convert `&`, `<`, and `>`, so care must be taken to avoid accidentally including valid HTML code inside these environments. Adding a space on either side may be sufficient.

For high-level block and inline custom CSS classes, see section 51.9.

**for HTML & PRINT:** 12245 `\begin{warpall}`

**Bool** `FixSmallCaps` User may set `FixSmallCaps` to true if small caps are being incorrectly rendered as all caps.

```
12246 \newbool{FixSmallCaps}
12247 \boolfalse{FixSmallCaps}

12248 \end{warpall}
```

**for HTML output:** 12249 `\begin{warpHTML}`

`\emph` `{\textit}`

```
12250 \DeclareRobustCommand{\LWR@HTML@emph}[1]{%
12251 {%
12252 \LWR@HTML@itshape%
12253 \LWR@htmlspan{em}{#1}%
12254 }%
12255 }
12256
12257 \LWR@formatted{emph}
```

`\textmd` `{\textit}`

```
12258 \DeclareRobustCommand{\LWR@HTML@textmd}[1]{%
12259 {%
12260 \LWR@HTML@mdseries%
12261 \InlineClass(font-weight:normal){textmd}{#1}%
12262 }%
12263 }
```

```
12264
12265 \LWR@formatted{textmd}
```

`\textbf`  $\{\langle text \rangle\}$

```
12266 \DeclareRobustCommand{\LWR@HTML@textbf}[1]{%
12267 {%
12268 \LWR@HTML@bfseries%
12269 \LWR@htmlspan{b}{#1}%
12270 }%
12271 }
12272
12273 \LWR@formatted{textbf}
```

`\texteb`  $\{\langle text \rangle\}$  From `nfssect-cfr`.

```
12274 \DeclareRobustCommand{\LWR@HTML@texteb}[1]{%
12275 {%
12276 \LWR@HTML@ebweight%
12277 \InlineClass{texteb}{#1}%
12278 }%
12279 }
12280
12281 \LWR@formatted{texteb}
```

`\textlg`  $\{\langle text \rangle\}$  From `nfssect-cfr`.

```
12282 \DeclareRobustCommand{\LWR@HTML@textlg}[1]{%
12283 {%
12284 \LWR@HTML@lgweight%
12285 \InlineClass{textlg}{#1}%
12286 }%
12287 }
12288
12289 \LWR@formatted{textlg}
```

`\textrm`  $\{\langle text \rangle\}$

```
12290 \DeclareRobustCommand{\LWR@HTML@textrm}[1]{%
12291 {%
12292 \LWR@HTML@rmfamily%
12293 \InlineClass(font-family:serif){textrm}{#1}%
12294 }%
12295 }
12296
12297 \LWR@formatted{textrm}
```

`\textsf`  $\{\langle text \rangle\}$

```
12298 \DeclareRobustCommand{\LWR@HTML@textsf}[1]{%
12299 {%
12300 \LWR@HTML@sffamily%
```

```

12301 \InlineClass(font-family:sans){textsf}{#1}%
12302 }%
12303 }
12304
12305 \LWR@formatted{textsf}

```

`\texttt`  $\{\langle text \rangle\}$

```

12306 \DeclareRobustCommand{\LWR@HTML@texttt}[1]{%
12307 {%
12308 \LWR@HTML@ttfamily%
12309 \LWR@htmlspan{kbd}{#1}%
12310 }%
12311 }
12312
12313 \LWR@formatted{texttt}

```

`\textup`  $\{\langle text \rangle\}$

```

12314 \DeclareRobustCommand{\LWR@HTML@textup}[1]{%
12315 {%
12316 \LWR@HTML@upshape%
12317 \InlineClass(font-style:normal){textup}{#1}%
12318 }%
12319 }
12320
12321 \LWR@formatted{textup}

```

`\textit`  $\{\langle text \rangle\}$

```

12322 \DeclareRobustCommand{\LWR@HTML@textit}[1]{%
12323 {%
12324 \LWR@HTML@itshape%
12325 \LWR@htmlspan{i}{#1}%
12326 }%
12327 }
12328
12329 \LWR@formatted{textit}

```

`\textsc`  $\{\langle text \rangle\}$

```

12330 \DeclareRobustCommand{\LWR@HTML@textsc}[1]{%
12331 {%
12332 \LWR@HTML@scshape%
12333 \InlineClass{textsc}{#1}%
12334 }%
12335 }
12336
12337 \LWR@formatted{textsc}

```

`\textulc`  $\{\langle text \rangle\}$  From fontaxes.

```

12338 \DeclareRobustCommand{\LWR@HTML@textulc}[1]{%
12339 {%
12340 \LWR@HTML@ulcshape%
12341 \InlineClass{textulc}{#1}%
12342 }%
12343 }
12344
12345 \LWR@formatted{textulc}

```

`\textsi` { *$\langle text \rangle$* }

```

12346 \@ifundefined{textsi}{
12347 \LetLtxMacro\LWR@print@textsi\LWR@print@textsc
12348 }{}
12349
12350 \DeclareRobustCommand{\LWR@HTML@textsi}[1]{%
12351 {%
12352 \LWR@HTML@sishape%
12353 \textsc{\textit{#1}}%
12354 %
12355 \InlineClass(
12356 font-style: italic;
12357 font-variant: small-caps ;
12358 font-variant-numeric: oldstyle-nums ;
12359){textsi}{#1}%
12360 }%
12361 }
12362 \LWR@formatted{textsi}

```

`\textsl` { *$\langle text \rangle$* }

```

12363 \DeclareRobustCommand{\LWR@HTML@textsl}[1]{%
12364 {%
12365 \slshape%
12366 \InlineClass(font-style:oblique){textsl}{#1}%
12367 }%
12368 }
12369
12370 \LWR@formatted{textsl}

```

`\textssc` { *$\langle text \rangle$* }

```

12371 \newrobustcmd{\LWR@HTML@textssc}[1]{\textsc{#1}}
12372 \LWR@formatted{textssc}

```

`\textnormal` { *$\langle text \rangle$* }

```

12373 \DeclareRobustCommand{\LWR@HTML@textnormal}[1]{\textmd{\textrm{\textup{#1}}}}
12374
12375 \LWR@formatted{textnormal}

12376 \FilenameNullify{%

```

```

12377 \LetLtxMacro\emph\@firstofone%
12378 \LetLtxMacro\textmd\@firstofone%
12379 \LetLtxMacro\textbf\@firstofone%
12380 \LetLtxMacro\texteb\@firstofone%
12381 \LetLtxMacro\textlg\@firstofone%
12382 \LetLtxMacro\textrm\@firstofone%
12383 \LetLtxMacro\textsf\@firstofone%
12384 \LetLtxMacro\texttt\@firstofone%
12385 \LetLtxMacro\textup\@firstofone%
12386 \LetLtxMacro\textit\@firstofone%
12387 \LetLtxMacro\textsc\@firstofone%
12388 \LetLtxMacro\textulc\@firstofone%
12389 \LetLtxMacro\textsi\@firstofone%
12390 \LetLtxMacro\textsl\@firstofone%
12391 \LetLtxMacro\textssc\@firstofone%
12392 \LetLtxMacro\textnormal\@firstofone%
12393 }

```

Remembers the current font family, series, and shape. fontaxes support is integrated here.

```

12394 \newcommand*{\LWR@f@family}{rm}
12395 \newcommand*{\LWR@f@series}{md}
12396 \newcommand*{\LWR@f@shape}{up}
12397 \newcommand*{\LWR@f@shapecaps}{ulc}

```

`\LWR@textcurrentfont` {*<text>*}

Prints the text with the current font choices. Avoids nesting repeated font selections.

```

12398 \newcounter{LWR@textcurrentfontdepth}
12399 \setcounter{LWR@textcurrentfontdepth}{0}
12400
12401 \newcommand*{\LWR@textcurrentfont}[1]{%
12402 \ifnumcomp{\value{LWR@textcurrentfontdepth}}{>}{0}%
12403 {%
12404 \addtocounter{LWR@textcurrentfontdepth}{1}%
12405 #1%
12406 \addtocounter{LWR@textcurrentfontdepth}{-1}%
12407 }%
12408 {%
12409 \addtocounter{LWR@textcurrentfontdepth}{1}%
12410 \InlineClass{%
12411 text\LWR@f@family\LWR@origtilde}%
12412 text\LWR@f@series\LWR@origtilde}%
12413 text\LWR@f@shape\LWR@origtilde}%
12414 text\LWR@f@shapecaps%
12415 }%
12416 {%#1}%
12417 \addtocounter{LWR@textcurrentfontdepth}{-1}%
12418 }%
12419 }

```

Env LWR@blocktextcurrentfont Prints the contents with the current font choices.

```

12420 \newenvironment*{LWR@blocktextcurrentfont}{%
12421 \LWR@stoppars%
12422 \BlockClass{%
12423 text\LWR@family\LWR@origtilde}%
12424 text\LWR@series\LWR@origtilde}%
12425 text\LWR@shape\LWR@origtilde}%
12426 text\LWR@shapecaps%
12427 }%
12428 }\endBlockClass\LWR@startpars}

```

\mdseries

```

12429 \newrobustcmd*{\LWR@HTML@mdseries}{%
12430 \LWR@print@mdseries%
12431 \renewcommand*{\LWR@series}{md}%
12432 }
12433 \LWR@formatted{mdseries}

```

\bfseries

```

12434 \newrobustcmd*{\LWR@HTML@bfseries}{%
12435 \LWR@print@bfseries%
12436 \renewcommand*{\LWR@series}{bf}%
12437 }
12438 \LWR@formatted{bfseries}

```

\ebweight From nfssex-cfr.

```

12439 \newrobustcmd*{\LWR@HTML@ebweight}{%
12440 \LWR@print@ebweight%
12441 \renewcommand*{\LWR@series}{eb}%
12442 }
12443 \LWR@formatted{ebweight}

```

\lgweight From nfssex-cfr.

```

12444 \newrobustcmd*{\LWR@HTML@lgweight}{%
12445 \LWR@print@lgweight%
12446 \renewcommand*{\LWR@series}{lg}%
12447 }
12448 \LWR@formatted{lgweight}

```

\rmfamily

```

12449 \newrobustcmd*{\LWR@HTML@rmfamily}{%
12450 \LWR@print@rmfamily%
12451 \renewcommand*{\LWR@family}{rm}%
12452 }
12453 \LWR@formatted{rmfamily}

```

\sffamily

```
12454 \newrobustcmd*{\LWR@HTML@sffamily}{%
12455 \LWR@print@sffamily%
12456 \renewcommand*{\LWR@f@family}{sf}%
12457 }
12458 \LWR@formatted{sffamily}
```

\ttfamily

```
12459 \newrobustcmd*{\LWR@HTML@ttfamily}{%
12460 \LWR@print@ttfamily%
12461 \renewcommand*{\LWR@f@family}{tt}%
12462 }
12463 \LWR@formatted{ttfamily}
```

The following use \AtBeginDocument due to the L<sup>A</sup>T<sub>E</sub>X core \reinstall@nfss@defs, which redefines these \AtBeginDocument. See **texdoc source2e**.

\upshape

```
12464 \newrobustcmd*{\LWR@HTML@upshape}{%
12465 \LWR@print@upshape%
12466 \renewcommand*{\LWR@f@shape}{up}%
12467 }
12468 \AtBeginDocument{\LWR@formatted{upshape}}
```

\itshape

```
12469 \newrobustcmd*{\LWR@HTML@itshape}{%
12470 \LWR@print@itshape%
12471 \renewcommand*{\LWR@f@shape}{it}%
12472 }
12473 \AtBeginDocument{\LWR@formatted{itshape}}
```

\scshape Note: \LWR@print@scshape is not used here since some fonts, such as **erewhon**, copy/paste as all-caps.

```
12474 \newrobustcmd*{\LWR@HTML@scshape}{%
12475 \ifbool{FixSmallCaps}{}%
12476 \LWR@print@scshape%
12477 }%
12478 \renewcommand*{\LWR@f@shapecaps}{sc}%
12479 }
12480 \AtBeginDocument{\LWR@formatted{scshape}}
```

\ulcshape From fontaxes.

```
12481 \@ifundefined{ulcshape}{
12482 \LetLtxMacro\ulcshape\upshape
```

```

12483 }{}
12484 \newrobustcmd*{\LWR@HTML@ulcshape}{%
12485 \LWR@print@ulcshape%
12486 \renewcommand*{\LWR@f@shapecaps}{ulc}%
12487 }
12488 \AtBeginDocument{\LWR@formatted{ulcshape}}

```

#### \sishape

```

12489 \@ifundefined{sishape}{
12490 \LetLtxMacro\sishape\scshape
12491 }{}
12492 \newrobustcmd*{\LWR@HTML@sishape}{%
12493 \ifbool{FixSmallCaps}{}{%
12494 \LWR@print@sishape%
12495 }%
12496 \renewcommand*{\LWR@f@shape}{it}
12497 \renewcommand*{\LWR@f@shapecaps}{sc}%
12498 }
12499 \AtBeginDocument{\LWR@formatted{sishape}}

```

#### \slshape

```

12500 \newrobustcmd*{\LWR@HTML@slshape}{%
12501 \LWR@print@slshape%
12502 \renewcommand*{\LWR@f@shape}{sl}%
12503 }
12504 \AtBeginDocument{\LWR@formatted{slshape}}

```

#### \sscshape

```

12505 \newrobustcmd*{\LWR@HTML@sscshape}{\LWR@HTML@scshape}
12506 \AtBeginDocument{\LWR@formatted{sscshape}}

```

#### \normalfont

```

12507 \newrobustcmd*{\LWR@HTML@normalfont}{\rmfamily\mdseries\upshape\ulcshape}
12508 \LWR@formatted{normalfont}

12509 \FilenameNullify{%
12510 \LetLtxMacro\rmfamily\@empty%
12511 \LetLtxMacro\sffamily\@empty%
12512 \LetLtxMacro\ttfamily\@empty%
12513 \LetLtxMacro\bfseries\@empty%
12514 \LetLtxMacro\ebweight\@empty%
12515 \LetLtxMacro\lgweight\@empty%
12516 \LetLtxMacro\mdseries\@empty%
12517 \LetLtxMacro\upshape\@empty%
12518 \LetLtxMacro\slshape\@empty%
12519 \LetLtxMacro\sishape\@empty%
12520 \LetLtxMacro\scshape\@empty%
12521 \LetLtxMacro\itshape\@empty%

```

```

12522 \LetLtxMacro\ulcshape\@empty%
12523 \LetLtxMacro\sscshape\@empty%
12524 \LetLtxMacro\normalfont\@empty%
12525 }

```

`\sp`  $\{\langle text \rangle\}$

For siunitx. Must work in math mode.

```

12526 \renewcommand{\sp}[1]{\text{^{#1}}{}}

```

`\sb`  $\{\langle text \rangle\}$

For siunitx. Must work in math mode.

```

12527 \renewcommand{\sb}[1]{\text{_{#1}}{}}

```

`\textsuperscript`  $\{\langle text \rangle\}$

```

12528 \newrobustcmd{\LWR@HTML@textsuperscript}[1]{\LWR@htmlspan{sup}{#1}}
12529 \LWR@formatted{textsuperscript}

```

`\@textsuperscript`  $\{\langle text \rangle\}$

```

12530 \newcommand{\LWR@HTML@textsuperscript}[1]{\LWR@htmlspan{sup}{#1}}
12531 \LWR@formatted{@textsuperscript}

```

`\textsubscript`  $\{\langle text \rangle\}$

```

12532 \newrobustcmd{\LWR@HTML@textsubscript}[1]{\LWR@htmlspan{sub}{#1}}
12533 \LWR@formatted{textsubscript}

```

`\@textsubscript`  $\{\langle text \rangle\}$

```

12534 \newcommand{\LWR@HTML@textsubscript}[1]{\LWR@htmlspan{sub}{#1}}
12535 \LWR@formatted{@textsubscript}

```

`\up`  $\{\langle text \rangle\}$  Prints superscript.

This is `\let` at the beginning of the document in case some other package has changed the definition.

```

12536 \AtBeginDocument{\let\up\textsuperscript}

```

`\fup`  $\{\langle text \rangle\}$  Prints superscript.

Supports `fmtcount` package.

This is `\let` at the beginning of the document in case some other package has changed the definition.

```
12537 \AtBeginDocument{\let\lup\textsuperscript}
```

`\underline`  $\{\langle text \rangle\}$

```
12538 \renewcommand{\underline}[1]{%
12539 \InlineClass%
12540 (text-decoration:underline; text-decoration-skip: auto)%
12541 {\underline}{#1}%
12542 }
```

`\LWR@overline`  $\{\langle text \rangle\}$

```
12543 \newcommand{\LWR@overline}[1]{%
12544 \InlineClass%
12545 (text-decoration:overline; text-decoration-skip: auto)%
12546 {\overline}{#1}%
12547 }
```

`\LWR@currenttextcolor` The color to use for text and `\rule`, defaulting to black:

```
12548 \newcommand*\LWR@currenttextcolor{black}
```

`\LWR@tempcolor` The color converted to HTML colorspace.

`\LWR@tempcolortwo`

```
12549 \newcommand*\LWR@tempcolor{}
12550 \newcommand*\LWR@tempcolortwo{}
```

`\LWR@findcurrenttextcolor` Sets `\LWR@tempcolor` to the current color.

```
12551 \newcommand*\LWR@findcurrenttextcolor{}%
12552 \renewcommand{\LWR@tempcolor}{000000}%
12553 }
```

`\LWR@textcurrentcolor`  $\{\langle text \rangle\}$  Like `\textcolor` but uses the current `\color` instead.

```
12554 \NewDocumentCommand{\LWR@textcurrentcolor}{m}{%
12555 \renewcommand*\LWR@currenttextcolor{black}%
12556 #1%
12557 }
```

```
12558 \end{warpHTML}
```

**for PRINT output:** 12559 `\begin{warpprint}`

`\LWR@textcurrentfont`  $\{\langle text \rangle\}$

Prints the text with the current font choices.

```
12560 \newcommand*\LWR@textcurrentfont[1]{#1}
```

Env LWR@blocktextcurrentfont Prints the contents with the current font choices.

```
12561 \newenvironment*{LWR@blocktextcurrentfont}{}{}
```

\FilenameNullify {*<macros to nullify>*}

```
12562 \newcommand*{\FilenameNullify}[1]{}

12563 \end{warpprint}
```

## 93 Skips, spaces, font sizes

for HTML output: 12564 \begin{warppHTML}

\, and \thinspace may be redefined by other packages, so are redefined \AtBeginDocument here.

Direct-formatting space commands become HTML entities:

```
12565 \AtBeginDocument{
12566 \renewrobustcmd*{\,}{\HTMLUnicode{202f}} % HTML thin non-breakable space
12567 \renewrobustcmd*{\thinspace}{\HTMLUnicode{202f}} % HTML thin non-breakable space
12568 \renewrobustcmd*{\negthinspace}{\HTMLUnicode{202f}} % HTML thin non-breakable space
12569 \renewrobustcmd*{\~}{\HTMLEntity{nbsp}}
12570 \renewrobustcmd*{\textellipsis}{\HTMLUnicode{2026}}
12571 \renewrobustcmd*{\vdots}{\HTMLUnicode{22EE}}
12572 }
```

Direct-formatting font sizes are remembered for future use:

```
12573 \newcommand*{\LWR@font@size}{normalsize}
12574
12575 \newrobustcmd*{\LWR@HTML@normalsize}{\renewcommand*{\LWR@font@size}{normalsize}}
12576 \LWR@formatted{normalsize}
12577
12578 \newrobustcmd*{\LWR@HTML@small}{\renewcommand*{\LWR@font@size}{small}}
12579 \LWR@formatted{small}
12580
12581 \newrobustcmd*{\LWR@HTML@footnotesize}{\renewcommand*{\LWR@font@size}{footnotesize}}
12582 \LWR@formatted{footnotesize}
12583
12584 \newrobustcmd*{\LWR@HTML@scriptsize}{\renewcommand*{\LWR@font@size}{scriptsize}}
12585 \LWR@formatted{scriptsize}
12586
12587 \newrobustcmd*{\LWR@HTML@tiny}{\renewcommand*{\LWR@font@size}{tiny}}
12588 \LWR@formatted{tiny}
12589
12590 \newrobustcmd*{\LWR@HTML@large}{\renewcommand*{\LWR@font@size}{large}}
12591 \LWR@formatted{large}
12592
12593 \newrobustcmd*{\LWR@HTML@Large}{\renewcommand*{\LWR@font@size}{Large}}
```

```

12594 \LWR@formatted{Large}
12595
12596 \newrobustcmd*{\LWR@HTML@LARGE}{\renewcommand*{\LWR@font@size}{LARGE}}
12597 \LWR@formatted{LARGE}
12598
12599 \newrobustcmd*{\LWR@HTML@huge}{\renewcommand*{\LWR@font@size}{huge}}
12600 \LWR@formatted{huge}
12601
12602 \newrobustcmd*{\LWR@HTML@Huge}{\renewcommand*{\LWR@font@size}{Huge}}
12603 \LWR@formatted{Huge}

```

```

12604 \DeclareDocumentCommand{\onecolumn}{}{}
12605
12606 \DeclareDocumentCommand{\twocolumn}{O{}}{
12607
12608 #1
12609
12610 }

```

#### \hfill

```

12611 \newcommand*{\LWR@HTML@hfill}{\quad}
12612 \LWR@formatted{hfill}

```

#### \hrulefill

```

12613 \newcommand*{\LWR@HTML@hrulefill}{%
12614 \ifbool{LWR@doingapar}%
12615 {\rule{1in}{1pt}}%
12616 {%
12617 \LWR@findcurrenttextcolor%
12618 \ifdefstring{\LWR@tempcolor}{000000}%
12619 {%
12620 \begin{BlockClass}{hrule}%
12621 \end{BlockClass}%
12622 }%
12623 }%
12624 \begin{BlockClass}[%
12625 border-top: 1px solid \LWR@origpound\LWR@tempcolor % space
12626]{hrule}%
12627 \end{BlockClass}%
12628 }%
12629 }%
12630 }%
12631 \LWR@formatted{hrulefill}

```

#### \dotfill

```

12632 \newcommand*{\LWR@HTML@dotfill}{\dots}
12633 \LWR@formatted{dotfill}

```

#### \newpage

```

12634 \renewcommand*{\newpage}{
12635
12636 }

```

`\newline` Uses the HTML `<br />` element.

```

12637 \newrobustcmd*{\LWR@newlinebr}{\unskip\LWR@htmltag{br /}\LWR@orignewline}%
12638 \LetLtxMacro\newline\LWR@newlinebr

```

`\\` Redefined to `\LWR@endofline` or `\LWR@tabularendofline`.

`\LWR@endofline` \* [*len*]

`\\` is assigned to `\LWR@endofline` at `\LWR@LwarpStart`.

Inside `tabular`, `\\` is temporarily changed to `\LWR@tabularendofline`.

```

12639 \LetLtxMacro\LWR@origendofline\\
12640 \NewDocumentCommand{\LWR@endofline}{s O{0pt}}
12641 {%
12642 \newline%
12643 \setlength{\LWR@templengthone}{#2}%
12644 \ifdimgreater{\LWR@templengthone}{0pt}{\newline}{}%
12645 }

```

`\LWR@minipagestartpars` Minipages are often placed side-by-side inside figures, with a bit of horizontal space to separate them. Since HTML does not allow a `<div>` to be inside a `p`, paragraphs must be turned off during the generation of the minipage, then turned on after the minipage is complete. When this occurs between side-by-side minipages, `lwarp` correctly suppresses the paragraph tags between the minipages, unless some other text is between the minipages. Such text forms its own paragraph, resulting in text after a minipage to be on its own line. Since people often place small horizontal space between minipages, it is desirable to maintain this space if possible. `lwarp` tries to do this by remembering that a minipage has been seen, in which case paragraph tags are suppressed around `\hspace`, `\enskip`, `\quad`, and `\qquad` until the end of the paragraph, when the closing `p` tag is created.

When a minipage is seen, the boolean `LWR@minipagethispar` is set, telling the following horizontal whitespace commands to try to suppress their surrounding paragraph tags. `LWR@minipagethispar` is cleared at the next end of paragraph, when the HTML paragraph closing tag is generated.

Placed just before `\hspace`, `\quad`, or `\qquad`'s HTML output.

```

12646 \newcommand*{\LWR@minipagestartpars}{%
12647 \ifbool{LWR@minipagethispar}{\LWR@startpars}{}%
12648 }

```

`\LWR@minipagestoppars` Placed just after `\hspace`, `\quad`, or `\qquad`'s HTML output.

```

12649 \newcommand*{\LWR@minipagestoppars}{%
12650 \ifbool{LWR@minipagethispar}{\LWR@stoppars}{}%
12651 }

```

`\quad` Handles special minipage & horizontal space interactions. Uses 2003 EM SPACE to pass validation.

```

12652 \renewrobustcmd*{\quad}{%
12653 \LWR@minipagestoppars%
12654 \HTMLUnicode{2003}%
12655 \LWR@minipagestartpars%
12656 }

```

`\qqquad` Handles special minipage & horizontal space interactions.

```

12657 \renewrobustcmd*{\qqquad}{\quad\quad}

```

`\enskip` Handles special minipage & horizontal space interactions.

```

12658 \renewrobustcmd*{\enskip}{%
12659 \LWR@minipagestoppars%
12660 \HTMLUnicode{2002}%
12661 \LWR@minipagestartpars%
12662 }

```

Len `\LWR@tempwidth` Used to compute span width, height, raise for `\hspace` and `\rule`:

Len `\LWR@tempheight`

Len `\LWR@tempraise`

```

12663 \newlength{\LWR@tempwidth}
12664 \newlength{\LWR@tempheight}
12665 \newlength{\LWR@tempraise}

```

`\LWR@select@html@hspace` \*  $\langle length \rangle$  \*  $\langle length \rangle$   
`\hspace`

Handles special minipage & horizontal space interactions.

Prints a span of a given width. Ignores the optional star.

`\hspace{\fill}` is converted to `\hspace{2em}`, equal to `\qqquad`.

```

12666 \newcommand{\LWR@select@html@hspace}{%
12667 \RenewDocumentCommand{\hspace}{s m}{%
12668 \setlength{\LWR@tempwidth}{##2}%

```

If `\fill`, change to `\qqquad`:

```

12669 \ifnum\gluestretchorder\LWR@tempwidth>0%
12670 \setlength{\LWR@tempwidth}{2em}%
12671 \fi%

```

Only if the width is greater than zero:

```

12672 \ifdimcomp{\LWR@tempwidth}{>}{0pt}{%

```

If had a minipage this paragraph, try to inline the white space without generating paragraph tags:

```
12673 \LWR@minipagestoppars%
```

Support the HTML thin wrappable space:

```
12674 \ifdimcomp{\LWR@tempwidth}{=}{.16667em}%
12675 {%
12676 \HTMLUnicode{2009}% thin breakable space
12677 }%
```

Print the span with the converted width. Not rounded.

```
12678 {%
12679 \LWR@htmltagc{%
12680 span style="width:\LWR@printlength{\LWR@tempwidth}; % extra space
12681 display:inline-block"%
12682 }%
```

If formatting for a word processor, approximate with a number of \quads, in case a span of a given width is not supported:

```
12683 \ifbool{FormatWP}{%
12684 \setlength{\LWR@templengthone}{\LWR@tempwidth}%
12685 \whiledo{\lengthtest{\LWR@templengthone>1em}}{%
12686 \quad%
12687 \addtolength{\LWR@templengthone}{-1em}%
12688 }%
12689 }%
```

If NOT formatting for a word processor, include an empty comment to avoid an empty span:

```
12690 {\LWR@htmlcomment{}}%
```

Close the span:

```
12691 \LWR@htmltagc{/span}%
12692 }%
```

If had a minipage this paragraph, try to inline the white space without generating paragraph tags:

```
12693 \LWR@minipagestartpars%
12694 }{}% width greater than 0
12695 }%
12696 }
```

```
\LWR@select@html@nohspace *{\length}
\hspace
```

Used to disable \hspace while creating description \items.

```

12697 \newcommand{\LWR@select@html@nohspace}{%
12698 \RenewDocumentCommand{\hspace}{s m}{}%
12699 }

```

\LWR@select@print@hspace

```

12700 \newcommand*\LWR@select@print@hspace{%
12701 \renewrobustcmd\hspace{\@ifstar\@hspacer\@hspace}%
12702 }

```

\hspace \*{\langle length \rangle}

Handles special minipage & horizontal space interactions.

```

12703 \LWR@select@html@hspace

```

\LWR@vspace \*{\langle length \rangle} Nullified vspace.

```

12704 \NewDocumentCommand{\LWR@HTML@vspace}{s m}{}
12705
12706 \LWR@formatted{vspace}

```

\linebreak [\langle num \rangle] Inserts an HTML br tag.

```

12707 \renewcommand*\linebreak[1][\newline]

```

\nolinebreak [\langle num \rangle]

```

12708 \renewcommand*\nolinebreak[1][\relax]

```

\pagebreak [\langle num \rangle] Starts a new paragraph.

```

12709 \renewcommand*\pagebreak[1][\relax]
12710
12711 }

```

\nopagebreak [\langle num \rangle]

```

12712 \renewcommand*\nopagebreak[1][\relax]

```

\enlargethispage \*{\langle len \rangle}

```

12713 \RenewDocumentCommand{\enlargethispage}{s m}{}

```

\clearpage

\cleardoublepage

```

12714 \renewcommand*\clearpage{}
12715 \renewcommand*\cleardoublepage{}

```

```
\rule [\raise] {\width} {\height}
```

Handles special minipage & horizontal space interactions.

Creates a span of a given width and height. Ignores the optional star.

\fill is zero-width, so \hspace{\fill} is ignored.

```
12716 \newcommand*{\LWR@HTML@rule}[3][\%
```

The width is copied into a temporary L<sup>A</sup>T<sub>E</sub>X length, from which comparisons and conversions may be made:

```
12717 \setlength{\LWR@tempwidth}{#2}%
```

If it's zero-width then skip the entire rule:

```
12718 \ifthenelse{\lengthtest{\LWR@tempwidth=0pt}}%
```

```
12719 {}% zero- width
```

```
12720 {}% non-zero width
```

If it's non-zero width, set a minimal thickness so that it more reliably shows in the browser:

```
12721 \ifthenelse{%
```

```
12722 \lengthtest{\LWR@tempwidth>0pt}\AND%
```

```
12723 \lengthtest{\LWR@tempwidth<1pt}}%
```

```
12724 }%
```

```
12725 {\setlength{\LWR@tempwidth}{1pt}}%
```

```
12726 {}%
```

Likewise with height:

```
12727 \setlength{\LWR@tempheight}{#3}%
```

```
12728 \ifthenelse{%
```

```
12729 \lengthtest{\LWR@tempheight>0pt}\AND%
```

```
12730 \lengthtest{\LWR@tempheight<1pt}}%
```

```
12731 }%
```

```
12732 {\setlength{\LWR@tempheight}{1pt}}%
```

```
12733 {}%
```

If had a minipage this paragraph, try to inline the rule without generating paragraph tags:

```
12734 \LWR@minipagestoppars%
```

Print the span with the converted width and height. The width and height are NOT rounded, since a height of less than 1pt is quite common in L<sup>A</sup>T<sub>E</sub>X code.

```
12735 \LWR@findcurrenttextcolor%
```

```
12736 \LWR@htmltagc{%
```

```
12737 span\LWR@indentHTML%
```

```
12738 style=""
```

The HTML background color is used to draw the filled rule according to the  $\LaTeX$  foreground color set by `\textcolor`.

```
12739 \ifbool{FormatWP}{\background:\LWR@currenttextcolor ; }%
```

The width and height are printed, converted to PT:

```
12740 width:\LWR@printlength{\LWR@tempwidth} ; %
12741 height:\LWR@printlength{\LWR@tempheight} ; %
```

The raise height is converted to a CSS transform. The \*2 raise multiplier is to approximately match HTML output's X height. Conversion to a  $\LaTeX$  length allows a typical  $\LaTeX$  expression to be used as an argument for the raise, whereas printing the raise argument directly to HTML output without conversion to a  $\LaTeX$  length limits the allowable syntax. To do: A superior method would compute a ratio of  $\LaTeX$  ex height, then print that to HTML with an ex unit.

```
12742 \ifblank{#1}%
12743 {}%
12744 {%
12745 \setlength{\LWR@tempraise}{0pt-#1}%
12746 \setlength{\LWR@tempraise}{\LWR@tempraise*2}%
12747 \LWR@indentHTML%
12748 -ms-transform: translate(0pt,\LWR@printlength{\LWR@tempraise}); %
12749 \LWR@indentHTML%
12750 -webkit-transform: translate(0pt,\LWR@printlength{\LWR@tempraise}); %
12751 \LWR@indentHTML%
12752 transform: translate(0pt,\LWR@printlength{\LWR@tempraise}); %
12753 \LWR@indentHTML%
12754 }%
```

Display inline-block to place the span inline with the text:

```
12755 display:inline-block;"\LWR@orignewline%
12756 }%
```

If formatting for a word processor, approximate with a number of underscores, in case a span of a given width is not supported:

```
12757 \ifbool{FormatWP}{%
12758 \setlength{\LWR@templengthone}{\LWR@tempwidth}%
12759 \whiledo{\lengthtest{\LWR@templengthone>1em}}{%
12760 _}%
12761 \addtolength{\LWR@templengthone}{-1em}%
12762 }%
12763 }%
```

If NOT formatting for a word processor, add a comment to avoid an empty `<span>`:

```
12764 {\LWR@htmlcomment{}}%
```

Close the span:

```
12765 \LWR@htmltagc{/span}%
```

If had a minipage this paragraph, try to inline the white space without generating paragraph tags:

```
12766 \LWR@minipagestartpars%
12767 }% non-zero width
12768 }
12769
12770 \LWR@formatted{rule}

12771 \end{warpHTML}
```

## 94 \phantomsection

**for HTML output:** 12772 \begin{warpHTML}

\LWR@phantomsection Emulate the `hyperref` `\phantomsection` command, often used to insert the bibliography into the table of contents. Ignores `\ForceHTMLTOC`.

```
12773 \newrobustcmd*{\LWR@phantomsection}{%
12774 \begingroup%
12775 \boolfalse{\LWR@forcinghtmltoc}%
12776 \section*{}}%
12777 \endgroup%
12778 }

12779 \end{warpHTML}
```

## 95 \LaTeX and other logos

Logos for HTML and print modes:

Some of these logos may be redefined in a later package, so after loading other packages, and at the beginning of the document, their definitions are finally set by `\LWR@formatted`.

For CSS conversions, see:

<http://edward.oconnor.cx/2007/08/tex-poshlet>

<http://nitens.org/taraborelli/texlogo>

and the spacing described in the `metafont` package documentation.

**for HTML & PRINT:** 12780 \begin{warpall}  
12781 \newbool{\LWR@warnXe}  
12782 \boolfalse{\LWR@warnXe}  
12783  
12784 \newrobustcmd\*{\Xe}  
12785 {%  
12786 X\hspace{-.1667em}\raisebox{-.5ex}{E}%  
12787 \global\booltrue{\LWR@warnXe}%

```

12788 }
12789
12790 \AtBeginDocument{
12791 \ifpackageloaded{graphics}{
12792 \ifpackageloaded{metalogo}{%
12793 \renewrobustcmd*{\Xe}
12794 {X\hspace{-.1667em}\raisebox{-.5ex}{\reflectbox{E}}}}
12795 }
12796 }{}
12797 }
12798
12799 \AtEndDocument{
12800 \ifbool{LWR@warnXe}{
12801 \PackageWarningNoLine{lwarp}{Load graphicx or graphics
12802 for improved XeTeX logo}
12803 }{}
12804 }
12805
12806 \providerobustcmd*{\XeTeX}{\mbox{\Xe\hspace{-.125em}\TeX}}
12807 \providerobustcmd*{\XeLaTeX}{\mbox{\Xe\hspace{-.125em}\LaTeX}}
12808 \providerobustcmd*{\AmS}{%
12809 \leavevmode\hbox{$\mathcal A\kern-.2em\lower.376ex%
12810 \hbox{$\mathcal M$}\kern-.2em\mathcal S$}%
12811 }
12812 \newrobustcmd*{\LyX}{\textsf{LyX}}
12813 \providerobustcmd*{\LuaTeX}{\mbox{Lua\TeX}}
12814 \providerobustcmd*{\LuaLaTeX}{\mbox{Lua\LaTeX}}
12815 \providerobustcmd*{\BibTeX}{\mbox{B\textsc{ib}\TeX}}
12816 \providerobustcmd*{\MakeIndex}{\mbox{\textit{MakeIndex}}}}
12817 \providerobustcmd*{\ConTeXt}{\mbox{Con\TeX{t}}}}
12818 \providerobustcmd*{\MiKTeX}{\mbox{MiK\TeX}}
12819 \end{warpall}

```

for HTML output: 12820 \begin{warpHTML}

The print-mode versions of the following may be changed by metalogo, so their print formatting is recorded \AtBeginDocument.

\TeX T<sub>E</sub>X

latexlogo is a css class used to properly typeset the E and A in L<sup>A</sup>T<sub>E</sub>X and friends.

latexlogofont is a css class used to select the font for the rest of the logo in L<sup>A</sup>T<sub>E</sub>X, LuaT<sub>E</sub>X, ConT<sub>E</sub>Xt, etc.

```

12821 \newrobustcmd*{\LWR@HTML@TeX}
12822 {%
12823 \InlineClass{latexlogofont}%
12824 {%
12825 \InlineClass{latexlogo}%
12826 {%
12827 T%
12828 \InlineClass{latexlogosub}{e}%
12829 X%
12830 }%

```

```

12831 }%
12832 }
12833 \AtBeginDocument{\LWR@formatted{TeX}}% may have been patched by metalogo

```

`\LaTeX`   `LATEX`, `LATEX2ε`

`\LaTeXe`

```

12834 \newrobustcmd*{\LWR@HTML@LaTeX}
12835 {%
12836 \InlineClass{latexlogofont}%
12837 {%
12838 \InlineClass{latexlogo}%
12839 {%
12840 L%
12841 \InlineClass{latexlogosup}{a}%
12842 T%
12843 \InlineClass{latexlogosub}{e}%
12844 X%
12845 }%
12846 }%
12847 }
12848
12849 \AtBeginDocument{\LWR@formatted{LaTeX}}% may have been patched by metalogo
12850
12851
12852 \newrobustcmd*{\LWR@HTML@LaTeXe}
12853 {%
12854 \LaTeX%
12855 \InlineClass{latexlogofont}{%
12856 \InlineClass{latexlogotwoe}{%
12857 2%
12858 \InlineClass{latexlogotwoesub}{\HTMLunicode{03B5}}%
12859 }%
12860 }%
12861 }
12862 \AtBeginDocument{\LWR@formatted{LaTeXe}}% may have been patched by metalogo

```

`\LuaTeX`   `LuaTEX`, `LuaLATEX`

`\LuaLaTeX`

```

12863 \newrobustcmd*{\LWR@HTML@LuaTeX}{\InlineClass{latexlogofont}{Lua}\TeX}
12864 \AtBeginDocument{\LWR@formatted{LuaTeX}}% may have been patched by metalogo
12865
12866 \newrobustcmd*{\LWR@HTML@LuaLaTeX}{\InlineClass{latexlogofont}{Lua}\LaTeX}
12867 \AtBeginDocument{\LWR@formatted{LuaLaTeX}}% may have been patched by metalogo

```

`\XeTeX`   `XƎTEX`, `XƎLATEX`

`\XeLaTeX`

`xetexlogo` is a css class which aligns the backwards E in `XƎTEX` and spaces `TEX` appropriately.

`xelatexlogo` is a css class which aligns the backwards E in `XƎLATEX` and spaces `LATEX` appropriately.

```

12868 \newrobustcmd*{\LWR@HTML@Xe}

```

```

12869 {%
12870 X%
12871 \InlineClass{xelatexlogosub}{\HTMLunicode{18e}}%
12872 }
12873 \AtBeginDocument{\LWR@formatted{Xe}}% may have been patched by metalogo
12874
12875 \newrobustcmd*{\LWR@HTML@XeTeX}{\InlineClass{xelatexlogo}{\Xe}\TeX}
12876 \AtBeginDocument{\LWR@formatted{XeTeX}}% may have been patched by metalogo
12877
12878 \newrobustcmd*{\LWR@HTML@XeLaTeX}{\InlineClass{xelatexlogo}{\Xe}\LaTeX}
12879 \AtBeginDocument{\LWR@formatted{XeLaTeX}}% may have been patched by metalogo

```

### \ConTeXt ConT<sub>E</sub>Xt

```

12880 \newrobustcmd*{\LWR@HTML@ConTeXt}{%
12881 \InlineClass{latexlogofont}{Con}\TeX}%
12882 \InlineClass{latexlogofont}{t}%
12883 }
12884 \LWR@formatted{ConTeXt}

```

### \BibTeX Bib<sub>T</sub><sub>E</sub>X, *MakeIndex*

#### \MakeIndex

```

12885 \newrobustcmd*{\LWR@HTML@BibTeX}
12886 {\InlineClass{latexlogofont}{B\textsc{ib}}\TeX}
12887 \LWR@formatted{BibTeX}
12888
12889 \newrobustcmd*{\LWR@HTML@MakeIndex}
12890 {\InlineClass{latexlogofont}{\textit{MakeIndex}}}
12891 \LWR@formatted{MakeIndex}

```

### \AmS *AMS*

amslogo is a css class used for the *AMS* logo.

```

12892 \AtBeginDocument{%
12893 \newrobustcmd*{\LWR@HTML@AmS}
12894 {%
12895 \InlineClass{amslogo}{%
12896 \textit{%
12897 A%
12898 \InlineClass{latexlogosub}{M}%
12899 S%
12900 }}%
12901 }%
12902 }%
12903 \LWR@formatted{AmS}
12904 }

```

### \MiKTeX MiK<sub>T</sub><sub>E</sub>X

```

12905 \newrobustcmd*{\LWR@HTML@MiKTeX}{\InlineClass{latexlogofont}{MiK}\TeX}
12906 \LWR@formatted{MiKTeX}

```

`\LyX` **LyX**

`lyxlogo` is a CSS class used for the LyX logo.

```
12907 \newrobustcmd*{\LWR@HTML@LyX}{\InlineClass{lyxlogo}{LyX}}
12908 \LWR@formatted{LyX}

12909 \end{warpHTML}
```

## 96 `\AtBeginDocument`, `\AtEndDocument`

**for HTML output:** 12910 `\begin{warpHTML}`

`\LWR@LwarpStart` Automatically sets up the HTML-related actions for the start and end of the document.

```
\LWR@LwarpEnd
12911 \AfterEndPreamble{\LWR@LwarpStart}
12912 \AtEndDocument{\LWR@LwarpEnd}

12913 \end{warpHTML}
```

## 97 Loading textcomp patches

`textcomp` has now been integrated into the  $\LaTeX$  core, so its patches are loaded now.

**for HTML output:** 12914 `\begin{warpHTML}`  
 12915 `\RequirePackage{lwarp-textcomp}`  
 12916 `\end{warpHTML}`

## 98 Loading KOMA-SCRIPT class patches

Load patches to koma-script.

**for HTML output:** 12917 `\begin{warpHTML}`

```
12918 \@ifclassloaded{scrbook}{\RequirePackage{lwarp-patch-komascript}}{}
12919 \@ifclassloaded{scrartcl}{\RequirePackage{lwarp-patch-komascript}}{}
12920 \@ifclassloaded{scrreprt}{\RequirePackage{lwarp-patch-komascript}}{}

12921 \end{warpHTML}
```

## 99 Loading MEMOIR class patches

Load patches to memoir.

```

for HTML & PRINT: 12922 \begin{warpprint}
12923 \ifclassloaded{memoir}{\LWR@origRequirePackage{xcolor}}{}
12924 \end{warpprint}

for HTML output: 12925 \begin{warpHTML}
12926 \ifclassloaded{memoir}{\RequirePackage{lwarp-patch-memoir}}{}
12927 \end{warpHTML}

```

## 100 ut\* class patches

Load patches to uj\* and ut\* classes, as well as ltj\* classes.

```

for HTML output: 12928 \begin{warpHTML}

12929 \newcommand*{\LWR@patchujtclasses}{

 uj/t does not use \partname

12930 \def\@partnameformat{}

12931 \def\@partcntformat##1{%
12932 \prepartname%
12933 \csname the##1\endcsname%
12934 \postpartname%
12935 \quad%
12936 }
12937 \ifundefined{chapter}{}{
12938 \def\@chapcntformat##1{%
12939 \prechaptername%
12940 \csname the##1\endcsname%
12941 \postchaptername%
12942 \quad%
12943 }
12944 }
12945 \renewcommand*{\LWR@printchaptername}{}

```

Use decimal points instead of centered dots:

```

12946 \renewcommand{\thepart}{\@Roman\c@part}
12947 \ifundefined{chapter}{
12948 \renewcommand{\thesection}{\@arabic\c@section}
12949 }{
12950 \renewcommand{\thechapter}{\@arabic\c@chapter}
12951 \renewcommand{\thesection}{\thechapter.\@arabic\c@section}
12952 }
12953 \renewcommand{\thesubsection}{\thesection.\@arabic\c@subsection}

```

```

12954 \renewcommand{\thesubsubsection}{%
12955 \thesubsection.\@arabic\c@subsubsection}
12956 \renewcommand{\theparagraph}{%
12957 \thesubsubsection.\@arabic\c@paragraph}
12958 \renewcommand{\thesubparagraph}{%
12959 \theparagraph.\@arabic\c@subparagraph}
12960 \ifundefined{chapter}{
12961 \renewcommand{\thefigure}{\@arabic\c@figure}
12962 \renewcommand{\thetable}{\@arabic\c@table}
12963 }{
12964 \renewcommand{\thefigure}{%
12965 \ifnum\c@chapter>\z@\thechapter.\fi\@arabic\c@figure}
12966 \renewcommand{\thetable}{%
12967 \ifnum\c@chapter>\z@\thechapter.\fi\@arabic\c@table}
12968 }
12969 }
12970
12971 \@ifclassloaded{ujarticle}{\LWR@patchujtclasses}{}
12972 \@ifclassloaded{ujbook}{\LWR@patchujtclasses}{}
12973 \@ifclassloaded{ujreport}{\LWR@patchujtclasses}{}
12974 \@ifclassloaded{utarticle}{\LWR@patchujtclasses}{}
12975 \@ifclassloaded{utbook}{\LWR@patchujtclasses}{}
12976 \@ifclassloaded{utreport}{\LWR@patchujtclasses}{}
12977 \@ifclassloaded{ltjarticle}{\LWR@patchujtclasses}{}
12978 \@ifclassloaded{ltjbook}{\LWR@patchujtclasses}{}
12979 \@ifclassloaded{ltjreport}{\LWR@patchujtclasses}{}
12980 \@ifclassloaded{ltjsarticle}{\LWR@patchujtclasses}{}
12981 \@ifclassloaded{ltjsbook}{\LWR@patchujtclasses}{}
12982 \@ifclassloaded{ltjsreport}{\LWR@patchujtclasses}{}
12983 \@ifclassloaded{ltjskiyou}{\LWR@patchujtclasses}{}
12984 \@ifclassloaded{ltjspf}{\LWR@patchujtclasses}{}
12985 \@ifclassloaded{ltjtarticle}{\LWR@patchujtclasses}{}
12986 \@ifclassloaded{ltjtbook}{\LWR@patchujtclasses}{}
12987 \@ifclassloaded{ltjtreport}{\LWR@patchujtclasses}{}
12988 \end{warpHTML}

```

## 101 CTEX patches

Patches for `ctex` and related classes, which are loaded before `lwarp`.

All CTEX classes and the `ctex` package seem to load `ctexpatch`, so its presence is used to decide whether to have `lwarp` patch CTEX.

**for HTML output:** 12989 \begin{warpHTML}

\AtBeginDocument in case the user set `FileSectionNames` in the preamble.

```

12990 \AtBeginDocument{
12991 \ifpackageloaded{ctexpatch}{%
12992 \def\@partcntformat#1{%
12993 \LWR@isolate{\CTEX@partname}~%

```

```

12994 \CTEX@part@aftername%
12995 }%
12996
12997 \def\@partnameformat{}
12998
12999 \def\@chapcntformat#1{%
13000 \LWR@isolate{\CTEX@chaptername}~%
13001 \CTEX@chapter@aftername%
13002 }%
13003
13004 \renewcommand*{\LWR@printchaptername}{}
13005 }{}
13006 }

13007 \end{warpHTML}

```

## 102 kotexutf patches

Patch for kotexutf, which is loaded before lwarp.

kotexutf's \@setref was conflicting with lwarp's cross references.

**for HTML output:** 13008 \begin{warpHTML}

If kotexutf's version of \@setref is detected, it is reverted to the original.

```

13009 \AtBeginDocument{
13010 \ifpackageloaded{kotexutf}{%
13011 \def\LWR@kotexutf@setref#1#2#3{%
13012 \@setref@dhuks@orig{#1}{#2}{#3}%
13013 \ifx#1\relax\else
13014 \bgroup
13015 \dhuks@make@cjckchar@null
13016 \edef\@temp{\expandafter#2#1}\global\josatoks\expandafter{\@temp}%
13017 \egroup
13018 \fi%
13019 }%
13020
13021 \ifdefequal{\@setref}{\LWR@kotexutf@setref}{
13022 \let\@setref\@setref@dhuks@orig
13023 }{}
13024 }{}
13025 }

13026 \end{warpHTML}

```

## 103 babel and polyglossia warnings

lwarp prints a message instructing the user how to avoid the following error.

(These are not `\PackageWarnings` because there may not be a problem.)

`lwarp` uses `cleveref`, which has some limitations when using `polyglossia`, possibly resulting in the error

```
! Undefined control sequence. . . . \@begindocumenthook
```

To test compatibility, add

```
\usepackage{cleveref}
```

near the end of the preamble (as the last package to be loaded), and try to compile the print version. It may be necessary to set

```
\setdefaultlanguage{english}
```

or some other language supported by `cleveref`, then select other languages using `\setotherlanguages`.

Once the print version works with `cleveref` and `polyglossia`, the HTML version should work as well using `lwarp`.

```
for HTML output: 13027 \begin{warpHTML}
 13028 \AtBeginDocument{
 13029
 13030 \ifpackageloaded{polyglossia}{
 13031 \PackageWarningNoLine{lwarp}
 13032 {%
 13033 Polyglossia has been loaded. Lwarp also uses cleveref.\MessageBreak
 13034 See the cleveref documentation regarding\MessageBreak
 13035 polyglossia support. Some languages are not supported%
 13036 }
 13037 \typeout{---}
 13038 \typeout{Package lwarp:}
 13039 \typeout{If the error}
 13040 \typeout{\space\space‘! Undefined control sequence.
 13041 \space ... \space \protect\@begindocumenthook’’}
 13042 \typeout{occurs here, use the polyglossia macro:}
 13043 \typeout{\space\space\protect\setmainlanguage\protect{...\protect}}
 13044 \typeout{---}
 13045 }{
 13046 \ifpackageloaded{babel}{
 13047 \PackageWarningNoLine{lwarp}
 13048 {%
 13049 Babel has been loaded. Lwarp also uses cleveref.\MessageBreak
 13050 See the cleveref documentation regarding\MessageBreak
 13051 babel support. Some languages are not supported%
 13052 }
 13053 }{}
 13054 }
 13055
 13056 }
 13057 \end{warpHTML}
```

## 104 MATHJAX warnings

`\LWR@mathjaxwarn`  $\{\langle packagename \rangle\} \{\langle More text. \rangle\}$

To be done `\AtBeginDocument`.

```

13058 \newcommand*{\LWR@mathjaxwarn}[2]{%
13059 \ifpackageloaded{lwarp-#1}{%
13060 \ifblank{#2}{%
13061 \PackageWarningNoLine{lwarp}
13062 {%
13063 Lwarp provides emulation for MathJax when used\MessageBreak
13064 with the #1 package%
13065 }
13066 }{%
13067 \PackageWarningNoLine{lwarp}
13068 {%
13069 Lwarp provides emulation for MathJax when used\MessageBreak
13070 with the #1 package.\MessageBreak
13071 #2%
13072 }
13073 }%
13074 }{}%
13075 }
13076
13077 \AtBeginDocument{
13078 \ifbool{mathjax}{
13079 \LWR@mathjaxwarn{arydshln}
13080 {In a math array, do not use the optional argument\MessageBreak
13081 for \protect\cdashline.\space\space
13082 Furthermore, \protect\cline\space is not\MessageBreak
13083 supported by MathJax}
13084 \LWR@mathjaxwarn{autonum}
13085 {MathJax does not support equation+.\MessageBreak
13086 You may use the warpprint and warpHTML\MessageBreak
13087 environments to isolate the package load\MessageBreak
13088 and the equation+ environments}
13089 \LWR@mathjaxwarn{backnaur}
13090 {You may enclose its uses inside\MessageBreak
13091 lateximage environments to force SVG output,\MessageBreak
13092 but this also changes the print output}
13093 \LWR@mathjaxwarn{bigdelim}
13094 {Delimiters appear only of the first line}
13095 \LWR@mathjaxwarn{booktabs}
13096 {In a math array, do not use (trim) for \protect\cmidrule}
13097 \LWR@mathjaxwarn{breqn}
13098 {Each environment becomes an SVG image}
13099 \LWR@mathjaxwarn{delarray}
13100 {Enclose its uses inside lateximage\MessageBreak
13101 environments to force SVG output}
13102 \LWR@mathjaxwarn{jkmath}{}
13103 \LWR@mathjaxwarn{mathtools}
13104 {See the Lwarp manual regarding the disallowspace\MessageBreak
13105 and showonlyrefs options, the alignat environment,\MessageBreak

```

```

13106 and \protect\DeclarePairedDelimiter\space and related%
13107 }
13108 \LWR@mathjaxwarn{mathspec}{}
13109 \LWR@mathjaxwarn{multirow}
13110 {Multirow works as expected in text mode, but\MessageBreak
13111 limited emulation is provided for MathJax math.\MessageBreak
13112 \protect\multirow\space ignores all arguments except\MessageBreak
13113 the text}
13114 \LWR@mathjaxwarn{pb-diagram}
13115 {Enclose its uses inside lateximage environments\MessageBreak
13116 to force SVG output}
13117 %
13118 % %
13119 % {The third-party extension is not used.\MessageBreak
13120 % {The MathJax v3 extension is used.\MessageBreak
13121 % See the Lwarp manual for details}
13122 \LWR@mathjaxwarn{unicode-math}
13123 {Not all characters are encoded correctly.\MessageBreak
13124 Some symbol fonts are not supported by MathJax,\MessageBreak
13125 and are only approximated}
13126 \LWR@mathjaxwarn{witharrows}
13127 {Arrows can only point to the next line.\MessageBreak
13128 Text is only placed on a single line}
13129 \LWR@mathjaxwarn{xy}
13130 {xy works in text, but in math you must\MessageBreak
13131 enclose its uses inside lateximage\MessageBreak
13132 environments to force SVG output}
13133 }{}

```

---

File 2 **lwarp-2in1.sty**

§ 105     Package **2in1**

Pkg   2in1   2in1 is ignored.

**for HTML output:**     1 \LWR@ProvidesPackageDrop{2in1}

---

File 3 **lwarp-2up.sty**

§ 106     Package **2up**

Pkg   2up   2up is ignored.

**for HTML output:**     1 \LWR@ProvidesPackageDrop{2up}[2010/05/15]

```

2 \def\source#1#2#3{}
3 \def\target#1#2#3{}
4 \def\targetlayout#1{}
5 \newdimen\pageseplength
6 \newdimen\pagesepwidth
7 \newdimen\pagesepoffset
8 \def\twoupemptypage{}
9 \def\twoupclearpage{}
10 \def\twoupeject{}
11 \def\twouparticle{}
12 \def\twoupplain{}
13 \def\twouplegaltarget{}
14 \def\twouplandscape{}
15 \def\TwoupWrites{}

```

---

File 4 **lwarp-a4.sty**

§ 107     Package **a4**

Pkg   a4   a4 is ignored.

**for HTML output:**     1 \LWR@ProvidesPackageDrop{a4}[2004/04/15]

```

2 \newcommand*{\WideMargins}{}

```

---

File 5 **lwarp-a4wide.sty**

§ 108      Package **a4wide**

Pkg   a4wide   a4wide is ignored.

**for HTML output:**      1 \LWR@ProvidesPackageDrop{a4wide}[1994/08/30]

---

File 6 **lwarp-a5comb.sty**

§ 109      Package **a5comb**

Pkg   a5comb   a5comb is ignored.

**for HTML output:**      1 \LWR@ProvidesPackageDrop{a5comb}


---

File 7 **lwarp-abstract.sty**

§ 110      Package **abstract**

*(Emulates or patches code by PETER WILSON.)*

Pkg   abstract   abstract is supported and patched by lwarp.

 **missing TOC** If using the number option with file splits, be sure to place the table of contents before the abstract. The number option causes a section break which may cause a file split, which would put a table of contents out of the home page if it is after the abstract.

**for HTML output:** memoir provides an abstract environment even though it is not an article or report class. Meanwhile, lwarp loads book to emulate memoir, but book does not have an abstract environment, so when the abstract package is loaded for emulation there is no pre-existing abstract to redefine, which would cause an error. Thus, a null abstract is provide here:

```
1 \ProvideDocumentEnvironment{abstract}{}{}{}
```

Accept all options for lwarp-abstract:

```
2 \LWR@ProvidesPackagePass{abstract}[2009/06/08]
```

```
3 \AtBeginDocument{
4 \BeforeBeginEnvironment{abstract}{
5 \LWR@forcenewpage
6 \BlockClass{abstract}
```

```

7 }
8 \AfterEndEnvironment{abstract}{\endBlockClass}
9 }
10
11 \renewcommand{\@bsrunintitle}{%
12 \hspace*{\abstitleskip}%
13 {\abstractnamefont%
14 \InlineClass{abstractrunintitle}{\abstractname}%
15 \@bslabeldelim}%
16 }

17 \@ifclassloaded{memoir}
18 {
19 \renewenvironment{abstract}{%
20 % \titlepage
21 % \null\vfil
22 % \@beginparpenalty\@lowpenalty
23 \setupabstract
24 \if@bsrunin
25 \else
26 % \if@bsstyle
27 % \abstitlestyle{\BlockClassSingle{abstracttitle}{\abstractname}}
28 % \else
29 % \ifnumber@bs
30 % \num@bs
31 % \else
32 % \begin{\absnamepos}%
33 \abstractnamefont \BlockClassSingle{abstracttitle}{\abstractname}
34 % \endparpenalty\@M
35 % \end\absnamepos%
36 % \vspace{\abstitleskip}%
37 % \fi
38 % \fi
39 % \vspace{\abstitleskip}%
40 \fi
41 \put@bsintoc%
42 \begin{@bsrctlist}\if@bsrunin\@bsrunintitle\fi\abstracttextfont}%
43 {\par\end{@bsrctlist}}%\vfil\null%\endtitlepage
44 }
45 }{% not memoir
46 \if@titlepage
47 \renewenvironment{abstract}{%
48 % \titlepage
49 % \null\vfil
50 % \@beginparpenalty\@lowpenalty
51 % \if@bsrunin
52 % \else
53 % \if@bsstyle
54 % \abstitlestyle{\BlockClassSingle{abstracttitle}{\abstractname}}
55 % \else
56 % \ifnumber@bs
57 % \num@bs
58 % \else
59 % \begin{\absnamepos}%
60 \abstractnamefont \BlockClassSingle{abstracttitle}{\abstractname}

```

---

```

61 \@endparpenalty\@M
62 \end\absnamepos%
63 %% \vspace{\abstitlekip}%
64 \fi
65 \fi
66 \vspace{\abstitlekip}%
67 \fi
68 \put@bsintoc%
69 \begin{@bstr@ctlist}\if@bsrunin\@bsrunintitle\fi\abstracttextfont}%
70 {\par\end{@bstr@ctlist}\vfil\null%\endtitlepage
71 }
72 \else
73 \renewenvironment{abstract}{%
74 \if@bsrunin
75 \else
76 \if@bsstyle
77 \abstitlestyle{\BlockClassSingle{abstracttitle}{\abstractname}}
78 \else
79 \ifnumber@bs
80 \num@bs
81 \else
82 \begin{\absnamepos}%
83 \abstractnamefont\BlockClassSingle{abstracttitle}{\abstractname}%
84 \end\absnamepos%
85 %% \vspace{\abstitlekip}%
86 \fi
87 \fi
88 \vspace{\abstitlekip}%
89 \fi
90 \put@bsintoc%
91 \begin{@bstr@ctlist}\if@bsrunin\@bsrunintitle\fi\abstracttextfont}%
92 {\par\end{@bstr@ctlist}}
93 \fi
94 }% not memoir

```

---

## File 8 **lwarp-academicons.sty**

### § 111 Package **academicons**

*(Emulates or patches code by DIOGO A. B. FERNANDES.)*

Pkg academicons **academicons** is patched for use by **lwarp**.

If `\aiicon` is used, the name of the icon is used in the `alt` tag. Otherwise, for each of the individual icon macros, a generic `alt` tag is used.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{academicons}[2018/06/27]

2 \LetLtxMacro\LWR@orig@symbol\symbol
3
4 \let\LWR@academicons@orig@AI\AI
5
6 \newcommand*{\LWR@academicons@symbol}[1]{%

```

---

```

7 \begin{lateximage}*[academicon][academicons#1]%
8 \begingroup%
9 \LWR@academicons@orig@AI%
10 \LWR@orig@symbol{#1}%
11 \endgroup%
12 \end{lateximage}%
13 }
14
15 \renewcommand*{\AI}{%
16 \LetLtxMacro\symbol\LWR@academicons@symbol%
17 }
18
19 \renewcommand*{\aiicon}[1]
20 {%
21 \begin{lateximage}*[#1 icon][academicons#1]%
22 \AI\csname aiicon@#1\endcsname%
23 \end{lateximage}%
24 }

```

---

## File 9 **lwarp-accessibility.sty**

### § 112 Package **accessibility**

Pkg accessibility accessibility is emulated.

**for HTML output:** Discard all options for lwarp-accessibility:

```

1 \LWR@ProvidesPackageDrop{accessibility}[2019/10/14]

2 \newcommand{\alt}[1]{\ThisAltText{#1}}
3 \newcommand{\newhref}[3]{\ThisAltText{#2}\LWR@href{#1}{#3}}%
4 \providecommand{\thead}[1]{\textbf{#1}}

```

For MATHJAX:

```

5 \begin{warpMathJax}
6 \CustomizeMathJax{\newcommand{\alt}[1]{} }
7 \CustomizeMathJax{\newcommand{\thead}[1]{\text{\textbf{#1}}}}
8 \end{warpMathJax}

```

---

## File 10 **lwarp-accsupp.sty**

### § 113 Package **accsupp**

Pkg accsupp accsupp is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{accsupp}[2018/03/28]

2 \newcommand*{\BeginAccSupp}[1]{}
3 \newcommand*{\EndAccSupp}[1]{}

```

For MATHJAX:


```
4 \begin{warpMathJax}
5 \CustomizeMathJax{\newcommand{\BeginAccSupp}[1]{} }
6 \CustomizeMathJax{\newcommand{\EndAccSupp}[1]{} }
7 \end{warpMathJax}
```

File 11 **lwarp-acro.sty**

§ 114 Package **acro**

(Emulates or patches code by CLEMENS NIEDERBERGER.)

Pkg acro **acro** is patched for use by **lwarp**.

 **formats** Define acronymn formats using `\textbf` instead of `\bfseries` etc.

for HTML output: 1 \LWR@ProvidesPackagePass{acro}[2019/10/12]

`\DeclareAcronym` is used in the preamble, where **lwarp** has not yet made the dollar active, so temporarily enable **lwarp** math catcode just for this definition:

```
2 \ExplSyntaxOn
3 \NewDocumentCommand \LWR@DeclareAcronym {mm}
4 {
5 \acro_declare_acronym:nn {#1} {#2}
6 \catcode'\$=3% lwarp
7 }
8 \ExplSyntaxOff
9
10 \RenewDocumentCommand{\DeclareAcronym}{}{
11 \catcode'\$=\active% lwarp
12 \LWR@DeclareAcronym
13 }
```

Modified to activate the current font:

```
14 \ExplSyntaxOn
15 \@ifpackagelater{acro}{2020/04/29}%
16 {}% v3 or later
17 {}% before v3
18 \@ifpackagelater{acro}{2019/09/23}%
19 {}% v2.10 or later
20 \cs_gset_protected:Npn __acro_typeset:nn #1#2
21 {
22 \mode_if_horizontal:F { \leavevmode }
23 \group_begin:
24 \use:x
25 {
26 \bool_if:cTF {l__acro_custom_#1_format_bool}
27 { \exp_not:v {l__acro_custom_#1_format_tl} }
28 { \exp_not:v {l__acro_#1_format_tl} }
```

```

29 {\exp_not:N\LWR@textcurrentfont{#2}}% lwarp
30 }
31 \group_end:
32 }
33
34 \cs_gset_protected:Npn __acro_ending_format:nn #1#2
35 {
36 \bool_if:NTF \l__acro_include_endings_format_bool
37 {
38 \str_case:nn {#1}
39 {
40 {long}
41 {
42 \bool_if:NTF \l__acro_custom_long_format_bool
43 { \l__acro_custom_long_format_tl }
44 {
45 \bool_if:NTF \l__acro_first_instance_bool
46 { \l__acro_first_long_format_tl }
47 { \l__acro_long_format_tl }
48 }
49 }
50 {short}
51 {
52 \bool_if:NTF \l__acro_custom_short_format_bool
53 { \l__acro_custom_short_format_tl }
54 { \l__acro_short_format_tl }
55 }
56 {alt}
57 {
58 \bool_if:NTF \l__acro_custom_alt_format_bool
59 { \l__acro_custom_alt_format_tl }
60 { \l__acro_alt_format_tl }
61 }
62 }
63 }
64 { \use:n }
65 {\exp_not:N\LWR@textcurrentfont{#2}}% lwarp
66 }
67}% v2.10 or later
68{% before v2.10
69 \cs_gset_protected:Npn \acro_write_short:nn #1#2
70 {
71 \mode_if_horizontal:F { \leavevmode }
72 \group_begin:
73 \bool_if:NTF \l__acro_custom_format_bool
74 { \l__acro_custom_format_tl }
75 { \l__acro_short_format_tl }
76 {\LWR@textcurrentfont{#2}}% lwarp
77 \group_end:
78 }
79
80 \cs_gset_protected:Npn \acro_write_alt:nn #1#2
81 {
82 \mode_if_horizontal:F { \leavevmode }
83 \group_begin:

```

```

84 \bool_if:NTF \l__acro_custom_format_bool
85 { \l__acro_custom_format_tl }
86 { \l__acro_alt_format_tl }
87 {\LWR@textcurrentfont{#2}}% lwarp
88 \group_end:
89 }
90
91 \cs_gset_protected:Npn \acro_write_long:nn #1#2
92 {
93 \mode_if_horizontal:F { \leavevmode }
94 \group_begin:
95 \bool_if:NTF \l__acro_custom_long_format_bool
96 { \l__acro_custom_long_format_tl }
97 { \use:n }
98 {
99 \use:x
100 {
101 \exp_not:n {#1}
102 {
103 \bool_if:NTF \l__acro_first_upper_bool
104 { \exp_not:N __acro_first_upper_case:n { \exp_not:n {
105 \LWR@textcurrentfont{#2}}% lwarp
106 } } }
107 { \exp_not:n {\LWR@textcurrentfont{#2}} }% lwarp
108 }
109 }
110 }
111 \group_end:
112 }
113 }% before v2.10
114 }% before v3
115 \ExplSyntaxOff

```


---

## File 12 **lwarp-acronym.sty**

### § 115 Package **acronym**

(Emulates or patches code by TOBIAS OETIKER.)

Pkg acronym **acronym** is patched for use by **lwarp**.

 **multiply-defined labels** `\acresetall` does not work with `cleveref`, causing multiply-defined labels. **lwarp** patches **acronym** for HTML, but not for print mode.

**for HTML output:** `1 \LWR@ProvidesPackagePass{acronym}[2015/03/21]`

Uses `\textit` instead of `\itshape`:

```

2 \renewcommand{\acfia}[1]{%
3 {\textit{\AC@acl{#1}} } (\ifAC@starred\acs*{#1}\else\acs{#1}\fi)}

```

Removes the `mbox` to allow math inside:

```

4 \renewcommand*\AC@acs[1]{%
5 % \mbox{
6 \expandafter\AC@get\csname fn@#1\endcsname\@firstoftwo{#1}}
7 % }

```

Fix for acronym labels in the captions of floats.

```

8 \renewcommand{\@starttoc}[1]{
9 \LWR@html@elementclass{nav}{#1}
10 \let\ltxMacro\@verridelabel\@gobble
11 \LWR@orig@starttoc{#1}
12 \LWR@html@elementclassend{nav}{#1}
13 }

```

Modified for cleveref and lwarp:

```

14 \renewcommand*\AC@und@newl@bel[3]{%
15 \ifundefined{#1@#3}%
16 {%
17 \global\expandafter\let\csname#2@#3\endcsname\@nnil
18 \global\expandafter\let\csname#2@#3@lwarp\endcsname\@nnil% lwarp
19 \global\expandafter\let\csname#2@#3@cref\endcsname\@nnil% lwarp
20 }%
21 {%
22 \global\expandafter\let\csname#1@#3\endcsname\relax
23 \global\expandafter\let\csname#1@#3@lwarp\endcsname\relax% lwarp
24 \global\expandafter\let\csname#1@#3@cref\endcsname\relax% lwarp
25 }%
26 }%

```

---

File 13 **lwarp-adjmulticol.sty**

§ 116 Package **adjmulticol**

(Emulates or patches code by BORIS VEYTSMAN.)

Pkg adjmulticol adjmulticol is emulated.

Emulation similar to multicol is used, with adjusted margins. If the number of columns is specified as 1, it is set so, but if two or greater are used, lwarp allows a variable number of columns up to three.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{adjmulticol}[2012/01/20]

2 \RequirePackage{multicol}

adjmulticols \* {<numcols>} {<left margi>} {<right margin>}

```

3 \NewDocumentEnvironment{adjmulticols}{s m m}
4 {%

```

Compute the margins, and limit to positive only:

```
5 \setlength{\LWR@templengthone}{#3}%
6 \ifdimcomp{\LWR@templengthone}{<}{0pt}{\setlength{\LWR@templengthone}{0pt}}{}%
7 \setlength{\LWR@templengthtwo}{#4}
8 \ifdimcomp{\LWR@templengthtwo}{<}{0pt}{\setlength{\LWR@templengthtwo}{0pt}}{}%
```

If one column is specified, use a <div> of class singlecolumn, else use multicols:

```
9 \newcommand*\LWR@mcstyle{\multicols}%
10 \ifnumcomp{#2}{=}{1}{\renewcommand*\LWR@mcstyle{\singlecolumn}}{}%
```

Help avoid page overflow:

```
11 \LWR@forcenewpage%
```

Create the <div> with the given margin and class:

```
12 \BlockClass[%
13 \LWR@print@mbx{margin-left:\LWR@printlength{\LWR@templengthone}} ; %
14 \LWR@print@mbx{margin-right:\LWR@printlength{\LWR@templengthtwo}}%
15]{\LWR@mcstyle}%
16 }
17 {\endBlockClass}
```

---

#### File 14 **lwarp-addlines.sty**

### § 117 Package **addlines**

*(Emulates or patches code by WILL ROBERTSON.)*

Pkg addlines addlines is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{addlines}[2018/12/05]

```
2 \newcommand\addlines{\@ifstar\addlines@a\addlines@a}
3 \newcommand\addlines@a[1][1]{}
4 \let\addline\addlines
5 \newcommand\removelines{\@ifstar\removelines@a\removelines@a}
6 \newcommand\removelines@a[1][1]{}
7 \let\removeline\removelines
8 \newcommand\squeezepage[1][0]{}%
```

---

#### File 15 **lwarp-afterpage.sty**

### § 118 Package **afterpage**

*(Emulates or patches code by DAVID CARLISLE.)*

Pkg afterpage afterpage is emulated.

for HTML output: Discard all options for lwarp-afterpage:

```
1 \LWR@ProvidesPackageDrop{afterpage}[2014/10/28]
2 \newcommand{\afterpage}[1]{#1}
```

---

File 16 **lwarp-algorithm2e.sty**

§ 119 Package **algorithm2e**

*(Emulates or patches code by CHRISTOPHE FIORIO.)*

Pkg algorithm2e algorithm2e is patched for use by lwarp.

For print output, captions are placed according to package options, but for HTML output captions are placed where used. Therefore, to have captions appear at the top of the algorithms for both print and HTML, place each captions at the top of each algorithm.

for HTML output: 1 \LWR@ProvidesPackagePass{algorithm2e}[2017/07/18]

For the list-of entries:

```
2 \renewcommand{\l@algocf}[2]{\hypertocfloat{1}{algocf}{loa}{#1}{#2}}
```

Select the lwarp float style according to the algorithm2e style:

```
3 \newcommand*{\LWR@floatstyle@algocf}{ruled}
4
5 \ifdefstring{\algocf@style}{boxed}{%
6 \renewcommand*{\LWR@floatstyle@algocf}{boxed}
7 }{}
8
9 \ifdefstring{\algocf@style}{boxruled}{%
10 \renewcommand*{\LWR@floatstyle@algocf}{boxruled}
11 }{}
12
13 \ifdefstring{\algocf@style}{plain}{%
14 \renewcommand*{\LWR@floatstyle@algocf}{plain}
15 }{}
```

Paragraph handling to allow line numbers under certain conditions:

```
16 \newbool{\LWR@algocf@dopars}
17 \booltrue{\LWR@algocf@dopars}
18
19 \renewcommand{\algocf@everypar}{%
20 \ifbool{\LWR@algocf@dopars}{%
21 \ifbool{\LWR@doingstartpars}{%
22 \ifnumcomp{\value{\LWR@lateximagedepth}}{>}{0}%
```

```

23 {}%
24 {%
25 \algocf@everypar\nl\algocf@everyparhanging%
26 }%
27 }{}%
28 }{}%
29 }

```

lwarp caption handling:

```

30 \renewcommand{\algocf@makecaption}[2]{%
31 \LWR@HTML@caption@begin{\algocf}%
32 \LWR@isolate{\algocf@captiontext{#1}{#2}}%
33 \LWR@HTML@caption@end%
34 }

```

Print any caption where it is declared:

```

35 \renewcommand{\algocf@makecaption@plain}[2]{%
36 \LWR@HTML@caption@begin{\algocf}%
37 \LWR@isolate{\algocf@captiontext{#1}{#2}}%
38 \LWR@HTML@caption@end%
39 }
40
41 \renewcommand{\algocf@makecaption@boxed}[2]{%
42 \LWR@HTML@caption@begin{\algocf}%
43 \LWR@isolate{\algocf@captiontext{#1}{#2}}%
44 \LWR@HTML@caption@end%
45 }
46
47 \renewcommand{\algocf@makecaption@ruled}[2]{%
48 \LWR@HTML@caption@begin{\algocf}%
49 \LWR@isolate{\algocf@captiontext{#1}{#2}}%
50 \LWR@HTML@caption@end%
51 }

```

Turn off line numbering while making the caption:

```

52 \long\def\algocf@latexcaption#1[#2]#3{% original definition of caption
53 \boolfalse{LWR@algocf@dopars}% lwarp
54 \par%
55 \addcontentsline{\csname ext@#1\endcsname}{#1}%
56 {\protect\numberline{\csname the#1\endcsname}{\ignorespaces \LWR@isolate{#2}}}%
57 \begingroup%
58 \@parboxrestore%
59 \if@minipage%
60 \setminipage%
61 \fi%
62 \normalsize%
63 \@makecaption{\csname fnum@#1\endcsname}{\ignorespaces #3}\par%
64 \endgroup%
65 \booltrue{LWR@algocf@dopars}% lwarp
66 }

```

Line numbers are printed in a `<span>` of class `alg2elinenumber`:

```
67 \renewcommand{\algocf@printnl}[1]{%
68 \InlineClass{alg2elinenumber}{\NLSty{#1}}~%
69 }%
```

While initializing an algorithm environment, locally declare the style of a regular figure to be the same as the algorithm style, in case the `figure` option was used.

```
70 \preto\@algocf@init{%
71 \edef\LWR@floatstyle@figure{\LWR@floatstyle@algocf}%
72 }
```

For `lwarp`, the algorithm is not assembled inside a box, since `lateximages` would not work, so the captions are printed where declared.

```
73 \renewcommand{\@algocf@start}{%
74 \let\@mathsemicolon=\; \def\;{\ifmmode\@mathsemicolon\else\@endalgoln\fi}%
75 % \raggedright%
76 \AlFnt{}%
77 \booltrue{LWR@algocf@dopars}% lwarp
78 }
79
80 \renewcommand{\@algocf@finish}{%
81 \boolfalse{LWR@algocf@dopars}% lwarp
82 \lineskip\normallineskip\setlength{\skiptotal}{\@defaultskiptotal}%
83 \let\;=\@mathsemicolon%
84 \let\]=\@emathdisplay%
85 }
```

Use an HTML break:

```
86 \renewcommand{\BlankLine}{%
87 \LWR@stoppars%
88 \LWR@htmltagc{br /}%
89 \LWR@startpars%
90 }
```

Simplified for HTML. The paragraph handling must be preserved.

```
91 \renewcommand{\SetKwInOut}[2]{%
92 \algocf@newcommand{#1}[1]{%
93 \ifthenelse{\boolean{algocf@hanginginout}}{%
94 {\relax}%
95 {\algocf@seteveryparhanging{\relax}}%
96 \ifthenelse{\boolean{algocf@inoutnumbered}}{%
97 {\relax}%
98 {\algocf@seteveryparnl{\relax}}%
99 }%
100 \KwSty{#2\algocf@typo:}%
101 ~#1\par%
102 }%
103 \algocf@linesnumbered% reset the numbering of the lines
104 \ifthenelse{\boolean{algocf@hanginginout}}{%
```

```

105 {\relax}%
106 {\algocf@reseteveryparhanging}%
107 }%
108 }%
109
110 \renewcommand{\ResetInOut}[1]{%

```

Each of the following creates a <div> of a given class, and turns off line numbering while creating the <div> tags:

```

111 \renewcommand{\algocf@Vline}[1]{%
112 \boolfalse{LWR@algocf@dopars}%
113 \begin{BlockClass}{alg2evline}
114 \booltrue{LWR@algocf@dopars}%
115 #1
116 \boolfalse{LWR@algocf@dopars}%
117 \end{BlockClass}
118 \booltrue{LWR@algocf@dopars}%
119 }

120 \renewcommand{\algocf@Vsline}[1]{%
121 \boolfalse{LWR@algocf@dopars}%
122 \begin{BlockClass}{alg2evsline}
123 \booltrue{LWR@algocf@dopars}%
124 #1
125 \boolfalse{LWR@algocf@dopars}%
126 \end{BlockClass}
127 \booltrue{LWR@algocf@dopars}%
128 }

129 \renewcommand{\algocf@Noline}[1]{%
130 \boolfalse{LWR@algocf@dopars}%
131 \begin{BlockClass}{alg2enoline}
132 \booltrue{LWR@algocf@dopars}%
133 #1
134 \boolfalse{LWR@algocf@dopars}%
135 \end{BlockClass}
136 \booltrue{LWR@algocf@dopars}%
137 }

```

The [H] environment is converted to a regular float, which in HTML is placed where declared. Reusing the regular float allows the [H] version to reuse the ruled and boxed options.

```

138 \LetLtxMacro\algocf@Here\algocf
139 \LetLtxMacro\endalgocf@Here\endalgocf

```

---

File 17 **lwarp-algorithmicx.sty**

§ 120 Package **algorithmicx**

*(Emulates or patches code by SZÁSZ JÁNOS.)*

Pkg algorithmicx algorithmicx is supported with minor adjustments.

for HTML output: 1 \LWR@ProvidesPackagePass{algorithmicx}[2005/04/27]

Inside the algorithmic environment, level indenting is converted to a <span> of the required length, and comments are placed inside a <span> which is floated right.

⚠ package conflicts If using \newfloat, trivfloat, and/or algorithmicx together, see section 558.1.

for HTML output: 2 \begin{warpHTML}

```

3 \AtBeginEnvironment{algorithmic}{%
4 %
5 \let\origALG@doentity\ALG@doentity%
6 %
7 \renewcommand*{\ALG@doentity}{%
8 \origALG@doentity%
9 \LWR@htmltagc{%
10 span style="width:\LWR@printlength{\ALG@thistlm}; display:inline-block;"%
11 }%
12 \ifbool{FormatWP}{%
13 \setlength{\LWR@templengthone}{\the\ALG@thistlm}%
14 \whiledo{\lengthtest{\LWR@templengthone>1em}}{%
15 \quad%
16 \addtolength{\LWR@templengthone}{-1em}%
17 }%
18 }{}%
19 \LWR@htmltagc{/span}%
20 }%
21
22 \let\LWR@origComment\Comment%
23
24 \renewcommand{\Comment}[1]{%
25 \InlineClass{floatright}{\LWR@origComment{#1}}%
26 }%
27 }
28
29 \renewcommand\algorithmiccomment[1]{%
30 \hfill\HTMLUnicode{25B7} #1 white right triangle
31 }%

32 \end{warpHTML}
```

---

File 18 **lwarp-alltt.sty**

§ 121 Package **alltt**

(Emulates or patches code by JOHANNES BRAAMS.)

Pkg alltt alltt is patched for use by lwarp.

for HTML output: 1 \LWR@ProvidesPackagePass{alltt}[1997/06/16]

---

```

2 \AfterEndPreamble{
3 \LWR@traceinfo{Patching alltt.}
4 \AtBeginEnvironment{alltt}{%
5 \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}%
6 {}%
7 {%
8 \LWR@forcenewpage
9 \LWR@atbeginverbatim{3}{alltt}%
10 }%
11 }
12 \AfterEndEnvironment{alltt}{%
13 \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}%
14 {}%
15 {%
16 \LWR@afterendverbatim{2}%
17 }%
18 }
19 }

```

---

File 19 **lwarp-amsmath.sty**

§ 122      Package **amsmath**

(Emulates or patches code by AMERICAN MATHEMATICAL SOCIETY, L<sup>A</sup>T<sub>E</sub>X3 PROJECT.)

Pkg    amsmath    amsmath is patched for use by lwarp.

for HTML output:    1 \LWR@ProvidesPackagePass{amsmath}[2017/09/02]

\dotso    An HTML text-mode version.

```

2 \newcommand*{\LWR@HTML@dotso}{\textellipsis\ }
3 \LWR@formatted{dotso}

```

Patches to allow \eqref inside a caption:

```

4 \def\maketag@@@#1{\text{#1}}
5 \def\tagform@#1{\maketag@@@(\ignorespaces#1\unskip)}

```

Patches for  $\mathcal{MS}$  math \tag macro to remember the first tag:

```

6 \ifbool{mathjax}{}{% not mathjax
7
8 \let\ltxMacro\LWR@origmake@df@tag@@\make@df@tag@@
9 \let\ltxMacro\LWR@origmake@df@tag@@@ \make@df@tag@@@
10
11 \renewcommand*{\make@df@tag@@}[1]{%
12 \LWR@remembertag{#1}%
13 \LWR@origmake@df@tag@@{#1}%
14 }
15
16 \renewcommand*{\make@df@tag@@@}[1]{%

```

```

17 \LWR@remembertag{#1}%
18 \LWR@origmake@df@tag@@{#1}%
19 }
20
21 }% not mathjax

```

For nesting  $\mathcal{AMS}$  environments:

```

22 \newcounter{LWR@amsmathdepth}
23 \setcounter{LWR@amsmathdepth}{0}

```

The following  $\mathcal{AMS}$  environments are patched in-place:

```

\LWR@amsmathenv@before * {<environment name>}
* if the environment was starred.
Embeds the environment inside a lateximage.

24 \NewDocumentCommand{\LWR@amsmathenv@before}{s m}{%
25 \IfBooleanTF{#1}{
26 \begin{BlockClass}{displaymath}
27 }{
28 \begin{BlockClass}{displaymathnumbered}
29 }
30 \LWR@newautoidanchor%
31 \booltrue{LWR@indisplaymathimage}%
32 \begin{lateximage}[\LWR@amsmathbodynumbered{#1}]*
33 \LWR@applyxfakebold%
34 }

```

```

\LWR@amsmathenv@before * {<environment name>}
* if the environment was starred.
Embeds the environment with MATHJAX or a lateximage.

35 \NewDocumentCommand{\LWR@amsmathenv@before}{s m}{%
36 \ifnumequal{\value{LWR@amsmathdepth}}{0}{%
37 \LWR@stoppars%
38 \ifboolexpr{bool{mathjax} or (bool{FormatWP} and bool{WPMarkMath}) }%
39 {
40 \LWR@syncmathjax
41 \boolfalse{LWR@amsmultline}
42 \ifstrequal{#2}{multline}{\booltrue{LWR@amsmultline}}{}
43 \ifstrequal{#2}{multline*}{\booltrue{LWR@amsmultline}}{}

```



autonum's "+" environments are not supported by MATHJAX.

```

44 \LWR@beginhideamsmath
45 }
46 {
47 \IfBooleanTF{#1}{
48 \LWR@amsmathenv@before*{#2}
49 }{
50 \LWR@amsmathenv@before{#2}
51 }
52 }

```

```

53 }{}
54 \addtocounter{LWR@amsmathdepth}{1}
55 }

```

`\LWR@amsmathenv@@after`

Embeds the environment inside a `lateximage`.

```

56 \newcommand*{\LWR@amsmathenv@@after}{%
57 \end{lateximage}\end{BlockClass}\LWR@startpars%
58 }

```

`\LWR@amsmathenv@after` \*  $\langle environment\ name \rangle$

\* if the environment was starred. Ignored here, only used for a consistent syntax.

Embeds the environment with `MATHJAX` or a `lateximage`.

```

59 \NewDocumentCommand{\LWR@amsmathenv@after}{s m}{%
60 \ifnumequal{\value{LWR@amsmathdepth}}{1}{%
61 \ifboolexpr{bool{mathjax} or (bool{FormatWP} and bool{WPMarkMath}) }{%
62 {
63 \LWR@endhideamsmath
64 \boolfalse{LWR@amsmultline}
65 \LWR@addmathjax{#2}{\the\@envbody}
66 }
67 {\LWR@amsmathenv@@after}

```

Clear the single-use alt text:

```

68 \gdef\LWR@ThisAltText{}%
69 }{}
70 \addtocounter{LWR@amsmathdepth}{-1}
71 }

```

Env `multline`

```

72 \BeforeBeginEnvironment{multline}{\LWR@amsmathenv@before{multline}}
73
74 \AfterEndEnvironment{multline}{\LWR@amsmathenv@after{multline}}

```

Env `multline*`

```

75 \BeforeBeginEnvironment{multline*}{\LWR@amsmathenv@before*{multline*}}
76
77 \AfterEndEnvironment{multline*}{\LWR@amsmathenv@after*{multline*}}
78

```

Env `gather`

```

79 \BeforeBeginEnvironment{gather}{\LWR@amsmathenv@before{gather}}
80
81 \AfterEndEnvironment{gather}{\LWR@amsmathenv@after{gather}}

```

Env gather\*

```
82 \BeforeBeginEnvironment{gather*}{\LWR@amsmathenv@before*{gather*}}
83
84 \AfterEndEnvironment{gather*}{\LWR@amsmathenv@after*{gather*}}
```

Env align

```
85 \BeforeBeginEnvironment{align}{\LWR@amsmathenv@before{align}}
86
87 \AfterEndEnvironment{align}{\LWR@amsmathenv@after{align}}
```

Env align\*

```
88 \BeforeBeginEnvironment{align*}{\LWR@amsmathenv@before*{align*}}
89
90 \AfterEndEnvironment{align*}{\LWR@amsmathenv@after*{align*}}
```

Env flalign

```
91 \BeforeBeginEnvironment{flalign}{\LWR@amsmathenv@before{flalign}}
92
93 \AfterEndEnvironment{flalign}{\LWR@amsmathenv@after{flalign}}
```

Env flalign\*

```
94 \BeforeBeginEnvironment{flalign*}{\LWR@amsmathenv@before*{flalign*}}
95
96 \AfterEndEnvironment{flalign*}{\LWR@amsmathenv@after*{flalign*}}
```

Env alignat

```
97 \BeforeBeginEnvironment{alignat}{\LWR@amsmathenv@before{alignat}}
98
99 \AfterEndEnvironment{alignat}{\LWR@amsmathenv@after{alignat}}
```

Env alignat\*

```
100 \BeforeBeginEnvironment{alignat*}{\LWR@amsmathenv@before*{alignat*}}
101
102 \AfterEndEnvironment{alignat*}{\LWR@amsmathenv@after*{alignat*}}

103 \AtBeginEnvironment{subequations}{
104 \renewcommand*{\theMathJaxsubequations}{1}
105 \renewcommand*{\theMathJaxsection}{\theparentequation}
106 \renewcommand*{\theMathJaxequation}{\arabic{equation}}
107 }
```

For MATHJAX:

---

```

108 \begin{warpMathJax}
109 \CustomizeMathJax{\newcommand{\intertext}[1]{\text{#1}\notag \\\}}
110 \end{warpMathJax}

```

---

File 20 **lwarp-amsthm.sty**

## § 123 Package **amsthm**

(Emulates or patches code by PUBLICATIONS TECHNICAL GROUP — AMERICAN MATHEMATICAL SOCIETY.)

The original source code is located in `amscldx.dtx`, and printed in `amscldx.pdf`.

Pkg amsthm amsthm is patched for use by lwarp.

---

Table 16: amsthm package — css styling of theorems and proofs

**Theorem:** `<div>` of class `amsthmbdy<theoremstyle>`

**Theorem Name:** `<span>` of class `amsthmname<theoremstyle>`

**Theorem Number:** `<span>` of class `amsthmnumber<theoremstyle>`

**Theorem Note:** `<span>` of class `amsthmnote<theoremstyle>`

**Proof:** `<div>` of class `amsthmproof`

**Proof Name:** `<span>` of class `amsthmproofname`

where `<theoremstyle>` is `plain`, `definition`, etc.

---

for HTML output: amsthm must be loaded before mdframed:

```

1 \ifpackageloaded{mdframed}{
2 \PackageError{lwarp}
3 {%
4 Package mdframed must be loaded after package amsthm.\MessageBreak
5 Enter 'H' for solutions%
6 }
7 {%
8 Move “\protect\usepackage{amsthm}” before
9 “\protect\usepackage{mdframed}”.\MessageBreak
10 Package amsthm may be loaded by something else,\MessageBreak
11 which must also be moved before mdframed.%
12 }
13 }
14 {}

```

Necessary for `\text`, used by `\openbox`, etc., below:

```

15 \RequirePackage{amsmath}

16 \LWR@ProvidesPackagePass{amsthm}[2017/10/31]

```

Storage for the style being used for new theorems:

```
17 \newcommand{\LWR@newtheoremstyle}{plain}
```

Patched to remember the style being used for new theorems:

```
18 \renewcommand{\theoremstyle}[1]{%
19 \ifundefined{th@#1}{%
20 \PackageWarning{amsthm}{Unknown theoremstyle ‘#1’}%
21 \thm@style{plain}%
22 \renewcommand{\LWR@newtheoremstyle}{plain}% lwarp
23 }{%
24 \thm@style{#1}%
25 \renewcommand{\LWR@newtheoremstyle}{#1}% lwarp
26 }%
27 }
```

Patched to remember the style for this theorem type:

```
28 \def\xnthm#1#2{%
29 \csedef{LWR@thmstyle#2}{\LWR@newtheoremstyle}% lwarp
30 \let\@tempa\relax
31 \exp\@ifdefinable\csname #2\endcsname{%
32 \global\exp\let\csname end#2\endcsname\endtheorem
33 \ifx *#1% unnumbered, need to get one more mandatory arg
34 \edef\@tempa##1{%
35 \gdef\exp\@nx\csname#2\endcsname{%
36 \@nx\thm{\exp\@nx\csname th@the\thm@style\endcsname}%
37 {}{##1}}}%
38 \else % numbered theorem, need to check for optional arg
39 \def\@tempa{\@oparg{\@ynthm{#2}}{}}%
40 \fi
41 \AtBeginEnvironment{#2}{%
42 \edef\LWR@thisthmstyle{\@nameuse{LWR@thmstyle#2}}%
43 }% lwarp
44 }%
45 \@tempa
46 }
```

Patched to enclose with css:

```
47 \newcommand{\LWR@haveamsthmname}{
48 \renewcommand{\thmname}[1]{%
49 \InlineClass{amsthmname\LWR@thisthmstyle}{##1}%
50 }
51 }
52
53 \newcommand{\LWR@haveamsthmnumber}{
54 \renewcommand{\thmnumber}[1]{%
55 \InlineClass{amsthmnumber\LWR@thisthmstyle}{##1}%
56 }
57 }
58
59 \newcommand{\LWR@haveamsthmnote}{
60 \renewcommand{\thmnote}[1]{%
```

```

61 \InlineClass{amsthmnote\LWR@thisthmstyle}{##1}%
62 }
63 }
64
65 \LWR@haveamsthmname
66 \LWR@haveamsthmnumber
67 \LWR@haveamsthmnote

```

Patched for css:

```

68 \def\@begintheorem#1#2[#3]{%

```

```

69 \GetTitleString{#3}% lwarp
70 \let\@currentlabelname\GetTitleStringResult% lwarp

71 \item[
72 % \deferred@thm@head{
73 % \the\thm@headfont \thm@indent
74 \@ifempty{#1}{\let\thmname\@gobble}{\LWR@haveamsthmname}% lwarp
75 \@ifempty{#2}{\let\thmnumber\@gobble}{\LWR@haveamsthmnumber}% lwarp
76 \@ifempty{#3}{\let\thmnote\@gobble}{\LWR@haveamsthmnote}% lwarp
77 \thm@swap\swappedhead\thmhead{#1}{#2}{#3}%
78 \the\thm@headpunct~
79 \thmheadnl % possibly a newline.
80 \hskip\thm@headsep
81 % }%
82]
83 \ignorespaces}

```

Patched for css:

```

84 \def\@thm#1#2#3{%
85 \ifhmode\unskip\unskip\par\fi
86 \normalfont
87 \LWR@forcenewpage% lwarp
88 \BlockClass{amsthmbody\LWR@thisthmstyle}% lwarp
89 \trivlist
90 \let\thmheadnl\relax
91 \let\thm@swap\@gobble
92 \thm@notefont{\fontseries\mddefault\upshape}%
93 \thm@headpunct{.}% add period after heading
94 \thm@headsep 5\p@ plus\p@ minus\p@\relax
95 \thm@space@setup
96 #1% style overrides
97 \@topsep \thm@preskip % used by thm head
98 \@topsepadd \thm@postskip % used by \@endparenv
99 \def\@tempa{#2}\ifx\@empty\@tempa
100 \def\@tempa{\@oparg{\@begintheorem{#3}{}}{}}{}}%
101 \else
102 \refstepcounter{#2}%
103 \def\@tempa{\@oparg{\@begintheorem{#3}{\csname the#2\endcsname}}{}}{}}%
104 \fi
105 \@tempa
106 }

```

`cleveref` patches `\@thm` to do `\cref@thmoptarg` if an optional argument is given. `lwarp` then patches `\cref@thmoptarg` `\AtBeginDocument`.

```

107 \AtBeginDocument{%
108 \def\cref@thmoptarg[#1]#2#3#4{%
109 \ifhmode\unskip\unskip\par\fi%
110 \normalfont%
111 \LWR@forcenewpage% lwarp
112 \BlockClass{amsthmbody\LWR@thisthmstyle}% lwarp
113 \trivlist%
114 \let\thmheadnl\relax%
115 \let\thm@swap\@gobble%
116 \thm@notefont{\fontseries\mddefault\upshape}%
117 \thm@headpunct{.}% add period after heading
118 \thm@headsep 5\p@ plus\p@ minus\p@\relax%
119 \thm@space@setup%
120 #2% style overrides
121 \@topsep \thm@preskip % used by thm head
122 \@topsepadd \thm@postskip % used by \@endparenv
123 \def\@tempa{#3}\ifx\@empty\@tempa%
124 \def\@tempa{\@oparg{\@begintheorem{#4}}{}}[]%
125 \else%
126 \refstepcounter{#1}{#3}% <<< cleveref modification
127 \def\@tempa{\@oparg{\@begintheorem{#4}}{\csname the#3\endcsname}}[]%
128 \fi%
129 \@tempa
130 }%
131 }% \AtBeginDocument
132
133 \def\@endtheorem{\endtrivlist\endBlockClass\@endpfalse }

```

Proof QED symbol:

```

134 \AtBeginDocument{
135 \ifundefined{LWR@orig@openbox}{
136 \LetLtxMacro\LWR@orig@openbox\openbox
137 \LetLtxMacro\LWR@orig@blacksquare\blacksquare
138 \LetLtxMacro\LWR@orig@Box\Box
139
140 \def\openbox{\text{\HTMLUnicode{25A1}}}% UTF-8 white box
141 \def\blacksquare{\text{\HTMLUnicode{220E}}}% UTF-8 end-of-proof
142 \def\Box{\text{\HTMLUnicode{25A1}}}% UTF-8 white box
143
144 \appto\LWR@restoreorigformatting{%
145 \LetLtxMacro\openbox\LWR@orig@openbox%
146 \LetLtxMacro\blacksquare\LWR@orig@blacksquare%
147 \LetLtxMacro\Box\LWR@orig@Box%
148 }% \appto
149 }{}% \ifundefined
150 }% \AtBeginDocument

```

Patched for css:

```

151 \renewenvironment{proof}[1][\proofname]{\par
152 \LWR@forcenewpage% lwarp

```

---

```

153 \BlockClass{amsthmproof}% lwarp
154 \pushQED{\qed}%
155 \normalfont \topsep6\p@\@plus6\p@\relax
156 \trivlist
157 \item[
158 \InlineClass{amsthmproofname}{#1\@addpunct{.}}]\ignorespaces% changes
159]{%
160 \InlineClass{theoremendmark}{\popQED}\endtrivlist%
161 \endBlockClass% lwarp
162 \@endpefalse
163 }
```

---

## File 21 **lwarp-anonchap.sty**

### § 124 Package **anonchap**

(Emulates or patches code by PETER WILSON.)

Pkg anonchap anonchap is emulated.

Pkg tocloft If using tocloft with tocbibind, anonchap, fncychap, or other packages which change chapter title formatting, load tocloft with its titles option, which tells tocloft to use standard L<sup>A</sup>T<sub>E</sub>X commands to create the titles, allowing other packages to work with it.



**tocloft & other packages**

The code is shared by tocbibind.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{anonchap}[2009/08/03]

2 \newcommand{\simplechapter}[1][\@empty]{%
3 \def\@chapcntformat##1{%
4 #1~\csname the##1\endcsname\simplechapterdelim\quad%
5 }%
6 }
7
8 \newcommand{\restorechapter}{%
9 \let\@chapcntformat\@secntformat%
10 }
```

---

## File 22 **lwarp-anysize.sty**

### § 125 Package **anysize**

(Emulates or patches code by MICHAEL SALZENBERG, THOMAS ESSER.)

Pkg anysize anysize is ignored.

**for HTML output:**

```


1 \LWR@ProvidesPackageDrop{anysize}[1994/08/13]

2 \def\papersize#1#2{}
3 \def\marginsize#1#2#3#4{}
```

File 23 **lwarp-appendix.sty**§ 126 Package **appendix**

(Emulates or patches code by PETER WILSON.)

Pkg appendix appendix is patched for use by lwarp.

 **incorrect toc link** During HTML conversion, the option toc without the option page results in a toc link to whichever section was before the appendices environment. It is recommended to use both toc and also page at the same time.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{appendix}[2009/09/02]

2 \renewcommand*{\@chap@pppage}{%
3 \part*{\appendixpagename}
4 \if@dotoc@pp
5 \addappheadtotoc
6 \fi
7 }
8
9 \renewcommand*{\@sec@pppage}{%
10 \part*{\appendixpagename}
11 \if@dotoc@pp
12 \addappheadtotoc
13 \fi
14 }
```

File 24 **lwarp-ar.sty**§ 127 Package **ar**

(Emulates or patches code by AGOSTINO DE MARCO.)

Pkg ar ar is patched for use by lwarp.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{ar}[2012/01/23]
```

Measure and print the width of the supplied glyph.

```

2 \newlength{\LWR@ar@width}
3
4 \newcommand*{\LWR@ar@printwidth}[1]{%
5 \setlength{\LWR@ar@width}{\widthof{#1}}%
6 width:%
7 \LWR@convertto{em}{\the\LWR@ar@width}em%
8 }
```

The HTML version of \AR:

```
9 \newrobustcmd*{\LWR@HTML@AR}{%
```

Start a hashed lateximage, additionally hashed by the font series, with a width depending on the given glyph:

```
10 \begin{lateximage}*[AR][\LWR@f@series][\LWR@ar@printwidth{\LWR@print@AR}]]%
```

For text mode, set the font series according to the HTML font series:

```
11 \ifmmode\else\csuse{\LWR@orig\LWR@f@series series}\fi%
```

Print the original glyph using the newly set font series:

```
12 \LWR@print@AR%
```

Done.

```
13 \end{lateximage}%
14 }
```

Combine the print and HTML versions:

```
15 \LWR@formatted{AR}
```

```
16 \newrobustcmd*{\LWR@HTML@ARb}{%
17 \begin{lateximage}*[AR][b][\LWR@ar@printwidth{\LWR@print@ARb}]]%
18 \LWR@print@ARb%
19 \end{lateximage}%
20 }
21 \LWR@formatted{ARb}
```

```
22 \newrobustcmd*{\LWR@HTML@ARss}{%
23 \begin{lateximage}*[ARss][\LWR@f@series][\LWR@ar@printwidth{\LWR@print@ARss}]]%
24 \ifmmode\else\csuse{\LWR@orig\LWR@f@series series}\fi%
25 \LWR@print@ARss%
26 \end{lateximage}%
27 }
28 \LWR@formatted{ARss}
```

```
29 \newrobustcmd*{\LWR@HTML@ARssb}{%
30 \begin{lateximage}*[AR][ssb][\LWR@ar@printwidth{\LWR@print@ARssb}]]%
31 \LWR@print@ARssb%
32 \end{lateximage}%
33 }
34 \LWR@formatted{ARssb}
```

```
35 \newrobustcmd*{\LWR@HTML@ARtt}{%
36 \begin{lateximage}*[AR][tt][\LWR@ar@printwidth{\LWR@print@ARtt}]]%
37 \LWR@print@ARtt%
38 \end{lateximage}%
39 }
40 \LWR@formatted{ARtt}
```

For MATHJAX:

```
41 \begin{warpMathJax}
42 \CustomizeMathJax{\newcommand{\AR}{\mathit{A\!\!R}}}
43 \CustomizeMathJax{\newcommand{\ARb}{\boldsymbol{A\!\!R}}}
44 \end{warpMathJax}
```

---

File 25 **lwarp-arabicfront.sty**

§ 128 Package **arabicfront**

Pkg arabicfront arabicfront is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{arabicfront}[2006/09/03]

---

File 26 **lwarp-array.sty**

§ 129 Package **array**

Pkg array array is used as-is for print output, and emulated for HTML.

plarray and plectarray do not affect \firstline or \lastline, and so are not affected by the following.

**for HTML output:** Remove the default nullfied macros:

```
1 \let\firstline\relax
2 \let\lastline\relax
3
4 \LWR@ProvidesPackagePass{array}[2018/12/30]

5 \newcommand*{\LWR@HTML@firstline}{\LWR@HTMLhline}%
6 \LWR@expandableformatted{firstline}
7
8 \newcommand*{\LWR@HTML@lastline}{\LWR@HTMLhline}%
9 \LWR@expandableformatted{lastline}

10 \providecommand*{\LWR@HTML@tabularnewline}{\LWR@tabularendofline}
11 \LWR@formatted{tabularnewline}
```

For MATHJAX:

```
12 \CustomizeMathJax{
13 \newcommand{\multicolumn}[3]{#3}% only uses one cell
14 }
```

File 27 **lwarp-arydshln.sty**§ 130 Package **arydshln**

(Emulates or patches code by HIROSHI NAKASHIMA.)

Pkg arydshln **arydshln** heavily patches tabular code, so the actual package is not used. **arydshln** is emulated for HTML tabular, and reverts to solid rules for svg math array and tabular in a lateximage.

css is not able to display a double-dashed border, so a single-dashed rule is displayed as a single-dashed border, and a double-dashed rule is displayed as a thicker single-dashed border.

For MATHJAX, limited emulation is provided for math mode.

for HTML output: array is required to allow \newcolumn below.

```
1 \RequirePackage{array}

2 \LWR@ProvidesPackageDrop{arydshln}[2018/09/26]
```

Ignored, but included for source compatibility:

```
3 \newdimen\dashlinedash \dashlinedash4pt %
4 \newdimen\dashlinegap \dashlinegap4pt %
5 \let\hdashlinewidth\dashlinedash
6 \let\hdashlinegap\dashlinegap
7
8 \def\ADLnullwide{}
9 \def\ADLsomewide{}
10 \def\ADLnullwidehline{}
11 \def\ADLsomewidehline{}
12
13 \def\ADLactivate{}
14 \def\ADLinactivate{}
15 \newcommand*{\ADLdrawingmode}[1]{}
16 \newcommand*{\ADLnoshorthanded}{}
17 \newcommand*{\dashgapcolor}[2][{}]{ }
18 \newcommand*{\nodashgapcolor}{}{ }
```

In a lateximage, revert to solid vertical rules:

```
19 \appto\LWR@restoreorigformatting{%
20 \newcolumnntype{:}{|}%
21 \newcolumnntype{;}[1]{|}%
22 \LetLtxMacro\hdashline\hline%
23 }
```

Some of these macros are already defined as temporary placeholders in the lwarp core, so they must be redefined here.

The emulated defaults also work for an emulated print mode inside a lateximage:

```

24 \def\hdashline{
25 % \adl@hdashline\adl@ihdashline
26 \adl@hdashline\adl@inactivehdl
27 }
28 \def\adl@hdashline#1{\noalign{\ifnum0='}\fi
29 % \ifadl@zwhrule \vskip-\arrayrulewidth
30 % \else
31 % \adl@hline\adl@connect\arrayrulewidth
32 % \hrule \@height \arrayrulewidth% lwarp
33 % \fi
34 \@ifnextchar[%]
35 {#1}%
36 {#1[%
37 % \dashlinedash/\dashlinegap
38 % 1pt/1pt
39 %]}}
40 \def\adl@ihdashline[#1/#2]{\ifnum0='{ \fi}%
41 % \multispan{\adl@columns}\unskip \adl@hcline\z@[#1/#2]%
42 % \noalign{\ifnum0='}\fi
43 % \futurelet\@tempa\adl@xhline}
44 \def\adl@inactivehdl[#1/#2]{
45 % \ifadl@zwhrule \vskip-\arrayrulewidth \fi
46 % \hrule \@height \arrayrulewidth
47 % \futurelet\@tempa\adl@xhline}
48 \def\adl@xhline{\ifx\@tempa\hline \adl@ixhline\fi
49 % \ifx\@tempa\hdashline \adl@ixhline\fi
50 % \ifnum0='{ \fi}}
51 \def\adl@ixhline{\vskip\doublerulesep \adl@hline\relax\doublerulesep}
52 \def\adl@hline#1#2{%
53 % \@tempcnta#2
54 % \global\advance\adl@totalheight\@tempcnta
55 % \xdef\adl@rowsL{\adl@rowsL
56 % (#1/\number\@tempcnta);}
57 % \xdef\adl@rowsR{\adl@rowsR
58 % (#1/\number\@tempcnta);}
59 }
60
61 \def\cdashline#1{\noalign{\ifnum0='}\fi
62 \@ifnextchar[%]
63 {\adl@cdline[#1]}%
64 {\adl@cdline[#1][\dashlinedash/\dashlinegap]}
65 {\adl@inactivecdl[#1]}%
66 {\adl@inactivecdl[#1][\dashlinedash/\dashlinegap]}
67 }
68
69 \def\adl@inactivecdl[#1-#2][#3]{\ifnum0='{ \fi}\cline{#1-#2}}

70 \begin{warpMathJax}
71 \CustomizeMathJax{\newcommand{\firsthdashline}[1][\hdashline]}
72 \CustomizeMathJax{\let\lasthdashline\firsthdashline}
73 \CustomizeMathJax{\let\cdashline\cline}
74 \end{warpMathJax}

```

File 28 **lwarp-asymptote.sty**§ 131     Package **asymptote***(Emulates or patches code by ANDY HAMMERLINDL, JOHN BOWMAN, TOM PRINCE.)*

Pkg    asymptote    asymptote is patched for use by lwarp.

To compile:

```
pdflatex project.tex
asy project-*.asy
pdflatex project.tex
```

```
lwarpmk print
asy project-*.asy
lwarpmk print1
lwarpmk print1
```

```
lwarpmk html
asy project_html-*.asy
lwarpmk html1
lwarpmk html1
lwarpmk limages
```

**for HTML output:**

```
1 \LWR@ProvidesPackagePass{asymptote}[2016/11/26]

2 \BeforeBeginEnvironment{asy}{%
3 \begin{lateximage}[-asymptote-~\PackageDiagramAltText]%
4 }
5 \AfterEndEnvironment{asy}{\end{lateximage}}
6
7 \xpatchcmd{\asyinclude}
8 {\begingroup}
9 {\begin{lateximage}[-asymptote-~\PackageDiagramAltText]}
10 {}
11 {\LWR@patcherror{asymptote}{asyinclude-begingroup}}
12
13 \xpatchcmd{\asyinclude}
14 {\endgroup}
15 {\end{lateximage}}
16 {}
17 {\LWR@patcherror{asymptote}{asyinclude-endgroup}}
```

File 29 **lwarp-atbegshi.sty**§ 132 Package **atbegshi***(Emulates or patches code by HEIKO OBERDIEK.)*

Pkg atbegshi atbegshi is ignored.

**for HTML output:** Discard all options for lwarp-atbegshi:

```

1 \LWR@ProvidesPackageDrop{atbegshi}[2011/10/05]

2 \newcommand*{\AtBeginShipout}[1]{}
3 \newbox\AtBeginShipoutBox
4 \newcommand*{\AtBeginShipoutNext}[1]{}
5 \newcommand*{\AtBeginShipoutFirst}[1]{}
6 \newcommand*{\AtBeginShipoutDiscard}{}
7 \newcommand*{\AtBeginShipoutInit}{}
8 \newcommand*{\AtBeginShipoutAddToBox}[1]{}
9 \newcommand*{\AtBeginShipoutAddToBoxForeground}[1]{}
10 \newcommand*{\AtBeginShipoutUpperLeft}[1]{}
11 \newcommand*{\AtBeginShipoutUpperLeftForeground}[1]{}
12 \newcommand*{\AtBeginShipoutOriginalShipout}[1]{}
13 \def\AtBeginShipoutBoxWidth{0pt}
14 \def\AtBeginShipoutBoxHeight{0pt}
15 \def\AtBeginShipoutBoxDepth{0pt}
16

```

File 30 **lwarp-attachfile.sty**§ 133 Package **attachfile***(Emulates or patches code by SCOTT PAKIN.)*

Pkg attachfile attachfile is patched for use by lwarp.



Metadata is ignored for now.

**for HTML output:** 1 \LWR@ProvidesPackagePass{attachfile}[2016/09/18]

Encloses each icon:

```

2 \newenvironment*{LWR@attachfile@icon}
3 {
4 \begin{lateximage}*%
5 [-attachfile-]%
6 [%
7 \detokenize\expandafter{\atfi@icon@icon}-%

```

```

8 \detokenize\expandafter{\atfi@color@rgb}%
9]%
10 }
11 {
12 \end{lateximage}
13 }

```

Each icon is enclosed inside a `LWR@attachfile@icon` environment:

```

14 \xpretocmd{\atfi@acroGraph}{\LWR@attachfile@icon}{}{}
15 \xapptocmd{\atfi@acroGraph}{\endLWR@attachfile@icon}{}{}
16
17 \xpretocmd{\atfi@acroPaperclip}{\LWR@attachfile@icon}{}{}
18 \xapptocmd{\atfi@acroPaperclip}{\endLWR@attachfile@icon}{}{}
19
20 \xpretocmd{\atfi@acroPushPin}{\LWR@attachfile@icon}{}{}
21 \xapptocmd{\atfi@acroPushPin}{\endLWR@attachfile@icon}{}{}
22
23 \xpretocmd{\atfi@acroTag}{\LWR@attachfile@icon}{}{}
24 \xapptocmd{\atfi@acroTag}{\endLWR@attachfile@icon}{}{}

```

Disable PDF file embedding:

```

25 \DeclareRobustCommand{\atfi@embedfile}[1]{}

```

The displayed output for an `\attachfile` reference:

```

26 \newcommand*{\LWR@attachfile@appearance}{}
27
28 \DeclareRobustCommand{\atfi@set@appearance}[1]{%
29 \def\LWR@attachfile@appearance{#1}%
30 }

```

A file annotation becomes a reference:

```

31 \DeclareRobustCommand{\atfi@insert@file@annot}[1]{%
32 \LWR@href{#1}{\LWR@attachfile@appearance}%
33 }

```

---

File 31 **lwarp-attachfile2.sty**

§ 134     Package **attachfile2**

*(Emulates or patches code by HEIKO OBERDIEK.)*

Pkg attachfile2 attachfile2 is patched for use by lwarp.



Metadata is ignored for now.

for HTML output: 1 \LWR@ProvidesPackagePass{attachfile2}[2016/05/16]

Adds memory of the selected color:

```

2 \def\LWR@attachfiletwo@color{%
3
4 \define@key{AtFi}{color}{%
5 \def\LWR@attachfiletwo@color{#1}% lwarp
6 \HyColor@AttachfileColor{#1}%
7 \atfi@color@tex\atfi@color@inline\atfi@color@annot
8 {attachfile2}{color}%
9 }

```

Encloses each icon:

```

10 \newenvironment*{LWR@attachfile@icon}
11 {
12 \begin{lateximage}%
13 [-attachfile-%
14 [%
15 \detokenize\expandafter{\atfi@icon@icon}-%
16 \detokenize\expandafter{\LWR@attachfiletwo@color}%
17]%
18 }
19 {
20 \end{lateximage}
21 }

```

Each icon is enclosed inside a LWR@attachfile@icon environment:

```

22 \xpretocmd{\atfi@acroGraph}{\LWR@attachfile@icon}{}{}
23 \xapptocmd{\atfi@acroGraph}{\endLWR@attachfile@icon}{}{}
24
25 \xpretocmd{\atfi@acroPaperclip}{\LWR@attachfile@icon}{}{}
26 \xapptocmd{\atfi@acroPaperclip}{\endLWR@attachfile@icon}{}{}
27
28 \xpretocmd{\atfi@acroPushPin}{\LWR@attachfile@icon}{}{}
29 \xapptocmd{\atfi@acroPushPin}{\endLWR@attachfile@icon}{}{}
30
31 \xpretocmd{\atfi@acroTag}{\LWR@attachfile@icon}{}{}
32 \xapptocmd{\atfi@acroTag}{\endLWR@attachfile@icon}{}{}

```

Disable PDF file embedding:

```

33 \DeclareRobustCommand{\atfi@embedfile}[1]{}

```

The displayed output for an \attachfile reference:

```

34 \newcommand*{\LWR@attachfile@appearance}{}
35
36 \def\atfi@set@appearance@icon{%
37 \atfi@set@appearance{\csname atfi@acro\atfi@icon@icon\endcsname}%
38 }
39
40 \DeclareRobustCommand{\atfi@set@appearance}[1]{%
41 \def\LWR@attachfile@appearance{#1}%
42 }

```

A file annotation becomes a reference:

```
43 \DeclareRobustCommand{\atfi@insert@file@annot}[1]{%
44 \LWR@href{#1}{\LWR@attachfile@appearance}%
45 }
```

Modified for text color:

```
46 \DeclareRobustCommand{\notextattachfile}[2][]{%
47 \begingroup
48 \atfi@setup{#1}%
49 \ifatfi@print
50 \leavevmode
51 \begingroup
52 \HyColor@UseColor\atfi@color@tex
53 \LWR@textcurrentcolor{#2}% lwarp
54 % \strut
55 \endgroup
56 % \else
57 % \sbox\ltx@zero{#2\strut}%
58 % \makebox[\wd0]{}%
59 \fi
60 \endgroup
61 }
```

Modified to draw the icon:

```
62 \DeclareRobustCommand{\noattachfile}[1][]{%
63 \begingroup
64 \atfi@setup{#1}%
65 \atfi@set@appearance@icon
66 \ifatfi@print
67 \LWR@attachfile@appearance% lwarp
68 % \expandafter
69 % \atfi@refxform\csname atfi@appobj@\atfi@icon@icon\endcsname
70 % \else
71 % \makebox[\atfi@appearancewidth]{}%
72 \fi
73 \endgroup
74 }
```


---

File 32 **lwarp-authblk.sty**

§ 135    Package **authblk**

(Emulates or patches code by PATRICK W. DALY.)

Pkg    authblk    authblk is patched for HTML.

**package support**    lwarp supports the native L<sup>A</sup>T<sub>E</sub>X titling commands, and also supports the packages  
 **load order**    authblk and titling. If both are used, authblk should be loaded before titling.

**\published and \subtitle**    If using the titling package, additional titlepage fields for \published and \subtitle

may be added by using `\AddSubtitlePublished` in the preamble. See section 66.8.

(Emulates or patches code by PATRICK W. DALY.)

for HTML output: Require that `authblk` be loaded before titling:

```

1 \@ifpackageloaded{titling}{
2 \PackageError{lwarp-authblk}
3 {Package authblk must be loaded before titling}
4 {%
5 Titling appends authblk's author macro,
6 so authblk must be loaded first.%
7 }
8 }
9 {}

```

Load `authblk`:

```
10 \LWR@ProvidesPackagePass{authblk}[2001/02/27]
```

Patch to add a class for the affiliation:

```

11 \LetLtxMacro\LWRAB@affil\affil
12
13 \renewcommand{\affil}[2][{}]{%
14 \LWRAB@affil[#1]{\protect\InlineClass{affiliation}{#2}}
15 }

```

Create an HTML break for an `\authorcr`:

```
16 \renewcommand*{\authorcr}{\protect\LWR@newlinebr}
```

---

### File 33 **lwarp-autobreak.sty**

## § 136 Package **autobreak**

(Emulates or patches code by TAKAHIRO UEDA.)

Pkg autobreak **autobreak** is used as-is for SVG math, and nullified for MATHJAX.

for HTML output: `\LWR@ProvidesPackagePass{autobreak}[2017/02/23]`

For MATHJAX. The modified `align` environment is used for SVG math, but is reverted to its original for MATHJAX. (Extraneous commas were appearing in the result.)

```

2 \begin{warpMathJax}
3 \renewenvironment{autobreak}{\newcommand{\MoveEqLeft}[1]{}{}}
4 \let\start@align@autobreak@oldstart@align
5 \let\endalign@autobreak@oldendalign
6 \CustomizeMathJax{\newenvironment{autobreak}{}{}}
7 \CustomizeMathJax{\newcommand{\MoveEqLeft}[1]{}{}}
8 \CustomizeMathJax{\newcommand{\everybeforeautobreak}[1]{}{}}

```

---

```

9 \CustomizeMathJax{\newcommand{\everyafterautobreak}[1]{} }
10 \end{warpMathJax}


```

---

File 34 **lwarp-autonum.sty**

## § 137 Package **autonum**

Pkg autonum autonum is ignored.

 **numbering** All equations are numbered in HTML output.

MATHJAX does not support the “+” environments.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{autonum}[2015/01/18]

2 \RequirePackage{amsmath}
3
4
5 \newenvironment{equation+}{\equation}{\endequation}
6
7
8 \newenvironment{gather+}{\gather}{\endgather}
9
10 \BeforeBeginEnvironment{gather+}{\LWR@amsmathenv@@before{gather+}}
11
12 \AfterEndEnvironment{gather+}{\LWR@amsmathenv@@after}
13
14
15 \newenvironment{multline+}{\multline}{\endmultline}
16
17 \BeforeBeginEnvironment{multline+}{\LWR@amsmathenv@@before{multline+}}
18
19 \AfterEndEnvironment{multline+}{\LWR@amsmathenv@@after}
20
21
22 \newenvironment{flalign+}{\flalign}{\endflalign}
23
24 \BeforeBeginEnvironment{flalign+}{\LWR@amsmathenv@@before{flalign+}}
25
26 \AfterEndEnvironment{flalign+}{\LWR@amsmathenv@@after}
27
28
29 \newenvironment{align+}{\align}{\endalign}
30
31 \BeforeBeginEnvironment{align+}{\LWR@amsmathenv@@before{align+}}
32
33 \AfterEndEnvironment{align+}{\LWR@amsmathenv@@after}
34
35
36 \newenvironment{alignat+}{\alignat}{\endalignat}
37
38 \BeforeBeginEnvironment{alignat+}{\LWR@amsmathenv@@before{alignat+}}
39

```

---

```

40 \AfterEndEnvironment{alignat+}{\LWR@amsmathenv@@after}
41
42
43 \newenvironment{split+}{\split}{\endsplit}

```

---

### File 35 **lwarp-awesomebox.sty**

## § 138 Package **awesomebox**

(Emulates or patches code by ÉTIENNE DEPARIS.)

Pkg awesomebox awesomebox is patched for use by lwarp.

for HTML output:

```

1 \LWR@ProvidesPackagePass{awesomebox}[2019/07/27]

2 \newcommand*{\LWR@awesomebox@boxborders}{}%
3 \newcommand*{\LWR@awesomebox@contentsborders}{}%
4
5 \newcommand*{\LWR@awesomebox@ruleborders}{%
6 border-top: 1px solid black ;
7 border-bottom: 1px solid black%
8 }
9
10 % \awesomebox[1:vrulecolor][2:hrule][3:title]{4:vrulewidth}{5:icon}{6:iconcolor}{7:content}
11 \RenewDocumentCommand \awesomebox { 0{abvrulecolor} 0{ } o m m m +m }{%
12 \begin{awesomeblock}[#1][#2][#3]{#4}{#5}{#6}
13 #7
14 \end{awesomeblock}
15 }
16
17 % \begin{awesomeblock}[1:vrulecolor][2:hrule][3:title]{4:vrulewidth}{5:icon}{6:iconcolor}
18 % <contents>
19 % \end{awesomeblock}
20 \RenewDocumentEnvironment{awesomeblock}{ 0{abvrulecolor} 0{ } o m m m }
21 {%
22 \LWR@forceminwidth{#4}%
23 \convertcolorspec{named}{#1}{HTML}\LWR@tempcolor%
24 \renewcommand*{\LWR@awesomebox@boxborders}{}%
25 \renewcommand*{\LWR@awesomebox@contentsborders}{}%
26 \ifdefstrequal{\abShortLine}{#2}{%
27 \renewcommand*{\LWR@awesomebox@contentsborders}{\LWR@awesomebox@ruleborders}%
28 }{%
29 \ifdefstrequal{\abLongLine}{#2}{%
30 \renewcommand*{\LWR@awesomebox@boxborders}{\LWR@awesomebox@ruleborders}%
31 }{%
32 \begin{BlockClass}[\LWR@awesomebox@boxborders]{awesomebox}
33 \begin{BlockClass}[%
34 margin-left: 2\% ;
35 vertical-align: top
36]{minipage}
37 \color{#6}\Huge #5
38 \end{BlockClass}
39 \begin{BlockClass}[%

```

```

40 width:75\% ;
41 vertical-align: top ;
42 padding-left: 1em ;
43 \LWR@awesomebox@contentsborders ;
44 border-left: \LWR@printlength{\LWR@atleastonept} %
45 solid \LWR@origpound\LWR@tempcolor%
46]{minipage}
47 \IfValueTF{#3}{#3\newline}{ }
48 }
49 {%
50 \end{BlockClass}
51 \end{BlockClass}
52 }

```

File 36 **lwarp-axessibility.sty**

## § 139 Package **axessibility**

Pkg axessibility axessibility is ignored.

**for HTML output:**

```

1 \PackageInfo{lwarp}{Using the lwarp version of package ‘axessibility’.}%
2 \ProvidesPackage{lwarp-axessibility}% no date is declared by the original
3
4 \newif\iftagpdfopt
5
6 \DeclareOption{accsupp}{
7 \tagpdfoptfalse
8 }
9
10 \DeclareOption{tagpdf}{
11 \tagpdfopttrue
12 }
13
14 \ProcessOptions\relax
15
16 \iftagpdfopt
17 \RequirePackage{tagpdf}
18 \else
19 \RequirePackage{accsupp}
20 \fi
21
22 \long\def\wrap#1{}
23 \long\def\wrapml#1{}
24 \long\def\wrapmlstar#1{}
25 \long\def\wrapmlalt#1{}

```

For MATHJAX. These usually will not be needed.

```

25 \begin{warpMathJax}
26 \CustomizeMathJax{\newcommand{\wrap}[1]{} }
27 \CustomizeMathJax{\newcommand{\wrapml}[1]{} }
28 \CustomizeMathJax{\newcommand{\wrapmlstar}[1]{} }

```

---

```

29 \CustomizeMathJax{\newcommand{\wrapmlalt}[1]{} }
30 \end{warpMathJax}

```

---

File 37 **lwarp-axodraw2.sty**

§ 140     Package **axodraw2**

*(Emulates or patches code by JOHN C. COLLINS, J.A.M. VERMASEREN.)*

Pkg    axodraw2    **axodraw2** is patched for use by **lwarp**.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{axodraw2}[2018/02/15]

2 \BeforeBeginEnvironment{axopicture}{%
3 \begin{lateximage}[-axopicture~\PackageDiagramAltText]%
4 }
5
6 \AfterEndEnvironment{axopicture}{\end{lateximage}}

```

---

File 38 **lwarp-backnaur.sty**

§ 141     Package **backnaur**

*(Emulates or patches code by ADRIAN P. ROBSON.)*

Pkg    backnaur    **backnaur** is patched for use by **lwarp**.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{backnaur}[2019/06/18]

2 \renewenvironment{bnf}{\eqnarray}{\endeqnarray}
3 \renewenvironment{bnf*}{\csuse{eqnarray*}}{\csuse{endeqnarray*}}

```


---

File 39 **lwarp-backref.sty**

§ 142     Package **backref**

*(Emulates or patches code by DAVID CARLISLE AND SEBASTIAN RAHTZ.)*

Pkg    backref    **backref** is patched for use by **lwarp**.

 **loading** Note that **backref** must be explicitly loaded, and is not automatically loaded by **hyperref** when generating HTML output.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{backref}[2016/05/21]

```

Force the hyperref option:

```
2 \def\backref{}
3
4 \long\def\hyper@section@backref#1#2#3{%
5 \ref{#3}%
6 }
7
8 \let\backrefxxx\hyper@section@backref
```

---

File 40 **lwarp-balance.sty**

§ 143     Package **balance**

*(Emulates or patches code by PATRICK W. DALY.)*

Pkg   balance   **balance** is ignored.

**for HTML output:**   Discard all options for **lwarp-balance**:

```
1 \LWR@ProvidesPackageDrop{balance}[1999/02/23]

2 \newcommand*{\balance}{}
3 \newcommand*{\nobalance}{}

```

---

File 41 **lwarp-bbding.sty**

§ 144     Package **bbding**

*(Emulates or patches code by KAREL HORAK, PETER MØLLER NEERGAARD.)*

Pkg   bbding   **bbding** is patched for use by **lwarp**.

**for HTML output:**

```
1 \LWR@ProvidesPackagePass{bbding}[1999/04/15]

2 \newcommand*{\LWR@bbdingsymbol}[2]{\HTMLunicode{#2}}
3
4 \newcommand{\LWR@HTML@ScissorRightBrokenBottom}{\LWR@bbdingsymbol{000} {2701}}
5 \newcommand{\LWR@HTML@ScissorRight}{\LWR@bbdingsymbol{001} {2702}}
6 \newcommand{\LWR@HTML@ScissorRightBrokenTop}{\LWR@bbdingsymbol{002} {2703}}
7 \newcommand{\LWR@HTML@ScissorLeftBrokenBottom}{\LWR@bbdingsymbol{003} {2701}}
8 \newcommand{\LWR@HTML@ScissorLeft}{\LWR@bbdingsymbol{004} {2702}}
9 \newcommand{\LWR@HTML@ScissorLeftBrokenTop}{\LWR@bbdingsymbol{005} {2703}}
10 \newcommand{\LWR@HTML@ScissorHollowRight}{\LWR@bbdingsymbol{006} {2704}}
11 \newcommand{\LWR@HTML@ScissorHollowLeft}{\LWR@bbdingsymbol{007} {2704}}
12 \newcommand{\LWR@HTML@Phone}{\LWR@bbdingsymbol{010} {260E}}
13 \newcommand{\LWR@HTML@PhoneHandset}{\LWR@bbdingsymbol{011} {2706}}
14 \newcommand{\LWR@HTML@Tape}{\LWR@bbdingsymbol{012} {2707}}
15 \newcommand{\LWR@HTML@Plane}{\LWR@bbdingsymbol{013} {2708}}
16 \newcommand{\LWR@HTML@Envelope}{\LWR@bbdingsymbol{014} {2709}}
```

|                                                                        |         |
|------------------------------------------------------------------------|---------|
| 17 \newcommand{\LWR@HTML@HandCuffRight}{\LWR@bbdingsymbol{015}}        | {261B}} |
| 18 \newcommand{\LWR@HTML@HandCuffLeft}{\LWR@bbdingsymbol{016}}         | {261A}} |
| 19 \newcommand{\LWR@HTML@HandCuffRightUp}{\LWR@bbdingsymbol{017}}      | {261D}} |
| 20 \newcommand{\LWR@HTML@HandCuffLeftUp}{\LWR@bbdingsymbol{020}}       | {261F}} |
| 21 \newcommand{\LWR@HTML@HandRight}{\LWR@bbdingsymbol{021}}            | {261E}} |
| 22 \newcommand{\LWR@HTML@HandLeft}{\LWR@bbdingsymbol{022}}             | {261C}} |
| 23 \newcommand{\LWR@HTML@HandRightUp}{\LWR@bbdingsymbol{023}}          | {261D}} |
| 24 \newcommand{\LWR@HTML@HandLeftUp}{\LWR@bbdingsymbol{024}}           | {261F}} |
| 25 \newcommand{\LWR@HTML@Peace}{\LWR@bbdingsymbol{025}}                | {270C}} |
| 26 \newcommand{\LWR@HTML@HandPencilLeft}{\LWR@bbdingsymbol{026}}       | {270D}} |
| 27 \newcommand{\LWR@HTML@PencilRight}{\LWR@bbdingsymbol{027}}          | {270F}} |
| 28 \newcommand{\LWR@HTML@PencilLeft}{\LWR@bbdingsymbol{030}}           | {270F}} |
| 29 \newcommand{\LWR@HTML@PencilRightUp}{\LWR@bbdingsymbol{031}}        | {2710}} |
| 30 \newcommand{\LWR@HTML@PencilLeftUp}{\LWR@bbdingsymbol{032}}         | {2710}} |
| 31 \newcommand{\LWR@HTML@PencilRightDown}{\LWR@bbdingsymbol{033}}      | {270E}} |
| 32 \newcommand{\LWR@HTML@PencilLeftDown}{\LWR@bbdingsymbol{034}}       | {270E}} |
| 33 \newcommand{\LWR@HTML@NibRight}{\LWR@bbdingsymbol{035}}             | {2711}} |
| 34 \newcommand{\LWR@HTML@NibLeft}{\LWR@bbdingsymbol{036}}              | {2711}} |
| 35 \newcommand{\LWR@HTML@NibSolidRight}{\LWR@bbdingsymbol{037}}        | {2712}} |
| 36 \newcommand{\LWR@HTML@NibSolidLeft}{\LWR@bbdingsymbol{040}}         | {2712}} |
| 37 \newcommand{\LWR@HTML@Checkmark}{\LWR@bbdingsymbol{041}}            | {2713}} |
| 38 \newcommand{\LWR@HTML@CheckmarkBold}{\LWR@bbdingsymbol{042}}        | {2714}} |
| 39 \newcommand{\LWR@HTML@XSolid}{\LWR@bbdingsymbol{043}}               | {2715}} |
| 40 \newcommand{\LWR@HTML@XSolidBold}{\LWR@bbdingsymbol{044}}           | {2716}} |
| 41 \newcommand{\LWR@HTML@XSolidBrush}{\LWR@bbdingsymbol{045}}          | {2717}} |
| 42 \newcommand{\LWR@HTML@PlusOutline}{\LWR@bbdingsymbol{046}}          | {2719}} |
| 43 \newcommand{\LWR@HTML@Plus}{\LWR@bbdingsymbol{047}}                 | {271A}} |
| 44 \newcommand{\LWR@HTML@PlusCenterOpen}{\LWR@bbdingsymbol{050}}       | {271C}} |
| 45 \newcommand{\LWR@HTML@PlusThinCenterOpen}{\LWR@bbdingsymbol{051}}   | {271B}} |
| 46 \newcommand{\LWR@HTML@Cross}{\LWR@bbdingsymbol{052}}                | {271D}} |
| 47 \newcommand{\LWR@HTML@CrossOpenShadow}{\LWR@bbdingsymbol{053}}      | {271E}} |
| 48 \newcommand{\LWR@HTML@CrossOutline}{\LWR@bbdingsymbol{054}}         | {271F}} |
| 49 \newcommand{\LWR@HTML@CrossBoldOutline}{\LWR@bbdingsymbol{055}}     | {271F}} |
| 50 \newcommand{\LWR@HTML@CrossMaltese}{\LWR@bbdingsymbol{056}}         | {2720}} |
| 51 \newcommand{\LWR@HTML@DavidStarSolid}{\LWR@bbdingsymbol{057}}       | {2721}} |
| 52 \newcommand{\LWR@HTML@DavidStar}{\LWR@bbdingsymbol{060}}            | {2721}} |
| 53 \newcommand{\LWR@HTML@FourAsterisk}{\LWR@bbdingsymbol{061}}         | {2722}} |
| 54 \newcommand{\LWR@HTML@JackStar}{\LWR@bbdingsymbol{062}}             | {2723}} |
| 55 \newcommand{\LWR@HTML@JackStarBold}{\LWR@bbdingsymbol{063}}         | {2724}} |
| 56 \newcommand{\LWR@HTML@CrossClowerTips}{\LWR@bbdingsymbol{064}}      | {2725}} |
| 57 \newcommand{\LWR@HTML@FourStar}{\LWR@bbdingsymbol{065}}             | {2726}} |
| 58 \newcommand{\LWR@HTML@FourStarOpen}{\LWR@bbdingsymbol{066}}         | {2727}} |
| 59 \newcommand{\LWR@HTML@FiveStarLines}{\LWR@bbdingsymbol{067}}        | {2729}} |
| 60 \newcommand{\LWR@HTML@FiveStar}{\LWR@bbdingsymbol{070}}             | {2605}} |
| 61 \newcommand{\LWR@HTML@FiveStarOpen}{\LWR@bbdingsymbol{071}}         | {2729}} |
| 62 \newcommand{\LWR@HTML@FiveStarOpenCircled}{\LWR@bbdingsymbol{072}}  | {272A}} |
| 63 \newcommand{\LWR@HTML@FiveStarCenterOpen}{\LWR@bbdingsymbol{073}}   | {272B}} |
| 64 \newcommand{\LWR@HTML@FiveStarOpenDotted}{\LWR@bbdingsymbol{074}}   | {272C}} |
| 65 \newcommand{\LWR@HTML@FiveStarOutline}{\LWR@bbdingsymbol{075}}      | {272D}} |
| 66 \newcommand{\LWR@HTML@FiveStarOutlineHeavy}{\LWR@bbdingsymbol{076}} | {272E}} |
| 67 \newcommand{\LWR@HTML@FiveStarConvex}{\LWR@bbdingsymbol{077}}       | {272F}} |
| 68 \newcommand{\LWR@HTML@FiveStarShadow}{\LWR@bbdingsymbol{100}}       | {2730}} |
| 69 \newcommand{\LWR@HTML@AsteriskBold}{\LWR@bbdingsymbol{101}}         | {2731}} |
| 70 \newcommand{\LWR@HTML@AsteriskCenterOpen}{\LWR@bbdingsymbol{102}}   | {2732}} |
| 71 \newcommand{\LWR@HTML@AsteriskThin}{\LWR@bbdingsymbol{103}}         | {273B}} |

```

72 \newcommand{\LWR@HTML@AsteriskThinCenterOpen}{\LWR@bbdingsymbol{104}} {273C}}
73 \newcommand{\LWR@HTML@EightStarTaper}{\LWR@bbdingsymbol{105}} {2733}}
74 \newcommand{\LWR@HTML@EightStarConvex}{\LWR@bbdingsymbol{106}} {2735}}
75 \newcommand{\LWR@HTML@SixStar}{\LWR@bbdingsymbol{107}} {2736}}
76 \newcommand{\LWR@HTML@EightStar}{\LWR@bbdingsymbol{110}} {2737}}
77 \newcommand{\LWR@HTML@EightStarBold}{\LWR@bbdingsymbol{111}} {2738}}
78 \newcommand{\LWR@HTML@TwelveStar}{\LWR@bbdingsymbol{112}} {2739}}
79 \newcommand{\LWR@HTML@SixteenStarLight}{\LWR@bbdingsymbol{113}} {273A}}
80 \newcommand{\LWR@HTML@SixFlowerPetalRemoved}{\LWR@bbdingsymbol{114}} {273B}}
81 \newcommand{\LWR@HTML@SixFlowerOpenCenter}{\LWR@bbdingsymbol{115}} {273C}}
82 \newcommand{\LWR@HTML@Asterisk}{\LWR@bbdingsymbol{116}} {273D}}
83 \newcommand{\LWR@HTML@SixFlowerAlternate}{\LWR@bbdingsymbol{117}} {273E}}
84 \newcommand{\LWR@HTML@FiveFlowerPetal}{\LWR@bbdingsymbol{120}} {273F}}
85 \newcommand{\LWR@HTML@SixFlowerPetalDotted}{\LWR@bbdingsymbol{121}} {2740}}
86 \newcommand{\LWR@HTML@FiveFlowerOpen}{\LWR@bbdingsymbol{122}} {2740}}
87 \newcommand{\LWR@HTML@EightFlowerPetal}{\LWR@bbdingsymbol{123}} {2741}}
88 \newcommand{\LWR@HTML@SunshineOpenCircled}{\LWR@bbdingsymbol{124}} {2742}}
89 \newcommand{\LWR@HTML@SixFlowerAltPetal}{\LWR@bbdingsymbol{125}} {2743}}
90 \newcommand{\LWR@HTML@FourClowerOpen}{\LWR@bbdingsymbol{126}} {273F}}
91 \newcommand{\LWR@HTML@FourClowerSolid}{\LWR@bbdingsymbol{127}} {273F}}
92 \newcommand{\LWR@HTML@AsteriskRoundedEnds}{\LWR@bbdingsymbol{130}} {2749}}
93 \newcommand{\LWR@HTML@EightFlowerPetalRemoved}{\LWR@bbdingsymbol{131}} {274A}}
94 \newcommand{\LWR@HTML@EightAsterisk}{\LWR@bbdingsymbol{132}} {274B}}
95 \newcommand{\LWR@HTML@SixFlowerRemovedOpenPetal}{\LWR@bbdingsymbol{133}} {2740}}
96 \newcommand{\LWR@HTML@SparkleBold}{\LWR@bbdingsymbol{134}} {2748}}
97 \newcommand{\LWR@HTML@Sparkle}{\LWR@bbdingsymbol{135}} {2747}}
98 \newcommand{\LWR@HTML@SnowflakeChevron}{\LWR@bbdingsymbol{136}} {2744}}
99 \newcommand{\LWR@HTML@SnowflakeChevronBold}{\LWR@bbdingsymbol{137}} {2746}}
100 \newcommand{\LWR@HTML@Snowflake}{\LWR@bbdingsymbol{140}} {2744}}
101 \newcommand{\LWR@HTML@CircleSolid}{\LWR@bbdingsymbol{141}} {25CF}}
102 \newcommand{\LWR@HTML@Ellipse}{\LWR@bbdingsymbol{142}} {274D}}
103 \newcommand{\LWR@HTML@EllipseSolid}{\LWR@bbdingsymbol{143}} {25CF}}
104 \newcommand{\LWR@HTML@CircleShadow}{\LWR@bbdingsymbol{144}} {274D}}
105 \newcommand{\LWR@HTML@EllipseShadow}{\LWR@bbdingsymbol{145}} {274D}}
106 \newcommand{\LWR@HTML@Square}{\LWR@bbdingsymbol{146}} {25A1}}
107 \newcommand{\LWR@HTML@SquareSolid}{\LWR@bbdingsymbol{147}} {25A0}}
108 \newcommand{\LWR@HTML@SquareShadowBottomRight}{\LWR@bbdingsymbol{150}} {2751}}
109 \newcommand{\LWR@HTML@SquareShadowTopRight}{\LWR@bbdingsymbol{151}} {2752}}
110 \newcommand{\LWR@HTML@SquareShadowTopLeft}{\LWR@bbdingsymbol{152}} {2752}}
111 \newcommand{\LWR@HTML@SquareCastShadowBottomRight}{\LWR@bbdingsymbol{153}} {2751}}
112 \newcommand{\LWR@HTML@SquareCastShadowTopRight}{\LWR@bbdingsymbol{154}} {2752}}
113 \newcommand{\LWR@HTML@SquareCastShadowTopLeft}{\LWR@bbdingsymbol{155}} {2752}}
114 \newcommand{\LWR@HTML@TriangleUp}{\LWR@bbdingsymbol{156}} {25B2}}
115 \newcommand{\LWR@HTML@TriangleDown}{\LWR@bbdingsymbol{157}} {25BC}}
116 \newcommand{\LWR@HTML@DiamondSolid}{\LWR@bbdingsymbol{160}} {25C6}}
117 \newcommand{\LWR@HTML@OrnamentDiamondSolid}{\LWR@bbdingsymbol{161}} {2756}}
118 \newcommand{\LWR@HTML@HalfCircleRight}{\LWR@bbdingsymbol{162}} {25D7}}
119 \newcommand{\LWR@HTML@HalfCircleLeft}{\LWR@bbdingsymbol{163}} {25D6}}
120 \newcommand{\LWR@HTML@RectangleThin}{\LWR@bbdingsymbol{164}} {2758}}
121 \newcommand{\LWR@HTML@Rectangle}{\LWR@bbdingsymbol{165}} {2759}}
122 \newcommand{\LWR@HTML@RectangleBold}{\LWR@bbdingsymbol{166}} {275A}}
123 \newcommand{\LWR@HTML@ArrowBoldRightStrobe}{\LWR@bbdingsymbol{167}} {27A0}}
124 \newcommand{\LWR@HTML@ArrowBoldUpRight}{\LWR@bbdingsymbol{170}} {27A6}}
125 \newcommand{\LWR@HTML@ArrowBoldDownRight}{\LWR@bbdingsymbol{171}} {27A5}}
126 \newcommand{\LWR@HTML@ArrowBoldRightShort}{\LWR@bbdingsymbol{172}} {27A7}}

```

```
127 \newcommand{\LWR@HTML@ArrowBoldRightCircled}{\LWR@bbdingsymbol{173} {27B2}}
128
129
130 \LWR@formatted{ScissorRightBrokenBottom}
131 \LWR@formatted{ScissorRight}
132 \LWR@formatted{ScissorRightBrokenTop}
133 \LWR@formatted{ScissorLeftBrokenBottom}
134 \LWR@formatted{ScissorLeft}
135 \LWR@formatted{ScissorLeftBrokenTop}
136 \LWR@formatted{ScissorHollowRight}
137 \LWR@formatted{ScissorHollowLeft}
138 \LWR@formatted{Phone}
139 \LWR@formatted{PhoneHandset}
140 \LWR@formatted{Tape}
141 \LWR@formatted{Plane}
142 \LWR@formatted{Envelope}
143 \LWR@formatted{HandCuffRight}
144 \LWR@formatted{HandCuffLeft}
145 \LWR@formatted{HandCuffRightUp}
146 \LWR@formatted{HandCuffLeftUp}
147 \LWR@formatted{HandRight}
148 \LWR@formatted{HandLeft}
149 \LWR@formatted{HandRightUp}
150 \LWR@formatted{HandLeftUp}
151 \LWR@formatted{Peace}
152 \LWR@formatted{HandPencilLeft}
153 \LWR@formatted{PencilRight}
154 \LWR@formatted{PencilLeft}
155 \LWR@formatted{PencilRightUp}
156 \LWR@formatted{PencilLeftUp}
157 \LWR@formatted{PencilRightDown}
158 \LWR@formatted{PencilLeftDown}
159 \LWR@formatted{NibRight}
160 \LWR@formatted{NibLeft}
161 \LWR@formatted{NibSolidRight}
162 \LWR@formatted{NibSolidLeft}
163 \LWR@formatted{Checkmark}
164 \LWR@formatted{CheckmarkBold}
165 \LWR@formatted{XSolid}
166 \LWR@formatted{XSolidBold}
167 \LWR@formatted{XSolidBrush}
168 \LWR@formatted{PlusOutline}
169 \LWR@formatted{Plus}
170 \LWR@formatted{PlusCenterOpen}
171 \LWR@formatted{PlusThinCenterOpen}
172 \LWR@formatted{Cross}
173 \LWR@formatted{CrossOpenShadow}
174 \LWR@formatted{CrossOutline}
175 \LWR@formatted{CrossBoldOutline}
176 \LWR@formatted{CrossMaltese}
177 \LWR@formatted{DavidStarSolid}
178 \LWR@formatted{DavidStar}
179 \LWR@formatted{FourAsterisk}
180 \LWR@formatted{JackStar}
181 \LWR@formatted{JackStarBold}
```

```
182 \LWR@formatted{CrossClowerTips}
183 \LWR@formatted{FourStar}
184 \LWR@formatted{FourStarOpen}
185 \LWR@formatted{FiveStarLines}
186 \LWR@formatted{FiveStar}
187 \LWR@formatted{FiveStarOpen}
188 \LWR@formatted{FiveStarOpenCircled}
189 \LWR@formatted{FiveStarCenterOpen}
190 \LWR@formatted{FiveStarOpenDotted}
191 \LWR@formatted{FiveStarOutline}
192 \LWR@formatted{FiveStarOutlineHeavy}
193 \LWR@formatted{FiveStarConvex}
194 \LWR@formatted{FiveStarShadow}
195 \LWR@formatted{AsteriskBold}
196 \LWR@formatted{AsteriskCenterOpen}
197 \LWR@formatted{AsteriskThin}
198 \LWR@formatted{AsteriskThinCenterOpen}
199 \LWR@formatted{EightStarTaper}
200 \LWR@formatted{EightStarConvex}
201 \LWR@formatted{SixStar}
202 \LWR@formatted{EightStar}
203 \LWR@formatted{EightStarBold}
204 \LWR@formatted{TwelveStar}
205 \LWR@formatted{SixteenStarLight}
206 \LWR@formatted{SixFlowerPetalRemoved}
207 \LWR@formatted{SixFlowerOpenCenter}
208 \LWR@formatted{Asterisk}
209 \LWR@formatted{SixFlowerAlternate}
210 \LWR@formatted{FiveFlowerPetal}
211 \LWR@formatted{SixFlowerPetalDotted}
212 \LWR@formatted{FiveFlowerOpen}
213 \LWR@formatted{EightFlowerPetal}
214 \LWR@formatted{SunshineOpenCircled}
215 \LWR@formatted{SixFlowerAltPetal}
216 \LWR@formatted{FourClowerOpen}
217 \LWR@formatted{FourClowerSolid}
218 \LWR@formatted{AsteriskRoundedEnds}
219 \LWR@formatted{EightFlowerPetalRemoved}
220 \LWR@formatted{EightAsterisk}
221 \LWR@formatted{SixFlowerRemovedOpenPetal}
222 \LWR@formatted{SparkleBold}
223 \LWR@formatted{Sparkle}
224 \LWR@formatted{SnowflakeChevron}
225 \LWR@formatted{SnowflakeChevronBold}
226 \LWR@formatted{Snowflake}
227 \LWR@formatted{CircleSolid}
228 \LWR@formatted{Ellipse}
229 \LWR@formatted{EllipseSolid}
230 \LWR@formatted{CircleShadow}
231 \LWR@formatted{EllipseShadow}
232 \LWR@formatted{Square}
233 \LWR@formatted{SquareSolid}
234 \LWR@formatted{SquareShadowBottomRight}
235 \LWR@formatted{SquareShadowTopRight}
236 \LWR@formatted{SquareShadowTopLeft}
```

```

237 \LWR@formatted{SquareCastShadowBottomRight}
238 \LWR@formatted{SquareCastShadowTopRight}
239 \LWR@formatted{SquareCastShadowTopLeft}
240 \LWR@formatted{TriangleUp}
241 \LWR@formatted{TriangleDown}
242 \LWR@formatted{DiamondSolid}
243 \LWR@formatted{OrnamentDiamondSolid}
244 \LWR@formatted{HalfCircleRight}
245 \LWR@formatted{HalfCircleLeft}
246 \LWR@formatted{RectangleThin}
247 \LWR@formatted{Rectangle}
248 \LWR@formatted{RectangleBold}
249 \LWR@formatted{ArrowBoldRightStrobe}
250 \LWR@formatted{ArrowBoldUpRight}
251 \LWR@formatted{ArrowBoldDownRight}
252 \LWR@formatted{ArrowBoldRightShort}
253 \LWR@formatted{ArrowBoldRightCircled}

```

---

#### File 42 **lwarp-biblatex.sty**

### § 145 Package **biblatex**

*(Emulates or patches code by PHILIPP LEHMAN.)*

Pkg biblatex When **biblatex** is used, modifications from **newfloat** may have to be undone.

#### for HTML output:

1. **lwarp** uses **newfloat**.
2. For classes with chapters which **newfloat** does not know about, such as CTEX-related classes, **newfloat** may modify `\addtocontents`.
3. **biblatex**, though, wants to patch `\addtocontents`, which causes an error if `\addtocontents` has been changed.
4. Therefore, `\addtocontents` is restored to its original here, since **biblatex** is about to be loaded.
5. This means that the **newfloat**'s `chapterlistsgaps` option may no longer work.

```

1 \ifdef{\newfloat@addtocontents@ORI}{
2 \let\addtocontents\newfloat@addtocontents@ORI
3 }{}

```

**hyperref** emulation is loaded `\AtBeginDocument` to avoid an options clash.

```

4 \AtBeginDocument{\RequirePackage{hyperref}}
5
6 \LWR@ProvidesPackagePass{biblatex}[2018/03/04]

```

The following create hyperlinks to the references. The original code to use **hyperref** is recreated here, because **hyperref** is emulated.

---

```

7 \AfterPreamble{
8
9 \let\blx@anchors\@empty
10 \protected\def\blx@anchor{%
11 \xifinlist{\the\c@refsection @\abx@field@entrykey}{\blx@anchors}
12 {}
13 {\listxadd\blx@anchors{\the\c@refsection @\abx@field@entrykey}%
14 \hypertarget{cite.\the\c@refsection @\abx@field@entrykey}{}}}
15 \protected\def\blx@imc@bibhyperref{%
16 \@ifnextchar[%
17 {\blx@bibhyperref}
18 {\blx@bibhyperref[\abx@field@entrykey]}}%
19
20 \long\def\blx@bibhyperref[#1]#2{%
21 % \blx@sfsave
22 \hyperlink{cite.\the\c@refsection @#1}{%
23 % \blx@sfst
24 #2%
25 % \blx@sfsave
26 }%
27 % \blx@sfst%
28 }% \def\blx@nohyperref[#1]#2{#2}%
29
30 \protected\long\def\blx@imc@bibhyperlink#1#2{%
31 % \blx@sfsave
32 \hyperlink{cite.\the\c@refsection:#1}{%
33 % \blx@sfst
34 #2%
35 % \blx@sfsave
36 }%
37 % \blx@sfst%
38 }%
39
40 \protected\long\def\blx@imc@bibhypertarget#1#2{%
41 % \blx@sfsave%
42 \hypertarget{cite.\the\c@refsection:#1}{%
43 % \blx@sfst
44 #2%
45 % \blx@sfsave%
46 }%
47 % \blx@sfst%
48 }
49
50 \let\blx@imc@ifhyperref\@firstoftwo
51 }

```

---

File 43 **lwarp-bibunits.sty**

§ 146 Package **bibunits**

(Emulates or patches code by THORSTEN HANSEN.)

Pkg bibunits **bibunits** is patched for use by **lwarp**.

for HTML output:

```
1 \LWR@ProvidesPackagePass{bibunits}[2004/05/12]
2 \def\bu@bibdata{\BaseJobname}
```

---

File 44 **lwarp-bigdelim.sty**

## § 147 Package **bigdelim**

(Emulates or patches code by PIET VAN OOSTRUM, ØYSTEIN BACHE, JERRY LEICHTER.)

Pkg bigdelim bigdelim is used as-is for print or lateximage, and patched for HTML.

The delimiters are displayed in HTML by printing the delimiter, the text, and a thick border across the side of the `\multirow` which indicates the actual height of the delimiter. The delimiter character is given a `<span>` class of `ldelim` or `rdelim`, and the default css sets this to `font-size:200%`

⚠ use `\mrowcell` `\ldelim` and `\rdelim` use `\multirow`, so `\mrowcell` must be used in the proper number of empty cells in the same column below `\ldelim` or `\rdelim`, but not in cells which are above or below the delimiter:

---

```
\begin{tabular}{lll}
<empty> & a & b \\
\ldelim{\}{3}{.25in}[left] & c & d \\
\mrowcell & e & f \\
\mrowcell & g & h \\
<empty> & i & j \\
\end{tabular}
```

---

```
<-> a b
 {
left { c d
 { e f
 { g h
 {
<-> i j
```

---

For MATHJAX, limited emulation is provided which merely prints the delimiter and optional text in the first row.

for HTML output: First, remove the temporary definitions of `\ldelim` and `\rdelim`, which were previously defined for tabular scanning in case **bigdelim** was not loaded:

```
1 \let\ldelim\relax
2 \let\rdelim\relax
```

Next, load the package's new definitions:

```
3 \LWR@ProvidesPackagePass{bigdelim}[2018/08/03]
```

```

\ldelim {\langle 1:delimiter\rangle} {\langle 2:#rows\rangle} {\langle 3:width\rangle} [\langle 4:text\rangle]
\rldelim

4 \NewDocumentCommand{\LWR@HTML@ldelim}{m m m O{}}{%
5 \renewcommand{\LWR@multirowborder}{right}%
6 \multirow{#2}{#3}{#4 \InlineClass{ldelim}{#1}}}%
7 }
8
9 \LWR@formatted{ldelim}
10
11 \NewDocumentCommand{\LWR@HTML@rdelim}{m m m O{}}{%
12 \renewcommand{\LWR@multirowborder}{left}%
13 \multirow{#2}{#3}{\InlineClass{rdelim}{#1} #4}%
14 }
15
16 \LWR@formatted{rdelim}

```

Limited emulation for MATHJAX. The delimiter is printed on the first row, along with any optional text.

```

17 \begin{warpMathJax}
18 % \ldelim ([n]{width}[text]
19 \CustomizeMathJax{\newcommand{\LWRldelim}[1][{}]{\text{#1}~\LWRbigdelim}}
20 \CustomizeMathJax{\def\ldelim#1#2#3{\def\LWRbigdelim{#1}\LWRldelim}}
21 % \rdelim) [n]{width}[text]
22 \CustomizeMathJax{\newcommand{\LWRrdelim}[1][{}]{\LWRbigdelim~\text{#1}}}
23 \CustomizeMathJax{\def\rdelim#1#2#3{\def\LWRbigdelim{#1}\LWRrdelim}}
24 \end{warpMathJax}

```

---

#### File 45 **lwarp-bigfoot.sty**

### § 148 Package **bigfoot**

Pkg bigfoot bigfoot is emulated.

for HTML output: 1 \LWR@ProvidesPackageDrop{bigfoot}[2015/08/30]

```

2 \RequirePackage{manyfoot}
3 \RequirePackage{perpage}
4
5 \def\RestyleFootnote#1#2{
6 \def\FootnoteSpecific#1{
7 \def\DefineFootnoteStack#1{
8 \def\PushFootnoteMark#1{
9 \def\PopFootnoteMark#1{
10 \def\hfootfraction{0.9}
11 \def\vtypefraction{0.7}
12 \def\FootnoteMinimum{1sp}
13 \def\FootnoteMainMinimum{0pt}
14 \newcount\bigfoottolerance
15 \bigfoottolerance=100
16 \providecommand\footnotecarryratio{2}

```

---

File 46 **lwarp-bigstrut.sty**

§ 149      Package **bigstrut**

*(Emulates or patches code by PIET VAN OOSTRUM, ØYSTEIN BACHE, JERRY LEICHTER.)*

Pkg    bigstrut    bigstrut is used as-is for print or lateximage, and patched for HTML.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{bigstrut}[2018/08/03]

2 \LetLtxMacro\LWR@origbigstrut\bigstrut
3
4 \renewcommand\bigstrut[1][x]{}
5
6 \appto\LWR@restoreorigformatting{%
7 \LetLtxMacro\bigstrut\LWR@origbigstrut%
8 }
9

10 \begin{warpMathJax}
11 \CustomizeMathJax{\newcommand{\bigstrut}[1][{}]}
12 \end{warpMathJax}
```

---

File 47 **lwarp-bitpattern.sty**

§ 150      Package **bitpattern**

*(Emulates or patches code by JEAN-MARC BOURGUET.)*

Pkg    bitpattern    bitpattern is patched for use by lwarp.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{bitpattern}[2015/12/11]

2 \xpatchcmd{\bitpattern}
3 {\begingroup}
4 {\begin{lateximage}[-bitpattern-~\PackageDiagramAltText]}
5 {}
6 {\LWR@patcherror{bitpattern}{bitpattern}}
7
8 \xpatchcmd{\bp@Done}
9 {\endgroup}
10 {\end{lateximage}}
11 {}
12 {\LWR@patcherror{bitpattern}{bp@Done}}
```

---

File 48 **lwarp-blowup.sty**

§ 151      Package **blowup**

Pkg   blowup   blowup is ignored.

**for HTML output:**    1 \LWR@ProvidesPackageDrop{blowup}[2018/01/02]

2 \newcommand\*\blowUp[1]{}

---

File 49 **lwarp-bm.sty**

§ 152      Package **bm**
*(Emulates or patches code by DAVID CARLISLE, FRANK MITTELBACH.)*

Pkg   bm   bm is patched for use by lwarp.

**for HTML output:**    1 \LWR@ProvidesPackagePass{bm}[2019/07/24]

\DeclareBoldMathCommand must only be used in the preamble, since it adds to the MATHJAX setup code.

```

2 \begin{warpMathJax}
3 \LetLtxMacro\LWR@orig@DeclareBoldMathCommand\DeclareBoldMathCommand
4
5 \renewcommand\DeclareBoldMathCommand[3][bold]{%
6 \LWR@orig@DeclareBoldMathCommand[#1]{#2}{#3}%
7 \CustomizeMathJax{\newcommand{#2}{\boldsymbol{#3}}}%
8 }
9
10 \@onlypreamble\DeclareBoldMathCommand
11
12 \CustomizeMathJax{\newcommand{\bm}[1]{\boldsymbol{#1}}}
13 \end{warpMathJax}

```

---

File 50 **lwarp-booklet.sty**

§ 153      Package **booklet**
*(Emulates or patches code by PETER WILSON.)*

Pkg   booklet   booklet is ignored.

**for HTML output:**    1 \LWR@ProvidesPackageDrop{booklet}[2009/09/02]

---

```

2 \newdimen\pageseplength
3 \newdimen\pagesepwidth
4 \newdimen\pagesepoffset
5 \newif\ifsidebyside \sidebyside true
6 \newif\ifuselandscape \uselandscape false
7 \newif\ifprintoption \printoption false
8 \newcommand*{\pagespersignature}[1]{}
9 \def\magstepminus#1{}
10 \newcommand*{\target}[3]{}
11 \newcommand*{\source}[3]{}
12 \newcommand*{\setpdftargetpages}{}
13 \newcommand*{\setdvipstargetpages}{}
14 \newcommand*{\targettopbottom}{}
15 \newcommand*{\twoupemptypage}{}
16 \newcommand*{\twoupclearpage}{}
17 \newcommand*{\checkforlandscape}{}

```

---

#### File 51 **lwarp-bookmark.sty**

### § 154 Package **bookmark**

*(Emulates or patches code by HEIKO OBERDIEK.)*

Pkg bookmark bookmark is ignored.

**for HTML output:** Discard all options for lwarp-bookmark:

```

1 \LWR@ProvidesPackageDrop{bookmark}[2016/05/17]

2 \newcommand*{\bookmarksetup}[1]{}
3 \newcommand*{\bookmarksetupnext}[1]{}
4 \newcommand*{\bookmark}[2][1]{}
5 \newcommand*{\bookmarkdefinestyle}[2]{}
6 \newcommand*{\bookmarkget}[1]{}
7 \newcommand{\BookmarkAtEnd}[1]{}

```


---

#### File 52 **lwarp-booktabs.sty**

### § 155 Package **booktabs**

*(Emulates or patches code by SIMON FEAR.)*

Pkg booktabs booktabs is emulated during HTML output, and used as-is during print output and inside an HTML lateximage.

 **\cmidrule** For MATHJAX, emulation is provided in math mode, but \cmidrule trim must not be used.

**for HTML output:**

If `booktabs` has already been loaded before `lwarp`, such as by `memoir`, use it as-is. If not, the `lwarp` core will have placed some dummy macros which should be removed before loading the actual `booktabs` definitions.

```

1 \ifpackageloaded{booktabs}{}{
2 \LetLtxMacro\toprule\relax
3 \LetLtxMacro\midrule\relax
4 \LetLtxMacro\cmidrule\cline
5 \LetLtxMacro\bottomrule\relax
6 \LetLtxMacro\addlinespace\relax
7 \LetLtxMacro\morecmidrules\relax
8 \LetLtxMacro\specialrule\relax
9 }

```

Next, load the `booktabs` package:

```
10 \LWR@ProvidesPackagePass{booktabs}[2019/10/08]
```

Adjust to work even if `xltabular` is loaded:

```

11 % \def\LWR@HTML@BLTrule{\@BTnormal}
12 %
13 % \LWR@formatted{@BLTrule}
14 \LetLtxMacro@BLTrule\@BTnormal

15 \DeclareDocumentCommand{\LWR@HTML@toprule}{o d()}%
16 {%
17 \IfValueTF{#1}%
18 {\LWR@docmidrule[#1]}{1-\arabic{LWR@tabletotalLaTeXcols}}}%
19 {%
20 \ifbool{FormatWP}%
21 {\LWR@docmidrule[#1]}{1-\arabic{LWR@tabletotalLaTeXcols}}}%
22 {\booltrue{LWR@doingtbrule}}}%
23 }%
24 \LWR@getmynexttoken}
25
26 \LWR@expandableformatted{toprule}
27
28 \DeclareDocumentCommand{\LWR@HTML@midrule}{o d()}%
29 {%
30 \IfValueTF{#1}%
31 {\LWR@docmidrule[#1]}{1-\arabic{LWR@tabletotalLaTeXcols}}}%
32 {%
33 \ifbool{FormatWP}%
34 {\LWR@docmidrule[#1]}{1-\arabic{LWR@tabletotalLaTeXcols}}}%
35 {\defaddtocounter{LWR@hlines}{1}}}%
36 }%
37 \LWR@getmynexttoken}
38
39 \LWR@expandableformatted{midrule}
40
41 \DeclareDocumentCommand{\LWR@HTML@cmidrule}{O{\LWR@cmidrulewidth} d() m}{%
42 \LWR@docmidrule[#1](#2){#3}%
43 \LWR@getmynexttoken%

```

```

44 }%
45
46 \LWR@expandableformatted{cmidrule}
47
48 \DeclareDocumentCommand{\LWR@HTML@bottomrule}{o d()}{%
49 \IfValueTF{#1}%
50 {\LWR@docmidrule[#1]}{1-\arabic{\LWR@tabletotalLaTeXcols}}}%
51 {%
52 \ifbool{FormatWP}%
53 {\LWR@docmidrule[#1]}{1-\arabic{\LWR@tabletotalLaTeXcols}}}%
54 {\booltrue{\LWR@doingtbrule}}}%
55 }%
56 \LWR@getmynexttoken%
57 }%
58
59 \LWR@expandableformatted{bottomrule}
60
61 \DeclareDocumentCommand{\LWR@HTML@addlinespace}{o}{}%
62
63 \LWR@expandableformatted{addlinespace}
64
65 \DeclareDocumentCommand{\LWR@HTML@morecmidrules}{o}{}%
66
67 \LWR@expandableformatted{morecmidrules}
68
69 \DeclareDocumentCommand{\LWR@HTML@specialrule}{m m m d()}%
70 {\LWR@docmidrule[#1]}{1-\arabic{\LWR@tabletotalLaTeXcols}}\LWR@getmynexttoken}%
71
72 \LWR@expandableformatted{specialrule}

```

For MATHJAX:

```

73 \begin{warpMathJax}
74 \CustomizeMathJax{\newcommand{\toprule}[1][\hline]}
75 \CustomizeMathJax{\let\midrule\toprule}
76 \CustomizeMathJax{\let\bottomrule\toprule}
77 \CustomizeMathJax{\newcommand{\cmidrule}[2][{}]}% avoid (trim)
78 \CustomizeMathJax{\newcommand{\morecmidrules}{}]}
79 \CustomizeMathJax{\newcommand{\specialrule}[3]{\hline}}
80 \CustomizeMathJax{\newcommand{\addlinespace}[1][{}]}
81 \end{warpMathJax}

```

---

File 53 **lwarp-bophook.sty**

§ 156      Package **bophook**

Pkg    bophook    bophook is ignored.

for HTML output:    1 \LWR@ProvidesPackageDrop{bophook}[2001/03/29]

```

2 \newcommand*{\AtBeginPage}[1]{}
3 \newcommand*{\PageLayout}[1]{}

```

---

File 54 **lwarp-bounddvi.sty**

§ 157      Package **bounddvi**

Pkg   bounddvi   bounddvi is ignored.

**for HTML output:**      1 \LWR@ProvidesPackageDrop{bounddvi}[2016/12/28]

---

File 55 **lwarp-boxedminipage.sty**

§ 158      Package **boxedminipage**
*(Emulates or patches code by SCOTT PAKIN.)*

Pkg   boxedminipage   boxedminipage is emulated for HTML, and used as-is for lateximages.

**for HTML output:**      1 \LWR@ProvidesPackagePass{boxedminipage}[2020/04/19]

```

2 \newenvironment{LWR@HTML@boxedminipage}{%
3 \LWR@stoppars%
4 \begin{BlockClass}{framebox}%
5 \minipage%
6 }
7 {%
8 \endminipage%
9 \end{BlockClass}%
10 \LWR@startpars%
11 }
12 \LWR@formattedenv{boxedminipage}
```

---

File 56 **lwarp-boxedminipage2e.sty**

§ 159      Package **boxedminipage2e**
*(Emulates or patches code by SCOTT PAKIN.)*

Pkg   boxedminipage2e   boxedminipage2e has been renamed boxedminipage by the author.

**for HTML output:**      Automatically loads boxedminipage:

```

1 \LWR@ProvidesPackagePass{boxedminipage2e}
```

File 57 **lwarp-braket.sty**§ 160 Package **braket**

(Emulates or patches code by DONALD ARSENEAU.)

Pkg braket **braket** works as-is for HTML with SVG math. For MATHJAX, emulation is provided by MATHJAX macros.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{braket}% No date is provided by the file.

2 \begin{warpMathJax}
3 \CustomizeMathJax{\newcommand{\bra}[1]{\langle#1\vert}}
4 \CustomizeMathJax{\newcommand{\Bra}[1]{\left\langle#1\right\vert}}
5 \CustomizeMathJax{\newcommand{\ket}[1]{\vert#1\rangle}}
6 \CustomizeMathJax{\newcommand{\Ket}[1]{\left\vert#1\right\rangle}}
7 \CustomizeMathJax{\newcommand{\braket}[1]{\langle#1\rangle}}
8 \CustomizeMathJax{\newcommand{\Braket}[1]{\left\langle#1\right\rangle}}
9 \CustomizeMathJax{\newcommand{\set}[1]{\{#1\}}}
10 \CustomizeMathJax{\newcommand{\Set}[1]{\left\{#1\right\}}}
11 \end{warpMathJax}

```

File 58 **lwarp-breakurl.sty**§ 161 Package **breakurl**

(Emulates or patches code by VILAR CAMARA NETO.)

Pkg breakurl **breakurl** is emulated.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{breakurl}[2013/04/10]

2 \LetLtxMacro\burl\LWR@url
3
4 \NewDocumentCommand{\LWR@burlaltb}{O{} +m m}{%
5 \LWR@ensuredoingapar%
6 \LWR@subhyperref{#2}%
7 \LWR@subhyperref{#3}%
8 \endgroup% restore catcodes
9 }
10
11 \newrobustcmd*{\burlalt}{%
12 \begingroup%
13 \LWR@linkcatcodes%
14 \LWR@burlaltb%
15 }
16
17 \LetLtxMacro\urlalt\burlalt


```

File 59 **lwarp-breqn.sty**

§ 162 Package **breqn**

(Emulates or patches code by MICHAEL J. DOWNES, MORTEN HØGHOLM.)

Pkg breqn **breqn** is patched for use by **lwarp**.

 **darray** darray is not supported, and in fact does not work in the print version either.

While using MATHJAX, **breqn** objects are converted to svg images.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{breqn}[2017/01/27]

2 \setkeys{breqn}{spread={5pt}}
3
4 \def\eqnumside{R}
5 % \def\eqnumplace{T}
6
7 \BeforeBeginEnvironment{dmath}{
8 \begin{BlockClass}{displaymathnumbered}
9 \LWR@newautoidanchor%
10 \booltrue{LWR@indisplaymathimage}%
11 \begin{lateximage}[-breqn dmath- \MathImageAltText]
12 }
13
14 \AfterEndEnvironment{dmath}{
15 \end{lateximage}\end{BlockClass}
16 }
17
18 \BeforeBeginEnvironment{dmath*}{
19 \begin{BlockClass}{displaymath}
20 \LWR@newautoidanchor%
21 \booltrue{LWR@indisplaymathimage}%
22 \begin{lateximage}[-breqn dmath*- \MathImageAltText]
23 }
24
25 \AfterEndEnvironment{dmath*}{
26 \end{lateximage}\end{BlockClass}
27 }
28
29 \BeforeBeginEnvironment{dseries}{
30 \begin{BlockClass}{displaymathnumbered}
31 \LWR@newautoidanchor%
32 \booltrue{LWR@indisplaymathimage}%
33 \begin{lateximage}[-breqn dseries- \MathImageAltText]
34 }
35
36 \AfterEndEnvironment{dseries}{
37 \end{lateximage}\end{BlockClass}
38 }
```

```

39
40 \BeforeBeginEnvironment{dseries*}{
41 \begin{BlockClass}{displaymath}
42 \LWR@newautoidanchor%
43 \booltrue{LWR@indisplaymathimage}%
44 \begin{lateximage}[-breqn dseries*- \MathImageAltText]
45 }
46
47 \AfterEndEnvironment{dseries*}{
48 \end{lateximage}\end{BlockClass}
49 }
50
51 \BeforeBeginEnvironment{dgroup}{
52 \begin{BlockClass}{displaymath}
53 \LWR@newautoidanchor%
54 \booltrue{LWR@indisplaymathimage}%
55 \begin{lateximage}[-breqn dgroup- \MathImageAltText]
56 }
57
58 \AfterEndEnvironment{dgroup}{
59 \end{lateximage}\end{BlockClass}
60 }
61
62 \BeforeBeginEnvironment{dgroup*}{
63 \begin{BlockClass}{displaymath}
64 \LWR@newautoidanchor%
65 \booltrue{LWR@indisplaymathimage}%
66 \begin{lateximage}[-breqn dgroup*- \MathImageAltText]
67 }
68
69 \AfterEndEnvironment{dgroup*}{
70 \end{lateximage}\end{BlockClass}
71 }

```

---

File 60 **lwarp-bsheaders.sty**

§ 163      Package **bsheaders**

Pkg   bsheaders   bsheaders is ignored.

for HTML output:    1 \LWR@ProvidesPackageDrop{bsheaders}[1997/10/06]

---

File 61 **lwarp-bxpapersize.sty**

§ 164      Package **bxpapersize**

Pkg   bxpapersize   bxpapersize is ignored.

for HTML output:    1 \LWR@ProvidesPackageDrop{bxpapersize}[2017/10/08]

---

```

2 \providecommand*\papersizesetup{\bxpapersizesetup}
3 \newcommand*\bxpapersizesetup[1]{}

```

---

## File 62 **lwarp-bytefield.sty**

### § 165 Package **bytefield**

*(Emulates or patches code by SCOTT PAKIN.)*

Pkg bytefield **bytefield** is patched for use by lwarp.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{bytefield}[2017/09/15]

2 \BeforeBeginEnvironment{bytefield}{%
3 \begin{lateximage}[-bytefield-~\PackageDiagramAltText]%
4 }
5
6 \AfterEndEnvironment{bytefield}{\end{lateximage}}

```

---

## File 63 **lwarp-cancel.sty**

### § 166 Package **cancel**

Pkg cancel **cancel** is used as-is for SVG math, and emulated for HTML text output.

**for HTML output:**

```

1 \LWR@origRequirePackage{lwarp-xcolor}% for \convertcolorspec
2 \LWR@ProvidesPackagePass{cancel}[2013/04/12]

```

`\cancelto` is math-only, so is used as-is.

```

3 \LetLtxMacro\LWR@origcancel\cancel
4 \LetLtxMacro\LWR@origbcancel\bcancel
5 \LetLtxMacro\LWR@origxcancel\xcancel
6
7 \appto\LWR@restoreorigformatting{%
8 \LetLtxMacro\cancel\LWR@origcancel%
9 \LetLtxMacro\bcancel\LWR@origbcancel%
10 \LetLtxMacro\xcancel\LWR@origxcancel%
11 }

```

`\LWR@cancelcolor` `{\langle text \rangle}{\langle color \rangle}{\langle class \rangle}{\langle colorstyle \rangle}{\langle FormatWPstyle \rangle}`

Add colors if not empty:

```

12 \newcommand{\LWR@cancelcolor}[5]{%
13 \ifcsempy{#2}%
14 {\InlineClass{#5}{#3}{#1}}%
15 {\LWR@htmlspanclass[#5;#4:\LWR@origpound\LWR@tempcolor]{#3}{#1}}%
16 }

```

```

\cancel {\text}

17 \DeclareRobustCommand{\cancel}[1]{%
18 \begingroup%
19 \CancelColor%
20 \LWR@findcurrenttextcolor%
21 \color{black}%
22 \LWR@cancelcolor{#1}{\LWR@tempcolor}{sout}{text-decoration-color}%
23 {text-decoration:line-through}%
24 \endgroup%
25 }
26
27 \LetLtxMacro\bcancel\cancel
28 \LetLtxMacro\xcancel\cancel

```

For MATHJAX:

```

29 \begin{warpMathJax}
30 \PackageWarningNoLine{lwarp, cancel}{The MathJax v3 extension will be used}
31 \CustomizeMathJax{\require{cancel}}
32 \end{warpMathJax}

```

---

#### File 64 **lwarp-canonicalayout.sty**

§ 167    Package **canonicalayout**

Pkg   canonicalayout   canonicalayout is ignored.

**for HTML output:**    s1 \LWR@ProvidesPackageDrop{canonicalayout}[2011/11/05]

```

2 \newcommand*{\currentfontletters}{}
3 \newcommand*{\charactersperpage}{}

```

---

#### File 65 **lwarp-caption.sty**

§ 168    Package **caption**

*(Emulates or patches code by AXEL SOMMERFELDT.)*

Pkg   caption   caption is patched for use by lwarp.

**for HTML output:**

```

1 \typeout{---}
2 \typeout{Packages lwarp and caption:}
3 \typeout{If a ‘Missing \protect\begin\protect{document\protect}’ error occurs here,}
4 \typeout{try using: \space \protect\usepackage\protect{caption\protect}\space%
5 \protect\captionsetup{options}}
6 \typeout{instead of: \protect\usepackage[options]\protect{caption\protect}.}
7 \typeout{---}
8
9 \LWR@ProvidesPackagePass{caption}[2020/01/03]

```

```

10 \long\def\caption@iibox@#1#2#3#4{%
11 % \setbox\@tempboxa\hbox{#4}%
12 \caption@iiibox{#1}{#2}{#3}%
13 % [\wd\@tempboxa]%
14 [% lwarp
15 [\captionbox@hj@default]%
16 % {\unhbox\@tempboxa}%
17 {#4}}% lwarp
18 }

19 \long\def\caption@iiibox#1#2#3#4#5[#6][#7]#8{%
20 \begin{group}
21 #1*% set \caption@position
22 \caption@iftop{%
23 \end{group}
24 \minipagefullwidth%
25 \parbox[t]{\linewidth}{%
26 #1\relax
27 \caption@setposition t%
28 % #2%
29 {\caption#4{#5}}%
30 % \captionbox@hrule
31 % \csname caption@hj@#7\endcsname
32 #8%
33 }%
34 }{%
35 \end{group}
36 % \parbox[b]{#6}{%
37 \minipagefullwidth%
38 \parbox[b]{\linewidth}{%
39 #1\relax
40 \caption@setposition b%
41 % \csname caption@hj@#7\endcsname
42 #8%
43 % \captionbox@hrule
44 % #3
45 {\caption#4{#5}}%
46 }%
47 }%
48 }

\caption@@@make {\langle caption label\rangle} {\langle caption text\rangle}

49 \renewcommand\caption@@@make[2]{%
50 \LWR@traceinfo{caption@@@make}%
51 \LWR@stoppars% lwarp
52 % \sbox\@tempboxa{#1}%
53 % \ifdim\wd\@tempboxa=\z@
54 % \let\caption@lsep\relax
55 % \fi
56 \caption@ifempty{#2}{%
57 \let\caption@lsep\empty
58 \let\caption@tfmt\@firstofone
59 }%
60 \caption@applyfont

```

\caption@fmt with plain format is defined as {#1#2#3\par}:

```

61 % \caption@fmt
62 {\ifcaption@star\else
63 \beginngroup
64 \captionlabelfont
65 \LWR@isolate{#1}% lwarp
66 \endgroup
67 \fi}%
68 {\ifcaption@star\else
69 \beginngroup
70 \caption@iflf\captionlabelfont
71 \relax
72 \caption@lsep
73 \endgroup
74 \fi}%
75 {%
76 \captiontextfont
77 \let\\newline% lwarp
78 % \caption@ifstrut
79 % {\vrule\@height\ht\strutbox\@width\z}%
80 % {}%
81 % \nobreak\hskip\z@skip % enable hyphenation
82 \LWR@isolate{\caption@tfmt{#2}}% lwarp
83 % \caption@ifstrut
84 % {\ifhmode\@finalstrut\strutbox\fi}%
85 % {}%
86 }%
87 \LWR@startpars% lwarp
88 \LWR@traceinfo{caption@@@make done}%
89 }

```

\caption@@make@ {<>} {<>}

```

90 \renewcommand{\caption@@make@}[2]{%
91 \caption@stepthecounter%
92 \caption@beginhook%
93 \caption@@make{#1}{#2}%
94 \caption@endhook%
95 }

```

\caption@makecaption

```

96 \long\def\caption@makecaption#1#2{%
97 % \caption@iftop
98 % {\vskip\belowcaptionskip}%
99 % {\caption@rule\vskip\abovecaptionskip}%
100 \caption@@make{#1}{#2}%
101 % \caption@iftop
102 % {\vskip\abovecaptionskip\caption@rule}%
103 % {\vskip\belowcaptionskip}%
104 }
105
106 \AtBeginDocument{
107 \let\@makecaption\caption@makecaption

```

108 }

Redefined to look ahead for \centering, etc:

```

109 \AtBeginDocument{
110 \def\xfloat#1[#2]{%
111 \caption@ORI\xfloat{#1}[#2]%
112 \caption@settype{#1}%
113 \LWR@futurenonspaclet\LWR@mynexttoken\LWR@floatalignment%
114 }%
115 \def\xdbfloat#1[#2]{%
116 \caption@ORI\xfloat{#1}[#2]%
117 \caption@settype{#1}%
118 \LWR@futurenonspaclet\LWR@mynexttoken\LWR@floatalignment%
119 }%
120 }
```

Add non-breakable spaces:

```

121 \long\def\caption@lsep@default{.~}
122 \long\def\caption@lsep@colon{:~}
123 \long\def\caption@lsep@period{.~}
124 \long\def\caption@lsep@space{~}
125 \long\def\caption@lsep@endash{~\textendash~}
126 \long\def\caption@lsep@arabi{~::~}

127 \DeclareCaptionBox{none}{#2}
128 \DeclareCaptionBox{parbox}{%
129 #2%
130 }
131
132 \DeclareCaptionBox{colorbox}{%
133 #2%
134 }
```

Updates for late patches for scrextend:

```

135 \caption@AtBeginDocument{
136 \ifpackageloaded{lwarp-scrextend}{
137 \LetLtxMacro\captionbelow\caption
138 \LetLtxMacro\captionabove\caption
139 \LetLtxMacro\captionofbelow\captionof
140 \LetLtxMacro\captionofabove\captionof
141 }{}
142 }
```

---

File 66 **lwarp-cases.sty**

§ 169 Package **cases**

(Emulates or patches code by DONALD ARSENEAU.)

Pkg cases **cases** is patched for use by lwarp.

While using MATHJAX, **cases** objects are converted to SVG math images.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{cases}[2002/05/02]

2 \BeforeBeginEnvironment{numcases}{
3 \begin{BlockClass}{displaymathnumbered}
4 \LWR@newautoidanchor%
5 \booltrue{LWR@indisplaymathimage}%
6 \begin{lateximage}[-cases- \MathImageAltText]
7 }
8
9 \AfterEndEnvironment{numcases}{
10 \end{lateximage}\end{BlockClass}
11 }
12
13 \BeforeBeginEnvironment{subnumcases}{
14 \begin{BlockClass}{displaymathnumbered}
15 \LWR@newautoidanchor%
16 \booltrue{LWR@indisplaymathimage}%
17 \begin{lateximage}[-cases- \MathImageAltText]
18 }
19
20 \AfterEndEnvironment{subnumcases}{
21 \end{lateximage}\end{BlockClass}
22 }
```

---

File 67 **lwarp-centernot.sty**

§ 170 Package **centernot**

*(Emulates or patches code by HEIKO OBERDIEK.)*

Pkg centernot **centernot** is used as-is for SVG math, and emulated for MATHJAX.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{centernot}[2016/05/16]

2 \begin{warpMathJax}
3 \CustomizeMathJax{\newcommand{\centernot}[1]{\not{!#1\,}}}
4 \end{warpMathJax}
```

---

File 68 **lwarp-changebar.sty**

§ 171 Package **changebar**

Pkg changebar **changebar** is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{changebar}[2018/03/09]
```

---

```

2 \newcommand*\cbstart{}{}
3 \newcommand*\cbend{}{}
4 \newenvironment*\changebar{}{}
5 \newcommand*\cbdelete{}{}
6 \newcommand*\nochnagebars{}{}
7 \newcommand*\cbcolor[1]{}
8 \newlength\changebarwidth
9 \newlength\deletebarwidth
10 \newlength\changebarsep
11 \newcounter{changebargrey}

```

---

File 69 **lwarp-changelayout.sty**

§ 172      Package **changelayout**

*(Emulates or patches code by AHMED MUSA.)*

Pkg changelayout changelayout is patched for use by lwarp.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{changelayout}[2009/10/07]

2 \renewrobustcmd\cpl@backtodefaults{}
3
4 \renewrobustcmd\cpl@checkifoddpagelayout{%
5 \cpl@oddpagelayoutfalse%
6 }
7
8 \renewrobustcmd\changepagelayout[1]{%
9 \setkeys[KV]{changelayout}{#1}%
10 }
11
12 \renewrobustcmd\changetextlayout[1]{\changepagelayout{#1}}
13
14 \renewrobustcmd\adjustpagelayout[1]{%
15 \setkeys[KV@X]{changelayout}{#1}%
16 }
17
18 \renewrobustcmd\adjusttextlayout[1]{\adjustpagelayout{#1}}
19
20 \renewrobustcmd\adjusttextwidth[1]{%
21 \setkeys[KV]{changelayout}{#1}%
22 \begin{BlockClass}[color:\LWR@colorstyle{named}{\cpl@textcolor}]{changelayout}
23 \color{\cpl@textcolor}%
24 \cpl@content
25 \end{BlockClass}
26 }

```

File 70 **lwarp-changepage.sty**§ 173 Package **changepage***(Emulates or patches code by PETER WILSON.)*Pkg changepage **changepage** is ignored.**for HTML output:** Discard all options for lwarp-changepage:

```

1 \LWR@ProvidesPackageDrop{changepage}[2009/10/20]

2 \newif\ifoddpage
3 \DeclareRobustCommand{\checkoddpage}{\oddpagetrue}
4 \DeclareRobustCommand{\changetext}[5]{}
5 \DeclareRobustCommand{\changeimage}[9]{}
6
7 \@ifundefined{adjustwidth}{
8 \newenvironment{adjustwidth}[2]{}{}
9 \newenvironment{adjustwidth*}[2]{}{}
10 }{
11 \renewenvironment{adjustwidth}[2]{}{}
12 \renewenvironment{adjustwidth*}[2]{}{}
13 }

14 \DeclareDocumentCommand{\strictpagecheck}{}{}
15 \DeclareDocumentCommand{\easypagecheck}{}{}

```

File 71 **lwarp-changes.sty**§ 174 Package **changes***(Emulates or patches code by EKKART KLEINOD.)*Pkg changes **changes** is patched for use by lwarp.**for HTML output:** 1 \LWR@ProvidesPackagePass{changes}[2019/01/26]

\BaseJobname is added to the label in case xr or xr-hyper are used.

```

2 \renewcommand{\ChangesListline}[4]{%
3 \IfSubStr{\Changes@loc@show}{#1}{%
4 \LWR@startpars%
5 #2: #3 \qqquad
6 \nameref{\BaseJobname-autopage-#4}%
7 \LWR@stoppars%
8 }{}%

```

```

9 }
10
11 \renewcommand{\Changes@summaryline}[4]{%
12 \IfSubStr{\Changes@loc@show}{#1}{%
13 \ifthenelse{\not\equal{\Changes@loc@style}{compactsummary} \or #2 > 0}%
14 {%
15 #3:~#2#4%
16 }{%
17 }}%
18 }
19
20 \xpatchcmd{\listofchanges}
21 {{\changesauthorname: \changesanonymousname}}
22 {{\LWR@textcurrentcolor{\changesauthorname: \changesanonymousname}}}
23 {}
24 {\LWR@patcherror{changes}{listofchanges A}}
25
26 \xpatchcmd{\listofchanges}
27 {\changesauthorname: \Changes@InID}
28 {\LWR@textcurrentcolor{\changesauthorname: \Changes@InID}}
29 {}
30 {\LWR@patcherror{changes}{listofchanges B}}
31
32 \xpatchcmd{\listofchanges}
33 {(\Changes@InName)}
34 {\LWR@textcurrentcolor{(\Changes@InName)}}
35 {}
36 {\LWR@patcherror{changes}{listofchanges C}}
37
38 \xpatchcmd{\listofchanges}
39 {\parbox{\Changes@summary@width}}
40 {}
41 {}
42 {\LWR@patcherror{changes}{listofchanges D}}
43
44 \xpatchcmd{\Changes@Markup@comment}
45 {%
46 \ifthenelse{\isAnonymous{#2}}%
47 {\textbf{[\arabic{Changes@commentCount#2}]:} }%
48 {\textbf{[#3~\arabic{Changes@commentCount#2}]:} }%
49 #1%
50 }
51 {%
52 \LWR@textcurrentcolor{% lwarp
53 \ifthenelse{\isAnonymous{#2}}%
54 {\textbf{[\arabic{Changes@commentCount#2}]:} }%
55 {\textbf{[#3~\arabic{Changes@commentCount#2}]:} }%
56 #1%
57 }% lwarp
58 }
59 {}
60 {\LWR@patcherror{changes}{\Changes@Markup@comment A}}
61
62 \xpatchcmd{\Changes@Markup@comment}
63 {%

```

```

64 \uwave{%
65 \ifthenelse{\isAnonymous{#2}}%
66 {\textbf{[\arabic{Changes@commentCount#2}]:} }%
67 {\textbf{[#3~\arabic{Changes@commentCount#2}]:} }%
68 #1%
69 }%
70 }
71 {%
72 \LWR@textcurrentcolor{% lwarp
73 \uwave{%
74 \ifthenelse{\isAnonymous{#2}}%
75 {\textbf{[\arabic{Changes@commentCount#2}]:} }%
76 {\textbf{[#3~\arabic{Changes@commentCount#2}]:} }%
77 #1%
78 }%
79 }%
80 }
81 {}
82 {\LWR@patcherror{changes}{\Changes@Markup@comment B}}
83
84 \xpatchcmd{\Changes@output}
85 {\Changes@Markup@author{\Changes@output@author{#2}{left}}}
86 {\LWR@textcurrentcolor{\Changes@Markup@author{\Changes@output@author{#2}{left}}}}
87 {}
88 {\LWR@patcherror{changes}{Changes@output A}}
89
90 \xpatchcmd{\Changes@output}
91 {%
92 \ifthenelse{\equal{#1}{added}}{\Changes@Markup@added{#3}}{}%
93 \ifthenelse{\equal{#1}{deleted}}{\Changes@Markup@deleted{#4}}{}%
94 \ifthenelse{\equal{#1}{replaced}}{%
95 {\Changes@Markup@added{#3}}\allowbreak\Changes@Markup@deleted{#4}%
96 }{}%
97 \ifthenelse{\equal{#1}{highlight}}{\Changes@Markup@highlight{#3}}{}%
98 }
99 {%
100 \LWR@textcurrentcolor{%
101 \ifthenelse{\equal{#1}{added}}{\Changes@Markup@added{#3}}{}%
102 \ifthenelse{\equal{#1}{deleted}}{\Changes@Markup@deleted{#4}}{}%
103 \ifthenelse{\equal{#1}{replaced}}{%
104 {\Changes@Markup@added{#3}}\allowbreak\Changes@Markup@deleted{#4}%
105 }{}%
106 \ifthenelse{\equal{#1}{highlight}}{\Changes@Markup@highlight{#3}}{}%
107 }%
108 }
109 {}
110 {\LWR@patcherror{changes}{Changes@output B}}
111
112 \xpatchcmd{\Changes@output}
113 {\Changes@Markup@author{\Changes@output@author{#2}{right}}}
114 {\LWR@textcurrentcolor{\Changes@Markup@author{\Changes@output@author{#2}{right}}}}
115 {}
116 {\LWR@patcherror{changes}{Changes@output C}}

```

---

File 72 **lwarp-chappg.sty**

§ 175      Package **chappg**

*(Emulates or patches code by ROBIN FAIRBAIRNS.)*

Pkg chappg chappg is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{chappg}[2006/05/09]

2 \renewcommand{\pagenumbering}[2][{}]{
3 \providecommand{\chappgsep}{--}
```

---

File 73 **lwarp-chapterbib.sty**

§ 176      Package **chapterbib**

*(Emulates or patches code by DONALD ARSENEAU.)*

Pkg chapterbib chapterbib is patched for use by lwarp.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{chapterbib}[2010/09/18]

2 \xdef\@savedjobname{\BaseJobname}
3 \let\@currentipfile\@savedjobname
```

---

File 74 **lwarp-chemfig.sty**

§ 177      Package **chemfig**

*(Emulates or patches code by CHRISTIAN TELLECHEA.)*

Pkg chemfig chemfig is patched for use by lwarp.

If using `\polymerdelim` to add delimiters to a `\chemfig`, wrap both inside a single `lateximage`:

```

\begin{lateximage}[-chemfig~\PackageDiagramAltText]
\chemfig{...}
\polymerdelim[...]{...}
\end{lateximage}
```

The images are not hashed because they depend on external settings which may be changed at any time, and are unlikely to be reused inline anyhow.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{chemfig}[2020/03/05]
```

```

2
3 \catcode'_ =11
4
5 \@ifpackagelater{chemfig}{2020/03/05}
6 {
7 \xpretocmd\charge{\begin{lateximage}[-chemfig-~\PackageDiagramAltText]}
8 {\LWR@patcherror{chemfig}{charge}}
9 \xpretocmd\Charge{\begin{lateximage}[-chemfig-~\PackageDiagramAltText]}
10 {\LWR@patcherror{chemfig}{Charge}}
11 \xapptocmd\charge_c{\end{lateximage}}
12 {\LWR@patcherror{chemfig}{charge_c}}
13 }{}
14
15 \@ifpackagelater{chemfig}{2019/04/18}%
16 {% 2019/04/18 or newer
17
18 \LetLtxMacro\LWR@chemfig@origchemfig\chemfig
19
20 \renewcommand*{\chemfig}[2][{}]{%
21 \begin{lateximage}[-chemfig-~\PackageDiagramAltText]%
22 \LWR@chemfig@origchemfig[#1]{#2}%
23 \end{lateximage}%
24 }
25
26 \GlobalLetLtxMacro\LWR@chemfig@origCF_lewisc\CF_lewisc
27 \gdef\CF_lewisc#1,#2_nil{%
28 \begin{lateximage}[-chemfig-~\PackageDiagramAltText]%
29 \LWR@chemfig@origCF_lewisc#1,#2_nil
30 \end{lateximage}
31 }
32
33 \gpreto{\schemestart}{%
34 \begin{lateximage}[-chemfig-~\PackageDiagramAltText]%
35 }
36 \gappto{\CF_schemestop}{\end{lateximage}}
37
38 }% 2019/04/18 or newer
39 {% older than 2019/04/18
40
41 \LetLtxMacro\LWR@chemfig@origchemfig\chemfig
42
43 \DeclareDocumentCommand\chemfig{s O{} O{} m}{%
44 \begin{lateximage}[-chemfig-~\PackageDiagramAltText]%
45 \IfBooleanTF{#1}{%
46 \LWR@chemfig@origchemfig*[#2][#3]{#4}%
47 }{%
48 \LWR@chemfig@origchemfig[#2][#3]{#4}%
49 }
50 \end{lateximage}%
51 }
52
53 \LetLtxMacro\LWR@chemfig@origCF@lewis@b\CF@lewis@b
54
55 \def\CF@lewis@b#1#2{%

```

```

57 \begin{lateximage}[-chemfig-~\PackageDiagramAltText]%
58 \LWR@chemfig@origCF@lewis@b{#1}{#2}%
59 \end{lateximage}%
60 }
61
62 \preto{\schemestart}{%
63 \begin{lateximage}[-chemfig-~\PackageDiagramAltText]%
64 }
65 \appto{\CF@schemestop}{\end{lateximage}}
66
67 }% older than 2019/04/18
68
69 \catcode'_ =8%
70
71
72
73 \LetLtxMacro\LWR@chemfig@origchemleft\chemleft
74
75 \def\chemleft#1#2\chemright#3{%
76 \begin{lateximage}[-chemfig-~\PackageDiagramAltText]%
77 \LWR@chemfig@origchemleft#1#2\chemright#3%
78 \end{lateximage}%
79 }
80
81 \LetLtxMacro\LWR@chemfig@origchemup\chemup
82
83 \def\chemup#1#2\chemdown#3{%
84 \begin{lateximage}[-chemfig-~\PackageDiagramAltText]%
85 \LWR@chemfig@origchemup#1#2\chemdown#3%
86 \end{lateximage}%
87 }

```

---

File 75 **lwarp-chemformula.sty**

§ 178

Package

## chemformula

(Emulates or patches code by CLEMENS NIEDERBERGER.)

Pkg chemformula chemformula is patched for use by lwarp.

The SVG images are hashed according to contents and local options. Global options are assumed to be constant document-wide.



### chemformula with MATHJAX

chemformula works best without MATHJAX. If MATHJAX is used, `\displaymathother` must be used before `array`, and then `\displaymathnormal` may be used after. (The chemformula package adapts to `array`, but does not know about MATHJAX, and MATHJAX does not know about chemformula.)

While using MATHJAX, `\displaymathother` may also be used for other forms of display and inline math which contain chemformula expressions.

for HTML output:

```
1 \LWR@ProvidesPackagePass{chemformula}[2019/10/13]
```

2 \ExplSyntaxOn

\ch    Enclose in an inline svg image or MathJax. The alt tag is is the contents of the \ch expression. The filename is hashed, and also has additional hashing information based on the local options.

```
3 \RenewDocumentCommand \ch { O{}m }
4 {%
```

To work inside align with \displaymathother, a simple version must be used to work with chemformula's adaptation to align.

```
5 \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}% lwarp
6 {
7 \chemformula_ch:nn {#1} {#2}% original
8 }
```

If used as the outer level, must temporarily ensure MATHJAX is disabled:

```
9 {
10 \begingroup%
11 \boolfalse{mathjax}%
```

An inline image is used, adjusted for the baseline:

```
12 \LWR@subsingledollar*{% lwarp
13 \textbackslash{}ch{\LWR@HTMLsanitize{#2}\}% alt text
14 }{%
15 \protect\LWR@HTMLsanitize{\detokenize\expandafter{#1}}% add'l hashing
16 }%
17 {%
18 \chemformula_ch:nn {#1} {#2}% original
19 }%
20 \endgroup%
21 }
22 }
```

\chcpd    Similar to \ch.

```
23 \@ifpackagelater{chemformula}{2019/10/13}{
24 \cs_gset_protected:Npn \chemformula_chcpd:nn #1#2
25 {
26 \begingroup%
27 \boolfalse{mathjax}%
28 \LWR@subsingledollar*{% lwarp
29 \textbackslash{}chcpd{\LWR@HTMLsanitize{#2}\}%
30 }{%
31 \protect\LWR@HTMLsanitize{\detokenize\expandafter{#1}}%
32 }{% original
33 \group_begin:
34 \tl_if_blank:nF {#2}
35 {
36 \keys_set:nn {chemformula} {#1}
37 __chemformula_save_catcodes:
38 __chemformula_sanitize:Nn
39 \l__chemformula_chemformula_tmpa_tl
40 {#2}
```

```

41 _chemformula_input_compound_no_check:N\
42 \l__chemformula_compound_tl
43 \l__chemformula_chemformula_tmpa_tl
44 _chemformula_prepare_output:N\
45 \l__chemformula_compound_tl
46 \l__chemformula_catcodes_tl
47 \chemformula_write:V \l__chemformula_compound_tl
48 }
49 \group_end:
50 }
51 \endgroup
52 }
53 }% later than 2019/10/13
54 {% earlier than 2019/10/13
55 \cs_gset_protected:Npn \chemformula_chcpd:nn #1#2
56 {
57 \begingroup%
58 \boolfalse{mathjax}%
59 \LWR@subsingledollar*{% lwarp
60 \textbackslash{}chcpd\{\LWR@HTMLsanitize{#2}\}%
61 }{%
62 \protect\LWR@HTMLsanitize{\detokenize\expandafter{#1}}%
63 }{% original
64 \group_begin:
65 \tl_if_blank:nF {#2}
66 {
67 \keys_set:nn {chemformula} {#1}
68 _chemformula_save_catcodes:
69 _chemformula_sanitize:Nn
70 \l__chemformula_chemformula_tmpa_tl
71 {#2}
72 _chemformula_input_compound_no_check:N\
73 \l__chemformula_compound_tl
74 \l__chemformula_chemformula_tmpa_tl
75 _chemformula_prepare_output:N \l__chemformula_compound_tl
76 \chemformula_write:V \l__chemformula_compound_tl
77 }
78 \group_end:
79 }
80 \endgroup
81 }
82 }% earlier than 2019/10/13

```

`\charrow` If standalone, appears in a regular `lateximage`.

```

83 \RenewDocumentCommand \charrow { m0{}0{} }
84 {
85 \begin{lateximage}[-chemformula- charrow]
86 \group_begin:
87 _chemformula_draw_arrow:nnn {#1} {#2} {#3}
88 \group_end:
89 \end{lateximage}
90 }

```

`\chname` If standalone, appears in a regular `lateximage`, hashed according to contents.

```

91 \RenewDocumentCommand \chname { R(){}R(){} }
92 {
93 \begin{lateximage}*[%
94 \textbackslash{}chname(\LWR@HTMLsanitize{#1})(\LWR@HTMLsanitize{#2})
95]*%
96 \chemformula_chwritebelow:nn {#1} {#2}
97 \end{lateximage}
98 }

```

`\chlewis` Placed inline, hashed according to contents and options.

```

99 \RenewDocumentCommand \chlewis { O{}mm }
100 {
101 \begingroup%
102 \boolfalse{mathjax}%
103 \LWR@subsingledollar*{\textbackslash{}chlewis\{#2\}\{#3\}}%
104 {
105 \protect\LWR@HTMLsanitize{\detokenize\expandafter{#1}}%
106 }{
107 \chemformula_lewis:nnn {#1} {#2} {#3}
108 }
109 \endgroup%
110 }

```

**lwarp** redefines the `$` character, so special handling is required to escape math expressions inside `\ch`.

This boolean tracks a new kind of escaped math:

```
111 \bool_new:N \l__chemformula_first_last_LWRdollar_bool
```

`\chemformula_input_escape_math`

Adds additional escaping for the new dollar definition:

```

112 \cs_gset_protected:Npn __chemformula_input_escape_math:n #1
113 {
114 __chemformula_first_last_math:n {#1}
115 \bool_if:NT \l__chemformula_first_last_dollar_bool
116 {
117 \bool_set_true:N \l__chemformula_first_last_math_bool
118 __chemformula_read_escape_dollar:w #1 \q_nil
119 }
120 \bool_if:NT \l__chemformula_first_last_mathbraces_bool
121 {
122 \bool_set_true:N \l__chemformula_first_last_math_bool
123 __chemformula_read_escape_mathbraces:w #1 \q_nil
124 }

```

Added by **lwarp**:

```

125 \bool_if:NT \l__chemformula_first_last_LWRdollar_bool% lwarp
126 {
127 \bool_set_true:N \l__chemformula_first_last_math_bool% lwarp

```

```

128 __chemformula_read_escape_LWRdollar:w #1 \q_nil% lwarp
129 }
130 }

```

#### \chemformula\_read\_escape\_LWRdollar

The following parses the contents inside the new dollars.

**lwarp** keeps the dollar as its original math shift until the document starts. While **chemmacros** is being patched, the dollar must temporarily be set to its new meaning during the following definition.

```

131 \begingroup
132 \catcode'\$=\active
133
134 \cs_new_protected:Npn __chemformula_read_escape_LWRdollar:w $#1$ \q_nil
135 {
136 __chemformula_read_escape_math:n {#1}
137 }
138
139 \endgroup

```

#### \chemformula\_bool\_set\_if\_first\_last

The following looks at the first and last tokens for delimiters to escape math inside **\ch**. The original definition is modified to look for the control sequences which are used by the new meaning of **\$**.

```

140 \cs_new_protected:Npn __chemformula_bool_cs_set_if_first_last:NnNN #1#2#3#4
141 {
142 \int_zero:N \l__chemformula_tmpa_int
143 \int_zero:N \l__chemformula_tmpb_int
144 \int_set:Nn \l__chemformula_tmpa_int { \tl_count:n {#2} }
145 \tl_map_inline:nn {#2}
146 {
147 \int_incr:N \l__chemformula_tmpb_int
148 \int_compare:nT { \l__chemformula_tmpb_int = 1 }
149 {

```

At the start, the **cs\_** version compares control sequences:

```

150 \ifdefstrequal{##1}{#3}% lwarp
151 {
152 \bool_set_true:N #1
153 }% lwarp
154 {}
155 }

```

At the end, compare more control sequences:

```

156 \int_compare:nT { \l__chemformula_tmpb_int = \l__chemformula_tmpa_int }
157 {
158 \ifdefstrequal{##1}{#4}
159 {}
160 {
161 \bool_set_false:N #1

```

```

162 }
163 }
164 }
165 }

```

`\chemformula_first_last_math`

Modified to check for the new meaning of \$ at first/last:

```

166 \cs_gset_protected:Npn __chemformula_first_last_math:n #1
167 {
168 \bool_set_false:N __chemformula_first_last_math_bool
169 \bool_set_false:N __chemformula_first_last_dollar_bool
170 \bool_set_false:N __chemformula_first_last_LWRdollar_bool% lwarp
171 \bool_set_false:N __chemformula_first_last_mathbraces_bool
172 __chemformula_bool_set_if_first_last:Nnnn
173 __chemformula_first_last_dollar_bool
174 {#1}
175 { $ } { $ }
176 \bool_if:NF __chemformula_first_last_dollar_bool
177 {
178 __chemformula_bool_set_if_first_last:Nnnn
179 __chemformula_first_last_mathbraces_bool
180 {#1}
181 { \ (} { \) }

```

Added by lwarp:

```

182 \bool_if:NF __chemformula_first_last_mathbraces_bool% lwarp
183 {
184 __chemformula_bool_cs_set_if_first_last:NnnN
185 __chemformula_first_last_LWRdollar_bool
186 {#1}
187 { \LWR@newsingledollar } { \LWR@newsingledollar }
188 }% lwarp
189 }
190 }

```

```

191 \ExplSyntaxOff


```


## File 76 **lwarp-chemgreek.sty**

### § 179 Package **chemgreek**

(Emulates or patches code by CLEMENS NIEDERBERGER.)

Pkg chemgreek chemgreek is patched for use by lwarp.

 **Greek symbols** To use text-mode symbols, use packages `textalpha` or `textgreek`. Using the other packages supported by chemgreek will result in math-mode greek characters, which will result in svg images being used. These images will be hashed.

 **X<sub>Y</sub>LaTeX, LuaLaTeX** If using X<sub>Y</sub>LaTeX or LuaLaTeX, select the fontspec mapping:

```
\selectchemgreekmapping{fontspec}
```

**for HTML output:** 1 \LWR@ProvidesPackagePass{chemgreek}[2020/01/16]

```
2 \ExplSyntaxOn
3
4 \cs_gset_protected:Npn \chemgreek_text:n #1
5 { { \text {#1} } }
6
7 \appto\LWR@restoreorigformatting{%
8 \cs_set_protected:Npn \chemgreek_text:n #1%
9 { \ensuremath { \text {#1} } }%
10 }
11
12 \ExplSyntaxOff
```

---

File 77 **lwarp-chemmacros.sty**

§ 180 Package **chemmacros**


*(Emulates or patches code by CLEMENS NIEDERBERGER.)*

Pkg chemmacros chemmacros is patched for use by lwarp.


**for HTML output:** 1 \LWR@ProvidesPackagePass{chemmacros}[2017/08/28]

SVG file hashing assumes that the relevant options are constant for the entire document.

§ 180.1 **Changes to the user's document**

 **\makepolymerdelims** When using \makepolymerdelims, enclose the entire expression inside a polymerdelims environment, such as (from the chemmacros manual):

```
\begin{polymerdelims}
\chemfig{-[@{op,.75}]CH_2-CH(-[6]Cl)-[@{cl,0.25}]}
\makepolymerdelims{5pt}[27pt]{op}{cl}
\end{polymerdelims}
```

 **redox reactions** Redox reactions must be enclosed inside a redoxreaction environment. For print output, extra space must be included above and/or below the result, so they are declared as arguments to the environment, instead of being manually entered as per the chemmacros manual. For HTML output, the extra space is ignored and a lateximage is used instead.

```
\begin{redoxreaction}{7mm}{7mm}
\OX{a,Na} \rightarrow \OX{b,Na}\pch{redox(a,b){oxidation}}
\end{redoxreaction}
```

§ 180.2 **Code**§ 180.3 **Loading modules**

Patching chemmacros modules must be done `\AtBeginDocument`, since modules are invoked by the user in the preamble, and each patch is only done if the module is loaded.

```

2 \ExplSyntaxOn
3
4 \newcommand{\ifchemmacrosmoduleloaded}[1]{%
5 \ifl@aded{\c__chemmacros_module_extension_tl}{\c__chemmacros_module_prefix_tl.#1}%
6 }
7
8 \ExplSyntaxOff

```

§ 180.4 **New environments**

`\makepolymerdelims` and redox reactions must be enclosed in a `lateximage` during HTML output. These environments are provided here in HTML mode, and in the `lwarp` core in print mode, as a high-level semantic syntax which automatically embeds the contents in a `lateximage` with an appropriate `alt` tag.

Env `polymerdelims`

```

9 \DeclareDocumentEnvironment{polymerdelims}{}
10 {\begin{lateximage}[-chemmacros- polymer]}
11 {\end{lateximage}}

```

Env `redoxreaction`     $\{\langle space\ above\rangle\}\{\langle space\ below\rangle\}$

For HTML output, the above and below space is ignored, and a `lateximage` is used instead. For the print output version, see section 87.

```

12 \DeclareDocumentEnvironment{redoxreaction}{m m}
13 {\begin{lateximage}[-chemmacros- redoxreaction]}
14 {\end{lateximage}}

```

```

15 \ExplSyntaxOn

```

§ 180.5 **Acid-base**

```

16 \AtBeginDocument{
17 \@ifchemmacrosmoduleloaded{acid-base}{
18 \PackageInfo{lwarp}{Patching~chemmacros~module~acid-base}
19
20 \cs_gset_protected:Npn \chemmacros_p:n #1
21 {
22 \begingroup
23 \boolfalse{mathjax}
24 \LWR@subsingledollar*{
25 \textbackslash}p\{\LWR@HTMLsanitize{#1}\}
26 }{
27 chemmacrosp\protect\LWR@HTMLsanitize{\detokenize\expandafter{#1}}%

```

```

28 }{
29 \group_begin:
30 \mbox
31 {
32 \chemmacros_p_style:n {p}
33 \ensuremath {#1}
34 }
35 \group_end:
36 }
37 \endgroup
38 }
39
40 \RenewDocumentCommand \pH {} {
41 \begingroup
42 \boolfalse{mathjax}
43 \LWR@subsingledollar*{\textbackslash{}}pH}{chemmacros}{
44 \chemmacros_p:n { \chemmacros_chemformula:n {H} }
45 }
46 \endgroup
47 }
48
49 \RenewDocumentCommand \pOH {} {
50 \begingroup
51 \boolfalse{mathjax}
52 \LWR@subsingledollar*{\textbackslash{}}pOH}{chemmacros}{
53 \chemmacros_p:n { \chemmacros_chemformula:n {OH} }
54 }
55 \endgroup
56 }
57
58 \RenewDocumentCommand \pKa {O{}}
59 {
60 \begingroup
61 \boolfalse{mathjax}
62 \LWR@subsingledollar*{\textbackslash{}}pKa{[]#1[]}{chemmacros #1}{
63 \chemmacros_p:n
64 {
65 \Ka \ifblank {#1} {}
66 { {} \c_math_subscript_token { \chemmacros_bold:n {#1} } }
67 }
68 }
69 \endgroup
70 }
71
72 \RenewDocumentCommand \pKb {O{}}
73 {
74 \begingroup
75 \boolfalse{mathjax}
76 \LWR@subsingledollar*{\textbackslash{}}pKb{[]#1[]}{chemmacros #1}{
77 \chemmacros_p:n
78 {
79 \Kb \ifblank {#1} {}
80 { {} \c_math_subscript_token { \chemmacros_bold:n {#1} } }
81 }
82 }

```

```

83 \endgroup
84 }
85
86 \LetLtxMacro\LWR@chemmacros@origKa\Ka
87 \renewcommand*{\Ka}{%
88 \begingroup
89 \boolfalse{mathjax}
90 \LWR@subsingledollar*{\textbackslash{}Ka}{chemmacros}{%
91 \LWR@chemmacros@origKa%
92 }%
93 \endgroup
94 }
95
96 \LetLtxMacro\LWR@chemmacros@origKb\Kb
97 \renewcommand*{\Kb}{%
98 \begingroup
99 \boolfalse{mathjax}
100 \LWR@subsingledollar*{\textbackslash{}Kb}{chemmacros}{%
101 \LWR@chemmacros@origKb%
102 }%
103 \endgroup
104 }
105
106 \LetLtxMacro\LWR@chemmacros@origKw\Kw
107 \renewcommand*{\Kw}{%
108 \begingroup
109 \boolfalse{mathjax}
110 \LWR@subsingledollar*{\textbackslash{}Kw}{chemmacros}{
111 \LWR@chemmacros@origKw
112 }
113 \endgroup
114 }
115
116 }{}% \@ifchemmacrosmoduleloaded
117 }% AtBeginDocument

```

## § 180.6 Charges

```

118 \AtBeginDocument{
119 \@ifchemmacrosmoduleloaded{charges}{
120 \PackageInfo{lwarp}{Patching~chemmacros~module~charges}
121
122 \cs_gset_protected:Npn \fplus {
123 \begingroup
124 \boolfalse{mathjax}
125 \LWR@subsingledollar*{\textbackslash{}fplus}{chemmacros}
126 { \LWR@origensuredmath{\chemformula_fplus:} }
127 \endgroup
128 }
129 \cs_gset_protected:Npn \fminus {
130 \begingroup
131 \boolfalse{mathjax}
132 \LWR@subsingledollar*{\textbackslash{}fminus}{chemmacros}
133 { \LWR@origensuredmath{\chemformula_fminus:} }
134 \endgroup
135 }

```

```

136
137 }{}% \@ifchemmacrosmoduleloaded
138 }% AtBeginDocument

```

## § 180.7 Nomenclature

```

139 \AtBeginDocument{
140 \@ifchemmacrosmoduleloaded{nomenclature}{
141 \PackageInfo{lwarp}{Patching~chemmacros~module~nomenclature}
142
143 \cs_gset_protected:Npn \chemmacros_charge:n #1
144 {
145 \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}{
146 {\chemmacros_chemformula:n { }^{#1} }}
147 {
148 \ifmmode
149 {\chemmacros_chemformula:n { }^{#1} }}
150 \else
151 { \textsuperscript{\ensuremath{#1}} }
152 \fi
153 }
154 }
155
156
157 \LetLtxMacro\LWR@chemmacros@origchemprime\chemprime
158
159 \protected\def\chemprime { \HTMLUnicode{2032} }
160
161 \appto\LWR@restoreorigformatting{%
162 \LetLtxMacro\chemprime\LWR@chemmacros@origchemprime%
163 }
164
165 \ChemCompatibilityFrom{5.8}
166 \cs_gset_protected:Npn __chemmacros_cip:n #1
167 {
168 \tl_set:Nn \l__chemmacros_tmpa_tl {#1}
169 \int_step_inline:nnnn {0} {1} {9}
170 {
171 \tl_replace_all:Nnn \l__chemmacros_tmpa_tl
172 {##1}
173 { { \l__chemmacros_cip_number_tl ##1} }
174 }
175 {
176 \l__chemmacros_cip_inner_tl
177 \LWR@textcurrentcolor{\LWR@textcurrentfont{% lwarp
178 \l__chemmacros_tmpa_tl
179 }}% lwarp
180 }
181 \EndChemCompatibility
182
183 \RenewDocumentCommand \Sconf { 0{S} } {
184 \begin{lateximage}[\textbackslash]{Sconf{[]#1{}}]*
185 \chemmacros_sconf:n {#1}
186 \end{lateximage}
187 }

```

```
187
188 \RenewDocumentCommand \Rconf { O{R} } {
189 \begin{lateximage}[\textbackslash{}Rconf{[]#1{}}]*
190 \chemmacros_rconf:n {#1}
191 \end{lateximage}
192 }

193 \cs_gset_protected:Npn \chemmacros_hapto:n #1
194 {
195 \begingroup
196 \boolfalse{mathjax}
197 \LWR@subsingledollar*{\textbackslash{}hapto\{#1\}}{\chemmacros}{
198 \chemmacros_coordination_symbol:nnnn
199 { \l__chemmacros_coord_use_hyphen_bool }
200 {
201 \chemmacros_if_compatibility:nnTF {>} {5.7}
202 { \c_true_bool }
203 { \c_false_bool }
204 }
205 { \chemeta }
206 {#1}
207 }
208 \endgroup
209 }
210
211 \cs_gset_protected:Npn \chemmacros_dento:n #1
212 {
213 \begingroup
214 \boolfalse{mathjax}
215 \LWR@subsingledollar*{\textbackslash{}dento\{#1\}}{\chemmacros}{
216 \chemmacros_coordination_symbol:nnnn
217 { \l__chemmacros_coord_use_hyphen_bool }
218 {
219 \chemmacros_if_compatibility:nnTF {>} {5.7}
220 { \c_true_bool }
221 { \c_false_bool }
222 }
223 { \chemkappa }
224 {#1}
225 }
226 \endgroup
227 }
228
229 \cs_gset_protected:Npn \chemmacros_bridge:n #1
230 {
231 \begingroup
232 \boolfalse{mathjax}
233 \LWR@subsingledollar*{\textbackslash{}bridge\{#1\}}{\chemmacros}{
234 \chemmacros_coordination_symbol:nnnn
235 { \l__chemmacros_coord_use_hyphen_bool }
236 { \l__chemmacros_bridge_super_bool }
237 { \chemmu }
238 {#1}
239 }
240 \endgroup
241 }
```

```

242 }{}% \@ifchemmacrosmoduleloaded
243 }% AtBeginDocument

```

## § 180.8 Particles

```

244 \AtBeginDocument{
245 \@ifchemmacrosmoduleloaded{particles}{
246 \PackageInfo{lwarp}{Patching~chemmacros~module~particles}
247
248 \cs_gset_protected:Npn \chemmacros_declare_nucleophile:Nn #1#2
249 {
250 \cs_set_protected:cpn {__chemmacros_ \chemmacros_remove_backslash:N #1:}
251 {
252 \bool_if:NTF \l__chemmacros_nucleophile_elpair_bool
253 {
254 \chemmacros_elpair:n { #2 }
255 \chemmacros_if_compatibility:nnT {>=} {5.3}
256 { \skip_horizontal:N \l__chemmacros_nucleophile_dim }
257 \chemmacros_chemformula:n { {}^{ - } }
258 }
259 { \chemmacros_chemformula:n { #2^{ - } } }
260 }
261 \DeclareDocumentCommand #1 {o}
262 {%
263 \begin{lateximage}%
264 \group_begin:%
265 \IfNoValueF {##1}%
266 { \chemmacros_set_keys:nn {particles} {##1} }%
267 \use:c {__chemmacros_ \chemmacros_remove_backslash:N #1:}%
268 \group_end:%
269 \end{lateximage}%
270 }
271 }
272
273 \RenewChemNucleophile \Nuc {Nu}
274 \RenewChemNucleophile \ba {ba}
275
276 }{}% \@ifchemmacrosmoduleloaded
277 }% AtBeginDocument

```

## § 180.9 Phases

```

278 \AtBeginDocument{
279 \@ifchemmacrosmoduleloaded{phases}{
280 \PackageInfo{lwarp}{Patching~chemmacros~module~phases}
281
282 \cs_undefine:N \chemmacros_phase:n
283 \cs_new_protected:Npn \chemmacros_phase:n #1
284 {
285 \mode_leave_vertical:
286
287 \bool_if:NTF \l__chemmacros_phases_sub_bool
288 {
289 \ifnumequal{\value{LWR@lateximagedepth}}{0}

```

```

289 {
290 \textsubscript{ (#1) }
291 }
292 {
293 \chemformula_subscript:n { (#1) }
294 }
295 }
296 {
297 \skip_horizontal:N \l__chemmacros_phases_space_dim
298 \chemmacros_text:n { (#1) }
299 }
300 }
301
302 }{}% \@ifchemmacrosmoduleloaded
303 }% AtBeginDocument

```

## § 180.10 Mechanisms

```

304 \AtBeginDocument{
305 \@ifchemmacrosmoduleloaded{mechanisms}{
306 \PackageInfo{lwarp}{Patching~chemmacros~module~mechanisms}
307
308 \chemmacros_define_keys:nn {textmechanisms}
309 {
310 type .choice: ,
311 type / .code:n =
312 {
313 __chemmacros_set_mechanisms:nnn { S }
314 {
315 \textsubscript{N}
316 }
317 { }
318 } ,
319 type / 1 .code:n =
320 {
321 __chemmacros_set_mechanisms:nnn { S }
322 {
323 \textsubscript{N}
324 1
325 }
326 { }
327 } ,
328 type / 2 .code:n =
329 {
330 __chemmacros_set_mechanisms:nnn { S }
331 {
332 \textsubscript{N}
333 2
334 }
335 { }
336 } ,
337 type / se .code:n =
338 {
339 __chemmacros_set_mechanisms:nnn { S }
340 {
341 \textsubscript{E}

```

```

342 }
343 { }
344 } ,
345 type / 1e .code:n =
346 {
347 __chemmacros_set_mechanisms:nnn { S }
348 {
349 \textsubscript{E}
350 1
351 }
352 { }
353 } ,
354 type / 2e .code:n =
355 {
356 __chemmacros_set_mechanisms:nnn { S }
357 {
358 \textsubscript{E}
359 2
360 }
361 { }
362 } ,
363 type / ar .code:n =
364 {
365 __chemmacros_set_mechanisms:nnn { S }
366 {
367 \textsubscript{E}
368 }
369 { Ar - }
370 } ,
371 type / e .code:n =
372 { __chemmacros_set_mechanisms:nnn { E } { } { } } ,
373 type / e1 .code:n =
374 { __chemmacros_set_mechanisms:nnn { E } { 1 } { } } ,
375 type / e2 .code:n =
376 { __chemmacros_set_mechanisms:nnn { E } { 2 } { } } ,
377 type / cb .code:n =
378 {
379 __chemmacros_set_mechanisms:nnn { E }
380 {
381 1
382 \textsubscript{cb}
383 }
384 { }
385 } ,
386 type .default:n =
387 }
388
389 \cs_gset_protected:Npn \chemmacros_mechanisms:n #1
390 {
391 \tl_if_blank:nTF {#1}
392 { \chemmacros_set_keys:nn {textmechanisms} { type } }
393 { \chemmacros_set_keys:nn {textmechanisms} { type = #1 } }
394 \mbox
395 {
396 \tl_use:N \l__chemmacros_mechanisms_ar_tl

```

```

397 \tl_use:N \l__chemmacros_mechanisms_type_tl
398 \tl_use:N \l__chemmacros_mechanisms_mol_tl
399 }
400 }
401
402 \appto\LWR@restoreorigformatting{%
403 \cs_set_protected:Npn \chemmacros_mechanisms:n #1%
404 {%
405 \tl_if_blank:nTF {#1}%
406 { \chemmacros_set_keys:nn {mechanisms} { type } }%
407 { \chemmacros_set_keys:nn {mechanisms} { type = #1 } }%
408 \mbox%
409 {%
410 \tl_use:N \l__chemmacros_mechanisms_ar_tl%
411 \tl_use:N \l__chemmacros_mechanisms_type_tl%
412 \tl_use:N \l__chemmacros_mechanisms_mol_tl%
413 }%
414 }%
415 }
416
417 }{}% \@ifchemmacrosmoduleloaded
418 }% AtBeginDocument

```

### § 180.11 Newman

```

419 \AtBeginDocument{
420 \@ifchemmacrosmoduleloaded{newman}{
421 \PackageInfo{lwarp}{Patching~chemmacros~module~newman}
422
423 \RenewDocumentCommand \newman {od()m}%
424 {
425 \IfValueTF{#2}
426 {\begin{lateximage}[\textbackslash{}newman(#2)\{#3\}]*}
427 {\begin{lateximage}[\textbackslash{}newman\{#3\}]*}
428 \group_begin:
429 \IfNoValueF {#1} { \chemmacros_set_keys:nn {newman} {#1} }
430 \IfNoValueTF {#2}
431 { \chemmacros_newman:nn { } {#3} }
432 { \chemmacros_newman:nn {#2} {#3} }
433 \group_end:
434 \end{lateximage}
435 }%
436
437 }{}% \@ifchemmacrosmoduleloaded
438 }% AtBeginDocument

```

### § 180.12 Orbital

```

439 \AtBeginDocument{
440 \@ifchemmacrosmoduleloaded{orbital}{
441 \PackageInfo{lwarp}{Patching~chemmacros~module~orbital}
442
443 \RenewDocumentCommand \orbital {om}
444 {
445 \IfValueTF{#1}

```

```

446 {
447 \begin{lateximage}[%
448 \textbackslash{}orbital{\LWR@HTMLsanitize{#1}{}}\{#2\}%
449]*[][\margin-left: 1em ; margin-right: 1em]
450 }
451 {
452 \begin{lateximage}[%
453 \textbackslash{}orbital\{#2\}%
454]*[][\margin-left: 1em ; margin-right: 1em]
455 }
456 \group_begin:
457 \chemmacros_set_keys:nn {orbital/type} {#2}
458 \IfNoValueTF {#1}
459 { \chemmacros_orbital:n { } }
460 { \chemmacros_orbital:n {#1} }
461 \group_end:
462 \end{lateximage}
463 }
464
465 }{}% \@ifchemmacrosmoduleloaded
466 }% AtBeginDocument

```

### § 180.13 Reactions

```

\chemmacros_declare_reaction_env {<chem>} {<math>} {<args number>} {<argument list ({#2}{#3}...)}

467 \AtBeginDocument{
468 \@ifchemmacrosmoduleloaded{reactions}{
469 \PackageInfo{lwarp}{Patching~chemmacros~module~reactions}
470 }
471 \cs_gset_protected:Npn \chemmacros_declare_reaction_env:nnnn #1#2#3#4
472 {
473 \exp_args:Nnx \DeclareDocumentEnvironment {#1} { 0{} } \prg_replicate:nn {#3+0} {m} {
474 {
475 \boolfalse{mathjax}%
476 \ifvoid\LWR@ThisAltText{%
477 \ThisAltText{-chemmacros~reaction}%
478 }{}%
479 \chemmacros_add_reaction_description:n {##1}
480 __chemmacros_begin_reaction:
481 \chemmacros_reaction_read:nnw {#2} {#4}
482 }
483 {
484 __chemmacros_end_reaction:
485 \gdef\LWR@ThisAltText{%
486 }
487 }
488 }
489 \cs_generate_variant:Nn \chemmacros_declare_reaction_env:nnnn {nnnV}
490 }
491 \RenewChemReaction {reaction} {equation}
492 \RenewChemReaction {reaction*} {equation*}
493 \RenewChemReaction {reactions} {align}
494 \RenewChemReaction {reactions*} {align*}
495 }{}% \@ifchemmacrosmoduleloaded

```

```
496}% AtBeginDocument
```

## § 180.14 Redox

```
497 \AtBeginDocument{
498 \ifchemmacrosmoduleloaded{redox}{
499 \PackageInfo{lwarp}{Patching~chemmacros~module~redox}
500
501 \NewDocumentCommand \LWR@chemmacros@ox { s m >{\SplitArgument{1}{,}}m }
502 {
503 \IfBooleanTF {#1}
504 { \chemmacros_ox:nnnn {#1} {#2} #3 }
505 { \chemmacros_ox:nnnn { } {#2} #3 }
506 }
507
508 \RenewDocumentCommand \ox { s O{ } m }
509 {
510 \begingroup
511 \boolfalse{mathjax}
512 \IfBooleanTF {#1}
513 {
514 \LWR@subsingledollar*{% yes hash
515 \textbackslash{}ox*\{\LWR@HTMLsanitize{#3}\}% alt
516 }{%
517 star \protect\LWR@HTMLsanitize{\detokenize\expandafter{#2}}%
518 }{%
519 \LWR@chemmacros@ox* {#2} {#3}% contents
520 }%
521 }
522 {
523 \LWR@subsingledollar*{% yes hash
524 \textbackslash{}ox*\{\LWR@HTMLsanitize{#3}\}% alt
525 }{%
526 \protect\LWR@HTMLsanitize{\detokenize\expandafter{#2}}%
527 }{%
528 \LWR@chemmacros@ox {#2} {#3}% contents
529 }%
530 }
531 \endgroup
532 }
533
534 }{}% \ifchemmacrosmoduleloaded
535}% AtBeginDocument
```

## § 180.15 Scheme

Fix for chemmacros as of v5.8b, when using newfloat and babel:

```
536 \AtBeginDocument{
537 \ifchemmacrosmoduleloaded{scheme}{
538 \PackageInfo{lwarp}{Patching~chemmacros~module~scheme}
539
540 \ifdefstring{\schemename}{los}{
541 \SetupFloatingEnvironment{scheme}{
542 name = \chemmacros_translate:n {scheme-name}
```

```

543 }
544 }{}
545
546 }{}% \@ifchemmacrosmoduleloaded
547 }% AtBeginDocument

```

## § 180.16 Spectroscopy

```

548 \AtBeginDocument{
549 \@ifchemmacrosmoduleloaded{spectroscopy}{
550 \PackageInfo{lwarp}{Patching~chemmacros~module~spectroscopy}
551
552 \ChemCompatibilityTo{5.8}
553 \cs_gset_protected:Npn __chemmacros_nmr_base:nn #1#2
554 {
555 \tl_if_blank:VF \g__chemmacros_nmr_element_coupled_tl
556 {
557 \tl_put_left:Nn \g__chemmacros_nmr_element_coupled_tl { \{ }
558 \tl_put_right:Nn \g__chemmacros_nmr_element_coupled_tl { \} }
559 }
560 \tl_put_left:Nn \g__chemmacros_nmr_element_coupled_tl {#2}
561 % \chemmacros_chemformula:n { ^{#1} }
562 #1
563 \bool_if:NTF \l__chemmacros_nmr_parse_bool
564 { \chemformula_ch:nV {} } \g__chemmacros_nmr_element_coupled_tl }
565 { \chemmacros_chemformula:V \g__chemmacros_nmr_element_coupled_tl }
566 \tl_use:N \l__chemmacros_nmr_element_method_connector_tl
567 \tl_use:N \l__chemmacros_nmr_method_tl
568 }
569 \EndChemCompatibility
570 \ChemCompatibilityFrom{5.8}
571 \cs_gset_protected:Npn __chemmacros_nmr_base:nn #1#2
572 {
573 \group_begin:
574 \tl_use:N \l__chemmacros_nmr_base_format_tl
575 \tl_if_blank:VF \g__chemmacros_nmr_element_coupled_tl
576 {
577 \tl_put_left:Nn \g__chemmacros_nmr_element_coupled_tl { \{ }
578 \tl_put_right:Nn \g__chemmacros_nmr_element_coupled_tl { \} }
579 }
580 \tl_put_left:Nn \g__chemmacros_nmr_element_coupled_tl {#2}
581 % \chemmacros_chemformula:n { ^{#1} }
582 #1
583 \tl_if_blank:VF \g__chemmacros_nmr_element_coupled_tl
584 {
585 \bool_if:NTF \l__chemmacros_nmr_parse_bool
586 { \chemformula_ch:nV {} } \g__chemmacros_nmr_element_coupled_tl }
587 { \chemmacros_chemformula:V \g__chemmacros_nmr_element_coupled_tl }
588 }
589 \tl_use:N \l__chemmacros_nmr_element_method_connector_tl
590 \tl_use:N \l__chemmacros_nmr_method_tl
591 \group_end:
592 }
593 \EndChemCompatibility
594

```

```

595
596 \cs_gset_protected:Npn \chemmacros_nmr_position:n #1
597 {
598 \chemmacros_chemformula:x
599 {
600 \exp_not:V \g__chemmacros_nmr_element_tl
601 \bool_if:NF \l__chemmacros_nmr_position_side_bool
602 {
603 \tl_if_eq:NnTF \l__chemmacros_nmr_position_tl {^}% lwarp
604 { \textsuperscript{\exp_not:n { {#1} }} }% lwarp
605 { \textsubscript{\exp_not:n { {#1} }} }% lwarp
606 % \exp_not:V \l__chemmacros_nmr_position_tl
607 % \exp_not:n { {#1} }
608 }
609 }
610 \bool_if:NT \l__chemmacros_nmr_position_side_bool
611 {
612 \tl_use:N \l__chemmacros_nmr_position_tl
613 __chemmacros_nmr_position:n {#1}
614 }
615 }
616
617 \cs_gset_protected:Npn __chemmacros_nmr_coupling:w (#1;#2)
618 {
619 \tl_set:Nn \l__chemmacros_nmr_coupling_bonds_tl
620 {
621 \l__chemmacros_nmr_coupling_bonds_pre_tl
622 #1
623 \l__chemmacros_nmr_coupling_bonds_post_tl
624 }
625 \bool_if:NTF \l__chemmacros_nmr_coupling_nuclei_sub_bool
626 {
627 \tl_set:Nn \l__chemmacros_nmr_coupling_nuclei_tl
628 {
629 % \c_math_subscript_token
630 \textsubscript% lwarp
631 {
632 \l__chemmacros_nmr_coupling_nuclei_pre_tl
633 \chemmacros_chemformula:n {#2}
634 \l__chemmacros_nmr_coupling_nuclei_post_tl
635 }
636 }
637 }
638 {
639 \tl_set:Nn \l__chemmacros_nmr_coupling_nuclei_tl
640 {
641 \l__chemmacros_nmr_coupling_nuclei_pre_tl
642 \chemmacros_chemformula:n {#2}
643 \l__chemmacros_nmr_coupling_nuclei_post_tl
644 }
645 }
646 __chemmacros_nmr_coupling_aux_i:w
647 }
648 \AfterEndPreamble{% After \AtBeginDocument
649 % \NMR{<num>,<elem>}{<num>,<unit>}[<solvent>] ALL arguments are optional

```

```

650 % \NMR* same but without ": δ" at end
651 \cs_gset_protected:Npn \chemmacros_nmr:nnnn #1#2#3#4
652 {
653 \bool_if:NT \l__chemmacros_nmr_list_bool { \item \scan_stop: }
654 \group_begin:

655 \mode_leave_vertical:

656 \bool_set_false:N \l__chemmacros_nmr_frequency_bool
657 \bool_set_false:N \l__chemmacros_nmr_solvent_bool
658 \tl_if_empty:nF {#3}
659 { \bool_set_true:N \l__chemmacros_nmr_frequency_bool }
660 \tl_if_empty:nF {#4}
661 { \bool_set_true:N \l__chemmacros_nmr_solvent_bool }
662 \bool_if:nT
663 {
664 \l__chemmacros_nmr_frequency_bool
665 ||
666 \l__chemmacros_nmr_solvent_bool
667 }
668 { \bool_set_true:N \l__chemmacros_nmr_delimiters_bool }
669 \bool_if:nT
670 {
671 \l__chemmacros_nmr_frequency_bool
672 &&
673 \l__chemmacros_nmr_solvent_bool
674 }
675 { \bool_set_true:N \l__chemmacros_nmr_comma_bool }
676 \tl_if_empty:nTF {#2}
677 {
678 __chemmacros_nmr_nucleus:VV
679 \l__chemmacros_nmr_isotope_default_tl
680 \l__chemmacros_nmr_element_default_tl
681 }
682 { __chemmacros_nmr_nucleus:w #2 \q_stop }
683 \mode_if_math:TF
684 {
685 \text
686 {
687 \group_begin:
688 \tl_use:N \l__chemmacros_nmr_format_tl
689 \LWR@textcurrentcolor{\LWR@textcurrentfont{% lwarp
690 __chemmacros_nmr_base:VV
691 \g__chemmacros_nmr_isotope_tl
692 \g__chemmacros_nmr_element_tl
693 \bool_if:NT \l__chemmacros_nmr_delimiters_bool
694 { ~ (}
695 \bool_if:NT \l__chemmacros_nmr_frequency_bool
696 { __chemmacros_nmr_frequency:n {#3} }
697 \bool_if:NT \l__chemmacros_nmr_comma_bool
698 { , ~ }
699 \bool_if:NT \l__chemmacros_nmr_solvent_bool
700 { \chemmacros_chemformula:n {#4} }
701 \bool_if:NT \l__chemmacros_nmr_delimiters_bool
702 {) }

```

```

703 \tl_if_blank:nT {#1} {:~}
704 }}% lwarp
705 \group_end:
706 }
707 \tl_if_blank:nT {#1}
708 {
709 \delta
710 \text { \l__chemmacros_nmr_delta_tl }
711 \bool_if:NT \l__chemmacros_nmr_use_equal_bool {=}
712 }
713 }
714 {
715 \group_begin:
716 \tl_use:N \l__chemmacros_nmr_format_tl
717 \LWR@textcurrentcolor{\LWR@textcurrentfont{% lwarp
718 __chemmacros_nmr_base:VV
719 \g__chemmacros_nmr_isotope_tl
720 \g__chemmacros_nmr_element_tl
721 \bool_if:NT \l__chemmacros_nmr_delimiters_bool
722 {~()}
723 \bool_if:NT \l__chemmacros_nmr_frequency_bool
724 { __chemmacros_nmr_frequency:n {#3} }
725 \bool_if:NT \l__chemmacros_nmr_comma_bool
726 {,~}
727 \bool_if:NT \l__chemmacros_nmr_solvent_bool
728 {
729 \bool_if:NTF \l__chemmacros_nmr_parse_bool

730 % { \chemformula_ch:nn { } {#4} }% original
731 {\ch{#4}}% lwarp
732 {#4}
733 }
734 \bool_if:NT \l__chemmacros_nmr_delimiters_bool
735 {}
736 }}% lwarp
737 \tl_if_blank:nT {#1} {:}
738 \group_end:
739 \tl_if_blank:nT {#1}
740 {
741 \tl_use:N \c_space_tl
742 \c_math_toggle_token
743 \delta
744 \c_math_toggle_token
745 \l__chemmacros_nmr_delta_tl
746 \bool_if:NT \l__chemmacros_nmr_use_equal_bool {~=}
747 }
748 }
749 \group_end:
750 }
751}% AfterEndPreamble
752
753
754 \RenewDocumentCommand \chemmacros_data:w { smo }
755 {
756 \bool_if:NT \l__chemmacros_nmr_list_bool { \item }

```

```

757 {
758 % \tl_use:N \l__chemmacros_nmr_format_tl #2
759 \tl_use:N \l__chemmacros_nmr_format_tl
760 \LWR@textcurrentcolor{\LWR@textcurrentfont{% lwarp
761 #2
762 \IfNoValueF {#3} { ~ (#3) }
763 \IfBooleanT {#1} { \bool_if:NT \l__chemmacros_nmr_use_equal_bool { : } }
764 }}% lwarp
765 }
766 \IfBooleanF {#1} { \bool_if:NT \l__chemmacros_nmr_use_equal_bool { ~ = } }
767 }
768
769 }{}% \@ifchemmacrosmoduleloaded
770}% AtBeginDocument

```

### § 180.17 Thermodynamics

```

771 \AtBeginDocument{
772 \@ifchemmacrosmoduleloaded{thermodynamics}{
773 \PackageInfo{lwarp}{Patching~chemmacros~module~thermodynamics}
774
775 \cs_gset_protected:Npn \chemmacros_state:nn #1#2
776 {
777 \group_begin:
778 \boolfalse{mathjax}
779 \chemmacros_set_keys:nn {thermodynamics} {#1}
780 \LWR@subsingledollar*{% yes hashing
781 \textbackslash{}state{\LWR@HTMLsanitize{#2}}}% alt
782 }{%
783 chemmacros_state% add'l hashing
784 #1% options
785 LSP \tl_use:N \l__chemmacros_state_sp_left_tl% super/subscripts
786 LSB \tl_use:N \l__chemmacros_state_sb_left_tl
787 RSP \tl_use:N \l__chemmacros_state_sp_right_tl
788 RSB \tl_use:N \l__chemmacros_state_sb_right_tl
789 }
790 {
791 \LWR@origensuredmath{
792 \chemmacros_text:V \l__chemmacros_state_pre_tl
793 \c_math_superscript_token
794 { \chemmacros_text:V \l__chemmacros_state_sp_left_tl }

```

Only add the subscripts if they are being used. This avoids causing an incorrect depth, as the empty subscript will be measured by T<sub>E</sub>X but cropped out by *pdfcrop*.

```

795 \tl_if_empty:NTF \l__chemmacros_state_sb_left_tl
796 {}
797 {
798 \c_math_subscript_token
799 { \chemmacros_text:V \l__chemmacros_state_sb_left_tl }
800 }
801 #2
802 \c_math_superscript_token
803 { \chemmacros_text:V \l__chemmacros_state_sp_right_tl }
804 \tl_if_empty:NTF \l__chemmacros_state_sb_right_tl

```

```

805 {}
806 {
807 \c_math_subscript_token
808 { \chemmacros_text:V \l__chemmacros_state_sb_right_tl }
809 }
810 \chemmacros_text:V \l__chemmacros_state_post_tl
811 }
812 }
813 \group_end:
814 }
815 \cs_generate_variant:Nn \chemmacros_state:nn { nV }
816
817 \cs_gset_protected:Npn \chemmacros_declare_state:Nn #1#2
818 {
819 \chemmacros_define_keys:xn
820 {thermodynamics/\chemmacros_remove_backslash:N #1}
821 {
822 pre .meta:nn = {chemmacros/thermodynamics} { pre = ##1 } ,
823 post .meta:nn = {chemmacros/thermodynamics} { post = ##1 } ,
824 superscript-left .meta:nn = {chemmacros/thermodynamics} { superscript-left = ##1 } ,
825 superscript-right .meta:nn = {chemmacros/thermodynamics} { superscript-right = ##1 } ,
826 superscript .meta:n = { superscript-right = ##1 } ,
827 subscript-left .meta:nn = {chemmacros/thermodynamics} { subscript-left = ##1 } ,
828 subscript-right .meta:nn = {chemmacros/thermodynamics} { subscript-right = ##1 } ,
829 subscript .meta:n = { subscript-left = ##1 } ,
830 subscript-pos .choices:nn =
831 { left , right }
832 { \tl_set_eq:NN \l__chemmacros_state_sb_pos_tl \l_keys_choice_tl } ,
833 symbol .tl_set:N = \l__chemmacros_state_symbol_tl ,
834 unit .tl_set:N = \l__chemmacros_state_unit_tl
835 }
836 \DeclareDocumentCommand #1 { sO{}D(){}m }
837 {
838 \group_begin:
839 \chemmacros_set_keys:xn
840 {thermodynamics/\chemmacros_remove_backslash:N #1}
841 {#2}
842 \tl_if_blank:nF {##3}
843 {
844 \chemmacros_set_keys:nx {thermodynamics}
845 { subscript-\l__chemmacros_state_sb_pos_tl = \exp_not:n {##3} }
846 }
847 \chemmacros_state:nV {##2} \l__chemmacros_state_symbol_tl
848 \chemmacros_set_keys_groups:nnn {thermodynamics} {variables} {##2}
849 \IfBooleanF {##1} { = ~ \SI {##4} { \l__chemmacros_state_unit_tl } }
850 \group_end:
851 }
852 }

```

The pre-existing macros are redefined with the new definition:

```

853 \RenewChemState \enthalpy { symbol = H , unit = \kilo\joule\per\mole }
854 \RenewChemState \entropy { symbol = S , unit = \joule\per\kelvin\per\mole , pre = }
855 \RenewChemState \gibbs { symbol = G , unit = \kilo\joule\per\mole }
856

```

```

857 }{}% \@ifchemmacrosmoduleloaded
858 }% AtBeginDocument

859 \ExplSyntaxOff

```

---

File 78 **lwarp-chemnum.sty**

§ 181      Package **chemnum**

(Emulates or patches code by CLEMENS NIEDERBERGER.)

Pkg    chemnum    chemnum is patched for use by lwarp.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{chemnum}[2016/04/14]

2 \ExplSyntaxOn
3
4 \cs_gset_protected:Npn \chemnum_compound_write:n #1
5 {
6 \chemnum_get_compound_property:nn {#1} {pre-main-label-code}
7 \group_begin:
8 \bool_if:NTF \l__chemnum_compound_local_bool
9 { \l__chemnum_local_label_format_tl }
10 { \chemnum_get_compound_property:nn {#1} {label-format} }
11 {
12 \LWR@textcurrentfont{
13 \chemnum_get_compound_property:nn {#1} {counter-representation}
14 }
15 }
16 \group_end:
17 \chemnum_get_compound_property:nn {#1} {post-main-label-code}
18 }
19
20 \cs_gset_protected:Npn \chemnum_subcompound_write:nn #1#2
21 {
22 \group_begin:
23 \bool_if:NTF \l__chemnum_compound_local_bool
24 { \l__chemnum_local_label_format_tl }
25 { \chemnum_get_compound_property:nn {#1} {label-format} }
26 {
27 \LWR@textcurrentfont{
28 \chemnum_get_subcompound_property:nnn {#1} {#2}
29 {counter-representation}
30 }
31 }
32 \group_end:
33 }
34
35 \ExplSyntaxOff

```

File 79 **lwarp-chkfloat.sty**§ 182 Package **chkfloat**

Pkg chkfloat chkfloat is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{chkfloat}[2012/08/19]

File 80 **lwarp-chngpage.sty**§ 183 Package **chngpage**

*(Emulates or patches code by PETER WILSON.)*

Pkg chngpage chngpage is ignored.

**for HTML output:** Discard all options for lwarp-chngpage:

```
1 \LWR@ProvidesPackageDrop{chngpage}[2009/10/20]
2 \LWR@origRequirePackage{lwarp-changepage}
```

File 81 **lwarp-cite.sty**§ 184 Package **cite**

*(Emulates or patches code by DONALD ARSENEAU.)*

Pkg cite cite is patched for use by lwarp.

**for HTML output:** 1 \LWR@ProvidesPackagePass{cite}[2015/02/27]

For the [super] option, the \kern must be removed:

```
2 \def\LWRCT@biblabel#1{\@citess{#1}\kern-\labelsep\,}
3
4 \ifdefstrequal{\@biblabel}{\LWRCT@biblabel}
5 {
6 \def\@biblabel#1{\@citess{#1}}
7 }{}
```

For the [super] option, \textsuperscript is used instead of math superscript:

```
8 \def\@citess#1{#1}
9
10 \DeclareDocumentCommand\citepunct{}{\, \, \relax}
```

---

File 82 **lwarp-citeref.sty**

§ 185      Package **citeref**

*(Emulates or patches code by BJÖRN BRIEL.)*

Pkg   citeref   citeref is patched for use by lwarp.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{citeref}[1999/27/05]

2 \def\@cprwrite#1={\write\@auxout{\string\citepageref{#1}{\theLWR@currentautosec}}}
3
4 \def\citepageref#1#2{%
5 \xdef\cpr@testa{\@nameuse{cpr@last@#1}}%letzte Zitatstelle
6 \xdef\cpr@testb{#2}% Seite dieser Zitatstelle
7 \ifx\cpr@testa\cpr@testb%
8 \relax% Konsekutive identische Seitenangaben weglassen
9 \else%
10 \@namexdef{cpr@last@#1}{#2}%
11 \ifundefined{cpr@#1}%
12 {\@namexdef{cpr@#1}{\ref{\BaseJobname-autopage-#2}}}% lwarp
13 {\@namexdef{cpr@#1}{\@nameuse{cpr@#1}}, \ref{\BaseJobname-autopage-#2}}}% lwarp
14 \fi
15 }
```

---

File 83 **lwarp-CJK.sty**

§ 186      Package **CJK**

Pkg   CJK   CJK does not work with lwarp unless called from ctex.

**for HTML output:**

```

1 \@ifpackageloaded{xeCJK}{\{
2 \LWR@loadnever{CJK}{ctex, xeCJK}
3 }
4
5 \LWR@ProvidesPackagePass{CJK}[2015/04/18]
```

---

File 84 **lwarp-CJKutf8.sty**

§ 187      Package **CJKutf8**

Pkg   CJKutf8   CJKutf8 does not work with lwarp unless called from ctex.

**for HTML output:**

```

1 \@ifpackageloaded{xeCJK}{\{
2 \LWR@loadnever{CJKutf8}{ctex, xeCJK}
3 }
```

```

4
5 \LWR@ProvidesPackagePass{CJKutf8}[2015/04/18]

```

## File 85 **lwarp-cleveref.sty**

### § 188 Package **cleveref**

(Emulates or patches code by TOBY CUBITT.)

Pkg cleveref cleveref is patched for HTML, and limited MATHJAX emulation is added.

⚠ **cleveref page numbers** cleveref and varioref are supported, but printed page numbers do not map to HTML, so a section name or a text phrase are used for \cpageref and \cpagerefrange. This phrase includes \cpagerefFor, which defaults to “for”.

Ex:

```

\cpageref{tab:first,tab:second}
in html becomes:
“pages for table 4.1 and for table 4.2”

```

See \cpagerefFor at page 721 to redefine the message which is printed for page number references.

Table 14 on page 494 shows the data structure of the label/reference system as revised by lwarp and cleveref.

For MATHJAX, each references is printed as an \eqref, without cleveref’s description text. Page references are also printed as simple \eqrefs. Multiple labels in a single \cref will print as (???) in MATHJAX.

⚠ **multiple labels**

for HTML output: 1 \LWR@ProvidesPackagePass{cleveref}[2018/03/27]

The following patches are applied. Print-mode versions are not required since they all come down to \ref eventually, and \ref has a print-mode version.

\@@@setcref {\<kindofref>} {\<label>}

\@templabel becomes the section number.

```

2 \def\LWR@orig@@@setcref#1#2{\cref@getlabel{#2}{\@templabel}#1{\@templabel}{}}%
3
4 \ifdefequal{\@@setcref}{\LWR@orig@@@setcref}{% before v0.21
5 \renewcommand*{\@@setcref}[2]{#1{\ref{#2}}{}}
6 }{
7 \ifdefequal{\@@@setcref}{\LWR@orig@@@setcref}{% as of v0.21
8 \renewcommand*{\@@@setcref}[2]{%
9 #1{\ref{#2}}{}}
10 }{
11 \PackageWarningNoLine{lwarp-cleveref}{
12 Unknown version of cleveref.
13 \protect\cref\space will fail.

```

```

14 }%
15 }
16 }

```

`\@@@setcrefrange`  $\{\langle text \rangle\} \{\langle label \rangle\} \{\langle label \rangle\}$

```

17 \def\LWR@orig@@@setcrefrange#1#2#3{%
18 \cref@getlabel{#2}\@labela}%
19 \cref@getlabel{#3}\@labelb}%
20 #1{\@labela}\@labelb}{\ref{#2}}{\ref{#3}}}%
21
22 \ifdefequal{\@@@setcrefrange}{\LWR@orig@@@setcrefrange}{
23 \renewcommand{\@@@setcrefrange}[3]{%
24 #1{\ref{#2}}{\ref{#3}}}{\ref{#2}}{\ref{#3}}}%
25 }
26 }{
27 \ifdefequal{\@@@setcrefrange}{\LWR@orig@@@setcrefrange}{
28 \renewcommand{\@@@setcrefrange}[3]{%
29 #1{\ref{#2}}{\ref{#3}}}{\ref{#2}}{\ref{#3}}}%
30 }
31 }{
32 \PackageWarningNoLine{lwarp-cleveref}{
33 Unknown version of cleveref.
34 \protect\crefrange\space will fail.
35 }
36 }
37 }

```

`\cpagerefFor` Redefinable word between “page(s)” and the page numbers.

```

38 \newcommand*{\cpagerefFor}{for}

```

`\@@@setcpageref`  $\{\langle typeofref \rangle\} \{\langle label \rangle\}$ , where `typeofref` is “page” or “pages”

```

39 \def\LWR@orig@@@setcpageref#1#2{% before v0.21
40 \cref@getpageref{#2}\@temppage}#1{\@temppage}{\ref{#2}}}%
41
42 \def\LWR@orig@@@setcpageref#1#2{% as of v0.21
43 \cpageref@getlabel{#2}\@temppage}#1{\@temppage}{\ref{#2}}}%
44
45 \ifdefequal{\@@@setcpageref}{\LWR@orig@@@setcpageref}{
46 \renewcommand*{\@@@setcpageref}[2]{%
47 #1{\cpagerefFor\ \cref{#2}}}{\ref{#2}}}%
48 }
49 }{
50 \ifdefequal{\@@@setcpageref}{\LWR@orig@@@setcpageref}{
51 \renewcommand*{\@@@setcpageref}[2]{%
52 #1{\cpagerefFor\ \cref{#2}}}{\ref{#2}}}%
53 }
54 }
55 {
56 \PackageWarningNoLine{lwarp-cleveref}{

```

```

57 Unknown version of cleveref.
58 \protect\cpageref\space will fail.
59 }
60 }
61 }

62 \def\LWR@orig@@setcpagerefrange#1#2#3{% before v0.21
63 \cref@getpageref{#2}{\@pagea}%
64 \cref@getpageref{#3}{\@pageb}%
65 #1{\@pagea}{\@pageb}{\{\}\{\}\{\}}%
66
67 \def\LWR@orig@@@setcpagerefrange#1#2#3{% as of v0.21
68 \cpageref@getlabel{#2}{\@pagea}%
69 \cpageref@getlabel{#3}{\@pageb}%
70 #1{\@pagea}{\@pageb}{\{\}\{\}\{\}}%
71
72 \ifdefequal{\@@setcpagerefrange}{\LWR@orig@@setcpagerefrange}{
73 \renewcommand*\@@setcpagerefrange[3]{%
74 #1{\cpagerefFor\ \cref{#2}}{\cref{#3}}{\{\}\{\}\{\}}%
75 }
76 }{
77 \ifdefequal{\@@@setcpagerefrange}{\LWR@orig@@@setcpagerefrange}{
78 \renewcommand*\@@@setcpagerefrange[3]{%
79 #1{\cpagerefFor\ \cref{#2}}{\cref{#3}}{\{\}\{\}\{\}}%
80 }
81 }
82 {
83 \PackageWarningNoLine{lwarp-cleveref}{
84 Unknown version of cleveref.
85 \protect\cpagerefrange\space will fail.
86 }
87 }
88 }

```

If `hyperref` is loaded, `cleveref` defines starred versions of the following, but since `hyperref` is only emulated, starred versions are defined here:

```

89 \LWR@absorbstar{cref}
90 \LWR@absorbstar{Cref}
91 \LWR@absorbstar{crefrange}
92 \LWR@absorbstar{Crefrange}
93 \LWR@absorbstar{cpageref}
94 \LWR@absorbstar{Cpageref}
95 \LWR@absorbstar{cpagerefrange}
96 \LWR@absorbstar{Cpagerefrange}
97 \LWR@absorbstar{labelcref}
98 \LWR@absorbstar{labelcpageref}

```

If `hyperref` is loaded, `cleveref` also defines starred versions of `varioref` macros, so they are defined here.

```

99 \ifpackageloaded{varioref}{
100 \LWR@absorbstar{vref}
101 \LWR@absorbstar{Vref}
102 \LWR@absorbstar{vrefrange}

```

---

```

103 \LWR@absorbstar{Vrefrange}
104 \LWR@absorbstar{fullref}
105 \LWR@absorbstar{Fullref}
106 }{}% varioref

```

---

#### File 86 **lwarp-clrdblpg.sty**

### § 189 Package **clrdblpg**

Pkg clrdblpg clrdblpg is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{clrdblpg}[2018/04/21]

---

#### File 87 **lwarp-cmdtrack.sty**

### § 190 Package **cmdtrack**

Pkg cmdtrack cmdtrack is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{cmdtrack}[2012/12/18]  
 2 \newcommand{\untrack}[1]{}

---

#### File 88 **lwarp-colonequals.sty**

### § 191 Package **colonequals**

*(Emulates or patches code by HEIKO OBERDIEK.)*

Pkg colonequals colonequals is used as-is for SVG math, and is emulated for MATHJAX.

Since UNICODE symbols are not available for each of the following, only two are used for the single and double colons, and the other symbols are derived in a consistent manner. Occasional negative space is added as well. This may need to be undone for some fonts.

**for HTML output:** 1 \LWR@ProvidesPackagePass{colonequals}[2016/05/16]  
 2 \begin{warpMathJax}  
 3 \LWR@info{processingmathjax}{colonequals}  
 4  
 5 \CustomizeMathJax{\newcommand{\ratio}{\unicode{x2236}}}  
 6 \CustomizeMathJax{\newcommand{\coloncolon}{\unicode{x2237}}}  
 7 \CustomizeMathJax{\newcommand{\colonequals}{\coloncolon=}}  
 8 \CustomizeMathJax{\newcommand{\coloncolonequals}{\coloncolon=}}  
 9 \CustomizeMathJax{\newcommand{\equalscolon}{=\!\ratio}}

---

```

10 \CustomizeMathJax{\newcommand{\equalscoloncolon}{=!\coloncolon}}
11 \CustomizeMathJax{\newcommand{\colonminus}{\ratio-}}
12 \CustomizeMathJax{\newcommand{\coloncolonminus}{\coloncolon-}}
13 \CustomizeMathJax{\newcommand{\minuscolon}{-\ratio}}
14 \CustomizeMathJax{\newcommand{\minuscoloncolon}{-\coloncolon}}
15 \CustomizeMathJax{\newcommand{\colonapprox}{\ratio\approx}}
16 \CustomizeMathJax{\newcommand{\coloncolonapprox}{\coloncolon\approx}}
17 \CustomizeMathJax{\newcommand{\approxcolon}{\approx!\ratio}}
18 \CustomizeMathJax{\newcommand{\approxcoloncolon}{\approx!\coloncolon}}
19 \CustomizeMathJax{\newcommand{\colonsim}{\ratio\sim}}
20 \CustomizeMathJax{\newcommand{\coloncolonsim}{\coloncolon\sim}}
21 \CustomizeMathJax{\newcommand{\simcolon}{\sim!\ratio}}
22 \CustomizeMathJax{\newcommand{\simcoloncolon}{\sim!\coloncolon}}
23 \end{warpMathJax}

```

---

### File 89 **lwarp-color.sty**

#### § 192 Package **color**

Pkg color Allowed but ignored. xcolor is then required as well.

color is superceded by xcolor, and lwarp requires several of the features of xcolor. When color is requested, xcolor is loaded as well.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{color}[2016/07/10]
2 \RequirePackage{xcolor}

```

---

### File 90 **lwarp-colortbl.sty**

#### § 193 Package **colortbl**

Pkg colortbl colortbl is used as-is for print output, and emulated for HTML.

 **row/cell color** Only use \rowcolor and \cellcolor at the start of a row, in that order.

colortbl ignores the overhang arguments.

**for HTML output:** A placeholder definition is forgotten first:

```

1 \let\rowcolor\relax
2
3 \LWR@ProvidesPackagePass{colortbl}[2018/12/12]

```

The following \LWR@HTML versions are used inside an HTML tabular.

\columncolor [⟨*model*⟩] {⟨*color*⟩} [⟨*left overhang*⟩] [⟨*right overhang*⟩]

\LWR@getmynexttoken is not used here because \columncolor is not used inside the data area of the tabular.

```

4 \NewDocumentCommand{\LWR@HTML@columncolor}{O{named} m o o}{%
5 \convertcolorspec{#1}{#2}{HTML}\LWR@columnHTMLcolor%
6 \LWR@addtabularcellcolor%
7 }
8
9 \AtBeginDocument{\LWR@formatted{columncolor}}

```

`\LWR@getmynexttoken` is used for `\rowcolor` because it is used inside the data area of the tabular.

`\rowcolor`     [*<model>*] [*<color>*] [*<left overhang>*] [*<right overhang>*]

```

10 \NewDocumentCommand{\LWR@HTML@rowcolor}{O{named} m o o}{%
11 \convertcolorspec{#1}{#2}{HTML}\LWR@rowHTMLcolor%
12 \LWR@getmynexttoken%
13 }
14
15 \AtBeginDocument{\LWR@expandableformatted{rowcolor}}

```

`\cellcolor`     [*<model>*] [*<color>*] [*<left overhang>*] [*<right overhang>*]

```

16 \NewDocumentCommand{\LWR@HTML@cellcolor}{O{named} m o o}{%
17 \convertcolorspec{#1}{#2}{HTML}\LWR@cellHTMLcolor%
18 \LWR@addtabularcellcolor%
19 }
20
21 \AtBeginDocument{\LWR@formatted{cellcolor}}

```

`\arrayrulecolor`     [*<model>*] [*<color>*]

The HTML version for use outside a tabular. Inside a tabular, `\LWR@HTML@arrayrulecolornexttoken` is used instead.

```

22 \newcommand{\LWR@HTML@arrayrulecolor}[2][named]{%
23 \convertcolorspec{#1}{#2}{HTML}\LWR@ruleHTMLcolor%
24 }
25
26 \AtBeginDocument{\LWR@expandableformatted{arrayrulecolor}}

```

                  [*<model>*] [*<color>*]

`\LWR@arrayrulecolornexttoken`     The HTML version for use inside a tabular.

```

27 \newcommand{\LWR@HTML@arrayrulecolornexttoken}[2][named]{%
28 \convertcolorspec{#1}{#2}{HTML}\LWR@ruleHTMLcolor%
29 \LWR@getmynexttoken%
30 }
31
32 \AtBeginDocument{\LWR@expandableformatted{arrayrulecolornexttoken}}

```

`\doublerulesepcolor`     [*<model>*] [*<color>*]

The version for use outside a tabular.

```

33 \newcommand{\LWR@HTML@doublerulesepcolor}[2][named]{%

```

```

34
35 \AtBeginDocument{\LWR@expandableformatted{doublerulesepcolor}}

```

```

[\<model>] {\<color>}

```

\LWR@doublerulesepcolornexttoken

The version for use inside a tabular.

```

36 \newcommand{\LWR@HTML@doublerulesepcolornexttoken}[2][named]{\LWR@getmynexttoken}
37
38 \AtBeginDocument{\LWR@expandableformatted{doublerulesepcolornexttoken}}

```

## File 91 **lwarp-continue.sty**

### § 194 Package **continue**

Pkg continue continue is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{continue}}[2018/12/09]

```

2 \newcommand*{\flagcont}{}
3 \newcommand*{\flagend}{}
4 \newcommand*{\flagword}{}
5 \newcommand*{\preflagword}{}
6 \newcommand*{\postflagword}{}
7 \newlength\contsep
8 \newlength\contdrop

```

## File 92 **lwarp-copyrightbox.sty**

### § 195 Package **copyrightbox**

*(Emulates or patches code by THOMAS FISCHER, IVES VAN DER FLAAS.)*

Pkg copyrightbox copyrightbox is emulated for use by lwarp.

The entire copyright box is placed inside a <div> of class copyrightbox.

The contents are placed inside a <div> of class copyrightboxcontents.

The copyright notice is placed inside a <div> of class copyrightboxnote.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{copyrightbox}}[2011/11/27]

```

2 \newcommand{\copyrightbox}[3][r]{%
3 \begin{BlockClass}[
4 display: inline-flex;
5 flex-direction: column ;
6]{copyrightbox}
7 \begin{BlockClass}{copyrightboxcontents}
8 #2

```

---

```

9 \end{BlockClass}
10 \begin{BlockClass}{copyrightboxnote}
11 #3
12 \end{BlockClass}
13 \end{BlockClass}
14 }
15
16 \newcommand{\CRB@setcopyrightfont}{}
17 \newcommand{\CRB@setcopyrightparagraphstyle}{}

```

---

### File 93 **lwarp-crop.sty**

#### § 196 Package **crop**

*(Emulates or patches code by MELCHIOR FRANZ.)*

Pkg crop crop is ignored.

**for HTML output:** Discard all options for lwarp-crop:

```

1 \LWR@ProvidesPackageDrop{crop}[2003/05/20]

2 \newcommand*{\crop}[1][]{ }
3 \newcommand*{\cropdef}[6][]{ }

```


---

### File 94 **lwarp-ctable.sty**

#### § 197 Package **ctable**

*(Emulates or patches code by WYBO DEKKER.)*

Pkg ctable ctable is patched for use by lwarp.

 **Misplaced alignment tab character &** Use \StartDefiningTabulars before one or more \ctables, and \StopDefiningTabulars after. These change the meaning of the ampersand & character.

**for HTML output:** 1 \LWR@ProvidesPackagePass{ctable}[2015/10/17]

The following is in the original:

```

2 \newcommand{\LWR@HTML@ctable}[4][]{%
3 \let\@CTtaborfig \@dfLTtaborfig
4 \let\@CTalign \@dfLTalign
5 \let\@CTsideways \@dfLTsideways
6 \let\@CTcontinued \empty
7 \let\@CTpos \@dfLTpos
8 \let\@CTcaption \empty
9 \let\@CTcap \undefined
10 \let\@CTlabel \empty
11 \let\@CTbotcap \@dfLTbotcap

```

```

12 \let\@CTstarred \@dfltCTstarred
13 \let\@CTsuper \@dfltCTsuper
14 \let\@CTnotespar \@dfltCTnotespar
15 \let\@CTdoinside \@dfltCTdoinside
16 \let\@CTbgopacity \@dfltCTbgopacity
17 \@CTframerule \@dfltCTframerule
18 \@CTcaptionskip \@dfltCTcaptionskip
19 \@CTframesep \@dfltCTframesep
20 \@CTwidth \@dfltCTwidth
21 \@CTmaxwidth \@dfltCTmaxwidth
22 \@CTmincapwidth \@dfltCTmincapwidth
23 \@CTfooterwidth \@dfltCTfooterwidth
24 \def\@CTfgactual {\@dfltCTframefg}%
25 \def\@CTbgactual {\@dfltCTframebg}%
26 \def\@CTbeg {\begin{\@CTsideways\@CTtaborfig\@CTstarred}}%
27 \def\@CTbegin {\@CTbeg}%
28 \def\@CTend {\end{\@CTsideways\@CTtaborfig\@CTstarred}}%
29 \setkeys{CT}{#1}%
30 \ifx\@CTcap\undefined\let\@CTcap\@CTcaption\fi
31 \ifx\@CTcap\empty
32 \if@CTcaptionloaded\else
33 \PackageWarningNoLine{lwarp-ctable}{\MessageBreak
34 An empty cap= option prevents lot/loc entry only\MessageBreak
35 if the caption package is loaded!}
36 \fi
37 \fi
38 \if@CTinmemoir\else
39 \ifx\@CTbotcap\undefined
40 \PackageError{lwarp-ctable}{\MessageBreak
41 You can, currently, use the sidecap option only with\MessageBreak
42 memoir documents. Use topcap or botcap only}
43 {}
44 \fi
45 \fi
46 \ifdim\@CTwidth=0pt\else
47 \ifdim\@CTmaxwidth=0pt\else
48 \PackageError{lwarp-ctable}{\MessageBreak
49 You may not use the width and maxwidth options together\MessageBreak
50 Use either width or maxwidth}
51 {}
52 \fi
53 \fi
54 \ifx\@CTpos\empty
55 \ifx\@CTsideways\empty\else
56 \PackageError{lwarp-ctable}{\MessageBreak
57 You may not use the pos and sideways options together\MessageBreak
58 Rotated tables and figures are always typeset on a separate page}
59 {}
60 \fi
61 \fi
62 \ifx\@CTcaption\empty
63 \ifx\@CTlabel\empty\else
64 \PackageError{lwarp-ctable}{\MessageBreak
65 You may not label a captionless table\MessageBreak
66 Such a label can't be referenced}

```

```

67 {}
68 \fi
69 \fi

```

Some of the original, regarding computing the width of \CT@t, is removed here.

```

70 \@CTbegin
71 \ifx\@CTcontinued\empty\else\addtocounter{\@CTtaborfig}{-1}\fi
72 \@CTalign

```

lwarp's patches begin here:

```

73 \begin{center}
74 \setlength{\fboxrule}{\@CTframerule}
75 \setlength{\fboxsep}{\@CTframesep}
76 \LWR@forceminwidth{\fboxrule}% lwarp
77 \convertcolorspec{named}{\@CTbgactual}{HTML}\LWR@tempcolor% lwarp
78 \begin{BlockClass}[% lwarp
79 border:
80 \LWR@printlength{\LWR@atleastonept}
81 solid
82 \LWR@colorstyle{named}{\@CTfgactual} ; %
83 padding:\LWR@printlength{\fboxsep} ; %
84 \ifdefstring{\LWR@tempcolor}{FFFFFF}{\}%
85 background: \LWR@colorstyle{named}{\@CTbgactual} ; %
86]%
87]{fminipage}% lwarp
88 \ifx\@CTbotcap\@CTfalse\@CTCaption\vskip\@CTcaptionskip\fi
89 \ifx\@CTbotcap\undefined%
90 \begin{sidecaption}[\@CTcap]{\@CTcaption}[\@CTlabel]
91 \fi
92 \@CTdoinside
93 \begin{tabularx}{\linewidth}{#2}% lwarp
94 #4%
95 \end{tabularx}% lwarp
96 \def\@CTfootnotes{#3}%
97 \ifx#3\empty\else{% append footnotes, if any
98 \begin{BlockClass}{tnotes}% lwarp
99 #3
100 \end{BlockClass}% lwarp
101 }
102 \fi
103 \ifx\@CTbotcap\undefined\end{sidecaption}\fi
104 \ifx\@CTbotcap\@CTtrue\vskip\@CTcaptionskip\@CTCaption\fi
105 \end{BlockClass}
106 \end{center}
107 \@CTend
108 }
109 \LWR@formatted{ctable}

```

Required to properly detect the toprule:

```

110 \LetLtxMacro\FL\toprule

```

Table notes are redefined for HTML:

```

111 \newcommand{\LWR@HTML@tmark}[1][a]{%
112 \textsuperscript{\textrm{\textit{#1}}}}
113 }
114 \LWR@formatted{tmark}
115
116 \newcommand{\LWR@HTML@tnote}[2][a]{%
117 \tmark[#1]\, #2\par
118 }
119 \LWR@formatted{tnote}

```

---

File 95 **lwarp-cuted.sty**

§ 198     Package **cuted**

*(Emulates or patches code by SIGITAS TOLUŠIS.)*

Pkg    cuted    **cuted** is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{cuted}[2012/10/04]

2 \newenvironment{strip}{}{}
3 \newskip\stripsep
4 \def\oldcolsbreak#1{}

```

---

File 96 **lwarp-cutwin.sty**

§ 199     Package **cutwin**

*(Emulates or patches code by PETER WILSON AND ALAN HOENIG.)*

Pkg    cutwin    **cutwin** is emulated.

**for HTML output:**    Discard all options for lwarp-cutwin:

```

1 \LWR@ProvidesPackageDrop{cutwin}[2010/09/29]

2 \newcommand*\opencutleft{}
3 \newcommand*\opencutright{}
4 \newcommand*\opencutcenter{}
5 \newcommand*\cutfuzz{}
6
7 \newenvironment{cutout}[4]
8 {\marginpar{\windowpagestuff}}
9 {}
10
11 \newcommand*\windowpagestuff{}
12
13 \newcommand*\pageinwindow{%

```

---

```

14 % \begin{minipage}{.3\linewidth}
15 \windowpagestuff
16 % \end{minipage}
17 }
18
19 \newenvironment{shapedcutout}[3]
20 {\marginpar{\picinwindow}}
21 {}
22
23 \newcommand*{\putstuffinpic}{}
24
25 \newcommand*{\picinwindow}{%
26 \begin{picture}(0,0)
27 \putstuffinpic
28 \end{picture}}

```

---

File 97 **lwarp-dblfloatfix.sty**

§ 200      Package **dblfloatfix**

Pkg    dblfloatfix    dblfloatfix is ignored.

**for HTML output:**    1 \LWR@ProvidesPackageDrop{dblfloatfix}[2012/12/31]

---

File 98 **lwarp-dblfnote.sty**

§ 201      Package **dblfnote**

*(Emulates or patches code by HIROSHI NAKASHIMA.)*

Pkg    dblfnote    dblfnote is ignored.

**for HTML output:**    1 \LWR@ProvidesPackageDrop{dblfnote}[1999/07/14]

```

2 \newcounter{DFNsloppiness}
3 \newdimen\DFNcolumnsep
4 \newdimen\DFNcolumnwidth
5 \def\DFNallowcbreak{}
6 \def\DFNinhibitcbreak{}
7 \def\DFNtrysingle{}
8 \def\DFNalwaysdouble{}
9 \def\DFNruleboth{}
10 \def\DFNruleleft{}

```

---

File 99 **lwarp-dcolumn.sty**

§ 202      Package **dcolumn**

Pkg    dcolumn    dcolumn is emulated by the lwarp core.

---

```
1 \LWR@ProvidesPackageDrop{dcolumn}[2014/10/28]
```

---

File 100 **lwarp-decimal.sty**

§ 203      Package **decimal**

*(Emulates or patches code by A. SYROPOULOS AND R. W. D. NICKALLS.)*

Pkg    decimal    **decimal** works as-is for SVG math, and is emulated for MATHJAX.

**for HTML output:**    1 \LWR@ProvidesPackagePass{decimal}[2011/06/03]

```
2 \begin{warpMathJax}
3 \CustomizeMathJax{\def\.\{\mbox{.}\}}
4 \end{warpMathJax}
```

---

File 101 **lwarp-diagbox.sty**

§ 204      Package **diagbox**

*(Emulates or patches code by LEO LIU.)*

Pkg    diagbox    **diagbox** is patched for use by lwarp.

**for HTML output:**    1 \LWR@ProvidesPackagePass{diagbox}[2016/12/28]

To restore print-mode inside a lateximage:

```
2 \LetLtxMacro\LWR@origdiagbox@double\diagbox@double
3 \LetLtxMacro\LWR@origdiagbox@triple\diagbox@triple
4
5 \appto\LWR@restoreorigformatting{%
6 \LetLtxMacro\diagbox@double\LWR@origdiagbox@double%
7 \LetLtxMacro\diagbox@triple\LWR@origdiagbox@triple%
8 }
```

\LWR@diagbox@AB     $\{\langle E/W \rangle\} \{\langle A \rangle\} \{\langle E/W \rangle\} \{\langle B \rangle\}$

```
9 \newcommand{\LWR@diagbox@AB}[4]{
10 \begingroup%
11 \LetLtxMacro\\newline%
12 \BlockClassSingle{diagbox#1}{#2}%
13 \BlockClassSingle{diagbox#3}{#4}%
14 \endgroup%
15 \LWR@stoppars%
16 }
```

\LWR@diagboxNW     $\{\langle A \rangle\} \{\langle B \rangle\}$

```

17 \newcommand{\LWR@diagboxNW}[2]{%
18 \LWR@diagbox@AB{E}{#2}{W}{#1}%
19 }

```

Likewise for NE, SW, SE:

```

20 \newcommand{\LWR@diagboxNE}[2]{%
21 \LWR@diagbox@AB{W}{#1}{E}{#2}%
22 }
23
24 \let\LWR@diagboxSW\LWR@diagboxNE
25 \let\LWR@diagboxSE\LWR@diagboxNW

```

`\diagbox@double`      $\{\langle keys \rangle\} \{\langle A \rangle\} \{\langle B \rangle\}$

```

26 \def\diagbox@double#1#2#3{%
27 \setkeys{diagbox}{dir=NW,#1}%
28 \@nameuse{\LWR@diagbox\diagbox@dir}{#2}{#3}%
29 }

```

`\LWR@diagboxTNW`      $\{\langle title \rangle\} \{\langle A \rangle\} \{\langle B \rangle\}$

```

30 \newcommand{\LWR@diagboxTNW}[3]{%
31 \BlockClassSingle{diagboxtitleN}{#1}
32 \LWR@diagboxNW{#2}{#3}
33 }

```

Likewise for NE, SW, SE:

```

34 \newcommand{\LWR@diagboxTNE}[3]{%
35 \BlockClassSingle{diagboxtitleN}{#1}
36 \LWR@diagboxNE{#2}{#3}
37 }
38
39 \newcommand{\LWR@diagboxTSW}[3]{%
40 \LWR@diagboxSW{#2}{#3}
41 \BlockClassSingle{diagboxtitleS}{#1}
42 \LWR@stoppars%
43 }
44
45 \newcommand{\LWR@diagboxTSE}[3]{%
46 \LWR@diagboxSE{#2}{#3}
47 \BlockClassSingle{diagboxtitleS}{#1}
48 \LWR@stoppars%
49 }

```

`\diagbox@triple`      $\{\langle keys \rangle\} \{\langle A \rangle\} \{\langle T \rangle\} \{\langle B \rangle\}$

```

50 \def\diagbox@triple#1#2#3#4{%
51 \setkeys{diagbox}{dir=NW,#1}%
52 \@nameuse{\LWR@diagboxT\diagbox@dir}{#3}{#2}{#4}%
53 }

```

---

File 102 **lwarp-dingbat.sty**

§ 205      Package **dingbat**
*(Emulates or patches code by SCOTT PAKIN.)*

Pkg    dingbat    **dingbat** is patched for use by **lwarp**.

**for HTML output:**    1 \LWR@ProvidesPackagePass{dingbat}[2001/04/27]

```

2 \newcommand*{\LWR@dingbatsymbol}[1]{\HTMLUnicode{#1}}
3
4 \newcommand{\LWR@HTML@rightpointright}{\LWR@dingbatsymbol{261E}}
5 \newcommand{\LWR@HTML@leftpointright}{\LWR@dingbatsymbol{261E}}
6 \newcommand{\LWR@HTML@leftthumbsdown}{\LWR@dingbatsymbol{1F44E}}
7 \newcommand{\LWR@HTML@leftthumbsup}{\LWR@dingbatsymbol{1F44D}}
8 \newcommand{\LWR@HTML@rightpointleft}{\LWR@dingbatsymbol{261C}}
9 \newcommand{\LWR@HTML@rightthumbsdown}{\LWR@dingbatsymbol{1F44E}}
10 \newcommand{\LWR@HTML@rightthumbsup}{\LWR@dingbatsymbol{1F44D}}
11 \newcommand{\LWR@HTML@squarewithdots}{\LWR@dingbatsymbol{25C7}}
12 \newcommand{\LWR@HTML@filledsquarewithdots}{\LWR@dingbatsymbol{25C6}}
13 \newcommand{\LWR@HTML@Sborder}{\LWR@dingbatsymbol{271A}}
14 \newcommand{\LWR@HTML@Zborder}{\LWR@dingbatsymbol{274B}}
15 \newcommand{\LWR@HTML@largepencil}{\LWR@dingbatsymbol{270E}}
16 \newcommand{\LWR@HTML@anchor}{\LWR@dingbatsymbol{2693}}
17 \newcommand{\LWR@HTML@carriagereturn}{\LWR@dingbatsymbol{23CE}}
18 \newcommand{\LWR@HTML@checkmark}{\LWR@dingbatsymbol{2713}}
19 \newcommand{\LWR@HTML@eye}{\LWR@dingbatsymbol{1F441}}
20 \newcommand{\LWR@HTML@satellitedish}{\LWR@dingbatsymbol{1F4E1}}
21 \newcommand{\LWR@HTML@smallpencil}{\LWR@dingbatsymbol{270E}}
22
23 \LWR@formatted{rightpointright}
24 \LWR@formatted{leftpointright}
25 \LWR@formatted{leftthumbsdown}
26 \LWR@formatted{leftthumbsup}
27 \LWR@formatted{rightpointleft}
28 \LWR@formatted{rightthumbsdown}
29 \LWR@formatted{rightthumbsup}
30 \LWR@formatted{squarewithdots}
31 \LWR@formatted{filledsquarewithdots}
32 \LWR@formatted{Sborder}
33 \LWR@formatted{Zborder}
34 \LWR@formatted{largepencil}
35 \LWR@formatted{anchor}
36 \LWR@formatted{carriagereturn}
37 \LWR@formatted{checkmark}
38 \LWR@formatted{eye}
39 \LWR@formatted{satellitedish}
40 \LWR@formatted{smallpencil}

```

---

File 103 **lwarp-DotArrow.sty**

§ 206 Package **DotArrow**

*(Emulates or patches code by SVEN SCHNEIDER.)*

Pkg DotArrow DotArrow is patched for use by lwarp, and emulated for MATHJAX.

for HTML output: 1 \LWR@ProvidesPackagePass{DotArrow}[2007/02/12]

The width must be recomputed each time, depending on print or HTML output.

```
2 \xpretocmd{\dotarrow}{\settowidth{\oneWidth}{\onePartX}}{}{}
3
4 \begin{warpMathJax}
5 \CustomizeMathJax{\newcommand{\dotarrow}[1]{\stackrel{#1}{\unicode{x21E2}}}}
6 \end{warpMathJax}
```


---


File 104 **lwarp-dotlessi.sty**

§ 207 Package **dotlessi**

*(Emulates or patches code by JAVIER BEZOS.)*

Pkg dotlessi dotlessi is used as-is for SVG math, and is emulated for MATHJAX.

 HTML \dotlessj Use \usepackage{cmap} if \dotlessj does not appear in HTML in text mode. See section 7.4.

 not bold For MATHJAX, use \boldsymbol instead of \mathbf.

for HTML output: 1 \LWR@ProvidesPackagePass{dotlessi}[1999/10/12]

For MATHJAX:

```
2 \begin{warpMathJax}
3 \CustomizeMathJax{\let\dotlessi\imath}
4 \CustomizeMathJax{\let\dotlessj\jmath}
5 \end{warpMathJax}
```

---

File 105 **lwarp-dprogress.sty**

§ 208 Package **dprogress**

Pkg dprogress dprogress is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{dprogress}[2008/02/21]

---

File 106 **lwarp-draftcopy.sty**

§ 209 Package **draftcopy**

Pkg draftcopy draftcopy is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{draftcopy}[2002/02/25]

```

2 \newcommand{\draftcopyVersion}[1]{}
3 \newcommand{\draftcopySetGrey}[1]{}
4 \newcommand{\draftcopySetScale}[1]{}
5 \newcommand{\draftcopySetScaleFactor}[1]{}
6 \newcommand{\draftcopyFirstPage}[1]{}
7 \newcommand{\draftcopyLastPage}[1]{}
8 \newcommand{\draftcopyName}[2]{}
9 \newcommand{\draftcopyPageTransform}[1]{}
10 \newcommand{\draftcopyBottomTransform}[1]{}
11 \newcommand{\draftcopyPageX}[1]{}
12 \newcommand{\draftcopyPageY}[1]{}
13 \newcommand{\draftcopyBottomX}[1]{}
14 \newcommand{\draftcopyBottomY}[1]{}

```

---

File 107 **lwarp-draftfigure.sty**

§ 210 Package **draftfigure**

Pkg draftfigure draftfigure is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{draftfigure}[2017/07/19]  
2 \RequirePackage{xkeyval}

```

3 \define@key{draftfigure}{code}{}
4 \define@key{draftfigure}{noframe}[true]{}
5 \define@key{draftfigure}{filename}[true]{}
6 \define@key{draftfigure}{content}[]{}
7 \define@key{draftfigure}{style}[normal]{}
8 \define@key{draftfigure}{position}[left]{}
9 \define@key{draftfigure}{size}[normal]{}
10 \newcommand\setdf[1]{\setkeys{draftfigure}{#1}}

```

---

File 108 **lwarp-draftwatermark.sty**

§ 211 Package **draftwatermark**

(Emulates or patches code by SERGIO CALLEGARI.)

Pkg draftwatermark **draftwatermark** is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{draftwatermark}[2020/03/14]

2 \newcommand{\DraftwatermarkOptions}[1]{}
3 \newcommand{\DraftwatermarkStdMark}{}
4 \newcommand{\SetWatermarkAngle}[1]{}
5 \newcommand{\SetWatermarkColor}[1]{}
6 \newcommand{\SetWatermarkLightness}[1]{}
7 \newcommand{\SetWatermarkFontSize}[1]{}
8 \newcommand{\SetWatermarkScale}[1]{}
9 \newcommand{\SetWatermarkHorCenter}[1]{}
10 \newcommand{\SetWatermarkVertCenter}[1]{}
11 \newcommand{\SetWatermarkText}[1]{}

```

---

File 109 **lwarp-drftcite.sty**

§ 212 Package **drftcite**

*(Emulates or patches code by DONALD ARSENEAU.)*

Pkg drftcite **drftcite** is patched for use by lwarp.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{drftcite}[1995/01/23]

2 \def\lbibitem[#1]#2{\global\@HighCite\z@
3 \item[
4 \textsuperscript{\@nameuse{DCN@#2\@extra@b@citeb}}~% lwarp
5 \@biblabel{\@ifundefined{DCN@#2\@extra@b@citeb}{\@warning
6 {Reference ‘#2’ on page \thepage\space was never cited}}}{}%
7 \DC@llap{$^\@nameuse{DCN@#2\@extra@b@citeb}}$\ \ }%%o
8 \@citeverb{#2}}\hfil]\if@filesw{\def\protect##1{\string ##1\space}%
9 \immediate\write\auxout{\string\bibcite{#2}{#1}}}\fi\ignorespaces}

```

---

File 110 **lwarp-easy-todo.sty**

§ 213 Package **easy-todo**

*(Emulates or patches code by JUAN RADA-VILELA.)*

Pkg easy-todo **easy-todo** is patched for use by lwarp.

To remove the “P.” heading for HTML:

```
\warpHTMLonly{\renewcommand{\todoindexpagetitle}{}}
```

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{easy-todo}[2014/01/01]

```

`\listoftodos` Modified to correct buggy use of `\flushright`.

```
2 \let\LWR@easytodo@origlistoftodos\listoftodos
3
4 \renewcommand{\listoftodos}{%
5 \begingroup
6 \renewcommand{\flushright}{}
7 \LWR@easytodo@origlistoftodos
8 \endgroup
9 }
```

`\todoii` Modified to use `\textcolor` instead of `\color`.

```
10 \renewcommand{\todoii}[2]{%
11 \ifthenelse{\equal{\@todoobeyfinal}{true}}{%
12 {%
13 \ifoptionfinal{\todoenable{false}}{\todoenable{true}}%
14 }%
15 }%
16 \ifthenelse{\equal{\@todoenable}{true}}{%
17 {%
18 \refstepcounter{todos}%
19 \noindent{%
20 \todocolor%
21 \LWR@textcurrentcolor{%
22 \normalfont\scriptsize{\bfseries{\thetodos.#1}}%
23 }%
24 }%
25 \addcontentsline{lod}{todos}{\protect{\thetodos. } \LWR@isolate{#2}}%
26 }%
27 }%
28 }
```

---

File 111 **lwarp-ebook.sty**

§ 214 Package **ebook**

*(Emulates or patches code by JØRGEN STEENSGAARD.)*

Pkg ebook **ebook** is ignored.

**for HTML output:**

```
1 \LWR@ProvidesPackageDrop{ebook}

2 \setcounter{secnumdepth}{0}
3 \setcounter{tocdepth}{2}
4
5 \providecommand{\pagefill}[1][0.001mm]{\noindent}
6
7 \providecommand{\ebook}{
8 \setcounter{secnumdepth}{0}
9 \setcounter{tocdepth}{2}
10 }
```

---

File 112 **lwarp-econometrics.sty**

§ 215      Package **econometrics**
*(Emulates or patches code by ERIK KOLE.)*

Pkg econometrics econometrics is used as-is for svg math, and is emulated for MATHJAX.

**for HTML output:**      1 \LWR@ProvidesPackagePass{econometrics}% no date specified in the original

```

2 \begin{warpMathJax}
3 \LWR@infoprocessingmathjax{econometrics}
4
5 \CustomizeMathJax{\newcommand{\SC}{\mathbb{C}}}
6 \CustomizeMathJax{\newcommand{\SN}{\mathbb{N}}}
7 \CustomizeMathJax{\newcommand{\SQ}{\mathbb{Q}}}
8 \CustomizeMathJax{\newcommand{\SR}{\mathbb{R}}}
9 \CustomizeMathJax{\newcommand{\SZ}{\mathbb{Z}}}
10
11 \CustomizeMathJax{\newcommand{\calA}{\mathcal{A}}}
12 \CustomizeMathJax{\newcommand{\calB}{\mathcal{B}}}
13 \CustomizeMathJax{\newcommand{\calC}{\mathcal{C}}}
14 \CustomizeMathJax{\newcommand{\calD}{\mathcal{D}}}
15 \CustomizeMathJax{\newcommand{\calE}{\mathcal{E}}}
16 \CustomizeMathJax{\newcommand{\calF}{\mathcal{F}}}
17 \CustomizeMathJax{\newcommand{\calG}{\mathcal{G}}}
18 \CustomizeMathJax{\newcommand{\calH}{\mathcal{H}}}
19 \CustomizeMathJax{\newcommand{\calI}{\mathcal{I}}}
20 \CustomizeMathJax{\newcommand{\calJ}{\mathcal{J}}}
21 \CustomizeMathJax{\newcommand{\calK}{\mathcal{K}}}
22 \CustomizeMathJax{\newcommand{\calL}{\mathcal{L}}}
23 \CustomizeMathJax{\newcommand{\calM}{\mathcal{M}}}
24 \CustomizeMathJax{\newcommand{\calN}{\mathcal{N}}}
25 \CustomizeMathJax{\newcommand{\calO}{\mathcal{O}}}
26 \CustomizeMathJax{\newcommand{\calP}{\mathcal{P}}}
27 \CustomizeMathJax{\newcommand{\calQ}{\mathcal{Q}}}
28 \CustomizeMathJax{\newcommand{\calR}{\mathcal{R}}}
29 \CustomizeMathJax{\newcommand{\calS}{\mathcal{S}}}
30 \CustomizeMathJax{\newcommand{\calT}{\mathcal{T}}}
31 \CustomizeMathJax{\newcommand{\calU}{\mathcal{U}}}
32 \CustomizeMathJax{\newcommand{\calV}{\mathcal{V}}}
33 \CustomizeMathJax{\newcommand{\calW}{\mathcal{W}}}
34 \CustomizeMathJax{\newcommand{\calX}{\mathcal{X}}}
35 \CustomizeMathJax{\newcommand{\calY}{\mathcal{Y}}}
36 \CustomizeMathJax{\newcommand{\calZ}{\mathcal{Z}}}
37
38 \CustomizeMathJax{\newcommand{\mA}{\bm A}}
39 \CustomizeMathJax{\newcommand{\va}{\bm a}}
40 \CustomizeMathJax{\newcommand{\mB}{\bm B}}
41 \CustomizeMathJax{\newcommand{\vb}{\bm b}}
42 \CustomizeMathJax{\newcommand{\mC}{\bm C}}

```

```

43 \CustomizeMathJax{\newcommand{\vc}{\bm c}}
44 \CustomizeMathJax{\newcommand{\mD}{\bm D}}
45 \CustomizeMathJax{\newcommand{\vd}{\bm d}}
46 \CustomizeMathJax{\newcommand{\mE}{\bm E}}
47 \CustomizeMathJax{\newcommand{\ve}{\bm e}}
48 \CustomizeMathJax{\newcommand{\mF}{\bm F}}
49 \CustomizeMathJax{\newcommand{\vf}{\bm f}}
50 \CustomizeMathJax{\newcommand{\mG}{\bm G}}
51 \CustomizeMathJax{\newcommand{\vg}{\bm g}}
52 \CustomizeMathJax{\newcommand{\mH}{\bm H}}
53 \CustomizeMathJax{\newcommand{\vh}{\bm h}}
54 \CustomizeMathJax{\newcommand{\mI}{\bm I}}
55 \CustomizeMathJax{\newcommand{\vi}{\bm i}}
56 \CustomizeMathJax{\newcommand{\mJ}{\bm J}}
57 \CustomizeMathJax{\newcommand{\vj}{\bm j}}
58 \CustomizeMathJax{\newcommand{\mK}{\bm K}}
59 \CustomizeMathJax{\newcommand{\vk}{\bm k}}
60 \CustomizeMathJax{\newcommand{\mL}{\bm L}}
61 \CustomizeMathJax{\newcommand{\vL}{\bm l}}
62 \CustomizeMathJax{\newcommand{\mM}{\bm M}}
63 \CustomizeMathJax{\newcommand{\vm}{\bm m}}
64 \CustomizeMathJax{\newcommand{\mN}{\bm N}}
65 \CustomizeMathJax{\newcommand{\vn}{\bm n}}
66 \CustomizeMathJax{\newcommand{\mO}{\bm O}}
67 \CustomizeMathJax{\newcommand{\vo}{\bm o}}
68 \CustomizeMathJax{\newcommand{\mP}{\bm P}}
69 \CustomizeMathJax{\newcommand{\vp}{\bm p}}
70 \CustomizeMathJax{\newcommand{\mQ}{\bm Q}}
71 \CustomizeMathJax{\newcommand{\vq}{\bm q}}
72 \CustomizeMathJax{\newcommand{\mR}{\bm R}}
73 \CustomizeMathJax{\newcommand{\vr}{\bm r}}
74 \CustomizeMathJax{\newcommand{\mS}{\bm S}}
75 \CustomizeMathJax{\newcommand{\vs}{\bm s}}
76 \CustomizeMathJax{\newcommand{\mT}{\bm T}}
77 \CustomizeMathJax{\newcommand{\vt}{\bm t}}
78 \CustomizeMathJax{\newcommand{\mU}{\bm U}}
79 \CustomizeMathJax{\newcommand{\vu}{\bm u}}
80 \CustomizeMathJax{\newcommand{\mV}{\bm V}}
81 \CustomizeMathJax{\newcommand{\vv}{\bm v}}
82 \CustomizeMathJax{\newcommand{\mW}{\bm W}}
83 \CustomizeMathJax{\newcommand{\vw}{\bm w}}
84 \CustomizeMathJax{\newcommand{\mX}{\bm X}}
85 \CustomizeMathJax{\newcommand{\vx}{\bm x}}
86 \CustomizeMathJax{\newcommand{\mY}{\bm Y}}
87 \CustomizeMathJax{\newcommand{\vy}{\bm y}}
88 \CustomizeMathJax{\newcommand{\mZ}{\bm Z}}
89 \CustomizeMathJax{\newcommand{\vz}{\bm z}}
90
91 \CustomizeMathJax{\newcommand{\valpha}{\bm \alpha}}
92 \CustomizeMathJax{\newcommand{\vbeta}{\bm \beta}}
93 \CustomizeMathJax{\newcommand{\vgamma}{\bm \gamma}}
94 \CustomizeMathJax{\newcommand{\vdelta}{\bm \delta}}
95 \CustomizeMathJax{\newcommand{\vepsi}{\bm \epsilon}}
96 \CustomizeMathJax{\newcommand{\vvarepsilon}{\bm \varepsilon}}
97 \CustomizeMathJax{\newcommand{\vzeta}{\bm \zeta}}

```

```

98 \CustomizeMathJax{\newcommand{\veta}{\bm \eta}}
99 \CustomizeMathJax{\newcommand{\vtheta}{\bm \theta}}
100 \CustomizeMathJax{\newcommand{\viota}{\bm \iota}}
101 \CustomizeMathJax{\newcommand{\vkappa}{\bm \kappa}}
102 \CustomizeMathJax{\newcommand{\vLambda}{\bm \Lambda}}
103 \CustomizeMathJax{\newcommand{\vmu}{\bm \mu}}
104 \CustomizeMathJax{\newcommand{\vnu}{\bm \nu}}
105 \CustomizeMathJax{\newcommand{\vxi}{\bm \xi}}
106 \CustomizeMathJax{\newcommand{\vpi}{\bm \pi}}
107 \CustomizeMathJax{\newcommand{\vrho}{\bm \rho}}
108 \CustomizeMathJax{\newcommand{\vsigma}{\bm \sigma}}
109 \CustomizeMathJax{\newcommand{\vtau}{\bm \tau}}
110 \CustomizeMathJax{\newcommand{\vupsilon}{\bm \upsilon}}
111 \CustomizeMathJax{\newcommand{\vphi}{\bm \phi}}
112 \CustomizeMathJax{\newcommand{\vchi}{\bm \chi}}
113 \CustomizeMathJax{\newcommand{\vpsi}{\bm \psi}}
114 \CustomizeMathJax{\newcommand{\vomega}{\bm \omega}}
115
116 \CustomizeMathJax{\newcommand{\mGamma}{\bm \varGamma}}
117 \CustomizeMathJax{\newcommand{\mDelta}{\bm \varDelta}}
118 \CustomizeMathJax{\newcommand{\mTheta}{\bm \varTheta}}
119 \CustomizeMathJax{\newcommand{\mLambda}{\bm \varLambda}}
120 \CustomizeMathJax{\newcommand{\mXi}{\bm \varXi}}
121 \CustomizeMathJax{\newcommand{\mPi}{\bm \varPi}}
122 \CustomizeMathJax{\newcommand{\mSigma}{\bm \varSigma}}
123 \CustomizeMathJax{\newcommand{\mUpsilon}{\bm \varUpsilon}}
124 \CustomizeMathJax{\newcommand{\mPhi}{\bm \varPhi}}
125 \CustomizeMathJax{\newcommand{\mPsi}{\bm \varPsi}}
126 \CustomizeMathJax{\newcommand{\mOmega}{\bm \varOmega}}
127
128 \CustomizeMathJax{\newcommand{\rb}{\mathrm{b}}}
129 \CustomizeMathJax{\newcommand{\rB}{\mathrm{B}}}
130 \CustomizeMathJax{\newcommand{\rC}{\mathrm{C}}}
131 \CustomizeMathJax{\newcommand{\rD}{\mathrm{D}}}
132 \CustomizeMathJax{\newcommand{\rf}{\mathrm{f}}}
133 \CustomizeMathJax{\newcommand{\rF}{\mathrm{F}}}
134 \CustomizeMathJax{\newcommand{\rH}{\mathrm{H}}}
135 \CustomizeMathJax{\newcommand{\rL}{\mathrm{L}}}
136 \CustomizeMathJax{\newcommand{\rN}{\mathrm{N}}}
137 \CustomizeMathJax{\newcommand{\rt}{\mathrm{t}}}
138 \CustomizeMathJax{\newcommand{\rU}{\mathrm{U}}}
139 \CustomizeMathJax{\newcommand{\rGam}{\mathrm{Gam}}}
140 \CustomizeMathJax{\newcommand{\rBeta}{\mathrm{Beta}}}
141
142 \CustomizeMathJax{\newcommand{\Bin}{\mathrm{Bin}}}
143 \CustomizeMathJax{\newcommand{\eu}{\mathrm{e}}}
144 \CustomizeMathJax{\newcommand{\iu}{\mathrm{i}}}
145 \CustomizeMathJax{\newcommand{\LN}{\mathrm{LN}}}
146 \CustomizeMathJax{\newcommand{\IN}{\mathrm{IN}}}
147
148 \CustomizeMathJax{\newcommand{\Poi}{\mathrm{Poi}}}
149
150 \CustomizeMathJax{\newcommand{\ped}[1]{_\mathrm{#1}}}
151 \CustomizeMathJax{\newcommand{\ap}[1]{^\mathrm{#1}}}
152 \CustomizeMathJax{\renewcommand{\Re}{\mathrm{Re}}{\nolimits}}

```

```

153 \CustomizeMathJax{\renewcommand{\Im}{\mathrm{Im}}{\nolimits}}
154
155 \CustomizeMathJax{\newcommand{\deriv}[3][\%
156 \frac{\mathrm{d}^{\#1}\#2}{\mathrm{d}\, \#3^{\#1}}\%
157]}
158 \CustomizeMathJax{\newcommand{\pderiv}[3][\%
159 \frac{\partial^{\#1}\#2}{\partial \#3^{\#1}}\%
160]}
161
162 \CustomizeMathJax{\newcommand{\bias}{\operatorname{bias}}}
163 \CustomizeMathJax{\newcommand{\col}{\operatorname{col}}}
164 \CustomizeMathJax{\newcommand{\corr}{\operatorname{corr}}}
165 \CustomizeMathJax{\newcommand{\cov}{\operatorname{cov}}}
166 \CustomizeMathJax{\newcommand{\dg}{\operatorname{dg}}}
167 \CustomizeMathJax{\newcommand{\diag}{\operatorname{diag}}}
168 \CustomizeMathJax{\newcommand{\E}{\operatorname{E}}}
169 \CustomizeMathJax{\newcommand{\etr}{\operatorname{etr}}}
170 \CustomizeMathJax{\newcommand{\ip}{\mathrm{int}}{\nolimits}}
171 \CustomizeMathJax{\newcommand{\kur}{\operatorname{kur}}}
172 \CustomizeMathJax{\newcommand{\MSE}{\operatorname{MSE}}}
173 \CustomizeMathJax{\newcommand{\MSFE}{\operatorname{MSFE}}}
174 \CustomizeMathJax{\newcommand{\OLS}{\operatorname{OLS}}}
175 \CustomizeMathJax{\newcommand{\plim}{\operatorname{plim}}}
176 \CustomizeMathJax{\newcommand{\resid}{\operatorname{resid}}}
177 \CustomizeMathJax{\newcommand{\rk}{\operatorname{rk}}}
178 \CustomizeMathJax{\newcommand{\SE}{\operatorname{SE}}}
179 \CustomizeMathJax{\newcommand{\sgn}{\operatorname{sgn}}}
180 \CustomizeMathJax{\newcommand{\tr}{\operatorname{tr}}}
181 \CustomizeMathJax{\newcommand{\var}{\operatorname{var}}}
182 \CustomizeMathJax{\renewcommand{\vec}{\operatorname{vec}}}
183 \CustomizeMathJax{\newcommand{\vech}{\operatorname{vech}}}
184
185 \CustomizeMathJax{\newcommand{\distr}{\sim}}
186 \CustomizeMathJax{\newcommand{\adistr}{\stackrel{a}{\distr}}}
187 \CustomizeMathJax{\newcommand{\diff}{\Delta}}
188 \CustomizeMathJax{\newcommand{\fdiff}{\diff_{\mathrm{rf}}}}
189 \CustomizeMathJax{\newcommand{\bdiff}{\diff_{\mathrm{rb}}}}
190
191 \CustomizeMathJax{\newcommand{\eps}{\epsilon}}
192 \CustomizeMathJax{\newcommand{\epsi}{\varepsilon}}
193
194 \CustomizeMathJax{\newcommand{\longto}{\longrightarrow}}
195 \CustomizeMathJax{\newcommand{\pto}{\stackrel{p}{\longrightarrow}}}
196 \CustomizeMathJax{\newcommand{\dto}{\stackrel{d}{\longrightarrow}}}
197 \CustomizeMathJax{\newcommand{\wto}{\stackrel{w}{\longrightarrow}}}
198
199 \CustomizeMathJax{\newcommand{\Infmat}{\bm{\mathrm{calI}}}}
200 \CustomizeMathJax{\newcommand{\Hesmat}{\bm{\mathrm{calH}}}}
201 \CustomizeMathJax{\newcommand{\bcdot}{\bullet}}
202
203 \CustomizeMathJax{\newcommand{\vones}{\bm{\mathrm{imath}}}}
204 \CustomizeMathJax{\newcommand{\vzeros}{\boldsymbol{0}}}
205 \CustomizeMathJax{\newcommand{\mZeros}{\mathbf{0}}}
206
207 \CustomizeMathJax{\newcommand{\e}{\mathrm{e}}}

```

---

```

208 \CustomizeMathJax{\newcommand{\mply}{\cdot}}
209 \CustomizeMathJax{\newcommand{\rW}{\ensuremath{\mathrm{W}}}}
210 \end{warpMathJax}

```

---

## File 113 **lwarp-ed.sty**

### § 216 Package **ed**

*(Emulates or patches code by MICHAEL KOHLHASE.)*

Pkg ed ed is patched for use by lwarp.

for HTML output: 1 \LWR@ProvidesPackagePass{ed}[2012/01/29]

#### Bugs:

1. todoclist fails with the hide option, as does \edexplanation.
2. \edstubURI is actually \edstuURI.

```

2 \RequirePackage{xcolor}
3
4 \renewenvironment{edstub}[2][The following blue text]
5 {%
6 \def\@test{#1}%
7 \begin{center}%
8 \huge%
9 \textcolor{red}{%
10 #1 is only a provisional stub\\Large
11 the Office document
12 \ifx\ed@stubURI@empty{#2}\else\LWR@href{\ed@stubURI}{#2}\fi\
13 contains more text\\which will be merged for the final document%
14 }%
15 \end{center}%
16 \BlockClass[color:blue]{edstub}%
17 }
18 {\endBlockClass}

```

---

## File 114 **lwarp-ellipsis.sty**

### § 217 Package **ellipsis**

*(Emulates or patches code by PETER J. HESLIN.)*

Pkg ellipsis ellipsis is emulated.

```

1 \LWR@ProvidesPackageDrop{ellipsis}[2004/09/28]
2
3 \newcommand{\ellipsisgap}{0.1em}

```

---

```

4
5 \newcommand*{\midwordellipsis}{\,\textellipsis\,}

```

---

File 115 **lwarp-embrac.sty**

§ 218      Package **embrac**

*(Emulates or patches code by CLEMENS NIEDERBERGER.)*

Pkg    embrac    **embrac** is patched for HTML and used as-is for print.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{embrac}[2017/07/04]

2 \ExplSyntaxOn
3 \RenewDocumentCommand{\embrac_kern:n}{m}{}
4 \ExplSyntaxOff

5 \LetLtxMacro\LWR@orig@HTML@emph\LWR@HTML@emph
6 \RenewDocumentCommand{\LWR@HTML@emph}{s m}{\LWR@orig@HTML@emph{#2}}
7
8 \LetLtxMacro\LWR@orig@HTML@textit\LWR@HTML@textit
9 \RenewDocumentCommand{\LWR@HTML@textit}{s m}{\LWR@orig@HTML@textit{#2}}
10
11 \LetLtxMacro\LWR@orig@HTML@textsl\LWR@HTML@textsl
12 \RenewDocumentCommand{\LWR@HTML@textsl}{s m}{\LWR@orig@HTML@textsl{#2}}
13
14 \ifxetexorluatex
15 \LetLtxMacro\LWR@orig@HTML@textsi\LWR@HTML@textsi
16 \RenewDocumentCommand{\LWR@HTML@textsi}{s m}{%
17 \LWR@orig@HTML@textsi{#2}}
18 \fi
19
20 \AtBeginDocument{
21 \LWR@formatted{emph}
22 \LWR@formatted{textit}
23 \LWR@formatted{textsl}
24 \ifxetexorluatex
25 \LWR@formatted{textsi}
26 \fi
27 }
28
29 \newcommand{\LWR@HTML@EmbracOff}{}
30 \LWR@formatted{EmbracOff}
31
32 \newcommand{\LWR@HTML@EmbracOn}{}
33 \LWR@formatted{EmbracOn}

```

---

File 116 **lwarp-emptypage.sty**

§ 219      Package **emptypage**

Pkg    emptypage    emptypage is ignored.

**for HTML output:**    Discard all options for lwarp-emptypage:

```
1 \LWR@ProvidesPackageDrop{emptypage}[2010/05/30]
```

---

File 117 **lwarp-endfloat.sty**

§ 220      Package **endfloat**

Pkg    endfloat    endfloat is ignored.

**for HTML output:**    1 \LWR@ProvidesPackageDrop{endfloat}[2019/04/15]

```
2 \newcommand\figureplace{}
3 \newcommand\tableplace{}
4 \newcommand\floatplace[1]{}
5 \newcounter{posttable}
6 \newcounter{postfigure}
7 \newcommand*\theposttbl{}
8 \newcommand*\thepostfig{}
9 \newcommand{\AtBeginFigures}[1]{}
10 \newcommand{\AtBeginTables}[1]{}
11 \newcommand{\AtBeginDelayedFloats}[1]{}
12 \newcommand*\processdelayedfloats{}
13 \newcommand*\efloatseparator{}
14 \def\efloattype{}
15 \providecommand\efloatheading[1]{}
16 \providecommand\efloatpreamble{}
17 \providecommand\efloatpostamble{}
18 \NewDocumentCommand{\addtodelayedfloat}{s m m}{}
19 \providecommand{\efloatbegin}{}
20 \providecommand{\efloatend}{}
21 \providecommand{\efloatbeginlist}{}
22 \providecommand{\efloatendlist}{}

```

---

File 118 **lwarp-endheads.sty**

§ 221      Package **endheads**

Pkg    endheads    endheads is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{endheads}[2017/04/06]

2 \newcommand{\changesinglepageabbrev}[1]{}
3 \newcommand{\changemultiplepageabbrev}[1]{}
4 \newcommand{\changenotesname}[1]{}
5 \newcommand{\changenotesheader}[1]{}
6 \newcommand{\changenotescontentsname}[1]{}
7 \newcommand{\changechapternotesline}[1]{}
8 \newcommand{\checknoteheaders}{}
9 \newif\ifnotesincontentson \notesincontentsonfalse
10 \newcommand{\notesincontents}{\notesincontentsontrue}
11 \newif\ifendnoteheaderson \endnoteheadersonfalse
12 \newcommand{\setupendnoteheaders}{%
13 \endnoteheadersontrue%
14 }
15 \newif\iftitleinnotes \titleinnotesttrue
16 \newcommand{\styleforchapternotebegin}{}
17 \newcommand{\styleforchapternoteend}{}
18 \newcommand{\setstyleforchapternotebegin}[1]{%
19 \renewcommand{\styleforchapternotebegin}{#1}%
20 }
21 \newcommand{\setstyleforchapternoteend}[1]{%
22 \renewcommand{\styleforchapternoteend}{#1}%
23 }
24 \newcommand{\resetendnotes}{}
25 \newif\ifnotesbychapteron \notesbychapteronfalse
26 \newcommand{\notesbychapter}{\notesbychapterontrue}

```

---

File 119 **lwarp-endnotes.sty**

§ 222 Package **endnotes**

(Emulates or patches code by JOHN LAVAGNINO.)

Pkg endnotes Patched for HTML.

**table of contents** To place the endnotes in the TOC, use:

```

\usepackage{endnotes}
\appto\enoteheading{\addcontentsline{toc}{section}{\notesname}}
\renewcommand*{\notesname}{Endnotes} % optional


```

**HTML page** To additionally have the endnotes on their own HTML page, if FileDepth allows:

```

\ForceHTMLPage
\theendnotes

```

 **\endnotemark numbering** If using MATHJAX, see section 8.5.4 regarding the use of \endnotemark and \endnotetext.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{endnotes}

```

```

2 \def\noteformat{%
3 % \rightskip\z@ \leftskip\z@ \parindent=1.8em
4 \leavevmode
5 % \llap{
6 \makeenmark
7 % }
8 }

9 \def\LWR@HTML@makeenmark{\hbox{\LWR@htmlspan{sup}}{\normalfont\theenmark}}
10 \LWR@formatted{@makeenmark}
11
12 \def\makeenmark{\@makeenmark}

```

For MATHJAX:

```

13 \begin{warpMathJax}
14 \def\endnotenname{endnote}
15 \appto\LWR@syncnotennumbers{\LWR@synconenotenummer{\LWR@endnote}{\theendnote}}
16 \appto\LWR@syncnotenames{\LWR@synconenotename{\LWR@endnote}{\endnotenname}}
17 \CustomizeMathJax{\def\LWR@endnote{1}}
18 \CustomizeMathJax{\newcommand{\endnote}[2][\LWR@endnote]{{}^{\mathrm{#1}}}}
19 \CustomizeMathJax{\newcommand{\endnotemark}[1][\LWR@endnote]{{}^{\mathrm{#1}}}}
20 \end{warpMathJax}

```

File 120 **lwarp-engt1c.sty**

§ 223

Package

**engt1c**

(Emulates or patches code by CLAUDIO FIANDRINO.)

Pkg engt1c engt1c is patched for use by lwarp. MATHJAX is emulated.



For MATHJAX, \signt, \signf, \signn, and \signz do not force letter case as they do in SVG math.

for HTML output:

```

1 \LWR@ProvidesPackagePass{engt1c}[2012/12/18]

2 \newcommand{\LWR@HTML@finees}{%
3 \begin{BlockClass}[text-align:right]{exerend}%
4 \HTMLUnicode{220E}%
5 \end{BlockClass}%
6 }
7 \LWR@formatted{finees}
8
9 \newcommand{\LWR@HTML@exerend}{\finees}
10 \LWR@formatted{exerend}
11
12 \begin{warpMathJax}
13 \LWR@infoprocessingmathjax{engt1c}
14
15 \CustomizeMathJax{\newcommand{\unit}[1]{\,\,\mathrm{#1}}}
16 \CustomizeMathJax{\newcommand{\micro}{\mathrm{\unicode{x00B5}}}}

```

```

17 %
18 \CustomizeMathJax{\newcommand{\ho}{\unit{h}}}
19 \CustomizeMathJax{\newcommand{\s}{\unit{s}}}
20 \CustomizeMathJax{\newcommand{\ms}{\unit{ms}}}
21 \CustomizeMathJax{\newcommand{\us}{\unit{\micro s}}}
22 \CustomizeMathJax{\newcommand{\ns}{\unit{ns}}}
23 \CustomizeMathJax{\newcommand{\ps}{\unit{ps}}}
24 %
25 \CustomizeMathJax{\newcommand{\um}{\unit{\micro m}}}
26 \CustomizeMathJax{\newcommand{\mm}{\unit{mm}}}
27 \CustomizeMathJax{\newcommand{\cm}{\unit{cm}}}
28 \CustomizeMathJax{\newcommand{\dm}{\unit{dm}}}
29 \CustomizeMathJax{\newcommand{\m}{\unit{m}}}
30 \CustomizeMathJax{\newcommand{\km}{\unit{km}}}
31 %
32 \CustomizeMathJax{\newcommand{\MA}{\unit{MA}}}
33 \CustomizeMathJax{\newcommand{\kA}{\unit{kA}}}
34 \CustomizeMathJax{\newcommand{\A}{\unit{A}}}
35 \CustomizeMathJax{\newcommand{\mA}{\unit{mA}}}
36 \CustomizeMathJax{\newcommand{\uA}{\unit{\micro A}}}
37 \CustomizeMathJax{\newcommand{\nA}{\unit{nA}}}
38 %
39 \CustomizeMathJax{\newcommand{\MV}{\unit{MV}}}
40 \CustomizeMathJax{\newcommand{\kV}{\unit{kV}}}
41 \CustomizeMathJax{\newcommand{\V}{\unit{V}}}
42 \CustomizeMathJax{\newcommand{\mV}{\unit{mV}}}
43 \CustomizeMathJax{\newcommand{\uV}{\unit{\micro V}}}
44 %
45 \CustomizeMathJax{\newcommand{\mohm}{\unit{m\Omega}}}
46 \CustomizeMathJax{\newcommand{\ohm}{\unit{\Omega}}}
47 \CustomizeMathJax{\newcommand{\kohm}{\unit{k\Omega}}}
48 \CustomizeMathJax{\newcommand{\Mohm}{\unit{M\Omega}}}
49 %
50 \CustomizeMathJax{\newcommand{\pSi}{\unit{pS}}}
51 \CustomizeMathJax{\newcommand{\nSi}{\unit{nS}}}
52 \CustomizeMathJax{\newcommand{\uSi}{\unit{\micro S}}}
53 \CustomizeMathJax{\newcommand{\mSi}{\unit{mS}}}
54 \CustomizeMathJax{\newcommand{\Si}{\unit{S}}}
55 \CustomizeMathJax{\newcommand{\kSi}{\unit{kS}}}
56 \CustomizeMathJax{\newcommand{\MSi}{\unit{MS}}}
57 %
58 \CustomizeMathJax{\newcommand{\fFa}{\unit{fF}}}
59 \CustomizeMathJax{\newcommand{\pFa}{\unit{pF}}}
60 \CustomizeMathJax{\newcommand{\nFa}{\unit{nF}}}
61 \CustomizeMathJax{\newcommand{\uFa}{\unit{\micro F}}}
62 \CustomizeMathJax{\newcommand{\mFa}{\unit{mF}}}
63 \CustomizeMathJax{\newcommand{\Fa}{\unit{F}}}
64 %
65 \CustomizeMathJax{\newcommand{\fHe}{\unit{fH}}}
66 \CustomizeMathJax{\newcommand{\pHe}{\unit{pH}}}
67 \CustomizeMathJax{\newcommand{\nHe}{\unit{nH}}}
68 \CustomizeMathJax{\newcommand{\uHe}{\unit{\micro H}}}
69 \CustomizeMathJax{\newcommand{\mHe}{\unit{mH}}}
70 \CustomizeMathJax{\newcommand{\He}{\unit{H}}}
71 %

```

```

72 \CustomizeMathJax{\newcommand{\dB}{\unit{dB}}}
73 \CustomizeMathJax{\newcommand{\dBm}{\unit{dBm}}}
74 %
75 \CustomizeMathJax{\newcommand{\uW}{\unit{\micro W}}}
76 \CustomizeMathJax{\newcommand{\mW}{\unit{mW}}}
77 \CustomizeMathJax{\newcommand{\W}{\unit{W}}}
78 \CustomizeMathJax{\newcommand{\kW}{\unit{kW}}}
79 \CustomizeMathJax{\newcommand{\MW}{\unit{MW}}}
80 %
81 \CustomizeMathJax{\newcommand{\Hz}{\unit{Hz}}}
82 \CustomizeMathJax{\newcommand{\kHz}{\unit{kHz}}}
83 \CustomizeMathJax{\newcommand{\MHz}{\unit{MHz}}}
84 \CustomizeMathJax{\newcommand{\GHz}{\unit{GHz}}}
85 \CustomizeMathJax{\newcommand{\THz}{\unit{THz}}}
86 %
87 \CustomizeMathJax{\newcommand{\bit}{\unit{bit}}}
88 \CustomizeMathJax{\newcommand{\kbit}{\unit{Kib}}}
89 \CustomizeMathJax{\newcommand{\Mbit}{\unit{Mib}}}
90 \CustomizeMathJax{\newcommand{\Byte}{\unit{B}}}
91 \CustomizeMathJax{\newcommand{\kByte}{\unit{KiB}}}
92 \CustomizeMathJax{\newcommand{\MByte}{\unit{Mib}}}
93 \CustomizeMathJax{\newcommand{\GByte}{\unit{GiB}}}
94 \CustomizeMathJax{\newcommand{\TByte}{\unit{TiB}}}
95 \CustomizeMathJax{\newcommand{\bits}{\unit{bit/s}}}
96 \CustomizeMathJax{\newcommand{\kbits}{\unit{Kib/s}}}
97 \CustomizeMathJax{\newcommand{\Mbits}{\unit{Mib/s}}}
98 \CustomizeMathJax{\newcommand{\Bytes}{\unit{B/s}}}
99 \CustomizeMathJax{\newcommand{\kBytes}{\unit{KiB/s}}}
100 \CustomizeMathJax{\newcommand{\MBytes}{\unit{MiB/s}}}
101 \CustomizeMathJax{\newcommand{\GBytes}{\unit{GiB/s}}}
102 \CustomizeMathJax{\newcommand{\TBytes}{\unit{TiB/s}}}
103 \CustomizeMathJax{\newcommand{\chips}{\unit{chip/s}}}
104 \CustomizeMathJax{\newcommand{\kchips}{\unit{Ki\mkern2mu chip/s}}}
105 \CustomizeMathJax{\newcommand{\Mchips}{\unit{Mi\mkern2mu chip/s}}}
106 \CustomizeMathJax{\newcommand{\chipsubit}{\unit{chip/bit}}}
107 %
108 \CustomizeMathJax{\newcommand{\frecciadex}[1][0.5]{%
109 \hspace{.25cm}\Longrightarrow \hspace{.25cm}}%
110 }
111 \CustomizeMathJax{\newcommand{\varianzarumore}{\frac{N_0}{2}}}
112 %
113 \CustomizeMathJax{\newcommand{\etsymbolbracearg}[2]{%
114 #1\mathopen{}\left\lbrace#2\right\rbrace\mathclose{}}%
115 }
116 \CustomizeMathJax{\newcommand{\fourier}[1]{\etsymbolbracearg{\mathcal{F}}{#1}}}
117 \CustomizeMathJax{\newcommand{\invfourier}[1]{\etsymbolbracearg{\mathcal{F}}^{-1}{#1}}}
118 \CustomizeMathJax{\newcommand{\partereale}[1]{\etsymbolbracearg{\textbf{Re}}{#1}}}
119 \CustomizeMathJax{\newcommand{\parteimm}[1]{\etsymbolbracearg{\textbf{Im}}{#1}}}
120 \CustomizeMathJax{\newcommand{\Info}[1]{I\left(#1\right)}}
121 \CustomizeMathJax{\newcommand{\versore}[1]{\hat{#1}}}
122 \CustomizeMathJax{\newcommand{\vettore}[1]{\overrightarrow{#1}}}
123 \CustomizeMathJax{\newcommand{\coseno}[1]{\cos\left(2\pi\#1t\right)}}
124 \CustomizeMathJax{\newcommand{\seno}[1]{\sin\left(2\pi\#1t\right)}}
125 \CustomizeMathJax{\newcommand{\energia}[1]{\mathcal{E}_{#1}}}
126 \CustomizeMathJax{\newcommand{\moduloexp}[2]{\left\vert\right.\#1\right\vert^{\#2}}}

```

```

127 \CustomizeMathJax{\newcommand{\modulo}[1]{\left\vert\right.\mathrm{#1}\right\vert}}
128 \CustomizeMathJax{\newcommand{\indB}[1]{%
129 \mathopen{}\left.\mathrm{#1}\right\vert_{\mathrm{dB}}\mathclose{}}}%
130 \CustomizeMathJax{\newcommand{\for}[2]{\left.\mathrm{#1}\right\vert_{\mathrm{#2}}}}
131 \CustomizeMathJax{\newcommand{\massimo}[1]{\etsymbolbracearg{\max}{#1}}}
132 \CustomizeMathJax{\newcommand{\minimo}[1]{\etsymbolbracearg{\min}{#1}}}
133 \CustomizeMathJax{\newcommand{\valc}[3]{\cdot 10^8}}
134 \CustomizeMathJax{\newcommand{\loga}[2]{\log_{\mathrm{#1}}\mathrm{#2}}}
135 \CustomizeMathJax{\newcommand{\analitic}[1]{\mathring{\mathrm{#1}}}}
136 \CustomizeMathJax{\newcommand{\diff}{\mathop{}\mathopen{}\mathrm{d}}}}
137 \CustomizeMathJax{\newcommand{\intinf}[1]{\int_{-\infty}^{+\infty}\mathrm{#1}}}
138 \CustomizeMathJax{\newcommand{\deltain}[1]{\delta\left(\mathrm{#1}\right)}}
139 \CustomizeMathJax{\newcommand{\iu}{\mathrm{j}}}
140 \CustomizeMathJax{\newcommand{\ex}[1]{\mathrm{e}^{\mathrm{#1}}}}
141 %
142 \CustomizeMathJax{\newcommand{\gammatens}{\{\}\mathrm{V}\Gamma}}
143 \CustomizeMathJax{\newcommand{\gammaacorr}{\{\}\mathrm{I}\Gamma}}
144 \CustomizeMathJax{\newcommand{\gammatensin}[1]{\{\}\mathrm{V}\Gamma_{\mathrm{#1}}}}
145 \CustomizeMathJax{\newcommand{\gammaacorrin}[1]{\{\}\mathrm{I}\Gamma_{\mathrm{#1}}}}
146 \CustomizeMathJax{\newcommand{\gammain}[1]{\Gamma_{\mathrm{#1}}}}
147 \CustomizeMathJax{\newcommand{\gammak}{\{\}\mathrm{k}\Gamma}}
148 %
149 \CustomizeMathJax{\newcommand{\lbvt}{\lambda_0}}
150 \CustomizeMathJax{\newcommand{\lbg}{\lambda_g}}
151 \CustomizeMathJax{\newcommand{\lbgvt}{\lambda_{g_0}}}
152 %
153 \CustomizeMathJax{\newcommand{\potin}[1]{P_{\mathrm{#1}}}}
154 \CustomizeMathJax{\newcommand{\potdisp}[1][P_{\mathrm{disp}}^{\mathrm{#1}}}}
155 \CustomizeMathJax{\newcommand{\potDC}[1][P_{\mathrm{DC}}^{\mathrm{#1}}}}
156 \CustomizeMathJax{\newcommand{\potCC}[1][P_{\mathrm{CC}}^{\mathrm{#1}}}}
157 \CustomizeMathJax{\newcommand{\potirr}[1][P_{\mathrm{irr}}^{\mathrm{#1}}}}
158 \CustomizeMathJax{\newcommand{\potdiss}[1][P_{\mathrm{diss}}^{\mathrm{#1}}}}
159 \CustomizeMathJax{\newcommand{\potinc}[1][P_{\mathrm{inc}}^{\mathrm{#1}}}}
160 %
161 \CustomizeMathJax{\newcommand{\z}[1]{Z_{\mathrm{#1}}}}
162 \CustomizeMathJax{\newcommand{\znorm}[1]{z_{\mathrm{#1}}}}
163 \CustomizeMathJax{\newcommand{\y}[1]{Y_{\mathrm{#1}}}}
164 \CustomizeMathJax{\newcommand{\ynorm}[1]{y_{\mathrm{#1}}}}
165 \CustomizeMathJax{\newcommand{\zinf}[1][Z_{\infty\mathrm{#1}}}}
166 \CustomizeMathJax{\newcommand{\zinf}[1]{z_{\mathrm{inf}}\mathrm{#1}}}
167 \CustomizeMathJax{\newcommand{\yinf}[1][Y_{\infty\mathrm{#1}}}}
168 \CustomizeMathJax{\newcommand{\yinf}[1]{y_{\mathrm{inf}}\mathrm{#1}}}
169 \CustomizeMathJax{\newcommand{\zvt}{Z_0}}
170 \CustomizeMathJax{\newcommand{\yvt}{Y_0}}
171 %
172 \CustomizeMathJax{\newcommand{\campoe}{\underline{\mathrm{cal{E}}}(\underline{r},t)}}
173 \CustomizeMathJax{\newcommand{\campoeas}{\underline{E}(\underline{r})}}
174 \CustomizeMathJax{\newcommand{\campoh}{\underline{\mathrm{cal{H}}}(\underline{r},t)}}
175 \CustomizeMathJax{\newcommand{\campohas}{\underline{H}(\underline{r})}}
176 %
177 \CustomizeMathJax{\newcommand{\signt}[1]{\mathrm{#1}(t)}}
178 \CustomizeMathJax{\newcommand{\signf}[1]{\mathrm{#1}(f)}}
179 \CustomizeMathJax{\newcommand{\signn}[1]{\mathrm{#1}(n)}}
180 \CustomizeMathJax{\newcommand{\signz}[1]{\mathrm{#1}(z)}}
181 %

```

```

182 \CustomizeMathJax{\newcommand{\prob}[1]{\mathcal{P}\left(\#1\right)}}
183 \CustomizeMathJax{\newcommand{\valatt}[1]{\mathbb{E}\left[\#1\right]}}
184 \CustomizeMathJax{\newcommand{\var}[1]{\mathrm{Var}\left[\#1\right]}}
185 \CustomizeMathJax{\newcommand{\comma}{\,,\,}}
186 \CustomizeMathJax{\newcommand{\dato}{\,,\,}}
187 %
188 \CustomizeMathJax{\let\bfRe\partereale}
189 \CustomizeMathJax{\let\bfIm\parteimm}
190 \CustomizeMathJax{\let\noisevar\varianzarumore}
191 % \CustomizeMathJax{\let\exerend\finees}
192 \CustomizeMathJax{\let\Spimplies\frecciadex}
193 \CustomizeMathJax{\let\Downimplies\frecciadown}
194 \CustomizeMathJax{\let\unitvec\versore}
195 \CustomizeMathJax{\let\vector\vettore}
196 \CustomizeMathJax{\let\cosine\coseno}
197 \CustomizeMathJax{\let\sine\seno}
198 \CustomizeMathJax{\let\energy\energia}
199 \CustomizeMathJax{\let\Abs\modulo}
200 \CustomizeMathJax{\let\AbsPow\moduloexp}
201 \CustomizeMathJax{\let\Max\massimo}
202 \CustomizeMathJax{\let\Min\minimo}
203 \CustomizeMathJax{\let\clight\valc}
204 \CustomizeMathJax{\let\Log\loga}
205 \CustomizeMathJax{\let\analytic\analitic}
206 \CustomizeMathJax{\let\infint\intinf}
207 \CustomizeMathJax{\let\deltainp\deltain}
208 \CustomizeMathJax{\let\Vgamma\gammatens}
209 \CustomizeMathJax{\let\Cgamma\gammacorr}
210 \CustomizeMathJax{\let\Vgammain\gammatensin}
211 \CustomizeMathJax{\let\Cgammain\gammacorrin}
212 \CustomizeMathJax{\let\Kgamma\gammak}
213 \CustomizeMathJax{\let\powerin\potin}
214 \CustomizeMathJax{\let\availpow\potdisp}
215 \CustomizeMathJax{\let\irrpow\potirr}
216 \CustomizeMathJax{\let\disppow\potdiss}
217 \CustomizeMathJax{\let\incpow\potinc}
218 \CustomizeMathJax{\let\potalim\potCC}
219 \CustomizeMathJax{\let\potDC\potCC}
220 \CustomizeMathJax{\let\Efield\campoe}
221 \CustomizeMathJax{\let\Hfield\campoh}
222 \CustomizeMathJax{\let\phasorEfield\campoe fas}
223 \CustomizeMathJax{\let\phasorHfield\campoh fas}
224 \CustomizeMathJax{\let\given\dato}
225 \CustomizeMathJax{\let\expval\valatt}
226 \CustomizeMathJax{\let\rmexp\ex}
227 \end{warpMathJax}

```

---

File 121 **lwarp-enumerate.sty**

§ 224 Package **enumerate**

Pkg enumerate enumerate is supported with no changes.

This package is only required because it was used in the past to drop and then emulate the package. It cannot be removed because an older version which dropped the package may still remain, for example in a local vs. distribution directory, but it is now supported directly by **lwarp** and thus must no longer be dropped.

**for HTML output:** 1 \LWR@ProvidesPackagePass{enumerate}[2015/07/23]

---

File 122 **lwarp-enumitem.sty**

§ 225 Package **enumitem**

*(Emulates or patches code by JAVIER BEZOS.)*

Pkg enumitem enumitem is supported with minor adjustments.

**for HTML output:** 1 \LWR@ProvidesPackagePass{enumitem}[2018/11/30]

**for HTML output:** 2 \begin{warpHTML}

```
\newlist {<name>} {<type>} {<maxdepth>}
\renewlist {<name>} {<type>} {<maxdepth>}
```

For enumitem lists, new lists must have the start and end actions assigned to the new environment. Renewed lists already have their actions assigned, and thus need no changes.

```
3 \let\LWR@enumitem@orignewlist\newlist
4
5 \renewcommand*{\newlist}[3]{%
6 \LWR@enumitem@orignewlist{#1}{#2}{#3}%
7 \AtBeginEnvironment{#1}{\@nameuse{LWR@#2start}}%
8 \AtEndEnvironment{#1}{\@nameuse{LWR@#2end}}%
9 }
10
11 \def\DrawEnumitemLabel{}

12 \end{warpHTML}
```

---

File 123 **lwarp-epigraph.sty**

§ 226 Package **epigraph**

*(Emulates or patches code by PETER WILSON.)*

Pkg epigraph epigraph is emulated for HTML, and used as-is for print output.

Use css to format epigraphs.

**for HTML output:** 1 \LWR@ProvidesPackagePass{epigraph}[2020/01/02]

```

2 \DeclareDocumentCommand{\LWR@HTML@qitem}{m m}
3 {%
4 \begin{BlockClass}{qitem}%
5 #1%
6 \LWR@stoppars%
7 \ifbool{FormatWP}%
8 {\begin{BlockClass}[border-top:1px solid gray]{epigraphsource}}%
9 {\begin{BlockClass}{epigraphsource}}%
10 #2%
11 \end{BlockClass}%
12 \end{BlockClass}%
13 }
14 \LWR@formatted{qitem}

15 \DeclareDocumentCommand{\LWR@HTML@epigraph}{m m}
16 {%
17 \begin{LWR@BlockClassWP}{\LWR@print@mbox{text-align:right}}{}{epigraph}%
18 \qitem{#1}{#2}%
19 \end{LWR@BlockClassWP}%
20 }
21 \LWR@formatted{epigraph}
22
23 \DeclareDocumentEnvironment{LWR@HTML@epigraphs}{}
24 {\LWR@BlockClassWP{\LWR@print@mbox{text-align:right}}{}{epigraph}}
25 {\endLWR@BlockClassWP}
26 \LWR@formattedenv{epigraphs}

```

The following cannot be used in print mode while generating HTML:

```

27 \renewcommand{\epigraphhead}[2][0]{#2}
28 \renewcommand{\dropchapter}[1]{}
29 \renewcommand*\undodrop{}{}

```

---

## File 124 **lwarp-epsfig.sty**

### § 227 Package **epsfig**

Pkg epsfig epsfig is emulated for use by lwarp.



Only the L<sup>A</sup>T<sub>E</sub>X2e syntax is emulated.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{epsfig}[2017/06/25]

A few additional keys to capture the filename:

```

2 \RequirePackage{graphics}
3
4 \define@key{igraph}{file}{%
5 \xdef\LWR@epsfig@filename{#1}%
6 }
7

```

```

8 \define@key{igraph}{figure}{%
9 \xdef\LWR@epsfig@filename{#1}%
10 }
11
12 \define@key{igraph}{prolog}{%}
13
14 \define@key{igraph}{silent}[]{}

```

The captured filename is used as the argument to `\includegraphics`:

```

15 \newcommand{\epsfig}[1]{\includegraphics[#1]{\LWR@epsfig@filename}}
16
17 \newcommand{\psfig}[1]{\includegraphics[#1]{\LWR@epsfig@filename}}

```

---

#### File 125 **lwarp-epstopdf.sty**

### § 228 Package **epstopdf**

Pkg epstopdf Previous versions of lwarp had a nullified version, but now **epstopdf-base** is supported. **lwarp-epstopdf** becomes a placeholder to overwrite previous versions.

See package **epstopdf-base** for details.

**for HTML output:** 1 \LWR@ProvidesPackagePass{epstopdf}[2016/05/15]

---

#### File 126 **lwarp-epstopdf-base.sty**

### § 229 Package **epstopdf-base**

Pkg epstopdf-base

 **convert to .svg**

Images with an `.eps` extension will be converted to `.pdf`. The HTML output uses the `.svg` version, so use

Enter ⇒ **lwarpmk pdftosvg <listofPDFfiles>**

to generate `.svg` versions.

**for HTML output:** 1 \LWR@ProvidesPackagePass{epstopdf-base}[2016/05/15]

Redefine to remember the image filename, replacing `.pdf` with `.svg`. Use the **epstopdf** print version inside a `lateximage`.

```

2 \newcommand*{\LWR@HTML@ETE@OrgGin@setfile}[3]{%
3 \edef\LWR@tempone{#3}%
4 \StrSubstitute{\LWR@tempone}{.pdf}{.svg}[\LWR@tempone]%
5 \StrSubstitute{\LWR@tempone}{.PDF}{.SVG}[\LWR@tempone]%
6 \xdef\LWR@parsedfilename{\LWR@tempone}%
7 }

```

```

8
9 \LWR@formatted{ETE@OrgGin@setfile}

```

\includegraphics in HTML mode redefines \Gin@setfile to be \LWR@HTML@Gin@setfile, which is now redirected to **epstopdf**'s version:

```

10 \renewcommand*{\LWR@HTML@Gin@setfile}[3]{%
11 \ETE@Gin@setfile{#1}{#2}{#3}%
12 }

```

Allow .eps images to be found if a suffix is not provided:

```

13 \AtBeginDocument{
14 \DeclareGraphicsExtensions{%
15 .eps,.EPS,.svg,.SVG,.gif,.GIF,.png,.PNG,.jpg,.JPG,.jpeg,.JPEG%
16 }
17 \DeclareGraphicsRule{.svg}{svg}{.svg}{}
18 \DeclareGraphicsRule{.SVG}{svg}{.SVG}{}
19 }

```

Likewise when inside a lateximage:

```

20 \appto\LWR@restoreorigformatting{%
21 \DeclareGraphicsExtensions{%
22 .eps,.EPS,.pdf,.PDF,.gif,.GIF,.png,.PNG,.jpg,.JPG,.jpeg,.JPEG%
23 }%
24 }

```

---

File 127 **lwarp-eqlist.sty**

§ 230     Package **eqlist**

Pkg    eqlist    eqlist is emulated.

**for HTML output:**    1 \LWR@ProvidesPackageDrop{eqlist}[2002/08/15]

```

2 \newenvironment{eqlist}[1][{}]{\description}{\enddescription}
3 \newenvironment{eqlist*}[1][{}]{\description}{\enddescription}
4 \newenvironment{Eqlist}[2][{}]{\description}{\enddescription}
5 \newenvironment{Eqlist*}[2][{}]{\description}{\enddescription}
6 \newcommand*{\longitem}[1][{}]{\item[#1]}
7 \newcommand*{\eqlistinit}{}
8 \newcommand*{\eqliststarinit}{}
9 \newcommand*{\eqlistinitpar}{}
10 \def\eqlistlabel#1{#1}
11 \newcommand{\eqlistauto}[1]{}
12 \newcommand{\eqlistnoauto}{}

```

---

File 128 **lwarp-eqparbox.sty**

§ 231      Package **eqparbox**
*(Emulates or patches code by SCOTT PAKIN.)*

Pkg    eqparbox    eqparbox is patched for use by lwarp.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{eqparbox}[2017/09/03]

2 \NewDocumentCommand{\LWR@HTML@eqparbox}{O{t} O{ } O{t} m +m}{%
3 {%
4 \minipagefullwidth%
5 \parbox[#1][#2][#3]{\linewidth}{#5}%
6 }%
7 }
8 \LWR@formatted{eqparbox}
9
10 \NewDocumentCommand{\LWR@HTML@eqmakebox}{o o m}{%
11 \makebox[#2][#3]%
12 }
13 \LWR@formatted{eqmakebox}
14
15 \NewDocumentCommand{\LWR@HTML@eqframebox}{o o m}{%
16 \framebox[#2][#3]%
17 }
18 \LWR@formatted{eqframebox}
19
20 \NewDocumentEnvironment{LWR@HTML@eqminipage}{O{t} O{ } O{t} m}
21 {%
22 \begingroup%
23 \minipagefullwidth%
24 \minipage[#1][#2][#3]{\linewidth}%
25 }%
26 {%
27 \endminipage%
28 \endgroup%
29 }
30
31 \newcommand*{\LWR@HTML@eqboxwidth}[1]{.25\linewidth}
32 \LWR@formatted{eqboxwidth}
33
34 \newcommand*{\LWR@HTML@eqsetminwidth}[2]{}
35 \newcommand*{\LWR@HTML@eqsetmaxwidth}[2]{}
36
37 \newcommand*{\LWR@HTML@eqsetminwidthto}[2]{}
38 \newcommand*{\LWR@HTML@eqsetmaxwidthto}[2]{}

```

---

File 129 **lwarp-errata.sty**

§ 232      Package **errata**
*(Emulates or patches code by MICHAEL KOHLHASE.)*

Pkg   errata   **errata** is patched for use by **lwarp**.

This is for v0.3 of **errata**. A newer version of **errata** with more features is under development, at which time the **lwarp** version will have to be updated.

**for HTML output:**      Macros are being defined with the math dollar, so enable the HTML version during package loading:

```
1 \StartDefiningMath
```

Now load the package:

```
2 \LWR@ProvidesPackagePass{errata}[2006/11/12]
```

Patches for dynamic inline math:

```
3 \xpatchcmd{\erratumAdd}
4 {$_a^{\arabic{erratum}}}$}
5 % {\inlinemathother$_a^{\arabic{erratum}}$\inlinemathnormal}
6 {\textsubscript{a}\textsuperscript{\arabic{erratum}}}
7 {}
8 {\LWR@patcherror{erratum}{erratumAdd}}
9
10 \xpatchcmd{\erratumDelete}
11 {$_d^{\arabic{erratum}}}$}
12 % {\inlinemathother$_d^{\arabic{erratum}}$\inlinemathnormal}
13 {\textsubscript{d}\textsuperscript{\arabic{erratum}}}
14 {}
15 {\LWR@patcherror{erratum}{erratumDelete}}
16
17 \xpatchcmd{\erratumReplace}
18 {$_r^{\arabic{erratum}}}$}
19 % {\inlinemathother$_r^{\arabic{erratum}}$\inlinemathnormal}
20 {\textsubscript{r}\textsuperscript{\arabic{erratum}}}
21 {}
22 {\LWR@patcherror{erratum}{erratumReplace}}
23
24 \xpatchcmd{\erratum}
25 {$_a$}
26 % {\inlinemathother$_a$\inlinemathnormal}
27 {\textsubscript{a}}
28 {}
29 {\LWR@patcherror{erratum}{erratumDelete}}
30
31 \xpatchcmd{\erratum}
```

```

32 {$_d^{\@thefnmark}$}
33 % {\inlinemathother$_d^{\@thefnmark}$\inlinemathnormal}
34 {\textsubscript{d}\@thefnmark}
35 {}
36 {\LWR@patcherror{erratum}{eDelete}}
37
38 \xpatchcmd{\erratum}
39 {$_r^{\@thefnmark}$}
40 % {\inlinemathother$_r^{\@thefnmark}$\inlinemathnormal}
41 {\textsubscript{r}\@thefnmark}
42 {}
43 {\LWR@patcherror{erratum}{eReplace}}

```

Finish the current page's errata before closing and reloading the list:

```
44 \preto\PrintErrata{\LWR@maybe@orignewpage}
```

No longer defining math macros with the HTML \$:

```
45 \StopDefiningMath
```

---

## File 130 **lwarp-eso-pic.sty**

### § 233 Package **eso-pic**

*(Emulates or patches code by ROLF NIEPRASCHK.)*

Pkg eso-pic **eso-pic is ignored.**

**for HTML output:** 1 \LWR@ProvidesPackageDrop{eso-pic}[2018/04/12]

```

2 \newcommand*{\LenToUnit}{}
3 \newcommand{\AtPageUpperLeft}[1]{}
4 \newcommand{\AtPageLowerLeft}[1]{}
5 \newcommand{\AtPageCenter}[1]{}
6 \newcommand{\AtStockLowerLeft}[1]{}
7 \newcommand{\AtStockUpperLeft}[1]{}
8 \newcommand{\AtStockCenter}[1]{}
9 \newcommand{\AtTextUpperLeft}[1]{}
10 \newcommand{\AtTextLowerLeft}[1]{}
11 \newcommand{\AtTextCenter}[1]{}
12 \NewDocumentCommand{\AddToShipoutPictureBG}{s +m}{}

13 \newcommand{\AddToShipoutPicture}{\AddToShipoutPictureBG}
14 \NewDocumentCommand{\AddToShipoutPictureFG}{s +m}{}
15 \newcommand*{\ClearShipoutPictureBG}{}
16 \newcommand*{\ClearShipoutPicture}{}
17 \newcommand*{\ClearShipoutPictureFG}{}
18 \newcommand{\gridSetup}[6][1]{}

```

File 131 **lwarp-etoc.sty**

§ 234 Package **etoc**

Pkg etoc etoc is ignored. All commands are nullified.

⚠ **\tableofcontents with \ref** The etoc package uses a non-standard syntax which looks ahead after a \tableofcontents for a following \ref. These \refs appear in the HTML result unless they are removed. Where a \tableofcontents is followed by \ref, and perhaps also \label as well, enclose all of them inside \warpprintonly:

```
\warpprintonly{\tableofcontents \ref{toc:abc} \label{toc:def}}
```

or place all code related to a local \tableofcontents inside a warpprint environment.

⚠ **home page** Be sure to keep the initial \tableofcontents on the home page, perhaps in its own \warppHTMLOnly macro or warppHTML environment.

for HTML output:

```
1 \LWR@ProvidesPackageDrop{etoc}[2019/11/17]

2 \def\etocsetlevel#1#2{}
3 \def\etocskipfirstprefix{}
4 \let\etocthename \empty
5 \let\etocthenumber \empty
6 \let\etocthepage \empty
7 \let\etocthelinkedname \empty
8 \let\etocthelinkednumber \empty
9 \let\etocthelinkedpage \empty
10 \let\etocthelink \@firstofone % prior to 1.08j its was \let to \empty
11 \DeclareRobustCommand*\etocname {}
12 \DeclareRobustCommand*\etocnumber {}
13 \DeclareRobustCommand*\etocpage {}
14 \DeclareRobustCommand*\etoclink {\@firstofone}
15 \DeclareRobustCommand*\etocifnumbered {\@firstoftwo}
16 \DeclareRobustCommand*\etociffirst {\@firstoftwo}
17 \DeclareRobustCommand*\etocifwasempty {\@firstoftwo}
18 \let\etocaftertitlehook \empty
19 \let\etocaftercontentshook \empty
20 \def\etoc\tableofcontents{}
21 \newcommand*\localtableofcontents{}
22 \newcommand*\localtableofcontentswithrelativedepth[1]{}
23 \newcommand\etocsettocstyle[2]{}
24 \long\def\etocsetstyle#1#2#3#4#5{}
25 \def\etocfontminustwo {\normalfont \LARGE \bfseries}
26 \def\etocfontminusone {\normalfont \large \bfseries}
27 \def\etocfontzero {\normalfont \large \bfseries}
28 \def\etocfontone {\normalfont \normalsize \bfseries}
29 \def\etocfonttwo {\normalfont \normalsize}
30 \def\etocfontthree {\normalfont \footnotesize}
31 \def\etocsepminustwo {4ex \@plus .5ex \@minus .5ex}
32 \def\etocsepminusone {4ex \@plus .5ex \@minus .5ex}
```

```

33 \def\etocsepzero {2.5ex \@plus .4ex \@minus .4ex}
34 \def\etocseppone {1.5ex \@plus .3ex \@minus .3ex}
35 \def\etocseptwo {.5ex \@plus .1ex \@minus .1ex}
36 \def\etocsepthree {.25ex \@plus .05ex \@minus .05ex}
37 \def\etocbaselinespreadadminustwo {1}
38 \def\etocbaselinespreadadminusone {1}
39 \def\etocbaselinespreadzero {1}
40 \def\etocbaselinespreadone {1}
41 \def\etocbaselinespreadtwo {1}
42 \def\etocbaselinespreadthree {.9}
43 \def\etocminustwoleftmargin {1.5em plus 0.5fil}
44 \def\etocminustworightmargin {1.5em plus -0.5fil}
45 \def\etocminusoneleftmargin {1em}
46 \def\etocminusonerightmargin {1em}
47 \def\etoclineleaders
48 {\hbox{\normalfont\normalsize\hbext@2ex {\hss.\hss}}}
49 \def\etocabbrevpagename {p.~}
50 \def\etocpartname {Part}% modified 1.08b
51 \def\etocbookname {Book}
52 \def\etocdefaultlines{}
53 \def\etocabovetocskip{3.5ex \@plus 1ex \@minus .2ex}
54 \def\etocbelowtocskip{3.5ex \@plus 1ex \@minus .2ex}
55 \def\etoccolumnsep{2em}
56 \def\etocmulticolsep{0ex}
57 \def\etocmulticolpretolerance{-1}
58 \def\etocmulticoltolerance{200}
59 \def\etocdefaultnbcol{2}
60 \def\etocinnertopsep{2ex}
61 \newcommand\etocmulticolstyle[2][{}]{
62 \def\etocinnerbottomsep{3.5ex}
63 \def\etocinnerleftsep{2em}
64 \def\etocinnerrightsep{2em}
65 \def\etoctoprule{\hrule}
66 \def\etoclefttrule{\vrule}
67 \def\etocrighttrule{\vrule}
68 \def\etocbottomrule{\hrule}
69 \def\etoctoprulecolorcmd{\relax}
70 \def\etocbottomrulecolorcmd{\relax}
71 \def\etoclefttrulecolorcmd{\relax}
72 \def\etocrighttrulecolorcmd{\relax}
73 \newcommand*\etocruledstyle[2][{}]{
74 \def\etocframedmphook{\relax}
75 \long\def\etocbkgcolorcmd{\relax}
76 \newcommand*\etocframedstyle[2][{}]{
77 \def\etocmulticol{}
78 \def\etocruled{}
79 \def\etocframed{}
80 \def\etoclocalmulticol{}
81 \def\etoclocalruled{}
82 \def\etoclocalframed{}
83 \def\etocarticlestyle{}
84 \def\etocarticlestylenomarks{}
85 \def\etocbookstyle{}
86 \def\etocbookstylenomarks{}
87 \let\etocreportstyle\etocbookstyle

```

---

```

88 \let\etocreportstylenomarks\etocbookstylenomarks
89 \def\etocmemoirtoc\tocfmt #1#2{}
90 \def\etocmemoirstyle{}
91 \def\etocscrartclstyle{}
92 \let\etocscrbookstyle\etocscrartclstyle
93 \let\etocscrreprtstyle\etocscrartclstyle
94 \def\etocstandarddisplaystyle{\etocarticlestyle}
95 \newcommand*{\etocmarkboth}[1]{}
96 \newcommand*{\etocmarkbothnouc}[1]{}
97 \newcommand\etocstyle[3][section]{}
98 \newcommand\etocstylewithmarks[4][section]{}
99 \newcommand\etocstylewithmarksnouc[4][section]{}
100 \def\etocignoretoctocdepth{}
101 \def\etocsettocdepth[1]{}
102 \def\etocdepthtag #1#{\Etoc@depthtag }
103 \def\Etoc@depthtag #1{}
104 \def\etocignoredepthtags {}
105 \def\etocobeydepthtags {}
106 \def\etocsettagdepth #1#2{}
107 \def\invisibletableofcontents {}
108 \def\invisiblelocaltableofcontents{}
109 \def\etocsetnexttocdepth #1{}
110 \def\etocsetlocaltop #1#{\Etoc@set@localtop}
111 \def\Etoc@set@localtop #1{}
112 \def\etocstandardlines {}
113 \def\etoclines {}
114 \let\etocaftertochook \@empty
115 \let\etocbeforetitlehook \@empty
116 \appto\tableofcontents{\def\tableofcontents{}}

```

---

File 132 **lwarp-eurosym.sty**

§ 235 Package **eurosym**

(Emulates or patches code by HENRIK THEILING.)

Pkg eurosym eurosym is patched for use by lwarp.

for HTML output: 1 \LWR@ProvidesPackagePass{eurosym}[1998/08/06]

```

2 \renewrobustcmd\officialeguro{\HTMLentity{euro}}
3 \let\geneuro\officialeguro
4 \let\geneuronarrow\officialeguro
5 \let\geneurowide\officialeguro
6 \let\euro\officialeguro
7 \renewrobustcmd\eurobars{}
8 \renewrobustcmd\eurobarsnarrow{}
9 \renewrobustcmd\eurobarswide{}

```

---

File 133 **lwarp-everypage.sty**

§ 236 Package **everypage**

*(Emulates or patches code by SERGIO CALLEGARI.)*

Pkg everypage **everypage** is ignored.

**for HTML output:**

```
1 \LWR@ProvidesPackageDrop{everypage}[2007/06/20]

2 \newcommand*{\AddEverypageHook}[1]{}
3 \newcommand*{\AddThispageHook}[1]{}

```

---

File 134 **lwarp-everyshi.sty**

§ 237 Package **everyshi**

*(Emulates or patches code by MARTIN SCHRÖDER.)*

Pkg everyshi **everyshi** is ignored.

**for HTML output:** Discard all options for **lwarp-everyshi**:

```
1 \LWR@ProvidesPackageDrop{everyshi}[2001/05/15]

2 \newcommand*{\EveryShipout}[1]{}
3 \newcommand*{\AtNextShipout}[1]{}

```

---

File 135 **lwarp-extarrows.sty**

§ 238 Package **extarrows**

*(Emulates or patches code by HUYNH KY ANH.)*

Pkg extarrows **extarrows** is used as-is for SVG math, and emulated for MATHJAX.

**for HTML output:**

```
1 \LWR@ProvidesPackagePass{extarrows}[2008/05/15]

2 \begin{warpMathJax}
3 \CustomizeMathJax{\Newextarrow\xLongleftarrow{10,10}{0x21D0}}
4 \CustomizeMathJax{\Newextarrow\xLongrightarrow{10,10}{0x21D2}}
5 \CustomizeMathJax{\Newextarrow\xLonglefttrightharpoon{10,10}{0x21D4}}
6 \CustomizeMathJax{\Newextarrow\xLefttrightharpoon{10,10}{0x21D4}}
7 \CustomizeMathJax{\Newextarrow\xlonglefttrightharpoon{10,10}{0x2194}}
8 \CustomizeMathJax{\Newextarrow\xleftrightharpoon{10,10}{0x2194}}

```

---

```

9 \CustomizeMathJax{\let\xlongleftarrow\xleftarrow}
10 \CustomizeMathJax{\let\xlongrightarrow\xrightarrow}
11 \end{warpMathJax}

```

---

File 136 **lwarp-extramarks.sty**

§ 239     Package **extramarks**

*(Emulates or patches code by PIET VAN OOSTRUM.)*

Pkg    extramarks    extramarks is ignored.

**for HTML output:**    Discard all options for lwarp-extramarks:

```

1 \LWR@ProvidesPackageDrop{extramarks}[2019/01/31]

2 \newcommand*{\extramarks}[2]{}
3 \newcommand*{\firstleftxmark}{}
4 \newcommand*{\lastleftxmark}{}
5 \newcommand*{\firstrightxmark}{}
6 \newcommand*{\lastrightxmark}{}
7 \newcommand*{\firstxmark}{}
8 \newcommand*{\lastxmark}{}
9 \newcommand*{\topxmark}{}
10 \newcommand*{\topleftxmark}{}
11 \newcommand*{\toprightxmark}{}
12 \newcommand*{\firstleftmark}{}
13 \newcommand*{\lastrightmark}{}
14 \newcommand*{\firstrightmark}{}
15 \newcommand*{\lastleftmark}{}

```

---

File 137 **lwarp-fancybox.sty**

§ 240     Package **fancybox**

*(Emulates or patches code by TIMOTHY VAN ZANDT.)*

Pkg    fancybox    fancybox is supported with some patches.

**framed equation example**    fancybox's documentation has an example FramedEqn environment which combines math, \Sbox, a minipage, and an \fbox. This combination requires that the entire environment be enclosed inside a lateximage, which is done by adding \lateximage at the very start of FramedEqn's beginning code, and \endlateximage at the very end of the ending code. Unfortunately, the HTML alt attribute is not used here.

```

\newenvironmentFramedEqn
{
\lateximage% NEW
\setlength{\fboxsep}{15pt}
... }{...
\[\fbox{\TheSbox}\]
\endlateximage% NEW
}

```


**framing alternatives** `\fbox` works with `fancybox`. Also see `lwarp`'s `\fboxBlock` macro and `fminipage` environment for alternatives to `\fbox` for framing environments.

**framed table example** The `fancybox` documentation's example of a framed table using an `\fbox` containing a `tabular` does not work with `lwarp`, but the `FramedTable` environment does work if `\fbox` is replaced by `\fboxBlock`. This method does lose some HTML formatting. A better method is to enclose the table's contents inside a `fminipage` environment. The caption may be placed either inside or outside the `fminipage`:

```

\begin{table}
\begin{fminipage}{\linewidth}
\begin{tabular}{lr}
...
\end{tabular}
\end{fminipage}
\end{table}

```

 **framed verbatim** `lwarp` does not support the `verbatim` environment inside a `span`, `box`, or `fancybox`'s `\Sbox`, but a `verbatim` may be placed inside a `fminipage`. The `fancybox` documentation's example `FramedVerb` may be defined as:

```



\newenvironment{FramedVerb}[1] % width
{
\VerbatimEnvironment
\fminipage{#1}
\beginVerbatim
}{
\endVerbatim
\endfminipage
}

```

**framed \VerbBox** `fancybox`'s `\VerbBox` may be used inside `\fbox`.

**indented alignment** `LVerbatim`, `LVerbatimInput`, and `LUseVerbatim` indent with horizontal space which may not line up exactly with what *pdftotext* detects. Some lines may be off slightly in their left edge.

**fancybox, fancyvrb** If using `fancybox` or `fancyvrb` with `\VerbatimFootnotes`, and using footnotes in a sectioning command or display math, use `\footnotemark` and `\footnotetext`:

 **\VerbatimFootnotes**  
 **sectioning or displaymath**

```

\subsection[Subsection Name]
{Subsection Name\protect\footnotemark}
\footnotetext{A footnote with \verb+verbatim+.}

```

and likewise for equations or display math.

At present there is a bug such that paragraph closing tags are not present in footnotes when `\VerbatimFootnotes` are selected. The browser usually compensates.

```
1 \LWR@ProvidesPackagePass{fancybox}[2010/05/15]
```

After the preamble is loaded, after any patches to Verbatim:

```
2 \AfterEndPreamble{
3 \LWR@traceinfo{Patching fancybox.}
```

`\VerbatimFootnotes`      Patched to use the new version.

```
4 \def\VerbatimFootnotes{%
5 \let\@footnotetext\V@footnotetext%
6 \let\LWR@footnotetext\V@footnotetext% lwarp
7 }
```

`\V@footnotetext`      Patches in a subset of `lwarp`'s `\LWR@footnotetext` to the `fancyvrb` version of `\V@footnotetext`.

```
8 \def\V@footnotetext{%
9 \LWR@traceinfo{V@footnotetext}%
10 \global\setbox\LWR@footnotebox=\vbox\bgroup%
```

Add to any current footnotes:

```
11 \unvbox\LWR@footnotebox%
```

Remember the footnote number for `\ref`:

```
12 \protected@edef\@currentlabel{%
13 \csname p@footnote\endcsname\@thefnmark%
14 }% @currentlabel
```

Use HTML superscripts in the footnote even inside a `lateximage`:

```
15 \renewrobustcmd{\textsuperscript}[1]{\LWR@htmlspan{sup}{##1}}%
```

Use paragraph tags if in a tabular data cell or a `lateximage`:

```
16 \ifthenelse{%
17 \boolean{LWR@doingstartpars} \AND%
18 \cnttest{\value{LWR@lateximagedepth}}{=}{0}%
19 }%
20 {}%
21 {\LWR@htmltagc{\LWR@tagregularparagraph}\LWR@orignewline}%

```

Append the footnote to the list:

```
22 \@makefntext{}%
```

The footnote text will follow after `\V@@@footnotetext` has completed.

```
23 \bgroup%
24 \aftergroup{\V@@@footnotetext}%
25 \ignorespaces%
26 }%
```

```

27 }% AfterEndPreamble

28 \renewcommand*\@shadowbox}[1]{%
29 \ifbool{FormatWP}%
30 {\InlineClass[border:1px solid black]{shadowbox}{#1}}%
31 {\InlineClass{shadowbox}{#1}}%
32 }
33
34 \renewcommand*\@doublebox}[1]{%
35 \ifbool{FormatWP}%
36 {\InlineClass[border:1px double black]{doublebox}{#1}}%
37 {\InlineClass{doublebox}{#1}}%
38 }
39
40 \renewcommand*\@ovalbox}[2]{%
41 \ifbool{FormatWP}%
42 {\InlineClass[border:1px solid black; border-radius:1ex]{ovalbox}{#2}}%
43 {%
44 \ifthenelse{\isequivalentto{#1}{\thinlines}}%
45 {\InlineClass{ovalbox}{#2}}%
46 {\InlineClass{Ovalbox}{#2}}%
47 }%
48 }

```

Convert minipages, parboxes, and lists into linear text using the LWR@nestspan environment:

```

49 \let\LWR@origSbox\Sbox
50
51 \def\Sbox{\LWR@origSbox\LWR@nestspan}
52
53
54 \let\LWR@origendSbox\endSbox
55
56 \def\endSbox{\endLWR@nestspan\LWR@origendSbox}

```

Beqarray is adapted for MATHJAX or enclosed inside a lateximage:

```

57 \RenewEnviron{Beqarray}
58 {\LWR@eqnarrayfactor}
59
60 \csgpreto{Beqarray*}{\boolfalse{LWR@numbereqnarray}}

```

\GenericCaption is enclosed in an HTML block:

```

61 \renewcommand{\GenericCaption}[1]{%
62 \LWR@figcaption%
63 \LWR@isolate{#1}%
64 \endLWR@figcaption%
65 }

```

Btrivlist is enclosed in an HTML block. This is a tabular, and does not use \item.

```

\trivlist {\l/c/r} [\t/c/b]

66 \RenewDocumentEnvironment{Btrivlist}{m o}
67 {%
68 \LWR@stoppars%
69 \begin{BlockClass}{Btrivlist}%
70 \tabular{#1}%
71 }
72 {%
73 \endtabular%
74 \end{BlockClass}%
75 \LWR@startpars%
76 }

```

Btrivlist is also neutralized when used inside a span:

```

77 \AtBeginEnvironment{LWR@nestspan}{%
78 \RenewDocumentEnvironment{Btrivlist}{m o}{}{}%
79 }

```

lwarp's handling of \item is patched to accept fancybox's optional arguments:

```

80 \let\LWRFB@origitemizeitem\LWR@itemizeitem
81 \let\LWRFB@origdescitem\LWR@descitem
82
83 \RenewDocumentCommand{\LWR@itemizeitem}{d()o}{%
84 \IfValueTF{#2}{%
85 \LWRFB@origitemizeitem[#2]%
86 }{%
87 \LWRFB@origitemizeitem%
88 }%
89 }
90
91 \RenewDocumentCommand{\LWR@descitem}{d()o}{%
92 \IfValueTF{#2}{%
93 \LWRFB@origdescitem[#2]~%
94 }{%
95 \LWRFB@origdescitem%
96 }%
97 }

98 \RenewDocumentCommand{\LWR@nestspanitem}{d()}{%
99 \if@newlist\else{\LWR@htmltagc{br /}}\fi%
100 \LWR@origitem%
101 }

```

The various boxed lists become regular lists:

```

102 \renewenvironment{Bitemize}[1][\begin{itemize}]{\end{itemize}}
103 \renewenvironment{Benumerate}[1][\begin{enumerate}]{\end{enumerate}}
104 \renewenvironment{Bdescription}[1][\begin{description}]{\end{description}}

```

`\boxput` simply prints one then the other argument, side-by-side instead of above and behind:

```
105 \RenewDocumentCommand{\boxput}{s d() m m}{%
106 \IfBooleanTF{#1}{#3\quad#4}{#4\quad#3}%
107 }
```

Neutralized commands:

```
108 \RenewDocumentCommand{\fancyput}{s d() m}{%
109 \RenewDocumentCommand{\thisfancyput}{s d() m}{%
110
111 \RenewDocumentCommand{\fancypage}{m m}{%
112 \RenewDocumentCommand{\thisfancypage}{m m}{%
113
114 \def\LandScape#1{%
115 \def\endLandScape{%
116 \def\@LandScape#1#2#3{%
117 \def\endLandScape{%
```

Low-level patches for `UseVerbatim` and friends:

```
118 \let\LWRFB@UseVerbatim\UseVerbatim
119 \renewcommand*{\UseVerbatim}[1]{%
120 \LWR@atbeginverbatim{3}{Verbatim}%
121 \LWRFB@UseVerbatim{#1}%
122 \LWR@afterendverbatim{.5}%
123 }
124
125 \let\LWRFB@LUseVerbatim\LUseVerbatim
126
127 \renewcommand*{\LUseVerbatim}[1]{%
128 \LWR@atbeginverbatim{3}{LVerbatim}%
129 \noindent%
130 \LWRFB@LUseVerbatim{#1}%
131 \LWR@afterendverbatim{.5}%
132 }
133
134 \def\@BUseVerbatim[#1]#2{%
135 \LWR@atbeginverbatim{3}{BVerbatim}%
136 \LWRFB@UseVerbatim{#2}%
137 \LWR@afterendverbatim{.5}%
138 }
```

---

File 138 **lwarp-fancyhdr.sty**

§ 241 Package **fancyhdr**

*(Emulates or patches code by PIET VAN OOSTRUM.)*

Pkg fancyhdr fancyhdr is ignored.

for HTML output:

Discard all options for `lwarp-fancyhdr`:

```

1 \LWR@ProvidesPackageDrop{fancyhdr}[2019/01/31]

2 \newcommand*\fancyhead[2][]{ }
3 \newcommand*\fancyfoot[2][]{ }
4 \newcommand*\fancyhf[2][]{ }
5 \newcommand*\fancypagestyle[2]{ }
6 \newcommand*\lhead[2][]{ }
7 \newcommand*\chead[2][]{ }
8 \newcommand*\rhead[2][]{ }
9 \newcommand*\lfoot[2][]{ }
10 \newcommand*\cfoot[2][]{ }
11 \newcommand*\rfoot[2][]{ }
12 \newcommand*\headrulewidth{ }
13 \newcommand*\footrulewidth{ }
14 \newcommand*\headrule{ }
15 \newcommand*\footrule{ }
16 \newlength\headwidth
17 \newcommand*\fancyheadoffset[2][]{ }
18 \newcommand*\fancyfootoffset[2][]{ }
19 \newcommand*\fancyhfoffset[2][]{ }
20 \newcommand*\iffloatpage[2]{#2}
21 \newcommand*\ifftopfloat[2]{#2}
22 \newcommand*\iffbotfloat[2]{#2}
23 \newcommand*\iffootnote[2]{#2}

```

---

File 139 **lwarp-fancyref.sty**

§ 242      Package **fancyref**

*(Emulates or patches code by AXEL REICHERT.)*

Pkg    fancyref    fancyref is modified for HTML output.

for HTML output:

```

1 \LWR@ProvidesPackagePass{fancyref}[1999/02/03]

```

To remove the margin option, if `\fancyrefhook` is anything other than the paren option, then force it to the default instead. (Comparing to the margin option was not possible since `lwarp` has revised the meaning of `\mbox` so the comparison failed.)

```

2 \newcommand*\LWRfref@parenfancyrefhook[1]{(#1)}
3
4 \ifdefstrequal{\fancyrefhook}{\LWRfref@parenfancyrefhook}
5 { }{
6 \renewcommand*\fancyrefhook[1]{#1}%
7 }

```

---

File 140 **lwarp-fancytabs.sty**

§ 243 Package **fancytabs**

Pkg fancytabs fancytabs is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{fancytabs}[2016/03/29]

```

2 \newcommand{\fancytab}[3][RIGHT]{
3 \newcommand{\fancytabsStyle}[1]{
4 \newcommand{\fancytabsHeight}[1]{
5 \newcommand{\fancytabsWidth}[1]{
6 \newcommand{\fancytabsCount}[1]{
7 \newcommand{\fancytabsLeftColor}[1]{
8 \newcommand{\fancytabsRightColor}[1]{
9 \newcommand{\fancytabsTop}[1]{
10 \newcommand{\fancytabsTextVPos}[1]{
11 \newcommand{\fancytabsTextHPos}[1]{
12 \newcommand{\fancytabsGap}[1]{
13 \newcommand{\fancytabsFloor}[1]{
14 \newcommand{\fancytabsRotate}[1]{

```

---

File 141 **lwarp-fancyvrb.sty**

§ 244 Package **fancyvrb**

(Emulates or patches code by TIMOTHY VAN ZANDT.)

Pkg fancyvrb fancyvrb is supported with some patches.

HTML classes The fancy verbatim environment is placed inside a <div> of class fancyvrb. The label is placed inside a <div> of class fancyvrblabel. The verbatim text itself is placed inside a <div> of class verbatim.

fancybox, fancyvrb



\VerbatimFootnotes



sectioning or  
displaymath

If using fancybox or fancyvrb with \VerbatimFootnotes, and using footnotes in a sectioning command or display math, use \footnotemark and \footnotetext:

```

\subsection[Subsection Name]
{Subsection Name\protect\footnotemark}
\footnotetext{A footnote with \verb+verbatim+.}

```

and likewise for equations or display math.

At present there is a bug such that paragraph closing tags are not present in footnotes when \VerbatimFootnotes are selected. The browser usually compensates.

```
1 \AtBeginDocument{\RequirePackage{xcolor}}% for \convertcolorspec
```

```

2
3 \LWR@ProvidesPackagePass{fancyvrb}[2008/02/07]

```

Initial default patch for fancyvrb:

```

4 \fvset{frame=none}%

```

After the preamble is loaded, after any patches to Verbatim:

```

5 \AfterEndPreamble{
6 \LWR@traceinfo{Patching fancyvrb.}

```

\VerbatimFootnotes      Patched to use the new version.

```

7 \def\VerbatimFootnotes{%
8 \let\@footnotetext\V@footnotetext%
9 \let\footnote\V@footnote%
10 \let\LWR@footnotetext\V@footnotetext% lwarp
11 }

```

\V@footnotetext      Patches in a subset of lwarp's \LWR@footnotetext to the fancyvrb version of \V@footnotetext.

```

12 \def\V@footnotetext{%
13 \LWR@traceinfo{V@footnotetext}%
14 \global\setbox\LWR@footnotebox=\vbox\bgroup%

```

Add to any current footnotes:

```

15 \unvbox\LWR@footnotebox%

```

Remember the footnote number for \ref:

```

16 \protected@edef\@currentlabel{%
17 \csname p@footnote\endcsname\@thefnmark%
18 }% @currentlabel

```

Use HTML superscripts in the footnote even inside a lateximage:

```

19 \renewrobustcmd{\textsuperscript}[1]{\LWR@htmlspan{sup}{##1}}%

```

Use paragraph tags if in a tabular data cell or a lateximage:

```

20 \ifthenelse{%
21 \boolean{LWR@doingstartpars} \AND%
22 \cnttest{\value{LWR@lateximagedepth}}{=}{0}%
23 }%
24 {}%
25 {\LWR@htmltagc{\LWR@tagregularparagraph}\LWR@orignewline}%

```

Append the footnote mark to the list:

```

26 \@makefnmark{}%

```

The footnote text will follow after \V@@@footnotetext has completed.

```

27 \bgroup%
28 \aftergroup{\V@@@footnotetext}%
29 \ignorespaces%
30 }%

```

```

31 \preto\FVB@Verbatim{\LWR@forcenewpage}
32 \preto\FVB@LVerbatim{\LWR@forcenewpage}
33 % \preto\FVB@BVerbatim{\LWR@forcenewpage}% Fails, so done below.

```

Simplified to remove PDF formatting:

```

34 \def\FV@BeginListFrame@Single{%
35 \FV@SingleFrameLine{\z@}%
36 }
37
38 \def\FV@EndListFrame@Single{%
39 \FV@SingleFrameLine{\@ne}%
40 }
41
42 \def\FV@BeginListFrame@Lines{%
43 \FV@SingleFrameLine{\z@}%
44 }
45
46 \def\FV@EndListFrame@Lines{%
47 \FV@SingleFrameLine{\@ne}%
48 }
49
50 \renewcommand*{\FV@SingleFrameSep}{}

```

Adds HTML formatting:

```

51 \def\FV@BUseVerbatim#1{%
52 \LWR@atbeginverbatim{0}{verbatim}%
53 \FV@BVerbatimBegin#1\FV@BVerbatimEnd%
54 \LWR@afterendverbatim{0}%
55 }

```

`\LWR@FVstyle` Holds the style of the verbatim.

```

56 \newcommand*{\LWR@FVstyle}{}

```

The following patches to Verbatim are executed at the start and end of the environment, depending on the choice of frame. Original code is from the `fancyvrb` package.

```

57 \newcommand*{\LWR@fvstartnone}{%
58 \LWR@traceinfo{fvstartnone}%
59 % \hbox to\z@{
60 \BlockClass[\LWR@FVstyle]{fancyvrb}
61 \LWR@stoppars
62 \ifx\FV@LabelPositionTopLine\relax\else
63 \ifx\FV@LabelBegin\relax\else
64 \FancyVerbRuleColor{\LWR@FVfindbordercolor}
65 \LWR@htmltagc{%
66 div class="fancyvrblabel" % extra space
67 style="color: \LWR@origpound\LWR@tempcolor"%
68 }
69 \LWR@print@textrm{\FV@LabelBegin}% \textrm preserves emdash

```

```

70 \LWR@htmltagc{/div}\LWR@orignewline%
71 \fi
72 \fi
73 \LWR@atbeginverbatim{0}{verbatim}%
74 % }%
75 }
76
77 \newcommand*{\LWR@fvendnone}{%
78 \LWR@traceinfo{fvendnone}%
79 % \hbox to\z@{
80 \LWR@afterendverbatim{0}%
81 \LWR@stoppars%
82 \ifx\FV@LabelPositionBottomLine\relax\else
83 \ifx\FV@LabelEnd\relax\else
84 \FancyVerbRuleColor{\LWR@FVfindbordercolor}
85 \LWR@htmltagc{%
86 div class="fancyvrblabel" % extra space
87 style="color: \LWR@origpound\LWR@tempcolor"%
88 }
89 \LWR@print@textrm{\FV@LabelEnd}
90 \LWR@htmltagc{/div}\LWR@orignewline%
91 \fi
92 \fi
93 \endBlockClass
94 }
95
96 \newcommand*{\LWR@fvstartsingle}{%
97 \LWR@traceinfo{fvstartsingle}%
98 \LWR@fvstartnone%
99 \FV@BeginListFrame@Single%
100 }
101
102 \newcommand*{\LWR@fvendsingle}{%
103 \LWR@traceinfo{fvendsingle}%
104 \FV@EndListFrame@Single%
105 \LWR@fvendnone%
106 }
107
108 \newcommand*{\LWR@fvstartline}{%
109 \LWR@traceinfo{fvstartline}%
110 \LWR@fvstartnone%
111 % \setlength{\LWR@templengthnone}{\baselineskip}%
112 \FV@BeginListFrame@Lines%
113 % \setlength{\baselineskip}{\LWR@templengthnone}%
114 % \setlength{\baselineskip}{5pt}%
115 }
116
117 \newcommand*{\LWR@fvendline}{%
118 \LWR@traceinfo{fvendline}%
119 \FV@EndListFrame@Lines%
120 \LWR@fvendnone%
121 }

```

The following patches select the start/left/right/end behaviors depending on frame. Original code is from the `fancyvrb` package.

```

122 \newcommand*{\LWR@FVfindbordercolor}{%
123 \FancyVerbRuleColor%
124 \LWR@findcurrenttextcolor%
125 \color{black}%
126 }
127
128 % border width of \FV@FrameRule
129 \newcommand*{\LWR@FVborderstyle}[1]{%
130 padding#1: \strip@pt\dimexpr \FV@FrameSep\relax\relax pt ; % space
131 \LWR@FVfindbordercolor\LWR@indentHTMLtwo%
132 border#1: \strip@pt\dimexpr \FV@FrameRule\relax\relax pt % space
133 solid {\FancyVerbRuleColor{\LWR@origpound\LWR@tempcolor}} ; % space
134 }
135
136 \def\FV@Frame@none{%
137 \renewcommand*{\LWR@FVstyle}{\LWR@currenttextcolorstyle}%
138 \let\FV@BeginListFrame\LWR@fvstartnone%
139 \let\FV@LeftListFrame\relax%
140 \let\FV@RightListFrame\relax%
141 \let\FV@endListFrame\LWR@fvendnone%
142
143 \FV@Frame@none% default values
144
145 \def\FV@Frame@single{%
146 \renewcommand*{\LWR@FVstyle}{%
147 \LWR@currenttextcolorstyle\LWR@indentHTMLtwo%
148 \LWR@FVborderstyle}%
149 }%
150 \let\FV@BeginListFrame\LWR@fvstartsingle%
151 \let\FV@LeftListFrame\FV@LeftListFrame@Single%
152 \let\FV@RightListFrame\FV@RightListFrame@Single%
153 \let\FV@endListFrame\LWR@fvendsingle%
154
155 \def\FV@Frame@lines{%
156 \renewcommand*{\LWR@FVstyle}{%
157 \LWR@currenttextcolorstyle\LWR@indentHTMLtwo%
158 \LWR@FVborderstyle{-top}%
159 \LWR@indentHTMLtwo%
160 \LWR@FVborderstyle{-bottom}%
161 }%
162 \let\FV@BeginListFrame\LWR@fvstartline%
163 \let\FV@LeftListFrame\relax%
164 \let\FV@RightListFrame\relax%
165 \let\FV@endListFrame\LWR@fvendline%
166
167 \def\FV@Frame@topline{%
168 \renewcommand*{\LWR@FVstyle}{%
169 \LWR@currenttextcolorstyle\LWR@indentHTMLtwo%
170 \LWR@FVborderstyle{-top}%
171 }%
172 \let\FV@BeginListFrame\LWR@fvstartline%
173 \let\FV@LeftListFrame\relax%

```

```

174 \let\FV@RightListFrame\relax%
175 \let\FV@EndListFrame\LWR@fvendnone}
176
177 \def\FV@Frame@bottomline{%
178 \renewcommand*{\LWR@FVstyle}{%
179 \LWR@currenttextcolorstyle\LWR@indentHTMLtwo%
180 \LWR@FVborderstyle{-bottom}%
181 }%
182 \let\FV@BeginListFrame\LWR@fvstartnone%
183 \let\FV@LeftListFrame\relax%
184 \let\FV@RightListFrame\relax%
185 \let\FV@EndListFrame\LWR@fvendline}
186
187 \def\FV@Frame@leftline{%
188 \renewcommand*{\LWR@FVstyle}{%
189 \LWR@currenttextcolorstyle\LWR@indentHTMLtwo%
190 \LWR@FVborderstyle{-left}%
191 }%
192 % To define the \FV@FrameFillLine macro (from \FV@BeginListFrame)
193 \ifx\FancyVerbFillColor\relax%
194 \let\FV@FrameFillLine\relax%
195 \else%
196 \@tempdima\FV@FrameRule\relax%
197 \multiply\@tempdima-\tw@%
198 \edef\FV@FrameFillLine{%
199 \noexpand\FancyVerbFillColor{\vrule\@width\@number\@tempdima sp}%
200 \kern-\@number\@tempdima sp}}%
201 \fi%
202 \let\FV@BeginListFrame\LWR@fvstartnone%
203 \let\FV@LeftListFrame\FV@LeftListFrame@Single%
204 \let\FV@RightListFrame\relax%
205 \let\FV@EndListFrame\LWR@fvendnone}

```

Adds the optional label to the top and bottom edges. Original code is from the fancyvrb package.

```

206 \def\FV@SingleFrameLine#1{%
207 % \hbox to\z@{%
208 % \kern\leftmargin
209 \ifnum#1=\z@\relax
210 \let\FV@Label\FV@LabelBegin
211 \else
212 \let\FV@Label\FV@LabelEnd
213 \fi
214 \ifx\FV@Label\relax
215 % \FancyVerbRuleColor{\vrule \@width\linewidth \@height\FV@FrameRule}%
216 \else
217 \ifnum#1=\z@
218 % \setbox\z@\hbox{\strut\enspace\FV@LabelBegin\enspace\strut}%
219 \ifx\FV@LabelPositionTopLine\relax
220 \else
221 \fi
222 \else
223 % \setbox\z@\hbox{\strut\enspace\FV@LabelEnd\enspace\strut}%
224 \ifx\FV@LabelPositionBottomLine\relax

```

```

225 \else
226 \fi
227 \fi
228 \fi
229 % \hss
230 % }
231 }

```

Processes each line, adding optional line numbers. Original code is from the `fancyvrb` package.

```

232 \def\FV@ListProcessLine#1{%
233 \hbox to \hsize{%
234 \kern\leftmargin
235 \hbox to \VerbatimHTMLWidth {%
236 \ifcvoid{FV@LeftListNumber}{}{\kern 2.5em}%
237 \FV@LeftListNumber%
238 }%
239 \FancyVerbFormatLine{#1}%
240 \hss%
241 }%
242 \FV@RightListFrame
243 \FV@RightListNumber%
244 \hss% required to avoid underfull hboxes
245 }
246 }

```

Env BVerbatim

```

247 \AtBeginEnvironment{BVerbatim}
248 {%
249 \LWR@forcenewpage% instead of \preto
250 \LWR@atbeginverbatim{0}{bverbatim}%
251 }
252
253 \AfterEndEnvironment{BVerbatim}
254 {%
255 \LWR@afterendverbatim{0}%
256 }

```

End of the modifications to make at the end of the preamble:

```

257 } % \AfterEndPreamble

```

---

File 142 **lwarp-fbox.sty**

§ 245 Package **fbox**

*(Emulates or patches code by HERBERT VOSS.)*

Pkg fbox **fbox** is patched for use by **lwarp**.

for HTML output: 1 \LWR@ProvidesPackagePass{fbox}[2020/06/22]

This will be \LWR@formatted when \AtBeginDocument:

2 \LetLtxMacro\LWR@HTML@fbox\fbox

Instead of using the original, the new version is used with all borders:

3 \renewcommand\*\orig@fbox{\FBox@i[tblr]}

\WR@fboxpkg@border {<1: top/bottom/left/right>} {<2: padding, or empty>}

Accumulates HTML styles for border, and padding if given:

```
4 \newcommand*\LWR@fboxpkg@border}[2]{%
5 \appto\LWR@tempone{%
6 border-#1: % space
7 \LWR@printlength{\LWR@atleastonept} % space
8 solid \LWR@origpound\LWR@tempcolor ;\LWR@indentHTML
9 }%
10 \ifblank{#2}{}%
11 \appto\LWR@tempone{%
12 padding-#1: \LWR@printlength{#2} ;\LWR@indentHTML
13 }%
14 }%
15 }
```

A hack to reuse the same code for inline and blocks:

```
16 \newbool{\LWR@fboxpkg@ispar}
17 \boolfalse{\LWR@fboxpkg@ispar}
```

Accumulate HTML styles for left and right padding, depending on \if@fbox@space@left, \if@fbox@space@right:

```
18 \newcommand{\LWR@fboxpkg@lrpadding}[1]{%
19 \csuse{if@fbox@space@#1}%
20 \appto\LWR@tempone{%
21 padding-#1: \LWR@printlength{\fbox@@sep};\LWR@indentHTML
22 }
23 \else%
24 \appto\LWR@tempone{%
25 padding-#1: 0pt;\LWR@indentHTML
26 }
27 \fi%
28 }
```

The HTML version, modified to use HTML styles and either an \InlineClass or BlockClass:

```
29 \newcommand{\LWR@HTML@FBox@iii}[1]{%
```

Find and set the text color, rule width, margin:

```

30 \LWR@forceminwidth{\fbox@@rule}%
31 \LWR@findcurrenttextcolor%
32 \def\LWR@tempone{%
33 color: \LWR@origpound\LWR@tempcolor ; \LWR@indentHTML
34 margin: 1ex ; \LWR@indentHTML
35 }%

```

Add left/right padding:

```

36 \LWR@fboxpkg@lrpadding{left}%
37 \LWR@fboxpkg@lrpadding{right}%

```

Per the original to decode the borders, in a new way:

```

38 \ifnum\the\@tempcntb>8\relax
39 \advance\@tempcntb by -8
40 \LWR@fboxpkg@border{top}{\fbox@@sep}%
41 \fi
42 \ifnum\@tempcntb>3
43 \advance\@tempcntb by -4
44 \LWR@fboxpkg@border{left}{}%
45 \fi
46 \ifnum\@tempcntb>1
47 \LWR@fboxpkg@border{right}{}%
48 \fi
49 \ifodd\@tempcntb
50 \LWR@fboxpkg@border{bottom}{\fbox@@sep}%
51 \fi

```

Generate a BlockClass or \InlineClass with the contents:

```

52 \color@begingroup
53 \ifbool{LWR@fboxpkg@ispar}%
54 {%
55 \begin{BlockClass}[\LWR@tempone]{fboxpkg}%
56 #1%
57 \end{BlockClass}%
58 }%
59 {%
60 \InlineClass[\LWR@tempone]{fboxpkg}{%
61 #1%
62 }%
63 }%
64 \color@endgroup
65 \boolfalse{LWR@fboxpkg@ispar}% globally
66 }
67 \LWR@formatted{FBox@iii}

```

For \fparbox, set the use of BlockClass, then reuse the above:

```

68 \long\def\LWR@HTML@FParBox@i[#1]#2{%
69 \booltrue{LWR@fboxpkg@ispar}%
70 \FBox@i[#1]{#2}
71 }
72 \LWR@formatted{FParBox@i}

```

```

73
74 \long\def\LWR@HTML@FParBox@ii#1{%
75 \booltrue{LWR@fboxpkg@ispar}%
76 \FBox@i[tblr]{#1}%
77 }
78 \LWR@formatted{FParBox@ii}

```

For MATHJAX, absorb and ignore star and optional arguments:

```

79 \CustomizeMathJax{\let\LWRorigfbox\fbox}
80 \CustomizeMathJax{\newcommand{\LWRfboxpkgtwo}[2][\LWRorigfbox{#2}]}
81 \CustomizeMathJax{\renewcommand{\fbox}{\ifstar\LWRfboxpkgtwo\LWRfboxpkgtwo}}
82 \CustomizeMathJax{\newcommand{\fparbox}{\fbox}}

```

---

### File 143 **lwarp-fewerfloatpages.sty**

#### § 246 Package **fewerfloatpages**

Pkg fewerfloatpages fewerfloatpages is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{fewerfloatpages}[2020/02/14]

```

2 \newcommand\floatpagekeepfraction{\textfraction}
3 \newcounter{floatpagedeferlimit}
4 \newcounter{floatpagekeeplimit}

```

---

### File 144 **lwarp-figcaps.sty**

#### § 247 Package **figcaps**

*(Emulates or patches code by PATRICK W. DALY.)*

Pkg figcaps figcaps is ignored.

**for HTML output:** Discard all options for lwarp-figcaps:

```

1 \LWR@ProvidesPackageDrop{figcaps}[1999/02/23]

2 \newcommand*{\figcapson}{}
3 \newcommand*{\figcapsoff}{}
4 \newcommand*{\printfigures}{}
5 \newcommand*{\figmarkon}{}
6 \newcommand*{\figmarkoff}{}
7 \def\figurecapname{Figure Captions}
8 \def\tablepagename{Tables}
9 \def\figurepagename{Figures}

```

---

File 145 **lwarp-figsize.sty**

§ 248      Package **figsize**

*(Emulates or patches code by ANTHONY A. TANBAKUCHI.)*

Pkg    figsize    figsize is emulated.

**for HTML output:**    1 \LWR@ProvidesPackageDrop{figsize}[2002/03/18]

Emulates a virtual 6×9 inch textsize.

```

2 \newlength{\figwidth}
3 \newlength{\figheight}
4
5 \newcommand{\SetFigLayout}[3][0]{%
6 \setlength{\figheight}{8in}%
7 \setlength{\figheight}{\figheight / #2}%
8 %
9 \setlength{\figwidth}{5.5in}%
10 \setlength{\figwidth}{\figwidth / #3}%
11 }
```

---

File 146 **lwarp-fitbox.sty**

§ 249      Package **fitbox**

Pkg    fitbox    fitbox is ignored.

**for HTML output:**    1 \LWR@ProvidesPackageDrop{fitbox}[2019/02/20]

```

2 \NewDocumentCommand{\fitbox}{s o m}{%
3 \begin{BlockClass}{fitbox}
4 #3
5 \end{BlockClass}
6 }
7
8 \newcommand*{\fitboxset}[1]{}
9
10 \newdimen\fitboxnatheight
11 \newdimen\fitboxnatwidth
12
13 \newcommand\SetFitboxLayout[3][[]]{}

```

---

File 147 **lwarp-fix2col.sty**

§ 250      Package **fix2col**

Pkg    fix2col    fix2col is ignored.

**for HTML output:**    1 \LWR@ProvidesPackageDrop{fix2col}[2015/11/13]


---

File 148 **lwarp-fixme.sty**

§ 251      Package **fixme**

*(Emulates or patches code by DIDIER VERNA.)*

Pkg    fixme    fixme is patched for use by lwarp.

 **external layouts** External layouts (\fxloadlayouts) are not supported.

User control is provided for setting the HTML styling of the “faces”. The defaults are as follows, and may be changed in the preamble after fixme is loaded:

```
\def\FXFaceInlineHTMLStyle{font-weight:bold}
\def\FXFaceEnvHTMLStyle{font-weight:bold}
\def\FXFaceSignatureHTMLStyle{font-style:italic}
\def\FXFaceTargetHTMLStyle{font-style:italic}
```

**for HTML output:**    1 \LWR@ProvidesPackagePass{fixme}[2017/03/05]

Restore lwarp’s version of \@wrindex, ignoring the fixme package’s target option:

```
2 \let\@wrindex\LWR@wrindex
```

Float-related macros required by lwarp:

```
3 \newcommand{\ext@fixme}{lox}
4
5 \renewcommand{\l@fixme}[2]{%
6 \hypertocfloat{1}{fixme}{lox}%
7 {\LWR@nameref{\BaseJobname-autopage-\arabic{LWR@nextautopage}} --- #1}
8 {#2}
9 }
```

Other modifications:

```
10 \def\FXFaceInlineHTMLStyle{font-weight:bold}
11
12 \renewcommand*\FXLayoutInline[3]{ %
```

```

13 \InlineClass[\FXFaceInlineHTMLStyle]{fixmeinline}%
14 {\@fxtextstd{#1}{#2}{#3}}%
15 }
16
17 \def\FXFaceEnvHTMLStyle{font-weight:bold}
18
19 \renewcommand*\FXEnvLayoutPlainBegin[2]{%
20 \BlockClass[\FXFaceEnvHTMLStyle]{fixmebold}
21 \ignorespaces#2 \fxnotename{#1}: \ignorespaces}
22
23 \renewcommand*\FXEnvLayoutPlainEnd[2]{\endBlockClass}
24
25 \renewcommand*\FXEnvLayoutSignatureBegin[2]{%
26 \BlockClass[\FXFaceEnvHTMLStyle]{fixmebold}
27 \fxnotename{#1}: \ignorespaces}
28
29 \renewcommand*\FXEnvLayoutSignatureEnd[2]{\@fxsignature{#2}\endBlockClass}
30
31 \def\FXFaceSignatureHTMLStyle{font-style:italic}
32
33 \DeclareRobustCommand*\@fxsignature[1]{%
34 \ifthenelse{\equal{#1}{}}{%
35 {}%
36 { -- {\InlineClass[\FXFaceSignatureHTMLStyle]{fixmesignature}{#1}}}%
37 }
38
39
40 \def\FXFaceTargetHTMLStyle{font-style:italic}
41
42 \renewcommand\FXTargetLayoutPlain[2]{%
43 \InlineClass[\FXFaceTargetHTMLStyle]{fixmetarget}{#2}%
44 }

```

---

File 149 **lwarp-fixmetodonotes.sty**

§ 252      Package **fixmetodonotes**

*(Emulates or patches code by GIOELE BARABUCCI.)*

Pkg    fixmetodonotes    **fixmetodonotes** is patched for use by lwarp.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{fixmetodonotes}[2013/04/28]

2 \renewcommand{\NOTES@addtolist}[2]{%
3 \refstepcounter{NOTES@note}%
4 \phantomsection% REMOVED
5 \addcontentsline{notes}{NOTES@note}{%
6 \protect\numberline{\theNOTES@note}{#1}: {#2}}%
7 }%
8 }
9
10 \renewcommand{\NOTES@marker}[2]{\fbox{%
11 \textcolor{#2}{% WAS \color

```

---

```

12 \textbf{#1}}}%
13 }}
14
15 \renewcommand{\NOTES@colorline}[2]{%
16 \bgroup%
17 \ULon{\LWR@backgroundcolor{#1}{#2}}}%
18 }

```

---

File 150 **lwarp-flafter.sty**

§ 253 Package **flafter**

Pkg flafter flafter is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{flafter}[2018/01/08]  
 2 \providecommand\fl@trace[1]{}

---

File 151 **lwarp-flippdf.sty**

§ 254 Package **flippdf**

Pkg flippdf flippdf is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{flippdf}[2006/06/30]  
 2 \newcommand\FlipPDF{}  
 3 \newcommand\UnFlipPDF{}

---

File 152 **lwarp-float.sty**

§ 255 Package **float**

*(Emulates or patches code by ANSELM LINGNAU.)*

Pkg float float is emulated.

Float styles boxed and ruled are emulated by css and a float class according to style.

The HTML <figure> class is set to the float type, so css may also be used to format the float and its caption, according to float type. Furthermore, an additional class is set to the float style: plain, plaintop, boxed, or ruled, so css may be used to format by float style as well. Default formatting by css is provided for ruled and boxed styles.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{float}[2001/11/08]

\listof See section 75.2 for the \listof command.

`\LWR@floatstyle` The default float style:

```
2 \newcommand*{\LWR@floatstyle}{plain}
```

`\newfloat`  $\{\langle 1: type \rangle\} \{\langle 2: placement \rangle\} \{\langle 3: ext \rangle\} [\langle 4: within \rangle]$

Emulates the `\newfloat` command from the `float` package.

“placement” is ignored.

```
3 \NewDocumentCommand{\newfloat}{m m m o}{%
4 \IfValueTF{#4}{%
5 {\DeclareFloatingEnvironment[fileext=#3,within=#4]{#1}}%
6 {\DeclareFloatingEnvironment[fileext=#3]{#1}}%
7 }
```

Remember the float style:

```
7 \csedef{\LWR@floatstyle@#1}{\LWR@floatstyle}%
8 \cslet{\listof#1s}\relax%
9 \cslet{\listof#1es}\relax%
```

`newfloat` package automatically creates the `\listof` command for new floats, but `float` does not, so remove `\listof` here in case it is manually created later.

```
8 \cslet{\listof#1s}\relax%
9 \cslet{\listof#1es}\relax%
```

Like `size`, `newfloat` also creates `\l@<type>`, but `float` does not, so remove it here:

```
10 \cslet{\l@#1}\relax%
11 }
```

`\floatname`  $\{\langle type \rangle\} \{\langle name \rangle\}$

Sets the text name of the float, such as “Figure”. Avoids trying to set a recursive name, from `trivfloat`.

```
12 \NewDocumentCommand{\floatname}{m +m}{%
13 \def\LWR@tempone{#2}%
14 \def\LWR@temptwo{\@nameuse{#1name}}%
15 \ifdefequal{\LWR@tempone}{\LWR@temptwo}{%
16 \SetupFloatingEnvironment{#1}{name=#2}%
17 }%
18 }
```

`\floatplacement`  $\{\langle type \rangle\} \{\langle placement \rangle\}$

Float placement is ignored.

```
19 \newcommand*{\floatplacement}[2]{%
20 \SetupFloatingEnvironment{#1}{placement=#2}%
21 }
```

`\floatstyle`  $\{\langle style \rangle\}$

Remember the style for future floats:

```
22 \newcommand{\floatstyle}[1]{%
23 \def\LWR@floatstyle{#1}%
24 }
```

`\restylefloat` \*  $\langle type \rangle$

Remember the style for this float:

```
25 \NewDocumentCommand{\restylefloat}{s m}{%
26 \csedef{LWR@floatstyle@#2}{\LWR@floatstyle}%
27 }
```

File 153 **lwarp-floatflt.sty**

§ 256 Package **floatflt**

*(Emulates or patches code by MATS DAHLGREN.)*

Pkg floatflt floatflt is emulated.

for HTML output: Discard all options for lwarp-floatflt:

```
1 \LWR@ProvidesPackageDrop{floatflt}[1997/07/16]
```

Env  $\langle \rangle$  offset  $\langle type \rangle$   $\langle width \rangle$  Borrowed from the lwarp version of keyfloat:

```
2 \NewDocumentEnvironment{KFLTfloatflt@marginfloat}{0{-1.2ex} m m}
3 {%
4 \begin{LWR@setvirtualpage}*%
5 \ifblank{#3}{%
6 \LWR@BlockClassWP{%
7 float:right; %
8 width: 1.5in; % reasonable dummy width for word processor
9 margin:10pt%
10 }{%
11 {marginblock}%
12 }{%
13 \setlength{\LWR@templengthone}{#3}%
14 \LWR@BlockClassWP{%
15 float:right; %
16 width:\LWR@printlength{\LWR@templengthone}; % extra space
17 margin:10pt%
18 }{%
19 width:\LWR@printlength{\LWR@templengthone}%
20 }%
21 {marginblock}%
22 }%
23 \renewcommand*{\@capttype}{#2}%
24 }
25 {%
26 \endLWR@BlockClassWP%
27 \end{LWR@setvirtualpage}%
28 }
```

Env floatingfigure  $\langle placement \rangle$   $\langle width \rangle$

```

29 \DeclareDocumentEnvironment{floatingfigure}{o m}
30 {\begin{KFLTfloatflt@marginfloat}{figure}{#2}}
31 {\end{KFLTfloatflt@marginfloat}}

```

Env floatingtable [*(placement)*]

```

32 \DeclareDocumentEnvironment{floatingtable}{o}
33 {\begin{KFLTfloatflt@marginfloat}{table}{}}
34 {\end{KFLTfloatflt@marginfloat}}

```

---

File 154 **lwarp-floatpag.sty**

§ 257 Package **floatpag**

*(Emulates or patches code by VYTAS STATULEVIČIUS AND SIGITAS TOLUŠIS.)*

Pkg floatpag floatpag is ignored.

**for HTML output:** Discard all options for lwarp-floatpag:

```

1 \LWR@ProvidesPackageDrop{floatpag}[2012/05/29]

2 \newcommand*{\floatpagestyle}[1]{}
3 \newcommand*{\rotfloatpagestyle}[1]{}
4 \newcommand*{\thisfloatpagestyle}[1]{}

```

---

File 155 **lwarp-floatrow.sty**

§ 258 Package **floatrow**

*(Emulates or patches code by OLGA LAPKO.)*

Pkg floatrow floatrow is emulated.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{floatrow}[2008/08/02]

⚠ **Misplaced alignment tab character &** Use \StartDefiningTabulars and \StopDefiningTabulars before and after defining macros using \ttabbox with a tabular inside. See section 8.10.1.

⚠ **subfig package** When combined with the subfig package, while inside a subfloatrow \ffigbox and \ttabbox must have the caption in the first of the two of the mandatory arguments.

⚠ **\FBwidth, \FBheight** The emulation of floatrow does not support \FBwidth or \FBheight. These values are pre-set to .3\linewidth and 2in. Possible solutions include:

- Use fixed lengths. lwarp will scale the HTML lengths appropriately.
- Use warpprint and warpHTML environments to select appropriate values for each case.

- Inside a warpHTML environment, manually change \FBwidth or \FBheight before the \ffigbox or \ttabbox. Use \FBwidth or \FBheight normally afterwards; it will be used as expected in print output, and will use your custom-selected value in HTML output. This custom value will be used repeatedly, until it is manually changed to a new value.

After everything has loaded, remember whether subcaption was loaded. If not, it is assumed that subfig is used instead:

```

2 \newbool{LWR@subcaptionloaded}
3
4 \AtBeginDocument{
5 \ifpackageloaded{subcaption}
6 {\booltrue{LWR@subcaptionloaded}}
7 {\boolfalse{LWR@subcaptionloaded}}
8 }

```

\floatbox [*<1 preamble>*] [*<2 captype>*] [*<3 width>*] [*<4 height>*] [*<5 vert pos>*] [*<6 caption>*] [*<7 object>*]

Only parameters for captype, width, caption, and object are used.

LWR@insubfloatrow is true if inside a subfloatrow environment.

There are two actions, depending on the use of subcaption or subfig.

```

9 \NewDocumentCommand{\floatbox}{o m o o o +m +m}{%
10 \ifbool{LWR@subcaptionloaded}%
11 {% subcaption

```

For subcaption:

```

12 \ifbool{LWR@insubfloatrow}%
13 {% subcaption in a subfloatrow

```

subfigure and subtable environments take width as an argument.

```

14 \IfValueTF{#3}%
15 {\@nameuse{sub#2}{#3}}%
16 {\@nameuse{sub#2}{\linewidth}}%
17 }% subcaption in a subfloatrow
18 {% subcaption not in subfloatrow

```

figure and table environments do not take a width argument.

```

19 \@nameuse{#2}%
20 }% subcaption not in subfloatrow
21 #6
22
23 #7

```

End the environments:

```

24 \ifbool{LWR@insubfloatrow}%
25 {\@nameuse{endsub#2}}%
26 {\@nameuse{end#2}}%
27 }% subcaption
28 {% assume subfig

```

For subfig:

```
29 \ifbool{LWR@insubfloatrow}%
30 {% subfig in a subfloatrow
```

\subfloat is a macro, not an environment.

Package subfig's \subfloat command takes an optional argument which is the caption, but \floatbox argument #6 contains commands to create the caption and label, not the caption itself. Thus, \caption is temporarily disabled to return its own argument without braces.

```
31 \begingroup
32 \let\caption\@firstofone
33 \subfloat[#6]{#7}
34 \endgroup
35}% subfig in a subfloatrow
36{% subfig package, but not a subfig
```

figure and table are environments:

```
37 \@nameuse{#2}
38 #6
39
40 #7
41 \@nameuse{end#2}
42}% subfig package, but not a subfig
43}% assume subfig
44 }
```

Not used:

```
45 \newcommand*{\nocapbeside}{}
46 \newcommand*{\capbeside}{}
47 \newcommand*{\captop}{}
48 \newlength{\FBwidth}
49 \setlength{\FBwidth}{.3\linewidth}
50 \newlength{\FBheight}
51 \setlength{\FBheight}{2in}
52 \newcommand*{\useFCwidth}{}
53 \newcommand{\floatsetup}[2][{}]{
54 \newcommand{\thisfloatsetup}[1]{
55 \newcommand{\clearfloatsetup}[1]{
56 \newcommand*{\killfloatstyle}{}

```

\newfloatcommand {<1 command>} {<2 captype>} [<3 preamble>] [<4 default width>]

Preamble and default width are ignored.

```
57 \NewDocumentCommand{\newfloatcommand}{m m o o}{%
58 \@namedef{#1}{
59 \floatbox{#2}
60 }
61 }
```

\renewfloatcommand {<1 command>} {<2 captype>} [<3 preamble>] [<4 default width>]

Preamble and default width are ignored.

```

62 \NewDocumentCommand{\renewfloatcommand}{m m o o}{%
63 \@namedef{#1}{%
64 \floatbox{#2}
65 }
66 }

```

```

\ffigbox [⟨width⟩] [⟨height⟩] [⟨vposn⟩] {⟨caption commands⟩} {⟨contents⟩}
67 \newfloatcommand{ffigbox}{figure}[\nocapbeside][]

```

```

\ttabbox [⟨width⟩] [⟨height⟩] [⟨vposn⟩] {⟨caption commands⟩} {⟨contents⟩}
68 \newfloatcommand{ttabbox}{table}[\captop][\FBwidth]

```

```

\fcapside [⟨width⟩] [⟨height⟩] [⟨vposn⟩] {⟨caption commands⟩} {⟨contents⟩}
69 \newfloatcommand{fcapside}{figure}[\capbeside][]

```

Env floatrow [⟨numfloats⟩]

The row of floats is placed into a <div> of class floatrow.

```

70 \newenvironment*{floatrow}[1][2]
71 {%
72 \begin{LWR@setvirtualpage}%
73 \BlockClass{floatrow}%
74 }
75 {
76 \endBlockClass%
77 \end{LWR@setvirtualpage}%
78 }

```

Keys for \DeclareNewFloatType:

```

79 \newcommand*{\LWR@frowkeyplacement}{}
80 \newcommand*{\LWR@frowkeyname}{}
81 \newcommand*{\LWR@frowkeyfileext}{}
82 \newcommand*{\LWR@frowkeywithin}{}
83 \newcommand*{\LWR@frowkeycapstyle}{}
84
85 \define@key{frowkeys}{placement}{}%
86 \define@key{frowkeys}{name}{\renewcommand{\LWR@frowkeyname}{#1}}%
87 \define@key{frowkeys}{fileext}{\renewcommand{\LWR@frowkeyfileext}{#1}}%
88 \define@key{frowkeys}{within}{\renewcommand{\LWR@frowkeywithin}{#1}}%
89 \define@key{frowkeys}{relatedcapstyle}{}%

```

\DeclareNewFloatType {⟨type⟩} {⟨options⟩}

Use \listof{type}{Title} to print a list of the floats.

```

90 \newcommand*{\DeclareNewFloatType}[2]{%

```

Reset key values:

```

91 \renewcommand*{\LWR@frowkeyplacement}{}%
92 \renewcommand*{\LWR@frowkeyname}{}%

```

```

93 \renewcommand*{\LWR@frowkeyfileext}{}%
94 \renewcommand*{\LWR@frowkeywithin}{}%
95 \renewcommand*{\LWR@frowkeycapstyle}{}%

```

Read new key values:

```

96 \LWR@traceinfo{about to setkeys frowkeys}%
97 \setkeys{frowkeys}{#2}%
98 \LWR@traceinfo{finished setkeys frowkeys}%

```

Create a new float with optional [within]:

```

99 \ifthenelse{\equal{\LWR@frowkeywithin}{} }%
100 {%
101 \DeclareFloatingEnvironment[
102 placement=\LWR@frowkeyplacement,
103 fileext=\LWR@frowkeyfileext
104]{#1}%
105 }%
106 {%
107 \DeclareFloatingEnvironment[
108 placement=\LWR@frowkeyplacement,
109 fileext=\LWR@frowkeyfileext,
110 within=\LWR@frowkeywithin
111]{#1}%
112 % \LWR@traceinfo{finished newfloat #1}%
113 }%

```

Rename the float if a name was given:

```

114 \ifthenelse{\equal{\LWR@frowkeyname}{} }%
115 {}%
116 {%
117 \SetupFloatingEnvironment{#1}{name={\LWR@frowkeyname}}%
118 }%
119 }

```

Not used:

```

120 \newcommand{\buildFBBBOX}[2]{}
121 \newcommand*{\CenterFloatBoxes}{}
122 \newcommand*{\TopFloatBoxes}{}
123 \newcommand*{\BottomFloatBoxes}{}
124 \newcommand*{\PlainFloatBoxes}{}
125
126 \newcommand{\capsubrowsettings}{}
127
128 \NewDocumentCommand{\RawFloats}{o o}{}

```

`\RawCaption`     $\{\langle text \rangle\}$

To be used inside a minipage or parbox.

```

129 \newcommand{\RawCaption}[1]{#1}

```

`\floatfoot`     $\{\langle text \rangle\}$

Places additional text inside a float, inside a css <div> of class floatfoot.

```

130 \NewDocumentCommand{\floatfoot}{s +m}{%
131 \begin{BlockClass}{floatfoot}
132 #2
133 \end{BlockClass}
134 }

```

Used to compute \linewidth.

```

135 \newbool{LWR@insubfloatrow}
136 \boolfalse{LWR@insubfloatrow}

```

Env subfloatrow [*<num\_floats>*]

```

137 \newenvironment*{subfloatrow}[1][2]
138 {

```

The row of floats is placed into a <div> of class floatrow:

```

139 \LWR@forcenewpage
140 \BlockClass{floatrow}

```

While inside the floatrow, LWR@insubfloatrow is set true, which tells \floatbox to use \subfigure or \subtable.

```

141 \begingroup%
142 \booltrue{LWR@insubfloatrow}%
143 }
144 {%
145 \endgroup%
146 \endBlockClass%
147 \boolfalse{LWR@insubfloatrow}%
148 }

```

---

File 156 **lwarp-fltrace.sty**

§ 259 Package **fltrace**

Pkg fltrace fltrace is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{fltrace}[2018/01/08]

2 \def\tracefloats{}
3 \def\tracefloatsoff{}
4 \def\tracefloatvals{}

```

---

File 157 **lwarp-flushend.sty**

§ 260 Package **flushend**

(Emulates or patches code by SIGITAS TOLUŠIS.)

Pkg flushend flushend is ignored.

for HTML output: Discard all options for lwarp-flushend:

```
1 \LWR@ProvidesPackageDrop{flushend}[2017/03/27]

2 \newcommand*{\flushend}{}
3 \newcommand*{\raggedend}{}
4 \newcommand*{\flushcolsend}{}
5 \newcommand*{\raggedcolsend}{}
6 \newcommand*{\atColsBreak}[1]{}
7 \newcommand*{\atColsEnd}[1]{}
8 \newcommand*{\showcolsendrule}{}

```

---

File 158 **lwarp-fnbreak.sty**

§ 261 Package **fnbreak**

Pkg fnbreak fnbreak is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{fnbreak}[2012/01/01]

```
2 \newcommand*{\fnbreakverbose}{}
3 \newcommand*{\fnbreaknonverbose}{}
4 \newcommand*{\fnbreaklabel}{}
5 \newcommand*{\fnbreaknolabel}{}

```

---

File 159 **lwarp-fncychap.sty**

§ 262 Package **fncychap**

*(Emulates or patches code by Ulf A. Lindgren.)*

Pkg fncychap fncychap is ignored.

for HTML output: Discard all options for lwarp-fncychap:

```
1 \LWR@ProvidesPackageDrop{fncychap}[2007/07/30]

2 \def\mghrulefill#1{}
3 \def\ChNameLowerCase{}
4 \def\ChNameUpperCase{}
5 \def\ChNameAsIs{}
6 \def\ChTitleLowerCase{}
7 \def\ChTitleUpperCase{}
8 \def\ChTitleAsIs{}
9 \newcommand{\ChRuleWidth}[1]{}
10 \newcommand{\ChNameVar}[1]{}
11 \newcommand{\ChNumVar}[1]{}
12 \newcommand{\ChTitleVar}[1]{}

```

---

```

13 \newcommand{\TheAlphaChapter}{}
14 \newcommand{\DOCH}{}
15 \newcommand{\DOTI}[1]{}
16 \newcommand{\DOTIS}[1]{}
17 \newlength{\mylen}
18 \newlength{\myhi}
19 \newlength{\px}
20 \newlength{\py}
21 \newlength{\pyy}
22 \newlength{\pxx}
23 \newlength{\RW}
24 \newcommand{\FmN}[1]{#1}
25 \newcommand{\FmTi}[1]{#1}

```

---

File 160 **lwarp-fnlineno.sty**

§ 263      Package **fnlineno**

Pkg    fnlineno    fnlineno is ignored.

**for HTML output:**    1 \LWR@ProvidesPackageDrop{fnlineno}[2011/01/07]

---

File 161 **lwarp-fnpara.sty**

§ 264      Package **fnpara**

Pkg    fnpara    fnpara is ignored.

**for HTML output:**    1 \LWR@ProvidesPackageDrop{fnpara}

---

File 162 **lwarp-fnpos.sty**

§ 265      Package **fnpos**

*(Emulates or patches code by HIROSHI NAKASHIMA.)*

Pkg    fnpos    fnpos is ignored.

**for HTML output:**    1 \LWR@ProvidesPackageDrop{fnpos}[1999/07/14]

```

2 \newcommand*{\makeFNbottom}{}
3 \newcommand*{\makeFNmid}{}
4 \newcommand*{\makeFNbelow}{}
5 \newcommand*{\makeFNabove}{}

```


File 163 **lwarp-fontawesome.sty**

§ 266 Package **fontawesome**

(Emulates or patches code by XAVIER DANAUX.)

Pkg fontawesome fontawesome is patched for use by lwarp.

Hashed inline images are used, as there may not be Unicode support for all icons.

 **poppler syntax warning** If using pdfL<sup>A</sup>T<sub>E</sub>X, *poppler* may issue a syntax warning regarding parsing a ligature component. X<sub>Y</sub>L<sup>A</sup>T<sub>E</sub>X or LuaL<sup>A</sup>T<sub>E</sub>X may be used to avoid this warning.

In the following, the general strategy is to intercept `\symbol` and embed it inside a `lateximage`. These changes are done inside a local group.

For pdfL<sup>A</sup>T<sub>E</sub>X, the `alt` tag includes the icon (symbol) number. For X<sub>Y</sub>L<sup>A</sup>T<sub>E</sub>X and LuaL<sup>A</sup>T<sub>E</sub>X, the `alt` tag is generic.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{fontawesome}[2016/05/15]
2 \LetLtxMacro\LWR@orig@symbol\symbol
3
4 \ifxetexorluatex
5
6 \newfontfamily{\LWR@orig@FA}{FontAwesome}
7
8 \newcommand*{\LWR@fontawesome@xelatex@symbol}[1]{%
9 \LWR@findcurrenttextcolor%
10 \begin{lateximage}*[icon][fontawesomexetex#1SZ\LWR@font@size{}CL\LWR@tempcolor]%
11 \csuse{\LWR@font@size}%
12 \LWR@orig@FA%
13 \LWR@orig@symbol{#1}%
14 \end{lateximage}%
15 }
16
17 \RenewDocumentCommand{\FA}{}{%
18 \LetLtxMacro\symbol\LWR@fontawesome@xelatex@symbol%
19 }
20
21 \else
22
23 \newcommand*{\LWR@fontawesome@symbolX}[2]{%
24 \LWR@findcurrenttextcolor%
25 \begin{lateximage}*[icon #1][fontawesome#2#1SZ\LWR@font@size{}CL\LWR@tempcolor]%
26 \csuse{\LWR@font@size}%
27 \fontencoding{U}\fontfamily{fontawesome#2}\selectfont%
28 \LWR@orig@symbol{#1}%
29 \end{lateximage}%
30 }
31
```

```

32 \newcommand*{\LWR@fontawesome@symbolone}[1]{%
33 \LWR@fontawesome@symbolX{#1}{one}%
34 }
35
36 \newcommand*{\LWR@fontawesome@symboltwo}[1]{%
37 \LWR@fontawesome@symbolX{#1}{two}%
38 }
39
40 \newcommand*{\LWR@fontawesome@symbolthree}[1]{%
41 \LWR@fontawesome@symbolX{#1}{three}%
42 }
43
44 \renewrobustcmd\FAone{%
45 \LetLtxMacro\symbol\LWR@fontawesome@symbolone%
46 }
47
48 \renewrobustcmd\FAtwo{%
49 \LetLtxMacro\symbol\LWR@fontawesome@symboltwo%
50 }
51
52 \renewrobustcmd\FAthree{%
53 \LetLtxMacro\symbol\LWR@fontawesome@symbolthree%
54 }
55 \fi

```

---

File 164 **lwarp-fontawesome5.sty**

§ 267     Package **fontawesome5**

(Emulates or patches code by MARCEL KRÜGER.)

Pkg fontawesome5 fontawesome5 is patched for use by lwarp.

Hashed inline images are used, as there may not be Unicode support for all icons.

The alt tag has the name of the icon.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{fontawesome5}[2018/07/27]
2 \ExplSyntaxOn
3 \cs_set:Nn\fontawesome_use_icon:nn{
4 \LWR@findcurrenttextcolor
5 \cs_if_exist:cTF{c__fontawesome_slot_#2_tl}{
6 \begin{lateximage}*[#2][fontawesome5#1SZ\LWR@font@size{}CL\LWR@tempcolor]
7 \csuse{\LWR@font@size}
8 \exp_last_unbraced:Nv
9 __fontawesome_icon_at:nnnn
10 {c__fontawesome_slot_#2_tl}
11 {#1}{#2}
12 \end{lateximage}
13 }{
14 \msg_error:nnxx{fontawesome5}{icon-not-found}{#2}{#1}
15 }

```

---

```
16 }
17 \ExplSyntaxOff
```

---

File 165 **lwarp-fontaxes.sty**

§ 268     Package **fontaxes**

*(Emulates or patches code by ANDREAS BÜHMANN, MICHAEL UMMELS.)*

Pkg   fontaxes   **fontaxes** is emulated for HTML, and used as-is for print output.

Functionality for small caps is in the **lwarp** core. Swashes and figure styles are ignored for HTML.

**for HTML output:**

```
1 \LWR@ProvidesPackagePass{fontaxes}[2014/03/23]

2 \ifdef{\LWR@HTML@swshape}{\% duplicated by nfssect-cfr
3 \newcommand{\LWR@HTML@swshape}{}
4 \LWR@formatted{swshape}
5
6 \newcommand{\LWR@HTML@textsw}[1]{#1}
7 \LWR@formatted{textsw}
8
9 \FilenameNullify{%
10 \LetLtxMacro\swshape\empty%
11 \LetLtxMacro\textsw\firstofone%
12 }
13 }
```

---

File 166 **lwarp-fontenc.sty**

§ 269     Package **fontenc**

Pkg   fontenc   If using pdfL<sup>A</sup>T<sub>E</sub>X, **lwarp** used to require **fontenc** be loaded before **lwarp**, but now **lwarp** itself loads **\fontenc** with T1 encoding, which **lwarp** requires. **fontenc** is now allowed to be loaded with another encoding after **lwarp**.

**lwarp-fontenc** is no longer necessary, but is still provided to overwrite older versions.

**for HTML output:**

```
1 \LWR@ProvidesPackagePass{fontenc}[2017/04/05]
```

---

File 167 **lwarp-footmisc.sty**

§ 270     Package **footmisc**

*(Emulates or patches code by ROBIN FAIRBAIRNS.)*

Pkg footmisc footmisc is emulated.

lwarp incidentally happens to emulate the stable option.

```
1 \LWR@ProvidesPackageDrop{footmisc}[2011/06/06]
```

Some nullified commands:

```
2 \newcommand{\footnotelayout}{}
3 \newcommand{\setfnsymbol}[1]{}
4 \NewDocumentCommand{\DefineFNSymbols}{s m o m}{}
5
6 \newdimen\footnotemargin
7 \footnotemargin1.8em\relax
8
9 \newcommand*\hangfootparskip{0.5\baselineskip}
10 \newcommand*\hangfootparindent{0em}%
11
12 \let\pagefootnoterule\footnoterule
13 \let\mpfootnoterule\footnoterule
14 \def\splitfootnoterule{\kern-3\p@ \hrule \kern2.6\p@}
15
16 \providecommand*\multiplefootnotemarker{3sp}
17 \providecommand*\multfootsep}{,}
```

Using `cleveref`. `\labelcref` only prints the number of the object, not its type.

```
18 \providecommand*\footref}[1]{\labelcref{#1}}
```

The following work as-is:

```
19 \newcommand\mpfootnotemark{%
20 \@ifnextchar[%
21 \@xmpfootnotemark%
22 {%
23 \stepcounter\@mpfn%
24 \protected@xdef\@thefnmark{\thempfn}%
25 \@footnotemark%
26 }%
27 }
28 \def\@xmpfootnotemark[#1]{%
29 \begingroup%
30 \csname c@\@mpfn\endcsname #1\relax%
31 \unrestored@protected@xdef\@thefnmark{\thempfn}%
32 \endgroup%
33 \@footnotemark%
34 }
```

---

File 168 **lwarp-footnote.sty**

§ 271 Package **footnote**

(Emulates or patches code by MARK WOODING.)

Pkg footnote footnote is used with minor patches.

for HTML output: 1 \LWR@ProvidesPackagePass{footnote}[1997/01/28]

Removed print-version formatting:

```

2 \def\fn@startnote{%
3 % \@parboxrestore%
4 \protected@edef\@currentlabel{\csname p@\@mpfn\endcsname\@thefnmark}%
5 % \color@begingroup% *** conflicts with lwarp
6 }
7
8 % \let\fn@endnote\color@endgroup% *** conflicts with lwarp
9 \def\fn@endnote{%
10 \LWR@htmltagc{/LWR@tagregularparagraph}%
11 \LWR@orignewline%
12 }

```

Removed print-version formatting:

```

13 \def\fn@startfntext{%
14 \setbox\z@\vbox\bgroup%
15 \fn@startnote%
16 \ignorespaces%
17 }

```

Removed print-version formatting, added closing paragraph tag:

```

18 \def\fn@endfntext{%
19 \LWR@htmltagc{/LWR@tagregularparagraph}%
20 \LWR@orignewline%
21 \egroup%
22 \begingroup%
23 \let\@makefntext\@empty%
24 \let\@finalstrut\@gobble%
25 \LetLtxMacro\rule\@gobbletwo% *8* also the optional argument?
26 \@footnotetext{\unvbox\z@}%
27 \endgroup%
28 }

```

These have been redefined, so re-\let them again:

```

29 \let\endfootnote\fn@endfntext
30 \let\endfootnotetext\endfootnote

```

---

File 169 **lwarp-footnotebackref.sty**

§ 272 Package **footnotebackref**

Pkg footnotebackref footnotebackref is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{footnotebackref}[2012/07/01]

---

File 170 **lwarp-footnotehyper.sty**

§ 273     Package **footnotehyper**

Pkg   footnotehyper   footnotehyper is a hyperref-safe version of footnote. For lwarp, footnotehyper is emulated.

**for HTML output:**     Discard all options for lwarp-footnotehyper:

```
1 \RequirePackage{footnote}
2 \LWR@ProvidesPackageDrop{footnotehyper}[2018/01/23]
```

---

File 171 **lwarp-footnoterange.sty**

§ 274     Package **footnoterange**

*(Emulates or patches code by H.-MARTIN MÜNCH.)*

Pkg   footnoterange   footnoterange is patched for use by lwarp.

**for HTML output:**     1 \LWR@ProvidesPackagePass{footnoterange}[2012/02/17]

```
2 \csletcs{footnoterange}{footnoterange*}
3 \csletcs{endfootnoterange}{endfootnoterange*}
```

---

File 172 **lwarp-footnpag.sty**

§ 275     Package **footnpag**

Pkg   footnpag   footnpag is ignored.

**for HTML output:**     1 \LWR@ProvidesPackageDrop{footnpag}

---

File 173 **lwarp-foreign.sty**

§ 276     Package **foreign**

*(Emulates or patches code by PHILIP G. RATCLIFFE.)*

Pkg   foreign   foreign is patched for use by lwarp.

**for HTML output:**     1 \LWR@ProvidesPackagePass{foreign}[2012/09/25]

---

```
2 \renewcommand\foreignabbrfont{\emph}
```


---

## File 174 **lwarp-forest.sty**

### § 277 Package **forest**

*(Emulates or patches code by SAŠO ŽIVANOVIĆ.)*

Pkg forest **forest** is patched for use by lwarp.

 **\Forest\*** The starred version of the macro **\Forest\*** is not supported. **lwarp** encases each **lateximage** in an environment, so the global results of the starred **\Forest\*** are lost.

**for HTML output:**

```
1 \LWR@ProvidesPackagePass{forest}[2017/07/14]

2 \BeforeBeginEnvironment{forest}{%
3 \begin{lateximage}[-forest-~\PackageDiagramAltText]%
4 }
5
6 \AfterEndEnvironment{forest}{\end{lateximage}}
7
8 \RenewDocumentCommand{\Forest}{s D(){} m}{%
9 \forest@config{#2}%
10 \IfBooleanTF{#1}{%
11 \PackageError{lwarp-forest}%
12 {\protect\Forest* is not supported}%
13 {\Lwarp uses an environment for images,\MessageBreak
14 but \protect\Forest* cannot work in an environment.}%
15 \let\forest@next\forest@env%
16 }{\let\forest@next\forest@group@env}%
17 \begin{lateximage}[-forest-~\PackageDiagramAltText]% lwarp
18 \forest@next{#3}%
19 \end{lateximage}% lwarp
20 }
```

---

## File 175 **lwarp-fouridx.sty**

### § 278 Package **fouridx**

*(Emulates or patches code by STEFAN KARRMANN.)*

Pkg fouridx **fouridx** works as-is with SVG math, and is emulated for MATHJAX.

**for HTML output:**

```
1 \LWR@ProvidesPackagePass{fouridx}[2013/11/21]

2 \begin{warpMathJax}
3 \CustomizeMathJax{%
4 \newcommand{\fourIdx}[5]{%
5 \vphantom{#5}^{\hphantom{#2}#1}_{\hphantom{#1}#2}{#5}^{\#3}_{\#4}%
6 }
```

```

6 }%
7 }
8 \end{warpMathJax}

```

File 176 **lwarp-framed.sty**

## § 279 Package **framed**

*(Emulates or patches code by DONALD ARSENEAU.)*

Pkg framed framed is supported and patched by lwarp.

**for HTML output:** Accept all options for lwarp-framed:

```

1 \LWR@ProvidesPackagePass{framed}[2011/10/22]
2 \AtBeginDocument{\RequirePackage{xcolor}}% for \convertcolorspec

3
4 \renewenvironment{framed}{%
5 \LWR@forcenewpage
6 \BlockClass{framed}%
7 }
8 {\endBlockClass}
9
10 \renewenvironment{oframed}{%
11 \LWR@forcenewpage
12 \BlockClass{framed}%
13 }
14 {\endBlockClass}
15
16
17 \renewenvironment{shaded}{%
18 \convertcolorspec{named}{shadecolor}{HTML}\LWR@tempcolor%
19 \LWR@forcenewpage
20 \BlockClass[background: \LWR@origpound\LWR@tempcolor]{shaded}%
21 }
22 {\endBlockClass}
23
24 \renewenvironment{shaded*}{%
25 \convertcolorspec{named}{shadecolor}{HTML}\LWR@tempcolor%
26 \LWR@forcenewpage
27 \BlockClass[background: \LWR@origpound\LWR@tempcolor]{shaded}%
28 }
29 {\endBlockClass}
30
31
32 \renewenvironment{leftbar}{%
33 \LWR@forcenewpage
34 \BlockClass{framedleftbar}
35 \def\FrameCommand{%
36 \MakeFramed {}
37 }%
38 {\endMakeFramed\endBlockClass}

```

```

39
40
41 \renewenvironment{snugshade}{%
42 \convertcolorspec{named}{shadecolor}{HTML}\LWR@tempcolor%
43 \LWR@forcenewpage
44 \BlockClass[background: \LWR@origpound\LWR@tempcolor]{snugframed}%
45 }
46 {\endBlockClass}
47
48 \renewenvironment{snugshade*}{%
49 \convertcolorspec{named}{shadecolor}{HTML}\LWR@tempcolor%
50 \LWR@forcenewpage
51 \BlockClass[background: \LWR@origpound\LWR@tempcolor]{snugframed}%
52 }
53 {\endBlockClass}
54
55 \let\oframed\framed
56 \let\endoframed\endframed
57
58
59 \RenewEnviron{titled-frame}[1]{%
60 \CustomFBox{#1}{0pt}{0pt}{0pt}{0pt}{\BODY}
61 }

\CustomFBox {<toptitle>} {<bottitle>} {<thicknesstop>} {<bottom>} {<left>} {<right>}
{<text contents>}

62 \renewcommand{\CustomFBox}[7]{%
63 \convertcolorspec{named}{TFFrameColor}{HTML}\LWR@tempcolor%
64 \LWR@forcenewpage
65 \begin{BlockClass}[border: 3px solid \LWR@origpound\LWR@tempcolor]{framed}%
66 \ifthenelse{\isempty{#1}}{}{% not empty
67 \begin{BlockClass}[background: \LWR@origpound\LWR@tempcolor]{framedtitle}%
68 \textcolor{TFTitleColor}{\textbf{#1}}%
69 \end{BlockClass}
70 }% not empty
71
72 #7
73
74 \ifthenelse{\isempty{#2}}{}{% not empty
75 \convertcolorspec{named}{TFFrameColor}{HTML}\LWR@tempcolor%
76 \begin{BlockClass}[background: \LWR@origpound\LWR@tempcolor]{framedtitle}%
77 \textcolor{TFTitleColor}{\textbf{#2}}%
78 \end{BlockClass}
79 }% not empty
80 \end{BlockClass}
81 }

\TitleBarFrame [<marker>] {<title>} {<contents>}

82 \renewcommand\TitleBarFrame[3][[] {
83 \CustomFBox
84 {#2}{}%
85 \fboxrule\fboxrule\fboxrule\fboxrule
86 {#3}%

```

---

```

87 }

88 \renewcommand{\TF@Title}[1]{#1}

MakeFramed {\<settings>}

89 \let\MakeFramed\relax
90 \let\endMakeFramed\relax
91
92 \NewEnviron{MakeFramed}[1]{%
93 \FrameCommand{\begin{minipage}{\linewidth}\BODY\end{minipage}}%
94 }

\fb@put@frame {\<frame cmd no split>} {\<frame cmd split>}

95 \renewcommand*\fb@put@frame}[2]{%
96 \relax%
97 \@tempboxa%
98 }

```

---

#### File 177 **lwarp-ftcap.sty**

§ 280    Package **ftcap**

Pkg    ftcap    ftcap is ignored.

**for HTML output:**    1 \LWR@ProvidesPackageDrop{ftcap}

---

#### File 178 **lwarp-ftnright.sty**

§ 281    Package **ftnright**

Pkg    ftnright    ftnright is ignored.

**for HTML output:**    Discard all options for lwarp-ftnright:

1 \LWR@ProvidesPackageDrop{ftnright}[2014/10/28]

---

#### File 179 **lwarp-fullminipage.sty**

§ 282    Package **fullminipage**

Pkg    fullminipage    fullminipage is ignored.

**for HTML output:**    1 \LWR@ProvidesPackageDrop{fullminipage}[2014/07/06]

---

```
2 \newenvironment{fullminipage}[1][{}]{}
```

---

File 180 **lwarp-fullpage.sty**

§ 283     Package **fullpage**

Pkg   fullpage   fullpage is ignored.

**for HTML output:**   Discard all options for lwarp-fullpage:

```
1 \LWR@ProvidesPackageDrop{fullpage}[1994/06/01]
```

---

File 181 **lwarp-fullwidth.sty**

§ 284     Package **fullwidth**

*(Emulates or patches code by MARCO DANIEL.)*

Pkg   fullwidth   fullwidth is emulated.

A minipage is used, of no HTML width.

**for HTML output:**   1 \LWR@ProvidesPackageDrop{fullwidth}[2011/11/18]

```
2 \newenvironment*{fullwidth}[1][{}]{%
3 \minipagefullwidth%
4 \minipage{\linewidth}%
5 }
6 {%
7 \endminipage%
8 }
```

---

File 182 **lwarp-fwlw.sty**

§ 285     Package **fwlw**

Pkg   fwlw   fwlw is ignored.

**for HTML output:**   1 \LWR@ProvidesPackageDrop{fwlw}

```
2 \newbox\FirstWordBox \global\setbox\FirstWordBox\hbox{}
3 \newbox\NextWordBox \global\setbox\NextWordBox\hbox{}
4 \newbox\LastWordBox \global\setbox\LastWordBox\hbox{}
5 \def\ps@fwlwhead{}
6 \def\ps@NextWordFoot{}
```

---

File 183 **lwarp-gensymb.sty**

§ 286 Package **gensymb**

*(Emulates or patches code by WALTER SCHMIDT.)*

Pkg gensymb gensymb works as-is for SVG math, and is emulated for MATHJAX.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{gensymb}[2003/07/02]

2 \begin{warpMathJax}
3 \CustomizeMathJax{\newcommand{\degree}{\mathrm{^\circ}}}
4 \CustomizeMathJax{\newcommand{\celsius}{\unicode{x2103}}}
5 \CustomizeMathJax{\newcommand{\perthousand}{\unicode{x2030}}}
6 \CustomizeMathJax{\newcommand{\ohm}{\mathrm{\Omega}}}
7 \CustomizeMathJax{\newcommand{\micro}{\mathrm{\unicode{x00B5}}}}
8 \end{warpMathJax}

```

---

File 184 **lwarp-gentombow.sty**

§ 287 Package **gentombow**

Pkg gentombow gentombow is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{gentombow}[2018/05/17]

2 \newcommand{\settombowbanner}[1]{}
3 \newcommand{\settombowbannerfont}[1]{}
4 \newcommand{\settombowwidth}[1]{}
5 \newcommand{\settombowbleed}[1]{}
6 \newcommand{\settombowcolor}[1]{}

```

---

File 185 **lwarp-geometry.sty**

§ 288 Package **geometry**

*(Emulates or patches code by HIDEO UMEKI.)*

Pkg geometry geometry is preloaded by lwarp, but must be nullified as seen by the user's source code.

**for HTML output:** Discard all options for lwarp-geometry:

```

1 \LWR@ProvidesPackageDropA{geometry}{2018/04/16}

```

If `geometry` is never loaded by the user, it will be loaded by `lwarp \AtBeginDocument`. If this is the case, the page layout should not be changed but the user macros should still be nullified.

```
2 \ifbool{LWR@allowanothergeometry}{%
```

Assign and set the selected geometry with `reset` prepended. `\AtEndPreamble lwarp` will save this, then set its own geometry.

```
3 \edef\LWR@tempone{reset,\@ptionlist{\@currname.\@currentt}}%
4 \expandafter\LWR@origgeometry\expandafter{\LWR@tempone}%
5 }{}% LWR@allowanothergeometry
```

The user-level commands are nullified:

```
6 \renewcommand*{\geometry}[1]{}
7 \renewcommand*{\newgeometry}[1]{}
8 \renewcommand*{\restoregeometry}{}
9 \renewcommand*{\savegeometry}[1]{}
10 \renewcommand*{\loadgeometry}[1]{}%
```


---

File 186 **lwarp-ghsystem.sty**

§ 289 Package **ghsystem**

(Emulates or patches code by CLEMENS NIEDERBERGER.)

Pkg ghsystem ghsystem is patched for use by lwarp.

 **\ghspic images** Images must be provided in `svg` format, unless `jpg` is specified. It is recommended to create a local images directory, copy into it the relevant `PDF ghsystem` images, and then convert them with

Enter ⇒ **lwarpmk pdftosvg images/\*.pdf**

**for HTML output:** 1 \LWR@ProvidesPackagePass{ghsystem}[2020/02/17]

```
2 \ExplSyntaxOn
3
4 \cs_set_protected:Npn \ghsystem_filler:n #1
5 { \emph { \textless #1 \textgreater } }
6
7 \cs_set_protected:Npn \ghsystem_pic:n #1
8 {
9 __ghsystem_includegraphics:xn
10 {
11 % scale = \fp_to_tl:N \l__ghsystem_picture_scale_fp
12 width = 1.25cm
13 \exp_not:V \l__ghsystem_picture_includegraphics_tl
14 }
15 { ghsystem_ #1 . \l__ghsystem_picture_type_tl }
16 }
```

17  
18 \ExplSyntaxOff

File 187 **lwarp-gindex.sty**

§ 290      Package **gindex**

*(Emulates or patches code by JAVIER BEZOS.)*

Pkg gindex gindex is patched for use by lwarp.

See section **8.6.15**.

**for HTML output:**    1 \LWR@ProvidesPackagePass{gindex}[2019/10/07]

Set the index page and range separators. These are set \AtBeginDocument to allow the user to change them. They are then protected so that the lwarp core looks for the tokens instead of their expanded contents, since the \*.ind files will contain \indexpagessep and \indexrangesep instead of their literal contents. Finally, lwarp is told of the gindex macros.

```
2 \AtBeginDocument{
3 \robustify{\indexpagessep}
4 \robustify{\indexrangesep}
5 \renewcommand*\IndexPageSeparator{\indexpagessep}
6 \renewcommand*\IndexRangeSeparator{\indexrangesep}
7 }
```

\hyperindexref is added:

```
8 \def\addindexitem#1#2{%
9 \indexflushitem
10 \gix@getspecial#1\indexspecial\indexspecial\@@\indexitem{\hyperindexref{#2}}
11
12 \def\addindexsubitem#1#2{%
13 \stepcounter{indexsubitems}%
14 \gix@getspecial#1\indexspecial\indexspecial\@@\indexsubitem{\hyperindexref{#2}}
15
16 \def\addindexsubsubitem#1#2{%
17 \gix@getspecial#1\indexspecial\indexspecial\@@\indexsubsubitem{\hyperindexref{#2}}
```

Uses a <div> of class indexheading:

```
18 \renewcommand\indexheading[1]{%
19 \begin{BlockClass}{indexheading}
20 \MakeUppercase{#1}%
21 \end{BlockClass}
22 }
```

File 188 **lwarp-gloss.sty**§ 291 Package **gloss**

(Emulates or patches code by JOSE LUIS DÍAZ, JAVIER BEZOS.)

Pkg gloss gloss is patched for use by lwarp.

To process the HTML glossary:

```
bibtex <projectname>_html.gls
```

for HTML output: 1 \LWR@ProvidesPackagePass{gloss}[2002/07/26]

\BaseJobname is added to the label in case xr or xr-hyper are used.

```
2 \xpatchcmd{\gls@gloss@iii}
3 {\thepage}
4 {\theLWR@previousautopagelabel}
5 {}
6 {\LWR@patcherror{gloss}{\gls@gloss@iii}}
7
8 \def\gls@page@i#1#2{%
9 \endgroup%
10 \global\@namedef{glsp@#1}{\nameref{\BaseJobname-autopage-#2}}}%

```

File 189 **lwarp-glossaries.sty**§ 292 Package **glossaries**

(Emulates or patches code by NICOLA L.C. TALBOT.)

Pkg glossaries *lwarpmk* has the commands **lwarpmk printglossary** and **lwarpmk htmlglossary**, which process the glossaries created by the **glossaries** package using that package's *makeglossaries* program.

Opt [lwarpmk] printglossary  
Opt [lwarpmk] htmlglossary  
Default: *makeglossaries*  
The shell command to execute is set by the **lwarp** option **GlossaryCmd**, which defaults to **makeglossaries**. The print or HTML glossary filename is appended to this command.

⚠ **makeglossaries not found** In some situations it may be required to modify the default command, such as to add the **perl** command in front:

```
\usepackage[
 GlossaryCmd={perl makeglossaries},
] {lwarp}

```

*xindy* language To set the language to use for processing glossaries with *xindy*:

```
\usepackage[
 GlossaryCmd={makeglossaries -L english},
] {lwarp}
```

Other options for *makeglossaries* may be set as well.

**placement and toc options** The glossaries may be placed in a numbered or unnumbered section, given a TOC entry, and placed inline or on their own HTML page:

**Numbered section, on its own HTML page:**


```
\usepackage[xindy,toc,numberedsection=nolabel]{glossaries}
...
\printglossaries
```


**Unnumbered section, inline with the current HTML page:**

```
\usepackage[xindy,toc]{glossaries}
...
\printglossaries
```

**Unnumbered section, on its own HTML page:**

```
\usepackage[xindy,toc]{glossaries}
...
\ForceHTMLPage
\printglossaries
```

 **glossary style** The default style=item option for glossaries conflicts with lwarp, so the style is forced to index instead.

 **number list** The page number list in the printed form would become \namerefs in HTML, which could become a very long string if many items are referenced. For now, the number list is simply turned off.

**print/HTML versions** The print and HTML versions of the glossary differ in their internal page numbers. Separate commands for generating print and HTML glossaries are used, even though the page number is currently ignored.

**for HTML output:**

```
1 \PassOptionsToPackage{xindy}{glossaries}
2
3 \LWR@ProvidesPackagePass{glossaries}[2018/07/23]
4
5 \setupglossaries{nonumberlist}
6 \setglossarystyle{index}
```

Patched to fix TOC pointing to the previous page:

```
7 \renewcommand*{\@p@glossarysection}[2]{%
8 \glsclearpage
9 \LWR@phantomsection
10 \ifdefempty\@glossarysecstar
11 {%
12 \csname\@glossarysec\endcsname{#2}%
13 }%
14 {%
```

In the original, the TOC entry was made before the section, thus linking to the phantomsection in the printed version, but for HTML, this caused the link to point to the page before the glossaries, which could be a different HTML file. Here, the TOC entry is made after the section is created:

```

15 \csname\@glossarysec\endcsname*{#2}%
16 \glstoc{#1}{\@glossarysec}% Moved after the previous line.
17 }%
18 \@glossaryseclabel
19 }

```

`lwrap`'s sectioning commands cannot handle robust macros when splitting HTML into named filenames. `glossaries` uses `\translate` in sectioning names, and `\translate` is robust and cannot be expanded. The following pre-expands the translations at this moment, making use of `\translatelet`.

```

20 \newcommand*{\LWR@comp@glossaryname}{\translate{Glossary}}
21
22 \ifdefstrequal{\glossaryname}{\LWR@comp@glossaryname}{
23 \translatelet\LWR@translatetemp{Glossary}
24 \edef\glossaryname{\LWR@translatetemp}
25 }{}
26
27 \newcommand*{\LWR@comp@acronymname}{\translate{Acronym}}
28
29 \ifdefstrequal{\acronymname}{\LWR@comp@acronymname}{
30 \translatelet\LWR@translatetemp{Acronym}
31 \edef\acronymname{\LWR@translatetemp}
32 }{}
33
34 \newcommand*{\LWR@comp@glssymbolsgroupname}{\translate{Symbols (glossaries)}}
35
36 \ifdefstrequal{\glssymbolsgroupname}{\LWR@comp@glssymbolsgroupname}{
37 \translatelet\LWR@translatetemp{Symbols (glossaries)}
38 \edef\glssymbolsgroupname{\LWR@translatetemp}
39 }{}
40
41 \newcommand*{\LWR@comp@glslnumbersgroupname}{\translate{Numbers (glossaries)}}
42
43 \ifdefstrequal{\glslnumbersgroupname}{\LWR@comp@glslnumbersgroupname}{
44 \translatelet\LWR@translatetemp{Numbers (glossaries)}
45 \edef\glslnumbersgroupname{\LWR@translatetemp}
46 }{}

```

File 190 **lwarp-gmeometric.sty**

§ 293 Package **gmeometric**

```
Pkg gmeometric gmeometric is ignored.
```

**for HTML output:**

```
1 \LWR@ProvidesPackageDrop{gmeometric}[2008/11/22]
2 \RequirePackageWithOptions{geometry}
```

File 191 **lwarp-graphics.sty**

§ 294      Package **graphics**

*(Emulates or patches code by D. P. CARLISLE.)*

Pkg graphics graphics is emulated.

for HTML output: 1 \LWR@ProvidesPackagePass{graphics}[2017/06/25]

§ 294.1 **Graphics extensions**

\DeclareGraphicsExtensions {*{list}*}

\AtBeginDocument allow SVG files instead of PDF:

```
2 \AtBeginDocument{
3 \DeclareGraphicsExtensions{.svg,.SVG,.gif,.GIF,.png,.PNG,.jpg,.JPG,.jpeg,.JPEG}
4 \DeclareGraphicsRule{.svg}{svg}{.svg}{}
5 \DeclareGraphicsRule{.SVG}{svg}{.SVG}{}
6 }
```

Inside a lateximage, allow PDF instead of SVG:

```
7 \ifpdf
8 \appto\LWR@restoreorigformatting{%
9 \DeclareGraphicsExtensions{.pdf,.PDF,.gif,.GIF,.png,.PNG,.jpg,.JPG,.jpeg,.JPEG}%
10 }
11 \else% \ifpdf
12 \ifXeTeX
13 \appto\LWR@restoreorigformatting{%
14 \DeclareGraphicsExtensions{.pdf,.PDF,.gif,.GIF,.png,.PNG,.jpg,.JPG,.jpeg,.JPEG}%
15 }
16 \else
17 \appto\LWR@restoreorigformatting{%
18 \DeclareGraphicsExtensions{.eps,.EPS,.gif,.GIF,.png,.PNG,.jpg,.JPG,.jpeg,.JPEG}%
19 }
20 \fi
21 \fi
```

## § 294.2 Length conversions and graphics options



**whitespace**

A scaled image in L<sup>A</sup>T<sub>E</sub>X by default takes only as much space on the page as it requires, but HTML browsers use as much space as the original unscaled image would have taken, with the scaled image over- or under-flowing the area.

Used to store the user's selected dimensions and HTML class.

The class defaults to “inlineimage” unless changed by a `class=xyx` option.

```

22 \newlength{\LWR@igwidth}
23 \newlength{\LWR@igheight}
24 \newcommand*\LWR@igwidthstyle{}
25 \newcommand*\LWR@igheightstyle{}
26 \newcommand*\LWR@igorigin{}
27 \newcommand*\LWR@igangle{}
28 \newcommand*\LWR@igxscale{1}
29 \newcommand*\LWR@igyyscale{1}
30 \newcommand*\LWR@igclass{inlineimage}

31 \newcommand*\LWR@igalt{\ImageAltText}

```

Set the actions of each of the key/value combinations for `\includegraphics`. Many are ignored.

If an optional width was given, set an HTML style:

```

32 \define@key{igraph}{width}{%
33 \setlength{\LWR@igwidth}{#1}%
34 \ifthenelse{\lengthtest{\LWR@igwidth > 0pt}}{%
35 {%

```

Default to use the converted fixed length given:

```

36 \renewcommand*\LWR@igwidthstyle{width:\LWR@printlength{\LWR@igwidth}}%

```

If ex or em dimensions were given, use those instead:

```

37 \IfEndWith{#1}{ex}%
38 {\renewcommand*\LWR@igwidthstyle{width:#1}}% yes ex
39 {}% not ex
40 \IfEndWith{#1}{em}%
41 {\renewcommand*\LWR@igwidthstyle{width:#1}}% yes em
42 {}% not em
43 \IfEndWith{#1}{\}%
44 {\renewcommand*\LWR@igwidthstyle{width:#1}}% yes percent
45 {}% not percent
46 \IfEndWith{#1}{px}%
47 {\renewcommand*\LWR@igwidthstyle{width:#1}}% yes px
48 {}% not px
49 {}% end of length > 0pt
50 }

```

If an optional height was given, set an HTML style:

```
51 \define@key{igraph}{height}{%
52 \setlength{\LWR@igheight}{#1}%
53 \ifthenelse{\lengthtest{\LWR@igheight > 0pt}}%
54 {%
```

Default to use the converted fixed length given:

```
55 \renewcommand*\LWR@igheightstyle{%
56 height:\LWR@printlength{\LWR@igheight} % extra space
57 }%
```

If ex or em dimensions were given, use those instead:

```
58 \IfEndWith{#1}{ex}%
59 {\renewcommand*\LWR@igheightstyle}{height:#1}}% yes ex
60 {}% not ex
61 \IfEndWith{#1}{em}%
62 {\renewcommand*\LWR@igheightstyle}{height:#1}}% yes em
63 {}% not em
64 \IfEndWith{#1}{\}%
65 {\renewcommand*\LWR@igheightstyle}{height:#1}}% yes percent
66 {}% not percent
67 \IfEndWith{#1}{px}%
68 {\renewcommand*\LWR@igheightstyle}{height:#1}}% yes px
69 {}% not px
70 }{}% end of length > 0pt
71 }
```

Handle origin key:

```
72 \define@key{igraph}{origin}[c]{%
73 \renewcommand*\LWR@igorigin}{#1}%
74 }
```

Handle angle key:

```
75 \define@key{igraph}{angle}{\renewcommand*\LWR@igangle}{#1}}
```

Handle class key:

```
76 \define@key{igraph}{class}{\renewcommand*\LWR@igclass}{#1}}
```

Handle alt key:

```
77 \define@key{igraph}{alt}{\renewcommand*\LWR@igalt}{#1}}
```

It appears that `graphicx` does not have separate keys for `xscale` and `yscale`. `scale` adjusts both at the same time.

```
78 \define@key{igraph}{scale}{%
79 \ifthenelse{equal{#1}{1}}{}{}% must expand #1
80 \PackageWarning{lwarp}{%
```

```

81 It is recommended to use “[width=xx\protect\linewidth]”\MessageBreak
82 instead of “[scale=yy]”,%
83]%
84]%
85 \renewcommand*\LWR@igxscale{#1}%
86 \renewcommand*\LWR@igyscale{#1}%
87 }

```

Numerous ignored keys:

```

88 \define@key{igraph}{bb}{}
89 \define@key{igraph}{bblx}{}
90 \define@key{igraph}{bblly}{}
91 \define@key{igraph}{bburx}{}
92 \define@key{igraph}{bbury}{}
93 \define@key{igraph}{natwidth}{}
94 \define@key{igraph}{natheight}{}
95 \define@key{igraph}{hiresbb}[true]{}
96 \define@key{igraph}{viewport}{}
97 \define@key{igraph}{trim}{}
98 \define@key{igraph}{totalheight}{}
99 \define@key{igraph}{keepaspectratio}[true]{}
100 \define@key{igraph}{clip}[true]{}
101 \define@key{igraph}{draft}[true]{}
102 \define@key{igraph}{type}{}
103 \define@key{igraph}{ext}{}
104 \define@key{igraph}{read}{}
105 \define@key{igraph}{command}{}

```

New in v1.1a:

```

106 \define@key{igraph}{quite}{}
107 \define@key{igraph}{page}{}
108 \define@key{igraph}{pagebox}{}
109 \define@key{igraph}{interpolate}[true]{}

```

New in v1.1b:

```

110 \define@key{igraph}{decodearray}{}

```

### § 294.3 Printing HTML styles

`\LWR@rotstyle`     $\{\langle prefix \rangle\} \{\langle degrees \rangle\}$

Prints the rotate style with the given prefix.

prefix is -ms- or -webkit- or nothing, and is used to generate three versions of the transform:rotate style.

```

111 \newcommand*\LWR@rotstyle[2]{%
112 \edef\LWR@tempone{#2}%
113 \setcounter{LWR@tempcountone}{-1*\real{\LWR@tempone}} % space
114 #1transform:rotate(\arabic{LWR@tempcountone}deg); % space
115 }

```

`\LWR@scalestyle`     $\{\langle prefix \rangle\} \{\langle xscale \rangle\} \{\langle yscale \rangle\}$

Prints the scale style with the given prefix.

prefix is -ms- or -webkit- or nothing, and is used to generate three versions of the transform:scale style.

```
116 \newcommand*\LWR@scalestyle}[3]{%
117 #1transform:scale(#2,#3);
118 }
```

## § 294.4 \includegraphics

`\LWR@opacity` For HTML, used only for `\includegraphics`.

`\LWR@opacity` may be set by the transparent package.

```
119 \def\LWR@opacity{1}
```

`\LWR@imagesizebox` Used to determine the actual image size if needed.

```
120 \newsavebox{\LWR@imagesizebox}
```

`\LWR@HTML@Gin@setfile`  $\{\langle w \rangle\} \{\langle h \rangle\} \{\langle filename \rangle\}$  Sets the parsed filename for HTML output.

```
121 \newcommand*\LWR@HTML@Gin@setfile}[3]{%
122 \xdef\LWR@parsedfilename{#3}%
123 }
```

Key [Gin] class css class for the image.

Define the new class key for the print-mode version of `\includegraphics`, which is enabled inside a `lateximage`.

```
124 \AtBeginDocument{
125 \define@key{Gin}{class}{}
126 \define@key{Gin}{alt}{}
127 }
```

`\LWR@replaceEPSSVG`

Usually, references to EPS files become SVG files, but if the `epstopdf` package is being used, it automatically converts EPS to PDF, and the following must NOT be done.

```
128 \AtBeginDocument{
129 \ifpackageloaded{epstopdf}
130 {
131 \newcommand*\LWR@replaceEPSSVG{}
132 }{%
133 \newcommand*\LWR@replaceEPSSVG{%
134 \StrSubstitute{\LWR@tempone}{.eps}{.svg}[\LWR@tempone]%
135 \StrSubstitute{\LWR@tempone}{.EPS}{.SVG}[\LWR@tempone]%
136 }
137 }%
138 }
```

`\LWR@ig@wpimagesizes` \* [ $\langle 2: options \rangle$ ] [ $\langle 3: options \rangle$ ] [ $\langle 4: filename \rangle$ ]

If formatting for a word processor, find and set the actual image size, without rotation, using PDF instead of svg to find the original bounding box:

```

139 \newcommand*{\LWR@ig@wpimagesizes}[4]{%
140 \ifbool{FormatWP}{%
141 \begingroup%
142 \LWR@restoreorigformatting%
143 \ifpdf%
144 \appto\LWR@restoreorigformatting{%
145 \DeclareGraphicsExtensions{%
146 .pdf,.PDF,.gif,.GIF,.png,.PNG,.jpg,.JPG,.jpeg,.JPEG%
147 }%
148 }%
149 \else% \ifpdf
150 \ifXeTeX%
151 \appto\LWR@restoreorigformatting{%
152 \DeclareGraphicsExtensions{%
153 .pdf,.PDF,.gif,.GIF,.png,.PNG,.jpg,.JPG,.jpeg,.JPEG%
154 }%
155 }%
156 \else%
157 \appto\LWR@restoreorigformatting{%
158 \DeclareGraphicsExtensions{%
159 .eps,.EPS,.gif,.GIF,.png,.PNG,.jpg,.JPG,.jpeg,.JPEG%
160 }%
161 }%
162 \fi%
163 \fi% \ifpdf
164 \define@key{Gin}{angle}{}%
165 \IfBooleanTF{#1}%
166 {% starred
167 \IfValueTF{#3}%
168 {%
169 \global\sbox{\LWR@imagesizebox}{%
170 \LWR@originincludegraphics*{#2}[#3]{#4}%
171 }%
172 }%
173 {%
174 \IfValueTF{#2}%
175 {%
176 \global\sbox{\LWR@imagesizebox}{%
177 \LWR@originincludegraphics*{#2}{#4}%
178 }%
179 }{%
180 \global\sbox{\LWR@imagesizebox}{%
181 \LWR@originincludegraphics*{#4}%
182 }%
183 }%
184 }%
185 }% starred
186 {% not starred
187 \IfValueTF{#3}%
188 {%
189 \global\sbox{\LWR@imagesizebox}{%
190 \LWR@originincludegraphics[#2][#3]{#4}%
191 }%

```

```

192 }%
193 {%
194 \IfValueTF{#2}%
195 {%
196 \global\sbox{\LWR@imagesizebox}{%
197 \LWR@originincludegraphics[#2]{#4}%
198 }%
199 }{%
200 \global\sbox{\LWR@imagesizebox}{%
201 \LWR@originincludegraphics{#4}%
202 }%
203 }%
204 }%
205 }% not starred
206 \endgroup%
207 \settowidth{\LWR@igwidth}{\usebox{\LWR@imagesizebox}}%
208 \global\renewcommand*\LWR@igwidthstyle{%
209 width:\LWR@printlength{\LWR@igwidth}%
210 }%
211 \settoheight{\LWR@igheight}{\usebox{\LWR@imagesizebox}}%
212 \global\renewcommand*\LWR@igheightstyle{%
213 height:\LWR@printlength{\LWR@igheight}%
214 }%
215 }{}% FormatWP
216 }

```

`\LWR@ig@htmltag` For the HTML reference, add the graphicspath, filename, extension, alt tag, style, and class.

```

217 \newcommand*\LWR@ig@htmltag{%
218 img\LWR@indentHTML%
219 src="%
220 \detokenize\expandafter{\LWR@parsedfilename}%
221 "\LWR@indentHTML%

```

Only include a style tag if a width, height, angle, or scale was given:

```

222 \ifthenelse{
223 \NOT\equal{\LWR@igwidthstyle}{} \OR
224 \NOT\equal{\LWR@igheightstyle}{} \OR
225 \NOT\equal{\LWR@igorigin}{} \OR
226 \NOT\equal{\LWR@igangle}{} \OR
227 \NOT\equal{\LWR@igxscale}{1} \OR
228 \NOT\equal{\LWR@igyscale}{1}
229 }%
230 {%
231 style="\LWR@indentHTML
232 \ifthenelse{\NOT\equal{\LWR@igwidthstyle}{} }%
233 {\LWR@igwidthstyle;\LWR@indentHTML}{}%
234 \ifthenelse{\NOT\equal{\LWR@igheightstyle}{} }%
235 {\LWR@igheightstyle;\LWR@indentHTML}{}%
236 \ifthenelse{\NOT\equal{\LWR@igorigin}{} }%
237 {%
238 transform-origin: \LWR@originnames{\LWR@igorigin};%

```

```

239 \LWR@indentHTML%
240 }{}%
241 \ifthenelse{\NOT\equal{\LWR@igangle}{}}{%
242 {%
243 \LWR@rotstyle{-ms-}{\LWR@igangle}\LWR@indentHTML
244 \LWR@rotstyle{-webkit-}{\LWR@igangle}\LWR@indentHTML
245 \LWR@rotstyle{}{\LWR@igangle }\LWR@indentHTML
246 }{}%
247 \ifthenelse{%
248 \NOT\equal{\LWR@igxscale}{1}\OR%
249 \NOT\equal{\LWR@igyscale}{1}%
250 }%
251 {%
252 \LWR@scalestyle{-ms-}{\LWR@igxscale}{\LWR@igyscale}%
253 \LWR@indentHTML
254 \LWR@scalestyle{-webkit-}{\LWR@igxscale}{\LWR@igyscale}%
255 \LWR@indentHTML
256 \LWR@scalestyle{}{\LWR@igxscale}{\LWR@igyscale}%
257 \LWR@indentHTML
258 }{}%
259 %
260 \ifthenelse{\NOT\equal{\LWR@opacity}{1}}{%
261 {opacity:\LWR@opacity;\LWR@indentHTML}{}%
262 %
263 "\LWR@indentHTML%
264 }{}%
```

Set the class and alt tag:

```

265 class="\LWR@igclass"\LWR@indentHTML%
266 alt="\AltTextOpen\LWR@igalt\AltTextClose" \LWR@orignewline%
267 }% end of image tags
```

`\LWR@includegraphicsb` \* [*<2: options>*] [*<3: options>*] [*<4: filename>*]

graphics syntax is `\includegraphics` \* [*<llx,lly>*] [*<urx,ury>*] [*<file>*]

graphicx syntax is `\includegraphics` [*<key values>*] [*<file>*]

If #3 is empty, only one optional argument was given, thus `graphicx` syntax.

If using `\epsfig` or `\psfig` from the `epsfig` package, #4 will be `\LWR@epsfig@filename`, which will have been set by the file or figure keys. Therefore, #4 must not be used until after the keys have been processed.

```

268 \NewDocumentCommand{\LWR@includegraphicsb}{s o o m}
269 {%
```

Start the image tag on a new line, allow PDF output word wrap:

```

270 \LWR@origtilde \LWR@orignewline%
```

Temporarily compute `\linewidth`, `\textwidth`, `\textheight` arguments with a 6x9 inch size until the next `\endgroup`.

```

271 \begin{\LWR@setvirtualpage}%
```

For correct em sizing during the width and height conversions:

```

272 \large%
```

Reset some defaults, possibly will be changed below if options were given:

```

273 \setlength{\LWR@igwidth}{0pt}%
274 \setlength{\LWR@igheight}{0pt}%
275 \renewcommand*\LWR@igwidthstyle{}%
276 \renewcommand*\LWR@igheightstyle{}%
277 \renewcommand*\LWR@igorigin{}%
278 \renewcommand*\LWR@igangle{}%
279 \renewcommand*\LWR@igxscale{1}%
280 \renewcommand*\LWR@igyscale{1}%
281 \renewcommand*\LWR@igclass{\inlineimage}%

282 \ifdefvoid{\LWR@ThisAltText}%
283 \edef\LWR@igalt{\ImageAltText}%
284 }{%
285 \edef\LWR@igalt{\LWR@ThisAltText}%
286 }%
```

If #3 is empty, only one optional argument was given, thus `graphicx` syntax:

```

287 \IfValueF{#3}{%
288 \IfValueTF{#2}%
289 {\setkeys{igraph}{#2}}%
290 {\setkeys{igraph}}}%
291 }%
```

Fully expand and detokenize the filename, changing the file extension to `.svg` if necessary.

```

292 \begingroup%
293 \LetLtxMacro\Gin@setfile\LWR@HTML@Gin@setfile%
294 \edef\LWR@tempone{#4}%
295 \StrSubstitute{\LWR@tempone}{.pdf}{.svg}[\LWR@tempone]%
296 \StrSubstitute{\LWR@tempone}{.PDF}{.SVG}[\LWR@tempone]%
297 \LWR@replaceEPS SVG%
298 \xdef\LWR@parsedfilename{\LWR@tempone}%
299 \Gin@include@graphics{\detokenize\expandafter{\LWR@tempone}}%
300 \endgroup%
301 \filename@parse{\LWR@parsedfilename}%
302 \LWR@traceinfo{\LWR@parsedfilename is \LWR@parsedfilename}%
303 % \LWR@sanitize{\LWR@parsedfilename}%

```

If formatting for a word processor, find and set the actual image size, without rotation, using PDF instead of SVG to find the original bounding box:

```

304 \LWR@ig@wpimagesizes{#1}{#2}{#3}{#4}%

```

Create the HTML reference with the `graphicspath`, filename, extension, alt tag, style, and class:

```

305 \LWR@traceinfo{\LWR@includegraphicsb: about to create href}%
306 \LWR@href{\LWR@parsedfilename}%
307 {% start of href
308 \LWR@traceinfo{\LWR@includegraphicsb: about to LWR@htmltag}%
309 \LWR@htmltag{\LWR@ig@htmltag}%
310 }% end of href

```

Return to original page size and font size:

```

311 \end{\LWR@setvirtualpage}%

```

Clear the single-use alt text:

```
312 \gdef\LWR@ThisAltText{}%
313 \LWR@traceinfo{LWR@includegraphicsb done}%
314 }
```

`\includegraphics` [*(key=val)*] {*(filename)*}

Handles width and height, converted to fixed width and heights.

The user should always use no file suffix in the document source.

```
315 \AtBeginDocument{
316
317 \LWR@traceinfo{Patching includegraphics.}
318
319 \LetLtxMacro\LWR@originincludegraphics\includegraphics

320 \renewrobustcmd*{\includegraphics}
321 {%
```

This graphic should trigger an HTML paragraph even if alone, so ensure that are doing paragraph handling:

```
322 \LWR@traceinfo{includegraphics}%
323 \LWR@ensuredoingapar%
324 \LWR@includegraphicsb%
325 }% includegraphics
326 }% AtBeginDocument
```

## § 294.5 Boxes

`\LWR@rotboxorigin` Holds the origin key letters.

```
327 \newcommand*\LWR@rotboxorigin{}
```

`\LWR@originname` {*(letter)*}

Given one L<sup>A</sup>T<sub>E</sub>X origin key value, translate into an HTML origin word:

```
328 \newcommand*\LWR@originname[1]{%
329 \ifthenelse{equal{#1}{t}}{top}{}%
330 \ifthenelse{equal{#1}{b}}{bottom}{}%
331 \ifthenelse{equal{#1}{c}}{center}{}%
332 \ifthenelse{equal{#1}{l}}{left}{}%
333 \ifthenelse{equal{#1}{r}}{right}{}%
334 }
```

`\LWR@originnames` {*(letters)*}

Given one- or two-letter L<sup>A</sup>T<sub>E</sub>X origin key values, translate into HTML origin words:

```
335 \newcommand*\LWR@originnames[1]{%
336 \StrChar{#1}{1}[\LWR@strresult]%
337 \LWR@originname{\LWR@strresult}
```

```

338 \StrChar{#1}{2}[\LWR@strresult]%
339 \LWR@originname{\LWR@strresult}
340 }

```

Handle the origin key for \rotatebox:

```

341 \define@key{krotbox}{origin}{%
342 \renewcommand*{\LWR@rotboxorigin}{#1}%
343 }

```

These keys are ignored:

```

344 \define@key{krotbox}{x}{}
345 \define@key{krotbox}{y}{}
346 \define@key{krotbox}{units}{}

```

`\rotatebox` [*<keyval list>*] {<angle>} {<text>}

```

347 \AtBeginDocument{

```

The HTML version:

```

348 \NewDocumentCommand{\LWR@HTML@rotatebox}{0}{ m +m}{%

```

Reset the origin to “none-given”:

```

349 \renewcommand*{\LWR@rotboxorigin}{}

```

Process the optional keys, which may set \LWR@rotateboxorigin:

```

350 \setkeys{krotbox}{#1}%

```

Select inline-block so that HTML will transform this span:

```

351 \LWR@htmltagc{%
352 span\LWR@indentHTML
353 style="\LWR@indentHTML
354 display: inline-block;\LWR@indentHTML

```

If an origin was given, translate and print the origin information:

```

355 \ifthenelse{\NOT\equal{\LWR@rotboxorigin}{} }{%
356 {transform-origin: \LWR@originnames{\LWR@rotboxorigin};\LWR@indentHTML}%
357 }%

```

Print the rotation information:

```

358 \LWR@rotstyle{-ms-}{#2}\LWR@indentHTML
359 \LWR@rotstyle{-webkit-}{#2}\LWR@indentHTML
360 \LWR@rotstyle{}{#2}"\LWR@orignewline%
361 }\LWR@orignewline%

```

Print the text to be rotated:

```
362 \begin{LWR@nestspan}%
363 #3%
```

Close the span:

```
364 \LWR@htmltagc{/span}%
365 \end{LWR@nestspan}%
366 }
```

The high-level interface:

```
367 \LWR@formatted{rotatebox}
368
369 }% AtBeginDocument
```

`\scalebox`  $\{\langle h\text{-}scale\rangle\} [\langle v\text{-}scale\rangle] \{\langle text\rangle\}$

```
370 \AtBeginDocument{
```

The HTML version:

```
371 \NewDocumentCommand{\LWR@HTML@scalebox}{m o m}{%
```

Select inline-block so that HTML will transform this span:

```
372 \LWR@htmltagc{%
373 span\LWR@indentHTML
374 style="\LWR@indentHTML
375 display: inline-block;\LWR@indentHTML
```

Print the scaling information:

```
376 \LWR@scalestyle{-ms-}{#1}{\IfNoValueTF{#2}{#1}{#2}}\LWR@indentHTML
377 \LWR@scalestyle{-webkit-}{#1}{\IfNoValueTF{#2}{#1}{#2}}\LWR@indentHTML
378 \LWR@scalestyle{#1}{\IfNoValueTF{#2}{#1}{#2}}
379 "\LWR@orignewline
380 }\LWR@orignewline%
```

Print the text to be scaled:

```
381 \begin{LWR@nestspan}%
382 #3%
```

Close the span:

```
383 \LWR@htmltagc{/span}%
384 \end{LWR@nestspan}%
385 }
```

The high-level interface:

```

386 \LWR@formatted{scalebox}
387
388 }% AtBeginDocument

```

`\reflectbox`  $\{\langle text \rangle\}$

```

389 \AtBeginDocument{
390
391 \newcommand{\LWR@HTML@reflectbox}[1]{%
392 \scalebox{-1}[1]{#1}%
393 }% \reflectbox
394
395 \LWR@formatted{reflectbox}
396
397 }% AtBeginDocument

```

`\resizebox`  $\{\langle h-length \rangle\} \{\langle v-length \rangle\} \{\langle text \rangle\}$

Simply prints its text argument.

```

398 \AtBeginDocument{
399
400 \NewDocumentCommand{\LWR@HTML@resizebox}{s m m m}{%
401 #4%
402 }
403
404 \LWR@formatted{resizebox}
405
406 }% AtBeginDocument

```

---

File 192 **lwarp-graphics.sty**

§ 295 Package **graphicx**

Pkg graphicx graphicx is emulated.

graphicx loads graphics, which also loads lwarp-graphics, which remembers the original graphics definitions for use inside a lateximage, and then patches them \AtBeginDocument for HTML output.

lwarp-graphics handles the syntax of either graphics or graphicx.

for HTML output: 1 \LWR@ProvidesPackagePass{graphicx}[2017/06/01]

---

File 193 **lwarp-grffile.sty**

§ 296 Package **grffile**

Pkg grffile grffile is supported as-is. File types known to the browser are displayed, and unknown

**matching PDF and SVG**

file types are given a link. Each PDF image for print mode should be accompanied by an SVG, PNG, or JPG version for HTML.

lwarp-grffile now exists as a placeholder since grffile used to be emulated by lwarp, and thus older versions of lwarp-grffile may exist and should be overwritten by this newer version.

**for HTML output:** 1 \LWR@ProvidesPackagePass{grffile}[2017/06/30]

---

File 194 **lwarp-grid.sty**

§ 297 Package **grid**

Pkg grid grid is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{grid}[2009/06/16]

2 \newenvironment\*{gridenv}{}{}

---

File 195 **lwarp-grid-system.sty**

§ 298 Package **grid-system**

*(Emulates or patches code by MARCUS BITZL.)*

Pkg grid-system grid-system is patched for use by lwarp.

**for HTML output:** 1 \LWR@ProvidesPackagePass{grid-system}[2014/02/16]

(\ifdef is in case the older syntax is removed.)

```
2 \AtBeginEnvironment{Row}{\setlength{\linewidth}{6in}}
3
4 \ifdef{\endrow}{
5 \AtBeginEnvironment{row}{\setlength{\linewidth}{6in}}
6 }{}
7
8 \renewcommand{\gridsystem@finishcell}{\hspace{\gridsystem@cellsep}}
```

---

File 196 **lwarp-gridset.sty**

§ 299 Package **gridset**

Pkg gridset gridset is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{gridset}[2020-02-12]

---

```

2 \newcommand*\gridbase{}
3 \newcommand*\gridinterval{}
4 \newcommand*\SavePos[1]{}
5 \ifLuaTeX
6 \else
7 \let\savepos\SavePos
8 \fi
9 \newcommand*\vskipnextgrid{}
10 \newcommand*\thegridinfo[1]{(thegridinfo)}
11 \newcommand*\theposinfo[1]{(theposinfo)}
12 \newcommand*\theypos[1]{(theypos)}

```

---

File 197 **lwarp-hang.sty**

§ 300     Package **hang**

*(Emulates or patches code by ANDREAS NOLDA.)*

Pkg    hang    **hang** is emulated.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{hang}[2017/02/18]

2 \newlength{\hangingindent}
3 \setlength{\hangingindent}{1em}
4 \newlength{\hangingleftmargin}
5 \setlength{\hangingleftmargin}{0em}
6
7 \newcommand*\LWR@findhangingleftmargin{%
8 \setlength{\LWR@templengthone}{\hangingleftmargin}%
9 \addtolength{\LWR@templengthone}{\hangingindent}%
10 }
11
12 \newenvironment{hangingpar}
13 {
14 \LWR@findhangingleftmargin%
15 \BlockClass[%
16 \LWR@print@mbbox{margin-left:\LWR@printlength{\LWR@templengthone}} ; %
17 \LWR@print@mbbox{text-indent:-\LWR@printlength{\hangingindent}}%
18]%
19 {hangingpar}%
20 }
21 {\endBlockClass}
22
23 \newenvironment{hanginglist}
24 {%
25 \renewcommand*\LWR@printcloselist{\LWR@printcloseitemize}%
26 \renewcommand*\LWR@printopenlist{%
27 \LWR@findhangingleftmargin%
28 ul style=""
29 \LWR@print@mbbox{list-style-type:none;} % extra space
30 \LWR@print@mbbox{%
31 margin-left:\LWR@printlength{\LWR@templengthone}%
32 } ; % extra space

```

---

```

33 \LWR@print@mbox{%
34 text-indent:-\LWR@printlength{\hangingindent}%
35 }%
36 "%
37 }%
38 \let\item\LWR@itemizeitem%
39 \list{}{}%
40 }
41 {\endlist}
42
43 \newenvironment{compacthang}
44 {\hanginglist}
45 {\endhanginglist}
46
47 \newlength{\labeledleftmargin}
48 \setlength{\labeledleftmargin}{0em}
49
50 \newenvironment{labeledpar}[2]
51 {%
52 \BlockClass[%
53 \LWR@findhangingleftmargin%
54 \LWR@print@mbox{margin-left:\LWR@printlength{\LWR@templengthone}} ; %
55 \LWR@print@mbox{text-indent:-\LWR@printlength{\hangingindent}}%
56][labeledpar]#2%
57 }
58 {\endBlockClass}
59
60 \newenvironment{labeledlist}[1]
61 {\hanginglist}
62 {\endhanginglist}
63
64 \newenvironment{compactlabel}[1]
65 {\hanginglist}
66 {\endhanginglist}

```

---

File 198 **lwarp-hanging.sty**

§ 301     Package **hanging**

    Pkg    hanging    hanging is emulated.

**for HTML output:**    1 \LWR@ProvidesPackageDrop{hanging}[2009/09/02]

```

2 \@ifclassloaded{memoir}{
3 \let\hangpara\relax
4 \let\hangparas\relax
5 \let\endhangparas\relax
6 \let\hangpunct\relax
7 \let\endhangpunct\relax
8 }{}

```

`\hangpara`     $\{\langle indent \rangle\} \{\langle afternum \rangle\}$

Use `hangparas` instead.

9 `\newcommand*\hangpara}[2]{}`

Env `hangparas`     $\{\langle indent \rangle\} \{\langle afternum \rangle\}$

10 `\newenvironment*{hangparas}[2]`

11 `{%`

12     `\BlockClass[%`

13         `\LWR@print@mbox{margin-left:\LWR@printlength{#1}} ; %`

14         `\LWR@print@mbox{text-indent:-\LWR@printlength{#1}}%`

15     `]%`

16     `{hangingpar}%`

17 `}`

18 `\endBlockClass}`

Env `hangpunct`

19 `\newenvironment*{hangpunct}`

20 `{\BlockClass{hangpunct}}`

21 `\endBlockClass}`

22 `\newcommand{\nhpt}{.}`

23 `\newcommand{\nhlq}{'}`

24 `\newcommand{\nhrq}{'}`

File 199 **lwarp-hhline.sty**

§ 302     Package **hhline**

*(Emulates or patches code by DAVID CARLISLE.)*

Pkg `hhline`    `hhline` is patched for use by `lwarp`.

Only a rudimentary emulation is provided so far. If the argument contains any = characters, the result is a double `\hline`. If none, the result is a single `\hline`.

for HTML output:    1 `\LWR@ProvidesPackagePass{hhline}[2014/10/28]`

2 `\newrobustcmd*\LWR@HTML@hhline}[1]{%`

3     `\edef\LWR@tempone{\detokenize\expandafter{#1}}%`

4     `\IfSubStr[1]{\LWR@tempone}{=}{\hline\hline}{\hline}%`

5 `}`

6 % ^^A or:

7 % ^^A \newrobustcmd\*\LWR@HTML@hhline}[1]{\LWR@getmynexttoken}

8

9 `\AtBeginDocument{\LWR@expandableformatted{hhline}}`

For MATHJAX. A simple `\hline` is used.

---

```

10 \begin{warpMathJax}
11 \CustomizeMathJax{\newcommand{\hhline}[1]{\hline}}
12 \end{warpMathJax}

```

---

File 200 **lwarp-hypbmsec.sty**

§ 303     Package **hypbmsec**

Pkg   hypbmsec   hypbmsec is emulated by the lwarp core.

**for HTML output:**     1 \LWR@ProvidesPackageDrop{hypbmsec}[2016/05/16]

---

File 201 **lwarp-hypcap.sty**

§ 304     Package **hypcap**

Pkg   hypcap   hypcap is ignored.

**for HTML output:**     1 \LWR@ProvidesPackageDrop{hypcap}[2016/05/16]

```

2 \newcommand*{\capstart}{}
3 \newcommand*{\hypcapspace}{}
4 \newcommand*{\hypcapredef}[1]{}
5 \newcommand*{\capstartfalse}{}
6 \newcommand*{\capstarttrue}{}

```

---

File 202 **lwarp-hypdestopt.sty**

§ 305     Package **hypdestopt**

Pkg   hypdestopt   hypdestopt is ignored.

**for HTML output:**     1 \LWR@ProvidesPackageDrop{hypdestopt}[2016/05/21]

---

File 203 **lwarp-hypernat.sty**

§ 306     Package **hypernat**

Pkg   hypernat   hypernat is ignored.

**for HTML output:**     1 \LWR@ProvidesPackageDrop{hypernat}[2001/07/09]

---

File 204 **lwarp-hyperref.sty**

§ 307      Package **hyperref**
*(Emulates or patches code by SEBASTIAN RAHTZ, HEIKO OBERDIEK, THE L<sup>A</sup>T<sub>E</sub>X3 PROJECT.)*

Pkg    hyperref    **hyperref** is emulated.

**for HTML output:**

```

1 % \LWR@ProvidesPackageDrop{hyperref}% not allowed
2 % \ProvidesPackage{lwarp-#1-#2}% not allowed
3 \PackageInfo{lwarp}{%
4 Using the lwarp HTML version of package 'hyperref', \MessageBreak
5 and discarding options. \MessageBreak
6 (Not using \protect\ProvidesPackage, so that other packages \MessageBreak
7 do not attempt to patch lwarp's version of 'hyperref'.) \MessageBreak}
8
9 \DeclareOption*{}

10 % \ProcessOptions\relax
11 \let\ds@{} empty% from the original \ProcessOptions
12 \edef\@curroptions{}% lwarp modification to \ProcessOptions
13 \@processoptions\relax% from the original \ProcessOptions

14 \LetLtxMacro\href\LWR@href
15 \LetLtxMacro\nolinkurl\LWR@nolinkurl
16 \LetLtxMacro\url\LWR@url
17 \LetLtxMacro\phantomsection\LWR@phantomsection

18 \newcommand*{\hypersetup}[1]{}
19 \newcommand*{\hyperbaseurl}[1]{}

```

\hyperimage    {&lt;URL&gt;} {&lt;alt text&gt;}

Insert an image with alt text:

```

20 \NewDocumentCommand{\LWR@hyperimageb}{m +m}{%
21 \LWR@ensuredoingapar%
22 \def\LWR@templink{#1}%
23 \@onelevel@sanitize\LWR@templink%
24 \LWR@htmltag{img src="\LWR@templink" alt="#2" class="hyperimage"}%
25 \LWR@ensuredoingapar%
26 \endgroup%
27 }
28
29 \newrobustcmd*{\hyperimage}{%
30 \begingroup%
31 \LWR@linkcatcodes%
32 \LWR@hyperimageb%
33 }
34

```

`\hyperdef`     $\{\langle 1: category \rangle\} \{\langle 2: name \rangle\} \{\langle 3: text \rangle\}$

Creates an HTML anchor to `category.name` with the given text.

```

35 \NewDocumentCommand{\LWR@hyperdefb}{m m +m}{%
36 \LWR@ensuredoingapar%
37 \LWR@label@createtag{\#1.\#2}%
38 \#3%
39 \endgroup%
40 }
41
42 \newcommand*\hyperdef{\%
43 \begingroup%
44 \LWR@linkcatcodes%
45 \LWR@hyperdefb%
46 }
47
```

`\LWR@hyperrefb`     $\{\langle 1: URL \rangle\} \{\langle 2: category \rangle\} \{\langle 3: name \rangle\} \{\langle 4: text \rangle\}$

Creates an HTML link to `URL#category.name` with the given text.

To avoid nested links, `\ref` is temporarily redefined to the print version.

```

48 \newcommand{\LWR@hyperreffinish}[1]{%
49 \begingroup%
50 \RenewDocumentCommand{\ref}{s m}{\LWR@print@ref{##2}}%
51 \#1%
52 \endgroup%
53 \LWR@htmltag{/a}%
54 }
55
56 \newcommand*\LWR@hyperrefbb[3]{%
57 \LWR@htmltag{%
58 a href="%
59 \detokenize\expandafter{\#1}\LWR@hashmark%
60 \detokenize\expandafter{\#2}.\detokenize\expandafter{\#3}%
61 "%
62 \LWR@addlinktitle%
63 }%
64 \endgroup%
65 \LWR@hyperreffinish%
66 }
67
68 \newrobustcmd*\LWR@hyperrefb{\%
69 \begingroup%
70 \LWR@linkcatcodes%
71 \LWR@hyperrefbb%
72 }

```

`\LWR@hyperrefc`     $[\langle label \rangle] \{\langle text \rangle\}$

Creates text as an HTML link to the L<sup>A</sup>T<sub>E</sub>X label.

```

73
74 \NewDocumentCommand{\LWR@hyperrefcb}{O{label}}{%

```

```

75 \LWR@startref{#1}%
76 \endgroup%
77 \LWR@hyperreffinish%
78 }
79
80 \newcommand*\LWR@hyperrefc{%
81 \begingroup%
82 \LWR@linkcatcodes%
83 \LWR@hyperrefcb%
84 }

```

`\hyperref`     $\{\langle 1: URL \rangle\} \{\langle 2: category \rangle\} \{\langle 3: name \rangle\} \{\langle 4: text \rangle\}$     — or —  
 $[\langle 1: label \rangle] \{\langle 2: text \rangle\}$

```

85 \DeclareRobustCommand*\hyperref{%
86 \LWR@ensuredoingapar%
87 \ifnextchar[\LWR@hyperrefc\LWR@hyperrefb%
88 }

```

`\hypertarget`     $\{\langle name \rangle\} \{\langle text \rangle\}$

Creates an anchor to name with the given text.

```

89 \NewDocumentCommand{\LWR@hypertargetb}{m +m}{%
90 \label{\LWR-ht-#1}%
91 #2%
92 \endgroup%
93 }
94
95 \newcommand*\hypertarget{%
96 \begingroup%
97 \LWR@linkcatcodes%
98 \LWR@hypertargetb%
99 }

```

`\hyperlink`     $\{\langle name \rangle\} \{\langle text \rangle\}$

Creates a link to the anchor created by `hypertarget`, with the given link text.

Declared because also defined by `memoir`.

```

100 \DeclareDocumentCommand{\LWR@hyperlinkb}{m}{%
101 \LWR@hyperrefcb[\LWR-ht-#1]%
102 }
103
104 \DeclareDocumentCommand{\hyperlink}{\}{%
105 \LWR@ensuredoingapar%
106 \begingroup%
107 \LWR@linkcatcodes%
108 \LWR@hyperlinkb%
109 }

```

`\autoref`     $* \{\langle label \rangle\}$

For HTML, `\cleveref` is used instead.

```

110 \NewDocumentCommand{\autoref}{s m}{%
111 \IfBooleanTF{#1}{\ref{#2}}{\cref{#2}}%
112 }

```

`\autopageref`     $\{\langle label \rangle\}$

For HTML, `\cleveref` is used instead.

```

113 \NewDocumentCommand{\autopageref}{s m}{%
114 \IfBooleanTF{#1}{\cpageref{#2}}{\cref{#2}}%
115 }

```

`\pdfstringdef`     $\{\langle macroname \rangle\} \{\langle T\!E\!Xstring \rangle\}$

```

116 \newcommand{\pdfstringdef}[2]{}

```

`\pdfbookmark`     $[\langle level \rangle] \{\langle text \rangle\} \{\langle name \rangle\}$

```

117 \newcommand{\pdfbookmark}[3][]{\}

```

`\currentpdfbookmark`     $\{\langle text \rangle\} \{\langle name \rangle\}$

```

118 \newcommand{\currentpdfbookmark}[2]{}

```

`\subpdfbookmark`     $\{\langle text \rangle\} \{\langle name \rangle\}$

```

119 \newcommand{\subpdfbookmark}[2]{}

```

`\belowpdfbookmark`     $\{\langle text \rangle\} \{\langle name \rangle\}$

```

120 \newcommand{\belowpdfbookmark}[2]{}

```

`\texorpdfstring`     $\{\langle T\!E\!Xstring \rangle\} \{\langle PDFstring \rangle\}$

```

121 \newcommand{\texorpdfstring}[2]{#1}

```

$\{\langle commands \rangle\}$

`\pdfstringdefDisableCommands`

```

122 \newcommand{\pdfstringdefDisableCommands}[1]{}

```

`\hypercalcbp`     $\{\langle dimen \rangle\}$     From `hyperref`.

```

123 \def\hypercalcbp#1{%
124 \strip@pt\dimexpr 0.99626401\dimexpr(#1)\relax\relax
125 }%

```

`\Acrobatmenu`     $\{\langle menuoption \rangle\} \{\langle text \rangle\}$

```

126 \newcommand{\Acrobatmenu}[2]{}

```

`\TextField`     $[\langle parameters \rangle] \{\langle label \rangle\}$

127 \DeclareRobustCommand{\TextField}[2][{}]

\CheckBox     [*\parameters*] {*\label*}

128 \DeclareRobustCommand{\CheckBox}[2][{}]

\ChoiceMenu    [*\parameters*] {*\label*} {*\choices*}

129 \DeclareRobustCommand{\ChoiceMenu}[3][{}]

\PushButton    [*\parameters*] {*\label*}

130 \DeclareRobustCommand{\PushButton}[2][{}]

\Submit        [*\parameters*] {*\label*}

131 \DeclareRobustCommand{\Submit}[2][{}]

\Reset         [*\parameters*] {*\label*}

132 \DeclareRobustCommand{\Reset}[2][{}]

\Gauge         [*\parameters*] {*\label*}

133 \DeclareRobustCommand{\Gauge}[2][{}]

\LayoutTextField    {*\label*} {*\field*}

134 \newcommand\*\LayoutTextField[2]{}

\LayoutChoiceField    {*\label*} {*\field*}

135 \newcommand\*\LayoutChoiceField[2]{}

\LayoutCheckField    {*\label*} {*\field*}

136 \newcommand\*\LayoutCheckField[2]{}

\MakeRadioField    {*\width*} {*\height*}

137 \newcommand\*\MakeRadioField[2]{}

\MakeCheckField    {*\width*} {*\height*}

138 \newcommand\*\MakeCheckField[2]{}

\MakeTextField      {*\width*} {*\height*}

139 \newcommand\*\MakeTextField[2]{}

```
\MakeChoiceField {\langle width\rangle}\langle height\rangle
140 \newcommand*{\MakeChoiceField}[2]{}
```

```
\MakeFieldButton {\langle text\rangle}
141 \newcommand{\MakeFieldButton}[1]{}
```

---

File 205 **lwarp-hyperxmp.sty**

§ 308     Package **hyperxmp**

Pkg    hyperxmp    hyperxmp is ignored.

**for HTML output:**    Discard all options for lwarp-hyperxmp:

```
1 \LWR@ProvidesPackageDrop{hyperxmp}[2018/11/27]
```

---

File 206 **lwarp-hyphenat.sty**

§ 309     Package **hyphenat**

Pkg    hyphenat    hyphenat is emulated during HTML output, while the print-mode version is used inside a lateximage.

**for HTML output:**    1 \LWR@ProvidesPackagePass{hyphenat}[2009/09/02]

```
2 \LetLtxMacro\LWRHYNAT@origtextnhtt\textnhtt
3 \LetLtxMacro\LWRHYNAT@originhttfamily\nhttfamily
4 \LetLtxMacro\LWRHYNAT@originohypens\nohypens
5 \LetLtxMacro\LWRHYNAT@origbshyp\bshyp
6 \LetLtxMacro\LWRHYNAT@origfshyp\fshyp
7 \LetLtxMacro\LWRHYNAT@origdothyp\dothyp
8 \LetLtxMacro\LWRHYNAT@origcolonhyp\colonhyp
9 \LetLtxMacro\LWRHYNAT@orighyp\hyp
10
11 \LetLtxMacro\textnhtt\texttt
12 \LetLtxMacro\nhttfamily\ttfamily
13
14 \renewcommand{\nohypens}[1]{#1}
15 \renewrobustcmd{\bshyp}{%
16 \ifmmode\backslash\else\textbackslash\fi%
17 }
18 \renewrobustcmd{\fshyp}{/}
19 \renewrobustcmd{\dothyp}{.}
20 \renewrobustcmd{\colonhyp}{:}
21 \renewrobustcmd{\hyp}{-}
22
```

---

```

23 \appto\LWR@restoreorigformatting{%
24 \LetLtxMacro\textnhtt\LWRHYNAT@origtextnhtt%
25 \LetLtxMacro\nhttfamily\LWRHYNAT@orignhttfamily%
26 \LetLtxMacro\nohyphens\LWRHYNAT@orignohyphens%
27 \LetLtxMacro\bshyp\LWRHYNAT@origbshyp%
28 \LetLtxMacro\fshyp\LWRHYNAT@origfshyp%
29 \LetLtxMacro\dothyp\LWRHYNAT@origdothyp%
30 \LetLtxMacro\colonhyp\LWRHYNAT@origcolonhyp%
31 \LetLtxMacro\hyp\LWRHYNAT@orighyp%
32 }

```

---

File 207 **lwarp-idxlayout.sty**

§ 310      Package **idxlayout**

*(Emulates or patches code by THOMAS TITZ.)*

Pkg idxlayout idxlayout is emulated.

for HTML output: Discard all options for lwarp-idxlayout:

```
1 \LWR@ProvidesPackageDrop{idxlayout}[2012/03/30]
```

```
2 \newcommand{\LWR@indexprenote}{}

```

\AtBeginDocument to help with package load order.

```

3 \AtBeginDocument{
4 \preto\printindex{
5
6 \LWR@maybe@orignewpage
7 \LWR@startpars
8
9 \LWR@indexprenote
10
11 }
12 }

```

```

13 \newcommand{\setindexprenote}[1]{\renewcommand{\LWR@indexprenote}{#1}}
14 \newcommand*{\noindexprenote}{\renewcommand{\LWR@indexprenote}{} }
15
16 \newcommand{\idxlayout}[1]{}
17 \newcommand*{\indexfont}{}
18 \newcommand*{\indexjustific}{}
19 \newcommand*{\indexsubsdelim}{}
20 \newcommand*{\indexstheadcase}{}

```

---

File 208 **lwarp-ifoddpagel.sty**

§ 311 Package **ifoddpagel**

(Emulates or patches code by MARTIN SCHARRER.)

Pkg ifoddpagel ifoddpagel is emulated.

for HTML output: Discard all options for lwarp-ifoddpagel:

```
1 \LWR@ProvidesPackageDrop{ifoddpagel}[2016/04/23]

2 \newif\ifoddpagel
3
4 \newif\ifoddpageloroneside
5
6 \DeclareRobustCommand{\checkoddpagel}{\oddpageltrue\oddpageloronesidefalse}
7
8 \def\oddpagel@page{1}
9
10 \def\@ifoddpagel{%
11 \expandafter\@firstoftwo
12 }
13
14 \def\@ifoddpageloroneside{%
15 \expandafter\@firstoftwo
16 }
```

---

File 209 **lwarp-imakeidx.sty**

§ 312 Package **imakeidx**

(Emulates or patches code by ENRICO GREGORIO.)

Pkg imakeidx imakeidx is patched for use by lwarp.

letter headings When using *makeindex*, to match the print and HTML output's display of index letter headings, specify the lwarp.ist style:

```
\makeindex[options={-s lwarp.ist}]
```

(For HTML the lwarp.ist style is used automatically, which displays letter headings. When using *xindy* the default style also displays letter headings.)

index setup See section 8.6.18 for how to setup *lwarpmk* to process the indexes with imakeidx, both with and without shell escape.

for HTML output: 1 \LWR@ProvidesPackagePass{imakeidx}[2016/10/15]

Use the new HTML suffix:

```
2 \catcode'_ =12%
3 \define@key{imki}{name}{\def\imki@name{#1_html}}
4 \catcode'_ =8%
```

\printindex    The HTML version of \printindex:

```
5 \catcode'_ =12%
6
7 \renewcommand*\printindex[1][\imki@jobname]{%
8 \LWR@maybe@orignewpage%
9 \LWR@startpars%
10 \ifstrequal{#1}{\imki@jobname}{%
11 \ifundefined{#1@idxfile}{%
12 \imki@error{#1}%
13 }{%
14 \imki@putindex{#1}%
15 }%
16 }{%
17 \ifundefined{#1_html@idxfile}{\imki@error{#1_html}}{\imki@putindex{#1_html}}%
18 }%
19 }
20
21 \catcode'_ =8%
```

\@index    The HTML version of \@index:

```
22 \catcode'_ =12%
23
24 \def\@index[#1]{%
25 \ifstrequal{#1}{\imki@jobname}%
26 {%
27 \ifundefined{#1@idxfile}%
28 {%
29 \PackageWarning{lwarp-imakeidx}{Undefined index file '#1'}%
30 \begingroup
31 \@sanitize
32 \imki@nowrindex%
33 }%
34 {%
35 \edef\@idxfile{#1}%
36 \begingroup
37 \@sanitize
38 \@wrindex\@idxfile%
39 }%
40 }%
41 {%
42 \ifundefined{#1_html@idxfile}%
43 {%
44 \PackageWarning{lwarp-imakeidx}{Undefined index file '#1_html'}%
45 \begingroup
46 \@sanitize
47 \imki@nowrindex%
48 }%
49 }
```

```

49 {%
50 \edef\@idxfile{#1_html}%
51 \begingroup
52 \@sanitize
53 \@wrindex\@idxfile%
54 }%
55 }%
56 }
57
58 \catcode'_ =8%

```

```

\item
\subitem
\subsubitem HTML versions of \item, etc.:

59 \appto\theindex{%
60 \let\item\LWR@indexitem%
61 \let\subitem\LWR@indexsubitem%
62 \let\subsubitem\LWR@indexsubsubitem%
63 }

```

`\imki@wrindexentrysplit`     $\{\langle file \rangle\} \{\langle entry \rangle\} \{\langle page \rangle\}$

`\imki@wrindexentryunique`     $\{\langle file \rangle\} \{\langle entry \rangle\} \{\langle page \rangle\}$

While writing index entries, adds an HTML label, and writes the label's index instead of the page number:

```

64 \renewcommand\imki@wrindexentrysplit[3]{%
65 \addtocounter{LWR@autoindex}{1}%
66 \label{LWRindex-\arabic{LWR@autoindex}}%
67 \expandafter\protected@write\csname#1@idxfile\endcsname{%
68 {\string\indexentry{#2}{\arabic{LWR@autoindex}}}%
69 }
70
71 \renewcommand\imki@wrindexentryunique[3]{%
72 \addtocounter{LWR@autoindex}{1}%
73 \label{LWRindex-\arabic{LWR@autoindex}}%
74 \protected@write\@indexfile{%
75 {\string\indexentry[#1]{#2}{\arabic{LWR@autoindex}}}%
76 }
77
78 \def\imki@wrindexsplit#1#2{%
79 \imki@wrindexentrysplit{#1}{#2}{\thepage}%
80 \endgroup\imki@showidxentry{#1}{#2}%
81 \@esphack%
82 }
83
84 \def\imki@wrindexunique#1#2{%
85 \imki@wrindexentryunique{#1}{#2}{\thepage}%
86 \endgroup\imki@showidxentry{#1}{#2}%
87 \@esphack%
88 }
89

```

`\LWR@imki@setxdydefopts`

Sets the *xindy* HTML options, ignoring the user's settings.

```

90 \newcommand*{\LWR@imki@setxdydefopts}{%
91 \edef\imki@options{ \space %
92 -M \space \LWR@xindyStyle\space %
93 -L \space \LWR@xindyLanguage\space %
94 -C \space \LWR@xindyCodepage\space %
95 }%
96 }
```

`\LWR@imki@setdefopts`    `{\langle user options \rangle}`

Sets the HTML options, added to the user's settings, depending on whether *makeindex* or *xindy* are used.

For *makeindex*, the user's choice is ignored, and only the lwarp version is used. (Only one style at a time is possible.)

For *xindy*, multiple modules may be specified, and the lwarp version is appended.

```

97 \newcommand*{\LWR@imki@setdefopts}[1]{%
98 \ifblank{#1}{%
99 \edef\imki@options{\space -s \space \LWR@makeindexStyle \space}%
100 \ifdefstring{\imki@progdefault}{xindy}{\LWR@imki@setxdydefopts}{}%
101 \ifdefstring{\imki@progdefault}{texindy}{\LWR@imki@setxdydefopts}{}%
102 \ifdefstring{\imki@progdefault}{truexindy}{\LWR@imki@setxdydefopts}{}%
103 }{%
104 \edef\imki@options{\space #1 \space}%
105 }%
106 }
```

`\imki@makeindex`    Use the new HTML options:

```

107 \xpatchcmd{\imki@makeindex}
108 {\let\imki@options\space}
109 {\LWR@imki@setdefopts{}}%
110 {}
111 {\LWR@patcherror{imakeidx}{makeindex}}
```

Use the new HTML options.

```

112 \define@key{imki}{options}{\LWR@imki@setdefopts{#1}}
```

`\imki@resetdefaults`    Use the new HTML options:

```

113 \xpatchcmd{\imki@resetdefaults}
114 {\def\imki@options{ }}
115 {\LWR@imki@setdefopts{}}
116 {}
117 {\LWR@patcherror{imakeidx}{resetdefaults}}
```

`theindex` was already defined `\AtBeginDocument` by the lwarp core, so it must be redefined here similarly, but patched for `imakeidx`:

Env    `theindex`

```

118 \AtBeginDocument{
119 \renewenvironment*{theindex}{%
120 \imki@maybeaddtotoc
121 \imki@indexlevel{\indexname}
122 \let\item\LWR@indexitem%
123 \let\subitem\LWR@indexsubitem%
124 \let\subsubitem\LWR@indexsubsubitem%
125 }{}
126}% AtBeginDocument

```

Update to the new defaults:

```
127 \imki@resetdefaults
```

Update to the new patches:

\AtBeginDocument is because \@wrindex is previously defined as \AtBeginDocument in the lwarp core.

```

128 \ifimki@splitindex
129 \let\imki@startidx\imki@startidxunique
130 \AtBeginDocument{\let\@wrindex\imki@wrindexunique}
131 \let\imki@putindex\imki@putindexunique
132 \let\imki@wrindexentry\imki@wrindexentryunique
133 \let\imki@startidxsplit\@undefined
134 \let\imki@wrindexsplit\@undefined
135 \let\imki@putindexsplit\@undefined
136 \else
137 \let\imki@startidx\imki@startidxsplit
138 \AtBeginDocument{\let\@wrindex\imki@wrindexsplit}
139 \let\imki@putindex\imki@putindexsplit
140 \let\imki@wrindexentry\imki@wrindexentrysplit
141 \let\imki@startidxunique\@undefined
142 \let\imki@wrindexunique\@undefined
143 \let\imki@putindexunique\@undefined
144 \fi

```

---

File 210 **lwarp-index.sty**

§ 313     Package **index**

*(Emulates or patches code by DAVID M. JONES.)*

Pkg    index    index is patched for use by lwarp.

**for HTML output:**    1 \LWR@ProvidesPackagePass{index}[2004/01/20]

Use \theLWR@autoindex instead of \thepage. \@tempswatrue is used to force an immediate write to the index file instead of waiting until the end of the page.

```

2 \xpatchcmd{\newindex}
3 {\x@newindex[thepage]}

```

```

4 {%
5 \@tempwattrue%
6 \x@newindex[theLWR@autoindex]%
7 }
8 {}
9 {\LWR@patcherror{index}{newindex}}
10
11 \xpatchcmd{\renewindex}
12 {\x@renewindex[thepage]}
13 {%
14 \@tempwattrue%
15 \x@renewindex[theLWR@autoindex]%
16 }
17 {}
18 {\LWR@patcherror{index}{renewindex}}

```

Patched to set a new autoindex:

```

19 \xpatchcmd{\@wrindex}
20 {\begingroup}
21 {%
22 \addtocounter{LWR@autoindex}{1}%
23 \label{LWRindex-\arabic{LWR@autoindex}}%
24 \begingroup%
25 }
26 {}
27 {\LWR@patcherror{index}{@wrindex}}

```

\AtBeginDocument **lwarp** core \lets \@wrindex to \LWR@wrindex. Since the index package has been loaded, \let to its version instead:

```

28 \let\LWR@index@wrindex\@wrindex
29
30 \AtBeginDocument{
31 \let\@wrindex\LWR@index@wrindex
32 }

```

Modified to add \index@prologue:

```

33 \AtBeginDocument{
34 \renewenvironment*{theindex}{%
35 \LWR@indexsection{\indexname}%
36 \ifx\index@prologue\@empty\else
37 \index@prologue
38 \bigskip
39 \fi
40 \let\item\LWR@indexitem%
41 \let\subitem\LWR@indexsubitem%
42 \let\subsubitem\LWR@indexsubsubitem%
43 }{}
44 }% AtBeginDocument

```

Disabled:

```

45 \def\@showidx#1{}

```

---

```

46 \let\@texttop\relax
47 \renewcommand*{\raggedbottom}{}
48 \renewcommand*{\flushbottom}{}
49 \renewcommand*{\markboth}[2]{}
50 \renewcommand*{\markright}[1]{}

```

---

File 211 **lwarp-inputtrc.sty**

§ 314      Package **inputtrc**

*(Emulates or patches code by Uwe Lück.)*

Pkg    inputtrc    inputtrc is patched for use by lwarp.

**for HTML output:**    1 \LWR@ProvidesPackagePass{inputtrc}[2012/10/10]

Patched to remove extraneous spaces, which sometimes showed up in logos inside a lateximage.

```

2 \renewcommand*{\IT@prim@input}[1]{%
3 \typeout{\IT@indent\IT@currfile INPUTTING #1}%
4 %% ... TODO: option to write to '.log' only.
5 \xdef\IT@filestack{{\IT@currfile}\IT@filestack}%
6 \xdef\IT@currfile{#1}%
7 \expandafter \gdef\expandafter \IT@indent\expandafter{%
8 \IT@indent \IT@indent@unit}% lwarp
9 \@input#1% lwarp
10 \expandafter\IT@pop@indent\IT@indent \@nil% lwarp
11 \expandafter\IT@pop@file \IT@filestack \@nil% lwarp
12 \IT@maybe@returnmessage%% v0.2 lwarp
13 }

```

---

File 212 **lwarp-intopdf.sty**

§ 315      Package **intopdf**

Pkg    intopdf    intopdf is emulated.

The filespec, MIME type, and description are ignored for now.

**for HTML output:**    1 \LWR@ProvidesPackageDrop{intopdf}[2019/05/28]

```

2 \NewDocumentCommand{\attachandlink}{o m o m m}{%
3 \LWR@href{#2}{#5}%
4 }

```

---

File 213 **lwarp-jurabib.sty**

§ 316      Package **jurabib**
*(Emulates or patches code by JENS BERGER.)*

Pkg jurabib jurabib is patched for use by lwarp.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{jurabib}[2004/01/25]

2 \renewrobustcmd{\jblangle}{\textless}
3
4 \renewrobustcmd{\jbrangle}{\textgreater}
5
6 \renewcommand*{\jb@biblaw@item}{%
7 \hspace{0.5em}%
8 \triangleright
9 \HTMLunicode{25B7}% lwarp
10 \hspace{0.5em}%
11 }
12
13 \renewrobustcmd{\jbarchsig}[2]{%
14 \ifjbweareinbib
15 \settowidth{\jb@subarchitemwidth}{\jbsamesubarchindent+#1}%
16 \setlength{\jb@subarchentrywidth}{\textwidth-\jb@subarchitemwidth-4em}%
17 % \begin{tabular}{@{}p{\jb@subarchitemwidth}@{}j{\jb@subarchentrywidth}@{}}%
18 #1\ifjb@dot\unskip\unskip\unskip.\fi
19 % &
20 \quad% lwarp
21 \ifthenelse{equal{#2}{}}{\jbarchnameformat{#2}}%
22 % \end{tabular}%
23 \fi
24 }%
25
26
27 \xpatchcmd{\jb@do@post@item}
28 {\begin{tabular}{p{\jb@biblaw@item@width}j{\jb@biblaw@entry@width}}}
29 {}
30 {}
31 {\LWR@patcherror{jurabib}{jb@do@post@item 1}}
32
33 \xpatchcmd{\jb@do@post@item}
34 {\multicolumn{2}{p{\columnwidth}}{\jb@@name}}
35 {\jb@@name}
36 {}
37 {\LWR@patcherror{jurabib}{jb@do@post@item 2}}
38
39 \xpatchcmd{\jb@do@post@item}
40 {\jb@biblaw@item & \jb@@fulltitle}
41 {\jb@biblaw@item \quad \jb@@fulltitle}
42 {}

```

```

43 {\LWR@patcherror{jurabib}{jb@do@post@item 3}}
44
45 \xpatchcmd{\jb@do@post@item}
46 {\end{tabular}}
47 {}
48 {}
49 {\LWR@patcherror{jurabib}{jb@do@post@item 4}}
50
51 \xpatchcmd{\jb@do@post@item}
52 {\begin{minipage}[t]{\bibnumberwidth}}
53 {}
54 {}
55 {\LWR@patcherror{jurabib}{jb@do@post@item 5}}
56
57 \xpatchcmd{\jb@do@post@item}
58 {\end{minipage}}
59 {\quad}
60 {}
61 {\LWR@patcherror{jurabib}{jb@do@post@item 6}}

```

---

File 214 **lwarp-karnaugh-map.sty**

§ 317      Package **karnaugh-map**

*(Emulates or patches code by MATTIAS JACOBSSON.)*

Pkg karnaugh-map **karnaugh-map** is patched for use by **lwarp**.

**for HTML output:**    1 \LWR@ProvidesPackagePass{karnaugh-map}[2017/02/20]

This patch is needed only because **lwarp** changes the definition of `\&`, and the original uses `\ifnum` to compare 0 with `\&`. It is hard to patch this environment, so the entire thing is redefined here, with the **lwarp** modifications identified in comments.

```

2 \RenewDocumentEnvironment{karnaugh-map}{s O{4} O{4} O{1} O{X_1X_0} O{X_3X_2} O{X_5X_4}} {%
3 \begingroup
4 % store map size {[START]
5 \renewcommand{\@karnaughmap@var@mapsize@}{#2}%
6 \renewcommand{\@karnaughmap@var@mapsizey@}{#3}%
7 \renewcommand{\@karnaughmap@var@mapsize@}{#4}%
8 % [END]}
9 % determinate if markings should be color or black and white
10 \IfBooleanTF{#1}{%
11 % should be black and white
12 \renewcommand{\@karnaughmap@var@bw@}{1}%
13 }{%
14 % should be color
15 \renewcommand{\@karnaughmap@var@bw@}{0}%
16 }%
17 %
18 % find matching matrix template and alignment parameters {[START]
19 \newcommand{\@karnaughmap@local@matrixtemplate@}{0}% '0' is considered as missing matrix template

```

[illegible]

```

75 10 \& |(001000)| \& |(001001)| \& |(001011)| \& |(0010
76 \& \& \& \& \&
77 00 \& |(100000)| \& |(100001)| \& |(100011)| \& |(1000
78 01 \& |(100100)| \& |(100101)| \& |(100111)| \& |(1001
79 11 \& |(101100)| \& |(101101)| \& |(101111)| \& |(1011
80 10 \& |(101000)| \& |(101001)| \& |(101011)| \& |(1010
81 \& \& \& \& \&
82 }%
83 \renewcommand{\@karnaughmap@local@maprealignmentx@}{2.5}%
84 \renewcommand{\@karnaughmap@local@maprealignmenty@}{-2.5}%
85 \fi
86 % [END]]
87 % test if a matrix template is found or not(aka "\@karnaughmap@local@matrixtemplate@" equals to '0')
88 \ifdefstring{\@karnaughmap@local@matrixtemplate@}{0}{% lwarp
89 % \ifnum0=\@karnaughmap@local@matrixtemplate@% original
90 % print error if no template could be found
91 \PackageError{lwarp-karnaugh-map}{%
92 Can not find a template fitting your specification (\@karnaughmap@var@mapsize@x\space x \@karnaughma
93 }{%
94 Existing templates have the following dimensions: 2x2x1, 2x4x1, 4x2x1, 4x4x1, 4x4x2, and 4x4x4.
95 }%
96 % \fi original
97 }{% lwarp
98 \begin{tikzpicture}
99 % grid
100 % for all dimensions
101 \draw[color=black, ultra thin] (0,0) grid (\@karnaughmap@var@mapsize@x,\@karnaughmap@var@mapsize@y);
102 % when there are 2 sub maps
103 \ifnum\@karnaughmap@var@mapsize@=2
104 \draw[color=black, ultra thin] (5,0) grid (9,4);
105 \fi
106 % when there are 4 sub maps
107 \ifnum\@karnaughmap@var@mapsize@=4
108 \draw[color=black, ultra thin] (5,0) grid (9,4);
109 \draw[color=black, ultra thin] (0,-5) grid (4,-1);
110 \draw[color=black, ultra thin] (5,-5) grid (9,-1);
111 \fi
112 % labels
113 % for all dimensions
114 \node[above] at (\@karnaughmap@var@mapsize@x*0.5,\@karnaughmap@var@mapsize@y+0.9) {\small{#5}};
115 \node[left] at (-0.9,\@karnaughmap@var@mapsize@y*0.5) {\small{#6}};
116 % when there are 2 sub maps
117 \ifnum\@karnaughmap@var@mapsize@=2
118 \node[above] at (7,4.9) {\small{#5}};
119 % extra sub maps labels
120 \node[below] at (2,-0.1) {\small{#7$=0$}};
121 \node[below] at (7,-0.1) {\small{#7$=1$}};
122 \fi
123 % when there are 4 sub maps
124 \ifnum\@karnaughmap@var@mapsize@=4
125 \node[above] at (7,4.9) {\small{#5}};
126 \node[left] at (-0.9,-3) {\small{#6}};
127 % extra sub maps labels
128 \node[below] at (2,-0.1) {\small{#7$=00$}};
129 \node[below] at (7,-0.1) {\small{#7$=01$}};

```

```

130 \node[below] at (2,-5.1) {\small{\#7$=10$}};
131 \node[below] at (7,-5.1) {\small{\#7$=11$}};
132 \fi
133 % data
134 \matrix[
135 matrix of nodes,
136 ampersand replacement=\&,
137 column sep={1cm,between origins},
138 row sep={1cm,between origins},
139] at (\@karnaughmap@var@mapsize*0.5+\@karnaughmap@local@maprealignmentx@,\@karnaughmap@var@mapsize
140 \@karnaughmap@local@matrixtemplate%
141);
142 }{
143 \end{tikzpicture}
144 \endgroup
145 }

```


---

File 215 **lwarp-keyfloat.sty**

## § 318 Package **keyfloat**

(Emulates or patches code by BRIAN DUNN.)

Pkg keyfloat keyfloat is supported with a considerable amount of hacking. (It's a mashup of lwarp, keyfloat, and tocdata.)

 **keywrap** If placing a \keyfig[H] inside a keywrap, use an absolute width for \keyfig, instead of lw-proportional widths. (The [H] option forces the use of a minipage, which internally adjusts for a virtual 6-inch wide minipage, which then corrupts the lw option.)

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{keyfloat}[2019/09/23]
2
3 \@ifpackagelater{keyfloat}{2019/09/23}{}{
4 \PackageError{lwarp-keyfloat}
5 {%
6 The keyfloat package is out of date.\MessageBreak
7 Update to keyfloat v2.01 2019/09/23 or later%
8 }
9 {%
10 Please update the keyfloat package. It's worth it!%
11 }
12 }

```

After keyfloat has loaded:

```

13 \AtBeginDocument{

14 \providecommand*\KFLT@LWR@hook@boxouter{}{
15 \renewcommand*\KFLT@LWR@hook@boxouter}{%
16 \ifbool{KFLT@keywrap}{%
17 }{%
18 \ifnumequal{\value{KFLT@keyfloatdepth}}{0}{%

```

```

19 \setlength{\linewidth}{6in}%
20 \setlength{\textwidth}{6in}%
21 \setlength{\textheight}{9in}%
22 }{}%
23 }%
24 \normalcolor%
25 }

26 \LetLtxMacro\KFLT@LWR@hook@keysubfloats\KFLT@LWR@hook@boxouter
27
28 \let\KFLT@LWR@hook@keyfloatsminipage\relax
29 \let\endKFLT@LWR@hook@keyfloatsminipage\relax
30 \newenvironment*{KFLT@LWR@hook@keyfloatsminipage}[1]{}{}

31 \LetLtxMacro\KFLT@LWR@hook@keyfloats\KFLT@LWR@hook@boxouter
32
33 \renewcommand*{\KFLT@maybeendfloatrow}{%
34 \ifnumless{\value{KFLT@thiscol}}{\value{KFLT@numcols}}%
35 }% thiscol < numcols
36 {% >=
37 \defcounter{KFLT@thiscol}{0}%
38 }%
39 }%
40
41 \renewcommand{\KFLT@trackrows}%
42 {%

```

If are nested inside a keyfloats or a subfloat:

```

43 \ifboolexpr{%
44 test {\ifnumgreater{\value{KFLT@keyfloatdepth}}{0}} or%
45 bool{KFLT@inkeysubfloats}%
46 }%
47 {% nested

```

Tracks row start and end:

```

48 \KFLT@maybestartfloatrow%

```

Possibly fill space between columns:

```

49 \ifnumgreater{\value{KFLT@thiscol}}{1}%
50 {%
51 \hfill%
52 }%
53 {}%
54 }% nested
55 {}% not nested
56 }

```

```

57 \RenewDocumentCommand{\KFLT@onefigureimage}{m}
58 {%
59 \LWR@traceinfo{KFLT@onefigureimage}%

```

```

60 % \begin{lrbox}{\KFLT@envbox}%
61 \ifthenelse{\NOT\equal{\KFLT@lw}{}}%
62 {%
63 \KFLT@frame{\includegraphics%
64 [scale=\KFLT@es,width=\KFLT@imagewidth]{#1}}%
65 }%
66 {% not linewidth
67 \ifthenelse{\dimtest{\KFLT@w}{>}{0pt}}%
68 {% width is given
69 \ifthenelse{\dimtest{\KFLT@h}{>}{0pt}}%
70 {% w and h
71 \KFLT@frame{\includegraphics%
72 [scale=\KFLT@es,%
73 width=\KFLT@imagewidth,height=\KFLT@h]{#1}}%
74 }% w and h
75 {% only w
76 \KFLT@frame{\includegraphics%
77 [scale=\KFLT@es,width=\KFLT@imagewidth]{#1}}%
78 }% only w
79 }% width is given
80 {% width is not given
81 \ifthenelse{\dimtest{\KFLT@h}{>}{0pt}}%
82 {%
83 \KFLT@frame{\includegraphics%
84 [scale=\KFLT@es,height=\KFLT@h]{#1}}%
85 }%
86 {%
87 \KFLT@frame{\includegraphics%
88 [scale=\KFLT@es]{#1}}%
89 }%
90 }% width is not given
91 }% not linewidth
92 % \end{lrbox}%
93 % \unskip%
94 % \KFLT@findenvboxwidth%
95 % \begin{turn}{\KFLT@r}%
96 % \KFLT@frame{\usebox{\KFLT@envbox}}%
97 % \unskip%
98 % \end{turn}%
99 \LWR@traceinfo{\KFLT@onefigureimage: done}%
100 }

101 \RenewDocumentEnvironment{\KFLT@boxinner}{}
102 {%
103 \LWR@traceinfo{\KFLT@boxinner}%
104 \LWR@stoppars%
105 \minipagefullwidth%
106 \ifboolexpr{bool{\KFLT@ft} or bool{\KFLT@f}}{%
107 \fminipage{\KFLT@imagewidth}%
108 }{%
109 \minipage{\KFLT@imagewidth}%
110 }%
111 }
112 {%
113 \ifboolexpr{bool{\KFLT@ft} or bool{\KFLT@f}}{%

```

```

114 \endminipage%
115 }{%
116 \endminipage%
117 }%
118 \LWR@startpars%
119 \LWR@traceinfo{KFLT@boxinner: done}%
120 }

121 \newcommand*{\LWR@KFLT@settextalign}[1]{%
122 \def\LWR@KFLT@textalign{justify}%
123 \ifcsstring{KFLT@#1textalign}{\centering}%
124 {\def\LWR@KFLT@textalign{center}}%
125 {%
126 \ifcsstring{KFLT@#1textalign}{\raggedleft}%
127 {\def\LWR@KFLT@textalign{right}}%
128 {%
129 \ifcsstring{KFLT@#1textalign}{\raggedright}%
130 {\def\LWR@KFLT@textalign{left}}%
131 {%
132 }
133
134 \renewcommand{\KFLT@addtext}[1]
135 {%

```

Is there text to add?

```

136 \ifcsemtty{KFLT@#1t}%
137 {}% no text
138 {% text to add
139 {% local

```

Add some space, then create a <div> to contain the text:

```

140 \addvspace{\smallskipamount}%
141 \LWR@KFLT@settextalign{#1}%
142 \begin{BlockClass}[text-align:\LWR@KFLT@textalign]{floatnotes}%

```

Set the alignment and some text parameters:

```

143 % \csuse{KFLT@#1textalign}%
144 % \footnotesize%
145 \setlength{\parskip}{1.5ex}%
146 \setlength{\parindent}{0em}%

```

Typeset the actual text:

```

147 \csuse{KFLT@#1t}%

```

Close it all out with a little more space:

```

148 \end{BlockClass}%
149 % \par\addvspace{2ex}%
150 }% local
151 }% text to add

```

```

152 }
153
154 \@ifpackageloaded{tocdata}
155 {}
156 {% tocdata not loaded
157
158 \newcommand*{\LWR@KFLT@setnamealign}[1]{%
159 \def\LWR@KFLT@textalign{justify}%
160 \ifstrequal{#1}{\centering}%
161 {\def\LWR@KFLT@textalign{center}}%
162 }%
163 \ifstrequal{#1}{\raggedleft}%
164 {\def\LWR@KFLT@textalign{right}}%
165 }%
166 \ifstrequal{#1}{\raggedright}%
167 {\def\LWR@KFLT@textalign{left}}%
168 }%
169 }
170
171 \renewcommand*{\KFLT@addartisttext}[3]{%
172

```

Add space and create the name inside a <div>:

```

173 % \addvspace{\medskipamount}%
174 % \begin{minipage}{\linewidth}%
175 % \LWR@KFLT@setnamealign{#3}%
176 % \begin{BlockClass}[text-align:\LWR@KFLT@textalign]{floatnotes}%
177

```

Text alignment is #3, and depends on artist or author:

```

178 % #3%
179

```

#1 is empty or 'subgrp'

#2 is empty for artist, 'u' for author:

```

180 \footnotesize\textsc{%
181 \KFLT@optionalname{\csuse{KFLT@#1a#2p}}}%
182 \KFLT@optionalname{\csuse{KFLT@#1a#2f}}}%
183 \csuse{KFLT@#1a#2l}%
184 \csuse{KFLT@#1a#2s}%
185 }%
186 % \end{minipage}%
187 % \end{BlockClass}
188 % \par\addvspace{2ex}%
189 }
190
191 }% tocdata not loaded

```

Env KFLT@marginfloat [*<offset>*] [*<type>*]

```

192 \DeclareDocumentEnvironment{KFLT@marginfloat}{0{-1.2ex} m}

```

```

193 {%
194 \uselengthunit{PT}%
195 \LWR@BlockClassWP%
196 {float:right; width:2in; margin:10pt}%
197 }%
198 {marginblock}%
199 \renewcommand*{\@capttype}{#2}%
200 \minipage{\LWR@usersmarginparwidth}%
201 \setlength{\marginparwidth}{.95\LWR@usersmarginparwidth}%
202 }
203 {%
204 \endminipage%
205 \endLWR@BlockClassWP%
206 }

207 \DeclareDocumentEnvironment{marginfigure}{o}
208 {\begin{KFLT@marginfloat}{figure}}
209 {\end{KFLT@marginfloat}}
210
211 \DeclareDocumentEnvironment{marginfigure}{o}
212 {\begin{KFLT@marginfloat}{table}}
213 {\end{KFLT@marginfloat}}

Env keywrap {\langle width \rangle \langle keyfloat \rangle}

214 \DeclareDocumentEnvironment{keywrap}{m +m}
215 {%
216 \begin{LWR@setvirtualpage}*
217 \setlength{\LWR@templengthone}{#1}%
218 \begin{LWR@BlockClassWP}%
219 {%
220 float:right; width:\LWR@printlength{\LWR@templengthone}; % extra space
221 margin:10pt%
222 }%
223 }%
224 {marginblock}%
225 \setlength{\linewidth}{.95\LWR@templengthone}%
226 \booltrue{KFLT@keywrap}%
227 #2%
228 \end{LWR@BlockClassWP}%
229 \end{LWR@setvirtualpage}%
230 }
231 {}

232 }% AtBeginDocument

```

---

File 216 **lwarp-layaureo.sty**

§ 319 Package **layaureo**

Pkg layaureo layaureo is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{layaureo}[2004/09/16]

---

File 217 **lwarp-layout.sty**

§ 320 Package **layout**

Pkg layout layout is ignored.

**for HTML output:** Discard all options for lwarp-layout:

```
1 \LWR@ProvidesPackageDrop{layout}[2014/10/28]

2 \NewDocumentCommand{\layout}{s}{}

```

---

File 218 **lwarp-layouts.sty**

§ 321 Package **layouts**

Pkg layouts layouts is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{layouts}[2009/09/02]

```
2 \newif\ifoddpagelayout
3 \oddpagelayouttrue
4 \newif\iftwocolumnlayout
5 \twocolumnlayoutfalse
6 \newif\ifdrawmarginpars
7 \drawmarginparstrue
8 \newif\ifdrawparameters
9 \drawparameterstrue
10 \newif\iflistaspara
11 \listasparatrue
12 \newif\ifruninhead
13 \runinheadfalse
14 \newif\ifprintparameters
15 \printparameterstrue
16 \newif\ifdrawdimensions
17 \drawdimensionsfalse
18 \newif\ifprintheadings
19 \printheadingstrue
20 \newcommand{\testdrawdimensions}{}
21 \newcommand{\testprintparameters}{}
22 \newcommand{\setlabelfont}[1]{}
23 \newcommand{\setparameterfont}[1]{}
24 \newcommand{\setvaluestextsize}[1]{}
25 \newcommand{\setlayoutscale}[1]{}
26 \newcommand{\setuplayouts}{}
27 \newcommand{\printinunitsof}[1]{}
28 \newcommand{\prntlen}[1]{}

```

```
29 \newcommand{\trypaperwidth}[1]{}
30 \newcommand{\trypaperheight}[1]{}
31 \newcommand{\tryhoffset}[1]{}
32 \newcommand{\tryvoffset}[1]{}
33 \newcommand{\trytopmargin}[1]{}
34 \newcommand{\tryheadheight}[1]{}
35 \newcommand{\tryheadsep}[1]{}
36 \newcommand{\trytextheight}[1]{}
37 \newcommand{\tryfootskip}[1]{}
38 \newcommand{\tryoddsidemargin}[1]{}
39 \newcommand{\tryevensidemargin}[1]{}
40 \newcommand{\trytextwidth}[1]{}
41 \newcommand{\trymarginparsep}[1]{}
42 \newcommand{\trymarginparwidth}[1]{}
43 \newcommand{\trymarginparpush}[1]{}
44 \newcommand{\trycolumnsep}[1]{}
45 \newcommand{\trycolumnseprule}[1]{}
46 \newcommand{\setfootbox}[2]{}
47 \newcommand{\currentpage}{}
48 \newcommand{\drawpage}{(draw page)}
49 \newcommand{\pagediagram}{(page diagram)}
50 \newcommand{\pagedesign}{(page design)}
51 \newcommand{\pagevalues}{(page values)}
52 \newcommand{\trystockwidth}[1]{}
53 \newcommand{\trystockheight}[1]{}
54 \newcommand{\trytrimedge}[1]{}
55 \newcommand{\trytrimtop}[1]{}
56 \newcommand{\tryuppermargin}[1]{}
57 \newcommand{\tryspinemargin}[1]{}
58 \newcommand{\currentstock}{}
59 \newcommand{\drawstock}{(draw stock)}
60 \newcommand{\stockdiagram}{(stock diagram)}
61 \newcommand{\stockdesign}{(stock design)}
62 \newcommand{\stockvalues}{(stock values)}
63 \newcommand{\tryitemindent}[1]{}
64 \newcommand{\trylabelwidth}[1]{}
65 \newcommand{\trylabelsep}[1]{}
66 \newcommand{\tryleftmargin}[1]{}
67 \newcommand{\tryrightmargin}[1]{}
68 \newcommand{\trylistparindent}[1]{}
69 \newcommand{\trytopsep}[1]{}
70 \newcommand{\tryparskip}[1]{}
71 \newcommand{\trypartopsep}[1]{}
72 \newcommand{\tryparsep}[1]{}
73 \newcommand{\tryitemsep}[1]{}
74 \newcommand{\currentlist}{}
75 \newcommand{\drawlist}{(draw list)}
76 \newcommand{\listdiagram}{(list diagram)}
77 \newcommand{\listdesign}{(list design)}
78 \newcommand{\listvalues}{(list values)}
79 \newcommand{\tryfootins}[1]{}
80 \newcommand{\tryfootnotesep}[1]{}
81 \newcommand{\tryfootnotebaseline}[1]{}
82 \newcommand{\tryfootruleheight}[1]{}
83 \newcommand{\tryfootrulefrac}[1]{}

```

```
84 \newcommand{\currentfootnote}{}
85 \newcommand{\drawfootnote}{(draw footnote)}
86 \newcommand{\footnotediagram}{(footnote diagram)}
87 \newcommand{\footnotedesign}{(footnote design)}
88 \newcommand{\footnotevalues}{(footnote values)}
89 \newcommand{\tryparindent}[1]{}
90 \newcommand{\tryparlinewidth}[1]{}
91 \newcommand{\tryparbaselineskip}[1]{}
92 \newcommand{\currentparagraph}{}
93 \newcommand{\drawparagraph}{(draw paragraph)}
94 \newcommand{\paragraphdiagram}{(paragraph diagram)}
95 \newcommand{\paragraphdesign}{(paragraph design)}
96 \newcommand{\paragraphvalues}{(paragraph values)}
97 \newcommand{\trybeforeskip}[1]{}
98 \newcommand{\tryafterskip}[1]{}
99 \newcommand{\tryindent}[1]{}
100 \newcommand{\currentheading}{}
101 \newcommand{\drawheading}[1]{(draw heading)}
102 \newcommand{\headingdiagram}[1]{(heading diagram)}
103 \newcommand{\headingdesign}[1]{(heading design)}
104 \newcommand{\headingvalues}{(heading values)}
105 \newcommand{\trytextfloatsep}[1]{}
106 \newcommand{\tryfloatsep}[1]{}
107 \newcommand{\tryintextsep}[1]{}
108 \newcommand{\trytopfigrule}[1]{}
109 \newcommand{\trybotfigrule}[1]{}
110 \newcommand{\currentfloat}{}
111 \newcommand{\drawfloat}{(draw float)}
112 \newcommand{\floatdiagram}{(float diagram)}
113 \newcommand{\floatdesign}{(float design)}
114 \newcommand{\floatvalues}{(float values)}
115 \newcommand{\trytotalnumber}[1]{}
116 \newcommand{\trytopnumber}[1]{}
117 \newcommand{\trybottomnumber}[1]{}
118 \newcommand{\trytopfraction}[1]{}
119 \newcommand{\trytextfraction}[1]{}
120 \newcommand{\trybottomfraction}[1]{}
121 \newcommand{\currentfloatpage}{}
122 \newcommand{\drawfloatpage}{(draw floatpage)}
123 \newcommand{\floatpagediagram}{(floatpage diagram)}
124 \newcommand{\floatpagedesign}{(floatpage design)}
125 \newcommand{\floatpagevalues}{(floatpage values)}
126 \newcommand{\trytocindent}[1]{}
127 \newcommand{\trytocnumwidth}[1]{}
128 \newcommand{\trytoclinewidth}[1]{}
129 \newcommand{\trytocrmarg}[1]{}
130 \newcommand{\trytocpnumwidth}[1]{}
131 \newcommand{\trytocdotsep}[1]{}
132 \newcommand{\currenttoc}{}
133 \newcommand{\drawtoc}{(draw toc)}
134 \newcommand{\tocdiagram}{(toc diagram)}
135 \newcommand{\tocdesign}{(toc design)}
136 \newcommand{\tocvalues}{(toc values)}
137 \newcommand{\drawspread}[8][0]{(a spread)}
138 \newcommand{\drawfontframe}[1]{(font frame)}
```

---

```
139 \newcommand{\drawfontframelabel}[1]{}
```

---

File 219 **lwarp-leading.sty**

§ 322     Package **leading**

Pkg    leading    leading is ignored.

**for HTML output:**    1 \LWR@ProvidesPackageDrop{leading}[2008/12/11]

```
2 \newcommand\leading[1]{}
```

---

File 220 **lwarp-leftidx.sty**

§ 323     Package **leftidx**

*(Emulates or patches code by HARALD HARDERS.)*

Pkg    leftidx    leftidx works as-is with SVG math, and is emulated for MATHJAX.

**for HTML output:**    1 \LWR@ProvidesPackagePass{leftidx}[2003/09/24]

```
2 \begin{warpMathJax}
3 \CustomizeMathJax{\newcommand{\leftidx}[3]{\vphantom{#2}}#1#2#3}}
4 \CustomizeMathJax{\newcommand{\ltrans}[1]{\leftidx{^\mathrm{t}}{\!#1}{}}}
5 \end{warpMathJax}
```

---

File 221 **lwarp-letterspace.sty**

§ 324     Package **letterspace**

*(Emulates or patches code by R SCHLICHT.)*

Pkg    letterspace    letterspace is a subset of microtype, which is pre-loaded by lwarp. All user options and macros are ignored and disabled.

**for HTML output:**    Discard all options for lwarp-letterspace:

```
1 \LWR@ProvidesPackageDrop{letterspace}[2018/01/14]
```

```
2 \newcommand*\lsstyle{}
3 \newcommand\textls[2][{}]{
4 \def\textls#1#{}
5 \newcommand*\slig[1]{#1}
```

---

File 222 **lwarp-lettrine.sty**

§ 325     Package **lettrine**

*(Emulates or patches code by DANIEL FLIPO.)*

Pkg    lettrine    **lettrine** is emulated.

**for HTML output:**    Discard all options for lwarp-lettrine:

```
1 \LWR@ProvidesPackageDrop{lettrine}[2018-08-28]
```

The initial letter is in a <span> of class lettrine, and the following text is in a <span> of class lettrinetext. \lettrine [*<keys>*] {*<letter>*} {*<additional text>*}

```
2 \DeclareDocumentCommand{\lettrine}{o m m}{%
3 \InlineClass{lettrine}{#2}\InlineClass{lettrinetext}{#3} % extra space
4 }
5
6 \newcounter{DefaultLines}
7 \setcounter{DefaultLines}{2}
8 \newcounter{DefaultDepth}
9 \newcommand*{\DefaultOptionsFile}{\relax}
10 \newcommand*{\DefaultLoversize}{0}
11 \newcommand*{\DefaultLraise}{0}
12 \newcommand*{\DefaultLhang}{0}
13 \newdimen\DefaultFindent
14 \setlength{\DefaultFindent}{\z@}
15 \newdimen\DefaultNindent
16 \setlength{\DefaultNindent}{0.5em}
17 \newdimen\DefaultSlope
18 \setlength{\DefaultSlope}{\z@}
19 \newdimen\DiscardVskip
20 \setlength{\DiscardVskip}{0.2\p@}
21 \newif\ifLettrineImage
22 \newif\ifLettrineOnGrid
23 \newif\ifLettrineRealHeight
24
25 \newcommand*{\LettrineTextFont}{\scshape}
26 \newcommand*{\LettrineFontHook}{}
27 \newcommand*{\LettrineFont}[1]{\InlineClass{lettrine}{#1}}
28 \newcommand*{\LettrineFontEPS}[1]{\includegraphics[height=1.5ex]{#1}}
```

---

File 223 **lwarp-lineno.sty**

§ 326     Package **lineno**

*(Emulates or patches code by STEPHAN I. BÖTTCHER.)*

Pkg    lineno    lineno is partly emulated, but mostly ignored.

```

for HTML output: 1 \LWR@ProvidesPackageDrop{lineno}[2005/11/02]

2 \newcommand*\resetlinenumber[1][\@ne]{}
3
4 \def\linenumbers{%
5 \@ifnextchar[\resetlinenumber]%
6 {\@ifstar{\resetlinenumber}{}}%
7 }
8
9 \newcommand*\nolinenumbers{}
10
11 \@namedef{linenumbers*}{\par\linenumbers*}
12 \@namedef{runninglinenumbers*}{\par\runninglinenumbers*}
13
14 \def\endlinenumbers{\par}
15 \let\endrunninglinenumbers\endlinenumbers
16 \let\endpagewiselinenumbers\endlinenumbers
17 \expandafter\let\csname endlinenumbers*\endcsname\endlinenumbers
18 \expandafter\let\csname endrunninglinenumbers*\endcsname\endlinenumbers
19 \let\endnolinenumbers\endlinenumbers
20
21 \def\pagewiselinenumbers{\linenumbers\setpagewiselinenumbers}
22
23 \def\runninglinenumbers{\setrunninglinenumbers\linenumbers}
24
25 \def\setpagewiselinenumbers{}
26
27 \def\setrunninglinenumbers{}
28
29 \def\linenomath{}%
30 \@namedef{linenomath*}{}%
31 \def\endlinenomath{}
32 \expandafter\let\csname endlinenomath*\endcsname\endlinenomath
33
34 \let\line\label\label
35
36 \def\switchlinenumbers{\@ifstar{}{}}
37 \def\setmakelinenumbers#1{\@ifstar{}{}}
38
39 \def\leftlinenumbers{\@ifstar{}{}}
40 \def\rightlinenumbers{\@ifstar{}{}}
41
42 \newcounter{linenumber}
43 \newcount\c@pagewiselinenumber
44 \let\c@runninglinenumber\c@linenumber
45
46 \def\runningpagewiselinenumbers{}
47 \def\realpagewiselinenumbers{}
48
49
50 \NewDocumentCommand\modulolinenumbers{s o}{}
51
52 \chardef\c@linenumbermodulo=5

```

```

53 \modulolinenumbers[1]
54
55 \newcommand*\firstlinenumber[1]{}
56
57 \newcommand\internallinenumbers{}
58 \let\endinternallinenumbers\endlinenumbers
59 \@namedef{internallinenumbers*}{\internallinenumbers*}
60 \expandafter\let\csname endinternallinenumbers*\endcsname\endlinenumbers
61
62 \newcommand*{\linenoplaceholder}[1]{% redefine per language
63 (line number reference for \detokenize\expandafter{#1})
64 }
65
66 \newcommand*{\lineref}[2][\]{\linenoplaceholder{#2}}
67 \newcommand*{\linerefp}[2][\]{\linenoplaceholder{#2}}
68 \newcommand*{\linerefr}[2][\]{\linenoplaceholder{#2}}
69
70 \newcommand\quotelinenumbers
71 {\ifstar\linenumbers{\ifnextchar[\linenumbers{\linenumbers*}}}
72
73 \newdimen\linenumbersep
74 \newdimen\linenumberwidth
75 \newdimen\quotelinenumbersep
76
77 \quotelinenumbersep=\linenumbersep
78 \let\quotelinenumberfont\linenumberfont
79
80 \def\linenumberfont{\normalfont\tiny\sffamily}
81
82
83 \linenumberwidth=10pt
84 \linenumbersep=10pt
85
86 \def\thelinenumber{}
87
88 \def\LineNumber{}
89 \def\makeLineNumber{}
90 \def\makeLineNumberLeft{}
91 \def\makeLineNumberRight{}
92 \def\makeLineNumberOdd{}
93 \def\makeLineNumberEven{}
94 \def\makeLineNumberRunning{}
95
96
97 \newenvironment{numquote} {\quote}{\endquote}
98 \newenvironment{numquotation} {\quotation}{\endquotation}
99 \newenvironment{numquote*} {\quote}{\endquote}
100 \newenvironment{numquotation*}{\quotation}{\endquotation}
101
102 \newdimen\bframerule
103 \bframerule=\fbxrule
104
105 \newdimen\bframesep
106 \bframesep=\fbxsep
107

```

---

```

108 \newenvironment{bframe}
109 {%
110 \LWR@forceminwidth{\bframerule}%
111 \BlockClass[
112 border:\LWR@printlength{\LWR@atleastonept} solid black ; %
113 padding:\LWR@printlength{\bframesep}%
114]{bframe}
115 }
116 {\endBlockClass}

```

---

File 224 **lwarp-lips.sty**

§ 327 Package **lips**

*(Emulates or patches code by MATT SWIFT.)*

Pkg lips lips is emulated.

```

1 % \LWR@ProvidesPackageDrop{lips}
2 \PackageInfo{lwarp}{Using the lwarp version of package 'lips'.}%
3 \ProvidesPackage{lwarp-lips}[2001/08/31]
4
5 \NewDocumentCommand{\Lips}{}{\textellipsis}
6
7 \NewDocumentCommand{\BracketedLips}{}{[\textellipsis]}
8
9 \let\lips\Lips
10 \let\olips\lips
11
12 \DeclareOption*{}
13 \DeclareOption{mla}{
14 \let\lips\BracketedLips
15 }
16 \ProcessOptions\relax
17
18 \newcommand \LPNobreakList {}

```

---

File 225 **lwarp-listings.sty**

§ 328 Package **listings**

*(Emulates or patches code by CARSTEN HEINZ, BROOKS MOSES, JOBST HOFFMANN.)*

Pkg listings listings is supported with some limitations. Text formatting is not yet supported.

**for HTML output:**

```

1 \begin{warpHTML}

2 \LWR@ProvidesPackagePass{listings}[2018/09/02]

```

Force flexible columns. Fixed columns inserts spaces in the PDF output.

```
3 \lst@column@flexible
```

Patches to embed listings inside pre tags:

```
4 \let\LWR@origlst@Init\lst@Init
5 \let\LWR@origlst@DeInit\lst@DeInit
6
7 \let\LWR@origlsthkEveryPar\lsthk@EveryPar
8
9 \renewcommand{\l@lstlisting}[2]{\hypertocfloat{1}{\lstlisting}{lol}{#1}{#2}}
```

`\lstset`    `{\langle options \rangle}`

Use the listings `literate` option to replace HTML entities:

```
10 \def\lstset@#1{\endgroup%
11 % \ifx\@empty#1%
12 % \@empty%
13 % \else%
14 \setkeys{lst}{%
15 #1%
16 ,literate=%
17 {<}{\HTMLentity{lt}}{4}%
18 {>}{\HTMLentity{gt}}{4}%
19 {\&}{\HTMLentity{amp}}{5}%
20 }%
21 % \fi%
22 }
```

`\lst@Init`    `{\langle backslash-processing \rangle}`    Done at the start of a listing.

```
23 \renewcommand{\lst@Init}[1]{%
```

Perform the listings initialization:

```
24 \LWR@traceinfo{\lst@Init}%
25 \renewcommand*\@capttype{\lstlisting}%
26 \let\lst@aboveskip\z@\let\lst@belowskip\z@%
27 \gdef\lst@boxpos{t}%
28 \let\lst@frame\@empty
29 \let\lst@frametshape\@empty
30 \let\lst@framershape\@empty
31 \let\lst@framebshape\@empty
32 \let\lst@framelshape\@empty
33 \lstframe@\lst@frameround ffff\relax%
34 \lst@multicols\@empty%
35 \LWR@origlst@Init{#1}\relax%
```

Avoids extra horizontal space:

```
36 \def\lst@framelr{}%

37 \LWR@traceinfo{finished origlst@Init}%
38 \lst@ifdisplaystyle%
```

Creating a display.

Disable line numbers, produce the <pre>, then reenable line numbers.

```
39 \LWR@traceinfo{About to create verbatim.}%
40 \let\lsthk@EveryPar\relax%
41 \LWR@forcenewpage%
42 \LWR@atbeginverbatim{1.5}{programlisting}%
43
44 \let\lsthk@EveryPar\LWR@origlsthkEveryPar%
45 \else%
```

Inline, so open a <span>:

```
46 \ifbool{LWR@verbtags}{\LWR@htmltag{span class="inlineprogramlisting"}}{}%
47 \fi%
48 }
49
```

`\lst@DeInit` Done at the end of a listing.

```
50 \renewcommand*{\lst@DeInit}{%
51 \lst@ifdisplaystyle%
```

Creating a display.

Disable line numbers, produce the </pre>, then reenable line numbers:

```
52 \let\lsthk@EveryPar\relax%
53 \LWR@afterendverbatim{0}%
54 \let\lsthk@EveryPar\LWR@origlsthkEveryPar%
55 \else%
```

Inline, so create the closing </span>:

```
56 \ifbool{LWR@verbtags}{\noindent\LWR@htmltag{/span}}{}%
57 \fi%
```

Final listings deinit:

```
58 \LWR@origlst@DeInit%
59 }
```

`\lst@MakeCaption` {<math>t/b</math>}

This is called BOTH at the top and at the bottom of each listing.

Patched for lwarp.

```
60
61 \def\lst@MakeCaption#1{%
62 \LWR@traceinfo{MAKING CAPTION at #1}%
63 \lst@ifdisplaystyle
64 \LWR@traceinfo{making a listings display caption}%
65 \ifx #1t%
66 \ifx\lst@caption\empty\expandafter\lst@HRefStepCounter \else
67 \expandafter\refstepcounter
68 \fi {lstlisting}%
69 \LWR@traceinfo{About to assign label: !\lst@label!}%
70 % \ifx\lst@label\empty\else
71 % \label{\lst@label}\fi
```

```

72 \LWR@traceinfo{Finished assigning the label.}%
73 \let\lst@arg\lst@intname \lst@ReplaceIn\lst@arg\lst@filenamerpl
74 \global\let\lst@name\lst@arg \global\let\lstname\lst@name
75 \lst@ifnolol\else
76 \ifx\lst@caption\@empty
77 \ifx\lst@caption\@empty
78 \ifx\lst@intname\@empty \else \def\lst@temp{ }%
79 \ifx\lst@intname\lst@temp \else

```

This code places a contents entry for a non-float. This would have to be modified for **lwarp**:

```

80 \LWR@traceinfo{addcontents lst@name: -\lst@name-}%
81 % \addcontentsline{lol}{lstlisting}{\lst@name}
82 \fi\fi
83 \fi
84 \else

```

This would have to be modified for **lwarp**:

```

85 \LWR@traceinfo{addcontents lst@caption: -\lst@caption-}%
86 \addcontentsline{lol}{lstlisting}%
87 {\protect\numberline{\thelstlisting}%
88 {\protect\ignorespaces \LWR@isolate{\lst@caption} \protect\relax}}%
89 \fi
90 \fi
91 \fi
92 \ifx\lst@caption\@empty\else
93 \LWR@traceinfo{lst@caption not empty-}%
94 \lst@ifSubstring #1\lst@captionpos
95 {\begingroup
96 \LWR@traceinfo{at the selected position}%

```

These space and box commands are not needed for HTML output:

```

97 % \let@@vskip\vskip
98 % \def\vskip{\afterassignment\lst@vskip \@tempskipa}%
99 % \def\lst@vskip{\nobreak@@vskip\@tempskipa\nobreak}%
100 % \par\@parboxrestore\normalsize\normalfont % \noindent (AS)
101 % \ifx #1\allowbreak \fi
102 \ifx\lst@title\@empty

```

New **lwarp** code to create a caption:

```

103 \LWR@stoppars%
104 \lst@makecaption\fnnum\lstlisting{\ignorespaces \lst@caption}
105 \else

```

New **lwarp** code to create a title:

```

106 % \lst@maketitle\lst@title % (AS)
107 \LWR@traceinfo{Making title: \lst@title}%
108 \begin{BlockClass}{lstlistingtitle}% lwarp
109 \lst@maketitle\lst@title% lwarp
110 \end{BlockClass}% lwarp
111 \fi
112 \LWR@traceinfo{About to assign label: !\lst@label!}%
113 \ifx\lst@label\@empty\else
114 \leavevmode% gets rid of bad space factor error
115 \GetTitleStringExpand{\lst@caption}%

```

```

116 \edef\LWR@lntemp{\GetTitleStringResult}%
117 \edef\@currentlabelname{\detokenize\expandafter{\LWR@lntemp}}%
118 \label{\lst@label}\fi
119 \LWR@traceinfo{Finished assigning the label.}%

```

Not needed for lwarp:

```

120 % \ifx #1b\allowbreak \fi
121 \endgroup}}}%
122 \fi
123 \LWR@traceinfo{end of making a listings display caption}%
124 \else
125 \LWR@traceinfo{INLINE}%
126 \fi
127 \LWR@traceinfo{DONE WITH CAPTION at #1}%
128 }
129
130 \renewcommand{\lst@maketitle}[1]{%
131 \LWR@isolate{#1}%
132 }%
133

```

**line numbers** Patched to keep left line numbers outside of the left margin, and place right line numbers in a field \VerbatimHTMLWidth wide.

```

134 \lst@Key{numbers}{none}{%
135 \let\lst@PlaceNumber\@empty
136 \lstKV@SwitchCases{#1}%
137 {none:}%
138 left:\def\lst@PlaceNumber{%

```

For now, lwarp places left line numbers inline. Ideally the entire line would be moved to the right, but conflicts with list indenting occurs.

```

139 % \LWR@origllap{
140 \LWR@orignormalfont%
141 \lst@numberstyle{\thelstnumber}\kern\lst@numbersep%
142 % }
143 }%%
144 right:\def\lst@PlaceNumber{\LWR@origrlap{\LWR@orignormalfont
145 \kern 6in \kern\lst@numbersep
146 \lst@numberstyle{\thelstnumber}}}%
147 }{\PackageError{lwarp-listings}{Numbers #1 unknown}\@ehc}}

```

148 \end{warpHTML}

---

File 226 **lwarp-listliketab.sty**

§ 329 Package **listliketab**

Pkg listliketab listliketab is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{listliketab}[2005/01/09]

```

2 \newcommand*\storestyleof}[1]{}
3 \newcommand*\storeliststyle{}
4 \newenvironment{listliketab}{}{}

```

File 227 **lwarp-lltjext.sty**

§ 330 Package **lltjext**

(Emulates or patches code by THE L<sup>A</sup>T<sub>E</sub>X-JA PROJECT TEAM.)

Pkg lltjext lltjext is patched for use by lwarp.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{lltjext}[2018/10/07]

2 \protected\def\yoko{%
3 \directlua{luatexja.direction.set_list_direction(4, 'yoko')}%
4 }
5 \protected\def\tate{\yoko}
6 \protected\def\dtou{\yoko}
7 \protected\def\utod{\yoko}
8
9 \define@key[ltj]{japaram}{direction}{}
10
11 \yoko
12
13 \DeclareExpandableDocumentCommand{\rensuji}{s o m}{#3}
14
15 \DeclareDocumentCommand{\layoutfloat}{d() o m}{}
16
17 \DeclareDocumentCommand{\DeclareLayoutCaption}{m d<> d() o}{}
18
19 \LetLtxMacro\pcaption\caption
20
21 \DeclareDocumentCommand{\layoutcaption}{d<> d() o}{}
22
23 \let\captiondir\relax
24 \RenewDocumentEnvironment{LWR@HTML@minipage}{d<> O{t} O{} O{t} m}
25 {\LWR@HTML@sub@minipage{#2}{#3}{#4}{#5}}
26 {\endLWR@HTML@sub@minipage}
27
28 \RenewDocumentCommand{\LWR@HTML@parbox}{d<> O{t} O{} O{t} m +m}
29 {
30 \LWR@traceinfo{parbox of width #4}%
31 \begin{minipage}[#2][#3][#4]{#5}%
32 #6
33 \end{minipage}%
34 }
35
36 \RenewDocumentCommand{\pbox}{d<> O{0pt} O{c} m}{%
37 \global\booltrue{LWR@minipagefullwidth}%
38 \parbox{#2}{#4}%
39 }

```

File 228 **lwarp-longtable.sty**

§ 331 Package **longtable**

(Emulates or patches code by DAVID CARLISLE.)

Pkg longtable longtable is emulated.

for HTML output: 1 \LWR@ProvidesPackageDrop{longtable}[2014/10/28]

Use one of either `\endhead` or `\endfirsthead` for both print and HTML, and use a `\warpprintonly` macro to disable the other head phrase, and also the `\endfoot` and `\endfirstfoot` phrases. (See section 8.10.4 if using `threeparttablex`.)

```
\begin{longtable}{ [column specifiers] }
[. . .] \endfirsthead % or \endhead, for print and HTML
\warpprintonly{ % not used in HTML
[. . .] \endhead % or \endfirsthead
[. . .] \endfoot
[<lastfoot macros>] \endlastfoot
}
. . . table contents . . .
\warppHTMLonly{
[<lastfoot macros>] % HTML last footer, without \endfoot
% or \endlastfoot.
}
\end{longtable}
```

⚠ Misplaced `\noalign` Use the `\warpprintonly` macro instead of the `\warpprint` environment. Doing so helps avoid “Misplaced `\noalign`.” when using `\begin{warpprint}`.

⚠ `\kill` `\kill` is ignored, place a `\kill` line inside

```
\begin{warpprint} . . . \end{warpprint}
```

or place it inside `\warpprintonly`.

⚠ `lateximage` `longtable` is not supported inside a `lateximage`.

See:

<http://tex.stackexchange.com/questions/43006/why-is-input-not-expandable>

Used to detect more than one of `\endhead` and `\endfirsthead` in use for HTML at the same time.

```
2 \newbool{\LWR@longtable@havehead}
3 \boolfalse{\LWR@longtable@havehead}
```

Env longtable \* [*horizontal alignment*] {*colspec*} Emulates the `longtable` environment.

Per the caption package, the starred version steps the counter per caption. The unstarred version steps the counter once at the beginning, but not at each caption.

Options [c], [l], and [r] are ignored.

```

4 \newenvironment{longtable*}[2][\%
5 \LWR@floatbegin{table}%
6 \ifdef{\setcaptiontype}{% caption package:
7 \setcaptiontype{\LTcaption}%
8 \caption@setoptions{longtable}%
9 \caption@setoptions{@longtable}%
10 \caption@LT@setup%
11 }{% w/o caption package:
12 \renewcommand*{\@caption}{\LTcaption}%
13 }%
14 \booltrue{LWR@starredlongtable}%
15 \boolfalse{LWR@longtable@havehead}%
16 \let\captionlistentry\LWR@LTcaptionlistentry%
17 \tabular{#2}%
18 }
19 {\endtabular\LWR@floatend}
20
21 \newenvironment{longtable}[2][\%
22 \LWR@floatbegin{table}%
23 \ifdef{\setcaptiontype}{% caption package:
24 \setcaptiontype{\LTcaption}%
25 \caption@setoptions{longtable}%
26 \caption@setoptions{@longtable}%
27 \caption@LT@setup%
28 }{% w/o caption package:
29 \renewcommand*{\@caption}{\LTcaption}%
30 }%
31 \refstepcounter{\LTcaption}%
32 \boolfalse{LWR@longtable@havehead}%
33 \let\captionlistentry\LWR@LTcaptionlistentry%
34 \tabular{#2}%
35 }
36 {\endtabular\LWR@floatend}

```

Provided for compatibility, but ignored:

```

37 \newcounter{LTchunksize}

```

Error for heads which should have been in \warpprintonly:

```

38 \newcommand*{\LWR@longtable@headerror}{%
39 \PackageError{lwarp-longtable}
40 {For longtable:\MessageBreak
41 1: Keep either one of an \protect\endhead\space or
42 \protect\endfirsthead\space\MessageBreak
43 \space phrase as-is, to be used by both print and HTML.\MessageBreak
44 2: Place any other \protect\end... phrases inside a\MessageBreak
45 \space\protect\warpprintonly\space macro,
46 to be ignored by HTML.\MessageBreak

```

```

47 3: Add a final footer for HTML at the end of the table\MessageBreak
48 \space inside a \protect\warpHTMLonly\space macro.
49 This can be\MessageBreak
50 \space a copy of an \protect\endfoot\space or
51 \protect\endfirstfoot\space phrase,\MessageBreak
52 \space but without the actual \protect\endfoot\space
53 or \protect\endfirstfoot\MessageBreak
54 \space macros. If using threeparttablex, add\MessageBreak
55 \space \protect\insertTableNotes\space here,
56 optionally with\MessageBreak
57 \space \protect\UseMinipageWidths\space in front.\MessageBreak
58 See the Lwarp documentation regarding longtables\MessageBreak
59 and threeparttablex}
60 {See the Lwarp documentation regarding longtables and threeparttablex.}
61 }

```

Error if more than one of \endhead or \endfirsthead is outside of warpprintonly.

```

62 \newcommand*{\LWR@longtable@maybeheaderror}{%
63 \ifbool{\LWR@longtable@havehead}%
64 {\LWR@longtable@headerror}%
65 {%
66 \booltrue{\LWR@longtable@havehead}
67 \LWR@tabularendoffline% throws away options //[dim] and //*
68 }%
69 }

```

Error if more than one of these is outside of warpprint.

```

70 \def\endhead{\LWR@longtable@maybeheaderror}
71 \def\endfirsthead{\LWR@longtable@maybeheaderror}

```

Error if ANY of these is outside of warpprint.

```

72 \def\endfoot{\LWR@longtable@headerror}
73 \def\endlastfoot{\LWR@longtable@headerror}

74 \providecommand*{\LWR@HTML@tabularnewline}{\LWR@tabularendoffline}
75 \LWR@formatted{tabularnewline}

76 \newcommand{\setlongtables}{}% Obsolete command, does nothing.
77 \newlength{\LTleft}
78 \newlength{\LTRight}
79 \newlength{\LTpre}
80 \newlength{\LTpost}
81 \newlength{\LTcapwidth}

82 \LetLtxMacro\LWR@origkill\kill
83 \renewcommand*{\kill}{\LWR@tabularendoffline}
84 \appto\LWR@restoreorigformatting{%
85 \LetLtxMacro\kill\LWR@origkill%
86 }

```

---

File 229 **lwarp-lscape.sty**

§ 332      Package **lscape**

*(Emulates or patches code by D. P. CARLISLE.)*

Pkg    lscape    **lscape** is ignored.

**for HTML output:**    Discard all options for lwarp-lscape.

```
1 \LWR@ProvidesPackageDrop{lscape}[2000/10/22]

2 \newenvironment*{landscape}{}{}
```

---

File 230 **lwarp-ltablex.sty**

§ 333      Package **ltablex**

*(Emulates or patches code by ANIL K. GOEL.)*

Pkg    ltablex    **ltablex** is emulated by lwarp.

**for HTML output:**    Relies on tabularx.

```
1 \RequirePackage{longtable}
2 \RequirePackage{tabularx}
3
4 \LWR@ProvidesPackageDrop{ltablex}[2014/08/13]
5
6 \DeclareDocumentEnvironment{tabularx*}{m o m}
7 {\longtable{#3}}
8 {\endlongtable}
9
10 \DeclareDocumentEnvironment{tabularx*}{m o m}
11 {\longtable{#3}}
12 {\endlongtable}
13
14 \newcommand*{\keepXColumns}{}
15 \newcommand*{\convertXColumns}{}
16
```

---

File 231 **lwarp-ltcaption.sty**

§ 334      Package **ltcaption**

*(Emulates or patches code by AXEL SOMMERFELDT.)*

Pkg ltcaption ltcaption is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{ltcaption}[2018/08/26]

\LTcaptype is already defined by lwarp.

longtable\* is already defined by lwarp-longtable.

```
2 \newlength{\LTcapskip}
3 \newlength{\LTcapleft}
4 \newlength{\LTcapright}
5 \newcommand*\LTcapmarginfalse{}
```

---

File 232 **lwarp-ltxgrid.sty**

§ 335 Package **ltxgrid**

Pkg ltxgrid ltxgrid is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{ltxgrid}[2010/07/25]

```
2 \newcommand*\onecolumngrid{}
3 \newcommand*\twocolumngrid{}
4 \newcommand*\removestuff{}
5 \newcommand*\addstuff[2]{}
6 \newcommand*\replacestuff[2]{}


```

---

File 233 **lwarp-ltxtable.sty**

§ 336 Package **ltxtable**

Pkg ltxtable ltxtable is emulated.

 **table numbering** The print version does not seem to honor longtable\* from the caption package, while lwarp does.

for HTML output: 1 \RequirePackage{tabularx,longtable}  
2 \LWR@ProvidesPackageDrop{ltxtable}[1995/12/11]

```
\LTxtable {<width>} {<file>}

3 \newcommand*\LTxtable[2]{%
4 \input{#2}%
5 }
```

---

File 234 **lwarp-lua-check-hyphen.sty**

§ 337 Package **lua-check-hyphen**

Pkg lua-check-hyphen lua-check-hyphen is ignored.

**for HTML output:**

```
1 \LWR@ProvidesPackageDrop{lua-check-hyphen}[2018/04/19]

2 \newcommand*{\LuaCheckHyphen}[1]{}

```

---

File 235 **lwarp-lua-visual-debug.sty**

§ 338 Package **lua-visual-debug**

Pkg lua-visual-debug lua-visual-debug is ignored.

**for HTML output:**

```
1 \LWR@ProvidesPackageDrop{lua-visual-debug}[2016/05/30]

```

---

File 236 **lwarp-luacolor.sty**

§ 339 Package **luacolor**

Pkg luacolor luacolor is ignored.

**for HTML output:**

```
1 \LWR@ProvidesPackageDrop{luacolor}[2016/05/16]

2 \newcommand{\luacolorProcessBox}[1]{}

```

---

File 237 **lwarp-luamplib.sty**

§ 340 Package **luamplib**

*(Emulates or patches code by HANS HAGEN, TACO HOEKWATER, ELIE ROUX, PHILIPP GESANG, KIM DOHYUN.)*

Pkg luamplib luamplib is patched for use by lwarp.

**for HTML output:**

```
1 \LWR@ProvidesPackagePass{luamplib}[2020/02/24]

2 \BeforeBeginEnvironment{mplibcode}{%
3 \begin{lateximage}[-mplibcode~\PackageDiagramAltText]%
4 }
5 \AfterEndEnvironment{mplibcode}{\end{lateximage}}

```

File 238 **lwarp-luatexko.sty**

§ 341 Package **luatexko**

*(Emulates or patches code by DOHYUN KIM, SOOJIN NAM.)*

Pkg luatexko **luatexko** is patched for use by lwarp.

Modern HTML is used for \dotemph, \ruby, and offset and thickness control for \uline, etc.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{luatexko}[2020/03/20]

2 \newcommand{\LWR@HTML@dotemph}[1]{%
3 % \uline{#1}%
4 \InlineClass[text-emphasis-style: dot]{dotemph}{#1}%
5 }
6 \LWR@formatted{dotemph}
7
8 \newcommand{\LWR@HTML@ruby}[2]{%
9 \LWR@htmltagc{ruby}%
10 \LWR@htmltagc{rb}#1\LWR@htmltagc{/rb}%
11 \LWR@htmltagc{rp}{\LWR@htmltagc{/rp}%
12 \LWR@htmltagc{rt}#2\LWR@htmltagc{/rt}%
13 \LWR@htmltagc{rp}}\LWR@htmltagc{/rp}%
14 \LWR@htmltagc{/ruby}%
15 }
16 \LWR@formatted{ruby}
```

The following is modified from lwarp-ulem:

```

17 \NewDocumentCommand{\LWR@HTML@uline}{+m}{%
18 \InlineClass%
19 (text-decoration:underline; text-decoration-skip: auto)%
20 [%
21 text-underline-offset: \linedown ;
22 text-decoration-thickness: \linewidth%
23]%
24 {uline}{\LWR@isolate{#1}}%
25 }
26 \LWR@formatted{uline}
27
28 \NewDocumentCommand{\LWR@HTML@uuline}{+m}{%
29 \InlineClass%
30 (%
31 text-decoration:underline; text-decoration-skip: auto;%
32 text-decoration-style:double%
33)%
34 [%
35 text-underline-offset: \linedown ;
36 text-decoration-thickness: \linewidth%
```

```

37]%
38 {\LWR@isolate{#1}}%
39 }
40 \LWR@formatted{uuline}
41
42 \NewDocumentCommand{\LWR@HTML@uwave}{+m}{%
43 \InlineClass%
44 (%
45 text-decoration:underline; text-decoration-skip: auto;%
46 text-decoration-style:wavy%
47)%
48 [%
49 text-underline-offset: \ulinedown ;
50 text-decoration-thickness: \ulinewidth%
51]%
52 {\LWR@isolate{#1}}%
53 }
54 \LWR@formatted{uwave}
55
56 \NewDocumentCommand{\LWR@HTML@sout}{+m}{%
57 \InlineClass%
58 (text-decoration:line-through)%
59 [text-decoration-thickness: \ulinewidth]%
60 {\LWR@isolate{#1}}%
61 }
62 \LWR@formatted{sout}
63
64 \NewDocumentCommand{\LWR@HTML@xout}{+m}{%
65 \InlineClass%
66 (text-decoration:line-through)%
67 [text-decoration-thickness: \ulinewidth]%
68 {\LWR@isolate{#1}}%
69 }
70 \LWR@formatted{xout}
71
72 \NewDocumentCommand{\LWR@HTML@dashuline}{+m}{%
73 \InlineClass%
74 (%
75 text-decoration:underline;%
76 text-decoration-skip: auto;%
77 text-decoration-style:dashed%
78)%
79 [%
80 text-underline-offset: \ulinedown ;
81 text-decoration-thickness: \ulinewidth%
82]%
83 {\LWR@isolate{#1}}%
84 }
85 \LWR@formatted{dashuline}
86
87 \NewDocumentCommand{\LWR@HTML@dotuline}{+m}{%
88 \InlineClass%
89 (%
90 text-decoration:underline;%
91 text-decoration-skip: auto;%

```

```

92 text-decoration-style: dotted%
93)%
94 [%
95 text-underline-offset: \ulinedown ;
96 text-decoration-thickness: \ulinewidth%
97]%
98 {dotuline}{\LWR@isolate{#1}}%
99 }
100 \LWR@formatted{dotuline}

```

---

File 239 **lwarp-luatodonotes.sty**

§ 342     Package **luatodonotes**

*(Emulates or patches code by FABIAN LIPP.)*

Pkg    luatodonotes    **luatodonotes** is emulated.

The documentation for **todonotes** and **luatodonotes** have an example with a **todo** inside a caption. If this example does not work it will be necessary to move the **todo** outside of the caption.

**for HTML output:**    1 \LWR@ProvidesPackagePass{luatodonotes}[2017/09/30]

Nullify options:

```

2 \@todonotes@additionalMarginEnabledfalse

3 \if@todonotes@disabled
4 \else
5
6 \newcommand{\ext@todo}{tdo}
7
8 \renewcommand{\l@todo}[2]{\hypertocfloat{1}{todo}{ldo}{#1}{#2}}

9 \let\LWRTODONOTES@orig@todototoc\todototoc
10
11 \renewcommand*{\todototoc}{%
12 \LWR@phantomsection%
13 \LWRTODONOTES@orig@todototoc%
14 }
15
16
17 \renewcommand{\@todonotes@drawMarginNoteWithLine}{%
18 \fcolorbox
19 {\@todonotes@currentbordercolor}
20 {\@todonotes@currentbackgroundcolor}
21 {\arabic{\@todonotes@numberoftodonotes}}
22 \marginpar{\@todonotes@drawMarginNote}
23 }
24
25 \renewcommand{\@todonotes@drawInlineNote}{%

```

```

26 \fcolorboxBlock%
27 {\@todonotes@currentbordercolor}%
28 {\@todonotes@currentbackgroundcolor}%
29 {%
30 \if@todonotes@authorgiven%
31 {\@todonotes@author:\,}%
32 \fi%
33 \@todonotes@text%
34 }%
35 }
36
37 \newcommand{\@todonotes@drawMarginNote}{%
38 \if@todonotes@authorgiven%
39 \@todonotes@author\par%
40 \fi%
41 \arabic{\@todonotes@numberoftodonotes}: %
42 \fcolorbox%
43 {\@todonotes@currentbordercolor}%
44 {\@todonotes@currentbackgroundcolor}%
45 {%
46 \@todonotes@sizecommand%
47 \@todonotes@text %
48 }%
49 }%
50
51 \renewcommand{\missingfigure}[2][]{%
52 \setkeys{todonotes}{#1}%
53 \addcontentsline{tdo}{todo}{\@todonotes@MissingFigureText: #2}%
54 \fcolorboxBlock%
55 {\@todonotes@currentbordercolor}%
56 {\@todonotes@currentfigcolor}%
57 {%
58 \setlength{\fboxrule}{4pt}%
59 \fcolorbox{red}{white}{Missing figure} \quad #2%
60 }
61 }
62
63 \LetLtxMacro\LWRTODONOTES@orig@todocommon\@todocommon
64
65 \RenewDocumentCommand{\@todocommon}{m m}{%
66 \begingroup%
67 \renewcommand*\phantomsection{}%
68 \LWRTODONOTES@orig@todocommon{#1}{#2}%
69 \endgroup%
70 }
71
72 \renewcommand{\@todoarea}[3][]{%
73 \@todonotes@areaselectedtrue%
74 \@todocommon{#1}{#2}%
75 \@todonotes@textmark@highlight{#3}%
76 \zref@label{\@todonotes@arabic{\@todonotes@numberoftodonotes}@end}%
77 }%
78
79
80 \DeclareDocumentCommand{\todonotes@textmark@highlight}{m}{%

```

```

81 \InlineClass[background:\LWR@origpound{ }B3FFB3]{highlight}{#1}%
82 }
83
84 \fi% \if@todonotes@disabled

```

File 240 **lwarp-lyluatex.sty**


§ 343 Package **lyluatex**

(Emulates or patches code by FR. JACQUES PERON, URS LISKA, BR. SAMUEL SPRINGUEL.)


Pkg lyluatex lyluatex is patched for use by lwarp.


For the first compile, to set *lwarpmk*'s configuration, use:

```
lualatex --shell-escape <filename>
```

 **images** After compiling the document with **lwarpmk html**, use **lwarpmk limages** to convert the Lilypond images for HTML.

**css** The option `insert=systems` results in an image per system. Each music image “system” is placed inside a `<span>` of class `lyluatex`, which defaults to `display: inline-block`.


 **insert=fullpage** The option `insert=fullpage` results in a single image per page of printed output. Each music “fullpage” image is placed inside a `<div>` of class `lyluatex`. To match the number of measures per line with the printed version, use the **geometry** package to select the page geometry, or use the **lyluatex** options for page and staff sizes.

 **options** To use `\linewidth` or `\textwidth` inside the package options for **lyluatex**, use the **kvoptions-patch** package first:

```

\usepackage{kvoptions-patch}
\usepackage[... ,line-width=0.8\linewidth,...]{lyluatex}

```

 **raw-pdf** If using `raw-pdf`, the resulting PDF images must be converted to SVG:

```
Enter ⇒ lwarpmk pdftosvg tmp-ly/*.pdf
```

**for HTML output:**

```

1 \LWR@origRequirePackage{luacode}
2
3 \LWR@ProvidesPackagePass{lyluatex}[2019/05/27]

```

User-redefinable ALT tag:

```
4 \newcommand*{\LyluatexImageAltText}{-lilypond--\PackageDiagramAltText}
```

```

\ly@compilescore {(Lilypond object)}

5 \LetLtxMacro\LWR@orig@ly@compilescore\ly@compilescore
6
7 \renewcommand*{\ly@compilescore}[1]{%

```

A local group holds a number of changes:

```
8 \begingroup%
```

The user's original geometry and font size are restored to match the print version. This allows for correct spacing in the musical score.

```
9 \LWR@maybe@orignewpage%
10 \LWR@origloadgeometry{\LWR@usergeometry}%
11 \LWR@print@normalsize%
```

A local group holds a redefined `\includegraphics` which is used by *lyluatex.lua* to insert the *Lilypond* score if `insert=systems` is used. This is now placed inside a `lateximage`, which itself is placed inside a `<span>` of class `lyluatex`.

`\LWR@addbaselinemarker` preserves the left margins.

```
12 \renewcommand{\includegraphics}[2][{}]{%
13 \InlineClass{lyluatex}{%
14 \begin{lateximage}[\LyluatexImageAltText]%
15 \LWR@addbaselinemarker%
16 \LWR@originincludegraphics{##2}%
17 \end{lateximage}%
18 }%
19 }
```

From the original:

```
20 \ly@setunits%
21 \directlua{
22 ly_opts:set_option('currfiledir', [[\currfiledir]])
23 ly_opts:set_option('twoside', '\ly@istwosided')
24 #1
25 }%
26 \ly@resetunits%
27 \ly@currentfonts%
```

The fullpage version is set inside an HTML `<div>`:

```
28 \directlua{
29 if (ly.score.insert == 'fullpage') then
30 tex.print{[[\string\begin{BlockClass}{lyluatex}]]}
31 end
32 }
```

Generate the score:

```
33 \directlua{ly.score:process()}%
```

Close the `<div>`:

```
34 \directlua{
35 if (ly.score.insert == 'fullpage') then
36 tex.print{[[\string\end{BlockClass}]]}
37 end
38 }
```

Move to a new page and renew the regular page geometry:

```
39 \LWR@maybe@orignewpage%
40 \LWR@origrestoregeometry%
```

End of the local group.

```
41 \endgroup%
42 }
```

In HTML the following generates an error, so is removed:

```
43 \xpatchcmd{\endly@bufferenv}
44 {\hspace{0pt}\}
45 {}
46 {}
47 {\LWR@patcherror{lylualatex}{endly@bufferenv}}
```

---

File 241 **lwarp-magaz.sty**

§ 344 Package **magaz**

Pkg magaz magaz is emulated.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{magaz}[2011/11/24]

```
2 \newcommand\FirstLine[1]{%
3 \begingroup%
4 \FirstLineFont{%
5 \LWR@textcurrentcolor{%
6 \LWR@textcurrentfont{%
7 #1%
8 }%
9 }%
10 }%
11 \endgroup%
12 }
13
14 \providecommand\FirstLineFont{\scshape}
```

---

File 242 **lwarp-makeidx.sty**

§ 345 Package **makeidx**

*(Emulates or patches code by L<sup>A</sup>T<sub>E</sub>X PROJECT TEAM.)*

Pkg makeidx makeidx is patched for use by lwarp.

**for HTML output:** 1 \LWR@ProvidesPackagePass{makeidx}[2014/09/29]

\@wrindex is redefined \AtBeginDocument by the lwarp core.

\printindex

```

2 \preto\printindex{%
3 \LWR@maybe@orignewpage%
4 \LWR@startpars%
5 }

```

---

File 243 **lwarp-manyfoot.sty**

§ 346    Package **manyfoot**

Pkg   manyfoot   manyfoot is emulated.

bigfoot, manyfoot   Verbatim footnotes are not yet supported.

   **verbatim**

If using the **bigfoot** package, and possibly also **manyfoot**, problems may occur with counter allocation because **lwarp** uses many counters, and there is a difference in how counters numbered 256 and up are handled in pdf $\LaTeX$ . With **bigfoot** this has been known to show up as an error related to one footnote insert being forbidden inside another. Another problem showed up as a input stack error, and which of these problems occurred depended on how many counters were allocated.

As a possible solution, try creating several new counters before defining **bigfoot** or **manyfoot** footnotes, hoping to shift the problematic counter above the 256 threshold. It may instead be necessary to use X $\LaTeX$  or Lua $\LaTeX$  instead of pdf $\LaTeX$ .

**lwarp**'s emulation of **bigfoot** uses **manyfoot**, so some of the **bigfoot** enhancements are included here.

The **bigfoot** “default” footnote is ignored, using the **lwarp** version instead.

for HTML output:

```

1 \LWR@ProvidesPackageDrop{manyfoot}[2005/09/11]

2 \RequirePackage{nccffoots}
3
4 \newcommand{\extrafootnoterule}{}
5
6 \let\defaultfootnoterule\footnoterule
7
8 \newcommand*{\SelectFootnoteRule}[2][0]{}
9
10 \newcommand{\footnoterulepriority}{1}
11
12 \newcommand{\SetFootnoteHook}[1]{}
13 \@onlypreamble\SetFootnoteHook
14
15 \newcommand{\SplitNote}{}
16
17 \newcommand*{\ExtraParaSkip}[1]{}
18
19 \newcommand*{\newfootnote}[2][plain]{%
20 \ifstrequal{#2}{default}{}{% not "default"
21 \expandafter\newbox\csname LWR@footnote#2box\endcsname%
22 \appto{\LWR@printpendingfootnotes}{%

```

```

23 \LWR@@printpendingfootnotes{footnote#2}%
24 }
25 \long\csdef{Footnotetext#2}##1##2{%
26 \NCC@makefnmark{##1}%
27 \LWR@@footnotetext{##2}{LWR@footnote#2box}%
28 }%
29 \long\csdef{Footnotetext#2+}##1##2{%
30 \NCC@makefnmark{##1}%
31 \LWR@@footnotetext{##2}{LWR@footnote#2box}%
32 }%
33 }% not "default"
34 }
35 \@onlypreamble\newfootnote
36
37 \newcommand*{\DeclareNewFootnote}[2][plain]{%
38 \ifnextchar[%
39 {\LWR@manyfoot@declare{#1}{#2}}%
40 {\LWR@manyfoot@declare{#1}{#2}[arabic]}%
41 }
42
43 \def\LWR@manyfoot@declare#1#2[#3]{%
44 \ifstrequal{#2}{default}{}% not "default"
45 \newfootnote[#1]{#2}%
46 \newcounter{footnote#2}%
47 \newcounter{footnote#2Reset}%
48 \setcounter{footnote#2Reset}{0}%
49 \csdef{thefootnote#2}{%
50 \expandafter\noexpand\csname @#3\endcsname%
51 \expandafter\noexpand\csname c@footnote#2\endcsname%
52 }%

```

For **bigfoot**, the footnote commands may be appended with one or two plusses or one or two minuses, which are ignored in HTML.

```

53 \expandafter\NewDocumentCommand\csname footnote#2\endcsname{t{+}t{+}t{-}t{-}}{%
54 \stepcounter{footnote#2}%
55 \protected@xdef\@thefnmark{\csname thefootnote#2\endcsname}%
56 \@footnotemark%
57 \csuse{Footnotetext#2}{\@thefnmark}% absorbs the footnote contents
58 }%
59 \csdef{footnotemark#2}{%
60 \stepcounter{footnote#2}%
61 \protected@xdef\@thefnmark{\csname thefootnote#2\endcsname}%
62 \@footnotemark%
63 }%
64 \expandafter\NewDocumentCommand\csname footnotetext#2\endcsname{t{+}t{+}t{-}t{-}}{%
65 \protected@xdef\@thefnmark{\csname thefootnote#2\endcsname}%
66 \csuse{Footnotetext#2}{\@thefnmark}% absorbs the footnote contents
67 }%
68 \csdef{Footnotemark#2}{%
69 \Footnotemark%
70 }%
71 \csdef{Footnote#2}##1{%
72 \Footnotemark{##1}%
73 \csuse{Footnotetext#2}{##1}%

```

---

```

74 }%
75 }% not "default"
76 }
77 \@onlypreamble\DeclareNewFootnote

```

---

File 244 **lwarp-marginal.sty**

§ 347     Package **marginal**

Pkg    marginal    marginal is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{marginal}

2 \newcommand*{\showlostmarginals}{}
3 \newcommand*{\enlargefreelist}{}
4 \newcommand*{\onesidemarginals}{}

```

---

File 245 **lwarp-marginfit.sty**

§ 348     Package **marginfit**

Pkg    marginfit    marginfit is ignored.

**for HTML output:** Discard all options for lwarp-marginfit:

```

1 \LWR@ProvidesPackageDrop{marginfit}[2018/06/08]

```

---

File 246 **lwarp-marginfix.sty**

§ 349     Package **marginfix**

*(Emulates or patches code by STEPHEN HICKS.)*

Pkg    marginfix    marginfix is ignored.

**for HTML output:** Discard all options for lwarp-marginfix:

```

1 \LWR@ProvidesPackageDrop{marginfix}[2013/09/08]

2 \newcommand*{\margin skip}[1]{}
3 \newcommand*{\clearmargin}{}
4 \newcommand*{\softclearmargin}{}
5 \newcommand*{\extendmargin}[1]{}
6 \newcommand*{\mparshift}[1]{}
7 \newdimen\marginheightadjustment
8 \newdimen\marginposadjustment
9 \newcommand*{\blockmargin}[1][{}]{

```

---

```

10 \newcommand*\unlockmargin[1][{}]{
11 \newcommand*\marginphantom[2][{}]{

```

---

File 247 **lwarp-marginnote.sty**

§ 350     Package **marginnote**

*(Emulates or patches code by MARKUS KOHM.)*

Pkg   marginnote   **marginnote** is emulated.

**for HTML output:**   Discard all options for lwarp-marginnote:

```

1 \LWR@ProvidesPackageDrop{marginnote}[2018/08/09]

2 \NewDocumentCommand{\marginnote}{+o +m o}{\marginpar{#2}}

3 \newcommand*\marginnoteleftadjust{}
4 \newcommand*\marginnoterightadjust{}
5 \newcommand*\marginnotetextwidth{}
6 \let\marginnotetextwidth\textwidth
7 \newcommand*\marginnotevadjust{}
8 \newcommand*\marginfont{}
9 \newcommand*\raggedleftmarginnote{}
10 \newcommand*\raggedrightmarginnote{}

11 \appto\LWR@restoreorigformatting{%
12 \RenewDocumentCommand{\marginnote}{+o +m o}{}
13 }

For MATHJAX:

14 \begin{warpMathJax}
15 \CustomizeMathJax{\newcommand{\LWRmarginnote}[1][{}]}
16 \CustomizeMathJax{\newcommand{\marginnote}[2][{}]{\quad\small\textrm{#2}}\LWRmarginnote}}
17 \end{warpMathJax}

```

---

File 248 **lwarp-marvosym.sty**

§ 351     Package **marvosym**

*(Emulates or patches code by THOMAS HENLICH, MOJCA MIKLAVEC.)*

Pkg   marvosym   **marvosym** is patched for use by lwarp.

Hashed inline images are used, as there may not be Unicode support for all icons.

**for HTML output:**   1 \LWR@ProvidesPackagePass{marvosym}[2011/07/20]

---

```

2 \renewcommand{\mvchr}[1]{%
3 \begin{lateximage}*[symbol #1][marvosym #1]%
4 \mvs\char#1%
5 \end{lateximage}%
6 }
7
8 \renewcommand{\textmvs}[1]{%
9 \begin{lateximage}%
10 \mvs #1%
11 \end{lateximage}%
12 }

```

---

File 249 **lwarp-mathcomp.sty**

§ 352     Package **mathcomp**

*(Emulates or patches code by TILMANN BÖB.)*

Pkg    mathcomp    **mathcomp** is supported as-is for SVG math, and is emulated for MATHJAX.

**for HTML output:**    1 \LWR@ProvidesPackagePass{mathcomp}[2001/01/07]

```

2 \begin{warpMathJax}
3 \CustomizeMathJax{\newcommand{\tcohm}{\mathrm{\Omega}}}
4 \CustomizeMathJax{\newcommand{\tcelsius}{\unicode{x2103}}}
5 \CustomizeMathJax{\newcommand{\tcmu}{\mathrm{\unicode{x00B5}}}}
6 \CustomizeMathJax{\newcommand{\tcperthousand}{\unicode{x2030}}}
7 \CustomizeMathJax{\newcommand{\tcpertenthousand}{\unicode{x2031}}}
8 \CustomizeMathJax{\newcommand{\tcdegree}{\mathrm{^\circ}}}
9 \CustomizeMathJax{\newcommand{\tcdigitoldstyle}[1]{\oldstyle{#1}}}
10 \end{warpMathJax}

```

---

File 250 **lwarp-mathdots.sty**

§ 353     Package **mathdots**

*(Emulates or patches code by DAN LUECKING.)*

Pkg    mathdots    **mathdots** is used as-is for SVG math, and emulated for MATHJAX.

**for HTML output:**    1 \LWR@ProvidesPackagePass{mathdots}[2014/06/11]

```

2 \begin{warpMathJax}
3 \CustomizeMathJax{\newcommand{\iddots}{\unicode{x22F0}}}
4 \end{warpMathJax}

```

File 251 **lwarp-mathfixs.sty**§ 354 Package **mathfixs***(Emulates or patches code by NIKLAS BEISERT.)*

Pkg mathfixs mathfixs is used as-is for SVG math, and is emulated for MATHJAX.



Greek letters are unchanged.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{mathfixs}[2018/12/30]

2 \begin{warpMathJax}
3 \CustomizeMathJax{\newcommand{\rfrac}[2]{\tfrac{#1}{#2}}}
4 \CustomizeMathJax{\newcommand{\vfrac}[2]{\frac{#1}{#2}}}
5 \CustomizeMathJax{\newcommand{\ProvideMathFix}[1]}
6 \CustomizeMathJax{\newcommand{\mathbold}[1]{\boldsymbol{#1}}}
7 \CustomizeMathJax{\newcommand{\.}{\,}}
8 \end{warpMathJax}

```

File 252 **lwarp-mathtools.sty**§ 355 Package **mathtools***(Emulates or patches code by MORTEN HØGHOLM, LARS MADSEN.)*

Pkg mathtools mathtools is patched for use by lwarp. Emulation macros are provided for MATHJAX.

**equation numbering**

showonlyrefs is disabled, as it conflicts with cleveref, which is used by lwarp. Equation numbers may not match the print version.

**italic correction**

mathic is not emulated for HTML.

**MATHJAX**

If using MATHJAX:

- mathtools disallows spaces does not work for MATHJAX. Protect brackets which are not optional arguments, such as:

```

\begin{gathered}{}
[p]=1 \dots
\end{gathered}

```

- showonlyrefs does not work in MATHJAX, and will result in a difference in equation numbering compared to the print version.
- Due to MATHJAX limitations, the following do not render well: `\overbracket`, `\underbracket`, `\overbrace`, `\underbrace`, `rcases`, `drcases`, `\Aboxed`, and `\ArrowBetweenLines`.



```

32 \CustomizeMathJax{\newcommand{\crampedrlap}[2][{}]{#1#2}}
33 \CustomizeMathJax{\newcommand{\crampedclap}[2][{}]{#1#2}}
34 \CustomizeMathJax{\newenvironment{crampedsubarray}[1][{}]{}}
35 \CustomizeMathJax{\newcommand{\crampedsubstack}{}{}}
36 \CustomizeMathJax{\newcommand{\smashoperator}[2][{}]{#2}}
37 \CustomizeMathJax{\newcommand{\SwapAboveDisplaySkip}{}{}}
38
39 \CustomizeMathJax{\require{extpfeil}}
40 \CustomizeMathJax{\Newextarrow\xlefttrightarrow{10,10}{0x2194}}
41 \CustomizeMathJax{\Newextarrow\xleftarrow{10,10}{0x21d0}}
42 \CustomizeMathJax{\Newextarrow\xhookleftarrow{10,10}{0x21a9}}
43 \CustomizeMathJax{\Newextarrow\xmapsto{10,10}{0x21a6}}
44 \CustomizeMathJax{\Newextarrow\xrightarrow{10,10}{0x21d2}}
45 \CustomizeMathJax{\Newextarrow\xlefttrightarrow{10,10}{0x21d4}}
46 \CustomizeMathJax{\Newextarrow\xhookrightarrow{10,10}{0x21aa}}
47 \CustomizeMathJax{\Newextarrow\xrightharpoondown{10,10}{0x21c1}}
48 \CustomizeMathJax{\Newextarrow\xleftharpoondown{10,10}{0x21bd}}
49 \CustomizeMathJax{\Newextarrow\xrightleftharpoons{10,10}{0x21cc}}
50 \CustomizeMathJax{\Newextarrow\xrightharpoonup{10,10}{0x21c0}}
51 \CustomizeMathJax{\Newextarrow\xleftharpoonup{10,10}{0x21bc}}
52 \CustomizeMathJax{\Newextarrow\xleftrightharpoons{10,10}{0x21cb}}
53
54 \CustomizeMathJax{\newcommand{\LWRdunderbracket}[3]{\underset{#3}{\underline{#1}}}}
55 \CustomizeMathJax{\newcommand{\LWRunderbracket}[2][{}]{\LWRdunderbracket{#2}}}
56 \CustomizeMathJax{\newcommand{\underbracket}[1][{}]{\LWRunderbracket{}}}
57 \CustomizeMathJax{\newcommand{\LWRdooverbracket}[3]{\overset{#3}{\overline{#1}}}}
58 \CustomizeMathJax{\newcommand{\LWRoverbracket}[2][{}]{\LWRdooverbracket{#2}}}
59 \CustomizeMathJax{\newcommand{\overbracket}[1][{}]{\LWRoverbracket{}}}
60
61 \CustomizeMathJax{\newcommand{\LaTeXunderbrace}[1]{\underbrace{#1}}}
62 \CustomizeMathJax{\newcommand{\LaTeXoverbrace}[1]{\overbrace{#1}}}
63
64 \CustomizeMathJax{\newenvironment{matrix*}[1][{}]{\begin{matrix}}{\end{matrix}}}
65 \CustomizeMathJax{\newenvironment{pmatrix*}[1][{}]{\begin{pmatrix}}{\end{pmatrix}}}
66 \CustomizeMathJax{\newenvironment{bmatrix*}[1][{}]{\begin{bmatrix}}{\end{bmatrix}}}
67 \CustomizeMathJax{\newenvironment{Bmatrix*}[1][{}]{\begin{Bmatrix}}{\end{Bmatrix}}}
68 \CustomizeMathJax{\newenvironment{vmatrix*}[1][{}]{\begin{vmatrix}}{\end{vmatrix}}}
69 \CustomizeMathJax{\newenvironment{Vmatrix*}[1][{}]{\begin{Vmatrix}}{\end{Vmatrix}}}
70 \CustomizeMathJax{\newenvironment{smallmatrix*}[1][{}]{\begin{matrix}}{\end{matrix}}}
71 \CustomizeMathJax{\newenvironment{psmallmatrix*}[1][{}]{\begin{pmatrix}}{\end{pmatrix}}}
72 \CustomizeMathJax{\newenvironment{bsmallmatrix*}[1][{}]{\begin{bmatrix}}{\end{bmatrix}}}
73 \CustomizeMathJax{\newenvironment{Bsmallmatrix*}[1][{}]{\begin{Bmatrix}}{\end{Bmatrix}}}
74 \CustomizeMathJax{\newenvironment{vsmallmatrix*}[1][{}]{\begin{vmatrix}}{\end{vmatrix}}}
75 \CustomizeMathJax{\newenvironment{Vsmallmatrix*}[1][{}]{\begin{Vmatrix}}{\end{Vmatrix}}}
76 \CustomizeMathJax{\newenvironment{psmallmatrix}[1][{}]{\begin{pmatrix}}{\end{pmatrix}}}
77 \CustomizeMathJax{\newenvironment{bsmallmatrix}[1][{}]{\begin{bmatrix}}{\end{bmatrix}}}
78 \CustomizeMathJax{\newenvironment{Bsmallmatrix}[1][{}]{\begin{Bmatrix}}{\end{Bmatrix}}}
79 \CustomizeMathJax{\newenvironment{vsmallmatrix}[1][{}]{\begin{vmatrix}}{\end{vmatrix}}}
80 \CustomizeMathJax{\newenvironment{Vsmallmatrix}[1][{}]{\begin{Vmatrix}}{\end{Vmatrix}}}
81
82
83 \CustomizeMathJax{\newcommand{\LWRmultlined}[1][{}]{\begin{multline*}}}
84 \CustomizeMathJax{\newenvironment{multlined}[1][{}]{\LWRmultlined}{\end{multline*}}}
85
86 \CustomizeMathJax{\let\LWRorigshoveleft\shoveleft}

```

```

87 \CustomizeMathJax{\renewcommand{\shoveleft}[1][\LWRorigshoveleft]}
88 \CustomizeMathJax{\let\LWRorigshoveright\shoveright}
89 \CustomizeMathJax{\renewcommand{\shoveright}[1][\LWRorigshoveright]}
90
91 \CustomizeMathJax{\newenvironment{dcases}{\begin{cases}}{\end{cases}}}
92 \CustomizeMathJax{\newenvironment{dcases*}{\begin{cases}}{\end{cases}}}
93 \CustomizeMathJax{\newenvironment{rcases}{\begin{cases}}{\end{cases}}}
94 \CustomizeMathJax{\newenvironment{rcases*}{\begin{cases}}{\end{cases}}}
95 \CustomizeMathJax{\newenvironment{drcases}{\begin{cases}}{\end{cases}}}
96 \CustomizeMathJax{\newenvironment{drcases*}{\begin{cases}}{\end{cases}}}
97 \CustomizeMathJax{\newenvironment{cases*}{\begin{cases}}{\end{cases}}}
98
99 \CustomizeMathJax{\newcommand{\MoveEqLeft}[1][{}]}
100
101 \CustomizeMathJax{% special parsing to handle ' & ' in argument
102 \def\LWRAbboxed#1!!!{\fbox{\(#1\)}&\fbox{\(#2\)}}
103 \newcommand{\Abboxed}[1]{\LWRAbboxed#1&!!!}
104 }

105 \CustomizeMathJax{
106 \newcommand{\LWRABLines}[1][\Updownarrow]{#1 \notag \\\% star/nostar the same
107 \newcommand{\ArrowBetweenLines}{\ifstar\LWRABLines\LWRABLines}
108 }

109 \CustomizeMathJax{\newcommand{\shortintertext}[1]{\text{#1}\notag \\\}}
110
111 \CustomizeMathJax{\newcommand{\vdotswithin}[1]{\hspace{.5em}\vdots}}

112 \CustomizeMathJax{\newcommand{\LWRshortvdotswithinstar}[1]{\vdots \hspace{.5em} & \\\}}
113 \CustomizeMathJax{\newcommand{\LWRshortvdotswithinnostar}[1]{& \hspace{.5em}\vdots \\\}}
114 \CustomizeMathJax{%
115 \newcommand{\shortvdotswithin}%
116 {\ifstar\LWRshortvdotswithinstar\LWRshortvdotswithinnostar}%
117 }
118
119 \CustomizeMathJax{\newcommand{\MTFlushSpaceAbove}{}}
120 \CustomizeMathJax{\newcommand{\MTFlushSpaceBelow}{\\\}}
121
122 \LetLtxMacro\LWR@mathtools@orig@DeclarePairedDelimiter\DeclarePairedDelimiter
123 \renewcommand{\DeclarePairedDelimiter}[3]{
124 \LWR@mathtools@orig@DeclarePairedDelimiter{#1}{#2}{#3}
125 % starred:
126 \appto\LWR@customizedMathJax{\LWRbackslash{}}
127 \appto\LWR@customizedMathJax{%
128 \LWRbackslash{}}\newcommand{\LWRbackslash\macrotocname{#1}\LWRsubstar\}%
129 }%
130 \appto\LWR@customizedMathJax{[2][{}]}%
131 \appto\LWR@customizedMathJax{\{\}%
132 \LWR@subcustomizedmathjax{##1\left##2##1\right##3}%
133 \appto\LWR@customizedMathJax{\}\}%
134 \appto\LWR@customizedMathJax{\LWRbackslash}\par}%
135 % not starred:
136 \appto\LWR@customizedMathJax{\LWRbackslash{}}
137 \appto\LWR@customizedMathJax{%

```

```

138 \LWRbackslash{}newcommand\{\LWRbackslash\macrotocname{#1}LWRsubnostar\}%
139 }%
140 \appto\LWR@customizedMathJax{[2][]}%
141 \appto\LWR@customizedMathJax{\{\}%
142 \LWR@subcustomizedmathjax{##1#2##2##1#3}%
143 \appto\LWR@customizedMathJax{\}\}%
144 \appto\LWR@customizedMathJax{\LWRbackslash)\par}%
145 % user macro:
146 \appto\LWR@customizedMathJax{\LWRbackslash(}
147 \appto\LWR@customizedMathJax{%
148 \LWRbackslash{}newcommand\{\LWRbackslash\macrotocname{#1}\}%
149 \{\LWRbackslash{}ifstar%
150 \LWRbackslash\macrotocname{#1}LWRsubstar%
151 \LWRbackslash\macrotocname{#1}LWRsubnostar%
152 \}%
153 }%
154 \appto\LWR@customizedMathJax{\LWRbackslash)\par}%
155 }
156 \@onlypreamble\DeclarePairedDelimiter
157
158 % (DeclarePairedDelimiterX is already defined to use \DeclarePairedDelimiterXPP.)
159
160 \let\ltxMacro\LWR@mathtools@orig@DeclarePairedDelimiterXPP\DeclarePairedDelimiterXPP
161 \DeclareDocumentCommand{\DeclarePairedDelimiterXPP}{m O{1} m m m m m}{
162 \LWR@mathtools@orig@DeclarePairedDelimiterXPP{#1}[#2]{#3}{#4}{#5}{#6}{#7}
163 % subsubstar, second opt arg
164 \appto\LWR@customizedMathJax{\LWRbackslash(}%
165 \appto\LWR@customizedMathJax{%
166 \LWRbackslash{}newcommand\{\LWRbackslash\macrotocname{#1}LWRsubsubstar\}%
167 }%
168 \appto\LWR@customizedMathJax{[#2]}%
169 \appto\LWR@customizedMathJax{\{\{\LWRbackslash{}left}%
170 \LWR@subcustomizedmathjax{#3#4#7}%
171 \appto\LWR@customizedMathJax{\LWRbackslash{}right}%
172 \LWR@subcustomizedmathjax{#5#6}%
173 \appto\LWR@customizedMathJax{\}\}%
174 \appto\LWR@customizedMathJax{\LWRbackslash)\par}%
175 % substar, first opt arg
176 \appto\LWR@customizedMathJax{\LWRbackslash(}%
177 \appto\LWR@customizedMathJax{%
178 \LWRbackslash{}newcommand\{\LWRbackslash\macrotocname{#1}LWRsubstar\}[1][]%
179 }%
180 \appto\LWR@customizedMathJax{%
181 \{
182 \LWRbackslash{}def\LWRbackslash{}delimsizes\{\#1\}
183 \LWRbackslash\macrotocname{#1}LWRsubsubstar
184 \}%
185 }%
186 \appto\LWR@customizedMathJax{\LWRbackslash)\par}%
187 % subsubnostar, second opt arg
188 \appto\LWR@customizedMathJax{\LWRbackslash(}%
189 \appto\LWR@customizedMathJax{%
190 \LWRbackslash{}newcommand\{\LWRbackslash\macrotocname{#1}LWRsubsubnostar\}%
191 }%
192 \appto\LWR@customizedMathJax{[#2]}%

```

```

193 \appto\LWR@customizedMathJax{\{\LWRbackslash\}delimsizes}%
194 \LWR@subcustomizedmathjax{#3#4#7}%
195 \appto\LWR@customizedMathJax{\LWRbackslash\}delimsizes}%
196 \LWR@subcustomizedmathjax{#5#6}%
197 \appto\LWR@customizedMathJax{\}\}%
198 \appto\LWR@customizedMathJax{\LWRbackslash}\par}%
199 % subnoster, first opt arg
200 \appto\LWR@customizedMathJax{\LWRbackslash}%
201 \appto\LWR@customizedMathJax{%
202 \LWRbackslash\}newcommand{\LWRbackslash\macrotoctocname{#1}LWRsubnoster}[1][]%
203 }%
204 \appto\LWR@customizedMathJax{%
205 \{
206 \LWRbackslash\}def\LWRbackslash\}delimsizes\{#1\}
207 \LWRbackslash\macrotoctocname{#1}LWRsubsubnoster
208 \}%
209 }%
210 \appto\LWR@customizedMathJax{\LWRbackslash}\par}%
211 % user macro:
212 \appto\LWR@customizedMathJax{\LWRbackslash\}
213 \appto\LWR@customizedMathJax{%
214 \LWRbackslash\}newcommand{\%
215 \LWRbackslash\}\macrotoctocname{#1}%
216 \}%
217 \{\LWRbackslash\}ifstar%
218 \LWRbackslash\}\macrotoctocname{#1}LWRsubstar%
219 \LWRbackslash\}\macrotoctocname{#1}LWRsubnoster%
220 \}%
221 }%
222 \appto\LWR@customizedMathJax{\LWRbackslash}\par}%
223 }
224 \@onlypreamble\DeclareParedDelimiterXPP
225 \@onlypreamble\DeclareParedDelimiterX
226
227 \CustomizeMathJax{\newcommand\lparen{}}
228 \CustomizeMathJax{\newcommand\rparen{}}
229 \CustomizeMathJax{\newcommand\vcentcolon}{:}}
230 \CustomizeMathJax{\newcommand\ordinarycolon}{:}}
231
232 \CustomizeMathJax{\newcommand\dblcolon{\vcentcolon\vcentcolon}}
233 \CustomizeMathJax{\newcommand\coloneqq{\vcentcolon=}}
234 \CustomizeMathJax{\newcommand\Coloneqq{\dblcolon=}}
235 \CustomizeMathJax{\newcommand\coloneq{\vcentcolon{-}}}
236 \CustomizeMathJax{\newcommand\Coloneq{\dblcolon{-}}}
237
238 \CustomizeMathJax{\newcommand\eqqcolon{=\vcentcolon}}
239 \CustomizeMathJax{\newcommand\Eqqcolon{=\dblcolon}}
240 \CustomizeMathJax{\newcommand\eqcolon{\mathrel{-}\vcentcolon}}
241 \CustomizeMathJax{\newcommand\Eqcolon{\mathrel{-}\dblcolon}}
242
243 \CustomizeMathJax{\newcommand\colonapprox{\vcentcolon\approx}}
244 \CustomizeMathJax{\newcommand\Colonapprox{\dblcolon\approx}}
245 \CustomizeMathJax{\newcommand\colonsim{\vcentcolon\sim}}
246 \CustomizeMathJax{\newcommand\Colonsim{\dblcolon\sim}}
247

```

---

```

248 \CustomizeMathJax{\newcommand{\nuparrow}{\cancel{\uparrow}}}
249 \CustomizeMathJax{\newcommand{\ndownarrow}{\cancel{\downarrow}}}
250 \CustomizeMathJax{\newcommand{\bigtimes}{\Large\times}}
251
252 \CustomizeMathJax{\newcommand{\prescript}[3]{\{}^{\#1}_{\#2}\#3}}
253
254
255 \CustomizeMathJax{\newenvironment{lgathered}{\begin{gathered}}{\end{gathered}}}
256 \CustomizeMathJax{\newenvironment{rgathered}{\begin{gathered}}{\end{gathered}}}
257
258 \LetLtxMacro\LWR@mathtools@orig@newgathered\newgathered
259 \renewcommand{\newgathered}[4]{%
260 \LWR@mathtools@orig@newgathered{\#1}{\#2}{\#3}{\#4}%
261 \appto\LWR@customizedMathJax{\LWRbackslash}%
262 \LWR@subcustomizedmathjax{%
263 \newenvironment{\#1}{\begin{gathered}}{\end{gathered}}}%
264 }%
265 \appto\LWR@customizedMathJax{\LWRbackslash}%
266 }
267 \@onlypreamble\newgathered
268
269 \CustomizeMathJax{\newcommand{\splitfrac}[2]{\{}^{\#1}_{\#2}\}}
270 \CustomizeMathJax{\let\splitfrac\splitfrac}
271 \end{warpMathJax}

```

---

File 253 **lwarp-mcaption.sty**

§ 356     Package **mcaption**

*(Emulates or patches code by STEPHAN HENNIG.)*

Pkg    mcaption    mcaption is ignored.

**for HTML output:**    Discard all options for lwarp-mcaption:

```

1 \LWR@ProvidesPackageDrop{mcaption}[2009/03/13]

2 \newenvironment{margincap}{}{}
3 \newcommand*{\margincapalign}{}
4 \newlength{\margincapsep}

```

---

File 254 **lwarp-mdframed.sty**

§ 357     Package **mdframed**

*(Emulates or patches code by MARCO DANIEL, ELKE SCHUBERT.)*

Pkg    mdframed    mdframed is loaded with options forced to framemethod=none.

### § 357.1 Limitations

**support** Most basic functionality is supported, including frame background colors and single-border colors and thickness, title and subtitle background colors and borders and thickness, border radius, and shadow. CSS classes are created for `mdframed` environments and frame titles.

 **loading** When used, `lwarp` loads `mdframed` in HTML with `framemethod=none`.

**font** For title font, use

```
frametitlefont=\textbf,
```

instead of

```
frametitlefont=\bfseries,
```

where `\textbf` must appear just before the comma and will receive the following text as its argument (since the text happens to be between braces in the `mdframed` source). Since `lwarp` does not support `\bfseries` and friends, only one font selection may be made at a time.

**theoremtitlefont** `theoremtitlefont` is not supported, since the following text is not in braces in the `mdframed` source.

**ignored options** `userdefinedwidth` and `align` are currently ignored.

**css classes** Environments created or encapsulated by `mdframed` are enclosed in a `<div>` of class `mdframed`, and also class `md<environmentname>` for new environments.

Frame titles are placed in a `<div>` of class `|mdframedtitle|`. Subtitles are in a `<div>` of class `|mdframedsubtitle|`, and likewise for subsubtitles.

Pre-existing hooks are used to patch extra functions before and after the frames.

### § 357.2 Package loading

**for HTML output:**

```
1 \RequirePackage{xcolor}% for \convertcolorspec
2
3 \LWR@ProvidesPackageDrop{mdframed}[2013/07/01]
```

Do not require `Tikz` or `pstricks`:

```
4 \LWR@origRequirePackage[framemethod=none]{mdframed}
```

### § 357.3 Patches

Patch to remove PDF formatting and add HTML tags:

```
5 \AtBeginDocument{
6 \def\mdf@trivlist#1{%
7 \edef\mdf@temp{%
8 % \topsep=\the\topsep\relax%
9 % \partopsep=\the\partopsep\relax%
10 % \parsep=\the\parsep\relax%
```

```

11 }%
12 % \setlength{\topsep}{#1}%
13 % \topskip\z@%
14 % \partopsep\z@%
15 % \parsep\z@%
16 % \@nmblistfalse%
17 % \@trivlist%
18 % \labelwidth\z@%
19 % \leftmargin\z@%
20 % \itemindent\z@%
21 \let\@itemlabel\@empty%
22 \def\makelabel##1{##1}%
23 % \item\relax\mdf@temp\relax%
24 }
25
26 \renewcommand*\@endmdf@trivlist{%
27 \LWR@traceinfo{\endmdf@trivlist}%
28 % \endtrivlist%
29 \LWR@listend%
30 }
31 }% AtBeginDocument

```

#### § 357.4 Initial setup

To handle css and paragraphs, patch code at start and end of environment and contents. \LWR@print@raggedright helps avoid hyphenation.

```

32 \mdfsetup{
33 startcode={\LWR@mdframedstart\LWR@print@raggedright},
34 endcode={\LWR@mdframedend},
35 startinnercode={\LWR@startpars\LWR@print@raggedright},
36 endinnercode={\LWR@stoppars},
37 }

```

#### § 357.5 Color and length HTML conversion

\LWR@mdfprintcolor {<mdfcolorkey>}

Given the mdframed key, print the color.

```

38 \newcommand*\LWR@mdfprintcolor[1]{%
39 \convertcolorspec{named}{\@nameuse{mdf@#1}}{HTML}\LWR@tempcolor%
40 \LWR@origpound\LWR@tempcolor
41 }

```

\LWR@mdfprintlength {<mdflengthkey>}

Given the mdframed key, print the length.

```

42 \newcommand*\LWR@mdfprintlength[1]{%
43 \LWR@forceminwidth{\@nameuse{mdf@#1@length}}%
44 \LWR@printlength{\LWR@atleastonept}%
45 }

```

## § 357.6 Environment encapsulation

`\LWR@mdframedstart`    Actions before an mdframe starts.

Encapsulate a frame inside a `<div>` of the desired class.

```
46 \newcommand*{\LWR@mdframedstart}{%
47 \LWR@traceinfo{\LWR@mdframedstart start}%
```

Warn if starting a frame inside a `<span>`:

```
48 \LWR@spanwarninvalid{mdframe}%
```

Turn off paragraph handling during the generation of the encapsulating tags:

```
49 \LWR@stoppars%
```

Open a `<div>` and with custom class and custom style. A `BlockClass` environment is not used because this `<div>` is created by the `mdframed` startcode and endcode settings, which do not properly nest the `<div>` inside the `mdframed` environment.

```
50 \LWR@htmltagc{div class="%
51 mdframed%
52 \ifdefstring{\LWR@mdthisenv}{mdframed}}{\LWR@mdthisenv}%
53 " \LWR@orignewline
54 style=" \LWR@orignewline
```

Convert and print the background color:

```
55 background: \LWR@mdfprintcolor{backgroundcolor} ; \LWR@orignewline
```

Convert and print the border color and width:

```
56 border: \LWR@mdfprintlength{linewidth} solid
57 \LWR@mdfprintcolor{linecolor} ; \LWR@orignewline
```

Convert and print the border radius:

```
58 border-radius: \LWR@mdfprintlength{roundcorner} ; \LWR@orignewline
```

Convert and print the shadow:

```
59 \ifbool{mdf@shadow}{%
60 box-shadow:
61 \LWR@mdfprintlength{shadowsize}
62 \LWR@mdfprintlength{shadowsize}
63 \LWR@mdfprintlength{shadowsize}
64 \LWR@mdfprintcolor{shadowcolor} ;
65 }
66 {box-shadow: none ;}
67 \LWR@orignewline
```

```
68 "}
69 % \LWR@htmldivclass{\LWR@mdthisenv}
```

`mdframed` environment may not work with the HTML versions of the following, so restore them to their originals while inside `mdframed`:

```
70 \LWR@select@print@hspace%
71 \renewcommand*{\rule}{\LWR@print@rule}
72 \LetLtxMacro\makebox\LWR@print@makebox%

73 \LWR@startpars%
74 \LWR@traceinfo{\LWR@mdframedstart done}%
75 }
```

`\LWR@mdframedend`    Actions after an mdframe ends.

After closing the `<div>`, globally restore to the default environment type:

```
76 \newcommand*{\LWR@mdframedend}{
77 \LWR@traceinfo{\LWR@mdframedend start}%
```

Close the custom `<div>`:

```
78 \LWR@htmldivclassend{\LWR@mdthisenv}
```

Reset future custom class to the default:

```
79 \gdef\LWR@mdthisenv{mdframed}
```

Resume paragraph handling:

```
80 \LWR@startpars%
81 \LWR@traceinfo{\LWR@mdframedend done}%
82 }
```

### § 357.7 **Mdframed environment**

```
83 \renewenvironment{mdframed}[1][]{%
84 \color@begingroup%
85 \mdfsetup{userdefinedwidth=\linewidth,#1}%
86 \mdf@startcode%
87 \mdf@preenvsetting%
88 \ifdefempty{\mdf@firstframetitle}{}%
89 {\let\mdf@frametitlesave\mdf@frametitle%
90 \let\mdf@frametitle\mdf@firstframetitle%
91 }%
92 \ifvmode\nointerlineskip\fi%
93 \ifdefempty{\mdf@frametitle}{}%
94 {\mdfframedtitleenv{\mdf@frametitle}%
95 % \mdf@@frametitle@use%
96 }%
97 \mdf@trivlist{\mdf@skipabove@length}%%
98 \mdf@settings%
99 % \mdf@lrbox{\mdf@splitbox@one}%
100 % \mdf@startinnercode%
101 }%
102 {%
103 % \mdf@@ignorelastdescenders%
104 \par%
105 % \unskip\ifvmode\nointerlineskip\hrule \@height\z@ \@width\hsize\fi%
106 \ifmdf@footnoteinside%
107 \def\mdf@reserveda{%
108 \mdf@footnoteoutput%
109 % \mdf@endinnercode%
110 % \endmdf@lrbox%
111 % \ifdefempty{\mdf@frametitle}{}%
112 % {\mdfframedtitleenv{\mdf@frametitle}\mdf@@frametitle@use}%
113 % \detected@mdf@put@frame
114 }%
115 \else%
116 \def\mdf@reserveda{%
117 % \mdf@endinnercode%
```

```

118 % \endmdf@lrbox%
119 % \ifdefempty{\mdf@frametitle}{}%
120 % {\mdfframedtitleenv{\mdf@frametitle}\mdf@frametitle@use}%
121 % \detected@mdf@put@frame%
122 \mdf@footnoteoutput%
123 }%
124 \fi%
125 \mdf@reserveda%
126 \aftergroup\endmdf@trivlist%
127 \color@endgroup%
128 \mdf@endcode%
129 }

```

\mdf@footnoteoutput

```

130 \renewrobustcmd*\mdf@footnoteoutput{%
131 \LWR@printpendingmpfootnotes%
132 }

```

## § 357.8 Titles and subtitles

\mdfframedtitleenv {<title>}

Place the title inside a <div> of class mdframedtitle:

```

133 \newlength{\LWR@titleroundcorner}
134
135 \renewrobustcmd\mdfframedtitleenv[1]{%
136 \LWR@traceinfo{\LWR@mdfframedtitleenv start}%

```

Open a <div> with a custom class and custom style:

```

137 \begin{BlockClass}[%

```

Convert and print the title background color:

```

138 background:
139 \LWR@mdfprintcolor{frametitlebackgroundcolor}
140 ; \LWR@orignewline

```

Convert and print the title rule:

```

141 \ifbool{mdf@frametitlerule}{%
142 border-bottom:
143 \LWR@mdfprintlength{frametitlerulewidth}
144 solid
145 \LWR@mdfprintcolor{frametitlerulecolor}
146 ; \LWR@orignewline
147 }{}%

```

Finish the custom style and the opening <div> tag:

```

148]{mdframedtitle}%

```

Print the title inside the <div>:

```

149 \mdf@frametitlefont{\LWR@textcurrentfont{#1}}%

```

Close the <div>:

```

150 \end{BlockClass}%

```

```

151 \LWR@traceinfo{\LWR@mdframedtitleenv end}%
152 }

```

`\LWR@mdfsubtitlecommon`    `{\sub — or — subsub} [\langle options \rangle] {\langle title \rangle}`

Common code for `\LWR@mdfsubtitle` and `\LWR@mdfsubsubtitle`.

Encapsulate the subtitle inside a `<div>` of class `mdframedsubtitle`:

```

153 \NewDocumentCommand{\LWR@mdfsubtitlecommon}{m o m}
154 {% the following empty line is required
155
156 \LWR@traceinfo{\LWR@mdframedsubtitlecommon start}%

```

Open a `<div>` with a custom `class` and custom `style`:

```

157 \begin{BlockClass}[%

```

Convert and print the background color:

```

158 background:
159 \LWR@mdfprintcolor{\#1titlebackgroundcolor}
160 ; \LWR@orignewline

```

Convert and print the above line:

```

161 \ifbool{mdf@#1titleaboveline}{%
162 border-top:
163 \LWR@mdfprintlength{\#1titleabovelinewidth}
164 solid
165 \LWR@mdfprintcolor{\#1titleabovelinecolor}
166 ; \LWR@orignewline
167 }{}%

```

Convert and print the below line:

```

168 \ifbool{mdf@#1titlebelowline}{%
169 border-bottom:
170 \LWR@mdfprintlength{\#1titlebelowlinewidth}
171 solid
172 \LWR@mdfprintcolor{\#1titlebelowlinecolor}
173 ; \LWR@orignewline
174 }{}%

```

Finish the custom style and the opening `<div>` tag:

```

175]{mdframed#1title}%

```

Perform the original subtitle action:

```

176 \IfNoValueTF{\#2}
177 {\@nameuse{\LWR@origmdf#1title}{\csuse{mdf@#1titlefont}{\LWR@textcurrentfont{\#3}}}}%
178 {\@nameuse{\LWR@origmdf#1title}[\#2]{\csuse{mdf@#1titlefont}{\LWR@textcurrentfont{\#3}}}}%

```

Close the `<div>`:

```

179 \end{BlockClass}%
180 \LWR@traceinfo{\LWR@mdframedsubtitlecommon end}%
181 }

```

`\LWR@mdfsubtitle`    `[\langle options \rangle] {\langle title \rangle}`

```

182 \newcommand*\LWR@mdfsubsubtitle}{%
183 \LWR@mdfsubsubtitlecommon{sub}%
184 }
185 \let\mdfsubsubtitle\LWR@mdfsubsubtitle

```

`\LWR@mdfsubsubsubtitle` [*<options>*] {*<title>*}

```

186 \newcommand*\LWR@mdfsubsubsubtitle}{%
187 \LWR@mdfsubsubsubtitlecommon{subsub}%
188 }
189 \let\mdfsubsubsubtitle\LWR@mdfsubsubsubtitle

```

### § 357.9 New environments

`\LWR@mdthisenv` Stores the environment of the frame about to be created:

```

190 \newcommand*\LWR@mdthisenv{\mdframed}

```

`\newmdenv` [*<options>*] {*<env-name>*}

Modified from the original to remember the environment.

```

191 \renewrobustcmd*\newmdenv[2][]{%
192 \newenvironment{#2}%
193 {%
194 \mdfsetup{#1}%
195 \renewcommand*\LWR@mdthisenv{\md#2}%
196 \begin{mdframed}%
197 }
198 {\end{mdframed}}%
199 }

```

`\surroundwithmdframed` [*<options>*] {*<environment>*}

Modified from the original to remember the environment.

```

200 \renewrobustcmd*\surroundwithmdframed[2][]{%
201 \BeforeBeginEnvironment{#2}{%
202 \renewcommand*\LWR@mdthisenv{\md#2}%
203 \begin{mdframed}[#1]}%
204 \AfterEndEnvironment{#2}{\end{mdframed}}%
205 }

```

`\mdtheorem` [*<mdframed-options>*] {*<envname>*} [*<numberedlike>*] {*<caption>*} [*<within>*]

Modified from the original to remember the environment.

```

206 \DeclareDocumentCommand{\mdtheorem}{ O{} m o m o }%
207 {\ifcsdef{#2}%
208 {\mdf@PackageWarning{Environment #2 already exists\MessageBreak}}%
209 {%
210 \IfNoValueTF {#3}%
211 {%#3 not given -- number relationship
212 \IfNoValueTF {#5}%
213 {%#3+#5 not given
214 \@definecounter{#2}%
215 \expandafter\xdef\csname the#2\endcsname{\@thmcounter{#2}}%

```

```

216 \newenvironment{#2}[1][{%
217 \refstepcounter{#2}%
218 \ifstrepty{##1}%
219 {\let\@temptitle\relax}%
220 {%
221 \def\@temptitle{\mdf@theoremseparator%
222 \mdf@theoremspace%
223 \mdf@theoremtitlefont%
224 \LWR@textcurrentfont{##1}}% lwarp
225 \mdf@thm@caption{#2}{\csname the#2\endcsname}{##1}}%
226 }%
227 \begin{mdframed}[#1,frametitle={\strut#4\ \csname the#2\endcsname%
228 \@temptitle}]]%
229 {\end{mdframed}}%
230 \newenvironment{#2*}[1][{%
231 \ifstrepty{##1}{\let\@temptitle\relax}{\def\@temptitle{: \ #1}}%
232 \begin{mdframed}[#1,frametitle={\strut#4\@temptitle}]]%
233 {\end{mdframed}}%
234 }%
235 {%#5 given -- reset counter
236 \@definecounter{#2}\@newctr{#2}[#5]%
237 \expandafter\xdef\csname the#2\endcsname{\@thmcounter{#2}}%
238 \expandafter\xdef\csname the#2\endcsname{%
239 \expandafter\noexpand\csname the#5\endcsname \@thmcountersep%
240 \@thmcounter{#2}}%
241 \newenvironment{#2}[1][{%
242 \refstepcounter{#2}%
243 \ifstrepty{##1}%
244 {\let\@temptitle\relax}%
245 {%
246 \def\@temptitle{\mdf@theoremseparator%
247 \mdf@theoremspace%
248 \mdf@theoremtitlefont%
249 \LWR@textcurrentfont{##1}}% lwarp
250 \mdf@thm@caption{#2}{\csname the#2\endcsname}{##1}}%
251 }
252 \begin{mdframed}[#1,frametitle={\strut#4\ \csname the#2\endcsname%
253 \@temptitle}]]%
254 {\end{mdframed}}%
255 \newenvironment{#2*}[1][{%
256 \ifstrepty{##1}%
257 {\let\@temptitle\relax}%
258 {%
259 \def\@temptitle{\mdf@theoremseparator%
260 \mdf@theoremspace%
261 \mdf@theoremtitlefont%
262 \LWR@textcurrentfont{##1}}% lwarp
263 \mdf@thm@caption{#2}{\csname the#2\endcsname}{##1}}%
264 }%
265 \begin{mdframed}[#1,frametitle={\strut#4\@temptitle}]]%
266 {\end{mdframed}}%
267 }%
268 }%
269 {%#3 given -- number relationship
270 \global\@namedef{the#2}{\@nameuse{the#3}}%

```

```

271 \newenvironment{#2}[1][{}%
272 \refstepcounter{#3}%
273 \ifstrempy{##1}%
274 {\let\@temptitle\relax}%
275 {%
276 \def\@temptitle{\mdf@theoremseparator%
277 \mdf@theoremspace%
278 \mdf@theoremtitlefont%
279 \LWR@textcurrentfont{##1}}% lwarp
280 \mdf@thm@caption{#2}{\csname the#2\endcsname}{##1}}%
281 }
282 \begin{mdframed}[#1,frametitle={\strut#4\ \csname the#2\endcsname%
283 \@temptitle}]]%
284 {\end{mdframed}}%
285 \newenvironment{#2*}[1][{}%
286 \ifstrempy{##1}{\let\@temptitle\relax}{\def\@temptitle{: \ #1}}%
287 \begin{mdframed}[#1,frametitle={\strut#4\@temptitle}]]%
288 {\end{mdframed}}%
289 }%
290 \BeforeBeginEnvironment{#2}{\renewcommand*\{LWR@mdthisenv\}{md#2}}% lwarp
291 \BeforeBeginEnvironment{#2*}{\renewcommand*\{LWR@mdthisenv\}{md#2}}% lwarp
292 }%
293 }

```

`\newmdtheoremenv` [*⟨1: mdframed-options⟩*] [*⟨2: envname⟩*] [*⟨3: numberedlike⟩*] [*⟨4: caption⟩*] [*⟨5: within⟩*]

Modified from the original to remember the environment.

```

294 \DeclareDocumentCommand\newmdtheoremenv{O{} m o m o }{%
295 \ifbool{test}{\IfNoValueTF {#3}} and test {\IfNoValueTF {#5}}}%
296 {\newtheorem{#2}{#4}}%
297 {%
298 \IfValueT{#3}{\newtheorem{#2}[#3]{#4}}%
299 \IfValueT{#5}{\newtheorem{#2}{#4}[#5}}%
300 }%
301 \BeforeBeginEnvironment{#2}{%
302 \renewcommand*\{LWR@mdthisenv\}{md#2}}%
303 \begin{mdframed}[#1]]%
304 \AfterEndEnvironment{#2}{%
305 \end{mdframed}}%
306 }

```

---

File 255 **lwarp-media9.sty**

§ 358 Package **media9**

Pkg media9 media9 is emulated.

The packages multimedia, movie15, and media9 are supported.

HTML5 <audio> and <video> objects are created for .mp3 and .mp4 files.

HTML5 <embed> objects are created for http and ftp links.

\href links are created for other media types. (Unfortunately, there is not much overlap between the file types supported for print output and the file types supported by HTML5.)

For **media9**, a multimedia object is inserted for each `addressource=`, as well as each `flashvars source=` and `src=`. This may result in duplicate objects.

Undesired objects may be nullified by placing them inside `\warpprintonly` or the `warpprint` environment.

Each HTML multimedia object includes the poster text, except for <embed> objects. For **movie15**, the text option is supported to specify the poster text.

The width, height, and totalheight options are supported. The HTML object is scaled according to the display width, correctly compensating for either tall or wide viewports.

Other options are ignored.

**media9** `\addmediapath` is supported. It is assumed that the same path structure will exist for the HTML document.


HTML5 media controls are always specified for each <audio> and <video> object.

**media9** slideshows are not supported.

`\hyperlinkmovie`, `\movieref`, and `\mediabutton` are not supported.

3D objects are not supported.

If using a YOUTUBE™ video, use an “embedded” URL with `.../embed/...` instead of `.../v/...`

 **& in a URL** Many special characters are converted to regular catcode 12 characters for use inside a URL. & is used in the flash variables fields, which are split with `xparse \SplitList`, which does not seem to work with a catcode 12 divider token, so & is not converted to catcode 12, and will not work in a URL with **media9**. Using & in a URL in a `flashvars` field may also cause parsing problems with print output, as well.

**for HTML output:**

```
1 \LWR@ProvidesPackageDrop{media9}[2019/02/21]
```

```
2 \LWR@origRequirePackage{lwarp-common-multimedia}
```

```
3
```

```
4 \RequirePackage{xkeyval}
```

`\addmediapath`     `{\path}`

Supported.

```
5 \newcommand*{\LWR@medianine@path}{}
6
```

```
7 \newcommand*{\addmediapath}[1]{\appto\LWR@medianine@path{{#1}}}
```

The options and poster text are reused in several places.

```
8 \newcommand*{\LWR@medianine@postertext}{}
9 \newcommand*{\LWR@medianine@options}{}

```

Each addresource can generate a multimedia object.

```
10 \define@key{\LWR@medianine}{addresource}{%
11 \expandafter\LWR@multimedia\expandafter[\LWR@medianine@options]
12 {\LWR@medianine@postertext}
13 {#1}
14 }

```

Each flashvars source can generate a multimedia object.

```
15 \newcommand*{\LWR@medianine@flashvarsb}[1]{%
16 \IfBeginWith{#1}{source=}{%
17 \StrGobbleLeft{#1}{7}[\LWR@tempone]%
18 \expandafter\LWR@multimedia\expandafter[\LWR@medianine@options]%
19 {\LWR@medianine@postertext}%
20 {\LWR@tempone}%
21 }{}%
22 \IfBeginWith{#1}{src=}{%
23 \StrGobbleLeft{#1}{4}[\LWR@tempone]%
24 \expandafter\LWR@multimedia\expandafter[\LWR@medianine@options]%
25 {\LWR@medianine@postertext}%
26 {\LWR@tempone}%
27 }{}%
28 }
29
30 \NewDocumentCommand{\LWR@medianine@flashvars}{>\SplitList{&}} m }{%
31 \ProcessList {#1}{\LWR@medianine@flashvarsb}%
32 }
33
34 \define@key{\LWR@medianine}{flashvars}{%
35 \LWR@medianine@flashvars{#1}%
36 }

```

`\includemedia` [*<options>*] {*<poster text>*} {*<file or URL>*}

```
37 \newcommand*{\LWR@includemediab}[3][{}%
38 \let\input@path\LWR@medianine@path%
39 \renewcommand*{\LWR@medianine@options}{#1}%
40 \renewcommand*{\LWR@medianine@postertext}{#2}%
41 \setkeys{\LWR@medianine}{#1}%
42 \IfBeginWith{#3}{http}{\LWR@multimedia[#1]{#2}{#3}}{%
43 \IfBeginWith{#3}{HTTP}{\LWR@multimedia[#1]{#2}{#3}}{%
44 \IfBeginWith{#3}{ftp}{\LWR@multimedia[#1]{#2}{#3}}{%
45 \IfBeginWith{#3}{FTP}{\LWR@multimedia[#1]{#2}{#3}}{%
46 }}}%
47 \endgroup%
48 }
49
50 \newrobustcmd*{\includemedia}{%
51 \begingroup%

```

```

52 \LWR@linkmediacatcodes%
53 \LWR@includemediab%
54 }

```

\mediabutton [*<options>*] {*<text>*}

Ignored.

```

55 \newcommand*{\mediabutton}[2][{}]{

```

---

File 256 **lwarp-memhfixc.sty**

§ 359 Package **memhfixc**

Pkg memhfixc memhfixc is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{memhfixc}[2013/05/30]

---

File 257 **lwarp-metalogo.sty**

§ 360 Package **metalogo**

(Emulates or patches code by ANDREW GILBERT MOSCHOU.)

Pkg metalogo metalogo is used in print mode, and emulated in HTML.

**for HTML output:** 1 \LWR@ProvidesPackagePass{metalogo}[2010/05/29]

```

2 \newcommand*{\LWR@HTML@setlogokern}[2]{}
3 \newcommand*{\LWR@HTML@setlogodrop}[2][XeTeX]{}
4 \newcommand*{\LWR@HTML@setLaTeXa}[1]{}
5 \newcommand*{\LWR@HTML@setLaTeXee}[1]{}
6 \newcommand*{\LWR@HTML@seteverylogo}[1]{}
7 \newcommand*{\LWR@HTML@everylogo}[1]{}
8
9 \LWR@formatted{setlogokern}
10 \LWR@formatted{setlogodrop}
11 \LWR@formatted{setLaTeXa}
12 \LWR@formatted{setLaTeXee}
13 \LWR@formatted{seteverylogo}
14 \LWR@formatted{everylogo}

```

---

File 258 **lwarp-metalogox.sty**

§ 361 Package **metalogox**

(Emulates or patches code by BRIAN DUNN.)

Pkg metalogox metalogox is patched for use by lwarp.

for HTML output: 1 \LWR@ProvidesPackagePass{metalogox}[2019/01/20]

\AtBeginDocument, adjust the logo setting according to the font which is active at that moment.

```
2 \AtBeginDocument{
3 \let\LWR@metalogox@currentformatting\LWR@formatting
4 \renewcommand*\LWR@formatting{\print}%
5 \autoadjustlogos*
6 \let\LWR@formatting\LWR@metalogox@currentformatting
7 }
```

File 259 **lwarp-mhchem.sty**

§ 362 Package **mhchem**

(Emulates or patches code by MARTIN HENSEL.)

Pkg mhchem mhchem is patched for use by lwarp.

without MATHJAX Without MATHJAX, mhchem expressions are converted to svg math. Inline expressions use hashed filenames to allow reuse, and assume that any mhchem options are global.

MATHJAX with mhchem extension For MATHJAX, the mhchem extension is used if the mhchem expression is used inside a math expression:

$\text{\ce{C6H5-CHO}}$

To force the use of svg math for an expression which does not work with MATHJAX, place the expression between \displaymathother and \displaymathnormal:

```
\displaymathother
\[\text{\ce{...}}\] ... $\text{\ce{...}}$
\displaymathnormal
```

not inside math

If *not* used inside a math expression, lwarp converts standalone mhchem expressions into svg math images.



nested math

When producing HTML output without the MATHJAX mhchem extension, lwarp does not support the use of nested dollar signs in mhchem expressions.

For some examples from the mhchem manual, change as follows:

|                                    |       |
|------------------------------------|-------|
| $\text{\ce{NaOH(aq,\infty)}}$      | % old |
| $\text{\ce{NaOH(aq,\infty)}}$      | % new |
| $\text{\ce{Fe(CN)_{\frac{6}{2}}}}$ | % old |
| $\text{\ce{Fe(CN)_{\frac{6}{2}}}}$ | % new |

|                                         |       |
|-----------------------------------------|-------|
| $\text{\ce{NO_}x}$                      | % old |
| $\text{\ce{NO_}x}$                      | % new |
| $\text{\ce{NO_}x}$                      | % old |
| $\text{\ce{NO_}x}$                      | % new |
| $\text{\ce{cis}[PtCl2(NH3)2]}$          | % old |
| $\text{\ce{\mathit{cis}[PtCl2(NH3)2]}}$ | % new |

for HTML output: 1 \LWR@ProvidesPackagePass{mhchem}[2018/06/22]

The original definition of \ce:

```
2 \LetLtxMacro\LWR@mhchem@origce\ce
```

The new definition, called from the new \ce after math shift is set. The starred lateximage uses a hashed filename for the svg image. The alt tag is set to the mhchem expression.

```
3 \newcommand{\LWR@mhchem@HTML@ce}[1]{%
4 \LWR@findcurrenttextcolor% sets \LWR@tempcolor
5 \ifbool{\LWR@xfakebold}%
6 {\def\LWR@tempone{Y}}%
7 {\def\LWR@tempone{N}}%
8 \begin{lateximage}*[\textbackslash{ce}\{\LWR@HTMLsanitize{#1}\}]*%
9 [%
10 FM\LWR@f@family%
11 SR\LWR@f@series%
12 SH\LWR@f@shape%
13 SHC\LWR@f@shapecaps%
14 CL\LWR@tempcolor%
15 FB\LWR@tempone% xfakebold
16]%
17 \LWR@setcurrentfont%
18 \LWR@mhchem@origce{#1}%
19 \end{lateximage}%
20 \endgroup%
21 \addtocounter{\LWR@mhchem@cedepth}{-1}%
22 }
```

Only set math shift if outer depth:

```
23 \newcounter{\LWR@mhchem@cedepth}
24 \setcounter{\LWR@mhchem@cedepth}{0}
```

The new \ce. Sets math shift then continues.

```
25 \renewcommand{\ce}{%
26 \begingroup%
27 \ifnumequal{\value{\LWR@mhchem@cedepth}}{0}{%
28 \catcode'\$=3% math shift
29 }{%
30 \addtocounter{\LWR@mhchem@cedepth}{1}%

```

```

31 \LWR@mhchem@HTML@ce%
32 }

```

The original definition of `\cesplit`:

```

33 \LetLtxMacro\LWR@mhchem@origcesplit\cesplit

```

The new definition, called from the new `\cesplit` after math shift is set. The starred `lateximage` uses a hashed filename for the `svg` image. The `alt` tag is set to the `mhchem` expression.

```

34 \newcommand*{\LWR@mhchem@HTML@cesplit}[2]
35 {%
36 \LWR@findcurrenttextcolor% sets \LWR@tempcolor
37 \ifbool{\LWR@xfakebold}%
38 {\def\LWR@tempone{Y}}%
39 {\def\LWR@tempone{N}}%
40 \begin{lateximage}*[\textbackslash{}cesplit\{\LWR@HTMLsanitize{#2}\}]%*
41 [%
42 FM\LWR@f@family%
43 SR\LWR@f@series%
44 SH\LWR@f@shape%
45 SHC\LWR@f@shapecaps%
46 CL\LWR@tempcolor%
47 FB\LWR@tempone% xfakebold
48]%
49 \LWR@setcurrentfont%
50 \LWR@mhchem@origcesplit{#1}{#2}%
51 \end{lateximage}%
52 \endgroup%
53 }

```

Only set math shift if outer depth:

```

54 \newcounter{\LWR@mhchem@cesplitdepth}
55 \setcounter{\LWR@mhchem@cesplitdepth}{0}

```

The new `\cesplit`. Sets math shift then continues.

```

56 \renewcommand{\cesplit}{%
57 \begingroup%
58 \ifnumequal{\value{\LWR@mhchem@cesplitdepth}}{0}{%
59 \catcode'\$=3% math shift
60 }{%
61 \addtocounter{\LWR@mhchem@cesplitdepth}{1}%
62 \LWR@mhchem@HTML@cesplit%
63 }

```

Resore originals inside a `lateximage`:

```

64 \appto\LWR@restoreorigformatting{%
65 \LetLtxMacro\ce\LWR@mhchem@origce%
66 \LetLtxMacro\cesplit\LWR@mhchem@origcesplit%
67 }

```

```

68
69 \begin{warpHTML}
70 \CustomizeMathJax{\require{mhchem}}
71 \end{warpHTML}

```

File 260 **lwarp-microtype.sty**

§ 363 Package **microtype**

*(Emulates or patches code by R SCHLICHT.)*

Pkg microtype microtype is pre-loaded by lwarp. All user options and macros are ignored and disabled.

for HTML output: Discard all options for lwarp-microtype:

```

1 \LWR@ProvidesPackageDrop{microtype}[2018/01/14]

2 \DeclareDocumentCommand{\DeclareMicrotypeSet}{o m m}{}
3 \DeclareDocumentCommand{\UseMicrotypeSet}{o m}{}
4 \DeclareDocumentCommand{\DeclareMicrotypeSetDefault}{o m}{}
5 \DeclareDocumentCommand{\SetProtrusion}{o m m}{}
6 \DeclareDocumentCommand{\SetExpansion}{o m m}{}
7 \DeclareDocumentCommand{\SetTracking}{o m m}{}
8 \DeclareDocumentCommand{\SetExtraKerning}{o m m}{}
9 \DeclareDocumentCommand{\SetExtraSpacing}{o m m}{}
10 \DeclareDocumentCommand{\DisableLigatures}{o m}{}
11 \DeclareDocumentCommand{\DeclareCharacterInheritance}{o m m}{}
12 \DeclareDocumentCommand{\DeclareMicrotypeVariants}{m}{}
13 \DeclareDocumentCommand{\DeclareMicrotypeAlias}{m m}{}
14 \DeclareDocumentCommand{\LoadMicrotypeFile}{m}{}
15 \DeclareDocumentCommand{\DeclareMicrotypeBabelHook}{m m}{}
16 \DeclareDocumentCommand{\microtypesetup}{m}{}
17 \DeclareDocumentCommand{\microtypecontext}{m}{}
18 \DeclareDocumentCommand{\textmicrotypecontext}{m m}{#2}
19 \ifpackageloaded{letterspace}{\let\MT@textls\relax}{%
20 \DeclareDocumentCommand{\lsstyle}{}{}
21 \DeclareDocumentCommand{\textls}{o +m}{}
22 \DeclareDocumentCommand{\lslig}{m}{#1}
23 }
24 \def\DeclareMicrotypeSet#1#{\@gobbletwo}
25 \def\DeclareMicrotypeVariants#1#{\@gobble}
26 \@onlypreamble\DeclareMicrotypeSet
27 \@onlypreamble\UseMicrotypeSet
28 \@onlypreamble\DeclareMicrotypeSetDefault
29 \@onlypreamble\DisableLigatures
30 \@onlypreamble\DeclareMicrotypeVariants
31 \@onlypreamble\DeclareMicrotypeBabelHook

```

---

File 261 **lwarp-midfloat.sty**

§ 364      Package **midfloat**

*(Emulates or patches code by SIGITAS TOLUŠIS.)*

Pkg    midfloat    midfloat is emulated.

**for HTML output:**    1 \LWR@ProvidesPackageDrop{midfloat}[2012/05/29]

2 \newenvironment{strip}[1][{}]{}

3 \newskip\stripsep

---

File 262 **lwarp-midpage.sty**

§ 365      Package **midpage**

Pkg    midpage    midpage is ignored.

**for HTML output:**    1 \LWR@ProvidesPackageDrop{midpage}[2009/09/03]

2 \newenvironment{midpage}

3 {\begin{BlockClass}[%

4     \LWR@print@mbbox{margin-top:6ex} ; \LWR@print@mbbox{margin-bottom:6ex}%

5 ]{midpage}}

6 {\end{BlockClass}}

---

File 263 **lwarp-minibox.sty**

§ 366      Package **minibox**

*(Emulates or patches code by WILL ROBERTSON.)*

Pkg    minibox    minibox is patched for use by lwarp.

Due to HTML limitations regarding paragraphs and <div>s, miniboxes inline with other text will appear on their own line.

**for HTML output:**    1 \LWR@ProvidesPackagePass{minibox}[2013/06/21]

2 \ExplSyntaxOn

3 \newcommand\LWR@HTML@minibox[2][{}]{%

4     \LWR@stoppars%

5     \group\_begin:

---

```

6 \keys_set:nn {minibox} {#1}
7 \bool_if:NTF \l_minibox_frame_bool
8 {
9 \setlength\fbboxrule{\l_minibox_rule_dim}
10 \setlength\fbboxsep{\l_minibox_pad_dim}
11 \fbboxBlock{%
12 \begin{tabular}[\l_minibox_tabular_valign_tl]%
13 {\l_minibox_tabular_preamble_tl}
14 {#2}
15 \end{tabular}
16 }%
17 }
18 {
19 \begin{BlockClass}[display:inline-block]{minibox}
20 \begin{tabular}[\l_minibox_tabular_valign_tl]%
21 {\l_minibox_tabular_preamble_tl}
22 {#2}
23 \end{tabular}
24 \end{BlockClass}
25 }
26 \group_end:
27 \LWR@startpars%
28 }
29 \ExplSyntaxOff
30
31 \LWR@formatted{minibox}

```

---

File 264 **lwarp-minitoc.sty**

§ 367     Package **minitoc**

Pkg minitoc minitoc is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{minitoc}[2018/07/12]

mtcoff disables minitoc.

2 \usepackage{mtcoff}


---

File 265 **lwarp-mismath.sty**

§ 368     Package **mismath**

(Emulates or patches code by ANTOINE MISSIER.)

Pkg mismath mismath is patched for svg math, and emulated for MATHJAX.

 **MATHJAX** \enumber, \inumber, \jnumber, and \pinumber are ignored for MATHJAX, except that \itpi is made available as a clone of \pi.

For MATHJAX, `\boldvect` and `\arrowvect` are honored if in the preamble.

If `\boldvectcommand` is set to `\mathbf` in the preamble, it will be used for MATHJAX, otherwise it will default to `\mathit`. `\boldvectcommand` may also be set with `\CustomizeMathJax` in the preamble. See section 8.7.5. Note that as of this writing there is not a bold italic font across all MATHJAX fonts.

If `\probastyle` is set to `\mathbb` in the preamble, it will be used for MATHJAX, otherwise it will default to `\mathrm`. `\probastyle` may be set with `\CustomizeMathJax` in the preamble.

If `\mathset` is set to `\mathbb` in the preamble, it will be used for MATHJAX, otherwise it will default to `\mathbf`. `\mathset` may be set with `\CustomizeMathJax` in the preamble.

for HTML output: 1 \LWR@ProvidesPackagePass{mismath}[2019/12/27]

For MATHJAX, used in the HTML comment before the environment.

```

2 \ifbool{mathjax}{
3 \RenewEnviron{mathcols}{%
4 \preto\BODY{\begin{aligned}\displaystyle}
5 \appto\BODY{\end{aligned}}
6 \expandafter\(\BODY\)
7 }
8 }% mathjax

```

For svg math. The `lateximage` restores the original definition of the `math` environment.

```

9 {% svg
10 \renewenvironment{mathcols}{
11 \begin{lateximage}
12 \begin{math}
13 \begin{aligned}\displaystyle
14 }{
15 \end{aligned}%
16 \end{math}
17 \end{lateximage}
18 }
19 }% svg
20
21 \renewcommand{\changecol}{
22 \end{aligned} \quad
23 \begin{aligned}\displaystyle
24 }
25
26 \begin{warpMathJax}
27 \CustomizeMathJax{\newcommand{\mathup}[1]{\mathrm{#1}}}
28 \CustomizeMathJax{\newcommand{\e}{\mathrm{e}}}
29 \CustomizeMathJax{\newcommand{\i}{\mathrm{i}}}
30 \CustomizeMathJax{\newcommand{\j}{\mathrm{j}}}
31
32 \CustomizeMathJax{\newcommand{\boldvect}{} }
33 \CustomizeMathJax{\newcommand{\arrowvect}{} }
34 \CustomizeMathJax{\newcommand{\pinumber}[1][{}]}
35 \CustomizeMathJax{\newcommand{\hvect}[1]{\vec{\vphantom{h}#1}}}

```

```

36 \CustomizeMathJax{\newcommand{\hvec}[1]{\vec{\vphantom{t}#1}}}
37 \CustomizeMathJax{%
38 \newcommand{\norm}[1]{\left\| \right.\left.\right\|_1\right\|}
39 }
40 \CustomizeMathJax{\newcommand{\di}{\mathop{\!|\!|}\nolimits}}
41
42 \CustomizeMathJax{\newcommand{\P}{\operatorname{\probastyle{P}}}}
43 \CustomizeMathJax{\newcommand{\E}{\operatorname{\probastyle{E}}}}
44 \CustomizeMathJax{\newcommand{\V}{\operatorname{\probastyle{V}}}}
45 \CustomizeMathJax{\newcommand{\Par}{\unicode{x00B6}}}
46
47 \CustomizeMathJax{\newcommand{\adj}{\mathrm{adj}}}
48 \CustomizeMathJax{\newcommand{\Aut}{\mathrm{Aut}}}
49 \CustomizeMathJax{\newcommand{\Conv}{\mathrm{Conv}}}
50 \CustomizeMathJax{\newcommand{\cov}{\mathrm{cov}}}
51 \CustomizeMathJax{\newcommand{\Cov}{\mathrm{Cov}}}
52 \CustomizeMathJax{\newcommand{\curl}{\operatorname{\vect{\mathrm{curl}}}}}
53 \CustomizeMathJax{\newcommand{\divg}{\mathrm{div}}}
54 \CustomizeMathJax{\newcommand{\End}{\mathrm{End}}}
55
56 \CustomizeMathJax{\newcommand{\erf}{\mathrm{erf}}}
57 \CustomizeMathJax{\newcommand{\grad}{\operatorname{\vect{\mathrm{grad}}}}}
58 \CustomizeMathJax{\newcommand{\id}{\mathrm{id}}}
59 \CustomizeMathJax{\newcommand{\Id}{\mathrm{Id}}}
60 \CustomizeMathJax{\newcommand{\im}{\mathrm{im}}}
61 \CustomizeMathJax{\let\oldIm\Im}
62 \CustomizeMathJax{\renewcommand{\Im}{\operatorname{Im}}}
63 \CustomizeMathJax{\newcommand{\lb}{\mathrm{lb}}}
64 \CustomizeMathJax{\newcommand{\lcm}{\mathrm{lcm}}}
65
66 \CustomizeMathJax{\newcommand{\rank}{\mathrm{rank}}}
67 \CustomizeMathJax{\let\oldRe\Re}
68 \CustomizeMathJax{\renewcommand{\Re}{\operatorname{Re}}}
69 \CustomizeMathJax{\newcommand{\rot}{\operatorname{\vect{\mathrm{rot}}}}}
70 \CustomizeMathJax{\newcommand{\sgn}{\mathrm{sgn}}}
71 \CustomizeMathJax{\newcommand{\spa}{\mathrm{span}}}
72 \CustomizeMathJax{\newcommand{\tr}{\mathrm{tr}}}
73 \CustomizeMathJax{\newcommand{\Var}{\mathrm{Var}}}
74 \CustomizeMathJax{\newcommand{\Zu}{\mathrm{Z}}}
75
76 \CustomizeMathJax{\newcommand{\arccot}{\mathrm{arccot}}}
77 \CustomizeMathJax{\newcommand{\sech}{\mathrm{sech}}}
78 \CustomizeMathJax{\newcommand{\csch}{\mathrm{csch}}}
79 \CustomizeMathJax{\newcommand{\arsinh}{\mathrm{arsinh}}}
80 \CustomizeMathJax{\newcommand{\arcosh}{\mathrm{arcosh}}}
81 \CustomizeMathJax{\newcommand{\artanh}{\mathrm{artanh}}}
82 \CustomizeMathJax{\newcommand{\arcoth}{\mathrm{arcoth}}}
83 \CustomizeMathJax{\newcommand{\arsech}{\mathrm{arsech}}}
84 \CustomizeMathJax{\newcommand{\arcsch}{\mathrm{arcsch}}}
85
86 \CustomizeMathJax{\newcommand{\bigO}{\mathcal{O}}}
87 \CustomizeMathJax{\newcommand{\bigo}{\mathrm{O}}}
88 \CustomizeMathJax{\newcommand{\lito}{\mathrm{o}}}
89
90 \CustomizeMathJax{\newcommand{\R}{\mathset{R}}}

```

User-adjustable settings, detected if in the preamble.

```

134 \AtBeginDocument{
135 \ifdef{\itpi}{
136 \CustomizeMathJax{\let\itpi\pi}
137 }{}
138 \ifdefstring{\boldvectcommand}{\mathbf}{
139 \CustomizeMathJax{\newcommand{\boldvectcommand}[1]{\mathbf{#1}}}
140 }{
141 \CustomizeMathJax{\newcommand{\boldvectcommand}[1]{\boldsymbol{#1}}}
142 }

```

---

```

143 \ifbool{arrowvect}{
144 \CustomizeMathJax{\newcommand{\vect}[1]{\overrightarrow{#1}}}
145 }{
146 \CustomizeMathJax{\newcommand{\vect}[1]{\boldvectcommand{#1}}}
147 }
148 \ifdefstring{\probastyle}{\mathbb}{
149 \CustomizeMathJax{\newcommand{\probastyle}[1]{\mathbb{#1}}}
150 }{
151 \CustomizeMathJax{\newcommand{\probastyle}[1]{\mathrm{#1}}}
152 }
153 \ifdefstring{\mathset}{\mathbb}{
154 \CustomizeMathJax{\newcommand{\mathset}[1]{\mathbb{#1}}}
155 }{
156 \CustomizeMathJax{\newcommand{\mathset}[1]{\mathbf{#1}}}
157 }
158 }
159 \end{warpMathJax}

```

---

File 266 **lwarp-morefloats.sty**

§ 369     Package **morefloats**

Pkg    morefloats    morefloats is ignored.

**for HTML output:**    1 \LWR@ProvidesPackageDrop{morefloats}[2015/07/22]

---

File 267 **lwarp-moreverb.sty**

§ 370     Package **moreverb**

*(Emulates or patches code by ROBIN FAIRBAIRNS.)*

Pkg    moreverb    moreverb is supported with some patches.

**for HTML output:**    1 \begin{warpHTML}

2 \LWR@ProvidesPackagePass{moreverb}[2008/06/03]

3 \BeforeBeginEnvironment{verbatimtab}{%

4 \LWR@forcenewpage

5 \LWR@atbeginverbatim{3}{Verbatim}%

6 }

7 \AfterEndEnvironment{verbatimtab}{%

8 \LWR@afterendverbatim{1}%

9 }

10

11

12 \LetLtxMacro\LWRMV@orig@verbatimtabinput\@verbatimtabinput

13

14 \renewcommand{\@verbatimtabinput}[2][1]{%

```

15 \LWR@forcenewpage
16 \LWR@atbeginverbatim{3}{Verbatim}%
17 \LWRMV@orig@verbatimtabinput[#1]{#2}%
18 \LWR@afterendverbatim{1}%
19 }
20
21 \BeforeBeginEnvironment{listing}{%
22 \LWR@forcenewpage
23 \LWR@atbeginverbatim{3}{programlisting}%
24 }
25
26 \AfterEndEnvironment{listing}{%
27 \LWR@afterendverbatim{1}%
28 }
29
30 \BeforeBeginEnvironment{listingcont}{%
31 \LWR@forcenewpage
32 \LWR@atbeginverbatim{3}{programlisting}%
33 }
34
35 \AfterEndEnvironment{listingcont}{%
36 \LWR@afterendverbatim{1}%
37 }

38 \LetLtxMacro\LWRMV@@listinginput\@listinginput
39
40 \renewcommand{\@listinginput}[3][{}{
41 \LWR@forcenewpage
42 \LWR@atbeginverbatim{3}{programlisting}%
43 \LWRMV@@listinginput[#1]{#2}{#3}%
44 \LWR@afterendverbatim{1}%
45 }
46
47
48 \renewenvironment*{boxedverbatim}
49 {
50 \LWR@forcenewpage
51 \LWR@atbeginverbatim{3}{boxedverbatim}%
52 \verbatim%
53 }
54 {
55 \endverbatim%
56 \LWR@afterendverbatim{1}%
57 }

58 \end{warpHTML}

```

---

File 268 **lwarp-movie15.sty**

§ 371 Package **movie15**

Pkg movie15 movie15 is emualted.

The packages `multimedia`, `movie15`, and `media9` are supported.

HTML5 `<audio>` and `<video>` objects are created for `.mp3` and `.mp4` files.

HTML5 `<embed>` objects are created for `http` and `ftp` links.

`\href` links are created for other media types. (Unfortunately, there is not much overlap between the file types supported for print output and the file types supported by HTML5.)

For `media9`, a multimedia object is inserted for each `addressource=`, as well as each `flashvars source=` and `src=`. This may result in duplicate objects.

Undesired objects may be nullified by placing them inside `\warpprintonly` or the `warpprint` environment.

Each HTML multimedia object includes the poster text, except for `<embed>` objects. For `movie15`, the `text` option is supported to specify the poster text.

The `width`, `height`, and `totalheight` options are supported. The HTML object is scaled according to the display width, correctly compensating for either tall or wide viewports.

Other options are ignored.

`media9 \addmediapath` is supported. It is assumed that the same path structure will exist for the HTML document.

HTML5 media controls are always specified for each `<audio>` and `<video>` object.

`media9` slideshows are not supported.

`\hyperlinkmovie`, `\movieref`, and `\mediabutton` are not supported.

3D objects are not supported.

If using a YouTube™ video, use an “embedded” URL with `.../embed/...` instead of `.../v/...`

for HTML output:

```

1 \LWR@ProvidesPackageDrop{movie15}[2012/05/16]

2 \LWR@origRequirePackage{lwarp-common-multimedia}
3
4 \RequirePackage{xkeyval}
5
6 \newcommand*{\LWR@moviefifteen@text}{}
7
8 \define@key{\LWR@moviefifteen}{text}{\renewcommand{\LWR@moviefifteen@text}{#1}}
9
10 \newcommand*{\LWR@includemovieb}[4][[]]{%
11 \renewcommand{\LWR@moviefifteen@text}{(multimedia)}
12 \setkeys*{\LWR@moviefifteen}{#1}%
13 \LWR@multimediab[#1,width=#2,height=#3]{\LWR@moviefifteen@text}{#4}%
14 }
15
16 \newrobustcmd*{\includemovie}{%
17 \begingroup%
```

---

```

18 \LWR@linkmediacatcodes%
19 \LWR@includemovieb%
20 }
21
22
23 \newcommand*{\movieref}[3][{}]{
24
25 \LetLtxMacro\movie\LWR@multimedia
26 % \LetLtxMacro\sound\LWR@multimedia% not in media15
27
28 \newcommand{\hyperlinkmovie}[3][{}]{

```

---

File 269 **lwarp-mparhack.sty**

§ 372 Package **mparhack**

Pkg mparhack mparhack is ignored.

**for HTML output:** Discard all options for lwarp-mparhack:

```
1 \LWR@ProvidesPackageDrop{mparhack}[2005/04/17]
```

---

File 270 **lwarp-multibib.sty**

§ 373 Package **multibib**

*(Emulates or patches code by THORSTEN HANSEN.)*

Pkg multibib multibib is patched for use by lwarp.

**for HTML output:** 1 \LWR@ProvidesPackagePass{multibib}[2008/12/10]

```

2 \xpatchcmd{\newcites}
3 {{\@suffix}}
4 {{\@suffix_html}}
5 {}
6 {\LWR@patcherror{multibib}{newcites}}

```

---

File 271 **lwarp-multicap.sty**

§ 374 Package **multicap**

Pkg multicap multicap is emulated.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{multicap}[2002/05/04]

---

```

2 \newcommand*{\mfcaption}{\captionof{figure}}
3 \newcommand*{\mtcaption}{\captionof{table}}
4 \newcounter{mcapsize}
5 \newcounter{mcapskip}
6 \newlength{\abvmcapskip}
7 \newlength{\blwmcapskip}

```

---

File 272 **lwarp-multicol.sty**

§ 375 Package **multicol**

(Emulates or patches code by FRANK MITTELBACH.)

Pkg multicol multicol is emulated.

for HTML output: 1 \LWR@ProvidesPackageDrop{multicol}[2018/12/27]

Multicols are converted into a 1–3 column display, browser-supported.

The optional multicols heading is placed inside a <div> of class multicolsheading.

The content is placed inside a <div> of class multicols.

```
2 \begin{warpHTML}
```

Env multicols \* {\<numcols>} [\<heading>]

```
3 \NewDocumentEnvironment{multicols}{s m o}
```

HTML <div> class to contain everything:

```
4 {
5 \LWR@forcenewpage
6 \BlockClass{multicols}

```

Optional HTML <div> class for the heading:

```
7 \IfValueT{#3}{\begin{BlockClass}{multicolsheading}#3\end{BlockClass}}%
```

Change \linewidth to compensate for expected size:

```
8 \setlength{\linewidth}{\linewidth/#2}
```

Locally force any minipages to be fullwidth:

```
9 \booltrue{LWR@forceminipagefullwidth}
10 }
```

When done with the environment, close the <div>:

```
11 {\endBlockClass}
```

Emulated null functions which are not used in HTML:

```
12 \newcommand*{\columnbreak}{}
13 \newcommand*{\RLmulticolcolumns}{}

```

---

```

14 \newcommand*\LRmulticolcolumns{}
15
16 \newlength{\premulticols}
17 \newlength{\postmulticols}
18 \newlength{\multicolsep}
19 \newlength{\multicolbaselineskip}
20 \newlength{\multicoltolerance}
21 \newlength{\multicolpretolerance}
22 \newcommand*\columnseprulecolor{\normalcolor}
23 \newcounter{columnbadness}
24 \newcounter{finalcolumnbadness}
25 \newcounter{collectmore}
26 \newcounter{unbalance}
27 \newlength{\multicolovershoot}
28 \newlength{\multicolundershoot}

29 \NewDocumentCommand{\docolaction}{s o m m}{%
30 \IfValueTF{#2}{#2}{#3}%
31 }

32 \end{warpHTML}

```

---

## File 273 **lwarp-multicolrule.sty**

### § 376 Package **multicolrule**

Pkg multicolrule multicolrule is ignored.

**for HTML output:**

```

1 \RequirePackage{multicol}
2
3 \LWR@ProvidesPackageDrop{multicolrule}[2019/01/01]

4 \newcommand*\SetMCRule[1]{}
5 \NewDocumentCommand{\DeclareMCRulePattern}{m m}{}

```

---

## File 274 **lwarp-multimedia.sty**

### § 377 Package **multimedia**

Pkg multimedia multimedia is emulated.

The packages multimedia, movie15, and media9 are supported.

HTML5 <audio> and <video> objects are created for .mp3 and .mp4 files.

HTML5 <embed> objects are created for http and ftp links.

\href links are created for other media types. (Unfortunately, there is not much overlap between the file types supported for print output and the file types supported by HTML5.)

For **media9**, a multimedia object is inserted for each `addressource=`, as well as each `flashvars source=` and `src=`. This may result in duplicate objects.

Undesired objects may be nullified by placing them inside `\warpprintonly` or the `warpprint` environment.

Each HTML multimedia object includes the poster text, except for `<embed>` objects. For **movie15**, the `text` option is supported to specify the poster text.

The `width`, `height`, and `totalheight` options are supported. The HTML object is scaled according to the display width, correctly compensating for either tall or wide viewports.

Other options are ignored.

**media9** `\addmediapath` is supported. It is assumed that the same path structure will exist for the HTML document.

HTML5 media controls are always specified for each `<audio>` and `<video>` object.

**media9** slideshows are not supported.

`\hyperlinkmovie`, `\movieref`, and `\mediabutton` are not supported.

3D objects are not supported.

If using a YouTube™ video, use an “embedded” URL with `.../embed/...` instead of `.../v/...`

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{multimedia}[2012/05/02]

2 \LWR@origRequirePackage{lwarp-common-multimedia}
3
4 \LetLtxMacro\movie\LWR@multimedia
5 \LetLtxMacro\sound\LWR@multimedia
6
7 \newcommand{\hyperlinkmovie}[3][{}]
```

---

File 275 **lwarp-multiobjective.sty**

§ 378      Package **multiobjective**

*(Emulates or patches code by LUIS MARTÍ.)*

Pkg    multiobjective    **multiobjective** is used as-is for SVG math, and is emulated for MATHJAX.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{multiobjective}[2008/08/19]

2 \begin{warpMathJax}
3 \CustomizeMathJax{\newcommand{\dom}{\prec}}
4 \CustomizeMathJax{\newcommand{\negdom}{\not\prec}}
5 \CustomizeMathJax{\newcommand{\weakdom}{\preccurlyeq}}
6 \CustomizeMathJax{\newcommand{\negweakdom}{\not\preccurlyeq}}
7 \CustomizeMathJax{\newcommand{\strictdom}{\prec\!\!\!\prec}}
```

```

8 \CustomizeMathJax{\newcommand{\negstrictdom}{\not\prec\!\!\!\prec}}
9 \CustomizeMathJax{\newcommand{\multepsilondom}{\preccurlyeq_{\epsilon\cdot}}}
10 \CustomizeMathJax{\newcommand{\addiepsilondom}{\preccurlyeq_{\epsilon+}}}
11 \CustomizeMathJax{\newcommand{\better}{\triangleleft}}
12 \CustomizeMathJax{\def\vec#1{%
13 \mathchoice%
14 {\displaystyle\boldsymbol{#1}}}%
15 {\textstyle\boldsymbol{#1}}}%
16 {\scriptstyle\boldsymbol{#1}}}%
17 {\scriptscriptstyle\boldsymbol{#1}}}%
18 }}
19
20 \CustomizeMathJax{\newcommand{\set}[1]{%
21 \mathchoice%
22 {\displaystyle\mathcal{#1}}}%
23 {\textstyle\mathcal{#1}}}%
24 {\scriptstyle\mathcal{#1}}}%
25 {\scriptscriptstyle\mathcal{#1}}}%
26 }}
27 \CustomizeMathJax{\def\argmax{\mathop{\mathrm{arg}}\!,\max}}
28 \CustomizeMathJax{\def\argmin{\mathop{\mathrm{arg}}\!,\min}}
29 }}
30 \end{warpMathJax}

```

File 276 **lwarp-multirow.sty**

## § 379 Package **multirow**

(Emulates or patches code by PIET VAN OOSTRUM, ØYSTEIN BACHE, JERRY LEICHTER.)

Pkg multirow multirow is emulated during HTML output, and used as-is while inside a lateximage.

**vposn**

- Note that recent versions of multirow include a new optional vposn argument.

**multirow cells**

- For multirow, insert \mrowcell into any empty multi-row cells. This will be a null function for the print output, and is a placeholder for parsing the table for HTML output. An error is generated if this is missed.

```

... & \multirow{2}{.5in}{text} & ...
... & \mrowcell & ...

```

**colored cells**

- The multirow documentation regarding colored cells recommends using a negative number of rows. This will not work with lwarp, so \warpprintonly and \warpHTMLonly must be used to make versions for print and HTML.

**with \multicolumn**

⚠ **\multicolumn & \multirow**

- See section 379.2 for \multicolumrow.

lwarp does not support directly combining \multicolumn and \multirow. Use \multicolumnrow instead. To create a 2 column, 3 row cell:

```
\multicolumnrow{2}{c}[c]{3}[0]{1in}[0pt]{Text}
```

The two arguments for \multicolumn come first, followed by the five arguments for \multirow, many of which are optional, followed by the contents.

⚠ skipped cells

As per `\multirow`, skipped cells to the right of the `\multicolumnrow` statement are not included in the source code on the same line. On the following lines, `\mcolrowcell` must be used for each cell of each column and each row to be skipped. An error is generated if this is missed.

⚠ empty cells

```
... & \multicolumnrow{2}{c}[c]{3}[0]{1in}[0pt]{Text} & ...
... & \mcolrowcell & \mcolrowcell & ...
... & \mcolrowcell & \mcolrowcell & ...
```

⚠ MathJax

- MATHJAX does not support `multirow`, so it is emulated to only print its text on the first row. `\multirow` works as expected in text tabulars or svg math.

In a `lateximage`, `\LWR@restoreorigformatting` restores the original print-mode versions.

See section 72.25 for the print-mode versions.

for HTML output:

Remove the placeholder macro which was used if `multirow` was not loaded:

```
1 \LetLtxMacro\multirow\relax
2 \LWR@ProvidesPackagePass{multirow}[2018/08/03]
```

`\LWR@multirowborder` Set to left or right to create a thick border for the cell, for use by `bigdelim`:

```
3 \newcommand{\LWR@multirowborder}{}%
```

### § 379.1 Multirow

`\multirow` [*⟨vpos⟩*] [*⟨numrows⟩*] [*⟨bigstruts⟩*] [*⟨width⟩*] [*⟨fixup⟩*] [*⟨text⟩*]

```
4 \NewDocumentCommand{\LWR@HTML@multirow}{O{c} m o m o +m}%
5 {%
6 \LWR@traceinfo{*** \LWR@HTML@multirow #1 #2 #4}%

7 \booltrue{\LWR@usedmultirow}%

8 \LWR@maybenewtablerow%
9 \LWR@tabularleftedge%
```

Print the start of a new table data cell:

```
10 \LWR@htmltag{td rowspan="#2" %
```

A class adds the column spec and the rule:

```
11 class="td%
```

Append this column's spec:

```
12 \LWR@gettexpparray{\LWR@tablecolspec}{\arabic{\LWR@tableLaTeXcolindex}}%
```

If this column has a `cmidrule`, add “rule” to the end of the HTML class tag. Also add the vertical bar class.

```
13 \LWR@addcmidruletrim%
14 \LWR@addleftmostbartag%
15 \LWR@printbartag{\arabic{LWR@tableLaTeXcolindex}}%
16 "%
```

```
17 \LWR@tdstartstyles%
```

The vertical alignment, if given:

```
18 \ifstrequal{#1}{c}{\LWR@tdaddstyle\LWR@print@mbbox{vertical-align:middle}}{}%
19 \ifstrequal{#1}{b}{\LWR@tdaddstyle\LWR@print@mbbox{vertical-align:bottom}}{}%
20 \ifstrequal{#1}{t}{\LWR@tdaddstyle\LWR@print@mbbox{vertical-align:top}}{}%
```

The left/right border, if given:

```
21 \ifdefvoid{\LWR@multirowborder}{}{%
22 \LWR@tdaddstyle%
23 \LWR@print@mbbox{border-\LWR@multirowborder:} 2px dotted black ; %
24 \LWR@print@mbbox{padding-\LWR@multirowborder:} 2px%
25 }%
```

Additional style elements:

```
26 \LWR@addcmidrulewidth%
27 \LWR@addcdashline%
28 \LWR@addtabularrulecolors%
29 \LWR@tdendstyles%
30 }%
```

The column's < spec:

```
31 \LWR@gettexpparray{\LWR@colbeforespec}{\arabic{LWR@tableLaTeXcolindex}}%
```

While printing the text, redefine `\` to generate a new line

```
32 \begingroup\let\txMacro{\}\{\LWR@endofline}\#6\endgroup%
33 \LWR@stoppars%
34 \boolfalse{\LWR@intabularmetadata}%
35 \renewcommand{\LWR@multirowborder}{}%
36 \LWR@traceinfo{*** LWR@HTML@multirow done}%
37 }%
38
39 \LWR@formatted{multirow}
```

### § 379.2 Combined multicolumn and multirow

`\multicolumnrow`  $\{\langle 1:cols \rangle\} \{\langle 2:halign \rangle\} [\langle 3:vpos \rangle] \{\langle 4:numrows \rangle\} [\langle 5:bigstruts \rangle] \{\langle 6:width \rangle\} [\langle 7:fixup \rangle] \{\langle 8:text \rangle\}$

`\@ifpackageloaded{multirow}` determines if v2.0 or later of `multirow` was used, which included the `\ProvidesPackage` macro.

The HTML version follows.

`\AtBeginDocument` because the print version had to see if `multirow` was loaded before determining how to define `\LWR@print@multicolumnrow`.

```
40 \AtBeginDocument{
41
42 \NewExpandableDocumentCommand{\LWR@HTML@multicolumnrow}{m m O{} m O{} m O{} +m}{%

43 \booltrue{\LWR@usedmultirow}%
```

Figure out how many extra HTML columns to add for @ and ! columns:

```
44 \LWR@tabularhtmlcolumns{\arabic{\LWR@tableLaTeXcolindex}}{\#1}
```

Create the multicolumn/multirow tag, temporarily redefining the end of line. (Using a group caused problems with a nested tabular.

```
45 \LetLtxMacro{\}\{\LWR@endofline}%
46 \LWR@domulticolumn[#3][#4]{#1}{\arabic{\LWR@tabhtmlcoltotal}}{\#2}{\#8}%
47 \LetLtxMacro{\}\{\LWR@tabularendofline}%
```

Move to the next L<sup>A</sup>T<sub>E</sub>X column:

```
48 \defaddtocounter{\LWR@tableLaTeXcolindex}{\#1}%
49 \defaddtocounter{\LWR@tableLaTeXcolindex}{-1}%
```

Skip any trailing @ or ! columns for this cell:

```
50 \booltrue{\LWR@skipatbang}%
51 }
52
53 \LWR@expandableformatted{multicolumnrow}
54
55 }% \AtBeginDocument
```

For MATHJAX. Only the text is used. All other parameters are ignored.

```
56 \begin{warpMathJax}
57 % \multirow[vpos]{num}[bigstruts]{width}[vmove]{text}
58 \CustomizeMathJax{\newcommand{\LWRsubmultirow}[2][\#2]}
59 \CustomizeMathJax{\newcommand{\LWRmultirow}[2][\LWRsubmultirow]}
60 \CustomizeMathJax{\newcommand{\multirow}[2][\LWRmultirow]}
61 %
62 \CustomizeMathJax{\newcommand{\mrowcell}{}}
```

---

```

63 \CustomizeMathJax{\newcommand{\mcolrowcell}{}}
64 \CustomizeMathJax{\newcommand{\STneed}[1]{} }
65 \end{warpMathJax}

```

---

File 277 **lwarp-multitoc.sty**

§ 380      Package **multitoc**

Pkg   multitoc   multitoc is ignored.

**for HTML output:**    1 \LWR@ProvidesPackageDrop{multitoc}[1999/06/08]

```

2 \newcommand{\multicolumntoc}{2}
3 \newcommand{\multicolumnlot}{2}
4 \newcommand{\multicolumnlof}{2}
5 \newcommand*{\immediateaddtocontents}[2]{}

```

---

File 278 **lwarp-musicography.sty**

§ 381      Package **musicography**

*(Emulates or patches code by ANDREW A. CASHNER.)*

Pkg   musicography   musicography is patched for use by lwarp.

Images are used for the meter symbols and fingered bass, since the HTML fonts tend not to be the correct size and HTML cannot stack items. The HTML alt tag copies C and 3/2, etc. Hashes are used for the meter images, which are then reused as necessary.



Note that browser support for musical symbols may be buggy. ALT text and copy/paste into a text editor work well.

**for HTML output:**    1 \LWR@ProvidesPackagePass{musicography}[2019/05/28]

```

2 \NewDocumentCommand{\LWR@HTML@musSymbol}{ O{\musFont} m m m m }{%
3 \begin{lateximage}%
4 {#1\kern#2\raisebox{#3}{#5}\kern#4}%
5 \end{lateximage}%
6 }
7
8 \LWR@formatted{musSymbol}
9
10 \NewDocumentCommand{\LWR@HTML@musStemmedNote}{ m }{%
11 \begin{lateximage}%
12 \musSymbol{0.05em}{0.5ex}{0.2em}{#1\musStem}%
13 \end{lateximage}%
14 }
15
16 \LWR@formatted{musStemmedNote}

```

```

17
18 \NewDocumentCommand{\LWR@HTML@musFlaggedNote}{ m m }{%
19 \begin{lateximage}%
20 \musSymbol{0.05em}{0.5ex}{0pt}{#1\musStem}%
21 \musSymbol{0pt}{0pt}{0.9em}{#2}%
22 \end{lateximage}%
23 }
24
25 \LWR@formatted{musFlaggedNote}
26
27 \NewDocumentCommand{\LWR@HTML@musDottedNote}{ m }{%
28 \begin{lateximage}%
29 #1\musDot%
30 \end{lateximage}%
31 }
32
33 \LWR@formatted{musDottedNote}
34
35 \NewDocumentCommand{\LWR@HTML@musMeter}{ m m }{%
36 \begin{lateximage}*[#1/#2][#1#2]*%
37 \musStack{#1 #2}\kern0.05em%
38 \end{lateximage}%
39 }
40
41 \LWR@formatted{musMeter}
42
43 \NewDocumentCommand{\LWR@HTML@meterCplus}{ m }{%
44 \begin{lateximage}*[C#1]*%
45 \meterC{}\kern-0.7pt#1%
46 \end{lateximage}%
47 }
48
49 \LWR@formatted{meterCplus}
50
51 \NewDocumentCommand{\LWR@HTML@meterC}{}{%
52 \begin{lateximage}*[C]*%
53 \musSymbolMeter{\symbol{83}}%
54 \end{lateximage}%
55 }
56
57 \LWR@formatted{meterC}
58
59 \NewDocumentCommand{\LWR@HTML@meterCutC}{}{%
60 \begin{lateximage}*[C|]*%
61 \musSymbolMeter{\symbol{82}}%
62 \end{lateximage}%
63 }
64
65 \LWR@formatted{meterCutC}
66
67 \NewDocumentCommand{\LWR@HTML@meterCThreeTwo}{}{%
68 \begin{lateximage}*[C3/2]*%
69 \meterCplus{\musStack{3 2}}%
70 \end{lateximage}%
71 }

```

```

72
73 \LWR@formatted{meterCThreeTwo}
74
75 \NewDocumentCommand{\LWR@HTML@meterO}{\HTMLUnicode{25EF}}
76
77 \LWR@formatted{meterO}
78
79 \newcommand{\LWR@null@noFig}[1][\LWR@null@noFig]{%
80
81 \NewDocumentCommand{\LWR@HTML@musFig}{ m }{%
82 \begin{lateximage}*[%
83 {% ALT text for copy/paste
84 \LetLtxMacro\noFig\LWR@null@noFig%
85 \LetLtxMacro\musSharp\LWR@HTML@musSharp%
86 \LetLtxMacro\musDoubleSharp\LWR@HTML@musDoubleSharp%
87 \LetLtxMacro\musFlat\LWR@HTML@musFlat%
88 \LetLtxMacro\musDoubleFlat\LWR@HTML@musDoubleFlat%
89 \LetLtxMacro\musNatural\LWR@HTML@musNatural%
90 {\#1}% braces here because \noFig uses []
91 }%
92]*%
93 \musStack[\musFigFont]{\#1}%
94 \end{lateximage}%
95 }
96
97 \LWR@formatted{musFig}
98
99 \NewDocumentCommand{\LWR@HTML@musFlat} {}{\HTMLUnicode{266D}}
100 \NewDocumentCommand{\LWR@HTML@musDoubleFlat} {}{\HTMLUnicode{1D12B}}
101 \NewDocumentCommand{\LWR@HTML@musSharp} {}{\HTMLUnicode{266F}}
102 \NewDocumentCommand{\LWR@HTML@musDoubleSharp} {}{\HTMLUnicode{1D12A}}
103 \NewDocumentCommand{\LWR@HTML@musNatural} {}{\HTMLUnicode{266E}}
104
105 \LWR@formatted{musFlat}
106 \LWR@formatted{musDoubleFlat}
107 \LWR@formatted{musSharp}
108 \LWR@formatted{musDoubleSharp}
109 \LWR@formatted{musNatural}
110
111 \NewDocumentCommand{\LWR@HTML@musWhole} {}{\HTMLUnicode{1D15D}}
112 \NewDocumentCommand{\LWR@HTML@musHalf} {}{\HTMLUnicode{1D15E}}
113 \NewDocumentCommand{\LWR@HTML@musQuarter} {}{\HTMLUnicode{1D15F}}
114 \NewDocumentCommand{\LWR@HTML@musEighth} {}{\HTMLUnicode{1D160}}
115 \NewDocumentCommand{\LWR@HTML@musSixteenth} {}{\HTMLUnicode{1D161}}
116 \NewDocumentCommand{\LWR@HTML@musThirtySecond} {}{\HTMLUnicode{1D162}}
117 \NewDocumentCommand{\LWR@HTML@musSixtyFourth} {}{\HTMLUnicode{1D163}}
118
119 \LWR@formatted{musWhole}
120 \LWR@formatted{musHalf}
121 \LWR@formatted{musQuarter}
122 \LWR@formatted{musEighth}
123 \LWR@formatted{musSixteenth}
124 \LWR@formatted{musThirtySecond}
125 \LWR@formatted{musSixtyFourth}
126

```

```

127 \NewDocumentCommand{\LWR@HTML@musWholeDotted}{}
128 {\HTMLUnicode{1D15D}\HTMLUnicode{1D16D}}
129 \NewDocumentCommand{\LWR@HTML@musHalfDotted}{}
130 {\HTMLUnicode{1D15E}\HTMLUnicode{1D16D}}
131 \NewDocumentCommand{\LWR@HTML@musQuarterDotted}{}
132 {\HTMLUnicode{1D15F}\HTMLUnicode{1D16D}}
133 \NewDocumentCommand{\LWR@HTML@musEighthDotted}{}
134 {\HTMLUnicode{1D160}\HTMLUnicode{1D16D}}
135 \NewDocumentCommand{\LWR@HTML@musSixteenthDotted}{}
136 {\HTMLUnicode{1D161}\HTMLUnicode{1D16D}}
137 \NewDocumentCommand{\LWR@HTML@musThirtySecondDotted}{}
138 {\HTMLUnicode{1D162}\HTMLUnicode{1D16D}}
139 \NewDocumentCommand{\LWR@HTML@musSixtyFourthDotted}{}
140 {\HTMLUnicode{1D163}\HTMLUnicode{1D16D}}
141
142 \LWR@formatted{musWholeDotted}
143 \LWR@formatted{musHalfDotted}
144 \LWR@formatted{musQuarterDotted}
145 \LWR@formatted{musEighthDotted}
146 \LWR@formatted{musSixteenthDotted}
147 \LWR@formatted{musThirtySecondDotted}
148 \LWR@formatted{musSixtyFourthDotted}

```

---

File 279 **lwarp-nameauth.sty**

§ 382     Package **nameauth**

*(Emulates or patches code by CHARLES P. SCHAUM.)*

Pkg   nameauth   nameauth is patched for use by lwarp.

**for HTML output:**    1 \LWR@ProvidesPackagePass{nameauth}[2017/03/22]

lwarp formatting is inserted in the following.

```

2 \renewcommand*\@nameauth@Hook[1]
3 {%
4 \if@nameauth@Lock
5 \@nameauth@InHooktrue%
6 \protected@edef\test{#1}%
7 \expandafter\LWR@HTML@musWholeDotted\expandafter{\test}%
8 \if@nameauth@InAKA
9 \if@nameauth@AlwaysFormat
10 \@nameauth@FirstFormattrue%
11 \else
12 \unless\if@nameauth@AKAFormat
13 \@nameauth@FirstFormatfalse\fi
14 \fi
15 \if@nameauth@MainFormat
16 \if@nameauth@FirstFormat
17 \bgroup\NamesFormat{%
18 \LWR@textcurrentcolor{\LWR@textcurrentfont{#1}}}% lwarp

```

```

19 }\egroup%
20 \else
21 \bgroup\MainNameHook{%
22 \LWR@textcurrentcolor{\LWR@textcurrentfont{#1}}}% lwarp
23 }\egroup%
24 \fi
25 \else
26 \if@nameauth@FirstFormat
27 \bgroup\FrontNamesFormat{%
28 \LWR@textcurrentcolor{\LWR@textcurrentfont{#1}}}% lwarp
29 }\egroup%
30 \else
31 \bgroup\FrontNameHook{%
32 \LWR@textcurrentcolor{\LWR@textcurrentfont{#1}}}% lwarp
33 }\egroup%
34 \fi
35 \fi
36 \else
37 \if@nameauth@AlwaysFormat
38 \@nameauth@FirstFormattrue%
39 \fi
40 \if@nameauth@MainFormat
41 \if@nameauth@FirstFormat
42 \bgroup\NamesFormat{%
43 \LWR@textcurrentcolor{\LWR@textcurrentfont{#1}}}% lwarp
44 }\egroup%
45 \else
46 \bgroup\MainNameHook{%
47 \LWR@textcurrentcolor{\LWR@textcurrentfont{#1}}}% lwarp
48 }\egroup%
49 \fi
50 \else
51 \if@nameauth@FirstFormat
52 \bgroup\FrontNamesFormat{%
53 \LWR@textcurrentcolor{\LWR@textcurrentfont{#1}}}% lwarp
54 }\egroup%
55 \else
56 \bgroup\FrontNameHook{%
57 \LWR@textcurrentcolor{\LWR@textcurrentfont{#1}}}% lwarp
58 }\egroup%
59 \fi
60 \fi
61 \fi
62 \@nameauth@FirstFormatfalse%
63 \@nameauth@InHookfalse%
64 \fi
65 }

```

---

File 280 **lwarp-nameref.sty**

§ 383     Package **nameref**

Pkg    nameref    nameref is emulated by lwarp.

**for HTML output:** Discard all options for `lwarp-nameref`:

```

1 \PackageInfo{lwarp}{%
2 Using the lwarp HTML version of package 'nameref',\MessageBreak
3 and discarding options.\MessageBreak
4 (Not using \protect\ProvidesPackage, so that other packages\MessageBreak
5 do not attempt to patch lwarp's version of 'nameref'.)\MessageBreak
6 }
7 \DeclareOption*{}
8 \ProcessOptions\relax

```

---

File 281 **lwarp-natbib.sty**

§ 384      Package **natbib**

*(Emulates or patches code by PATRICK W. DALY.)*

Pkg natbib natbib is patched for use by lwarp.

**for HTML output:** 1 \LWRN@ProvidesPackagePass{natbib}[2010/09/13]

Replace math < and > with `\textless` and `\textgreater`:

A macro to compare:

```
2 \newcommand{\LWRNB@NAT@open}{<}
```

To patch `\NAT@open` and `\NAT@close`

```

3 \newcommand{\LWRNB@patchnatbibopenclose}{
4 \ifdefstrequal{\NAT@open}{\LWRNB@NAT@open}
5 {
6 \renewcommand{\NAT@open}{\textless}
7 \renewcommand{\NAT@close}{\textgreater}
8 }}
9 }

```

Do it now in case angle was selected as an option:

```
10 \LWRNB@patchnatbibopenclose
```

Also patch `\setcitestyle` to patch after settings are made:

```

11 \let\LWRNB@origsetcitestyle\setcitestyle
12
13 \renewcommand{\setcitestyle}[1]{%
14 \LWRNB@origsetcitestyle{#1}%
15 \LWRNB@patchnatbibopenclose%
16 }

```

---

File 282 **lwarp-nccfancyhdr.sty**

§ 385      Package **nccfancyhdr**

*(Emulates or patches code by ALEXANDER I. ROZHENKO.)*

Pkg nccfancyhdr nccfancyhdr is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{nccfancyhdr}[2004/12/07]

```

2 \newcommand*{\headrulewidth}{}
3 \newcommand*{\footrulewidth}{}
4 \newcommand{\headstrutheight}{}
5 \newcommand{\footstrutheight}{}
6 \newcommand*{\headrule}{}
7 \newcommand*{\footrule}{}
8
9 \newdimen\headwidth
10 \newcommand*{\extendedheaders}{}
11 \newcommand*{\normalheaders}{}
12
13 \newcommand*{\fancyhead}[2][{}]{
14 \newcommand*{\fancyfoot}[2][{}]{
15 \newcommand*{\fancyhf}[2][{}]{
16 \newcommand*{\fancypagestyle}[2]{
17 \newcommand*{\lhead}[2][{}]{
18 \newcommand*{\chead}[2][{}]{
19 \newcommand*{\rhead}[2][{}]{
20 \newcommand*{\lfoot}[2][{}]{
21 \newcommand*{\cfoot}[2][{}]{
22 \newcommand*{\rfoot}[2][{}]{
23
24 \newcommand{\nouppercase}[1]{#1}
25
26 \NewDocumentCommand{\fancycenter}{o o m m}{
27
28 \NewDocumentCommand{\newpagestyle}{m o m}{
29
30 \newcommand*{\iffloatpage}[2]{#2}
31 \newcommand*{\ifftopfloat}[2]{#2}
32 \newcommand*{\iffbotfloat}[2]{#2}

```

---

File 283 **lwarp-nccfoots.sty**

§ 386      Package **nccfoots**

*(Emulates or patches code by ALEXANDER I. ROZHENKO.)*

Pkg nccfoots nccfoots is used as-is, and emulated for MATHJAX.

for HTML output: 1 \LWR@ProvidesPackagePass{nccfoots}[2005/02/03]



For MATHJAX. There is no way to test for an empty argument, so the mark is not automatically duplicated.

```
2 \begin{warpMathJax}
3 \CustomizeMathJax{\newcommand{\Footnotemark}[1]{{}^{\mathrm{#1}}}}
4 \CustomizeMathJax{\newcommand{\Footnote}[2]{\Footnotemark{#1}}}
5 \end{warpMathJax}
```

---

File 284 **lwarp-nccmath.sty**

§ 387 Package **nccmath**

*(Emulates or patches code by ALEXANDER I. ROZHENKO.)*

Pkg nccmath nccmath is patched for use by lwarp, and emulated for MATHJAX.

for HTML output: 1 \LWR@ProvidesPackagePass{nccmath}[2006/01/20]

```
2 \let\LWR@origeqnarray\eqnarray
3 \let\LWR@origendeqnarray\endeqnarray
4
5 \csletcs{LWR@origeqnarraystar}{eqnarray*}
6 \csletcs{LWR@origendeqnarraystar}{endeqnarray*}
7
8 \RenewEnviron{eqnarray}
9 {%
10
11 \LWR@eqnarrayfactor
12
13 }
14
15 \RenewEnviron{eqnarray*}
16 {%
17
18 \begingroup
19 \csletcs{LWR@origeqnarray}{LWR@origeqnarraystar}
20 \csletcs{LWR@origendeqnarray}{LWR@origendeqnarraystar}
21 \boolfalse{LWR@numbereqnarray}
22 \LWR@eqnarrayfactor
23 \endgroup
24
25 }
26
27 \def\eqs{%
28 \@ifstar\LWR@nccmath@eqsstar\LWR@nccmath@eqs%
29 }
30 \newcommand*{\LWR@nccmath@eqsstar}[2][\begin{eqnarray*}#2\end{eqnarray*}]
31 \newcommand*{\LWR@nccmath@eqs}[2][\begin{eqnarray}#2\end{eqnarray}]
32
33 \begin{warpMathJax}
```

```

34 \CustomizeMathJax{\renewcommand{\intertext}[2][\text{#2}\notag \{}
35 \CustomizeMathJax{\newenvironment{fleqn}[1][\{}{\}}
36 \CustomizeMathJax{\newenvironment{ceqn}[\]}{\}}
37 \CustomizeMathJax{\newenvironment{darray}[2][c]{\begin{array}[#1]{#2}}{\end{array}}}
38 \CustomizeMathJax{\newcommand{\dmulticolumn}[3]{#3}}

```

As of v0.86, MATHJAX v3 does not offer `\*`, so the unstarred version is used here.

```

39 \CustomizeMathJax{\newcommand{\LWRnrnstar}[1][0.5ex]{\{[1]}}
40 \CustomizeMathJax{\newcommand{\nr}{\ifstar\LWRnrnstar\LWRnrnstar}}
41
42 \CustomizeMathJax{\newcommand{\mrel}[1]{\begin{aligned}#1\end{aligned}}}
43 \CustomizeMathJax{\newcommand{\underrel}[2]{\underset{#2}{#1}}}
44 \CustomizeMathJax{\newcommand{\medmath}[1]{#1}}
45 \CustomizeMathJax{\newcommand{\medop}[1]{#1}}
46 \CustomizeMathJax{\newcommand{\medint}[1]{#1}}
47 \CustomizeMathJax{\newcommand{\medintcorr}[1]{#1}}
48 \CustomizeMathJax{\newcommand{\mfrac}[2]{\frac{#1}{#2}}}
49 \CustomizeMathJax{\newcommand{\mbinom}[2]{\binom{#1}{#2}}}
50 \CustomizeMathJax{\newenvironment{mmatrix}{\begin{matrix}}{\end{matrix}}}

51 \CustomizeMathJax{\newcommand{\displaybreak}[1][\]}{\}}

```

`\eq`, `\eqs`, `\eqalign` are created by L<sup>A</sup>T<sub>E</sub>X, not MATHJAX.

```
52 \end{warpMathJax}
```

---

File 285 **lwarp-needspace.sty**

§ 388      Package **needspace**

*(Emulates or patches code by PETER WILSON.)*

Pkg    needspace    needspace is ignored.

for HTML output:    Discard all options for lwarp-needspace:

```

1 \LWR@ProvidesPackageDrop{needspace}[2010/09/12]
2
3 \DeclareDocumentCommand{\needspace}{m}{}
4 \DeclareDocumentCommand{\Needspace}{s m}{}

```

---

File 286 **lwarp-nextpage.sty**

§ 389      Package **nextpage**

*(Emulates or patches code by PETER WILSON.)*

Pkg    nextpage    nextpage is ignored.

**for HTML output:** Discard all options for `lwarp-nextpage`.

```
1 \LWR@ProvidesPackageDrop{nextpage}[2009/09/03]

2 \DeclareDocumentCommand{\cleartoevenpage}{o}{}
3 \DeclareDocumentCommand{\movetoevenpage}{o}{}
4 \DeclareDocumentCommand{\cleartooddpge}{o}{}
5 \DeclareDocumentCommand{\movetooddpge}{o}{}

```

---

File 287 **lwarp-nfssext-cfr.sty**

§ 390 Package **nfssext-cfr**

*(Emulates or patches code by CLEA F. REES.)*

Pkg nfssext-cfr **nfssext-cfr** is emulated in HTML, and used as-is in print output.

Results depend on the browser's font.

**for HTML output:** 1 \LWR@ProvidesPackagePass{nfssext-cfr}[2017/03/28]

Macros which are present in the `lwarp` core are commented out here.

```
2 \newrobustcmd{\LWR@HTML@lnstyle}{}
3 \newrobustcmd{\LWR@HTML@osstyle}{\LWR@HTML@scshape}
4 \newrobustcmd{\LWR@HTML@instyle}{}
5 \newrobustcmd{\LWR@HTML@sustyle}{}
6 \newrobustcmd{\LWR@HTML@swstyle}{}
7 \newrobustcmd{\LWR@HTML@pstyle}{}
8 \newrobustcmd{\LWR@HTML@tistyle}{}
9 \newrobustcmd{\LWR@HTML@ostyle}{\LWR@HTML@scshape}
10 \newrobustcmd{\LWR@HTML@postyle}{\LWR@HTML@scshape}
11 \newrobustcmd{\LWR@HTML@ltstyle}{}
12 \newrobustcmd{\LWR@HTML@ofstyle}{}
13 \newrobustcmd{\LWR@HTML@altstyle}{}
14 \newrobustcmd{\LWR@HTML@regstyle}{}
15 \newrobustcmd{\LWR@HTML@embosstyle}{}
16 \newrobustcmd{\LWR@HTML@ornamentalstyle}{}
17 \newrobustcmd{\LWR@HTML@qtstyle}{}
18 \newrobustcmd{\LWR@HTML@shstyle}{}
19 \newrobustcmd{\LWR@HTML@swashstyle}{}
20 \newrobustcmd{\LWR@HTML@tmstyle}{\renewcommand*{\LWR@family}{tt}}
21 \newrobustcmd{\LWR@HTML@tvstyle}{\renewcommand*{\LWR@family}{tt}}
22 \newrobustcmd{\LWR@HTML@tstyle}{}
23 \newrobustcmd{\LWR@HTML@lstyle}{}
24 \newrobustcmd{\LWR@HTML@tlstyle}{}
25 \newrobustcmd{\LWR@HTML@plstyle}{}
26 \newrobustcmd{\LWR@HTML@tostyle}{\LWR@HTML@scshape}
27 % \newrobustcmd{\LWR@HTML@sishape}{}
28 \newrobustcmd{\LWR@HTML@olshape}{}
29 \newrobustcmd{\LWR@HTML@scolshape}{}
30 \newrobustcmd{\LWR@HTML@ushape}{}

```

```

31 \newrobustcmd{\LWR@HTML@scushape}{}
32 \newrobustcmd{\LWR@HTML@uishape}{\LWR@HTML@itshape}
33 \newrobustcmd{\LWR@HTML@rishape}{}
34 \newrobustcmd{\LWR@HTML@regwidth}{}
35 \newrobustcmd{\LWR@HTML@nwidth}{}
36 \newrobustcmd{\LWR@HTML@cdwidth}{}
37 \newrobustcmd{\LWR@HTML@ecwidth}{}
38 \newrobustcmd{\LWR@HTML@ucwidth}{}
39 \newrobustcmd{\LWR@HTML@etwidth}{}
40 \newrobustcmd{\LWR@HTML@epwidth}{}
41 \newrobustcmd{\LWR@HTML@exwidth}{}
42 \newrobustcmd{\LWR@HTML@uxwidth}{}
43 \newrobustcmd{\LWR@HTML@mbweight}{\renewcommand*{\LWR@f@series}{md}}
44 \newrobustcmd{\LWR@HTML@dbweight}{\renewcommand*{\LWR@f@series}{db}}
45 \newrobustcmd{\LWR@HTML@sbweight}{\renewcommand*{\LWR@f@series}{sb}}
46 % \newrobustcmd{\LWR@HTML@ebweight}{\renewcommand*{\LWR@f@series}{eb}}
47 \newrobustcmd{\LWR@HTML@ubweight}{\renewcommand*{\LWR@f@series}{ub}}
48 % \newrobustcmd{\LWR@HTML@lgweight}{\renewcommand*{\LWR@f@series}{lg}}
49 \newrobustcmd{\LWR@HTML@elweight}{\renewcommand*{\LWR@f@series}{el}}
50 \newrobustcmd{\LWR@HTML@ulweight}{\renewcommand*{\LWR@f@series}{ul}}
51 % \newrobustcmd{\LWR@HTML@itshape}{}
52 % \newrobustcmd{\LWR@HTML@scshape}{}
53 % \newrobustcmd{\LWR@HTML@upshape}{}
54 \newrobustcmd{\LWR@HTML@dfshape}{}
55
56 \ifdef{\LWR@HTML@swshape}{}{% duplicated by fontaxes
57 \newrobustcmd{\LWR@HTML@swshape}{}
58 }
59
60 \newrobustcmd{\LWR@HTML@ornament}[1]{}
61
62 \LWR@formatted{lnstyle}
63 \LWR@formatted{osstyle}
64 \LWR@formatted{instyle}
65 \LWR@formatted{sustyle}
66 \LWR@formatted{swstyle}
67 \LWR@formatted{pstyle}
68 \LWR@formatted{tistyle}
69 \LWR@formatted{ostyle}
70 \LWR@formatted{postyle}
71 \LWR@formatted{ltstyle}
72 \LWR@formatted{ofstyle}
73 \LWR@formatted{altstyle}
74 \LWR@formatted{regstyle}
75 \LWR@formatted{embossstyle}
76 \LWR@formatted{ornamentalstyle}
77 \LWR@formatted{qtstyle}
78 \LWR@formatted{shstyle}
79 \LWR@formatted{swashstyle}
80 \LWR@formatted{tmstyle}
81 \LWR@formatted{tvstyle}
82 \LWR@formatted{tstyle}
83 \LWR@formatted{lstyle}
84 \LWR@formatted{tlstyle}
85 \LWR@formatted{plstyle}

```

```

86 \LWR@formatted{tostyle}
87 % \LWR@formatted{sisshape}
88 \LWR@formatted{olshape}
89 \LWR@formatted{scolshape}
90 \LWR@formatted{ushape}
91 \LWR@formatted{scushape}
92 \LWR@formatted{uishape}
93 \LWR@formatted{rishape}
94 \LWR@formatted{regwidth}
95 \LWR@formatted{nwwidth}
96 \LWR@formatted{cdwidth}
97 \LWR@formatted{ecwidth}
98 \LWR@formatted{ucwidth}
99 \LWR@formatted{etwidth}
100 \LWR@formatted{epwidth}
101 \LWR@formatted{exwidth}
102 \LWR@formatted{uxwidth}
103 \LWR@formatted{mbweight}
104 \LWR@formatted{dbweight}
105 \LWR@formatted{sbweight}
106 % \LWR@formatted{ebweight}
107 \LWR@formatted{ubweight}
108 % \LWR@formatted{lgweight}
109 \LWR@formatted{elweight}
110 \LWR@formatted{ulweight}
111 \LWR@formatted{itshape}% adapt to the new print version
112 \LWR@formatted{scshape}% adapt to the new print version
113 \LWR@formatted{upshape}% adapt to the new print version
114 \LWR@formatted{dfshape}
115
116 \ifdef{\LWR@HTML@swshape}{ }{% duplicated by fontaxes
117 \LWR@formatted{swshape}
118 }
119
120 \LWR@formatted{ornament}

121 \FilenameNullify{%
122 \LetLtxMacro\lnstyle\@empty%
123 \LetLtxMacro\osstyle\@empty%
124 \LetLtxMacro\instyle\@empty%
125 \LetLtxMacro\sustyle\@empty%
126 \LetLtxMacro\swstyle\@empty%
127 \LetLtxMacro\pstyle\@empty%
128 \LetLtxMacro\tistyle\@empty%
129 \LetLtxMacro\ostyle\@empty%
130 \LetLtxMacro\postyle\@empty%
131 \LetLtxMacro\ltstyle\@empty%
132 \LetLtxMacro\ofstyle\@empty%
133 \LetLtxMacro\altstyle\@empty%
134 \LetLtxMacro\regstyle\@empty%
135 \LetLtxMacro\embosstyle\@empty%
136 \LetLtxMacro\ornamentalstyle\@empty%
137 \LetLtxMacro\qtstyle\@empty%
138 \LetLtxMacro\shstyle\@empty%
139 \LetLtxMacro\swashstyle\@empty%

```

```

140 \LetLtxMacro\tmlstyle\@empty%
141 \LetLtxMacro\tmlstyle\@empty%
142 \LetLtxMacro\tmlstyle\@empty%
143 \LetLtxMacro\tmlstyle\@empty%
144 \LetLtxMacro\tmlstyle\@empty%
145 \LetLtxMacro\tmlstyle\@empty%
146 \LetLtxMacro\tmlstyle\@empty%
147 % \LetLtxMacro\tmlstyle\@empty%
148 \LetLtxMacro\tmlstyle\@empty%
149 \LetLtxMacro\tmlstyle\@empty%
150 \LetLtxMacro\tmlstyle\@empty%
151 \LetLtxMacro\tmlstyle\@empty%
152 \LetLtxMacro\tmlstyle\@empty%
153 \LetLtxMacro\tmlstyle\@empty%
154 \LetLtxMacro\tmlstyle\@empty%
155 \LetLtxMacro\tmlstyle\@empty%
156 \LetLtxMacro\tmlstyle\@empty%
157 \LetLtxMacro\tmlstyle\@empty%
158 \LetLtxMacro\tmlstyle\@empty%
159 \LetLtxMacro\tmlstyle\@empty%
160 \LetLtxMacro\tmlstyle\@empty%
161 \LetLtxMacro\tmlstyle\@empty%
162 \LetLtxMacro\tmlstyle\@empty%
163 \LetLtxMacro\tmlstyle\@empty%
164 \LetLtxMacro\tmlstyle\@empty%
165 \LetLtxMacro\tmlstyle\@empty%
166 % \LetLtxMacro\tmlstyle\@empty%
167 \LetLtxMacro\tmlstyle\@empty%
168 % \LetLtxMacro\tmlstyle\@empty%
169 \LetLtxMacro\tmlstyle\@empty%
170 \LetLtxMacro\tmlstyle\@empty%
171 % \LetLtxMacro\tmlstyle\@empty%
172 % \LetLtxMacro\tmlstyle\@empty%
173 % \LetLtxMacro\tmlstyle\@empty%
174 \LetLtxMacro\tmlstyle\@empty%
175 \LetLtxMacro\tmlstyle\@empty%
176 \LetLtxMacro\tmlstyle\@empty%
177 }
178
179 \newrobustcmd{\LWR@HTML@textln}[1]{\InlineClass{textln}{#1}}
180 \newrobustcmd{\LWR@HTML@textos}[1]{\textsc{#1}}
181 \newrobustcmd{\LWR@HTML@textin}[1]{#1}
182 \newrobustcmd{\LWR@HTML@textsu}[1]{#1}
183 % \newrobustcmd{\LWR@HTML@textsi}[1]{#1}
184 \newrobustcmd{\LWR@HTML@textdf}[1]{#1}
185
186 \ifdef{\LWR@HTML@textsw}{% duplicated by fontaxes
187 \newrobustcmd{\LWR@HTML@textsw}[1]{#1}
188 }
189
190 \newrobustcmd{\LWR@HTML@textti}[1]{#1}
191 \newrobustcmd{\LWR@HTML@textlt}[1]{#1}
192 \newrobustcmd{\LWR@HTML@textof}[1]{#1}
193 \newrobustcmd{\LWR@HTML@textalt}[1]{#1}
194 \newrobustcmd{\LWR@HTML@textreg}[1]{#1}

```

```
195 \newrobustcmd{\LWR@HTML@emboss}[1]{#1}
196 \newrobustcmd{\LWR@HTML@textorn}[1]{#1}
197 \newrobustcmd{\LWR@HTML@textqt}[1]{#1}
198 \newrobustcmd{\LWR@HTML@textsh}[1]{#1}
199 \newrobustcmd{\LWR@HTML@texttm}[1]{\texttt{#1}}
200 \newrobustcmd{\LWR@HTML@texttv}[1]{\texttt{#1}}
201 \newrobustcmd{\LWR@HTML@textl}[1]{\InlineClass{textln}{#1}}
202 \newrobustcmd{\LWR@HTML@texto}[1]{\textsc{#1}}
203 \newrobustcmd{\LWR@HTML@textp}[1]{\InlineClass{textp}{#1}}
204 \newrobustcmd{\LWR@HTML@textt}[1]{\InlineClass{textt}{#1}}
205 \newrobustcmd{\LWR@HTML@textpl}[1]{#1}
206 \newrobustcmd{\LWR@HTML@textpo}[1]{\textsc{#1}}
207 \newrobustcmd{\LWR@HTML@texttl}[1]{\InlineClass{textln}{#1}}
208 \newrobustcmd{\LWR@HTML@textto}[1]{\textsc{#1}}
209 \newrobustcmd{\LWR@HTML@textol}[1]{#1}
210 \newrobustcmd{\LWR@HTML@textswash}[1]{#1}
211 \newrobustcmd{\LWR@HTML@textu}[1]{#1}
212 \newrobustcmd{\LWR@HTML@textscu}[1]{#1}
213 \newrobustcmd{\LWR@HTML@textui}[1]{\LWR@HTML@textit{#1}}
214 \newrobustcmd{\LWR@HTML@textri}[1]{#1}
215 \newrobustcmd{\LWR@HTML@textnw}[1]{#1}
216 \newrobustcmd{\LWR@HTML@textcd}[1]{#1}
217 \newrobustcmd{\LWR@HTML@textec}[1]{#1}
218 \newrobustcmd{\LWR@HTML@textuc}[1]{#1}
219 \newrobustcmd{\LWR@HTML@textet}[1]{#1}
220 \newrobustcmd{\LWR@HTML@textep}[1]{#1}
221 \newrobustcmd{\LWR@HTML@textex}[1]{#1}
222 \newrobustcmd{\LWR@HTML@textux}[1]{#1}
223 \newrobustcmd{\LWR@HTML@textrw}[1]{#1}
224 \newrobustcmd{\LWR@HTML@textmb}[1]{\LWR@HTML@mbweight\InlineClass{textmb}{#1}}
225 \newrobustcmd{\LWR@HTML@textdb}[1]{\LWR@HTML@dbweight\InlineClass{textdb}{#1}}
226 \newrobustcmd{\LWR@HTML@textsb}[1]{\LWR@HTML@sbweight\InlineClass{textsb}{#1}}
227 % \newrobustcmd{\LWR@HTML@texteb}[1]{#1}
228 \newrobustcmd{\LWR@HTML@textub}[1]{\LWR@HTML@ubweight\InlineClass{textub}{#1}}
229 % \newrobustcmd{\LWR@HTML@textlg}[1]{#1}
230 \newrobustcmd{\LWR@HTML@textel}[1]{\LWR@HTML@elweight\InlineClass{textel}{#1}}
231 \newrobustcmd{\LWR@HTML@textul}[1]{\LWR@HTML@ulweight\InlineClass{textul}{#1}}
232
233 \LWR@formatted{textln}
234 \LWR@formatted{textos}
235 \LWR@formatted{textin}
236 \LWR@formatted{textsu}
237 % \LWR@formatted{textsi}
238 \LWR@formatted{textdf}
239 \LWR@formatted{textsw}
240 \LWR@formatted{textti}
241 \LWR@formatted{textlt}
242 \LWR@formatted{textof}
243 \LWR@formatted{textalt}
244 \LWR@formatted{textreg}
245 \LWR@formatted{emboss}
246 \LWR@formatted{textorn}
247 \LWR@formatted{textqt}
248 \LWR@formatted{textsh}
249 \LWR@formatted{texttm}
```

```
250 \LWR@formatted{texttv}
251 \LWR@formatted{textl}
252 \LWR@formatted{texto}
253 \LWR@formatted{textp}
254 \LWR@formatted{textt}
255 \LWR@formatted{textpl}
256 \LWR@formatted{textpo}
257 \LWR@formatted{texttl}
258 \LWR@formatted{textto}
259 \LWR@formatted{textol}
260 \LWR@formatted{textswash}
261 \LWR@formatted{textu}
262 \LWR@formatted{textscu}
263 \LWR@formatted{textui}
264 \LWR@formatted{textri}
265 \LWR@formatted{textnw}
266 \LWR@formatted{textcd}
267 \LWR@formatted{textec}
268 \LWR@formatted{textuc}
269 \LWR@formatted{textet}
270 \LWR@formatted{textep}
271 \LWR@formatted{textex}
272 \LWR@formatted{textux}
273 \LWR@formatted{textrw}
274 \LWR@formatted{textmb}
275 \LWR@formatted{textdb}
276 \LWR@formatted{textsb}
277 % \LWR@formatted{texteb}
278 \LWR@formatted{textub}
279 % \LWR@formatted{textlg}
280 \LWR@formatted{textel}
281 \LWR@formatted{textul}
282
283 \FilenameNullify{%
284 \LetLtxMacro\textln\@firstofone%
285 \LetLtxMacro\textos\@firstofone%
286 \LetLtxMacro\textin\@firstofone%
287 \LetLtxMacro\textsu\@firstofone%
288 % \LetLtxMacro\textsi\@firstofone%
289 \LetLtxMacro\textdf\@firstofone%
290 \LetLtxMacro\textsw\@firstofone%
291 \LetLtxMacro\textti\@firstofone%
292 \LetLtxMacro\textlt\@firstofone%
293 \LetLtxMacro\textof\@firstofone%
294 \LetLtxMacro\textalt\@firstofone%
295 \LetLtxMacro\textreg\@firstofone%
296 \LetLtxMacro\emboss\@firstofone%
297 \LetLtxMacro\textorn\@firstofone%
298 \LetLtxMacro\textqt\@firstofone%
299 \LetLtxMacro\textsh\@firstofone%
300 \LetLtxMacro\texttm\@firstofone%
301 \LetLtxMacro\texttv\@firstofone%
302 \LetLtxMacro\textl\@firstofone%
303 \LetLtxMacro\texto\@firstofone%
```

```

304 \LetLtxMacro\textp\@firstofone%
305 \LetLtxMacro\textt\@firstofone%
306 \LetLtxMacro\textpl\@firstofone%
307 \LetLtxMacro\textpo\@firstofone%
308 \LetLtxMacro\texttl\@firstofone%
309 \LetLtxMacro\textto\@firstofone%
310 \LetLtxMacro\textol\@firstofone%
311 \LetLtxMacro\textswash\@firstofone%
312 \LetLtxMacro\textu\@firstofone%
313 \LetLtxMacro\textscu\@firstofone%
314 \LetLtxMacro\textui\@firstofone%
315 \LetLtxMacro\textri\@firstofone%
316 \LetLtxMacro\textnw\@firstofone%
317 \LetLtxMacro\textcd\@firstofone%
318 \LetLtxMacro\textec\@firstofone%
319 \LetLtxMacro\textuc\@firstofone%
320 \LetLtxMacro\textet\@firstofone%
321 \LetLtxMacro\textep\@firstofone%
322 \LetLtxMacro\textex\@firstofone%
323 \LetLtxMacro\textux\@firstofone%
324 \LetLtxMacro\textrw\@firstofone%
325 \LetLtxMacro\textmb\@firstofone%
326 \LetLtxMacro\textdb\@firstofone%
327 \LetLtxMacro\textsb\@firstofone%
328 % \LetLtxMacro\texteb\@firstofone%
329 \LetLtxMacro\textub\@firstofone%
330 % \LetLtxMacro\textlg\@firstofone%
331 \LetLtxMacro\textel\@firstofone%
332 \LetLtxMacro\textul\@firstofone%
333 }
334
335 \providecommand*\{zeroslash}{0}
336 \newrobustcmd*\LWR@HTML@zeroslash}{0}
337 \LWR@formatted{zeroslash}

```

---

File 288 **lwarp-nicefrac.sty**

§ 391 Package **nicefrac**

*(Emulates or patches code by AXEL REICHERT.)*

Pkg nicefrac nicefrac is patched for use by lwarp.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{nicefrac}[1998/08/04]

2 \DeclareRobustCommand*\LWR@HTML@UnitsNiceFrac}[3][[]]{%
3 {% localize font selection
4 #1{%
5 \LWR@textcurrentfont{%
6 \InlineClass{numerator}{#2}%
7 /%
8 \InlineClass{denominator}{#3}%
9 }%

```

```

10 }%
11 }%
12 }
13
14 \LWR@formatted{@UnitsNiceFrac}
15
16 \DeclareRobustCommand*\LWR@HTML@@UnitsUglyFrac}[3][[%
17 {% localize font selection
18 #1{\LWR@textcurrentfont{#2/#3}}%
19 }%
20 }
21
22 \LWR@formatted{@UnitsUglyFrac}

```

For Mathjax:

```

23 \begin{warpMathJax}
24 \CustomizeMathJax{\newcommand{\nicefrac}[3][\{#2/#3\}}
25 \end{warpMathJax}

```

---

File 289 **lwarp-niceframe.sty**

§ 392      Package **niceframe**

Pkg   niceframe   niceframe is emulated.

**for HTML output:**    1 \LWR@ProvidesPackageDrop{niceframe}% the original date is in yyyy/dd/mm format

```

2 \newcommand{\LWR@niceframe}[3]{%
3 \begin{LWR@setvirtualpage}*%
4 \setlength{\LWR@templengthone}{#1}%
5 \begin{BlockClass}[max-width:\LWR@printlength{\LWR@templengthone}]{#3}%
6 #2
7 \end{BlockClass}%
8 \end{LWR@setvirtualpage}%
9 }
10
11 \newcommand{\niceframe}[2][\textwidth]{\LWR@niceframe{#1}{#2}{niceframe}}
12 \newcommand{\curlyframe}[2][\textwidth]{\LWR@niceframe{#1}{#2}{curlyframe}}
13 \newcommand{\artdecoframe}[2][\textwidth]{\LWR@niceframe{#1}{#2}{artdecoframe}}
14
15 \newcommand{\generalframe}[9]{\LWR@niceframe{\textwidth}{#9}{generalframe}}

```

---

File 290 **lwarp-noitcrul.sty**

§ 393      Package **noitcrul**

*(Emulates or patches code by PAUL EBERMANN.)*

Pkg noitcrul noitcrul is used as-is for SVG and emulated for MATHJAX.

for HTML output:

```

1 \LWR@ProvidesPackagePass{noitcrul}[2006/04/11]

2 \begin{warpMathJax}
3 \CustomizeMathJax{\newcommand{\noitUnderline}[1]{\underline{#1}\!}}
4 \end{warpMathJax}

```

---

## File 291 **lwarp-nolbreaks.sty**

### \$ 394 Package **nolbreaks**

*(Emulates or patches code by DONALD ARSENEAU.)*

Pkg nolbreaks nolbreaks is emulated.

for HTML output:

```

1 \LWR@ProvidesPackageDrop{nolbreaks}[2012/05/31]

2 \NewDocumentCommand{\nolbreaks}{s m}{\InlineClass{nolbreaks}{#2}}

```

---

## File 292 **lwarp-nomenc1.sty**

### \$ 395 Package **nomenc1**

*(Emulates or patches code by BORIS VEYTSMAN, BERND SCHANDL, LEE NETHERTON, CV RADHAKRISHNAN.)*

Pkg nomenc1 nomenc1 is patched for use by lwarp.

To process the HTML nomenclature:

```
makeindex <project>_html.nlo -s nomenc1.list -o <project>_html.nls
```

for HTML output:

```

1 \LWR@ProvidesPackagePass{nomenc1}[2005/09/22]

\BaseJobname is added to the label in case xr or xr-hyper are used.

2 \def\@@@nomenclature[#1]#2#3{%
3 \def\@tempa{#2}\def\@tempb{#3}%
4 \protected@write\@nomenclaturefile{%
5 {\string\@nomenclatureentry{#1\nom@verb\@tempa @[\nom@verb\@tempa]}%
6 \begingroup\nom@verb\@tempb\protect\nomeqref{\theequation}%
7 \nompageref{\theLWR@previousautopagelabel}}% \lwarp
8 \endgroup
9 \@esphack}
10
11 \renewcommand*{\pagedeclaration}[1]{, \nameref{\BaseJobname-autopage-#1}}%

```

---

File 293 **lwarp-nonfloat.sty**

§ 396      Package **nonfloat**

*(Emulates or patches code by KAI RASCHER.)*

Pkg   nonfloat   nonfloat is emulated.

**for HTML output:**    1 \LWR@ProvidesPackageDrop{nonfloat}[1999/07/05]

2 \LetLtxMacro\topcaption\caption  
 3 \newcommand{\figcaption}{\def\@capttype{figure}\caption}  
 4 \newcommand{\tabcaption}{\def\@capttype{table}\topcaption}  
 5 \newenvironment{narrow}[2]{}{}

---

File 294 **lwarp-nonumonpart.sty**

§ 397      Package **nonumonpart**

Pkg   nonumonpart   nonumonpart is ignored.

**for HTML output:**    1 \LWR@ProvidesPackageDrop{nonumonpart}[2011/04/15]

---

File 295 **lwarp-nopageno.sty**

§ 398      Package **nopageno**

Pkg   nopageno   nopageno is ignored.

**for HTML output:**    1 \LWR@ProvidesPackageDrop{nopageno}[1989/01/01]

---

File 296 **lwarp-notes.sty**

§ 399      Package **notes**

Pkg   notes   notes is emulated.

**for HTML output:**    1 \LWR@ProvidesPackageDrop{notes}[2002/10/29]

2 \newcommand\*{\LWR@notes@onenote}[2]{%  
 3 \newenvironment{#1}  
 4    {

---

```

5 \BlockClass{notes#1}
6 \begin{BlockClass}{notesicon}\textcircled{~#2~}\end{BlockClass}
7 \BlockClass{notescontents}
8 }
9 {\endBlockClass\endBlockClass}
10 }
11
12 \LWR@notes@onenote{importantnote}{!}
13
14 \LWR@notes@onenote{warningnote}{--}
15
16 \LWR@notes@onenote{informationnote}{i}

```

---

File 297 **lwarp-notespages.sty**

\$ 400     Package **notespages**

Pkg   notespages   notespages is ignored.

for HTML output:    1 \LWR@ProvidesPackageDrop{notespages}[2016/08/21]

```

2 \newcommand*{\nnotesname}{}
3 \newcommand*{\nnotestext}{}
4 \newcommand*{\remainingtextheight}{}
5 \newdimen\remainingtextheight
6 \newcommand*{\notestitletext}{}
7 \newcommand*{\notesareatext}{}
8 \newcommand*{\npnpinfo}[1]{}
9 \newcommand*{\tracingnmarks}{}
10 \newcommand*{\notespage}[1][{}]{
11 \newcommand*{\notespages}[1][{}]{
12 \newcommand*{\notesfill}[1][{}]{
13 \newcommand*{\setnotespages}[1]{
14 \newcommand*{\definotesoption}[2]{
15 \newcommand{\definotesstyle}[2]{
16 \newcommand{\definetitlestyle}[2]{
17 \newcommand{\npnpatchchapter}[1]{
18 \newcommand{\npunpatchchapter}{}

```

---

File 298 **lwarp-nowidow.sty**

\$ 401     Package **nowidow**

(Emulates or patches code by RAPHAËL PINSON.)

Pkg   nowidow   nowidow is ignored.

for HTML output:    Discard file options for lwarp-nowidow [2011/09/20]

```
\nowidow [⟨lines⟩]
\setnowidow [⟨lines⟩]

2 \newcommand*{\nowidow}[1][{}]{
3 \newcommand*{\setnowidow}[1][{}]{

\noclub [⟨lines⟩]
\setnoclub [⟨lines⟩]

4 \newcommand*{\noclub}[1][{}]{
5 \newcommand*{\setnoclub}[1][{}]{
```

File 299 **lwarp-ntheorem.sty**



§ 402     Package **ntheorem**  
*(Emulates or patches code by WOLFGANG MAY, ANDREAS SCHEDLER.)*

Pkg    ntheorem    ntheorem is patched for use by lwarp.

Table 17: Ntheorem package — css styling of theorems and proofs

**Theorem:** <div> of class theorembody<theoremstyle>  
**Theorem Header:** <span> of class theoremheader<style>  
where <theoremstyle> is plain, break, etc.

§ 402.1    **Limitations**

-  **Font control**
- This conversion is not total. Font control is via css, and the custom L<sup>A</sup>T<sub>E</sub>X font settings are ignored.
-  **cref reference format undefined**
- If the print version does not use `cleveref`, place all `\theoremstyle` and `\newtheorem` declarations in the preamble inside `\AtBeginDocument`.<sup>19</sup> For some theorems, it may also be required to add inside `\AtBeginDocument` something such as:

```
\AtBeginDocument{ % if not using cleveref package
 \theoremstyle{definition}
 \newtheorem{dtheorem}{Definition}
 . . .
 \usepackage{etoolbox} % for \ifdef
 \ifdef{\cref}{
 \crefname{Proof}{Proof}{Proofs}
 }{
 }
}
```

<sup>19</sup>lwarp uses cleveref for the HTML conversion, and loads cleveref \AtEndPreamble, just before \AtBeginDocument.

⚠ **Equation numbering** `ntheorem` has a bug with equation numbering in  $\mathcal{AMS}$  environments when the option `thref` is used. `lwarp` does not share this bug, so equations with `\split`, etc, are numbered correctly with `lwarp`'s HTML output, but not with the print output. It is recommended to use `cleveref` instead of `ntheorem`'s `thref` option.

## § 402.2 Options

Options `amsthm` or `standard` choose which set of theorems and proofs to initialize.

⚠ **Disabled options** The options `thmmarks` and `amsmath` are disabled, since they heavily modify the underlying math code. Theorem marks are emulated. The AMS-math modifications are not done.

Option `thref` is disabled because `cleveref` functions are used instead. `\thref` is emulated.

Option `hyperref` is disabled because `lwarp` emulated `hyperref`.

**for HTML output:** Some disabled options:

```

1 \DeclareOption{thref}{
2 \AtEndDocument{
3 \PackageWarningNoLine{lwarp}{%
4 Lwarp uses cleveref, which takes over ntheorem's\MessageBreak
5 referencing, including
6 \protect\label \space and \protect\thref.\MessageBreak
7 Cleveref does not accept ntheorem's optional\MessageBreak
8 argument for \protect\label, so it will appear\MessageBreak
9 in the text. It is recommended to remove the\MessageBreak
10 thref option, \protect\usepackage{cleveref} instead,\MessageBreak
11 and remove any trailing optional arguments for \protect\label%
12 }%
13 }
14 }
15
16
17 \newbool{LWR@ntheoremmarks}
18 \boolfalse{LWR@ntheoremmarks}
19
20 \DeclareOption{thmmarks}{
21 \booltrue{LWR@ntheoremmarks}
22 \newif\ifsetendmark\setendmarktrue
23 }
24
25
26 \newbool{LWR@theoremamsthm}
27 \boolfalse{LWR@theoremamsthm}
28
29 \DeclareOption{amsthm}{\booltrue{LWR@theoremamsthm}}
30
31
32 \DeclareOption{amsmath}{}
33 \DeclareOption{hyperref}{}
34
35 \LWR@ProvidesPackagePass{ntheorem}[2011/08/15]
```

### § 402.3 Remembering the theorem style

Storage for the style being used for new theorems.

```

36 \newcommand{\LWR@newtheoremstyle}{plain}

37 \AtBeginDocument{
38 \ifpackageloaded{cleveref}{
39 \gdef\@thm#1#2#3{%
40 \if@thmmarks
41 \stepcounter{end\InTheoType ctr}%
42 \fi
43 \renewcommand{\InTheoType}{#1}%
44 \if@thmmarks
45 \stepcounter{curr#1ctr}%
46 \setcounter{end#1ctr}{0}%
47 \fi
48 \refstepcounter[#1]{#2}% <<< cleveref modification
49 \theorem@prework
50 \LWR@forcenewpage% lwarp
51 \BlockClass{theorembody#1}%\LWR@thisthmstyle% lwarp
52 \trivlist % latex's \trivlist, calling latex's \@trivlist unchanged
53 \ifuse@newframeskips % cf. latex.ltx for topsepadd: \@trivlist
54 \ifthm@inframe
55 \thm@topsep\theoreminframepreskipamount
56 \thm@topsepadd\theoreminframepostskipamount
57 \else
58 \thm@topsep\theorempreskipamount
59 \thm@topsepadd\theorem postskipamount
60 \fi
61 \else% oldframeskips
62 \thm@topsep\theorempreskipamount
63 \thm@topsepadd \theorem postskipamount
64 \ifvmode\advance\thm@topsepadd\partopsep\fi
65 \fi
66 \@topsep\thm@topsep
67 \@topsepadd\thm@topsepadd
68 \advance\linewidth -\theorem@indent
69 \advance\linewidth -\theorem@rightindent
70 \advance\@totalleftmargin \theorem@indent
71 \parshape \@ne \@totalleftmargin \linewidth
72 \@ifnextchar[{\@ythm{#1}{#2}{#3}}{\@xthm{#1}{#2}{#3}}
73 }
74 }{% not @ifpackageloaded{cleveref}
75 \gdef\@thm#1#2#3{%
76 \if@thmmarks
77 \stepcounter{end\InTheoType ctr}%
78 \fi
79 \renewcommand{\InTheoType}{#1}%
80 \if@thmmarks
81 \stepcounter{curr#1ctr}%
82 \setcounter{end#1ctr}{0}%
83 \fi
84 \refstepcounter{#2}%
85 \theorem@prework

```

```

86 \LWR@forcenewpage% lwarp
87 \BlockClass{theorembody#1}%\LWR@thisthmstyle% lwarp
88 \trivlist % latex's \trivlist, calling latex's \@trivlist unchanged
89 \ifuse@newframeskips % cf. latex.ltx for topsepadd: \@trivlist
90 \ifthm@inframe
91 \thm@topsep\theoremframepreskipamount
92 \thm@topsepadd\theoremframepostskipamount
93 \else
94 \thm@topsep\theorempreskipamount
95 \thm@topsepadd\theorempostskipamount
96 \fi
97 \else% oldframeskips
98 \thm@topsep\theorempreskipamount
99 \thm@topsepadd \theorempostskipamount
100 \ifvmode\advance\thm@topsepadd\partopsep\fi
101 \fi
102 \@topsep\thm@topsep
103 \@topsepadd\thm@topsepadd
104 \advance\linewidth -\theorem@indent
105 \advance\linewidth -\theorem@rightindent
106 \advance\@totalleftmargin \theorem@indent
107 \parshape \@ne \@totalleftmargin \linewidth
108 \@ifnextchar[\@ythm{#1}{#2}{#3}]{\@xthm{#1}{#2}{#3}}
109 }
110 }
111}% AtBeginDocument

```

Patched to remember the style being used for new theorems:

```

112 \gdef\theoremstyle#1{%
113 \@ifundefined{th#1}{\@warning
114 {Unknown theoremstyle '#1'. Using 'plain'}}%
115 \theorem@style{plain}
116 \renewcommand{\LWR@newtheoremstyle}{plain}% lwarp
117 }%
118 {
119 \theorem@style{#1}
120 \renewcommand{\LWR@newtheoremstyle}{#1}% lwarp
121 }
122 }

```

Patched to remember the style for this theorem type, and set it later when the environment is started.

```

123
124 \gdef\xnthm#1#2[#3]{%
125 \ifthm@tempif
126 \csedef{LWR@thmstyle#1}{\LWR@newtheoremstyle}% lwarp
127 \expandafter\@ifundefined{c#1}%
128 {\@definecounter{#1}}{}%
129 \@newctr{#1}[#3]%
130 \expandafter\xdef\csname the#1\endcsname{%
131 \expandafter\noexpand\csname the#3\endcsname \@thmcountersep
132 {\noexpand\csname\the\theoremnumbering\endcsname{#1}}}%
133 \expandafter\gdef\csname mkheader#1\endcsname

```

```

134 {\csname setparms@#1\endcsname
135 \@thm{#1}{#1}{#2}
136 }%
137 \global\@namedef{end#1}{\@endtheorem}
138 \AtBeginEnvironment{#1}{\edef\LWR@thisismstyle{\@nameuse{LWR@thmstyle#1}}}% lwarp
139 \fi
140 }
141
142 \gdef\@ynthm#1#2{%
143 \ifthm@tempif
144 \csedef{LWR@thmstyle#1}{\LWR@newtheoremstyle}% lwarp
145 \expandafter\@ifundefined{c@#1}%
146 {\@definecounter{#1}}{}%
147 \expandafter\xdef\csname the#1\endcsname
148 {\noexpand\csname\the\theoremnumbering\endcsname{#1}}%
149 \expandafter\gdef\csname mkheader@#1\endcsname
150 {\csname setparms@#1\endcsname
151 \@thm{#1}{#1}{#2}
152 }%
153 \global\@namedef{end#1}{\@endtheorem}
154 \AtBeginEnvironment{#1}{\edef\LWR@thisismstyle{\@nameuse{LWR@thmstyle#1}}}% lwarp
155 \fi
156 }
157
158 \gdef\@othm#1[#2]#3{%
159 \@ifundefined{c@#2}{\@nocounterr{#2}}%
160 {\ifthm@tempif
161 \csedef{LWR@thmstyle#1}{\LWR@newtheoremstyle}% lwarp
162 \global\@namedef{the#1}{\@nameuse{the#2}}%
163 \expandafter\protected@xdef\csname num@addtheoremline#1\endcsname{%
164 \noexpand\@num@addtheoremline{#1}{#3}}%
165 \expandafter\protected@xdef\csname nonum@addtheoremline#1\endcsname{%
166 \noexpand\@nonum@addtheoremline{#1}{#3}}%
167 \theoremkeyword{#3}%
168 \expandafter\protected@xdef\csname #1Keyword\endcsname
169 {\the\theoremkeyword}%
170 \expandafter\gdef\csname mkheader@#1\endcsname
171 {\csname setparms@#1\endcsname
172 \@thm{#1}{#2}{#3}
173 }%
174 \global\@namedef{end#1}{\@endtheorem}
175 \AtBeginEnvironment{#1}{\edef\LWR@thisismstyle{\@nameuse{LWR@thmstyle#1}}}% lwarp
176 \fi}
177 }

```

#### § 402.4 HTML cross-referencing

Mimics a float by incrementing the float counter and generating an HTML anchor. These are used for list-of-theorem cross-references.

```

178 \newcommand{\LWR@inctheorem}{%
179 \addtocounter{LWR@thisautoid}{1}%
180 \LWR@stoppars%
181 \LWR@htmltag{a id="\LWR@print@mbox{autoid-\arabic{LWR@thisautoid}}"}\LWR@htmltag{/a}%
182 \LWR@startpars%

```

183 }

## § 402.5 **\newtheoremstyle**

The following are patched for css.

These were in individual files thp.sty for plain, thmb.sty for margin break, etc. They are gathered together here.

Each theorem is encased in a BlockClass environment of class theorembody<style>.

Each header is encased in an \InlineClass of class theoremheader<style>.

```

184 \gdef\newtheoremstyle#1#2#3{%
185 \expandafter\@ifundefined{th@#1}%
186 {\expandafter\gdef\csname th@#1\endcsname{%
187 \def\@begintheorem####1####2{%
188 \LWR@intheorem% lwarp
189 #2}%
190 \def\@opargbegintheorem####1####2####3{%
191 \LWR@intheorem% lwarp
192 #3}%
193 }%
194 }%
195 {\PackageError{\basename}{Theorem style #1 already defined}\@eha}
196 }
```

## § 402.6 **Standard styles**

```

197 \renewtheoremstyle{plain}%
198 {\item[
199 \InlineClass{theoremheaderplain}{##1\ ##2\theorem@separator}]]%
200 {\item[
201 \InlineClass{theoremheaderplain}{##1\ ##2\ (##3)\theorem@separator}]]}
202
203 \renewtheoremstyle{break}%
204 {\item[
205 \InlineClass{theoremheaderbreak}{##1\ ##2\theorem@separator}\newline
206]}%
207 {\item[
208 \InlineClass{theoremheaderbreak}%
209 {##1\ ##2\ (##3)\theorem@separator}\newline
210]}
211
212 \renewtheoremstyle{change}%
213 {\item[
214 \InlineClass{theoremheaderchange}{##2\ ##1\theorem@separator}]]%
215 {\item[
216 \InlineClass{theoremheaderchange}{##2\ ##1\ (##3)\theorem@separator}]]}
217
218 \renewtheoremstyle{changebreak}%
219 {\item[
220 \InlineClass{theoremheaderchangebreak}%
221 {##2\ ##1\theorem@separator}\newline
222]}%

```

```

223 {\item[
224 \InlineClass{theoremheaderchangebreak}%
225 {##2\ ##1\ (##3)\theoremseparator}\newline
226]}
227
228 \renewtheoremstyle{margin}%
229 {\item[
230 \InlineClass{theoremheadermargin}{##2 \quad ##1\theoremseparator}
231]}%
232 {\item[
233 \InlineClass{theoremheadermargin}{##2 \quad ##1\ (##3)\theoremseparator}
234]}
235
236 \renewtheoremstyle{marginbreak}%
237 {\item[
238 \InlineClass{theoremheadermarginbreak}%
239 {##2 \quad ##1\theoremseparator}\newline
240]}%
241 {\item[
242 \InlineClass{theoremheadermarginbreak}%
243 {##2 \quad ##1\ (##3)\theoremseparator}\newline
244]}
245
246 \renewtheoremstyle{nonumberplain}%
247 {\item[
248 \InlineClass{theoremheaderplain}{##1\theoremseparator}]]%
249 {\item[
250 \InlineClass{theoremheaderplain}{##1\ (##3)\theoremseparator}]]}
251
252 \renewtheoremstyle{nonumberbreak}%
253 {\item[
254 \InlineClass{theoremheaderbreak}{##1\theoremseparator}\newline
255]}%
256 {\item[
257 \InlineClass{theoremheaderbreak}{##1\ (##3)\theoremseparator}\newline
258]}
259
260 \renewtheoremstyle{empty}%
261 {\item[]}%
262 {\item[
263 \InlineClass{theoremheaderplain}{##3}]]}
264
265 \renewtheoremstyle{emptybreak}%
266 {\item[]}%
267 {\item[
268 \InlineClass{theoremheaderplain}{##3}] \newline}

```

## § 402.7 Additional objects

The following manually adjust the css for the standard configuration objects which are not a purely plain style:

```

269 \ifbool{LWR@theoremamsthm}{\%

```

Upright text via CSS:

```

270 \newtheoremstyle{plainupright}%
271 {\item[
272 \InlineClass{theoremheaderplain}{##1\ ##2\theorem@separator}]]}%
273 {\item[
274 \InlineClass{theoremheaderplain}{##1\ ##2\ (##3)\theorem@separator}]]}

```

Upright text and small caps header via CSS:

```

275 \newtheoremstyle{nonumberplainuprightsc}%
276 {\item[
277 \InlineClass{theoremheadersc}{##1\theorem@separator}]]}%
278 {\item[
279 \InlineClass{theoremheadersc}{##1\ (##3)\theorem@separator}]]}
280}% not amsthm

```

## § 402.8 Renewed standard configuration

The following standard configuration is renewed using the new css:

```

281 \ifbool{LWR@theoremamsthm}{\}%

282 \ifx\thm@usestd\@undefined
283 \else
284 \theoremnumbering{arabic}
285 \theoremstyle{plain}
286 \RequirePackage{latexsym}
287 \theoremsymbol{\Box}
288 \theorembodyfont{\itshape}
289 \theoremheaderfont{\normalfont\bfseries}
290 \theoremseparator{}
291 \renewtheorem{Theorem}{Theorem}
292 \renewtheorem{theorem}{Theorem}
293 \renewtheorem{Satz}{Satz}
294 \renewtheorem{satz}{Satz}
295 \renewtheorem{Proposition}{Proposition}
296 \renewtheorem{proposition}{Proposition}
297 \renewtheorem{Lemma}{Lemma}
298 \renewtheorem{lemma}{Lemma}
299 \renewtheorem{Korollar}{Korollar}
300 \renewtheorem{korollar}{Korollar}
301 \renewtheorem{Corollary}{Corollary}
302 \renewtheorem{corollary}{Corollary}
303
304 \theoremstyle{plainupright}
305 \theorembodyfont{\upshape}
306 \theoremsymbol{\HTMLUnicode{25A1}}% UTF-8 white box
307 \renewtheorem{Example}{Example}
308 \renewtheorem{example}{Example}
309 \renewtheorem{Beispiel}{Beispiel}
310 \renewtheorem{beispiel}{Beispiel}
311 \renewtheorem{Bemerkung}{Bemerkung}
312 \renewtheorem{bemerkung}{Bemerkung}

```

```

313 \renewtheorem{Anmerkung}{Anmerkung}
314 \renewtheorem{anmerkung}{Anmerkung}
315 \renewtheorem{Remark}{Remark}
316 \renewtheorem{remark}{Remark}
317 \renewtheorem{Definition}{Definition}
318 \renewtheorem{definition}{Definition}
319
320 \theoremstyle{nonumberplainuprightsc}
321 \theoremsymbol{\HTMLUnicode{220E}}% UTF-8 end-of-proof
322 \renewtheorem{Proof}{Proof}
323 \renewtheorem{proof}{Proof}
324 \renewtheorem{Beweis}{Beweis}
325 \renewtheorem{beweis}{Beweis}
326 \qedsymbol{\HTMLUnicode{220E}}% UTF-8 end-of-proof
327
328 \theoremsymbol{}
329 \fi
330 }% not amsthm

```

## § 402.9 amsthm option

Only if the amsthm option was given:

```

331 \ifbool{LWR@theoremamsthm}{
332
333 \gdef\th@plain{%
334 \def\theorem@headerfont{\normalfont\bfseries}\itshape%
335 \def\@begintheorem##1##2{%
336 \LWR@intheorem% lwarp
337 \item[
338 \InlineClass{theoremheaderplain}{##1\ ##2.}
339]}%
340 \def\@opargbegintheorem##1##2##3{%
341 \LWR@intheorem% lwarp
342 \item[
343 \InlineClass{theoremheaderplain}{##1\ ##2\ (##3).}
344]}}
345
346 \gdef\th@nonumberplain{%
347 \def\theorem@headerfont{\normalfont\bfseries}\itshape%
348 \def\@begintheorem##1##2{%
349 \LWR@intheorem% lwarp
350 \item[
351 \InlineClass{theoremheaderplain}{##1.}
352]}%
353 \def\@opargbegintheorem##1##2##3{%
354 \LWR@intheorem% lwarp
355 \item[
356 \InlineClass{theoremheaderplain}{##1\ (##3).}
357]}}
358
359 \gdef\th@definition{%
360 \def\theorem@headerfont{\normalfont\bfseries}\normalfont%
361 \def\@begintheorem##1##2{%
362 \LWR@intheorem% lwarp

```

```

363 \item[
364 \InlineClass{theoremheaderdefinition}{##1\ ##2.}
365]}%
366 \def\@opargbegintheorem##1##2##3{%
367 \LWR@intheorem% lwarp
368 \item[
369 \InlineClass{theoremheaderdefinition}{##1\ ##2\ (##3).}
370]}}
371
372 \gdef\th@nonumberdefinition{%
373 \def\theorem@headerfont{\normalfont\bfseries}\normalfont%
374 \def\@begintheorem##1##2{%
375 \LWR@intheorem% lwarp
376 \item[
377 \InlineClass{theoremheaderdefinition}{##1.}
378]}%
379 \def\@opargbegintheorem##1##2##3{%
380 \LWR@intheorem% lwarp
381 \item[
382 \InlineClass{theoremheaderdefinition}{##1\ (##3).}
383]}}
384
385 \gdef\th@remark{%
386 \def\theorem@headerfont{\itshape}\normalfont%
387 \def\@begintheorem##1##2{%
388 \LWR@intheorem% lwarp
389 \item[
390 \InlineClass{theoremheaderremark}{##1\ ##2.}
391]}%
392 \def\@opargbegintheorem##1##2##3{%
393 \LWR@intheorem% lwarp
394 \item[
395 \InlineClass{theoremheaderremark}{##1\ ##2\ (##3).}
396]}}
397
398 \gdef\th@nonumberremark{%
399 \def\theorem@headerfont{\itshape}\normalfont%
400 \def\@begintheorem##1##2{%
401 \LWR@intheorem% lwarp
402 \item[
403 \InlineClass{theoremheaderremark}{##1.}
404]}%
405 \def\@opargbegintheorem##1##2##3{%
406 \LWR@intheorem% lwarp
407 \item[
408 \InlineClass{theoremheaderremark}{##1\ (##3).}
409]}}
410
411 \gdef\th@proof{%
412 \def\theorem@headerfont{\normalfont\bfseries}\itshape%
413 \def\@begintheorem##1##2{%
414 \LWR@intheorem% lwarp
415 \item[
416 \InlineClass{theoremheaderproof}{##1.}
417]}%

```

```

418 \def\@opargbegintheorem##1##2##3{%
419 \LWR@intheorem% lwarp
420 \item[
421 \InlineClass{theoremheaderproof}{##1\ (##3).}
422]}}
423
424
425
426 \newcounter{proof}%
427 \if@thmmarks
428 \newcounter{currproofctr}%
429 \newcounter{endproofctr}%
430 \fi
431
432 \gdef\proofSymbol{\openbox}
433
434 \newcommand{\proofname}{Proof}
435
436 \newenvironment{proof}[1][\proofname]{
437 \th@proof
438 \def\theorem@headerfont{\itshape}%
439 \normalfont
440 \theoremsymbol{\HTMLUnicode{220E}}% UTF-8 end-of-proof
441 \@thm{proof}{proof}{#1}
442 }%
443 {\@endtheorem}
444
445 }{}% amsthm option

```

## § 402.10 Ending a theorem

Patched for css:

```

446 \let\LWR@origendtheorem\@endtheorem
447 \renewcommand{\@endtheorem}{%
448 \ifbool{LWR@theoremmarks}{%
449 \ifsetendmark%
450 \InlineClass{theoremendmark}{\csname\InTheoType Symbol\endcsname}%
451 \setendmarkfalse%
452 \fi%
453 }{}%
454 \LWR@origendtheorem% also does \@endtrivlist
455 \ifbool{LWR@theoremmarks}{\global\setendmarktrue}{}%
456 \endBlockClass%
457 }

```

§ 402.11 **\NoEndMark**

```
458 \gdef\NoEndMark{\global\setendmarkfalse}
```

§ 402.12 **List-of**

Redefined to reuse the float mechanism to add list-of-theorem links:

```
\thm@thmline {\langle 1: printed type \rangle} {\langle 2: # \rangle} {\langle 3: optional \rangle} {\langle 4: page \rangle}
```

```
459 \renewcommand{\thm@thmline@noname}[4]{%
460 \hypertocfloat{1}{theorem}{thm}{#2 #3}{}%
461 }
462
463 \renewcommand{\thm@thmline@name}[4]{%
464 \hypertocfloat{1}{theorem}{thm}{#1 #2 #3}{}%
465 }
```

This was redefined by `ntheorem` when loaded, so it is now redefined for `lwarp`:

```
466 \def\thm@thmline{\thm@thmline@name}
```

Patch for CSS:

```
467 \def\listtheorems#1{
468 \LWR@html@elementclass{nav}{lohtm}%
469 \begingroup
470 \c@tocdepth=-2%
471 \def\thm@list{#1}\thm@processlist
472 \endgroup
473 \LWR@html@elementclassend{nav}{lohtm}%
474 }
```

§ 402.13 **Symbols**

Proof QED symbol:

```
475 \newcommand{\qed}{\quad\the\qedsymbol}
476
477 \AtBeginDocument{
478 \ifundefined{LWR@orig@openbox}{
479 \LetLtxMacro\LWR@orig@openbox\openbox
480 \LetLtxMacro\LWR@orig@blacksquare\blacksquare
481 \LetLtxMacro\LWR@orig@Box\Box
482
483 \def\openbox{\text{\HTMLUnicode{25A1}}}% UTF-8 white box
484 \def\blacksquare{\text{\HTMLUnicode{220E}}}% UTF-8 end-of-proof
485 \def\Box{\text{\HTMLUnicode{25A1}}}% UTF-8 white box
486
487 \appto\LWR@restoreorigformatting{%
488 \LetLtxMacro\openbox\LWR@orig@openbox%
489 \LetLtxMacro\blacksquare\LWR@orig@blacksquare%
490 \LetLtxMacro\Box\LWR@orig@Box%
491 }% appto
```

```

492 }{}% @ifundefined
493 }% AtBeginDocument

```

## § 402.14 Cross-referencing

```
\thref {<label>}
```

```
494 \newcommand*{\thref}[1]{\cref{#1}}%
```

## File 300 lwarp-octave.sty

## § 403 Package octave

*(Emulates or patches code by ANDREW A. CASHNER.)*

Pkg octave octave is patched for use by lwarp.

for HTML output: 1 \LWR@ProvidesPackagePass{octave}[2017/10/31]

Remove the leading 1pt kern:

```

2 \RenewDocumentCommand{\@PrintTicks}{ m }{%
3 \kern-1pt% lwarp
4 \@TickNum = #1%
5 \loop
6 \@Tick{}%
7 \advance\@TickNum by -1
8 \ifnum\@TickNum > 0
9 \repeat
10 }

```

Use unicode for the prime character:

```
11 \RenewDocumentCommand{\@Tick}{}{\HTMLUnicode{2032}}
```

Catch the inline font:

```

12 \RenewDocumentCommand{\pitch}{ m o m }{%
13 \if@OctaveNumber%
14 {%
15 \pitchfont{%
16 \LWR@textcurrentfont{% lwarp
17 \MakeUppercase{#1}%
18 \IfValueTF{#2}{#2}{\textsubscript{#3}}%
19 }%
20 }%
21 }%
22 \else%
23 {%
24 \pitchfont{%
25 \LWR@textcurrentfont{% lwarp
26 \@GetOctaveTick{#1}[#2]{#3}%

```

```

27 }%
28 }%
29 }%
30 \fi%
31 }

```

The original was hard to adapt to lwarp's handling of &.

```

32 \StartDefiningTabulars
33 \renewcommand{\octavetable}{%
34 \begin{tabular}{ll}
35 \octaveprimes \pitch{C}{0} & \octavenumbers \pitch{C}{0} \\
36 \octaveprimes \pitch{C}{1} & \octavenumbers \pitch{C}{1} \\
37 \octaveprimes \pitch{C}{2} & \octavenumbers \pitch{C}{2} \\
38 \octaveprimes \pitch{C}{3} & \octavenumbers \pitch{C}{3} \\
39 \octaveprimes \pitch{C}{4} & \octavenumbers \pitch{C}{4} \\
40 \octaveprimes \pitch{C}{5} & \octavenumbers \pitch{C}{5} \\
41 \octaveprimes \pitch{C}{6} & \octavenumbers \pitch{C}{6} \\
42 \octaveprimes \pitch{C}{7} & \octavenumbers \pitch{C}{7} \\
43 \end{tabular}
44 }
45 \StopDefiningTabulars

```


---

File 301 **lwarp-overpic.sty**

§ 404    Package **overpic**

*(Emulates or patches code by ROLF NIEPRASCHK.)*

Pkg overpic **overpic** is patched for use by lwarp.

 **scaling** The macros `\overpicfontsize` and `\overpicfontskip` are used during HTML generation. These are sent to `\fontsize` to adjust the font size for scaling differences between the print and HTML versions of the document. Renew these macros before using the `overpic` and `Overpic` environments.

See section 85.2 for the print-mode version of `\overpicfontsize` and `\overpicfontskip`.

**for HTML output:** 1 \LWR@ProvidesPackagePass{overpic}[2017/10/06]

```

2 \newcommand*{\overpicfontsize}{12}
3 \newcommand*{\overpicfontskip}{14}
4
5 \BeforeBeginEnvironment{overpic}{%
6 \begin{lateximage}%
7 \fontsize{\overpicfontsize}{\overpicfontskip}%
8 \selectfont%
9 }
10
11 \AfterEndEnvironment{overpic}{\end{lateximage}}
12
13 \BeforeBeginEnvironment{Overpic}{%

```

---

```

14 \begin{lateximage}%
15 \fontsize{\overpicfontsize}{\overpicfontskip}%
16 \selectfont%
17 }
18
19 \AfterEndEnvironment{Overpic}{\end{lateximage}}

```

---

File 302 **lwarp-pagegrid.sty**

§ 405 Package **pagegrid**

Pkg pagegrid pagegrid is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{pagegrid}[2016/05/16]

2 \newcommand*{\pagegridsetup}[1]{}


```

---

File 303 **lwarp-pagenote.sty**

§ 406 Package **pagenote**

Pkg pagenote pagenote works as-is, but the page option is disabled.

 **labels** Note that labels in page notes do not appear as expected, even in the print version.

**for HTML output:**

```

1 \DeclareOption{page}{}
2 \LWR@ProvidesPackagePass{pagenote}[2009/09/03]

```

For MATHJAX:

```

3 \begin{warpMathJax}
4 \appto\LWR@syncnotenumbers{\LWR@synconenotenummer{\LWRpagenote}{\thepagenote}}
5 \CustomizeMathJax{\def\LWRpagenote{1}}
6 \CustomizeMathJax{\newcommand{\pagenote}[2][\LWRpagenote]{\mathrm{#1}}}
7 \end{warpMathJax}

```

There is no \pagenotemark, so the following are not required:

```

\providecommand{\pagenotename}{pagenote}
\appto\LWR@syncnotenames{\LWR@synconenotename{\LWRpagenote}{\pagenotename}}

```

---

File 304 **lwarp-pagesel.sty**

§ 407 Package **pagesel**

Pkg pagesel pagesel is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{pagesel}[2016/05/16]

```

---

File 305 **lwarp-paralist.sty**

§ 408     Package **paralist**

*(Emulates or patches code by BERND SCHANDL.)*

Pkg    paralist    **paralist** is supported with minor changes.

**for HTML output:**    1 \LWR@ProvidesPackagePass{paralist}[2017/01/22]

The compact environments are identical to the regular ones:

```
2 \LetLtxMacro\compactitem\itemize
3 \LetLtxMacro\compactenum\enumerate
4 \LetLtxMacro\compactdesc\description
5 \LetLtxMacro\endcompactitem\enditemize
6 \LetLtxMacro\endcompactenum\endenumerate
7 \LetLtxMacro\endcompactdesc\enddescription
```

For the inline environments, revert `\item` to its original print-mode version:

```
8 \AtBeginEnvironment{inparaitem}{\LetLtxMacro\item\LWR@origitem}
9 \AtBeginEnvironment{inparaenum}{\LetLtxMacro\item\LWR@origitem}
10 \AtBeginEnvironment{inparadesc}{\LetLtxMacro\item\LWR@origitem}
```

Manual formatting of the description labels:

```
11 \def\paradescriptionlabel#1{{\normalfont\textbf{#1}}}
```

---

File 306 **lwarp-parallel.sty**

§ 409     Package **parallel**

*(Emulates or patches code by MATTHIAS ECKERMANN.)*

Pkg    parallel    **parallel** is emulated.

Package options are ignored. Footnotes are treated as normal **lwarp** footnotes.

Environment option `c` gives side-by-side `<div>`s of class `minipage`, each of whose width is a percent depending on the given left and right widths, proportional to `\linewidth`.

Inside each environment, `\linewidth` and `\textwidth` are set for the print-output sizes.

**for HTML output:**    Discard all options for **lwarp-parallel**:

```
1 \LWR@ProvidesPackageDrop{parallel}[2003/04/13]
```

```

2 \newcounter{LWR@parallel@Lwidth}
3 \newcounter{LWR@parallel@Rwidth}
4 \newcommand*{\LWR@parallel@border}
5
6 \newenvironment*{Parallel}[3][\%
7 {%
8 \LWR@printpendingfootnotes%
9 \setlength{\linewidth}{\LWR@userstextwidth}%
10 \setlength{\textwidth}{\LWR@userstextwidth}%
11 \renewcommand*{\LWR@parallel@border}{}%
12 \ifstrequal{#1}{v}%
13 {%
14 \renewcommand*{\LWR@parallel@border}{ ; border-left: 2px solid black}%
15 }%
16 }%
17 \ifblank{#2}{%
18 \ifblank{#3}{% {}{}
19 \setcounter{LWR@parallel@Lwidth}{45}%
20 \setcounter{LWR@parallel@Rwidth}{45}%
21 }% {}{}
22 }% {}{x}
23 \setlength{\LWR@templengthone}{\linewidth-#3}%
24 \setcounter{LWR@parallel@Lwidth}{%
25 90*\ratio{\LWR@templengthone}{\linewidth}%
26 }%
27 \setcounter{LWR@parallel@Rwidth}{%
28 90*\ratio{#3}{\linewidth}%
29 }%
30 }% {}{x}
31 }% #2 blank
32 {% #2 non-blank
33 \ifblank{#3}{% {}{}
34 \setcounter{LWR@parallel@Lwidth}{%
35 90*\ratio{#2}{\linewidth}%
36 }%
37 \setlength{\LWR@templengthone}{\linewidth-#2}%
38 \setcounter{LWR@parallel@Rwidth}{%
39 90*\ratio{\LWR@templengthone}{\linewidth}%
40 }%
41 }% {}{}
42 {% {}{x}
43 \setcounter{LWR@parallel@Lwidth}{%
44 90*\ratio{#2}{\linewidth}%
45 }%
46 \setcounter{LWR@parallel@Rwidth}{%
47 90*\ratio{#3}{\linewidth}%
48 }%
49 }% {}{x}
50 }% #2 non-blank
51 }
52 {%
53 \ParallelAtEnd%
54 \renewcommand*{\ParallelAtEnd}{}%
55 \LWR@printpendingfootnotes%
56 }

```

```

57
58 \newcommand*{\ParallelLText}[1]{%
59 \begin{BlockClass}%
60 width:\arabic{LWR@parallel@Lwidth}\% ; % space
61 padding: .5ex 1\% ; % space
62 }{minipage}%
63 #1%
64 \end{BlockClass}%
65 }
66
67 \newcommand*{\ParallelRText}[1]{%
68 \begin{BlockClass}%
69 width:\arabic{LWR@parallel@Rwidth}\% ; % space
70 padding: .5ex 1\% ; % space
71 \LWR@parallel@border%
72 }{minipage}%
73 #1%
74 \end{BlockClass}%
75 }
76
77 \newcommand*{\ParallelPar}{\LWR@printpendingfootnotes}
78
79 \newcommand*{\ParallelAtEnd}{}

```

---

File 307 **lwarp-parcolumns.sty**

## § 410 Package **parcolumns**

(Emulates or patches code by JONATHAN SAUER.)

Pkg parcolumns parcolumns is emulated.

rulebetween is honored. The other keys are ignored, including colwidths.

Each column is placed inside a <div> of class minipage, each of whose width is fixed at 85% divided by the number of columns. In most cases, this results in side-by-side minipages adapting to the browser width. Inside each minipage, \linewidth, \textwidth, and \textheight are set for a virtual 6 × 9 inch page, with \linewidth divided by the number of columns.

**for HTML output:** Discard all options for lwarp-parcolumns:

```

1 \RequirePackage{keyval}%
2
3 \LWR@ProvidesPackageDrop{parcolumns}[2004/11/25]

4 \newcounter{LWR@parcolumns@numcols}
5 \newcounter{LWR@parcolumns@thiscol}
6 \newcounter{LWR@parcolumns@width}
7 \newbool{LWR@parcolumns@started}
8 \newbool{LWR@parcolumns@rule}
9
10 \define@key{LWRparcols}{colwidths}{}

```

```

11 \define@key{LWRparcols}{distance}{}
12 \define@key{LWRparcols}{rulebetween}[true]{%
13 \setbool{LWR@parcolumns@rule}{#1}%
14 }
15 \define@key{LWRparcols}{nofirstindent}{}
16 \define@key{LWRparcols}{sloppy}{}
17 \define@key{LWRparcols}{sloppyspaces}{}
18
19 \newenvironment*{parcolumns}[2][]
20 {
21 \begin{LWR@setvirtualpage}*[#2]%
22 \setcounter{LWR@parcolumns@numcols}{#2}%
23 \setcounter{LWR@parcolumns@thiscol}{1}%
24 \boolfalse{LWR@parcolumns@started}%
25 \boolfalse{LWR@parcolumns@rule}%
26 \setcounter{LWR@parcolumns@width}{%
27 85/#2
28 }%
29 \setkeys{LWRparcols}{#1}%
30 }
31 {%

32 \colplacechunks%
33 \end{LWR@setvirtualpage}%
34 }
35
36 \newcommand{\LWR@parcolumns@onecol}[1]{%
37 \ifbool{LWR@parcolumns@started}%
38 {%
39 {%
40 \LWR@htmldivclass{parcolumns}%
41 \booltrue{LWR@parcolumns@started}%
42 }%
43 \ifboolexpr{%
44 bool {LWR@parcolumns@rule} and
45 test {%
46 \ifnumgreater
47 {\value{LWR@parcolumns@thiscol}}
48 {1}
49 }%
50 }%
51 {\renewcommand{\LWR@tempone}{ ; border-left: 2px solid black}}%
52 {\renewcommand{\LWR@tempone}{}}%
53 \begin{BlockClass}[%
54 width:\arabic{LWR@parcolumns@width}\% ; % space
55 padding: .5ex 1\% ; % space
56 \LWR@tempone%
57]{minipage}%
58 #1%
59 \end{BlockClass}%
60 \addtocounter{LWR@parcolumns@thiscol}{1}%
61 }
62
63 \newcommand{\colchunk}[2][\value{LWR@parcolumns@thiscol}]{%
64 \whileboolexpr{%

```

```

65 test {%
66 \ifnumcomp%
67 {\value{LWR@parcolumns@thiscol}}
68 {<}
69 {#1}%
70 }%
71 }{%
72 \LWR@parcolumns@onecol{}}%
73 }%
74 \LWR@parcolumns@onecol{#2}%
75 }
76
77 \newcommand*{\colplacechunks}{%
78 \ifbool{LWR@parcolumns@started}%
79 {%
80 \LWR@htmldivclassend{div}%
81 \boolfalse{LWR@parcolumns@started}%
82 }%
83 {}%
84 \setcounter{LWR@parcolumns@thiscol}{1}%
85 }

```

---

File 308 **lwarp-parnotes.sty**

§ 411 Package **parnotes**

(Emulates or patches code by CHELSEA HUGHES.)

Pkg parnotes parnotes is supported with some patches.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{parnotes}[2016/08/15]

2 \long\def\PN@parnote@real#1#2{%
3 \parnotemark{#1}%
4 % Unless this is the first parnote in \PN@text, add a separator first
5 \unless\ifx\PN@text\empty\g@addto@macro\PN@text{\parnoteintercmd}\fi
6 % Redefine \@currentlabel to the parnote label, so \label works
7 \g@addto@macro\PN@text{%
8 \phantomsection%
9 \def\@currentlabel{#1}%
10 \def\cref@currentlabel{% lwarp
11 [parnotemark][\arabic{parnotemark}][\theparnotemark%
12]}%
13 }%
14 \g@addto@macro\PN@text{%
15 \LWR@textcurrentfont{% lwarp
16 \parnotemark{#1}\nolinebreak\thinspace#2%
17 }%
18 }%
19 }
20
21 \def\PN@parnotes@real{%
22 % We call \par later, so this avoids recursion with \PN@parnotes@auto

```

```

23 \PN@inparnotesttrue
24 \unless\ifvmode\par\fi
25 % Avoid page breaks between a paragraph and its parnotes
26 \nopagebreak\addvspace{\parnotevskip}%
27 \LWR@forcenewpage% lwarp
28 \begin{BlockClass}{footnotes}% lwarp
29 {\parnotefmt{\PN@text}\par}%
30 \end{BlockClass}% lwarp
31 \global\def\PN@text{}%
32 \addvspace{\parnotevskip}%
33 %
34 % These can be enabled or disabled by package options
35 %
36 \PN@disable@indent
37 \PN@reset@optional
38 \PN@inparnotesfalse
39 }
40
41 \AtBeginDocument{
42 \crefname{parnotemark}{paragraph note}{paragraph notes}
43 \Crefname{parnotemark}{Paragraph note}{Paragraph notes}
44 }

```

For MATHJAX:

```

45 \begin{warpMathJax}
46 \providecommand{\parnotename}{parnote}
47 \appto\LWR@syncnotenumbers{%
48 \addtocounter{parnotemark}{-1}% specific to parnotes
49 \LWR@synconenotenummer{\LWRparnote}{\theparnotemark}%
50 \addtocounter{parnotemark}{1}% specific to parnotes
51 }
52 \appto\LWR@syncnotenames{\LWR@synconenotename{\LWRparnote}{\parnotename}}
53 \CustomizeMathJax{\def\LWRparnote{1}}
54 \CustomizeMathJax{\newcommand{\parnote}[2][\LWRparnote]{{}^{\mathrm{#1}}}}
55 \CustomizeMathJax{\newcommand{\parnotemark}[1][\LWRparnote]{{}^{\mathrm{#1}}}}
56 \end{warpMathJax}

```

---

File 309 **lwarp-parskip.sty**

§ 412     Package **parskip**

Pkg    parskip    parskip is ignored.

for HTML output: Discard all options for lwarp-parskip.

1 \LWR@ProvidesPackageDrop[parskip][2001/04/09]

---

File 310 **lwarp-pbox.sty**

§ 413      Package **pbox**

*(Emulates or patches code by SIMON LAW.)*

Pkg   pbox   **pbox** is emulated.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{pbox}[2011/12/07]

2 \NewDocumentCommand{\pbox}{O{t} O{} O{t} m +m}{%
3 \global\booltrue{LWR@minipagefullwidth}%
4 \parbox[#1][#2][#3]{#4}{#5}%
5 }
6
7 \newcommand{\settominwidth}[3][\columnwidth]{%
8 \settowidth{#2}{#3}%
9 }
10
11 \newcommand{\widthofpbox}[1]{%
12 \widthof{#1}%
13 }
```

---

File 311 **lwarp-pdfcol.sty**

§ 414      Package **pdfcol**

Pkg   pdfcol   **pdfcol** is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{pdfcol}[2018/11/01]
2
3 \ltx@newif\ifpdfcolAvailable
4 \pdfcolAvailablefalse
5
6 \def\pdfcolErrorNoStacks{
7 \PackageInfo{lwarp-pdfcol}{Ignoring pdfcol for HTML output.}
8 }
9
10 \def\pdfcolInitStack#1{%
11
12 \long\def\pdfcolIfStackExists#1#2#3{#3}%
13
14 \def\pdfcolSwitchStack#1{%
15
16 \def\pdfcolSetCurrentColor{%
17
18 \def\pdfcolSetCurrent#1{%
```

---

File 312 **lwarp-pdfcolfoot.sty**

§ 415     Package **pdfcolfoot**

Pkg   pdfcolfoot   pdfcolfoot is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{pdfcolfoot}[2016/05/16]
2
3 \newcommand*{\pdfcolfoot@switch}{}
4
5 \newcommand*{\pdfcolfoot@current}{}

```

---

File 313 **lwarp-pdfcolmk.sty**

§ 416     Package **pdfcolmk**

Pkg   pdfcolmk   pdfcolmk is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{pdfcolmk}[2016/05/16]

```

---

File 314 **lwarp-pdfcolparallel.sty**

§ 417     Package **pdfcolparallel**

Pkg   pdfcolparallel   pdfcolparallel is ignored.

**for HTML output:**

```

1 \RequirePackage{keyval}%
2
3 \LWR@ProvidesPackageDropA{pdfcolparallel}{2016/05/16}

```

Pass options to parallel:

```

4 \DeclareOption*{%
5 \PassoptionsToPackage{\CurrentOption}{parallel}%
6 }

```

Process the options:

```

7 \LWR@ProvidesPackageDropB

```

Require parallel with the given options:

```

8 \RequirePackage{parallel}[2003/04/13]

```

Ignore the new key:

```
9 \define@key{parallel}{rulebetweencolor}{{}
```

---

## File 315 **lwarp-pdfcolparcolumns.sty**

§ 418      Package **pdfcolparcolumns**

Pkg pdfcolparcolumns pdfcolparcolumns is ignored.

**for HTML output:**      1 \LWR@ProvidesPackageDropA{pdfcolparcolumns}{2016/05/16}

Pass options to parcolumns:

```
2 \DeclareOption*{%
3 \PassOptionsToPackage{\CurrentOption}{parcolumns}%
4 }
```

Process the options:

```
5 \LWR@ProvidesPackageDropB
```

Require parcolumns with the given options:

```
6 \RequirePackage{parcolumns}[2004/11/25]
```

Ignore the new key:

```
7 \define@key{LWRparcols}{rulebetweencolor}{{}
```

---

## File 316 **lwarp-pdfcomment.sty**

§ 419      Package **pdfcomment**

Pkg pdfcomment pdfcomment is ignored.

**for HTML output:**      1 \LWR@ProvidesPackageDrop{pdfcomment}[2016/06/13]

```
2 \newenvironment{pdfsidelinecomment}[2][{}]{ }
3 \newcommand{\pdfcomment}[2][{}]{ }
4 \newcommand{\pdfmargincomment}[2][{}]{ }
5 \newcommand{\pdfmarkupcomment}[3][{}]{#2}
6 \newcommand{\pdfreetextcomment}[2][{}]{ }
7 \newcommand{\pdfsquarecomment}[2][{}]{ }
8 \newcommand{\pdfcirclecomment}[2][{}]{ }
9 \newcommand{\pdflinecomment}[2][{}]{ }
10 \newcommand{\pdftooltip}[3][{}]{#2}
11 \newcommand{\pdfcommentsetup}[2][{}]{ }
```

```

12 \newcommand{\listofpdfcomments}[1][{}]{
13 \newcommand{\setliststyle}[1]{
14 \newcommand{\defineliststyle}[2]{
15 \newcommand{\defineavatar}[2]{
16 \newcommand{\definestyle}[2]{

```

For MATHJAX:

```

17 \begin{warpMathJax}
18 \CustomizeMathJax{\newcommand{\pdfmarkupcomment}[3][{}]{#2}}
19 \CustomizeMathJax{\newcommand{\pdftooltip}[3][{}]{#2}}
20 \end{warpMathJax}

```

---

File 317 **lwarp-pdfcrypt.sty**

§ 420     Package **pdfcrypt**

Pkg   pdfcrypt   pdfcrypt is ignored.

**for HTML output:**     1 \LWR@ProvidesPackageDrop{pdfcrypt}[2016/05/16]

2 \newcommand\*{\pdfcryptsetup}[1]{

---

File 318 **lwarp-pdflscape.sty**

§ 421     Package **pdfscape**

Pkg   pdfscape   pdfscape is ignored.

**for HTML output:**     Discard all options for lwarp-pdfscape:

1 \LWR@ProvidesPackageDrop{pdfscape}[2016/05/14]

---

File 319 **lwarp-pdfmarginpar.sty**

§ 422     Package **pdfmarginpar**

Pkg   pdfmarginpar   pdfmarginpar is ignored.

**for HTML output:**     1 \LWR@ProvidesPackageDrop{pdfmarginpar}[2011/08/05]

2 \newcommand{\pdfmarginpar}[2][{}]{
3 \newcommand{\pdfmarginparset}[1]{

---

File 320 **lwarp-pdfpages.sty**

§ 423      Package **pdfpages**

*(Emulates or patches code by ANDREAS MATTHIAS.)*

Pkg pdfpages pdfpages is patched for use by lwarp.

Option link and linkname work:

---

```
\hyperlink{<filename>.pdf.<pagenumber>}{some text}
\hyperlink{<linkname>.<pagenumber>}{some text}
```

---

Options which make no sense in HTML are disabled.

for HTML output:      1 \LWR@ProvidesPackagePass{pdfpages}[2017-10-31]

Disable option which have no meaning for HTML output:

```
2 \define@key{pdfpages}{fitpaper}[false]{}
3 \define@key{pdfpages}{landscape}[false]{}
4 \define@key{pdfpages}{openright}[false]{}
5 \define@key{pdfpages}{signature}{}
6 \define@key{pdfpages}{signature*}{}
7 \define@key{pdfpages}{booklet}[false]{}
8 \define@key{pdfpages}{rotateoversize}[false]{}
9 \define@key{pdfpages}{doublepages}[false]{}
10 \define@key{pdfpages}{doublepagestwist}[false]{}
11 \define@key{pdfpages}{doublepagestwistodd}[false]{}
12 \define@key{pdfpages}{doublepagestwist*}[false]{}
13 \define@key{pdfpages}{doublepagestwistodd*}[false]{}
14 \define@key{pdfpages}{duplicatepages}[2]{}
15 \define@key{pdfpages}{thread}[false]{}
16 \define@key{pdfpages}{threadname}{}
17 \define@key{pdfpages}{linkfit}{}
18 \define@key{pdfpages}{linktodoc}[false]{}
19 \define@key{pdfpages}{linktodocfit}{}
20 \define@key{pdfpages}{linkfilename}{}
21 \define@key{pdfpages}{survey}[false]{}
22 \define@key{pdfpages}{survey-nolink}[false]{}
23 \define@key{pdfpages}{newwindow}[false]{}

```

Use print mode while measuring the page numbers:

```
24 \xpretocmd{\AM@getpagecount}{\LWR@restoreorigformatting}{}{}
```

Emulate a bit of eso-pic:

```

25 \newif\ifESO@texcoord
26
27 \newcommand{\ESO@HookIIBG}{}
28
29 \renewcommand{\AM@AddToShipoutPicture}{\g@addto@macro\ESO@HookIIBG}
30
31 \renewcommand{\ClearShipoutPicture}{}

```

\LWR@esopic@newpage      At each \newpage.

```

32 \newcommand*{\LWR@esopic@newpage}{%

```

Is there something to draw?

```

33 \ifdefvoid{\ESO@HookIIBG}%
34 {}%
35 {%

```

If the link option was specified, add a hyper target:

```

36 \ifAM@link%
37 \hypertarget{\AM@linkname.\AM@page}{}%
38 \fi%

```

Draw inside a picture environment of the size of a virtual page:

```

39 \begingroup%
40 \setlength{\unitlength}{1in}%
41 \begin{picture}(8,10.5)%
42 \ESO@HookIIBG%
43 \end{picture}%
44 \endgroup%
45 \global\let\ESO@HookIIBG\@empty%
46 }
47 }

```

\AM@output      Patched to use \LWR@esopic@newpage.

```

48 \xpatchcmd{\AM@output}
49 {\newpage}
50 {\LWR@esopic@newpage}
51 {}
52 {\LWR@patcherror{pdfpages}{AM@output-1}}
53
54 \xpatchcmd{\AM@output}
55 {\newpage}
56 {\LWR@esopic@newpage}
57 {}
58 {\LWR@patcherror{pdfpages}{AM@output-2}}
59
60 \xpatchcmd{\AM@output}
61 {\newpage}
62 {\LWR@esopic@newpage}
63 {}
64 {\LWR@patcherror{pdfpages}{AM@output-3}}

```

`\includepdf`      Patched to set the user's paper size.

```
65 \xpretocmd{\includepdf}{%
66 \begingroup%
67 \setlength{\paperwidth}{\LWR@userspaperwidth}%
68 \setlength{\paperheight}{\LWR@userspaperheight}%
69 }{}{}
70
71 \xapptocmd{\includepdf}{%
72 \endgroup%
73 }{}{}
```

`\includepdfmerge`      Patched to set the user's paper size.

```
74 \xpretocmd{\includepdfmerge}{%
75 \begingroup%
76 \setlength{\paperwidth}{\LWR@userspaperwidth}%
77 \setlength{\paperheight}{\LWR@userspaperheight}%
78 }{}{}
79
80 \xapptocmd{\includepdfmerge}{%
81 \endgroup%
82 }{}{}
```

`\AM@hyper@begin@i`      Hyper links are created by `\LWR@esopic@newpage`, so don't create them here:

```
83 \renewcommand{\AM@hyper@begin@i}{}%
```

File 321      **lwarp-pdfprivacy.sty**

§ 424      Package      **pdfprivacy**

Pkg    pdfprivacy      pdfprivacy is ignored.

**for HTML output:**      1 \LWR@ProvidesPackageDrop{pdfprivacy}[2017/12/03]

File 322      **lwarp-pdfrenderer.sty**

§ 425      Package      **pdfrenderer**

Pkg    pdfrenderer      pdfrenderer is allowed during HTML, but it has no effect on HTML text output. pdfrenderer is enabled for use with `xfakebold`, and it is enabled during HTML so that it may be in use when an SVG math image is started. I.e. `xfakebold's \setBold` may be used outside of a math expression and still be detected when the math begins.

The `lwarp-pdfrenderer` package is present because it used to disable `pdfrenderer`, so this newer version is to overwrite older versions.

**for HTML output:**      1 \LWR@ProvidesPackagePass{pdfrenderer}[2019/12/29]

---

File 323 **lwarp-pdfsync.sty**

§ 426      Package **pdfsync**

*(Emulates or patches code by J. LAURENS.)*

Pkg pdfsync pdfsync is ignored.

**for HTML output:** Discard all options for lwarp-pdfsync:

```
1 \LWR@ProvidesPackageDrop{pdfsync}[2008/01/26]

2 \newcommand*{\pdfsync}{}
3 \newcommand*{\pdfsyncstart}{}
4 \newcommand*{\pdfsyncstop}{}

```


---

File 324 **lwarp-pdftricks.sty**

§ 427      Package **pdftricks**

*(Emulates or patches code by C. V. RADHAKRISHNAN, C. V. RAJAGOPAL, ANTOINE CHAMBERT-LOIR.)*

Pkg pdftricks pdftricks is patched for use by lwarp.

 **convert image files** The pdftricks image files <jobname>-fig\*.pdf must be converted to .svg, or else a missing file error will occur. The image files must also be converted again whenever they change. To convert the images:

Enter ⇒ **lwarpmk pdftosvg <jobname>-fig\*.pdf**

**for HTML output:** 1 \LWR@ProvidesPackagePass{pdftricks}[2003/08/10]

Reuse the print-mode images:

```
2 \def\PDFTfigname{\BaseJobname-fig\thepsfig}

```

If the .pdf images have not yet been converted to .svg then an error about a missing file will occur. Warn the user to convert the images.

```
3 \PackageWarning{lwarp-pdftricks}{
4 When the pdftricks images change,
5 remember to convert PDF images to SVG using 'lwarpmk pdftosvg *-fig.pdf',
6 }
7
8 \AfterEndDocument{\typeout{***}}
9 \AfterEndDocument{\typeout{*** Note: If pdftricks images are not found, new, or updated,}}
10 \AfterEndDocument{\typeout{*** \space use 'lwarpmk pdftosvg \BaseJobname-fig*.pdf'}}
11 \AfterEndDocument{\typeout{***}}

```

---

File 325 **lwarp-pdfx.sty**

§ 428      Package **pdfx**

Pkg   pdfx   pdfx is ignored.

**for HTML output:**    1 \LWR@ProvidesPackageDrop{pdfx}[2017/05/18]

---

File 326 **lwarp-perpage.sty**

§ 429      Package **perpage**

*(Emulates or patches code by DAVID KASTRUP.)*

Pkg   perpage   perpage is mostly ignored, but support is added for footnote counters.

There is no page number in HTML, so most counters are not reset. If the document redefines \the<countersname> to include \theperpage, it is necessary to place that redefinition inside a warpprint environment to avoid modifying the HTML definitions.

\AddAbsoluteCounter must not be inside warpprint, as the counter must be added for HTML also, although it is not incremented.

**footnote numbering**    To have footnote numbers reset each time footnotes are printed:

```
\setcounter{footnoteReset}{1}
```

For bigfoot, manyfoot, or perpage:

```
\MakePerPage{footnoteX}
— or —
\MakeSortedPerPage{footnoteX}
```

The footnotes are reset when they are printed, according to section level as set by FootnoteDepth, which is not necessarily by HTML page. This is recommended for \alph, \Alph, or \fnsymbol footnotes, due to the limited number of symbols which are available.

**for HTML output:**    1 \LWR@ProvidesPackageDrop{perpage}[2014/10/25]

```
2 \newcommand\AddAbsoluteCounter[1]
3 {
4 \ifundefined{c@abs#1}{%
5 \expandafter\newcount\csname c@abs#1\endcsname
6 \global\value{abs#1}\@ne
7 }
8 \expandafter\xdef\csname theabs#1\endcsname{%
9 \noexpand\number \csname c@abs#1\endcsname
```

---

```

10 }%
11 % \global\@namedef{c@pabs@#1}{\pp@cl@begin
12 % \stepcounter{abs#1}%
13 % \pp@cl@end}%
14 % \@addtoreset{pabs@#1}{#1}
15 }
16 {}
17 }
18
19 \AddAbsoluteCounter{page}
20 \def\theabspage{1}
21
22 \newcommand*\MakePerPage[2][1]{%
23 \ifltxcounter{#2Reset}{%
24 \setcounter{#2Reset}{#1}%
25 }{
26
27 }%
28 }
29
30 \newcommand*\MakeSorted[1]{%
31
32 \newcommand*\MakeSortedPerPage[2][1]{%
33 \ifltxcounter{#2Reset}{%
34 \setcounter{#2Reset}{#1}%
35 }{
36 }%
37 }
38
39 \newcommand*\theperpage{1}


```

---

File 327 **lwarp-pfnote.sty**

§ 430     Package **pfnote**

Pkg   pfnote   pfnote is ignored.

 **pfnote** While emulating pfnote, lwarp is not able to reset HTML footnote numbers per page  
**pfnote numbers** to match the printed version, as HTML has no concept of page numbers. lwarp  
 therefore uses continuous footnote numbering even for pfnote.

**for HTML output:**    1 \LWR@ProvidesPackageDrop{pfnote}[1999/07/14]

---

File 328 **lwarp-phfqit.sty**

§ 431     Package **phfqit**

*(Emulates or patches code by PHILIPPE FAIST.)*

Pkg   phfqit   phfqit is patched for use by lwarp.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{phfqit}[2017/08/16]

2 \LetLtxMacro\LWR@origbitstring\bitstring
3
4 \renewcommand\bitstring[1]{%
5 \InlineClass[%
6 text-decoration: overline underline ;
7]{bitstring}{#1}%
8 % \phfqit@bitstring{#1}%
9 }
10
11 \appto\LWR@restoreorigformatting{%
12 \LetLtxMacro\bitstring\LWR@origbitstring%
13 }
```

---

File 329 **lwarp-physics.sty**

§ 432     Package **physics**

*(Emulates or patches code by SERGIO C. DE LA BARRERA.)*

Pkg physics physics works as-is for HTML with SVG math.

For MATHJAX, the MATHJAX v3 physics extension is used.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{physics}% No date is provided by the package.

2 \begin{warpMathJax}
3 \PackageWarningNoLine{lwarp, physics}{The MathJax v3 extension will be used}
4 \CustomizeMathJax{\require{physics}}
5 \end{warpMathJax}
```

---

File 330 **lwarp-physunits.sty**

§ 433     Package **physunits**

*(Emulates or patches code by BRIAN W. MULLIGAN.)*

Pkg physunits physunits is supported as-is for SVG math, and is emulated for MATHJAX.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{physunits}[2020/03/26]

2 \begin{warpMathJax}
3 \LWR@infoprocessingmathjax{physunits}
4
5 \CustomizeMathJax{\newcommand{\micro}{\mu}}
6 \CustomizeMathJax{\newcommand{\V}[1][]{\, \mathrm{#1V}}}
7 \CustomizeMathJax{\newcommand{\Volt}[1][]{\, \mathrm{#1V}}}
8 \CustomizeMathJax{\newcommand{\Coulomb}[1][]{\, \mathrm{#1C}}}
```

```

9 \CustomizeMathJax{\newcommand{\esu}{\,\mathrm{esu}}}
10 \CustomizeMathJax{\newcommand{\Ohm}[1][\]{\,\mathrm{#1\Omega}}}
11 \CustomizeMathJax{\newcommand{\Amp}[1][\]{\,\mathrm{#1A}}}
12 \CustomizeMathJax{\newcommand{\Farad}[1][\]{\,\mathrm{#1F}}}
13 \CustomizeMathJax{\newcommand{\Tesla}[1][\]{\,\mathrm{#1T}}}
14 \CustomizeMathJax{\newcommand{\Gauss}[1][\]{\,\mathrm{#1G}}}
15 \CustomizeMathJax{\newcommand{\Henry}[1][\]{\,\mathrm{#1H}}}
16 \CustomizeMathJax{\newcommand{\eV}[1][\]{\,\mathrm{#1eV}}}
17 \CustomizeMathJax{\newcommand{\keV}{\,\mathrm{keV}}}
18 \CustomizeMathJax{\newcommand{\MeV}{\,\mathrm{MeV}}}
19 \CustomizeMathJax{\newcommand{\J}[1][\]{\,\mathrm{#1J}}}
20 \CustomizeMathJax{\newcommand{\Joule}[1][\]{\,\mathrm{#1J}}}
21 \CustomizeMathJax{\newcommand{\erg}{\,\mathrm{erg}}}
22 \CustomizeMathJax{\newcommand{\kcal}{\,\mathrm{kcal}}}
23 \CustomizeMathJax{\newcommand{\Cal}{\,\mathrm{Cal}}}
24 \CustomizeMathJax{\newcommand{\calorie}[1][\]{\,\mathrm{#1cal}}}
25 \CustomizeMathJax{\newcommand{\BTU}{\,\mathrm{BTU}}}
26 \CustomizeMathJax{\newcommand{\tnt}{\,\mathrm{ton\, of\, TNT}}}
27 \CustomizeMathJax{\newcommand{\Watt}[1][\]{\,\mathrm{#1W}}}
28 \CustomizeMathJax{\newcommand{\hpi}{\,\mathrm{hp(I)}}}
29 \CustomizeMathJax{\newcommand{\hpm}{\,\mathrm{hp(M)}}}
30 \CustomizeMathJax{\newcommand{\hp}{\,\mathrm{hp}}}
31 \CustomizeMathJax{\newcommand{\meter}[1][\]{\,\mathrm{#1m}}}
32 \CustomizeMathJax{\newcommand{\m}[1][\]{\,\mathrm{#1m}}}
33 \CustomizeMathJax{\newcommand{\km}{\,\mathrm{km}}}
34 \CustomizeMathJax{\newcommand{\au}{\,\mathrm{au}}}
35 \CustomizeMathJax{\newcommand{\pc}[1][\]{\,\mathrm{#1pc}}}
36 \CustomizeMathJax{\newcommand{\ly}[1][\]{\,\mathrm{#1ly}}}
37 \CustomizeMathJax{\newcommand{\cm}{\,\mathrm{cm}}}
38 \CustomizeMathJax{\newcommand{\nm}{\,\mathrm{nm}}}
39 \CustomizeMathJax{\newcommand{\ft}{\,\mathrm{ft}}}
40 \CustomizeMathJax{\newcommand{\inch}{\,\mathrm{in}}}
41 \CustomizeMathJax{\newcommand{\mi}{\,\mathrm{mi}}}
42 \CustomizeMathJax{\newcommand{\s}[1][\]{\,\mathrm{#1s}}}
43 \CustomizeMathJax{\newcommand{\Sec}[1][\]{\,\mathrm{#1s}}}
44 \CustomizeMathJax{\newcommand{\Min}{\,\mathrm{min}}}
45 \CustomizeMathJax{\newcommand{\h}{\,\mathrm{h}}}
46 \CustomizeMathJax{\newcommand{\y}[1][\]{\,\mathrm{#1y}}}
47 \CustomizeMathJax{\newcommand{\Day}{\,\mathrm{d}}}
48
49 \CustomizeMathJax{\newcommand{\gm}[1][\]{\,\mathrm{#1g}}}
50 \CustomizeMathJax{\newcommand{\kg}{\,\mathrm{kg}}}
51 \CustomizeMathJax{\newcommand{\lb}{\,\mathrm{lb}}}
52 \CustomizeMathJax{\newcommand{\amu}{\,\mathrm{amu}}}
53 \CustomizeMathJax{\newcommand{\N}[1][\]{\,\mathrm{#1N}}}
54 \CustomizeMathJax{\newcommand{\Newton}[1][\]{\,\mathrm{#1N}}}
55 \CustomizeMathJax{\newcommand{\dyne}[1][\]{\,\mathrm{#1dyn}}}
56 \CustomizeMathJax{\newcommand{\lbf}{\,\mathrm{lbf}}}
57 \CustomizeMathJax{\newcommand{\kmps}{\,\mathrm{km}\,\mathrm{s}^{-1}}}
58 \CustomizeMathJax{\newcommand{\kmph}{\,\mathrm{km}\,\mathrm{h}^{-1}}}
59 \CustomizeMathJax{\newcommand{\mps}[1][\]{\,\mathrm{#1m}\,\mathrm{s}^{-1}}}
60 \CustomizeMathJax{\newcommand{\miph}{\,\mathrm{mi}\,\mathrm{h}^{-1}}}
61 \CustomizeMathJax{\newcommand{\kts}{\,\mathrm{kts}}}
62
63 \CustomizeMathJax{\newcommand{\mpss}[1][\]{\,\mathrm{#1m}\,\mathrm{s}^{-2}}}

```

---

```

64 \CustomizeMathJax{\newcommand{\gacc}{\,\mathrm{g}}}
65 \CustomizeMathJax{\newcommand{\ftpss}{\,\mathrm{ft}\,\mathrm{s}^{-2}}}
66 \CustomizeMathJax{\newcommand{\K}[1][\]{\,\mathrm{#1K}}}
67 \CustomizeMathJax{\newcommand{\Kelvin}[1][\]{\,\mathrm{#1K}}}
68 \CustomizeMathJax{\newcommand{\Celcius}{\,\mathrm{^{\circ}C}}}
69 \CustomizeMathJax{\newcommand{\Rankine}{\,\mathrm{^{\circ}R}}}
70 \CustomizeMathJax{\newcommand{\Fahrenheit}{\,\mathrm{^{\circ}F}}}
71
72 \CustomizeMathJax{\newcommand{\rpm}{\,\mathrm{rev}\,\mathrm{Min}^{-1}}}
73
74 \CustomizeMathJax{\newcommand{\Hz}[1][\]{\,\mathrm{#1Hz}}}
75 \CustomizeMathJax{\newcommand{\barP}[1][\]{\,\mathrm{#1bar}}}
76 \CustomizeMathJax{\newcommand{\atm}{\,\mathrm{atm}}}
77 \CustomizeMathJax{\newcommand{\Pa}[1][\]{\,\mathrm{#1Pa}}}
78 \CustomizeMathJax{\newcommand{\mmHg}{\,\mathrm{mmHg}}}
79 \CustomizeMathJax{\newcommand{\inHg}{\,\mathrm{inHg}}}
80 \CustomizeMathJax{\newcommand{\lpsi}{\,\mathrm{\psi}}}
81 \CustomizeMathJax{\newcommand{\lpsf}{\,\mathrm{\psi f}}}
82 \CustomizeMathJax{\newcommand{\Ba}[1][\]{\,\mathrm{#1Ba}}}
83 \CustomizeMathJax{\newcommand{\Torr}[1][\]{\,\mathrm{#1Torr}}}
84 \CustomizeMathJax{\newcommand{\mol}{\,\mathrm{mol}}}
85 \end{CustomizeMathJax}

```

---

File 331 **lwarp-pifont.sty**

§ 434      Package **pifont**

*(Emulates or patches code by WALTER SCHMIDT.)*

Pkg    pifont    pifont is patched for use by lwarp.

Hashed inline images are used, as there may not be Unicode support for all icons.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{pifont}[2005/04/12]
2 \renewcommand{\Pisymbol}[2]{%
3 \begin{lateximage}*\Pisymbol[pisymbol#1#2]%
4 {\Pifont{#1}\char#2}%
5 \end{lateximage}%
6 }
7
8 \newcommand{\LWR@HTML@Pifill}[2]{
9 \Pisymbol{#1}{#2} \Pisymbol{#1}{#2} \Pisymbol{#1}{#2}
10 }
11 \LWR@formatted{Pifill}
12
13 \newcommand{\LWR@HTML@Piline}[2]{%
14 \par\noindent\hspace*{0.5in}
15 \Pifill{#1}{#2} \Pifill{#1}{#2} \Pifill{#1}{#2}
16 }
17 \LWR@formatted{Piline}

```

---

File 332 **lwarp-placeins.sty**

§ 435      Package **placeins**

*(Emulates or patches code by DONALD ARSENEAU.)*

Pkg placeins placeins is ignored.

Discard all options for lwarp-placeins:

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{placeins}[2005/04/18]
2 \newcommand*{\FloatBarrier}{}

```

---

File 333 **lwarp-plarydshln.sty**

§ 436      Package **plarydshln**

Pkg plarydshln plarydshln is emulated by lwarp-arydshln.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{plarydshln}[2018/10/20]
2 \LWR@origRequirePackage{lwarp-arydshln}

```

---

File 334 **lwarp-plext.sty**

§ 437      Package **plext**

Pkg plext plext is preloaded by jarticle and related classes.

**for HTML output:**

```

1 \LWR@loadbefore{plext}
2
3 \LWR@ProvidesPackagePass{plext}[2017/07/21]

4 \let\tate\relax
5
6 \DeclareExpandableDocumentCommand{\rensujii}{s o m}{#3}
7
8 % \layoutfloat(width,height)[pos]#4
9 \DeclareDocumentCommand{\layoutfloat}{d() o m}{}
10
11 % \DeclareLayoutCaption{type} <dir>(width)[pos1pos2]
12 \DeclareDocumentCommand{\DeclareLayoutCaption}{m d<> d() o}{}
13
14 \LetLtxMacro\pcaption\caption

```

```

15
16 % \layoutcaption<dir>(width)[pos]
17 \DeclareDocumentCommand{\layoutcaption}{d<> d() o{}}
18
19 \let\captiondir\relax

```

Add the optional <t/y> direction:

```

20 \RenewDocumentEnvironment{LWR@HTML@minipage}{d<> O{t} O{ } O{t} m}
21 {\LWR@HTML@sub@minipage{#2}{#3}{#4}{#5}}
22 {\endLWR@HTML@sub@minipage}
23
24 \RenewDocumentCommand{\LWR@HTML@parbox}{d<> O{t} O{ } O{t} m +m}
25 {
26 \LWR@traceinfo{parbox of width #4}%
27 \begin{minipage}[#2][#3][#4]{#5}%
28 #6
29 \end{minipage}%
30 }
31
32 % \pbox <t/y> [width] [l/r] {contents}
33 \RenewDocumentCommand{\pbox}{d<> O{0pt} O{c} m}{%
34 \global\booltrue{LWR@minipagefullwidth}%
35 \parbox{#2}{#4}%
36 }

```

picture, as modified by pext, is encapsulated by the lwarp core.

---

### File 335 **lwarp-plextarydshln.sty**

\$ 438    Package **plextarydshln**

Pkg    plextarydshln    plextarydshln is emulated by lwarp-arydshln.

**for HTML output:**    1 \LWR@ProvidesPackageDrop{plextarydshln}[2018/10/20]

2 \LWR@origRequirePackage{lwarp-arydshln}

---

### File 336 **lwarp-plextcolortbl.sty**

\$ 439    Package **plextcolortbl**

Pkg    plextcolortbl    plextcolortbl is emulated by lwarp-colortbl.

**for HTML output:**    1 \LWR@ProvidesPackageDrop{plextcolortbl}[2018/09/19]

2 \LWR@origRequirePackage{lwarp-colortbl}

---

File 337 **lwarp-prelim2e.sty**

§ 440      Package **prelim2e**

*(Emulates or patches code by MARTIN SCHRÖDER.)*

Pkg    prelim2e    **prelim2e** is ignored.

**for HTML output:**    Discard all options for lwarp-prelim2e:

```
1 \LWR@ProvidesPackageDrop{prelim2e}[2009/05/29]

2 \newcommand{\PrelimText}{}
3 \newcommand{\PrelimTextStyle}{}
4 \newcommand{\PrelimWords}{}

```

---

File 338 **lwarp-prettyref.sty**

§ 441      Package **prettyref**

*(Emulates or patches code by KEVIN S. RULAND.)*

Pkg    prettyref    **prettyref** is patched for use by lwarp.

**for HTML output:**    1 \LWR@ProvidesPackagePass{prettyref}[1998/07/09]

```
2 \newreformat{fig}{Figure \ref{#1}}
3 \newreformat{tab}{Table \ref{#1}}

```

---

File 339 **lwarp-preview.sty**

§ 442      Package **preview**

Pkg    preview    **preview** is ignored.

**for HTML output:**    1 \LWR@ProvidesPackageDrop{preview}[2017/04/24]

```
2 \newenvironment{preview}{}{}
3 \newenvironment{nopreview}{}{}
4 \NewDocumentCommand{\PreviewMacro}{s o o +m}{}
5 \NewDocumentCommand{\PreviewEnvironment}{s o o +m}{}
6 \newcommand{\PreviewSnarfEnvironment}[2][{}]{
7 \NewDocumentCommand{\PreviewOpen}{s o}{}
8 \NewDocumentCommand{\PreviewClose}{s o}{}
9 \let\ifPreview\iffalse% \fi for syntax highlighting

```


---


File 340 **lwarp-psfrag.sty**

§ 443      Package **psfrag**

*(Emulates or patches code by MICHAEL C. GRANT, DAVID CARLISLE.)*

Pkg   psfrag   **psfrag** is patched for use by **lwarp**.

 **use psfrags**   The **psfrags** environment is modified to use **lateximage** to encapsulate the image. Always use a **psfrags** environment to contain any local **\psfrag** macros and the associated **\includegraphics** or **\epsfig** calls. Outside of a **psfrags** environment, **psfrags** adjustments will not be seen by **lwarp**.

   Tip: Use a mono-spaced font for the tags in the EPS file.

**for HTML output:**    1 \LWR@ProvidesPackagePass{psfrag}[1998/04/11]

A **lateximage** captures the modified image from the document.

```
2 \BeforeBeginEnvironment{psfrags}{%
3 \begin{lateximage}[-psfrags-~\PackageDiagramAltText]%
4 }
5
6 \AfterEndEnvironment{psfrags}{\end{lateximage}}
```

---

File 341 **lwarp-psfragx.sty**

§ 444      Package **psfragx**

*(Emulates or patches code by PASCAL KOCKAERT.)*

Pkg   psfragx   **psfragx** is patched for use by **lwarp**.

**for HTML output:**    1 \LWR@ProvidesPackagePass{psfragx}[2012/05/02]

A **lateximage** captures the modified image from the document.

```
2 \def\pfx@includegraphicx#1#2{%
3 \begin{lateximage}[-psfragx-~\PackageDiagramAltText]%
4 \mbox{\pfx@overpix{#1}{#2}\endpfx@overpix}%
5 \end{lateximage}%
6 }
7
8 \def\@@@overpix[#1]<#2>[#3]#4{%
9 \begin{lateximage}[-psfragx-~\PackageDiagramAltText]%
10 \pfx@overpix{#1,ovpfgd={#2},ovpbgd={#3}}{#4}%
11 }
12
```

---

```

13 \def\endoverpix{%
14 \endpfx@overpix%
15 \end{lateximage}%
16 }

```

---

File 342 **lwarp-pst-eps.sty**

§ 445     Package **pst-eps**

*(Emulates or patches code by HERBERT VOSS.)*

Pkg   pst-eps   **pst-eps** is patched for use by **lwarp**.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{pst-eps}[2005/05/20]

2 \renewenvironment{TeXtoEPS}{}{}
3 \renewcommand{\PSTtoEPS}[3][{}]{

```

---

File 343 **lwarp-pstool.sty**

§ 446     Package **pstool**

*(Emulates or patches code by ZEBB PRIME, WILL ROBERTSON.)*

Pkg   pstool   **pstool** is patched for use by **lwarp**.

`\graphicspath` is ignored, and the file directory must be stated.

 **path and filename**   The filename must not have a file extension.

Use

Enter ⇒   **lwarpmk html**

followed by

Enter ⇒   **lwarpmk limages**

.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{pstool}[2018/01/20]

```

Each image is placed inside a `lateximage` to capture the results of `psfrag`.

```

2 \renewcommand\pstool@alwaysprocess[3][{}]{%
3 \begin{lateximage}[-pstool-~\PackageDiagramAltText]%
4 \includegraphics{#2.pdf}%
5 \end{lateximage}%
6 }
7 \let\LTxMacro\pstool@neverprocess\pstool@alwaysprocess

```

---

```

8 \LetLtxMacro\pstool@maybeprocess\pstool@alwaysprocess
9
10 \renewcommand\pstool@psfragfig[4]{%
11 \begin{lateximage}[-pstool-~\PackageDiagramAltText]%
12 \includegraphics{#2.pdf}%
13 \end{lateximage}%
14 }
```


---

### File 344 **lwarp-pstricks.sty**

## § 447 Package **pstricks**

(Emulates or patches code by TIMOTHY VAN ZANDT.)

Pkg pstricks pstricks is patched for use by lwarp.

 **use pspicture** All pstricks content should be contained inside a pspicture environment.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{pstricks}[2018/01/06]

2 \BeforeBeginEnvironment{pspicture}{%
3 \begin{lateximage}[pspicture]%
4 }
5 \AfterEndEnvironment{pspicture}{\end{lateximage}}
```

---

### File 345 **lwarp-pxatbegshi.sty**

## § 448 Package **pxatbegshi**

Pkg pxatbegshi pxatbegshi is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{pxatbegshi}[2017/11/04]

2 \LWR@origRequirePackage{lwarp-atbegshi}
```

---

### File 346 **lwarp-pxeveryshi.sty**

## § 449 Package **pxeveryshi**

Pkg pxeveryshi pxeveryshi is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{pxeveryshi}[2012/05/19]

2 \LWR@origRequirePackage{lwarp-everyshi}
```

---

File 347 **lwarp-pxftnright.sty**

§ 450     Package **pxftnright**

Pkg   pxftnright   pxftnright is ignored.

**for HTML output:**     1 \LWR@ProvidesPackageDrop{pxftnright}[2017/02/28]  
                           2 \LWR@origRequirePackage{lwarp-ftnright}

---

File 348 **lwarp-pxjahyper.sty**

§ 451     Package **pxjahyper**

Pkg   pxjahyper   pxjahyper is ignored.

**for HTML output:**     1 \LWR@ProvidesPackageDrop{pxjahyper}[2018/07/15]

---

File 349 **lwarp-quotchap.sty**

§ 452     Package **quotchap**

*(Emulates or patches code by KARSTEN TINNEFELD, JAN KLEVER.)*

Pkg   quotchap   quotchap is emulated.

**for HTML output:**     1 \LWR@ProvidesPackageDrop{quotchap}[2019/07/09]  
                           2 \newcommand{\@quotchap}{}  
                           3 \newlength{\LWR@quotchapwidth}  
                           4  
                           5 \let\@printcites\relax  
                           6  
                           7 \newcommand\*{\@iprintcites}{%

Place the quotes inside a <div> of class quotchap, of the maximum selected width:

```
8 \begin{BlockClass}[max-width: \LWR@printlength{\LWR@quotchapwidth}]{quotchap}
9 %\begin{minipage}{\LWR@quotchapwidth}
10 \@quotchap
11 %\end{minipage}
12 \end{BlockClass}
```

Deactivate the quote printing:

```
13 \global\let\@printcites\relax
14 }
15
16 \NewEnviron{savequote}[1][\linewidth]{%
```

Remember the width, adjusted for HTML, and make the length assignment global, per:

<https://tex.stackexchange.com/questions/300823/>

[why-is-setlength-ineffective-inside-a-tabular-environment](#)

```
17 \setlength{\LWR@quotchapwidth}{#1*2}%
18 \global\LWR@quotchapwidth=\LWR@quotchapwidth%
```

Remember the body, and activate the quote printing:

```
19 \global\let\@quotchap\BODY
20 \global\let\@printcites\@iprintcites%
21 }
```

The quotation author is placed inside a <div> of class qauthor:

```
22 \newcommand{\qauthor}[1]{%
23 \LWR@stoppars%
24 \begin{BlockClass}{qauthor}%
25 {#1}%
26 \end{BlockClass}%
27 \LWR@startpars%
28 }
```

Fonts are ignored. Use css.

```
29 \newcommand{\qsetcnfont}[1]{}
30 \providecommand*\quotefont{}
31 \providecommand*\qauthorfont{}
```

---

File 350 **lwarp-quoting.sty**

§ 453      Package **quoting**

*(Emulates or patches code by THOMAS TITZ.)*

Pkg    quoting    quoting is patched for use by lwarp.

**for HTML output:**    1 \LWR@ProvidesPackagePass{quoting}[2014/01/28]

```
2 \xpatchcmd{\quoting}{\quo@begintext}
3 {\begin{LWR@blocktextcurrentfont}\quo@begintext}
4 {}
5 {\LWR@patcherror{quoting}{quoting}}
6
```

---

```

7 \xpatchcmd{\endquoting}{\quo@endtext}
8 {\quo@endtext\end{LWR@blocktextcurrentfont}\LWR@stoppars}
9 {}
10 {\LWR@patcherror{quoting}{endquoting}}

```

---

File 351 **lwarp-ragged2e.sty**

§ 454     Package **ragged2e**

*(Emulates or patches code by MARTIN SCHRÖDER.)*

Pkg ragged2e **ragged2e** is emulated.

Discard all options for lwarp-ragged2e:

**for HTML output:**    1 \LWR@ProvidesPackageDrop{ragged2e}[2009/05/21]

```

2 \LetLtxMacro\Centering\centering
3 \LetLtxMacro\RaggedLeft\raggedleft
4 \LetLtxMacro\RaggedRight\raggedright
5 \newcommand*{\justifying}{}
6 \newlength{\CenteringLeftskip}
7 \newlength{\RaggedLeftLeftskip}
8 \newlength{\RaggedRightLeftskip}
9 \newlength{\CenteringRightskip}
10 \newlength{\RaggedLeftRightskip}
11 \newlength{\RaggedRightRightskip}
12 \newlength{\CenteringParfillskip}
13 \newlength{\RaggedLeftParfillskip}
14 \newlength{\RaggedRightParfillskip}
15 \newlength{\JustifyingParfillskip}
16 \newlength{\CenteringParindent}
17 \newlength{\RaggedLeftParindent}
18 \newlength{\RaggedRightParindent}
19 \newlength{\JustifyingParindent}
20 \newenvironment*{Center}{\center}{\endcenter}
21 \newenvironment*{FlushLeft}{\flushleft}{\endflushleft}
22 \newenvironment*{FlushRight}{\flushright}{\endflushright}
23 \newenvironment*{justify}{\justifying}{\endjustifying}

```

---

File 352 **lwarp-realscripts.sty**

§ 455     Package **realscripts**

*(Emulates or patches code by WILL ROBERTSON.)*

Pkg realscripts **realscripts** is emulated. See lwarp.css for the <span> of class supsubscript.

**for HTML output:**    1 \LWR@ProvidesPackagePass{realscripts}[2016/02/13]

The following are copied verbatim from the original, but given new names, since xparse definitions should not be \let.

```

2 \ExplSyntaxOn
3
4 \DeclareDocumentCommand \LWR@print@realsubscript {m} {
5 \fontspec_if_fontspec_font:TF {
6 \fontspec_if_opentype:TF
7 { \fontspec_if_feature:nTF {+subs}
8 { {\addfontfeature{VerticalPosition=Inferior}#1} }
9 { \fontspec_if_feature:nTF {+sinf}
10 { {\addfontfeature{VerticalPosition=ScientificInferior}#1} }
11 { \fakesubscript{#1} }
12 }
13 }
14 { \fontspec_if_aat_feature:nnTF {10} {2}
15 { {\addfontfeature{VerticalPosition=Inferior}#1} }
16 { \fakesubscript{#1} }
17 }
18 }
19 { \fakesubscript{#1} }
20 }
21
22 \DeclareDocumentCommand \LWR@HTML@realsubscript {m} {
23 \LWR@HTML@textsubscript{#1}
24 }
25
26 \LWR@formatted{realsubscript}
27
28
29 \DeclareDocumentCommand \LWR@print@realsuperscript {m} {
30 \fontspec_if_fontspec_font:TF
31 {
32 \fontspec_if_opentype:TF
33 { \fontspec_if_feature:nTF {+sup}
34 { {\addfontfeature{VerticalPosition=Superior}#1} }
35 { \fakesuperscript{#1} }
36 }
37 { \fontspec_if_aat_feature:nnTF {10} {1}
38 { {\addfontfeature{VerticalPosition=Superior}#1} }
39 { \fakesuperscript{#1} }
40 }
41 }
42 { \fakesuperscript{#1} }
43 }
44
45 \DeclareDocumentCommand \LWR@HTML@realsuperscript {m} {
46 \LWR@HTML@textsuperscript{#1}
47 }
48
49 \LWR@formatted{realsuperscript}
50
51
52 \DeclareDocumentCommand \LWR@print@textsubsuperscript {s O{l} mm} {
53 \leavevmode

```

```

54 \group_begin:
55 \IfBooleanTF #1
56 {
57 \hbox_set:Nn \l_tmpa_box {\textsubscript*{#3}}
58 \hbox_set:Nn \l_tmpb_box {\textsuperscript*{#4}}
59 }
60 {
61 \hbox_set:Nn \l_tmpa_box {\textsubscript{#3}}
62 \hbox_set:Nn \l_tmpb_box {#4}
63 }
64 \hbox_set:Nn \l_tmpa_box
65 { \box_move_down:nn \subsupersep {\box_use:N \l_tmpa_box} }
66 \hbox_set:Nn \l_tmpb_box
67 { \box_move_up:nn \subsupersep {\box_use:N \l_tmpb_box} }
68 \str_case:nnF {#2}
69 {
70 {l}{\use_i:nnn}
71 {c}{\use_ii:nnn}
72 {r}{\use_iii:nnn}
73 }
74 {
75 \PackageWarning{realscripts}{
76 Unknown~alignment~option~'#2'. \MessageBreak
77 One~ of~ 'l',~ 'c',~ 'r',~ only
78 }
79 \use_i:nnn
80 }
81 {
82 \hbox_overlap_right:n { \box_use:N \l_tmpa_box }
83 \hbox_overlap_right:n { \box_use:N \l_tmpb_box }
84 \skip_horizontal:n {
85 \dim_max:nn {\box_wd:N \l_tmpa_box} {\box_wd:N \l_tmpb_box}
86 }
87 }
88 {
89 \dim_compare:nTF { \box_wd:N \l_tmpa_box > \box_wd:N \l_tmpb_box }
90 {
91 \skip_horizontal:n {
92 0.5\box_wd:N \l_tmpa_box-0.5\box_wd:N \l_tmpb_box
93 }
94 \box_use:N \l_tmpb_box
95 \skip_horizontal:n {
96 -0.5\box_wd:N \l_tmpa_box-0.5\box_wd:N \l_tmpb_box
97 }
98 \box_use:N \l_tmpa_box
99 }
100 {
101 \skip_horizontal:n {
102 0.5\box_wd:N \l_tmpb_box-0.5\box_wd:N \l_tmpa_box
103 }
104 \box_use:N \l_tmpa_box
105 \skip_horizontal:n {
106 -0.5\box_wd:N \l_tmpb_box-0.5\box_wd:N \l_tmpa_box
107 }
108 \box_use:N \l_tmpb_box

```

```

109 }
110 }
111 {
112 \skip_horizontal:n {
113 \dim_max:nn {\box_wd:N \l_tmpa_box} {\box_wd:N \l_tmpb_box}
114 }
115 \hbox_overlap_left:n { \box_use:N \l_tmpa_box }
116 \hbox_overlap_left:n { \box_use:N \l_tmpb_box }
117 }
118 \group_end:
119 }
120
121 \ExplSyntaxOff
122
123
124 \newcommand*{\LWR@realscriptsalign}{}
125
126 \newcommand*{\LWR@setrealscriptsalign}[1]{%
127 \renewcommand*{\LWR@realscriptsalign}{}%
128 \ifthenelse{\equal{#1}{c}}{%
129 \renewcommand{\LWR@realscriptsalign}{%
130 \LWR@print@mbox{text-align:center} ; %
131 }%
132 }{}%
133 \ifthenelse{\equal{#1}{r}}{%
134 \renewcommand{\LWR@realscriptsalign}{%
135 \LWR@print@mbox{text-align:right} ; %
136 }%
137 }{}%
138 }
139
140 \DeclareDocumentCommand \LWR@HTML@textsubsuperscript {s O{l} mm} {%
141 \LWR@setrealscriptsalign{#2}%
142 \InlineClass[\LWR@realscriptsalign]{supsubscript}{%
143 #4\textsubscript{#3}%
144 }%
145 }
146 \LWR@formatted{textsubsuperscript}
147
148 \FilenameNullify{%
149 \RenewDocumentCommand{\textsuperscript}{s m}{}%
150 \RenewDocumentCommand{\textsubscript}{s m}{}%
151 \renewcommand{\fakesubscript}[1]{}%
152 \renewcommand{\fakesuperscript}[1]{}%
153 \renewcommand{\realsubscript}[1]{}%
154 \renewcommand{\realsuperscript}[1]{}%
155 \renewcommand{\textsubsuperscript}[2]{}%
156 \renewcommand{\textsupersubscript}[2]{}%
157 }

```

---

File 353 **lwarp-refcheck.sty**

§ 456 Package **refcheck**

Pkg refcheck **refcheck** is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{refcheck}[2013/02/14]

```

2 \def\showrefnames{}
3 \def\norefnames{}
4 \def\showcitenames{}
5 \def\nocitenames{}
6 \def\setonmsgs{}
7 \def\setoffmsgs{}
8 \def\checkunlbd{}
9 \def\ignoreunlbd{}
10 \newcommand*{\refcheckxrdoc}[2][{}]
```

---

File 354 **lwarp-register.sty**

§ 457 Package **register**

*(Emulates or patches code by MATTHEW LOVELL.)*

Pkg register **register** is patched for use by lwarp.

**for HTML output:** 1 \LWR@ProvidesPackagePass{register}[2019/01/01]

```

2 \xpatchcmd{\register}
3 {\centering}
4 {%
5 \begin{center}%
6 \begin{lateximage}[-register~~\PackageDiagramAltText]%
7 }
8 {}
9 {\LWR@patcherror{register}{register}}
10
11 \xpatchcmd{\endregister}
12 {\leftskip}
13 {%
14 \end{lateximage}\end{center}%
15 \leftskip%
16 }%
17 {}
18 {\LWR@patcherror{register}{endregister}}
19
20 \expandafter\xapptocmd\csname register*\endcsname
21 {%
```

---

```

22 \begin{center}%
23 \begin{lateximage}[-register--\PackageDiagramAltText]%
24 }
25 {}
26 {\LWR@patcherror{register}{register*}}
27
28 \expandafter\xpitchcmd\csname endregister*\endcsname
29 {\leftskip}
30 {%
31 \end{lateximage}\end{center}%
32 \leftskip%
33 }%
34 {}
35 {\LWR@patcherror{register}{endregister*}}
36
37 \setlength{\regWidth}{5in}

```

---

File 355 **lwarp-relsize.sty**

§ 458    Package **relsize**


*(Emulates or patches code by DONALD ARSENEAU, BERNIE COSELL, MATT SWIFT.)*

Pkg    relsize    relsize is patched for use by lwarp, and emulated for MATHJAX.

For HTML, only the inline macros are supported: `\textlarger`, `\textsmaller`, and `\textscale`. Each becomes an inline span of a modified font-size.

`\relsize`, `\larger`, `\smaller`, and `\relscale` are ignored.

While creating SVG math for HTML, the original definitions are temporarily restored, and so should work as expected.

 **not small**    The HTML browser's setting for minimum font size may limit how small the output will be displayed.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{relsize}[2013/03/29]

2 \let\LWR@origrelsize\relsize
3 \LetLtxMacro\LWR@origlarger\larger
4 \LetLtxMacro\LWR@origsmaller\smaller
5 \let\LWR@relscale\relscale
6 \LetLtxMacro\LWR@origtextlarger\textlarger
7 \LetLtxMacro\LWR@origtextsmaller\textsmaller
8 \let\LWR@textscale\textscale
9
10 \appto\LWR@restoreorigformatting{%
11 \let\relsize\LWR@origrelsize%
12 \LetLtxMacro\larger\LWR@origlarger%
13 \LetLtxMacro\smaller\LWR@origsmaller%
14 \let\relscale\LWR@relscale%
15 \LetLtxMacro\textlarger\LWR@origtextlarger%
16 \LetLtxMacro\textsmaller\LWR@origtextsmaller%

```

```

17 \let\textscale\LWR@textscale%
18 }
19
20 \newcounter{LWR@relsize-temp}
21
22 \renewcommand*{\relsize}[1]{%
23 \renewcommand*{\larger}[1][1]{%
24 \renewcommand*{\smaller}[1][1]{%
25 \renewcommand*{\relscale}[1]{%
26
27 \renewcommand*{\textlarger}[2][1]{%
28 \setcounter{LWR@relsize-temp}{100+(#1*20)}%
29 \InlineClass[font-size:\arabic{LWR@relsize-temp}\%]{textlarger}{#2}%
30 }
31
32 \renewcommand*{\textsmaller}[2][1]{%
33 \setcounter{LWR@relsize-temp}{100-(#1*20)}%
34 \InlineClass[font-size:\arabic{LWR@relsize-temp}\%]{textsmaller}{#2}%
35 }
36
37 \renewcommand*{\textscale}[2]{%
38 \setcounter{LWR@relsize-temp}{100*\real{#1}}%
39 \InlineClass[font-size:\arabic{LWR@relsize-temp}\%]{textscale}{#2}%
40 }

```

For MATHJAX:

```

41 \begin{warpMathJax}
42 \CustomizeMathJax{\newcommand{\mathlarger}[1]{#1}}
43 \CustomizeMathJax{\newcommand{\mathsmaller}[1]{#1}}
44 \end{warpMathJax}


```

---

File 356 **lwarp-repeatindex.sty**

§ 459      Package **repeatindex**

Pkg    repeatindex    repeatindex is emulated for lwarp.

 **style file**    lwarp must be used with a special style file:

```
\usepackage[makeindex,makeindexStyle={lwarp-repeatindex}]{lwarp}
```

where lwarp\_repeatindex.ist may be copied from the following modified version of lwarp.ist:

```

| preamble
| "\begin{theindex}
| \providecommand*\lettergroupDefault[1]{%
| \providecommand*\lettergroup[1]{%
| \par\textbf{#1}\par
| \nopagebreak

```

```

 }
"
headings_flag 1
heading_prefix "
 \\lettergroup{"
heading_suffix "}"
delim_0 "[", \\hyperindexref{"
delim_1 " ", \\hyperindexref{"
delim_2 " ", \\hyperindexref{"
delim_n "}", \\hyperindexref{"
delim_r "} -- \\hyperindexref{"
delim_t "}"
item_0 "\n \\item ["

```

(The modifications are the `delim_0` and `item_0` entries.)

**for HTML output:** 1 \LWR@ProvidesPackageDrop{repeatindex}[2001/10/13]

In the `lwarp` core, `\LWR@indexitem` is modified to accept the optional `\item` argument.

```

2 \RequirePackage{makeidx}
3 \def\entryprefix{\itshape}
4 \def\entrypostfix{\dots}

```

---

## File 357 **lwarp-resizegather.sty**

§ 460     Package **resizegather**

Pkg    `resizegather`    `resizegather` is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{resizegather}[2016/05/16]

```

2 \newcommand*{\resizegathersetup}[1]{}

```

---

## File 358 **lwarp-returntogrid.sty**

§ 461     Package **returntogrid**

Pkg    `returntogrid`    `returntogrid` is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{returntogrid}[2018/08/21]

```

2 \NewDocumentCommand\returntogrid{ 0 {} }{}
3 \NewDocumentCommand\returntogridsetup { m } {}
4 \NewDocumentCommand\showdebugpagegrid {} {}

```

---

File 359 **lwarp-rmathbr.sty**

§ 462      Package **rmathbr**

*(Emulates or patches code by DENIS RYABOV.)*

Pkg    rmathbr    rmathbr is used as-is for SVG math, and emulated for MATHJAX.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{rmathbr}[2016/04/10]

2 \begin{warpMathJax}
3 \CustomizeMathJax{\def*{~}}
4 \CustomizeMathJax{\newcommand{\cdott}{\cdot}}
5 \CustomizeMathJax{\newcommand{\nobr}{}}
6 \end{warpMathJax}
```

---

File 360 **lwarp-rmpage.sty**

§ 463      Package **rmpage**

Pkg    rmpage    rmpage is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{rmpage}[1997/09/29]
```

---

File 361 **lwarp-romanbar.sty**

§ 464      Package **romanbar**

*(Emulates or patches code by H.-MARTIN MÜNCH.)*

Pkg    romanbar    romanbar is patched for use by lwarp.

An inline class with an overline and underline is used.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{romanbar}[2012/01/01]

2 \DeclareRobustCommand{\Roman@bar}[1]{% #1 is in Roman, i.e. MMXII
3 \InlineClass[%
4 text-decoration: overline underline ;
5]{romanbar}{#1}%
6 }
```

---

File 362 **lwarp-romanbarpagenumber.sty**

§ 465 Package **romanbarpagenumber**

Pkg romanbarpagenumber romanbarpagenumber is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{romanbarpagenumber}[2015/02/06]

---

File 363 **lwarp-rotating.sty**

§ 466 Package **rotating**

*(Emulates or patches code by ROBIN FAIRBAIRNS, SEBASTIAN RAHTZ, LEONOR BARROCA.)*

Pkg rotating rotating is emulated.

All rotations are ignored in HTML output.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{rotating}[2016/08/11]  
 2 \RequirePackage{graphicx}  
  
 3 \LetLtxMacro\sidewaystable\table  
 4 \let\endsidewaystable\endtable  
 5  
 6 \LetLtxMacro\sidewaysfigure\figure  
 7 \let\endsidewaysfigure\endfigure  
 8  
 9 \newenvironment\*{sideways}{}{}  
 10 \newenvironment\*{turn}[1]{}{}  
 11 \newenvironment\*{rotate}[1]{}{}  
 12 \NewDocumentCommand{\turnbox}{m +m}{#2}  
 13 \let\rotcaption\caption  
 14 \let\@makerotcaption\makecaption

---

File 364 **lwarp-rotfloat.sty**

§ 467 Package **rotfloat**

*(Emulates or patches code by AXEL SOMMERFELDT.)*

Pkg rotfloat rotfloat is emulated.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{rotfloat}[2004/01/04]  
 2  
 3 \RequirePackage{float}  
 4 \RequirePackage{rotating}

`\newfloat`  $\{\langle 1: type \rangle\} \{\langle 2: placement \rangle\} \{\langle 3: ext \rangle\} [\langle 4: within \rangle]$

Emulates the `\newfloat` command from the `float` package. Sideways floats are `\let` to the same as regular floats.

“placement” is ignored.

```

5 \RenewDocumentCommand{\newfloat}{m m m o}{%
6 \IfValueTF{#4}%
7 {%
8 \DeclareFloatingEnvironment[fileext=#3,within=#4]{#1}%
9 }%
10 {%
11 \DeclareFloatingEnvironment[fileext=#3]{#1}%
12 }%
13 \csletcs{sideways#1}{#1}%
14 \csletcs{endsideways#1}{end#1}%

```

Remember the float style:

```

15 \csedef{LWR@floatstyle@#1}{\LWR@floatstyle}%
16 \csedef{LWR@floatstyle@sideways#1}{\LWR@floatstyle}%

```

`newfloat` package automatically creates the `\listof` command for new floats, but `float` does not, so remove `\listof` here in case it is manually created later:

```

17 \cslet{listof#1s}\relax%
18 \cslet{listof#1es}\relax%
19 \cslet{listofsideways#1s}\relax%
20 \cslet{listofsideways#1es}\relax%
21 }

```

File 365 **lwarp-rviewport.sty**

§ 468      Package **rviewport**

Pkg    rviewport    `rviewport` is honored inside a `lateximage`, and otherwise ignored for HTML output.

If `rviewport` is important for an image, enclose the image inside a `lateximage` environment.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{rviewport}[2011/08/27]

2 \define@key{igraph}{rviewport}{}

```

File 366 **lwarp-savetrees.sty**

§ 469      Package **savetrees**

Pkg    savetrees    `savetrees` is ignored.

**for HTML output:** Discard all options for lwarp-savetrees:

```
1 \LWR@ProvidesPackageDrop{savetrees}[2016/04/13]
```

---

File 367 **lwarp-scalefnt.sty**

§ 470 Package **scalefnt**

*(Emulates or patches code by D. CARLISLE.)*

Pkg scalefnt scalefnt is ignored.

**for HTML output:**

```
1 \LWR@ProvidesPackageDrop{scalefnt}

2 \DeclareRobustCommand\scalefont[1]{}

```

---

File 368 **lwarp-schemata.sty**

§ 471 Package **schemata**

*(Emulates or patches code by CHARLES P. SCHAUM.)*

Pkg schemata schemata is patched for use by lwarp.

**for HTML output:**

```
1 \LWR@ProvidesPackagePass{schemata}[2016/01/25]

2 \LetLtxMacro\LWR@schemata@origschema\schema
3 \LetLtxMacro\LWR@schemata@origSchema\Schema
4
5 \renewcommand{\schema}[3][open]{%
6 \begin{lateximage}%
7 \LWR@print@normalsize
8 \LWR@schemata@origschema[#1]{#2}{#3}%
9 \end{lateximage}%
10 }
11
12 \renewcommand{\Schema}[5][open]{%
13 \begin{lateximage}%
14 \LWR@print@normalsize
15 \LWR@schemata@origSchema[#1]{#2}{#3}{#4}{#5}%
16 \end{lateximage}%
17 }

```

---

File 369 **lwarp-scrextend.sty**

§ 472 Package **scrextend**

Pkg scrextend scrextend is emulated.

This package may be loaded standalone, but is also loaded automatically if koma-script classes are in use. `\DeclareDocumentCommand` is used to overwrite the koma-script definitions.

for HTML output:

```

1 \LWR@ProvidesPackageDrop{scrextend}[2020/01/24]

2 \DeclareDocumentCommand{\setkomafont}{m m}{}
3 \DeclareDocumentCommand{\addkomafont}{m m}{}
4 \DeclareDocumentCommand{\usekomafont}{m}{}
5
6 \DeclareDocumentCommand{\usefontofkomafont}{m}{}
7 \DeclareDocumentCommand{\useencodingofkomafont}{m}{}
8 \DeclareDocumentCommand{\usesizeofkomafont}{m}{}
9 \DeclareDocumentCommand{\usefamilyofkomafont}{m}{}
10 \DeclareDocumentCommand{\useseriesofkomafont}{m}{}
11 \DeclareDocumentCommand{\useshapeofkomafont}{m}{}
12
13 \providecommand*\coverpagetopmargin{}
14 \providecommand*\coverpagebottommargin{}
15 \providecommand*\coverpageleftmargin{}
16 \providecommand*\coverpagerightmargin{}
17

```

Title page:

```

18 \AtBeginDocument{
19 \let\LWR@koma@orig@maketitle\maketitle
20 \DeclareDocumentCommand{\maketitle}{o}{\LWR@koma@orig@maketitle}
21 }
22
23 \DeclareDocumentCommand{\@maketitle}{}{%
24 \ifdefvoid{\@titlehead}{}{%
25 \begin{BlockClass}{titlehead}%
26 \@titlehead%
27 \end{BlockClass}%
28 }%
29 \ifdefvoid{\@subject}{}{%
30 \begin{BlockClass}{subject}%
31 \@subject%
32 \end{BlockClass}%
33 }%
34 \LWR@stoppars%
35 \LWR@htmltag{\LWR@tagtitle}%
36 \@title%
37 \LWR@htmltag{\LWR@tagtitleend}%
38 \ifdefvoid{\@subtitle}{}{%
39 \begin{BlockClass}{subtitle}%
40 \@subtitle%
41 \end{BlockClass}%
42 }%
43 \LWR@startpars%
44 \begin{BlockClass}{author}%

45 \renewcommand*\cr{}{}%
46 \renewcommand*\crrcr{}{}%

```

```

47 \renewcommand*{\noalign}{}%

48 \renewcommand{\and}{%
49 \end{BlockClass}%
50 \begin{BlockClass}{oneauthor}%
51 }%
52 \begin{BlockClass}{oneauthor}%
53 \@author%
54 \end{BlockClass}%
55 \end{BlockClass}%
56 \begin{BlockClass}{titledate}%
57 \@date%
58 \end{BlockClass}%
59 \ifdefvoid{\@published}{}%
60 \begin{BlockClass}{published}%
61 \@published%
62 \end{BlockClass}%
63 }%
64 }
65
66 \AddSubtitlePublished
67
68 \DeclareDocumentCommand{\extratitle}{m}{}
69 \DeclareDocumentCommand{\frontispiece}{m}{}
70
71 \def\@titlehead{%
72 \DeclareDocumentCommand{\titlehead}{m}{\gdef\@titlehead{#1}}%
73
74 \def\@subject{%
75 \DeclareDocumentCommand{\subject}{m}{\gdef\@subject{#1}}%
76
77 % \subtitle and \published are defined by \AddSubtitlePublished
78
79 \DeclareDocumentCommand{\publishers}{m}{\published{#1}}
80
81 \DeclareDocumentCommand{\uppertitleback}{m}{}
82 \DeclareDocumentCommand{\lowertitleback}{m}{}
83 \DeclareDocumentCommand{\dedication}{m}{}
84
85 \DeclareDocumentCommand{\ifthispageodd}{m m}{#1}
86
87 \DeclareDocumentCommand{\cleardoublepageusingstyle}{m}{}
88 \DeclareDocumentCommand{\cleardoubleemptypage}{}{}
89 \DeclareDocumentCommand{\cleardoubleplainpage}{}{}
90 \DeclareDocumentCommand{\cleardoublestandardpage}{}{}
91 \DeclareDocumentCommand{\cleardoubleoddpager}{}{}
92 \DeclareDocumentCommand{\cleardoubleoddpagerusingstyle}{m}{}
93 \DeclareDocumentCommand{\cleardoubleoddpageremptypage}{}{}
94 \DeclareDocumentCommand{\cleardoubleoddpagerplainpage}{}{}
95 \DeclareDocumentCommand{\cleardoubleoddpagerstandardpage}{}{}
96 \DeclareDocumentCommand{\cleardoubleevenpage}{}{}
97 \DeclareDocumentCommand{\cleardoubleevenpagerusingstyle}{m}{}
98 \DeclareDocumentCommand{\cleardoubleevenpageremptypage}{}{}
99 \DeclareDocumentCommand{\cleardoubleevenpagerplainpage}{}{}
100 \DeclareDocumentCommand{\cleardoubleevenpagerstandardpage}{}{}

```

```

101
102 \DeclareDocumentCommand{\multiplefootnoteseparator}{}{%
103 \begingroup\let\thefootnotemark\multfootsep\makefnmark\endgroup
104 }
105
106 \DeclareDocumentCommand{\multfootsep}{}{,}
107
108 \DeclareDocumentCommand{\footref}{m}{%
109 \begingroup
110 \unrestored@protected@xdef\thefnmark{\ref{#1}}%
111 \endgroup
112 \@footnotemark
113 }
114
115 \DeclareDocumentCommand{\deffootnote}{o m m m}{}
116 \DeclareDocumentCommand{\deffootnotemark}{m}{}
117 \DeclareDocumentCommand{\setfootnoterule}{o m}{}
118 \DeclareDocumentCommand{\raggedfootnote}{}{}

119 \DeclareDocumentCommand{\dictum}{o m}{
120 \begin{LWR@BlockClassWP}{\LWR@print@mbbox{text-align:right}}{\dictum}
121 #2
122 \IfValueT{#1}
123 {
124 \LWR@stoppars%
125 \ifbool{FormatWP}
126 {\begin{BlockClass}[\LWR@print@mbbox{border-top:} 1px solid gray]{dictumauthor}}
127 {\begin{BlockClass}{dictumauthor}}
128 \dictumauthorformat{#1}
129 \end{BlockClass}
130 }
131 \end{LWR@BlockClassWP}
132 }
133
134 \DeclareDocumentCommand{\dictumwidth}{}{}
135 \DeclareDocumentCommand{\dictumauthorformat}{m}{(#1)}
136 \DeclareDocumentCommand{\dictumrule}{}{}
137 \DeclareDocumentCommand{\raggeddictum}{}{}
138 \DeclareDocumentCommand{\raggeddictumtext}{}{}
139 \DeclareDocumentCommand{\raggeddictumauthor}{}{}
140
141 \DeclareDocumentEnvironment{labeling}{o m}
142 {}
143 \def\sc@septestext{#1}%
144 \list{}{}%
145 \let\makelabel\labelinglabel%
146 }
147 {
148 \endlist
149 }
150
151 \DeclareDocumentCommand{\labelinglabel}{m}{%
152 #1 \quad \sc@septestext%
153 }
154

```

```

155 \let\addmargin\relax
156 \let\endaddmargin\relax
157 \cslet{addmargin*}{\relax}
158 \cslet{endaddmargin*}{\relax}

159 \NewDocumentEnvironment{addmargin}{s O{ } m}
160 {
161 \LWR@stoppars%
162 \setlength{\LWR@templelengthtwo}{#3}
163 \ifblank{#2}
164 {
165 \begin{BlockClass}[
166 \LWR@print@mbox{margin-left:\LWR@printlength{\LWR@templelengthtwo}} ;
167 \LWR@print@mbox{margin-right:\LWR@printlength{\LWR@templelengthtwo}}
168]{addmargin}
169 }
170 {
171 \setlength{\LWR@templelengthone}{#2}
172 \begin{BlockClass}[
173 \LWR@print@mbox{margin-left:\LWR@printlength{\LWR@templelengthone}} ;
174 \LWR@print@mbox{margin-right:\LWR@printlength{\LWR@templelengthtwo}}
175]{addmargin}
176 }
177 }
178 {\end{BlockClass}\LWR@startpars}

Ref to create a starred environment:
https://tex.stackexchange.com/questions/45401/
use-the-s-star-argument-with-newdocumentenvironment

179
180 \ExplSyntaxOn
181 \cs_new:cpn {addmargin*} {\addmargin*}
182 \cs_new_eq:cN {endaddmargin*} \endaddmargin
183 \ExplSyntaxOff
184
185 \DeclareDocumentCommand{\marginline}{m}{\marginpar{#1}}

```

---

File 370 **lwarp-scrhack.sty**

§ 473      Package **scrhack**

Pkg    scrhack    scrhack is ignored.

for HTML output:    1 \LWR@ProvidesPackageDrop{scrhack}[2018/03/30]

File 371 **lwarp-scrlayer.sty**

§ 474 Package **scrlayer**

(Emulates or patches code by MARKUS KOHM.)

Pkg scrlayer scrlayer is emulated.

 **Not fully tested!** [Please send bug reports!](#)

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{scrlayer}[2018/03/30]

2 \newcommand*{\DeclareSectionNumberDepth}[2]{}
3 \newcommand*{\DeclareLayer}[2][]{ }
4 \newcommand*{\DeclareNewLayer}[2][]{ }
5 \newcommand*{\ProvideLayer}[2][]{ }
6 \newcommand*{\RedeclareLayer}[2][]{ }
7 \newcommand*{\ModifyLayer}[2][]{ }
8 \newcommand*{\layerhalign}{}
9 \newcommand*{\layervalign}{}
10 \newcommand*{\layerxoffset}{}
11 \newcommand*{\layeryoffset}{}
12 \newcommand*{\layerwidth}{}
13 \newcommand*{\layerheight}{}
14 \providecommand*{\LenToUnit}[1]{\strip@pt\dimexpr#1*\p@/\unitlength}
15 \newcommand*{\putUL}[1]{}
16 \newcommand*{\putUR}[1]{}
17 \newcommand*{\putLL}[1]{}
18 \newcommand*{\putLR}[1]{}
19 \newcommand*{\putC}[1]{}
20 \newcommand*{\GetLayerContents}[1]{}
21 \newcommand*{\IfLayerExists}[3]{#3}
22 \newcommand*{\DestroyLayer}[1]{}
23 \newcommand*{\layercontentsmeasure}{}
24 \newcommand*{\currentpagestyle}{}
25 \newcommand*{\BeforeSelectAnyPageStyle}[1]{}
26 \newcommand*{\AfterSelectAnyPageStyle}[1]{}
27 \newcommand*{\DeclarePageStyleAlias}[2]{}
28 \newcommand*{\DeclareNewPageStyleAlias}[2]{}
29 \newcommand*{\ProvidePageStyleAlias}[2]{}
30 \newcommand*{\RedeclarePageStyleAlias}[2]{}
31 \newcommand*{\DestroyPageStyleAlias}[1]{}
32 \newcommand*{\GetRealPageStyle}[1]{}
33 \newcommand*{\DeclarePageStyleByLayers}[3][]{ }
34 \newcommand*{\DeclareNewPageStyleByLayers}[3][]{ }
35 \newcommand*{\ProvidePageStyleByLayers}[3][]{ }
36 \newcommand*{\RedeclarePageStyleByLayers}[3][]{ }
37 \NewDocumentCommand{\ForEachLayerOfPageStyle}{s m m}{}
38 \newcommand*{\AddLayersToPageStyle}[2]{}
39 \newcommand*{\AddLayersAtBeginOfPageStyle}[2]{}
40 \newcommand*{\AddLayersAtEndOfPageStyle}[2]{}

```

```

41 \newcommand*{\RemoveLayersFromPageStyle}[2]{}
42 \newcommand*{\AddLayersToPageStyleBeforeLayer}[3]{}
43 \newcommand*{\AddLayersToPageStyleAfterLayer}[3]{}
44 \newcommand*{\UnifyLayersAtPageStyle}[1]{}
45 \newcommand*{\ModifyLayerPageStyleOptions}[2]{}
46 \newcommand*{\AddToLayerPageStyleOptions}[2]{}
47 \newcommand{\IfLayerPageStyleExists}[3]{#3}
48 \newcommand{\IfRealLayerPageStyleExists}[3]{#3}
49 \newcommand{\IfLayerAtPageStyle}[4]{#4}
50 \newcommand{\IfSomeLayerAtPageStyle}[4]{#4}
51 \newcommand{\IfLayersAtPageStyle}[4]{#4}
52 \newcommand*{\DestroyRealLayerPageStyle}[1]{}
53 \ifundefined{footheight}{\newlength{footheight}}{}
54 \DeclareDocumentCommand{\automark}{s o m}{}
55 \DeclareDocumentCommand{\manualmark}{}{}
56 \DeclareDocumentCommand{\MakeMarkcase}{m}{#1}

57 \newcommand{\partmarkformat}{}
58 \if@chapter
59 \newcommand{\chaptermarkformat}{}
60 \fi
61 \newcommand{\sectionmarkformat}{}
62 \DeclareDocumentCommand{\GenericMarkFormat}{m}{}

63 \newcommand*{\@mkleft}[1]{}
64 \newcommand*{\@mkright}[1]{}
65 \newcommand*{\@mkdouble}[1]{}
66 \newcommand*{\@mkboth}[2]{}
67 \newcommand*{\sclayerInitInterface}[1][{}]{
68 \newcommand{\sclayerAddToInterface}[3][{}]{
69 \newcommand{\sclayerAddCsToInterface}[3][{}]{
70 \newcommand{\sclayerOnAutoRemoveInterface}[2][{}]{

```

---

File 372 **lwarp-sclayer-notecolumn.sty**

§ 475      Package **sclayer-notecolumn**

(Emulates or patches code by MARKUS KOHM.)

Pkg    sclayer-notecolumn    sclayer-notecolumn is emulated.

 **Not fully tested!** [Please send bug reports!](#)

**for HTML output:**    1 \LWR@ProvidesPackageDrop{sclayer-notecolumn}[2018/02/02]

```

2 \newcommand*{\DeclareNoteColumn}[2][{}]{
3 \newcommand*{\DeclareNewNoteColumn}[2][{}]{
4 \newcommand*{\ProvideNoteColumn}[2][{}]{
5 \newcommand*{\RedeclareNoteColumn}[2][{}]{
6 \NewDocumentCommand{\makenote}{s o m}{\marginpar{#3}}
7 \newcommand*{\syncwithnotecolumn}[1][{}]{
8 \newcommand*{\syncwithnotecolumns}[1][{}]{

```

```

9 \newcommand*{\clearnotecolumn}[1][{}]{
10 \newcommand*{\clearnotecolumns}[1][{}]{

```

File 373 **lwarp-scrlayer-scrpage.sty**

§ 476 Package **scrlayer-scrpage**

(Emulates or patches code by MARKUS KOHM.)

Pkg scrlayer-scrpage scrlayer-scrpage is ignored.

 **Not fully tested!** [Please send bug reports!](#)

**for HTML output:** 1 \LWR@ProvidesPackageDrop{scrlayer-scrpage}[2018/03/30]

```

2 \@ifundefined{footheight}{\newlength\footheight}{}
3 \NewDocumentCommand{\lehead}{s o m}{}
4 \NewDocumentCommand{\cehead}{s o m}{}
5 \NewDocumentCommand{\rehead}{s o m}{}
6 \NewDocumentCommand{\lohead}{s o m}{}
7 \NewDocumentCommand{\cohead}{s o m}{}
8 \NewDocumentCommand{\rohead}{s o m}{}
9 \NewDocumentCommand{\lefoot}{s o m}{}
10 \NewDocumentCommand{\cefoot}{s o m}{}
11 \NewDocumentCommand{\refoot}{s o m}{}
12 \NewDocumentCommand{\lofoot}{s o m}{}
13 \NewDocumentCommand{\cofoot}{s o m}{}
14 \NewDocumentCommand{\rofoot}{s o m}{}
15 \NewDocumentCommand{\ohead}{s o m}{}
16 \NewDocumentCommand{\chead}{s o m}{}
17 \NewDocumentCommand{\ihead}{s o m}{}
18 \NewDocumentCommand{\ofoot}{s o m}{}
19 \NewDocumentCommand{\cfoot}{s o m}{}
20 \NewDocumentCommand{\ifoot}{s o m}{}
21 \DeclareDocumentCommand{\MakeMarkcase}{m}{#1}
22 \newcommand*{\defpairofpagestyles}[3][{}]{
23 \newcommand*{\newpairofpagestyles}[3][{}]{
24 \newcommand*{\renewpairofpagestyles}[3][{}]{
25 \newcommand*{\providepairofpagestyles}[3][{}]{

26 \newcommand*{\clearmainofpairofpagestyles}{}
27 \newcommand*{\clearplainofpairofpagestyles}{}
28 \newcommand*{\clearpairofpagestyles}{}
29 \newcommand*{\clearscrheadings}{}
30 \newcommand*{\clearscrheadfoot}{}
31 \newcommand*{\clearscrplain}{}

32 \NewDocumentCommand{\deftriplepagestyle}{m o m m m m m m}{}
33 \NewDocumentCommand{\newtriplepagestyle}{m o m m m m m m}{}
34 \NewDocumentCommand{\renewtriplepagestyle}{m o m m m m m m}{}
35 \NewDocumentCommand{\providetriplespagestyle}{m o m m m m m m}{}
36 \newcommand*{\defpagestyle}[3][{}]{

```

```

37 \newcommand*{\newpagestyle}[3]{}
38 \newcommand*{\providepagestyle}[3]{}
39 \newcommand*{\renewpagestyle}[3]{}

```

File 374 **lwarp-scrpage2.sty**

§ 477 Package **scrpage2**

(Emulates or patches code by MARKUS KOHM.)

Pkg scrpage2 scrpage2 is ignored.

 **Not fully tested!** [Please send bug reports!](#)

**for HTML output:** 1 \LWRE@ProvidesPackageDrop{scrpage2}[2018/03/30]

```

2 \@ifundefined{footheight}{\newlength\footheight}{}
3 \NewDocumentCommand{\lehead}{o m}{}
4 \NewDocumentCommand{\cehead}{o m}{}
5 \NewDocumentCommand{\rehead}{o m}{}
6 \NewDocumentCommand{\lohead}{o m}{}
7 \NewDocumentCommand{\cohead}{o m}{}
8 \NewDocumentCommand{\rohead}{o m}{}
9 \NewDocumentCommand{\lefoot}{o m}{}
10 \NewDocumentCommand{\cefoot}{o m}{}
11 \NewDocumentCommand{\refoot}{o m}{}
12 \NewDocumentCommand{\lofoot}{o m}{}
13 \NewDocumentCommand{\cofoot}{o m}{}
14 \NewDocumentCommand{\rofoot}{o m}{}
15 \NewDocumentCommand{\ohead}{o m}{}
16 \NewDocumentCommand{\chead}{o m}{}
17 \NewDocumentCommand{\ihead}{o m}{}
18 \NewDocumentCommand{\ofoot}{o m}{}
19 \NewDocumentCommand{\cfoot}{o m}{}
20 \NewDocumentCommand{\ifoot}{o m}{}
21 \DeclareDocumentCommand{\automark}{o m}{}
22 \DeclareDocumentCommand{\manualmark}{}{}
23 \DeclareDocumentCommand{\MakeMarkcase}{m}{#1}
24 \NewDocumentCommand{\deftripstyle}{m o o m m m m m}{}
25 \NewDocumentCommand{\defpagestyle}{s m m m}{}
26 \NewDocumentCommand{\newpagestyle}{s m m m}{}
27 \NewDocumentCommand{\renewpagestyle}{s m m m}{}
28 \NewDocumentCommand{\providepagestyle}{s m m m}{}
29 \newcommand{\partmarkformat}{}
30 \if@chapter
31 \newcommand{\chaptermarkformat}{}
32 \fi
33 \newcommand{\sectionmarkformat}{}
34 \newcommand{\subsectionmarkformat}{}
35 \newcommand{\subsubsectionmarkformat}{}
36 \newcommand{\paragraphmarkformat}{}
37 \newcommand{\subparagraphmarkformat}{}
38

```

```

39 \newcommand*{\clearscrheadings}{}
40 \newcommand*{\clearscrheadfoot}{}
41 \newcommand*{\clearscrplain}{}

```

---

File 375 **lwarp-section.sty**

§ 478      Package **section**

Pkg    section    section is ignored.

*(Emulates or patches code by OLIVER PRETZEL.)*

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{section}

2 \ifx\chapter\undefined
3 \def\chsize{\Large}\def\hdsi{\huge}\else
4 \def\chsize{\huge}\def\hdsi{\Huge}
5 \fi
6 \let\ttsi\LARGE
7 \let\ausi\large
8 \let\dasize\large
9 \let\secsi\Large
10 \let\subsi\large
11 \let\hdpos\raggedright
12 \newcounter{hddepth}
13 \let\fpind\relax
14 \def\ttfnt{}
15 \def\hdfnt{}
16 \def\fefnt{}
17 \def\thfnt{}
18 \def\pgfnt{}
19 \def\hmkfnt{}
20 \let\mkcse\uppercase
21 \def\hddot{}
22 \def\cpdot{:}
23 \def\nmdot{}
24 \ifx\secindent\undefined
25 \newdimen\secindent
26 \newskip\secpreskip
27 \newskip\secpstskip
28 \newdimen\subindent
29 \newskip\subpreskip
30 \newskip\subpstskip
31 \newskip\parpstskip
32 \newcount\c@hddepth
33 \fi

```

---

File 376 **lwarp-sectionbreak.sty**

§ 479      Package **sectionbreak**

*(Emulates or patches code by MICHAL HOFTICH.)*

Pkg    sectionbreak    **sectionbreak** is patched for use by lwarp.

**for HTML output:**    1 \LWR@ProvidesPackagePass{sectionbreak}[2018-01-03]

```

2 \renewcommand\asterism{\HTMLunicode{2042}}
3
4 \renewcommand\pre@sectionbreak{}
5 \renewcommand\post@sectionbreak{}
6
7 \renewcommand\print@sectionbreak[1]{%
8 \begin{center}
9 #1
10 \end{center}
11 }
12
```

---

File 377 **lwarp-sectsty.sty**

§ 480      Package **sectsty**

*(Emulates or patches code by ROWLAND McDONNELL.)*

Pkg    sectsty    **sectsty** is ignored.

**for HTML output:**    1 \LWR@ProvidesPackageDrop{sectsty}[2002/02/25]

```

2 \newcommand*\partfont [1] {}
3 \newcommand*\partnumberfont [1] {}
4 \newcommand*\parttitlefont [1] {}
5 \newcommand*\chapterfont [1] {}
6 \newcommand*\chapternumberfont [1] {}
7 \newcommand*\chaptertitlefont [1] {}
8 \newcommand*\sectionfont [1] {}
9 \newcommand*\subsectionfont [1] {}
10 \newcommand*\subsubsectionfont [1] {}
11 \newcommand*\paragraphfont [1] {}
12 \newcommand*\subparagraphfont [1] {}
13 \newcommand*\minisecfont [1] {}
14 \newcommand*\allsectionsfont[1] {}
15 \newcommand\{nohang}{}
```

`\sectionrule` is only to be used in `*font` commands, thus it is ignored.

```
16 \newcommand*{\sectionrule}[5]{}
17
18 \def\ulemheading#1#2{}
```

---

## File 378 **lwarp-semantic-markup.sty**

### § 481 Package **semantic-markup**

*(Emulates or patches code by ANDREW A. CASHNER.)*

Pkg semantic-markup semantic-markup is patched for use by lwarp.



If using the endnotes option, add `\theendnotes` where desired.

for HTML output: 1 \LWR@ProvidesPackagePass{semantic-markup}[2018/05/21]

The endnotes must be printed by the user before the end of the document, since the end is after the HTML footer, etc.

```
2 \ifendnotes
3 \RenewDocumentCommand{\SetupEndnotes}{}{%
4 \let\footnote=\endnote
5 \AtEndDocument{\DoBeforeEndnotes{\EndnoteFont\theendnotes}}%
6 }
7 \fi
```

HTML unicode characters from musicography are used.

```
8 \RequirePackage{musicography}
9
10 \let\fl\musFlat
11 \let\sh\musSharp
12 \let\na\musNatural
```

The `\musfig` is placed inside a hashed image, with a simple alt tag.

```
13 \RequirePackage{amsmath}
14
15 \RenewDocumentCommand{\musfig}{ m m }{%
16 \LWR@subsingledollar*%
17 {#1/#2}% alt tag
18 {musfig}% addl' hashing
19 {% contents
20 \LWR@origensuredmath{%
21 \genfrac{}{}{0pt}{1}{\text{#1}}{\text{#2}}}%
22 }%
23 }%
24 }
```

The `\meter` is taken from musicography, and becomes a hashed image with a simple alt tag.

```
25 \RenewDocumentCommand{\meter}{ m m }{%
26 \musMeter{#1}{#2}%
27 }
```

---

File 379 **lwarp-setspace.sty**

§ 482      Package **setspace**

*(Emulates or patches code by ROBIN FAIRBAIRNS.)*

Pkg    setspace    **setspace** is emulated.

Discard all options for **lwarp-setspace**:

**for HTML output:**

```
1 \LWR@ProvidesPackageDrop{setspace}[2011/12/19]
2
3 \newcommand*\setstretch[1]{}
4 \newcommand*\SetSinglespace[1]{}
5 \newcommand*\singlespacing{}
6 \newcommand*\onehalfspacing{}
7 \newcommand*\doublespacing{}
8
9 \newenvironment{singlespace}
10 {
11 \LWR@forcenewpage
12 \BlockClass{singlespace}
13 }
14 {\endBlockClass}
15
16 \newenvironment{singlespace*}
17 {
18 \LWR@forcenewpage
19 \BlockClass{singlespace}
20 }
21 {\endBlockClass}
22
23 \newenvironment{spacing}[1]{
24
25 }{
26
27 }
28
29 \newenvironment{onehalfspace}
30 {
31 \LWR@forcenewpage
32 \BlockClass{onehalfspace}
33 }
34 {\endBlockClass}
35
36 \newenvironment{doublespace}
```

---

```

37 {
38 \LWR@forcenewpage
39 \BlockClass{doublespace}
40 }
41 {\endBlockClass}

```

---

File 380 **lwarp-shadethm.sty**

§ 483      Package **shadethm**

*(Emulates or patches code by JIM HEFFERON.)*

Pkg    shadethm    **shadethm** is patched for use by **lwarp**.

**for HTML output:**    1 \LWR@ProvidesPackagePass{shadethm}[1999/11/23]

```

2 \newenvironment{LWR@HTML@shadebox}
3 {%
4 \convertcolorspec{named}{shadethmcolor}{HTML}\LWR@tempcolor%
5 \convertcolorspec{named}{shaderulecolor}{HTML}\LWR@tempcolortwo%
6 \begin{BlockClass}{%
7 background: \LWR@origpound\LWR@tempcolor ;
8 border: 1px solid \LWR@origpound\LWR@tempcolortwo ;
9 }{shadebox}
10}%
11 {\end{BlockClass}}
12 \LWR@formattedenv{shadebox}

```

---

File 381 **lwarp-shadow.sty**

§ 484      Package **shadow**

*(Emulates or patches code by MAURO ORLANDINI.)*

Pkg    shadow    **shadow** is emulated.

**for HTML output:**    Discard all options for **lwarp-shadow**:

```

1 \LWR@ProvidesPackageDrop{shadow}[2003/02/19]

2 \newdimen\sboxsep
3 \newdimen\sboxrule
4 \newdimen\sdim
5
6 \newcommand{\shabox}[1]{%
7 \InlineClass{shabox}{#1}%
8 }

```

---

File 382 **lwarp-shapepar.sty**

§ 485      Package **shapepar**

*(Emulates or patches code by DONALD ARSENEAU.)*

Pkg    shapepar    **shapepar** is patched for use by **lwarp**. Shapes appear in print mode, as well as inside a `lateximage`, but are ignored for HTML.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{shapepar}[2013/03/26]

2 \newcommand*{\LWR@HTML@shapepar}[2][{}]{
3 \LWR@formatted{shapepar}
4
5 \NewDocumentCommand{\LWR@HTML@cutout}{m d()}{
6 \LWR@formatted{cutout}
```

---

File 383 **lwarp-showidx.sty**

§ 486      Package **showidx**

Pkg    showidx    **showidx** is ignored.

**for HTML output:**    Discard all options for **lwarp-showidx**:

```

1 \LWR@ProvidesPackageDrop{showidx}[2014/09/29]
```

`\@wrindex` is redefined `\AtBeginDocument` by the **lwarp** core.

---

File 384 **lwarp-showkeys.sty**

§ 487      Package **showkeys**

*(Emulates or patches code by DAVID CARLISLE, MORTEN HØGHOLM.)*

Pkg    showkeys    **showkeys** is ignored.

**for HTML output:**    Discard all options for **lwarp-showkeys**:

```

1 \LWR@ProvidesPackageDrop{showkeys}[2014/10/28]
```

```

2 \NewDocumentCommand{\showkeys}{s}{}

```

---

File 385 **lwarp-showtags.sty**

§ 488      Package **showtags**

Pkg    showtags    showtags is ignored.

**for HTML output:**    1 \LWR@ProvidesPackageDrop{showtags}% no version is given  
                          2 \newcommand{\thecitetag}[1]{}

---

File 386 **lwarp-sidecap.sty**

§ 489      Package **sidecap**

*(Emulates or patches code by ROLF NIEPRASCHK, HUBERT GÄSSLEIN.)*

Pkg    sidecap    sidecap is emulated.

**for HTML output:**    Discard all options for lwarp-sidecap.

1 \LWR@ProvidesPackageDrop{sidecap}[2003/06/06]

See:

<http://tex.stackexchange.com/questions/45401/use-the-s-star-argument-with-newdocumentenvironment>  
 regarding the creation of starred environments with xparse.

```

2 \NewDocumentEnvironment{SCtable}{soo}
3 {\IfValueTF{#3}{\table[#3]}{\table}}
4 {\endtable}
5
6 \ExplSyntaxOn
7 \cs_new:cpn {SCtable*} {\SCtable*}
8 \cs_new_eq:cN {endSCtable*} \endSCtable
9 \ExplSyntaxOff
10
11
12 \NewDocumentEnvironment{SCfigure}{soo}
13 {\IfValueTF{#3}{\figure[#3]}{\figure}}
14 {\endfigure}
15
16 \ExplSyntaxOn
17 \cs_new:cpn {SCfigure*} {\SCfigure*}
18 \cs_new_eq:cN {endSCfigure*} \endSCfigure
19 \ExplSyntaxOff
20
21
22 \newenvironment*{wide}{}{}
```

---

File 387 **lwarp-sidenotes.sty**

§ 490     Package **sidenotes**

(Emulates or patches code by ANDY THOMAS, OLIVER SCHEBAUM.)

Pkg    sidenotes    Patched for lwarp.

for HTML output:    Load the original package:

```
1 \LWR@ProvidesPackagePass{sidenotes}
```

The following patch sidenotes for use with lwarp:

```
\sidecaption * [⟨entry⟩] [⟨offset⟩] {⟨text⟩}

2 \RenewDocumentCommand \sidecaption {s o o m}
3 {
4 \LWR@stoppars
5 \begingroup
6 \captionsetup{style=sidecaption}%
7 \IfBooleanTF{#1}
8 { % starred
9 \begin{BlockClass}[border:none ; box-shadow:none]{marginblock}
10 \caption*{#4}%
11 \end{BlockClass}
12 }
13 { % unstarred
14 \IfNoValueOrEmptyTF{#2}
15 {\def\@sidenotes@sidecaption@tof{#4}}
16 {\def\@sidenotes@sidecaption@tof{#2}}
17 \begin{BlockClass}[border:none ; box-shadow:none]{marginblock}
18 \caption[\@sidenotes@sidecaption@tof]{#4}
19 \end{BlockClass}
20 }
21 \endgroup
22 \LWR@startpars
23 }
```

Borrowed from the lwarp version of keyfloat:

```
24 \NewDocumentEnvironment{KFLT sidenotes @marginfloat}{0{-1.2ex} m}
25 {% start
26 \LWR@BlockClassWP{float:right; width:2in; margin:10pt}{marginblock}%
27 \renewcommand*{\@capttype}{#2}%
28 }
29 {%
30 \endLWR@BlockClassWP%
31 }
32
33 \RenewDocumentEnvironment{marginfigure}{o}
```

```

34 {\begin{KFLTsidenotes@marginfloat}{figure}}
35 {\end{KFLTsidenotes@marginfloat}}
36
37 \RenewDocumentEnvironment{margintable}{o}
38 {\begin{KFLTsidenotes@marginfloat}{table}}
39 {\end{KFLTsidenotes@marginfloat}}

```

The following were changed by `sidenotes`, and now are reset back to their `lwarp`-supported originals:

Restoring the definition from the  $\text{\LaTeX}2_{\epsilon}$  `article.cls` source:

```

40 \renewenvironment{figure*}
41 {\@dblfloat{figure}}
42 {\end@dblfloat}
43
44 \renewenvironment{table*}
45 {\@dblfloat{table}}
46 {\end@dblfloat}

```

For `MATHJAX`:



Note that `sidenotes` does not support `\sidenote` inside math in print mode. Use `\sidenotemark` and `\sidenotetext` instead.

```

47 \begin{warpMathJax}
48 \providecommand{\sidenotename}{sidenote}
49 \appto\LWR@syncnotenumbers{\LWR@synconenotenumnumber{\LWRsidenote}{\thesidenote}}
50 \appto\LWR@syncnotenames{\LWR@synconenotename{\LWRsidenote}{\sidenotename}}
51 \CustomizeMathJax{\def\LWRsidenote{1}}
52 \CustomizeMathJax{\newcommand{\sidenotemark}[1][\LWRsidenote]{\mathrm{#1}}}
53 \end{warpMathJax}

```

The following is not defined since is not allowed inside math in print mode, and also would have to be modified to parse the optional offset argument:

```
\CustomizeMathJax{\newcommand{\sidenote}[2][\LWRsidenote]{\mathrm{#1}}}
```

---

File 388 **lwarp-SIunits.sty**

§ 491 Package **Slunits**

(Emulates or patches code by MARCEL HELDOORN.)

Pkg SIunits **Slunits** is patched for use by `lwarp`.

For `svg math`, it is recommended to use `\unit` where possible, which combines the entire expression into a single `lateximage`, and adds the `alt` tag containing the  $\text{\LaTeX}$  code, allowing for copy/paste. When units are used outside of the `\unit` macro, each unit macro will have its own `lateximage`, and each will have the `alt` tag set according to `\MathImageAltText`, which defaults to `(math image)`.

For MATHJAX, individual units used in text will appear as svg images, since `\ensuremath` is used in the original definitions, and `\ensuremath` often has expressions which do not work well in MATHJAX, so it is always forced to an svg image. If, however, `\unit` is used, the result is expressed with MATHJAX instead of an svg image.

for HTML output: `1 \LWR@ProvidesPackagePass{SIunits}[2007/12/02]`

Patched for copy/paste with the HTML alt tag:

```

2 \ifbool{mathjax}{
3 \DeclareRobustCommand{\LWR@HTML@unit}[2]{%
4 \LWR@subsingledollar*% lwarp
5 {% alt tag
6 \textbackslash{}unit\{\LWR@HTMLsanitize{#1}\}%
7 \{ \LWR@HTMLsanitize{#2}\}% extra space
8 }%
9 {SIunits}% add'l hashing
10 {%
11 #1\,{#2}%
12 }% contents
13 }
14 }{% not MathJax
15 \DeclareRobustCommand{\LWR@HTML@unit}[2]{%
16 \@inunitcommandtrue% original
17 \LWR@subsingledollar*% lwarp
18 {% alt tag
19 \textbackslash{}unit\{\LWR@HTMLsanitize{#1}\}%
20 \{ \LWR@HTMLsanitize{#2}\}% extra space
21 }%
22 {SIunits}% add'l hashing
23 {%
24 \LWR@origensuredmath{% lwarp modification
25 \SI@fstyle{%
26 {#1}\@qsk\period@active{#2}%
27 }% original
28 }%
29 }% contents
30 \@inunitcommandfalse% original
31 }
32 }{% not MathJax
33 \LWR@formatted{unit}

```

For MATHJAX:

```

34 \begin{warpMathJax}
35 \LWR@infoprocessingmathjax{SIunits}
36
37 \CustomizeMathJax{\newcommand{\one}{}}
38 \CustomizeMathJax{\newcommand{\meter}{\metre}}
39 \CustomizeMathJax{\newcommand{\deka}{\deca}}
40 \CustomizeMathJax{\newcommand{\dekad}{\decad}}
41 \CustomizeMathJax{\newcommand{\per}{/}}
42 \CustomizeMathJax{\newcommand{\usk}{\;}}
43 \CustomizeMathJax{\newcommand{\unit}[2]{#1\,{#2}}}
44 \CustomizeMathJax{\newcommand{\power}[2]{#1^{#2}}}

```

```

45
46 \AtBeginDocument{%
47 \if@redefsquare
48 \CustomizeMathJax{\renewcommand{\square}[1]{\power{#1}{2}}}
49 \else
50 \if@defsquaren
51 \CustomizeMathJax{\newcommand{\square}[1]{\power{#1}{2}}}
52 \else
53 \CustomizeMathJax{\renewcommand{\square}[1]{\power{#1}{2}}}
54 \fi %\if@defsquaren
55 \fi %\if@redefsquare
56 } %\AtBeginDocument
57
58 \CustomizeMathJax{\newcommand{\squared}{^{\{2\}}}}
59 \CustomizeMathJax{\newcommand{\cubic}[1]{\power{#1}{3}}}
60 \CustomizeMathJax{\newcommand{\cubed}{^{\{3\}}}}
61 \CustomizeMathJax{\newcommand{\fourth}[1]{\power{#1}{4}}}
62 \CustomizeMathJax{\newcommand{\reciprocal}[1]{\power{#1}{-1}}}
63 \CustomizeMathJax{\newcommand{\rp}{\reciprocal}}
64 \CustomizeMathJax{\newcommand{\rpsquare}[1]{\power{#1}{-2}}}
65 \CustomizeMathJax{\newcommand{\rpsquared}{^{\{-2\}}}}
66 \CustomizeMathJax{\newcommand{\rpcubic}[1]{\power{#1}{-3}}}
67 \CustomizeMathJax{\newcommand{\rpcubed}{^{\{-3\}}}}
68 \CustomizeMathJax{\newcommand{\rpfourth}[1]{\power{#1}{-4}}}
69 \CustomizeMathJax{\newcommand{\yocto}{\mathrm{y}}}
70 \CustomizeMathJax{\newcommand{\zepto}{\mathrm{z}}}
71 \CustomizeMathJax{\newcommand{\atto}{\mathrm{a}}}
72 \CustomizeMathJax{\newcommand{\femto}{\mathrm{f}}}
73 \CustomizeMathJax{\newcommand{\pico}{\mathrm{p}}}
74 \CustomizeMathJax{\newcommand{\nano}{\mathrm{n}}}
75 \CustomizeMathJax{\newcommand{\micro}{\mathrm{\unicode{x00B5}}}}
76 \CustomizeMathJax{\newcommand{\milli}{\mathrm{m}}}
77 \CustomizeMathJax{\newcommand{\centi}{\mathrm{c}}}
78 \CustomizeMathJax{\newcommand{\deci}{\mathrm{d}}}
79 \CustomizeMathJax{\newcommand{\deca}{\mathrm{da}}}
80 \CustomizeMathJax{\newcommand{\hecto}{\mathrm{h}}}
81 \CustomizeMathJax{\newcommand{\kilo}{\mathrm{k}}}
82 \CustomizeMathJax{\newcommand{\mega}{\mathrm{M}}}
83 \CustomizeMathJax{\newcommand{\giga}{\mathrm{G}}}
84 \CustomizeMathJax{\newcommand{\tera}{\mathrm{T}}}
85 \CustomizeMathJax{\newcommand{\peta}{\mathrm{P}}}
86 \CustomizeMathJax{\newcommand{\exa}{\mathrm{E}}}
87 \CustomizeMathJax{\newcommand{\zetta}{\mathrm{Z}}}
88 \CustomizeMathJax{\newcommand{\yotta}{\mathrm{Y}}}
89 \CustomizeMathJax{\newcommand{\yoctod}{\power{10}{-24}}}
90 \CustomizeMathJax{\newcommand{\zeptod}{\power{10}{-21}}}
91 \CustomizeMathJax{\newcommand{\attod}{\power{10}{-18}}}
92 \CustomizeMathJax{\newcommand{\femtod}{\power{10}{-15}}}
93 \CustomizeMathJax{\newcommand{\picod}{\power{10}{-12}}}
94 \CustomizeMathJax{\newcommand{\nanod}{\power{10}{-9}}}
95 \CustomizeMathJax{\newcommand{\microd}{\power{10}{-6}}}
96 \CustomizeMathJax{\newcommand{\millid}{\power{10}{-3}}}
97 \CustomizeMathJax{\newcommand{\centid}{\power{10}{-2}}}
98 \CustomizeMathJax{\newcommand{\decid}{\power{10}{-1}}}
99 \CustomizeMathJax{\newcommand{\decad}{\power{10}{1}}}

```

```

100 \CustomizeMathJax{\newcommand{\hectod}{\power{10}{2}}}
101 \CustomizeMathJax{\newcommand{\kilod}{\power{10}{3}}}
102 \CustomizeMathJax{\newcommand{\megad}{\power{10}{6}}}
103 \CustomizeMathJax{\newcommand{\gigad}{\power{10}{9}}}
104 \CustomizeMathJax{\newcommand{\terad}{\power{10}{12}}}
105 \CustomizeMathJax{\newcommand{\petad}{\power{10}{15}}}
106 \CustomizeMathJax{\newcommand{\exad}{\power{10}{18}}}
107 \CustomizeMathJax{\newcommand{\zettad}{\power{10}{21}}}
108 \CustomizeMathJax{\newcommand{\yottad}{\power{10}{24}}}
109 \CustomizeMathJax{\newcommand{\gram}{\mathrm{g}}}
110 \CustomizeMathJax{\newcommand{\metre}{\mathrm{m}}}
111 \CustomizeMathJax{\newcommand{\kilogram}{\kilo\gram}}
112 \CustomizeMathJax{\newcommand{\second}{\mathrm{s}}}
113 \CustomizeMathJax{\newcommand{\ampere}{\mathrm{A}}}
114 \CustomizeMathJax{\newcommand{\kelvin}{\mathrm{K}}}
115 \CustomizeMathJax{\newcommand{\mole}{\mathrm{mol}}}
116 \CustomizeMathJax{\newcommand{\candela}{\mathrm{cd}}}
117 \CustomizeMathJax{\newcommand{\radian}{\mathrm{rad}}}
118 \CustomizeMathJax{\newcommand{\steradian}{\mathrm{sr}}}
119 \CustomizeMathJax{\newcommand{\hertz}{\mathrm{Hz}}}
120 \CustomizeMathJax{\newcommand{\newton}{\mathrm{N}}}
121 \CustomizeMathJax{\newcommand{\pascal}{\mathrm{Pa}}}
122 \CustomizeMathJax{\newcommand{\joule}{\mathrm{J}}}
123 \CustomizeMathJax{\newcommand{\watt}{\mathrm{W}}}
124 \CustomizeMathJax{\newcommand{\coulomb}{\mathrm{C}}}
125 \CustomizeMathJax{\newcommand{\volt}{\mathrm{V}}}
126 \CustomizeMathJax{\newcommand{\farad}{\mathrm{F}}}
127 \CustomizeMathJax{\newcommand{\ohm}{\mathrm{\Omega}}}
128 \CustomizeMathJax{\newcommand{\siemens}{\mathrm{S}}}
129 \CustomizeMathJax{\newcommand{\weber}{\mathrm{Wb}}}
130 \CustomizeMathJax{\newcommand{\tesla}{\mathrm{T}}}
131 \CustomizeMathJax{\newcommand{\henry}{\mathrm{H}}}
132 \CustomizeMathJax{\newcommand{\degreecelsius}{\mathrm{\unicode{x2103}}}}
133 \CustomizeMathJax{\newcommand{\celsius}{\degreecelsius}}
134 \CustomizeMathJax{\newcommand{\lumen}{\mathrm{lm}}}
135 \CustomizeMathJax{\newcommand{\lux}{\mathrm{lx}}}
136 \CustomizeMathJax{\newcommand{\becquerel}{\mathrm{Bq}}}
137 \CustomizeMathJax{\newcommand{\sievert}{\mathrm{Sv}}}
138 \CustomizeMathJax{\newcommand{\katal}{\mathrm{kat}}}
139
140 \ifdef{\radianbase}{
141 \CustomizeMathJax{\newcommand{\radianbase}%
142 {\metre\usk\reciprocal\metre}}
143 \CustomizeMathJax{\newcommand{\steradianbase}%
144 {\squaremetre\usk\rpsquare\metre}}
145 \CustomizeMathJax{\newcommand{\hertzbase}%
146 {\reciprocal\second}}
147 \CustomizeMathJax{\newcommand{\newtonbase}%
148 {\metre\usk\kilogram\usk\second\rpsquared}}
149 \CustomizeMathJax{\newcommand{\pascalbase}%
150 {\reciprocal\metre\usk\kilogram\usk\second\rpsquared}}
151 \CustomizeMathJax{\newcommand{\joulebase}%
152 {\squaremetre\usk\kilogram\usk\second\rpsquared}}
153 \CustomizeMathJax{\newcommand{\wattbase}%
154 {\squaremetre\usk\kilogram\usk\rpcubic\second}}

```

```

155 \CustomizeMathJax{\newcommand{\coulombbase}%
156 {\ampere\usk\second}}
157 \CustomizeMathJax{\newcommand{\voltbase}%
158 {\squaremetre\usk\kilogram\usk\rcubic\second\usk\reciprocal\ampere}}
159 \CustomizeMathJax{\newcommand{\faradbase}%
160 {\rpsquare\metre\usk\reciprocal\kilogram\usk\fourth\second\usk\ampere\squared}}
161 \CustomizeMathJax{\newcommand{\ohmbase}%
162 {\squaremetre\usk\kilogram\usk\rcubic\second\usk\rpsquare\ampere}}
163 \CustomizeMathJax{\newcommand{\siemensbase}%
164 {\rpsquare\metre\usk\reciprocal\kilogram\usk\cubic\second\usk\ampere\squared}}
165 \CustomizeMathJax{\newcommand{\weberbase}%
166 {\squaremetre\usk\kilogram\usk\second\rpsquared\usk\reciprocal\ampere}}
167 \CustomizeMathJax{\newcommand{\teslabase}%
168 {\kilogram\usk\second\rpsquared\usk\reciprocal\ampere}}
169 \CustomizeMathJax{\newcommand{\henrybase}%
170 {\squaremetre\usk\kilogram\usk\second\rpsquared\usk\rpsquare\ampere}}
171 \CustomizeMathJax{\newcommand{\celsiusbase}%
172 {\kelvin}}
173 \CustomizeMathJax{\newcommand{\lumenbase}%
174 {\candela\usk\squaremetre\usk\rpsquare\metre}}
175 \CustomizeMathJax{\newcommand{\luxbase}%
176 {\candela\usk\squaremetre\usk\rfourth\metre}}
177 \CustomizeMathJax{\newcommand{\becquerelbase}%
178 {\hertzbase}}
179 \CustomizeMathJax{\newcommand{\graybase}%
180 {\squaremetre\usk\second\rpsquared}}
181 \CustomizeMathJax{\newcommand{\sievertbase}%
182 {\graybase}}
183 \CustomizeMathJax{\newcommand{\katalbase}%
184 {\rp\second\usk\mole }}
185 }{}
186
187 \ifdef{\derradian}{
188 \CustomizeMathJax{\newcommand{\derradian}%
189 {\metre\usk\reciprocal\metre}}
190 \CustomizeMathJax{\newcommand{\dersteradian}%
191 {\squaremetre\usk\rpsquare\metre}}
192 \CustomizeMathJax{\newcommand{\derhertz}%
193 {\reciprocal\second}}
194 \CustomizeMathJax{\newcommand{\dernewton}%
195 {\metre\usk\kilogram\usk\second\rpsquared}}
196 \CustomizeMathJax{\newcommand{\derpascal}%
197 {\newton\usk\rpsquare\metre}}
198 \CustomizeMathJax{\newcommand{\derjoule}%
199 {\newton\usk\metre}}
200 \CustomizeMathJax{\newcommand{\derwatt}%
201 {\joule\usk\reciprocal\second}}
202 \CustomizeMathJax{\newcommand{\dercoulomb}%
203 {\ampere\usk\second}}
204 \CustomizeMathJax{\newcommand{\dervolt}%
205 {\watt\usk\reciprocal\ampere}}
206 \CustomizeMathJax{\newcommand{\derfarad}%
207 {\coulomb\usk\reciprocal\volt}}
208 \CustomizeMathJax{\newcommand{\derohm}%
209 {\volt\usk\reciprocal\ampere}}

```

```

210 \CustomizeMathJax{\newcommand{\dersiemens}%
211 {\ampere\usk\reciprocal\volt}}
212 \CustomizeMathJax{\newcommand{\derweber}%
213 {\squaremetre\usk\kilogram\usk\second\rpsquared\usk\reciprocal\ampere}}
214 \CustomizeMathJax{\newcommand{\dertesla}%
215 {\weber\usk\rpsquare\metre}}
216 \CustomizeMathJax{\newcommand{\derhenry}%
217 {\weber\usk\reciprocal\ampere}}
218 \CustomizeMathJax{\newcommand{\dercelsius}%
219 {\kelvin}}
220 \CustomizeMathJax{\newcommand{\derlumen}%
221 {\candela\usk\steradian}}
222 \CustomizeMathJax{\newcommand{\derlux}%
223 {\lumen\usk\rpsquare\metre}}
224 \CustomizeMathJax{\newcommand{\derbecquerel}%
225 {\derhertz}}
226 \CustomizeMathJax{\newcommand{\dergray}%
227 {\joule\usk\reciprocal\kilogram}}
228 \CustomizeMathJax{\newcommand{\dersievert}%
229 {\dergray}}
230 \CustomizeMathJax{\newcommand{\derkatal}%
231 {\katalbase}}
232 {}{}
233
234 \CustomizeMathJax{\newcommand{\minute}{\mathrm{min}}}
235 \CustomizeMathJax{\newcommand{\hour}{\mathrm{h}}}
236 \CustomizeMathJax{\newcommand{\dday}{\mathrm{d}}}
237 \CustomizeMathJax{\newcommand{\degree}{\mathrm{^{\circ}}}}
238 \CustomizeMathJax{\newcommand{\pminute}{\mathrm{^{\prime}}}}
239 \CustomizeMathJax{\newcommand{\arcminute}{\mathrm{^{\prime}}}}
240 \CustomizeMathJax{\newcommand{\pasecond}{\mathrm{^{\prime}\prime}}}
241 \CustomizeMathJax{\newcommand{\arcsecond}{\mathrm{^{\prime}\prime}}}
242 \CustomizeMathJax{\newcommand{\ton}{\mathrm{t}}}
243 \CustomizeMathJax{\newcommand{\tonne}{\mathrm{t}}}
244 \CustomizeMathJax{\newcommand{\liter}{\mathrm{L}}}
245 \CustomizeMathJax{\newcommand{\litre}{\mathrm{L}}}
246 \CustomizeMathJax{\newcommand{\neper}{\mathrm{Np}}}
247 \CustomizeMathJax{\newcommand{\bel}{\mathrm{B}}}
248 \CustomizeMathJax{\newcommand{\curie}{\mathrm{Ci}}}
249 \CustomizeMathJax{\newcommand{\rad}{\mathrm{rad}}}
250 \CustomizeMathJax{\newcommand{\arad}{\mathrm{rd}}}
251 \CustomizeMathJax{\newcommand{\rem}{\mathrm{rem}}}
252 \CustomizeMathJax{\newcommand{\roentgen}{\mathrm{R}}}
253 \CustomizeMathJax{\newcommand{\electronvolt}{\mathrm{eV}}}
254 \CustomizeMathJax{\newcommand{\atomicmass}{\mathrm{u}}}
255 \CustomizeMathJax{\newcommand{\atomicmassunit}{\mathrm{u}}}
256 \CustomizeMathJax{\newcommand{\dalton}{\mathrm{Da}}}
257 \CustomizeMathJax{\newcommand{\are}{\mathrm{a}}}
258 \CustomizeMathJax{\newcommand{\hectare}{\mathrm{hecto\are}}}
259 \CustomizeMathJax{\newcommand{\barn}{\mathrm{b}}}
260 \CustomizeMathJax{\newcommand{\bbar}{\mathrm{bar}}}
261 \CustomizeMathJax{\newcommand{\gal}{\mathrm{Gal}}}
262 \CustomizeMathJax{\newcommand{\angstrom}{\mathrm{\unicode{x00C5}}}}
263 \CustomizeMathJax{\newcommand{\rperminute}{\mathrm{r\per minute}}}
264 \CustomizeMathJax{\newcommand{\rpersecond}{\mathrm{r\per second}}}

```

```

265 \CustomizeMathJax{\newcommand{\squaremetre}{\power{\metre}{2}}}
266 \CustomizeMathJax{\newcommand{\cubicmetre}{\cubic\metre}}
267 \CustomizeMathJax{\newcommand{\graypersecond}{\gray\per\second}}
268 \CustomizeMathJax{\newcommand{\graypersecondnp}{\gray\usk\reciprocal\second}}
269 \CustomizeMathJax{\newcommand{\metrepersquaresecond}{\metre\per\second\squared}}
270 \CustomizeMathJax{\newcommand{\metrepersquaresecondnp}{\metre\usk\second\rpsquared}}
271 \CustomizeMathJax{\newcommand{\joulepermole}{\joule\per\mole}}
272 \CustomizeMathJax{\newcommand{\joulepermolenp}{\joule\usk\reciprocal\mole}}
273 \CustomizeMathJax{\newcommand{\molepercubicmetre}{\mole\per\cubic\metre}}
274 \CustomizeMathJax{\newcommand{\molepercubicmetrenp}{\mole\usk\rpcubic\metre}}
275 \CustomizeMathJax{\newcommand{\radianpersquaresecond}{\radian\per\second\squared}}
276 \CustomizeMathJax{\newcommand{\radianpersquaresecondnp}{\radian\usk\second\rpsquared}}
277 \CustomizeMathJax{\newcommand{\kilogramsquaremetrepersecond}{\kilogram\usk\squaremetre\per\second}}
278 \CustomizeMathJax{\newcommand{\kilogramsquaremetrepersecondnp}{\kilogram\usk\squaremetre\usk\reciproca}}
279 \CustomizeMathJax{\newcommand{\radianpersecond}{\radian\per\second}}
280 \CustomizeMathJax{\newcommand{\radianpersecondnp}{\radian\usk\reciprocal\second}}
281 \CustomizeMathJax{\newcommand{\squaremetrepercubicmetre}{\squaremetre\per\cubic\metre}}
282 \CustomizeMathJax{\newcommand{\squaremetrepercubicmetrenp}{\squaremetre\usk\rpcubic\metre}}
283 \CustomizeMathJax{\newcommand{\katalpercubicmetre}{\katal\per\cubic\metre}}
284 \CustomizeMathJax{\newcommand{\katalpercubicmetrenp}{\katal\usk\rpcubic\metre}}
285 \CustomizeMathJax{\newcommand{\coulombpermol}{\coulomb\per\mole}}
286 \CustomizeMathJax{\newcommand{\coulombpermolnp}{\coulomb\usk\reciprocal\mole}}
287 \CustomizeMathJax{\newcommand{\amperepersquaremetre}{\ampere\per\squaremetre}}
288 \CustomizeMathJax{\newcommand{\amperepersquaremetrenp}{\ampere\usk\rpsquare\metre}}
289 \CustomizeMathJax{\newcommand{\kilogrampercubicmetre}{\kilogram\per\cubic\metre}}
290 \CustomizeMathJax{\newcommand{\kilogrampercubicmetrenp}{\kilogram\usk\rpcubic\metre}}
291 \CustomizeMathJax{\newcommand{\squaremetrepernewtonsecond}{\squaremetre\per\newton\usk\second}}
292 \CustomizeMathJax{\newcommand{\squaremetrepernewtonsecondnp}{\squaremetre\usk\reciprocal\newton\usk\re}}
293 \CustomizeMathJax{\newcommand{\pascalsecond}{\pascal\usk\second}}
294 \CustomizeMathJax{\newcommand{\coulombpercubicmetre}{\coulomb\per\cubic\metre}}
295 \CustomizeMathJax{\newcommand{\coulombpercubicmetrenp}{\coulomb\usk\rpcubic\metre}}
296 \CustomizeMathJax{\newcommand{\ampere metre second}{\ampere\usk\metre\usk\second}}
297 \CustomizeMathJax{\newcommand{\voltpermetre}{\volt\per\metre}}
298 \CustomizeMathJax{\newcommand{\voltpermetrenp}{\volt\usk\reciprocal\metre}}
299 \CustomizeMathJax{\newcommand{\coulombpersquaremetre}{\coulomb\per\squaremetre}}
300 \CustomizeMathJax{\newcommand{\coulombpersquaremetrenp}{\coulomb\usk\rpsquare\metre}}
301 \CustomizeMathJax{\newcommand{\faradpermetre}{\farad\per\metre}}
302 \CustomizeMathJax{\newcommand{\faradpermetrenp}{\farad\usk\reciprocal\metre}}
303 \CustomizeMathJax{\newcommand{\ohmmetre}{\ohm\usk\metre}}
304 \CustomizeMathJax{\newcommand{\kilowatthour}{\kilo\watt\hour}}
305 \CustomizeMathJax{\newcommand{\wattpersquaremetre}{\watt\per\squaremetre}}
306 \CustomizeMathJax{\newcommand{\wattpersquaremetrenp}{\watt\usk\rpsquare\metre}}
307 \CustomizeMathJax{\newcommand{\joulepersquaremetre}{\joule\per\squaremetre}}
308 \CustomizeMathJax{\newcommand{\joulepersquaremetrenp}{\joule\usk\rpsquare\metre}}
309 \CustomizeMathJax{\newcommand{\newtonpercubicmetre}{\newton\per\cubic\metre}}
310 \CustomizeMathJax{\newcommand{\newtonpercubicmetrenp}{\newton\usk\rpcubic\metre}}
311 \CustomizeMathJax{\newcommand{\newtonperkilogram}{\newton\per\kilogram}}
312 \CustomizeMathJax{\newcommand{\newtonperkilogramnp}{\newton\usk\reciprocal\kilogram}}
313 \CustomizeMathJax{\newcommand{\jouleperkelvin}{\joule\per\kelvin}}
314 \CustomizeMathJax{\newcommand{\jouleperkelvinnp}{\joule\usk\reciprocal\kelvin}}
315 \CustomizeMathJax{\newcommand{\jouleperkilogram}{\joule\per\kilogram}}
316 \CustomizeMathJax{\newcommand{\jouleperkilogramnp}{\joule\usk\reciprocal\kilogram}}
317 \CustomizeMathJax{\newcommand{\coulombperkilogram}{\coulomb\per\kilogram}}
318 \CustomizeMathJax{\newcommand{\coulombperkilogramnp}{\coulomb\usk\reciprocal\kilogram}}
319 \CustomizeMathJax{\newcommand{\squaremetrepersecond}{\squaremetre\per\second}}

```

```

320 \CustomizeMathJax{\newcommand{\squaremetrepersecondnp}{\squaremetre\usk\reciprocal\second}}
321 \CustomizeMathJax{\newcommand{\squaremetrepersquaresecond}{\squaremetre\per\second\squared}}
322 \CustomizeMathJax{\newcommand{\squaremetrepersquaresecondnp}{\squaremetre\usk\second\rpsquared}}
323 \CustomizeMathJax{\newcommand{\kilogrammetrepersecond}{\kilogram\usk\metre\per\second}}
324 \CustomizeMathJax{\newcommand{\kilogrammetrepersecondnp}{\kilogram\usk\metre\usk\reciprocal\second}}
325 \CustomizeMathJax{\newcommand{\candelapersquaremetre}{\candela\per\squaremetre}}
326 \CustomizeMathJax{\newcommand{\candelapersquaremetrenp}{\candela\usk\rpsquare\metre}}
327 \CustomizeMathJax{\newcommand{\amperepermetre}{\ampere\per\metre}}
328 \CustomizeMathJax{\newcommand{\amperepermetrenp}{\ampere\usk\reciprocal\metre}}
329 \CustomizeMathJax{\newcommand{\joulepertesla}{\joule\per\tesla}}
330 \CustomizeMathJax{\newcommand{\jouleperteslanp}{\joule\usk\reciprocal\tesla}}
331 \CustomizeMathJax{\newcommand{\henrypermetre}{\henry\per\metre}}
332 \CustomizeMathJax{\newcommand{\henrypermetrenp}{\henry\usk\reciprocal\metre}}
333 \CustomizeMathJax{\newcommand{\kilogrampersecond}{\kilogram\per\second}}
334 \CustomizeMathJax{\newcommand{\kilogrampersecondnp}{\kilogram\usk\reciprocal\second}}
335 \CustomizeMathJax{\newcommand{\kilogrampersquaremetresecond}{\kilogram\per\squaremetre\usk\second}}
336 \CustomizeMathJax{\newcommand{\kilogrampersquaremetresecondnp}{\kilogram\usk\rpsquare\metre\usk\recipr}}
337 \CustomizeMathJax{\newcommand{\kilogrampersquaremetre}{\kilogram\per\squaremetre}}
338 \CustomizeMathJax{\newcommand{\kilogrampersquaremetrenp}{\kilogram\usk\rpsquare\metre}}
339 \CustomizeMathJax{\newcommand{\kilogrampermetre}{\kilogram\per\metre}}
340 \CustomizeMathJax{\newcommand{\kilogrampermetrenp}{\kilogram\usk\reciprocal\metre}}
341 \CustomizeMathJax{\newcommand{\joulepermolekelvin}{\joule\per\mole\usk\kelvin}}
342 \CustomizeMathJax{\newcommand{\joulepermolekelvinnp}{\joule\usk\reciprocal\mole\usk\reciprocal\kelvin}}
343 \CustomizeMathJax{\newcommand{\kilogramperkilomole}{\kilogram\per\kilo\mole}}
344 \CustomizeMathJax{\newcommand{\kilogramperkilomolenp}{\kilogram\usk\kilo\reciprocal\mole}}
345 \CustomizeMathJax{\newcommand{\kilogramsquaremetre}{\kilogram\usk\squaremetre}}
346 \CustomizeMathJax{\newcommand{\kilogramsquaremetrenp}{\kilogramsquaremetre}}
347 \CustomizeMathJax{\newcommand{\kilogrammetrepersquaresecond}{\kilogram\usk\metre\per\second\squared}}
348 \CustomizeMathJax{\newcommand{\kilogrammetrepersquaresecondnp}{\kilogram\usk\metre\usk\second\rpsquare}}
349 \CustomizeMathJax{\newcommand{\newtonpersquaremetre}{\newton\per\squaremetre}}
350 \CustomizeMathJax{\newcommand{\newtonpersquaremetrenp}{\newton\usk\rpsquare\metre}}
351 \CustomizeMathJax{\newcommand{\persquaremetresecond}{1\per\squaremetre\usk\second}}
352 \CustomizeMathJax{\newcommand{\persquaremetresecondnp}{\rpsquare\metre\usk\reciprocal\second}}
353 \CustomizeMathJax{\newcommand{\wattperkilogram}{\watt\per\kilogram}}
354 \CustomizeMathJax{\newcommand{\wattperkilogramnp}{\watt\usk\reciprocal\kilogram}}
355 \CustomizeMathJax{\newcommand{\wattpercubicmetre}{\watt\per\cubic\metre}}
356 \CustomizeMathJax{\newcommand{\wattpercubicmetrenp}{\watt\usk\rcubic\metre}}
357 \CustomizeMathJax{\newcommand{\wattpersquaremetresteradian}{\watt\per\squaremetre\usk\steradian}}
358 \CustomizeMathJax{\newcommand{\wattpersquaremetresteradiannp}{\watt\usk\rpsquare\metre\usk\rp\steradia}}
359 \CustomizeMathJax{\newcommand{\jouleperkilogramkelvin}{\joule\per\kilogram\usk\kelvin}}
360 \CustomizeMathJax{\newcommand{\jouleperkilogramkelvinnp}{\joule\usk\reciprocal\kilogram\usk\reciprocal}}
361 \CustomizeMathJax{\newcommand{\squaremetreperkilogram}{\squaremetre\per\kilogram}}
362 \CustomizeMathJax{\newcommand{\rpsquaremetreperkilogram}{\squaremetre\usk\reciprocal\kilogram}}
363 \CustomizeMathJax{\newcommand{\cubicmetreperkilogram}{\cubic\metre\per\kilogram}}
364 \CustomizeMathJax{\newcommand{\rpcubicmetreperkilogram}{\cubic\metre\usk\reciprocal\kilogram}}
365 \CustomizeMathJax{\newcommand{\newtonpermetre}{\newton\per\metre}}
366 \CustomizeMathJax{\newcommand{\newtonpermetrenp}{\newton\usk\reciprocal\metre}}
367 \CustomizeMathJax{\newcommand{\Celsius}{\unicode{x2103}}}
368 \CustomizeMathJax{\newcommand{\wattpermetrekelvin}{\watt\per\metre\usk\kelvin}}
369 \CustomizeMathJax{\newcommand{\wattpermetrekelvinnp}{\watt\usk\reciprocal\metre\usk\reciprocal\kelvin}}
370 \CustomizeMathJax{\newcommand{\newtonmetre}{\newton\usk\metre}} \CustomizeMathJax{\newcommand{\newtonme}}
371 \CustomizeMathJax{\newcommand{\squaremetrepercubicsecond}{\squaremetre\per\cubic\second}}
372 \CustomizeMathJax{\newcommand{\squaremetrepercubicsecondnp}{\squaremetre\usk\rpcubic\second}}
373 \CustomizeMathJax{\newcommand{\metrepersecond}{\metre\per\second}}
374 \CustomizeMathJax{\newcommand{\metrepersecondnp}{\metre\usk\reciprocal\second}}

```

```

375 \CustomizeMathJax{\newcommand{\joulepercubicmetre}{\joule\per\cubicmetre}}
376 \CustomizeMathJax{\newcommand{\joulepercubicmetrenp}{\joule\usk\rpcubic\metre}}
377 \CustomizeMathJax{\newcommand{\kilogrampercubicmetrecoulomb}{\kilogram\per\cubic\metre\usk\coulomb}}
378 \CustomizeMathJax{\newcommand{\kilogrampercubicmetrecoulombnp}{\kilogram\usk\rpcubic\metre\usk\reciprocal\coulomb}}
379 \CustomizeMathJax{\newcommand{\cubicmetrepersecond}{\cubicmetre\per\second}}
380 \CustomizeMathJax{\newcommand{\rpcubicmetrepersecond}{\cubicmetre\usk\reciprocal\second}}
381 \CustomizeMathJax{\newcommand{\kilogrampersecondcubicmetre}{\kilogram\per\second\usk\cubicmetre}}
382 \CustomizeMathJax{\newcommand{\kilogrampersecondcubicmetrenp}{\kilogram\usk\reciprocal\second\usk\rpcubicmetre}}
383 \end{warpMathJax}

```

---


## File 389 **lwarp-siunitx.sty**


### § 492 Package **siunitx**


(Emulates or patches code by JOSEPH WRIGHT.)

Pkg siunitx siunitx is patched for use by lwarp.

**fractions** Due to *pdftotext* limitations, fraction output is replaced by symbol output for per-mode and quotient-mode.

 **math mode required** Some units will require that the expression be placed inside math mode.

 **tabular** Tabular S columns are rendered as simple c columns, and tabular s columns are not supported. These may be replaced by c columns with each cell contained in \num or \si.


 **MathJax** For math mode with svg display, the original siunitx code is used while generating the svg image. For text mode, lwarp uses an emulation which provides a very effective HTML interpretation of siunitx. For math expressions while using MATHJAX, a limited emulation is used. Most functions work reasonably well, but many options cannot be emulated. siunitx macros with more than one optional value cannot absorb the second optional value, and complicated parsing such as for \ang is not supported. The result usually looks fine, and otherwise is enough to get the meaning across.

lwarp's MATHJAX emulation for siunitx is meant to be a stop-gap measure until an extension is included in MATHJAX. As of this writing, the third-party siunitx extension for MATHJAX is not currently hosted at any public CDN, thus siunitx is not usable with this extension unless a local copy of this extension is created first. See \MathJaxFilename to select a custom MathJax script, but lwarp's emulation would have to be disabled as well.


Document modifications required for MATHJAX:

**custom units**

- Custom units may be added with \CustomizeMathJax. See the lwarp-siunitx code for examples.

 **unit spacing**

- Units work better using ~ between units instead of using periods.

 **\square, \cubic**

- To square or cube compound units, enclose the following compound units in braces:

```
\cubic{\centi\meter}
```

Single units do not require braces.

Also see **MATHJAX** option, section 8.7.4.

for HTML output:

```
1 \RequirePackage{xcolor}% for \convertcolorspec
2
3 \LWR@ProvidesPackagePass{siunitx}[2018/05/17]

4 \AtBeginDocument{% in case textcomp was not loaded
5 \DeclareSIUnit\bohr{\textit{a}\textsubscript{0}}
6 \DeclareSIUnit\clight{\textit{c}\textsubscript{0}}
7 \DeclareSIUnit\elementarycharge{\textit{e}}
8 \DeclareSIUnit\electronmass{\textit{m}\textsubscript{e}}
9 \DeclareSIUnit\hartree{\textit{E}\textsubscript{h}}
10 \DeclareSIUnit\planckbar{\LWR@siunitx@textplanckbar}
11}% AtBeginDocument
```

`\@ensuredmath` is not supported inside an `\hbox`, so it must temporarily be restored to its original. Similar for `\mbox`. SVG math is created explicitly when necessary, using `\LWR@subsingledollar`.

```
12
13 \ExplSyntaxOn
14 %
```

Modified to set set HTML `\textcolor` if not black:

```
15 \cs_undefine:N __siunitx_print_aux:
16 \cs_new_protected:Npn __siunitx_print_aux:
17 {
18 \text
19 {
20 __siunitx_ensure_ltr:n
21 {
22 \color@begingroup
23 __siunitx_print_color:
24 __siunitx_font_shape:
25 __siunitx_font_weight:
26 \use:c
27 {
28 @@ \l__siunitx_print_type_tl _
29 text \l__siunitx_font_family_tl :
30 }
31 \bool_if:NTF \l__siunitx_font_math_mode_bool
32 { __siunitx_print_math: }
33 {
34 \LWR@findcurrenttextcolor% lwarp
35 \ifdefstring{\LWR@tempcolor}{000000}% lwarp
36 {__siunitx_print_text:}% lwarp
37 {% lwarp
38 \LWR@textcurrentcolor{% lwarp
39 __siunitx_print_text:
40 }% lwarp
```

```

41 }% lwarp
42 }
43 \color@endgroup
44 }
45 }
46 }
47
48
49 \cs_undefine:N __siunitx_set_math_fam:n
50 \cs_new_protected:Npn __siunitx_set_math_fam:n #1 {
51 \int_new:c { c__siunitx_math #1 _int }
52 \group_begin:% lwarp
53 \LetLtxMacro\ensuredmath\LWR@origensuredmath% lwarp
54 \LetLtxMacro\mbox\LWR@print@mbox% lwarp
55 \hbox_set:Nn \l__siunitx_tmp_box
56 {
57 \ensuremath
58 {
59 \use:c { math #1 }
60 {
61 \int_gset:cn { c__siunitx_math #1 _int } { \fam }
62 }
63 }
64 }
65 \group_end:% lwarp
66 }
67
68 \cs_undefine:N __siunitx_combined_output:n
69 \cs_new_protected:Npn __siunitx_combined_output:n #1 {
70 \group_begin:% lwarp
71 \LetLtxMacro\ensuredmath\LWR@origensuredmath% lwarp
72 \LetLtxMacro\mbox\LWR@print@mbox% lwarp
73 \bool_if:NTF \l__siunitx_number_parse_bool
74 {
75 \tl_clear:N \l__siunitx_number_out_tl
76 \bool_set_false:N \l__siunitx_number_compound_bool
77 __siunitx_number_output_parse:n {#1}
78 }
79 {

```

For parse-numbers=false:

```

80 __siunitx_unit_output_pre_print:
81 \begingroup% lwarp
82 \boolfalse{mathjax}% lwarp
83 % __siunitx_print:nn { number } { \ensuremath {#1} }
84 \LWR@subsingledollar{% lwarp
85 \textbackslash(\LWR@HTMLsanitize{#1} \textbackslash)% lwarp
86 }{siunitx}%
87 __siunitx_print:nn { number } {%
88 \LWR@origensuredmath{#1}%
89 }%
90 }% lwarp
91 \endgroup% lwarp
92 __siunitx_unit_output_print:

```

```

93 }
94 \group_end:% lwarp
95 }

```

For parse-numbers=false:

```

96 \cs_set_protected:Npn __siunitx_range_numbers_aux:n #1
97 {
98 \bool_if:NTF \l__siunitx_number_parse_bool
99 {
100 \tl_clear:N \l__siunitx_number_out_tl
101 \tl_clear:N \l__siunitx_number_out_saved_tl
102 \bool_set_false:N \l__siunitx_number_compound_bool
103 __siunitx_number_output_parse:n {#1}
104 \bool_if:NT \l__siunitx_number_compound_bool
105 { \msg_error:nx { siunitx } { multi-part-range } {#1} }
106 }
107 {
108 __siunitx_unit_output_pre_print:
109 \begingroup% lwarp
110 \boolfalse{mathjax}% lwarp
111 __siunitx_print:nn { number } {#1}
112 \LWR@subsingledollar{% lwarp
113 \textbackslash(\LWR@HTMLsanitize{#1} \textbackslash)% lwarp
114 }{siunitx}{%
115 __siunitx_print:nn { number } {
116 \LWR@origensuredmath{#1}%
117 } % lwarp
118 }% lwarp
119 \endgroup% lwarp
120 __siunitx_unit_output_print:
121 }
122 }

```

For parse-numbers=false:

```

123 \cs_set_protected:Npn __siunitx_angle_print_direct_aux:nn #1#2 {
124 \tl_if_empty:nF {#1}
125 {
126 \tl_set:Nn \l__siunitx_unit_tl {#2}
127 \begingroup% lwarp
128 \boolfalse{mathjax}% lwarp
129 __siunitx_print:nn { number } {#1}
130 \LWR@subsingledollar{% lwarp
131 \textbackslash(\LWR@HTMLsanitize{#1} \textbackslash)% lwarp
132 }{siunitx}{%
133 __siunitx_print:nn { number } {
134 \LWR@origensuredmath{#1}%
135 } % lwarp
136 }% lwarp
137 \endgroup% lwarp
138 __siunitx_unit_output_print:
139 }
140 }
141 %

```

For quotients, the fraction code is replaced by the symbol code:

```

142 \cs_undefine:N __siunitx_number_output_quotient_fraction:
143 \cs_new_protected:Npn __siunitx_number_output_quotient_fraction: {
144 \bool_set_true:N \l__siunitx_number_compound_bool
145 __siunitx_number_output_quotient_aux_i:
146 \tl_set_eq:NN \l__siunitx_number_out_tl
147 \l__siunitx_number_numerator_tl
148 \tl_put_right:NV \l__siunitx_number_out_tl \l__siunitx_output_quotient_tl
149 \tl_put_right:NV \l__siunitx_number_out_tl
150 \l__siunitx_number_denominator_tl
151 __siunitx_number_output_single_aux:
152 }
```

For units, the fraction code is replaced by the symbol code:

```

153 \cs_undefine:N __siunitx_unit_format_fraction_fraction:
154 \cs_new_protected:Npn __siunitx_unit_format_fraction_fraction: {
155 __siunitx_unit_format_fraction_symbol_aux:
156 \int_compare:nNt { \l__siunitx_unit_denominator_int } > { 1 }
157 {
158 \bool_if:NT \l__siunitx_unit_denominator_bracket_bool
159 {
160 \tl_put_left:NV \l__siunitx_unit_denominator_tl \l__siunitx_bracket_open_tl
161 \tl_put_right:NV \l__siunitx_unit_denominator_tl \l__siunitx_bracket_close_tl
162 }
163 }
164 \tl_set_eq:NN \l__siunitx_unit_tl \l__siunitx_unit_numerator_tl
165 \tl_put_right:NV \l__siunitx_unit_tl \l__siunitx_per_symbol_tl
166 \tl_put_right:NV \l__siunitx_unit_tl \l__siunitx_unit_denominator_tl
167 }
```

```

168 \cs_undefine:N __siunitx_angle_print_astronomy_aux:
169 \cs_new_protected:Npn __siunitx_angle_print_astronomy_aux: {
170 \prop_get:NnNT \l__siunitx_number_out_prop { mantissa-integer }
171 \l__siunitx_tmpa_tl
172 { __siunitx_print:nV { number } \l__siunitx_tmpa_tl }
173 \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}% lwarp
174 {% lateximage
175 \hbox_set:Nn \l__siunitx_angle_marker_box
176 {
177 __siunitx_print:nn { number } { { \l__siunitx_output_decimal_tl } }
178 }
179 \hbox_set:Nn \l__siunitx_angle_unit_box
180 {
181 __siunitx_print:nV { unit } \l__siunitx_unit_tl
182 \skip_horizontal:n { -\scriptspace }
183 }
184 __siunitx_angle_print_astronomy_aux:n { marker }
185 __siunitx_angle_print_astronomy_aux:n { unit }
186 \hbox_set:Nn \l__siunitx_angle_marker_box
187 {
188 \box_use:N \l__siunitx_angle_marker_box
189 \box_use:N \l__siunitx_angle_unit_box
190 }

```

```

191 \dim_compare:nNnTF
192 { \l__siunitx_angle_marker_dim } > { \l__siunitx_angle_unit_dim }
193 { \l__siunitx_angle_print_astronomy_marker: }
194 { \l__siunitx_angle_print_astronomy_unit: }
195]% lateximage
196 {% not a lateximage
197 \l__siunitx_print:nV { unit } \l__siunitx_unit_tl
198 \l__siunitx_print:nn { number } { { \l__siunitx_output_decimal_tl } }
199]% not a lateximage
200 \prop_get:NnNT \l__siunitx_number_out_prop { mantissa-decimal }
201 \l__siunitx_tmpa_tl
202 { \l__siunitx_print:nV { number } \l__siunitx_tmpa_tl }
203 }

204 \cs_undefine:N \l__siunitx_textsuperscript:n
205 \cs_new_protected:Npn \l__siunitx_textsuperscript:n #1 {#1}

206 \RenewDocumentCommand \num { o m } {
207 \leavevmode
208 \group_begin:% lwarp
209 \LetLtxMacro\ensuredmath\LWR@origensuredmath% lwarp
210 \LetLtxMacro\mbox\LWR@print@mbox% lwarp
211 \bool_set_false:N \l__siunitx_font_set_bool
212 \IfNoValueF {#1}
213 { \keys_set:nn { siunitx } {#1} }
214 \l__siunitx_number_output:n {#2}
215 \group_end:% lwarp
216 }
217
218 \RenewDocumentCommand \numrange { o m m } {
219 \leavevmode
220 \group_begin:% lwarp
221 \LetLtxMacro\ensuredmath\LWR@origensuredmath% lwarp
222 \LetLtxMacro\mbox\LWR@print@mbox% lwarp
223 \bool_set_false:N \l__siunitx_font_set_bool
224 \IfNoValueF {#1}
225 { \keys_set:nn { siunitx } {#1} }
226 \l__siunitx_range_numbers:nn {#2} {#3}
227 \group_end:% lwarp
228 }
229
230 \RenewDocumentCommand \ang { o > { \SplitArgument { 2 } { ; } } m } {
231 \group_begin:% lwarp
232 \LetLtxMacro\ensuredmath\LWR@origensuredmath% lwarp
233 \LetLtxMacro\mbox\LWR@print@mbox% lwarp
234 \IfNoValueF {#1}
235 { \keys_set:nn { siunitx } {#1} }
236 \l__siunitx_angle_output:nnn #2
237 \group_end:% lwarp
238 }
239
240 \RenewDocumentCommand \si { o m } {
241 \leavevmode
242 \group_begin:% lwarp
243 \LetLtxMacro\ensuredmath\LWR@origensuredmath% lwarp

```

```

244 \LetLtxMacro\mbox\LWR@print@mbox% lwarp
245 \bool_set_false:N \l__siunitx_font_set_bool
246 \IfNoValueTF {#1}
247 { __siunitx_unit_output:nn {#2} { } }
248 {
249 \keys_set:nn { siunitx } {#1}
250 __siunitx_unit_output:nn {#2} {#1}
251 }
252 \group_end:% lwarp
253 }
254
255
256 \RenewDocumentCommand{\SIrange}{o m m m}
257 {%
258 \leavevmode
259 \group_begin:% lwarp
260 \LetLtxMacro\ensuredmath\LWR@origensuredmath% lwarp
261 \LetLtxMacro\mbox\LWR@print@mbox% lwarp
262 \bool_set_false:N \l__siunitx_font_set_bool
263 \IfNoValueTF {#1}
264 { __siunitx_range_unit:nnnn {#4} { } {#2} {#3} }
265 {
266 \keys_set:nn { siunitx } {#1}
267 __siunitx_range_unit:nnnn {#4} {#1} {#2} {#3}
268 }
269 \group_end:% lwarp
270 }
271
272 \ExplSyntaxOff

```

For MATHJAX. (The following runs much faster as separate `\CusomizeMathJax` calls instead of one single call.)

```

273 \begin{warpMathJax}
274 \LWR@infoprocessingmathjax{siunitx}
275
276 \CustomizeMathJax{\newcommand{\ang}[2][\mathrm{#2}]{\mathrm{#2}^\circ}}
277 \CustomizeMathJax{\newcommand{\num}[2][\mathrm{#2}]}
278 \CustomizeMathJax{\newcommand{\si}[2][\mathrm{#2}]}
279 %
280 % \SI[opt]{num}[preunit]{unit}
281 \CustomizeMathJax{\newcommand{\LWRSI}[2][\mathrm{#1\LWRSInumber\, #2}}
282 \CustomizeMathJax{\newcommand{\SI}[2][\def\LWRSInumber{#2\LWRSI}}
283 %
284 \CustomizeMathJax{\newcommand{\numlist}[2][\mathrm{#2}]}
285 \CustomizeMathJax{\newcommand{\numrange}[3][\mathrm{#2}^{-- #3}}
286 \CustomizeMathJax{\newcommand{\SIlist}[3][\mathrm{#2\, #3}}
287 \CustomizeMathJax{\newcommand{\SIrange}[4][\mathrm{#2\, #4}^{-- #3\, #4}}
288 \CustomizeMathJax{\newcommand{\tablenum}[2][\mathrm{#2}]}
289 %
290 \CustomizeMathJax{\newcommand{\ampere}{\mathrm{A}}}
291 \CustomizeMathJax{\newcommand{\candela}{\mathrm{cd}}}
292 \CustomizeMathJax{\newcommand{\kelvin}{\mathrm{K}}}
293 \CustomizeMathJax{\newcommand{\kilogram}{\mathrm{kg}}}
294 \CustomizeMathJax{\newcommand{\metre}{\mathrm{m}}}

```

```

295 \CustomizeMathJax{\newcommand{\mole}{\mathrm{mol}}}
296 \CustomizeMathJax{\newcommand{\second}{\mathrm{s}}}
297 %
298 \CustomizeMathJax{\newcommand{\becquerel}{\mathrm{Bq}}}
299 \CustomizeMathJax{\newcommand{\degreeCelsius}{\unicode{x2103}}}
300 \CustomizeMathJax{\newcommand{\coulomb}{\mathrm{C}}}
301 \CustomizeMathJax{\newcommand{\farad}{\mathrm{F}}}
302 \CustomizeMathJax{\newcommand{\gray}{\mathrm{Gy}}}
303 \CustomizeMathJax{\newcommand{\hertz}{\mathrm{Hz}}}
304 \CustomizeMathJax{\newcommand{\henry}{\mathrm{H}}}
305 \CustomizeMathJax{\newcommand{\joule}{\mathrm{J}}}
306 \CustomizeMathJax{\newcommand{\katal}{\mathrm{kat}}}
307 \CustomizeMathJax{\newcommand{\lumen}{\mathrm{lm}}}
308 \CustomizeMathJax{\newcommand{\lux}{\mathrm{lx}}}
309 \CustomizeMathJax{\newcommand{\newton}{\mathrm{N}}}
310 \CustomizeMathJax{\newcommand{\ohm}{\mathrm{\Omega}}}
311 \CustomizeMathJax{\newcommand{\pascal}{\mathrm{Pa}}}
312 \CustomizeMathJax{\newcommand{\radian}{\mathrm{rad}}}
313 \CustomizeMathJax{\newcommand{\siemens}{\mathrm{S}}}
314 \CustomizeMathJax{\newcommand{\sievert}{\mathrm{Sv}}}
315 \CustomizeMathJax{\newcommand{\steradian}{\mathrm{sr}}}
316 \CustomizeMathJax{\newcommand{\tesla}{\mathrm{T}}}
317 \CustomizeMathJax{\newcommand{\volt}{\mathrm{V}}}
318 \CustomizeMathJax{\newcommand{\watt}{\mathrm{W}}}
319 \CustomizeMathJax{\newcommand{\weber}{\mathrm{Wb}}}
320 \CustomizeMathJax{\newcommand{\day}{\mathrm{d}}}
321 \CustomizeMathJax{\newcommand{\degree}{\mathrm{^{\circ}}}}
322 \CustomizeMathJax{\newcommand{\hectare}{\mathrm{ha}}}
323 \CustomizeMathJax{\newcommand{\hour}{\mathrm{h}}}
324 \CustomizeMathJax{\newcommand{\litre}{\mathrm{l}}}
325 \CustomizeMathJax{\newcommand{\liter}{\mathrm{L}}}
326 \CustomizeMathJax{\newcommand{\arcminute}{\mathrm{^{\prime}}}}
327 \CustomizeMathJax{\newcommand{\minute}{\mathrm{min}}}
328 \CustomizeMathJax{\newcommand{\arcsecond}{\mathrm{^{\prime\prime}}}}
329 \CustomizeMathJax{\newcommand{\tonne}{\mathrm{t}}}
330 \CustomizeMathJax{\newcommand{\astronomicalunit}{\mathrm{au}}}
331 \CustomizeMathJax{\newcommand{\atomicmassunit}{\mathrm{u}}}
332 \CustomizeMathJax{\newcommand{\bohr}{\mathrm{a_0}}}
333 \CustomizeMathJax{\newcommand{\c_light}{\mathrm{c_0}}}
334 \CustomizeMathJax{\newcommand{\dalton}{\mathrm{D_a}}}
335 \CustomizeMathJax{\newcommand{\electronmass}{\mathrm{m_e}}}
336 \CustomizeMathJax{\newcommand{\electronvolt}{\mathrm{eV}}}
337 \CustomizeMathJax{\newcommand{\elementarycharge}{\mathrm{e}}}
338 \CustomizeMathJax{\newcommand{\hartree}{\mathrm{E_h}}}
339 \CustomizeMathJax{\newcommand{\planckbar}{\mathrm{\hbar}}}
340 \CustomizeMathJax{\newcommand{\angstrom}{\mathrm{\AA}}}
341 \CustomizeMathJax{\let\LWRorigbar\bar}
342 \CustomizeMathJax{\newcommand{\bar}{\mathrm{\bar{}}}}
343 \CustomizeMathJax{\newcommand{\barn}{\mathrm{b}}}
344 \CustomizeMathJax{\newcommand{\bel}{\mathrm{B}}}
345 \CustomizeMathJax{\newcommand{\decibel}{\mathrm{dB}}}
346 \CustomizeMathJax{\newcommand{\knot}{\mathrm{kn}}}
347 \CustomizeMathJax{\newcommand{\mmHg}{\mathrm{mmHg}}}
348 \CustomizeMathJax{\newcommand{\nauticalmile}{\mathrm{M}}}
349 \CustomizeMathJax{\newcommand{\neper}{\mathrm{Np}}}

```

```

350 %
351 \CustomizeMathJax{\newcommand{\yocto}{\mathrm{y}}}
352 \CustomizeMathJax{\newcommand{\zepto}{\mathrm{z}}}
353 \CustomizeMathJax{\newcommand{\atto}{\mathrm{a}}}
354 \CustomizeMathJax{\newcommand{\femto}{\mathrm{f}}}
355 \CustomizeMathJax{\newcommand{\pico}{\mathrm{p}}}
356 \CustomizeMathJax{\newcommand{\nano}{\mathrm{n}}}
357 \CustomizeMathJax{\newcommand{\micro}{\mathrm{\unicode{x00B5}}}}
358 \CustomizeMathJax{\newcommand{\milli}{\mathrm{m}}}
359 \CustomizeMathJax{\newcommand{\centi}{\mathrm{c}}}
360 \CustomizeMathJax{\newcommand{\deci}{\mathrm{d}}}
361 \CustomizeMathJax{\newcommand{\deca}{\mathrm{da}}}
362 \CustomizeMathJax{\newcommand{\hecto}{\mathrm{h}}}
363 \CustomizeMathJax{\newcommand{\kilo}{\mathrm{k}}}
364 \CustomizeMathJax{\newcommand{\mega}{\mathrm{M}}}
365 \CustomizeMathJax{\newcommand{\giga}{\mathrm{G}}}
366 \CustomizeMathJax{\newcommand{\tera}{\mathrm{T}}}
367 \CustomizeMathJax{\newcommand{\peta}{\mathrm{P}}}
368 \CustomizeMathJax{\newcommand{\exa}{\mathrm{E}}}
369 \CustomizeMathJax{\newcommand{\zetta}{\mathrm{Z}}}
370 \CustomizeMathJax{\newcommand{\yotta}{\mathrm{Y}}}
371 %
372 \CustomizeMathJax{\newcommand{\percent}{\mathrm{\%}}}
373 %
374 \CustomizeMathJax{\newcommand{\meter}{\mathrm{m}}}
375 \CustomizeMathJax{\newcommand{\metre}{\mathrm{m}}}
376 %
377 \CustomizeMathJax{\newcommand{\gram}{\mathrm{g}}}
378 \CustomizeMathJax{\newcommand{\kg}{\kilo\gram}}
379 \CustomizeMathJax{\newcommand{\of}[1]{_{\mathrm{\#1}}}}
380 \CustomizeMathJax{\newcommand{\squared}{^2}}
381 \CustomizeMathJax{\newcommand{\square}[1]{\mathrm{\#1}^2}}
382 \CustomizeMathJax{\newcommand{\cubed}{^3}}
383 \CustomizeMathJax{\newcommand{\cubic}[1]{\mathrm{\#1}^3}}
384 \CustomizeMathJax{\newcommand{\per}{/}}
385 \CustomizeMathJax{\newcommand{\celsius}{\unicode{x2103}}}
386 %
387 \CustomizeMathJax{\newcommand{\fg}{\femto\gram}}
388 \CustomizeMathJax{\newcommand{\pg}{\pico\gram}}
389 \CustomizeMathJax{\newcommand{\ng}{\nano\gram}}
390 \CustomizeMathJax{\newcommand{\ug}{\micro\gram}}
391 \CustomizeMathJax{\newcommand{\mg}{\milli\gram}}
392 \CustomizeMathJax{\newcommand{\g}{\gram}}
393 \CustomizeMathJax{\newcommand{\kg}{\kilo\gram}}
394 %
395 \CustomizeMathJax{\newcommand{\amu}{\mathrm{u}}}
396 %
397 \CustomizeMathJax{\newcommand{\pm}{\pico\metre}}
398 \CustomizeMathJax{\newcommand{\nm}{\nano\metre}}
399 \CustomizeMathJax{\newcommand{\um}{\micro\metre}}
400 \CustomizeMathJax{\newcommand{\mm}{\milli\metre}}
401 \CustomizeMathJax{\newcommand{\cm}{\centi\metre}}
402 \CustomizeMathJax{\newcommand{\dm}{\deci\metre}}
403 \CustomizeMathJax{\newcommand{\m}{\metre}}
404 \CustomizeMathJax{\newcommand{\km}{\kilo\metre}}

```

```
405 %
406 \CustomizeMathJax{\newcommand{\as}{\atto\second}}
407 \CustomizeMathJax{\newcommand{\fs}{\femto\second}}
408 \CustomizeMathJax{\newcommand{\ps}{\pico\second}}
409 \CustomizeMathJax{\newcommand{\ns}{\nano\second}}
410 \CustomizeMathJax{\newcommand{\us}{\micro\second}}
411 \CustomizeMathJax{\newcommand{\ms}{\milli\second}}
412 \CustomizeMathJax{\newcommand{\s}{\second}}
413 %
414 \CustomizeMathJax{\newcommand{\fmol}{\femto\mol}}
415 \CustomizeMathJax{\newcommand{\pmol}{\pico\mol}}
416 \CustomizeMathJax{\newcommand{\nmol}{\nano\mol}}
417 \CustomizeMathJax{\newcommand{\umol}{\micro\mol}}
418 \CustomizeMathJax{\newcommand{\mmol}{\milli\mol}}
419 \CustomizeMathJax{\newcommand{\mol}{\mol}}
420 \CustomizeMathJax{\newcommand{\kmol}{\kilo\mol}}
421 %
422 \CustomizeMathJax{\newcommand{\pA}{\pico\ampere}}
423 \CustomizeMathJax{\newcommand{\nA}{\nano\ampere}}
424 \CustomizeMathJax{\newcommand{\uA}{\micro\ampere}}
425 \CustomizeMathJax{\newcommand{\mA}{\milli\ampere}}
426 \CustomizeMathJax{\newcommand{\A}{\ampere}}
427 \CustomizeMathJax{\newcommand{\kA}{\kilo\ampere}}
428 %
429 \CustomizeMathJax{\newcommand{\uL}{\micro\litre}}
430 \CustomizeMathJax{\newcommand{\mL}{\milli\litre}}
431 \CustomizeMathJax{\newcommand{\L}{\litre}}
432 \CustomizeMathJax{\newcommand{\hL}{\hecto\litre}}
433 \CustomizeMathJax{\newcommand{\uL}{\micro\liter}}
434 \CustomizeMathJax{\newcommand{\mL}{\milli\liter}}
435 \CustomizeMathJax{\newcommand{\L}{\liter}}
436 \CustomizeMathJax{\newcommand{\hL}{\hecto\liter}}
437 %
438 \CustomizeMathJax{\newcommand{\mHz}{\milli\hertz}}
439 \CustomizeMathJax{\newcommand{\Hz}{\hertz}}
440 \CustomizeMathJax{\newcommand{\kHz}{\kilo\hertz}}
441 \CustomizeMathJax{\newcommand{\MHz}{\mega\hertz}}
442 \CustomizeMathJax{\newcommand{\GHz}{\giga\hertz}}
443 \CustomizeMathJax{\newcommand{\THz}{\tera\hertz}}
444 %
445 \CustomizeMathJax{\newcommand{\mN}{\milli\newton}}
446 \CustomizeMathJax{\newcommand{\N}{\newton}}
447 \CustomizeMathJax{\newcommand{\kN}{\kilo\newton}}
448 \CustomizeMathJax{\newcommand{\MN}{\mega\newton}}
449 %
450 \CustomizeMathJax{\newcommand{\Pa}{\pascal}}
451 \CustomizeMathJax{\newcommand{\kPa}{\kilo\pascal}}
452 \CustomizeMathJax{\newcommand{\MPa}{\mega\pascal}}
453 \CustomizeMathJax{\newcommand{\GPa}{\giga\pascal}}
454 %
455 \CustomizeMathJax{\newcommand{\mohm}{\milli\ohm}}
456 \CustomizeMathJax{\newcommand{\kohm}{\kilo\ohm}}
457 \CustomizeMathJax{\newcommand{\Mohm}{\mega\ohm}}
458 %
459 \CustomizeMathJax{\newcommand{\pV}{\pico\volt}}
```

```

460 \CustomizeMathJax{\newcommand{\nV}{\nano\volt}}
461 \CustomizeMathJax{\newcommand{\uV}{\micro\volt}}
462 \CustomizeMathJax{\newcommand{\mV}{\milli\volt}}
463 \CustomizeMathJax{\newcommand{\V}{\volt}}
464 \CustomizeMathJax{\newcommand{\kV}{\kilo\volt}}
465 %
466 \CustomizeMathJax{\newcommand{\W}{\watt}}
467 \CustomizeMathJax{\newcommand{\uW}{\micro\watt}}
468 \CustomizeMathJax{\newcommand{\mW}{\milli\watt}}
469 \CustomizeMathJax{\newcommand{\kW}{\kilo\watt}}
470 \CustomizeMathJax{\newcommand{\MW}{\mega\watt}}
471 \CustomizeMathJax{\newcommand{\GW}{\giga\watt}}
472 %
473 \CustomizeMathJax{\newcommand{\J}{\joule}}
474 \CustomizeMathJax{\newcommand{\uJ}{\micro\joule}}
475 \CustomizeMathJax{\newcommand{\mJ}{\milli\joule}}
476 \CustomizeMathJax{\newcommand{\kJ}{\kilo\joule}}
477 %
478 \CustomizeMathJax{\newcommand{\eV}{\electronvolt}}
479 \CustomizeMathJax{\newcommand{\meV}{\milli\electronvolt}}
480 \CustomizeMathJax{\newcommand{\keV}{\kilo\electronvolt}}
481 \CustomizeMathJax{\newcommand{\MeV}{\mega\electronvolt}}
482 \CustomizeMathJax{\newcommand{\GeV}{\giga\electronvolt}}
483 \CustomizeMathJax{\newcommand{\TeV}{\tera\electronvolt}}
484 %
485 \CustomizeMathJax{\newcommand{\kWh}{\kilo\watt\hour}}
486 %
487 \CustomizeMathJax{\newcommand{\F}{\farad}}
488 \CustomizeMathJax{\newcommand{\fF}{\femto\farad}}
489 \CustomizeMathJax{\newcommand{\pF}{\pico\farad}}
490 %
491 \CustomizeMathJax{\newcommand{\K}{\mathrm{K}}}
492 %
493 \CustomizeMathJax{\newcommand{\dB}{\mathrm{dB}}}
494 %
495 \CustomizeMathJax{\newcommand{\kibi}{\mathrm{Ki}}}
496 \CustomizeMathJax{\newcommand{\mebi}{\mathrm{Mi}}}
497 \CustomizeMathJax{\newcommand{\gibi}{\mathrm{Gi}}}
498 \CustomizeMathJax{\newcommand{\tebi}{\mathrm{Ti}}}
499 \CustomizeMathJax{\newcommand{\pebi}{\mathrm{Pi}}}
500 \CustomizeMathJax{\newcommand{\exbi}{\mathrm{Ei}}}
501 \CustomizeMathJax{\newcommand{\zebi}{\mathrm{Zi}}}
502 \CustomizeMathJax{\newcommand{\yobi}{\mathrm{Yi}}}
503 \end{warpMathJax}

```

---

File 390 **lwarp-slantsc.sty**

§ 493

Package

**slantsc**

*(Emulates or patches code by HARALD HARDERS.)*

Pkg

slantsc

slantsc is emulated for HTML, and used as-is for print output.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{slantsc}[2012/01/01]

2 \newcommand*{\LWR@HTML@noscshape}{}
3 \LWR@formatted{noscshape}
4
5 \FilenameNullify{%
6 \LetLtxMacro\noscshape\@empty%
7 }
```

---

File 391 **lwarp-slashed.sty**

§ 494      Package **slashed**

*(Emulates or patches code by DAVID CARLISLE.)*

Pkg    slashed    slashed works as-s for HTML SVG math. For MATHJAX, emulation is provided.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{slashed}[1997/01/16]

2 \begin{warpMathJax}
3 \CustomizeMathJax{\newcommand{\slashed}[1]{\cancel{#1}}}
4 \end{warpMathJax}
```

---

File 392 **lwarp-soul.sty**

§ 495      Package **soul**

*(Emulates or patches code by MELCHIOR FRANZ.)*

Pkg    soul      soul is emulated.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{soul}[2003/11/17]
2 \RequirePackage{xcolor}% for \convertcolorspec
```

Storage for the colors to use:

```

3 \newcommand*{\LWR@soululcolor}{}
4
5 \newcommand*{\LWR@soulstcolor}{}
6
7 % \definecolor{\LWR@soulhlcolordefault}{HTML}{F8E800}
8 % \newcommand*{\LWR@soulhlcolor}{\LWR@soulhlcolordefault}
9 \newcommand*{\LWR@soulhlcolor}{}

```

\so    {<text>}

Basic markup with CSS:

```

10 \newcommand{\so}[1]{%
11 \InlineClass(letter-spacing:.2ex){letterspacing}{#1}%
12 }
```

\caps     {<text>}

```
13 \newcommand{\caps}[1]{%
14 \InlineClass%
15 (font-variant:small-caps;letter-spacing:.1ex)%
16 {capsspacing}{#1}%
17 }
```

\LWR@soulcolor     {<text>}{<color>}{<class>}{<colorstyle>}{<FormatWPstyle>}

Add colors if not empty:

```
18 \newcommand{\LWR@soulcolor}[5]{%
19 \ifcsempy{#2}%
20 {%
21 \InlineClass(#5){#3}{#1}%
22 }%
23 {%
24 \convertcolorspec{named}{\@nameuse{#2}}{HTML}\LWR@tempcolor%
25 \LWR@htmlspanclass[#5;#4:\LWR@origpound\LWR@tempcolor]{#3}{#1}%
26 }%
27 }

28 \newcommand{\ul}[1]{%
29 \LWR@soulcolor{#1}{\LWR@soululcolor}{uline}{text-decoration-color}%
30 {text-decoration:underline; text-decoration-skip: auto;}%
31 }
32
33 \newcommand{\st}[1]{
34 \LWR@soulcolor{#1}{\LWR@soulstcolor}{sout}{text-decoration-color}%
35 {text-decoration:line-through}%
36 }
37
38 \newcommand{\hl}[1]{
39 \LWR@soulcolor{#1}{\LWR@soulhlcolor}{highlight}{background-color}%
40 {background:\LWR@origpound{ }F8E800}
41 }
```

Nullified:

```
42 \newcommand*{\soulaccent}[1]{ }
43 \newcommand*{\soulregister}[2]{ }
44 \newcommand{\sloppyword}[1]{#1}
45 \newcommand*{\sodef}[5]{\DeclareRobustCommand*#1[1]{\so{##1}}}
46 \newcommand*{\resetso}{ }
47 \newcommand*{\capsdef}[5]{ }
48 \newcommand*{\capsreset}{ }
49 \newcommand*{\capssave}[1]{ }
50 \newcommand*{\capsselect}[1]{ }
51 \newcommand*{\setul}[2]{ }
52 \newcommand*{\resetul}{ }
53 \newcommand*{\setuldepth}[1]{ }
54 \newcommand*{\setuloverlap}[1]{ }
55 \newcommand*{\<}{ }
```

Set colors:

```
56 \newcommand*{\setulcolor}[1]{\renewcommand{\LWR@soululcolor}{#1}}
57 \newcommand*{\setstcolor}[1]{\renewcommand{\LWR@soulstcolor}{#1}}
58 \newcommand*{\sethlcolor}[1]{\renewcommand{\LWR@soulhlcolor}{#1}}
```

Long versions of the user-level macros:

```
59 \let\textso\so
60 \let\textul\ul
61 \let\texthl\hl
62 \let\textcaps\caps
```

---

File 393 **lwarp-soulpos.sty**

\$ 496      Package **soulpos**

*(Emulates or patches code by JAVIER BEZOS.)*

Pkg    soulpos    soulpos is emulated.

**for HTML output:**

```
1 \RequirePackage{soul}
2 \RequirePackage{soulutf8}
3 \LWR@ProvidesPackageDrop{soulpos}[2012/02/25]

4 \NewDocumentCommand{\ulposdef}{m o m}{}
5
6 \newdimen\ulwidth
7
8 \newcommand\ifulstarttype[1]{%
9 \expandafter\@secondoftwo%
10 }
11
12 \newcommand\ifulendtype[1]{%
13 \expandafter\@secondoftwo%
14 }
15
16 \newcommand{\ulstarttype}{0}
17 \newcommand{\ulendtype}{0}
18 \newcommand{\ulpostolerance}{0}%
```

---

File 394 **lwarp-soulutf8.sty**

\$ 497      Package **soulutf8**

Pkg    soulutf8    soulutf8 is emulated.

lwarp's HTML output naturally supports UTF-8 encoding.

**for HTML output:**

---

```

1 \LWR@ProvidesPackageDrop{soulutf8}[2016/05/16]
2 \RequirePackage{soul}

```

---

File 395 **lwarp-splitbib.sty**

§ 498      Package **splitbib**

*(Emulates or patches code by NICOLAS MARKEY.)*

Pkg    splitbib    **splitbib** is patched for use by **lwarp**.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{splitbib}[2005/12/22]

2 \def\NMSB@stylebox#1#2{%
3 \begin{BlockClass}[text-align:center ; border: 1px solid black]{splitbibbox}
4 \csname SB\NMSB@level font\endcsname{\LWR@textcurrentfont{#1#2}}
5 \end{BlockClass}
6 }
7
8 \def\NMSB@stylebar#1#2{%
9 \begin{BlockClass}[%
10 text-align:center ;
11 border-top: 1px solid black ;
12 border-bottom: 1px solid black ;
13]{splitbibbar}
14 \csname SB\NMSB@level font\endcsname{\LWR@textcurrentfont{#1#2}}
15 \end{BlockClass}
16 }
17
18 \def\NMSB@styledash#1#2{%
19 \begin{BlockClass}[%
20 text-align:center ;
21]{splitbibdash}
22 \csname SB\NMSB@level font\endcsname{\LWR@textcurrentfont{---#1#2---}}
23 \end{BlockClass}
24 }
25
26 \def\NMSB@stylenone#1#2{%
27 \par
28 }
29
30 \def\NMSB@stylesimple#1#2{%
31 \par
32 \csname SB\NMSB@level font\endcsname{\LWR@textcurrentfont{#1#2}}
33 \par
34 }

```


---

File 396 **lwarp-splitidx.sty**

§ 499      Package **splitidx**
*(Emulates or patches code by MARKUS KOHM.)*

Pkg    splitidx    splitidx is patched for use by lwarp.

If the `latexmk` option is selected for `lwarp`, *latexmk* will compile the document but will *not* compile the indexes. `lwarpmk printindex` and `lwarpmk htmlindex` will still be required.

 **\thepage** When using `\AtWriteToIndex` or `\AtNextWriteToIndex`, the user must not refer to `\thepage` during HTML output, as the concept of a page number is meaningless. Instead, do

```
\addtocounter{LWR@autoindex}{1}
\LWR@new@label{LWRindex-\arabic{LWR@autoindex}}
```

where the `\index`-like action occurs, and then refer to `\arabic{LWR@autoindex}` instead of `\thepage` where the reference should occur.

See section 608.17 in the `lwarp-patch-memoir` package for the `\@@wrsindexhyp` macro as an example.

for HTML output:    1 \LWR@ProvidesPackagePass{splitidx}[2016/02/18]

```
2 \catcode'_ =12%
3 \xpatchcmd{\newindex}
4 {\jobname-#2.idx}
5 {\jobname-#2_html.idx}
6 {}
7 {\LWR@patcherror{splitidx}{@newindex}}
8 \catcode'_ =8%
```

Patched to use `lwarp`'s automatic indexing counter instead of `\thepage`:

```
9 \renewcommand*{\@wrsindex}[2][\relax]{%
10 \ifx\relax#1\relax
11 \if@splitidx
12 \@wrsindex[idx]{#2}%
13 \else
14 \def\@tempa{#2}%
15 \if@verbinde\@onelevel@sanitize\@tempa\fi
16 \@wrsindex{\@tempa}%
17 \fi
18 \else
19 \def\@tempa{#2}%
20 \csname index@#1@hook\endcsname
21 % \expandafter\ifx\csname @@wrsindex\endcsname\relax
```

```

22 \addtocounter{LWR@autoindex}{1}% lwarp
23 \label{LWRindex-\arabic{LWR@autoindex}}% lwarp
24 % \@@@wrsindex{#1}{\@tempa}{\thepage}}%
25 \@@@wrsindex{#1}{\@tempa}{\arabic{LWR@autoindex}}}%
26 % \else
27 % \def\@tempb{\@wrsindex{#1}}%
28 % \expandafter\@tempb\@tempa||\%
29 % \fi
30 \endgroup
31 \@esphack
32 \fi
33 }

```

lwarp defines sectioning commands with xparse, so the below patches are done as temporary redefinitions instead of being \let.

```

34 \xpatchcmd{\printsubindex}
35 {\let\section\subsection}
36 {\renewcommand*{\section}{\subsection}}
37 {}
38 {\LWR@patcherror{splitidx}{printsubindex-section}}
39
40 \xpatchcmd{\printsubindex}
41 {\let\chapter\section}
42 {\renewcommand*{\chapter}{\section}}
43 {}
44 {\LWR@patcherror{splitidx}{printsubindex-chapter}}
45
46 \xpatchcmd{\printsubindex}
47 {\let\@makechapterhead\section}
48 {\def\@makechapterhead{\section}}
49 {}
50 {\LWR@patcherror{splitidx}{printsubindex-chapter}}

```

---

File 397 **lwarp-srcltx.sty**

§ 500 Package **srcltx**

Pkg srcltx srcltx is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{srcltx}[2006/11/12]

```

2 \newif\ifSRCOK \SRCOKfalse
3 \newcommand*\srcIncludeHook[1]{}
4 \newcommand*\srcInputHook[1]{}
5 \newcommand*\MainFile{}
6 \def\MainFile{\jobname.tex}
7 \newcommand*\CurrentInput{}
8 \gdef\CurrentInput{\MainFile}
9 \newcommand\Input{}
10 \let\Input\input

```

---

File 398 **lwarp-srctex.sty**

§ 501      Package **srctex**

Pkg   srctex   **srctex** is ignored.

**for HTML output:**    1 \LWR@ProvidesPackageDrop{srctex}[2006/11/12]  
                          2 \LWR@origRequirePackage{lwarp-srcltx}

---

File 399 **lwarp-stabular.sty**

§ 502      Package **stabular**

*(Emulates or patches code by SIGITAS TOLUŠIS.)*

Pkg   stabular   **stabular** is emulated.

**for HTML output:**    1 \LWR@ProvidesPackageDrop{stabular}[2014/03/20]

Env stabular    [*<vpos>*] {*<colspec>*}

```
2 \newenvironment{stabular}[2][c]
3 {
4 \begin{tabular}[#1]{#2}
5 \renewcommand{\noalign}[1]{}
6 }
7 {\end{tabular}}
```

Env stabular    {*<width>*} [*<vpos>*] {*<colspec>*}

```
8 \NewDocumentEnvironment{stabular*}{m o m}
9 {
10 \begin{tabular}[#2]{#3}
11 \renewcommand{\noalign}[1]{}
12 }
13 {\end{tabular}}
```

---

File 400 **lwarp-stackengine.sty**

§ 503      Package **stackengine**

*(Emulates or patches code by STEVEN B. SEGLETES.)*

Pkg   stackengine   **stackengine** is patched for use by lwarp.

**for HTML output:**    1 \LWR@ProvidesPackagePass{stackengine}[2017/02/13]

The original version is necessary for the patched `\@stack` and `\stackanchor`, where nesting `lateximage` does not work:

```

2 \LetLtxMacro\LWR@orig@stackengine\stackengine

3 \renewcommand*{\stackengine}[8]{%
4 \ifstrequal{#4}{0}%
5 {\begin{lateximage}[\ImageAltText]}%
6 {\begin{lateximage}[\ImageAltText][][vertical-align:top]}%
7 \LWR@orig@stackengine{#1}{#2}{#3}{#4}{#5}{#6}{#7}{#8}%
8 \end{lateximage}%
9 }

```

`\@stack` uses a `lateximage` with a vertical alignment:

```

10 \LetLtxMacro\LWR@orig@@stack\@stack
11
12 \xpatchcmd{\LWR@orig@@stack}{\stackengine}{\LWR@orig@stackengine}
13 {}
14 {\LWR@patcherror{stackengine}{\LWR@orig@@stack}}
15
16 \renewcommand*{\@stack}[4]{%
17 \ifstrequal{#3}{0}%
18 {\begin{lateximage}[\ImageAltText]}%
19 {\begin{lateximage}[\ImageAltText][][vertical-align:top]}%
20 \LWR@orig@@stack{#1}{#2}{#3}{#4}%
21 \end{lateximage}%
22 }

```

The lapping macros are disabled for HTML:

```

23 \newcommand*\LWR@HTML@stacklap[4]{#3}
24 \LWR@formatted{@stacklap}

```

`\stackanchor` is patched for two instances of `\stackengine`. A `lateximage` with vertical alignment is used.

```

25 \xpatchcmd{\stackanchor}{\stackengine}{\LWR@orig@stackengine}
26 {}
27 {\LWR@patcherror{stackengine}{stackanchor patch 1}}
28
29 \xpatchcmd{\stackanchor}{\stackengine}{\LWR@orig@stackengine}
30 {}
31 {\LWR@patcherror{stackengine}{stackanchor patch 2}}
32
33 \xpretocmd{\stackanchor}
34 {\begin{lateximage}[\ImageAltText][][vertical-align:middle]}
35 {}
36 {\LWR@patcherror{stackengine}{stackanchor pre}}
37
38 \xapptocmd{\stackanchor}{\end{lateximage}}
39 {}
40 {\LWR@patcherror{stackengine}{stackanchor app}}

```

`\Centerstack` is simply placed inside a `lateximage` with a vertical alignment:

```

41 \xpretocmd{\Centerstack}
42 {\begin{lateximage}[\ImageAltText][][vertical-align:middle]}
43 {}
44 {\LWR@patcherror{stackengine}{Centerstack pre}}
45
46 \xapptocmd{\Centerstack}{\end{lateximage}}
47 {}
48 {\LWR@patcherror{stackengine}{Centerstack app}}

```

`\savestack` reverts to print mode while saving the box, then places it inside a `lateximage` when used:

```

49 \renewcommand*\savestack[2]{%
50 \xdef\sv@name{\stack@macro@name{#1}}%
51 \@ifundefined{\sv@name content}{%
52 \expandafter\newsavebox\expandafter{\csname\sv@name content\endcsname}%
53 }{%
54 \begingroup% lwarp
55 \LWR@restoreorigformatting% lwarp
56 \RenewDocumentEnvironment{lateximage}{s o s o }{}{}% lwarp: inside group
57 \expandafter\LWR@gsavebox\csname\sv@name content\endcsname{#2}%
58 \expandafter\gdef\expandafter#1\expandafter{%
59 \expandafter\begin\expandafter{lateximage\expandafter}% lwarp
60 \expandafter\usebox\expandafter%
61 {\csname\sv@name content\endcsname}%
62 \expandafter\end\expandafter{lateximage\expandafter}% lwarp
63 }%
64 \endgroup% lwarp
65 }

```

---

File 401 **lwarp-stackrel.sty**

§ 504     Package **stackrel**

*(Emulates or patches code by HEIKO OBERDIEK.)*

Pkg    stackrel    **stackrel** is used as-is for SVG math, and is emulated for MATHJAX.

for HTML output:    1 \LWR@ProvidesPackagePass{stackrel}[2016/05/16]

```

2 \begin{warpMathJax}
3 \CustomizeMathJax{\renewcommand{\stackrel}[3][]{%
4 \mathrel{\mathop{#3}\limits_{#1}^{#2}}}%
5 }}
6
7 \CustomizeMathJax{\newcommand{\stackbin}[3][]{%
8 \mathbin{\mathop{#3}\limits_{#1}^{#2}}}%
9 }}
10 \end{warpMathJax}

```

File 402 **lwarp-statex2.sty**

§ 505 Package **statex2**

(Emulates or patches code by RODNEY A SPARAPANI.)

Pkg statex2 **statex2** is patched for use by **lwarp**, and emulated for MATHJAX.

- ⚠ As of this version, option autobold does not appear to work for PDF output.
- ⚠ For MATHJAX, the tilde character  $\sim$  does not create  $\sim$ . Use  $\sim$  directly.
- ⚠ Because MATHJAX has limited conditional processing:

- $\wrap$  only creates square braces, no matter what its optional arguments.
- $\P$ ,  $\pCau$ ,  $\pN$ , and  $\pU$  do not handle special cases.

⚠ **\and** To have  $\and$  work if using  $\maketitle$ , place the following after the start of the document:

```
\newcommand*\and{%
 \relax\ifmmode%
 \expandafter\;\mb{\mathrm{and}}\;%
 \else%
 \expandafter\STATEXand%
 \fi%
}
```

**for HTML output:** 1 \LWR@ProvidesPackagePass{statex2}[2011/09/14]

```
2 \newcommand*\LWR@HTML@Alpha[1][{}]{%
3 \fcolorbox{black}{ForestGreen}{\textcolor{white}{\textsf{ALPHA}}}%
4 \textbf{\textcolor{ForestGreen}{\textsf{\#1}}}%
5 }
6 \LWR@formatted{Alpha}
7
8 \newcommand*\LWR@HTML@List[1][{}]{%
9 \textbf{\textcolor{Dandelion}{\textsf{L}\textsubscript{\textit{\#1}}}}%
10 }
11 \LWR@formatted{List}
12
13 \newcommand*\LWR@HTML@Snd[1][{}]{%
14 \fcolorbox{black}{Dandelion}{\textcolor{white}{\textsf{2nd}}}%
15 \textbf{\textcolor{Dandelion}{\textsf{\#1}}}%
16 }
17 \LWR@formatted{Snd}
18
19 \begin{warpMathJax}
```

```

20 \LWR@infoprocessingmathjax{statex2}
21
22 \CustomizeMathJax{\newcommand{\cpi}{\boldsymbol{\pi}}}
23 \CustomizeMathJax{\newcommand{\c}[1]{\boldsymbol{\mathrm{#1}}}}
24 \CustomizeMathJax{\newcommand{\sfs}[1]{\mathsf{#1}}}% not slanted
25
26 \if@manualbold
27 \CustomizeMathJax{\newcommand{\mb}[1]{#1}}
28 \else
29 \CustomizeMathJax{\newcommand{\mb}[1]{\boldsymbol{#1}}}
30 \fi
31
32 \CustomizeMathJax{\newcommand{\diag}{\mb{\mathrm{diag}}}}
33 \CustomizeMathJax{\newcommand{\blockdiag}{\mb{\mathrm{blockdiag}}}}
34 \CustomizeMathJax{\newcommand{\erf}{\mb{\mathrm{erf}}}}
35 \CustomizeMathJax{\newcommand{\logit}{\mb{\mathrm{logit}}}}
36 \CustomizeMathJax{\newcommand{\trace}{\mb{\mathrm{trace}}}}
37
38 \CustomizeMathJax{\newcommand{\chisq}{\mb{\chi^2}}}
39 \CustomizeMathJax{\newcommand{\deriv}[2]{\mb{\frac{d}{d{#1}}}\wrap{\mb{#2}}}}
40 \CustomizeMathJax{\newcommand{\derivf}[2]{\mb{\frac{d}{d{#2}}}\wrap{\mb{#1}}}}
41 \CustomizeMathJax{\newcommand{\e}[1]{\mb{\mathrm{e}^{#1}}}}
42 \CustomizeMathJax{\newcommand{\E}[2][\mb{\mathrm{E}}_{\mb{#1}} \wrap{\mb{#2}}}}
43 \CustomizeMathJax{\newcommand{\ha}{\mb{\frac{\alpha}{2}}}}
44 \CustomizeMathJax{\newcommand{\I}[2][\%
45 \mb{\mathrm{I}}_{\mb{#1}} \LWRwrapparen{\mb{#2}}}%
46]}
47 \CustomizeMathJax{\newcommand{\IBeta}[2][\%
48 \mb{\frac{\Gamma[#1 + #2]}{\Gamma[#1] \Gamma[#2]}}}%
49]}
50 \CustomizeMathJax{\newcommand{\If}{\; \mb{\mathrm{if}} \; \;}}
51 \CustomizeMathJax{\newcommand{\im}{\mb{\mathrm{i}}}}
52 \CustomizeMathJax{\newcommand{\ol}{\overline{}}}
53 \CustomizeMathJax{\newcommand{\ow}{\; \mb{\mathrm{otherwise}} \; \;}}
54 \CustomizeMathJax{\newcommand{\pderiv}[2][\%
55 \mb{\frac{\partial}{\partial #1}}\wrap{\mb{#2}}}%
56]}
57 \CustomizeMathJax{\newcommand{\pderivf}[2][\%
58 \mb{\frac{\partial}{\partial #2}}\wrap{\mb{#1}}}%
59]}
60 \CustomizeMathJax{\newcommand{\sd}{\mb{\sigma}}}
61 \CustomizeMathJax{\newcommand{\ul}{\underline{}}}
62 \CustomizeMathJax{\newcommand{\V}[2][\mb{\mathrm{V}}_{\mb{#1}} \wrap{\mb{#2}}}}
63 \CustomizeMathJax{\newcommand{\vs}{\; \mb{\mathrm{vs.}} \; \;}}
64 \CustomizeMathJax{\newcommand{\where}{\; \mb{\mathrm{where}} \; \;}}
65 \CustomizeMathJax{\newcommand{\wrap}[2][\left[#2 \right]]}% only []
66 \CustomizeMathJax{\newcommand{\LWRwrapparen}[1]{\left(#1 \right)}}% lwarp
67
68 % \CustomizeMathJax{\renewcommand{\sim}{\mb{\sim}}}% doesn't work,
69 % replace <space>~<space> with <space>\sim<space>
70
71 \CustomizeMathJax{\newcommand{\iid}{\; \stackrel{\mb{\mathrm{iid}}}{\sim} \; \;}}
72 \CustomizeMathJax{\newcommand{\ind}{\; \stackrel{\mb{\mathrm{ind}}}{\sim} \; \;}}
73 \CustomizeMathJax{\newcommand{\indpr}{\%
74 \; \stackrel{\mb{\mathrm{ind}}}{\stackrel{\mb{\mathrm{prior}}}{\sim}} \; \; \%

```

```

75 }}
76 \CustomizeMathJax{\newcommand{\post}{\;\stackrel{\mb{\mathrm{post}}}{\sim}\;}}
77 \CustomizeMathJax{\newcommand{\prior}{\;\stackrel{\mb{\mathrm{prior}}}{\sim}\;}}
78
79 \CustomizeMathJax{\let\STATEXGamma=\Gamma}
80 \CustomizeMathJax{\renewcommand{\Gamma}[1][\mb{\STATEXGamma}\LWRwrapparen{\mb{#1}}]}
81 %
82 \CustomizeMathJax{\renewcommand{\and}{\;\mb{\mathrm{and}}\;}}
83 %
84 \CustomizeMathJax{\newcommand{\H}{\mb{\mathrm{H}}}}
85 %
86 \CustomizeMathJax{\newcommand{\P}[2][\mb{\mathrm{P}}]_{\mb{#1}}\wrap{\mb{#2}}}
87 %
88 \CustomizeMathJax{\newcommand{\mid}{\mb{\mathrm{mid}}}}
89
90 \CustomizeMathJax{\newcommand{\B}[1][\mb{\mathrm{B}}]\LWRwrapparen{\mb{#1}}}
91 \CustomizeMathJax{\newcommand{\BB}[1][\mb{\mathrm{BetaBin}}]\LWRwrapparen{\mb{#1}}}
92 \CustomizeMathJax{\newcommand{\Bin}[2][\mb{\mathrm{Bin}}]\LWRwrapparen{\mb{#1},\ #2}}}
93 \CustomizeMathJax{\newcommand{\Dir}[1][\mb{\mathrm{Dirichlet}}]\LWRwrapparen{\mb{#1}}}
94 \CustomizeMathJax{\newcommand{\HG}[3]{%
95 \mb{\mathrm{Hypergeometric}}\LWRwrapparen{\mb{#1},\ #2,\ #3}}%
96 }}
97 \CustomizeMathJax{\newcommand{\M}[2]{%
98 \mb{\mathrm{Multinomial}}\LWRwrapparen{\mb{#1},\ #2}}%
99 }}
100 \CustomizeMathJax{\newcommand{\NB}[2][\mb{\mathrm{NegBin}}]\LWRwrapparen{\mb{#1},\ #2}}}
101 \CustomizeMathJax{\newcommand{\Poi}[1][\mb{\mathrm{Poisson}}]\LWRwrapparen{\mb{#1}}}
102 \CustomizeMathJax{\let\Poisson=\Poi}
103
104 \CustomizeMathJax{\newcommand{\pBB}[4][x]{%
105 \mb{\frac{\Gamma[#+1]\Gamma[#+1]\Gamma[#+4-#1]\Gamma[#+4]}%
106 {\Gamma[#+1]\Gamma[#+1]\Gamma[#+3+4]\Gamma[#+3]\Gamma[#+4]}%
107 \I[#+1]{\{0,1,\.,\ #2\}}, \where \ #3>0,\; \ #4>0 \and n=1, 2,\.%
108 }}
109 \CustomizeMathJax{\newcommand{\pBin}[3][x]{%
110 \mb{\binom{#2}{#1}#3^{#1}} \LWRwrapparen{\mb{1-#3}^{#2-#1}}}
111 \mb{\I[#+1]{\{0,1,\.,\ #2\}}, \where p \in (0, 1) \and n=1, 2,\.%
112 }}
113 \CustomizeMathJax{\newcommand{\pPoi}[2][x]{%
114 \mb{\frac{1}{#1!}#2^{#1}e^{-#2}\I[#+1]{\{0,1,\.\}}, \where \ #2>0}%
115 }}
116
117 \CustomizeMathJax{\newcommand{\Cau}[2][\mb{\mathrm{Cauchy}}]\LWRwrapparen{\mb{#1},\ #2}}}
118 \CustomizeMathJax{\let\Cauchy=\Cau}
119 \CustomizeMathJax{\newcommand{\Chi}[2][\mb{\mathrm{Chi}}]\LWRwrapparen{\mb{#1},\ #2}}}
120 \chisq_{\mb{#1}}\LWRwrapparen{\mb{#2}}%
121 }}
122 \CustomizeMathJax{\let\Chisq=\Chi}
123 \CustomizeMathJax{\newcommand{\Bet}[2][\mb{\mathrm{Beta}}]\LWRwrapparen{\mb{#1},\ #2}}}
124 \CustomizeMathJax{\let\Beta=\Bet}
125 \CustomizeMathJax{\newcommand{\Exp}[1][\mb{\mathrm{Exp}}]\LWRwrapparen{\mb{#1}}}
126 \CustomizeMathJax{\newcommand{\F}[2][\mb{\mathrm{F}}]\LWRwrapparen{\mb{#1},\ #2}}}
127 \CustomizeMathJax{\newcommand{\Gam}[2][\mb{\mathrm{Gamma}}]\LWRwrapparen{\mb{#1},\ #2}}}
128 \CustomizeMathJax{\newcommand{\IC}[1][\mb{\mathrm{\chi^{-2}}}}\LWRwrapparen{\mb{#1}}}
129 \CustomizeMathJax{\newcommand{\IG}[2][\mb{\mathrm{Gamma}}]\LWRwrapparen{\mb{#1},\ #2}}}

```

```

130 \mb{\mathrm{\Gamma^{-1}}}\LWRwrapparen{\mb{#1,\ #2}}%
131 }}
132 \CustomizeMathJax{\newcommand{\IW}[2]{%
133 \mb{\mathrm{Wishart^{-1}}}\LWRwrapparen{\mb{#1,\ #2}}%
134 }}
135 \CustomizeMathJax{\newcommand{\Log}[2]{%
136 \mb{\mathrm{Logistic}}\LWRwrapparen{\mb{#1,\ #2}}%
137 }}
138 \CustomizeMathJax{\newcommand{\LogN}[2]{%
139 \mb{\mathrm{Log\!-\!N}}\LWRwrapparen{\mb{#1,\ #2}}%
140 }}
141 \CustomizeMathJax{\newcommand{\N}[3][x]{%
142 \mb{\mathrm{N}}_{\mb{#1}}\LWRwrapparen{\mb{#2,\ #3}}%
143 }}
144 \CustomizeMathJax{\newcommand{\Par}[2]{\mb{\mathrm{Pareto}}\LWRwrapparen{\mb{#1,\ #2}}}%
145 \CustomizeMathJax{\let\Pareto=\Par}
146 \CustomizeMathJax{\newcommand{\Tsqr}[2]{\mb{\mathrm{T^2}}\LWRwrapparen{\mb{#1,\ #2}}}%
147 \CustomizeMathJax{\newcommand{\U}[1]{\mb{\mathrm{U}}\LWRwrapparen{\mb{#1}}}%
148 \CustomizeMathJax{\newcommand{\W}[2]{\mb{\mathrm{Wishart}}\LWRwrapparen{\mb{#1,\ #2}}}%
149
150 \CustomizeMathJax{\renewcommand{\t}[1]{\mb{\mathrm{t}}\LWRwrapparen{\mb{#1}}}%
151
152 \CustomizeMathJax{\newcommand{\pBet}[3][x]{%
153 \IBeta{#2}{#3}%
154 #1^{#2-1}\LWRwrapparen{1-#1}^{#3-1}\I[#1]{0,\ 1}, \where #2>0 \and #3>0%
155 }}
156 \CustomizeMathJax{\newcommand{\pCau}[3][x]{%
157 % \ifthenelse{equal{#2, #3}{0, 1}}{\frac{1}{\cpi}\LWRwrapparen{1+#1}^2}%
158 {\frac{1}{#3\cpi}\left\{1+\wrap{\LWRwrapparen{x-#2}/#3}^2\right\}}, \where #3>0}%
159 }% no special case for 0,1
160 \CustomizeMathJax{\newcommand{\pChi}[2][x]{%
161 \frac{2^{-#2/2}}{\Gamma[#2/2]}#1^{#2/2-1}e^{-#1/2}%
162 \I[#1]{0,\infty}, \where #2>0%
163 }}
164 \CustomizeMathJax{\newcommand{\pExp}[2][x]{%
165 \frac{1}{#2}e^{-#1/#2}\I[#1]{0,\infty},%
166 \where #2>0%
167 }}
168 \CustomizeMathJax{\newcommand{\pGam}[3][x]{%
169 \frac{#3^{#2}}{\Gamma[#2]}#1^{#2-1}e^{-#3#1}%
170 \I[#1]{0,\infty}, \where #2>0 \and #3>0%
171 }}
172 \CustomizeMathJax{\newcommand{\pN}[3][x]{%
173 % \ifthenelse{equal{#2, #3}{0, 1}}%
174 % {\frac{1}{\sqrt{2\cpi}}e^{-#1^2/2}}%
175 {\frac{1}{\sqrt{2\cpi \cdot #3}}e^{-\LWRwrapparen{#1-#2}^2/2 \cdot #3}}%
176 }% no test for 0,1, must add \cdot
177 \CustomizeMathJax{\newcommand{\pPar}[3][x]{%
178 \frac{#3}{#2\LWRwrapparen{1+#1/#2}^{#3+1}}\I[#1]{0,\infty},%
179 \where #2>0 \and #3>0%
180 }}
181 \CustomizeMathJax{\newcommand{\pU}[3][x]{%
182 % \ifthenelse{equal{#2, #3}{0, 1}}{\I[#1]{0,\ 1}}%
183 {\frac{1}{#3-#2}\I[#1]{#2,\ #3}, \where #2<#3}%
184 }% no special case for 0,1

```

```

185
186 \CustomizeMathJax{\newcommand{\=}[1]{\bar{#1}}}
187 \CustomizeMathJax{\let\^{\widehat}}
188 \CustomizeMathJax{\let\~{\widetilde}}
189 \CustomizeMathJax{\newcommand{\'}[1]{\LWRwrapparen{\mb{#1}}}}
190 \CustomizeMathJax{\newcommand{\b}[1]{\bar{#1}}}
191 \CustomizeMathJax{\newcommand{\c}[1]{\mb{\mathrm{#1}}}}
192 \CustomizeMathJax{\newcommand{\d}[1]{\, \mb{\mathrm{d}}{#1}}}
193 \CustomizeMathJax{\newcommand{\.}{\mb{\ldots}}}
194 \end{warpMathJax}

```

---

File 403 **lwarp-statmath.sty**

§ 506      Package **statmath**

*(Emulates or patches code by SEBASTIAN ANKARGREN.)*

Pkg    statmath    **statmath** is used as-is for SVG math, and is emulated for MATHJAX.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{statmath}[2018/03/08]

2 \begin{warpMathJax}
3 \LWR@infoprocessingmathjax{statmath}
4
5 \CustomizeMathJax{\let\abcbf\mathbf}
6 \CustomizeMathJax{\newcommand{\greekbf}[1]{\boldsymbol{#1}}}
7 \CustomizeMathJax{\newcommand{\bfA}{\abcbf A}}
8 \CustomizeMathJax{\newcommand{\bfB}{\abcbf B}}
9 \CustomizeMathJax{\newcommand{\bfC}{\abcbf C}}
10 \CustomizeMathJax{\newcommand{\bfD}{\abcbf D}}
11 \CustomizeMathJax{\newcommand{\bfE}{\abcbf E}}
12 \CustomizeMathJax{\newcommand{\bfF}{\abcbf F}}
13 \CustomizeMathJax{\newcommand{\bfG}{\abcbf G}}
14 \CustomizeMathJax{\newcommand{\bfH}{\abcbf H}}
15 \CustomizeMathJax{\newcommand{\bfI}{\abcbf I}}
16 \CustomizeMathJax{\newcommand{\bfJ}{\abcbf J}}
17 \CustomizeMathJax{\newcommand{\bfK}{\abcbf K}}
18 \CustomizeMathJax{\newcommand{\bfL}{\abcbf L}}
19 \CustomizeMathJax{\newcommand{\bfM}{\abcbf M}}
20 \CustomizeMathJax{\newcommand{\bfN}{\abcbf N}}
21 \CustomizeMathJax{\newcommand{\bfO}{\abcbf O}}
22 \CustomizeMathJax{\newcommand{\bfP}{\abcbf P}}
23 \CustomizeMathJax{\newcommand{\bfQ}{\abcbf Q}}
24 \CustomizeMathJax{\newcommand{\bfR}{\abcbf R}}
25 \CustomizeMathJax{\newcommand{\bfS}{\abcbf S}}
26 \CustomizeMathJax{\newcommand{\bfT}{\abcbf T}}
27 \CustomizeMathJax{\newcommand{\bfU}{\abcbf U}}
28 \CustomizeMathJax{\newcommand{\bfV}{\abcbf V}}
29 \CustomizeMathJax{\newcommand{\bfW}{\abcbf W}}
30 \CustomizeMathJax{\newcommand{\bfX}{\abcbf X}}
31 \CustomizeMathJax{\newcommand{\bfY}{\abcbf Y}}
32 \CustomizeMathJax{\newcommand{\bfZ}{\abcbf Z}}
33 \CustomizeMathJax{\newcommand{\bfa}{\abcbf a}}

```

```

34 \CustomizeMathJax{\newcommand{\bfb}{\abcbf b}}
35 \CustomizeMathJax{\newcommand{\bfc}{\abcbf c}}
36 \CustomizeMathJax{\newcommand{\bfd}{\abcbf d}}
37 \CustomizeMathJax{\newcommand{\bfe}{\abcbf e}}
38 \CustomizeMathJax{\newcommand{\bff}{\abcbf f}}
39 \CustomizeMathJax{\newcommand{\bfg}{\abcbf g}}
40 \CustomizeMathJax{\newcommand{\bfh}{\abcbf h}}
41 \CustomizeMathJax{\newcommand{\bfi}{\abcbf i}}
42 \CustomizeMathJax{\newcommand{\bfj}{\abcbf j}}
43 \CustomizeMathJax{\newcommand{\bfk}{\abcbf k}}
44 \CustomizeMathJax{\newcommand{\bfl}{\abcbf l}}
45 \CustomizeMathJax{\newcommand{\bfm}{\abcbf m}}
46 \CustomizeMathJax{\newcommand{\bf n}{\abcbf n}}
47 \CustomizeMathJax{\newcommand{\bfo}{\abcbf o}}
48 \CustomizeMathJax{\newcommand{\bfp}{\abcbf p}}
49 \CustomizeMathJax{\newcommand{\bfq}{\abcbf q}}
50 \CustomizeMathJax{\newcommand{\bfr}{\abcbf r}}
51 \CustomizeMathJax{\newcommand{\bfs}{\abcbf s}}
52 \CustomizeMathJax{\newcommand{\bft}{\abcbf t}}
53 \CustomizeMathJax{\newcommand{\bfu}{\abcbf u}}
54 \CustomizeMathJax{\newcommand{\bfv}{\abcbf v}}
55 \CustomizeMathJax{\newcommand{\bfw}{\abcbf w}}
56 \CustomizeMathJax{\newcommand{\bfx}{\abcbf x}}
57 \CustomizeMathJax{\newcommand{\bfy}{\abcbf y}}
58 \CustomizeMathJax{\newcommand{\bfz}{\abcbf z}}
59 \CustomizeMathJax{\newcommand{\bfa\alpha}{\greekbf \alpha}}
60 \CustomizeMathJax{\newcommand{\bfb\beta}{\greekbf \beta}}
61 \CustomizeMathJax{\newcommand{\bfd\delta}{\greekbf \delta}}
62 \CustomizeMathJax{\newcommand{\bfe\epsilon}{\greekbf \epsilon}}
63 \CustomizeMathJax{\newcommand{\bfv\epsilon}{\greekbf \varepsilon}}
64 \CustomizeMathJax{\newcommand{\bfz\eta}{\greekbf \eta}}
65 \CustomizeMathJax{\newcommand{\bf\eta}{\greekbf \eta}}
66 \CustomizeMathJax{\newcommand{\bf\theta}{\greekbf \theta}}
67 \CustomizeMathJax{\newcommand{\bf\vartheta}{\greekbf \vartheta}}
68 \CustomizeMathJax{\newcommand{\bfg\gamma}{\greekbf \gamma}}
69 \CustomizeMathJax{\newcommand{\bfk\kappa}{\greekbf \kappa}}
70 \CustomizeMathJax{\newcommand{\bfl\lambda}{\greekbf \lambda}}
71 \CustomizeMathJax{\newcommand{\bf\mu}{\greekbf \mu}}
72 \CustomizeMathJax{\newcommand{\bf\nu}{\greekbf \nu}}
73 \CustomizeMathJax{\newcommand{\bf\xi}{\greekbf \xi}}
74 \CustomizeMathJax{\newcommand{\bf\pi}{\greekbf \pi}}
75 \CustomizeMathJax{\newcommand{\bf\varpi}{\greekbf \varpi}}
76 \CustomizeMathJax{\newcommand{\bf\rho}{\greekbf \rho}}
77 \CustomizeMathJax{\newcommand{\bf\varrho}{\greekbf \varrho}}
78 \CustomizeMathJax{\newcommand{\bf\sigma}{\greekbf \sigma}}
79 \CustomizeMathJax{\newcommand{\bf\varsigma}{\greekbf \varsigma}}
80 \CustomizeMathJax{\newcommand{\bf\tau}{\greekbf \tau}}
81 \CustomizeMathJax{\newcommand{\bf\upsilon}{\greekbf \upsilon}}
82 \CustomizeMathJax{\newcommand{\bf\phi}{\greekbf \phi}}
83 \CustomizeMathJax{\newcommand{\bf\varphi}{\greekbf \varphi}}
84 \CustomizeMathJax{\newcommand{\bf\chi}{\greekbf \chi}}
85 \CustomizeMathJax{\newcommand{\bf\psi}{\greekbf \psi}}
86 \CustomizeMathJax{\newcommand{\bf\omega}{\greekbf \omega}}
87 \CustomizeMathJax{\newcommand{\bf\iota}{\greekbf \iota}}
88 \CustomizeMathJax{\newcommand{\bf\Gamma}{\greekbf \Gamma}}

```

---

```

89 \CustomizeMathJax{\newcommand{\bfDelta}{\greekbf \Delta}}
90 \CustomizeMathJax{\newcommand{\bfTheta}{\greekbf \Theta}}
91 \CustomizeMathJax{\newcommand{\bfLambda}{\greekbf \Lambda}}
92 \CustomizeMathJax{\newcommand{\bfXi}{\greekbf \Xi}}
93 \CustomizeMathJax{\newcommand{\bfPi}{\greekbf \Pi}}
94 \CustomizeMathJax{\newcommand{\bfSigma}{\greekbf \Sigma}}
95 \CustomizeMathJax{\newcommand{\bfUpsilon}{\greekbf \Upsilon}}
96 \CustomizeMathJax{\newcommand{\bfPhi}{\greekbf \Phi}}
97 \CustomizeMathJax{\newcommand{\bfPsi}{\greekbf \Psi}}
98 \CustomizeMathJax{\newcommand{\bfOmega}{\greekbf \Omega}}
99 \CustomizeMathJax{\newcommand{\bfzero}{\greekbf 0}}
100 \CustomizeMathJax{\DeclareMathOperator{\cov}{Cov}}
101 \CustomizeMathJax{\DeclareMathOperator{\E}{E}}
102 \CustomizeMathJax{\DeclareMathOperator{\V}{V}}
103 \CustomizeMathJax{\newcommand{\inas}{\overset{a.s.}{\to}}}
104 \CustomizeMathJax{\newcommand{\indist}{\overset{d}{\to}}}
105 \CustomizeMathJax{\newcommand{\inprob}{\overset{p}{\to}}}
106 \CustomizeMathJax{\DeclareMathOperator{\plim}{plim}}
107 \CustomizeMathJax{\DeclareMathOperator{\tr}{tr}}
108 \CustomizeMathJax{\DeclareMathOperator{\vc}{vec}}
109 \CustomizeMathJax{\DeclareMathOperator{\vcs}{vecs}}
110 \CustomizeMathJax{\DeclareMathOperator{\vch}{vech}}
111 \CustomizeMathJax{\DeclareMathOperator{\diag}{diag}}
112 \CustomizeMathJax{\DeclareMathOperator{\argmin}{arg\,min}}
113 \CustomizeMathJax{\DeclareMathOperator{\argmax}{arg\,max}}
114 \end{warpMathJax}

```

---

File 404 **lwarp-steinmetz.sty**

§ 507      Package **steinmetz**

(Emulates or patches code by ENRICO GREGORIO.)

Pkg    **steinmetz**    **steinmetz** is patched for use by **lwarp**. Emulation is provided for **MATHJAX**

**for HTML output:**    1 \LWR@ProvidesPackagePass{steinmetz}[2009/06/14]

```

2 \begin{warpHTML}
3 \renewcommand{\phase}[2][]{%
4 \begin{lateximage}*[steinmetz\{\detokenize{#2}\}]
5 \ensuremath{\underline{/#2}}
6 \end{lateximage}
7 }
8 \end{warpHTML}
9
10 \begin{warpMathJax}
11 \CustomizeMathJax{\newcommand{\phase}[2][]{\underline{/#2}}}
12 \end{warpMathJax}

```

---

File 405 **lwarp-stfloats.sty**

§ 508      Package **stfloats**

Pkg    stfloats    stfloats is ignored.

**for HTML output:**    1 \LWR@ProvidesPackageDrop{stfloats}[2017/03/27]

stfloats may have been preloaded by a ltj\* class.

The following are provided in case they have not yet been defined:

```
2 \providecommand*\fnbelowfloat{}
3 \providecommand*\fnunderfloat{}
4 \providecommand*\setbaselinefloat{}
5 \providecommand*\setbaselinefixed{}
```

Nullified for HTML:

```
6 \renewcommand*\fnbelowfloat{}
7 \renewcommand*\fnunderfloat{}
8 \renewcommand*\setbaselinefloat{}
9 \renewcommand*\setbaselinefixed{}
```

---

File 406 **lwarp-struktex.sty**

§ 509      Package **struktex**

*(Emulates or patches code by JOBST Hoffmann.)*

Pkg    struktex    struktex is patched for use by lwarp.

**for HTML output:**    1 \LWR@ProvidesPackagePass{struktex}[2018/06/04]

```
2 \BeforeBeginEnvironment{struktogramm}{%
3 \begin{lateximage}[-struktex-~\PackageDiagramAltText]%
4 }
5 \AfterEndEnvironment{struktogramm}{\end{lateximage}}
6
7 \newenvironment{LWR@HTML@centernss}{\begin{center}}{\end{center}}
8 \LWR@formattedenv{centernss}
9
10 \newcommand{\LWR@HTML@CenterNssFile}[1]{%
11 \begin{center}
12 \input{#1.nss}
13 \end{center}
14 }
15 \LWR@formatted{CenterNssFile}
```

---

```

16
17 \newcommand{\LWR@HTML@centernssfile}{\LWR@HTML@CenterNssFile}
18 \LWR@formatted{centernssfile}

```

---

File 407 **lwarp-subcaption.sty**

§ 510      Package **subcaption**

*(Emulates or patches code by AXEL SOMMERFELDT.)*

Pkg   subcaption   **subcaption** is patched for use by **lwarp**.

**for HTML output:**    1 \LWR@ProvidesPackagePass{subcaption}[2018/05/01]

Tells **lwarp** to ignore minipage widths inside a subfigure or subtable. In print mode the minipages are used to place the items next to each other. In HTML they are placed side-by-side automatically.

```

2 \xpretocmd{\subcaption@iiminipage}
3 {\minipagefullwidth}
4 {}
5 {\LWR@patcherror{subcaption}{subcaption@iiminipage}}

```

Likewise for a `\subcaptionbox`:

```

6 \xpretocmd{\subcaptionbox}
7 {\minipagefullwidth}
8 {}
9 {\LWR@patcherror{subcaption}{subcaptionbox}}

```


---

File 408 **lwarp-subfig.sty**

§ 511      Package **subfig**

*(Emulates or patches code by STEVEN DOUGLAS COCHRAN.)*

Pkg   subfig   **subfig** is supported and patched by **lwarp**.

 **lof/lotdepth** At present, the package options for `lofdepth` and `lotdepth` are not working. These counters must be set separately after the package has been loaded.

In the document source, use `\hfill` and `\hspace*{subfig>inline}` between subfigures to spread them apart horizontally. The use of other forms of whitespace may cause paragraph tags to be generated, resulting in subfigures appearing on the following lines instead of all on a single line.

**for HTML output:**    Accept all options for **lwarp-subfig**:

```

1 \LWR@ProvidesPackagePass{subfig}[2005/06/28]

```

`\sf@@@subfloat`     $\{ \langle 1 \text{ type} \rangle \} [ \langle 2 \text{ LOF entry} \rangle ] [ \langle 3 \text{ caption} \rangle ] \{ \langle 4 \text{ contents} \rangle \}$

The outer minipage allows side-by-side subfloats with `\hfill` between.

```

2 \long\def\sf@@@subfloat#1[#2][#3]#4{%
3 \begin{minipage}{\linewidth}% lwarp

4 \IfValueTF{#2}{%
5 \LWR@setlatestname{#2}%
6 }{%
7 \IfValueTF{#3}{%
8 \LWR@setlatestname{#3}%
9 }{%
10 }%
11 \LWR@stoppars% lwarp
12 \ifundefined{FBsc@max}{%
13 {\FB@readaux{\let\FBsuboheight\relax}}%
14 \@tempcnta=\@ne
15 \if@minipage
16 \@tempcnta=\z@
17 \else\ifdim \lastskip=\z@ \else
18 \@tempcnta=\tw@
19 \fi\fi
20 \ifmaincaptiontop
21 \sf@top=\sf@nearskip
22 \sf@bottom=\sf@farskip
23 \else
24 \sf@top=\sf@farskip
25 \sf@bottom=\sf@nearskip
26 \fi
27 \leavevmode

28 % \setbox\@tempboxa \hbox{#4}%
29 % \@tempdima=\wd\@tempboxa
30 % \ifundefined{FBsc@max}{%
31 % {\global\advance\Xhsize-\wd\@tempboxa
32 % \dimen@=\ht\@tempboxa
33 % \advance\dimen@\dp\@tempboxa
34 % \ifdim\dimen@>\FBso@max
35 % \global\FBso@max\dimen@
36 % \fi}%

```

Do not use boxes, which interfere with `lateximages`:

```

37 % \vtop%
38 \bgroup
39 % \vbox%
40 \bgroup
41 \ifcase\@tempcnta
42 \@minipagefalse
43 \or
44 \vskip\sf@top
45 \or
46 \ifdim \lastskip=\z@ \else
47 % \@tempskipb\sf@top\relax\@xaddvskip
48 \fi

```

```

49 \fi
50 \sf@ifpositiontop{%
51 \ifx \@empty#3\relax \else
52 \sf@subcaption{#1}{#2}{#3}%
53 % \vskip\sf@capskip
54 % \vskip\sf@captopadj
55 \fi\egroup
56 % \hrule width0pt height0pt depth0pt
57 \LWR@startpars% lwarp
58 % \box\@tempboxa
59 % #4
60 % \LWR@stoppars% lwarp
61 % }{%
62 % \LWR@startpars% lwarp
63 % \@ifundefined{FBsc@max}%
64 % {
65 % \box\@tempboxa
66 % #4
67 % }%
68 % {\ifx\FBsuboheight\relax
69 % \box\@tempboxa
70 % #4
71 % \else
72 % \vbox to \FBsuboheight{\FBafil\box\@tempboxa\FBbfil}%
73 % #4
74 % \fi}%
75 % \LWR@stoppars% lwarp
76 % \egroup
77 % \ifx \@empty#3\relax \else
78 % \vskip\sf@capskip
79 % \hrule width0pt height0pt depth0pt
80 % \sf@subcaption{#1}{#2}{#3}%
81 % \fi
82 % }%
83 % \vskip\sf@bottom
84 % \egroup
85 % \@ifundefined{FBsc@max}{}%
86 % {\addtocounter{FRobj}{-1}%
87 % \ifnum\c@FRobj=0\else
88 % \subfloatrowsep
89 % \fi}%
90 % \ifmaincaptiontop\else
91 % \global\advance\@nameuse{c@\@captype}\m@ne
92 % \fi
93 % \end{minipage}% lwarp
94 % \LWR@startpars% lwarp
95 % \endgroup\ignorespaces%
96 %}%

```

\sf@subcaption    {<1 type>} {<2 LOF entry>} {<3 caption>}

```

97 \long\def\sf@subcaption#1#2#3{%
98 \LWR@stoppars% lwarp
99 \ifx \relax#2\relax \else
100 \bgroup

```

```

101 \let\label=\@gobble
102 \let\protect=\string
103 \def\@subcaplabel{%
104 \caption@lstfmt{\@nameuse{p@#1}}{\@nameuse{the#1}}}%
105 \sf@updatecaptionlist{#1}{#2}{\the\value{\@capytype}}{\the\value{#1}}%
106 \egroup
107 \fi
108 \bgroup
109 \ifx \relax#3\relax
110 \let\captionlabelsep=\relax
111 \fi
112 % \setbox0\vbox{%
113 % \hb@xt@\the\@tempdima{%
114 %
115 % \hss
116 % \parbox[t]{\the\@tempdima}{%
117 % \caption@make
118 % {\@nameuse{sub\@capytype name}}%
119 % {\@nameuse{thesub\@capytype}}%
120 % {#3}
121 % }%
122 % \hss
123 % }
124 % }%
125 \ifundefined{FBsc@max}%
126 % {\box0}%
127 {
128 % \parbox[t]{\the\@tempdima}{%
129 \LWR@traceinfo{sfsubcap B1}% lwarp
130 \LWR@figcaption% lwarp
131 \caption@make
132 {\@nameuse{sub\@capytype name}}%
133 {\@nameuse{thesub\@capytype}}%
134 {\LWR@isolate{#3}}%
135
136 \endLWR@figcaption% lwarp
137 \LWR@traceinfo{sfsubcap B2}% lwarp
138 }%
139 {\dimen@ \ht0%
140 \advance\dimen@ \dp0%
141 \ifdim\dimen@ > \FBsc@max
142 \global\FBsc@max \dimen@
143 \fi
144 \FB@readaux{\let\FBsubcheight\relax}%
145 \ifx\FBsubcheight\relax
146 \def\next{
147 % \parbox[t]{\the\@tempdima}
148 % }%
149 \else
150 \def\next{
151 % \parbox[t][\FBsubcheight][t]{\the\@tempdima}
152 % }%
153 \fi
154 % \vbox{%
155 % \hb@xt@\the\@tempdima{%

```

```

156
157 % \hss
158 % \next{%
159 \LWR@traceinfo{sfsubcap C1}% lwarp
160 \caption@make
161 {\@nameuse{sub\@capttype name}}%
162 {\@nameuse{thesub\@capttype}}%
163 {#3}
164 \LWR@traceinfo{sfsubcap C1}% lwarp
165 % }%
166 % \hss
167
168 % }
169 % }
170 % }%
171 \egroup
172 \LWR@startpars% lwarp
173 }

```

\subfloat@label     Patches for \sf@sub@label:

```

174 \def\subfloat@label{%
175 \LWR@ensuredoingapar% lwarp
176 \@ifnextchar(% %) match left parenthesis
177 {\sf@sub@label}
178 {\sf@sub@label(Sub\@capttype\space
179 \@ifundefined{thechapter}{\@nameuse{thechapter}\space}%
180 \@nameuse{p@sub\@capttype}%
181 \@nameuse{thesub\@capttype}.)}}

```

Patches for \subref.

\sf@subref     {\<label>}

The unstarred version uses a \ref link whose printed text comes from the sub@<label>:

```

182 \renewcommand{\sf@subref}[1]{%
183 \LWR@subnewref{#1}{sub@#1}%
184 }

```

\sf@@subref     {\<label>}

The starred version uses the printed sub@<label> which is stored as if it were a page number:

```

185 \renewcommand{\sf@@subref}[1]{\LWR@orig@pageref{sub@#1}}

```

Defining new subfloats. The l@sub<type> for each is redefined.

\@newsbfloat     [{\<keys/values>}] {\<float name>}

```

186 \LetLtxMacro\LWR@orig@newsbfloat\@newsbfloat
187
188 \def\@newsbfloat[#1]#2{%
189 \LWR@orig@newsbfloat[#1]{#2}%
190 \renewcommand{\l@sub#2}[2]{\hypertocfloat{2}{sub#2}{\ext@sub#2}{##1}{##2}}%

```

191 }

Pre-defined for figures and tables:

```
\l@subfigure {\text} {\pagenum}
192 \renewcommand{\l@subfigure}[2]{\hypertocfloat{2}{subfigure}{lof}{#1}{#2}}

\l@subtable {\text} {\pagenum}
193 \renewcommand{\l@subtable}[2]{\hypertocfloat{2}{subtable}{lot}{#1}{#2}}
```

---

File 409 **lwarp-subfigure.sty**

§ 512     Package **subfigure**

Pkg   subfigure   subfigure is emulated by subfig.

**for HTML output:**

```
1 \LWR@ProvidesPackageDrop{subfigure}[2002/03/15]
2 \RequirePackage{subfig}

3 \LetLtxMacro\subfigure\subfloat
4 \LetLtxMacro\subtable\subfloat
5 \LetLtxMacro\Subref\subref
6 \@ifundefined{figuretopcaptrue}{\newif\iffiguretopcap}{}
7 \newif\ifsubfiguretopcap
8 \newif\ifsubcaphang
9 \newif\ifsubcapcenter
10 \newif\ifsubcapcenterlast
11 \newif\ifsubcapnooneline
12 \newif\ifsubcapraggedright
13 \newskip\subfigtopskip
14 \newskip\subfigcapskip
15 \newdimen\subfigcaptopadj
16 \newskip\subfigbottomskip
17 \newdimen\subfigcapmargin
18 \newskip\subfiglabelskip
19 \newcommand*{\subcapsize}{}
20 \newcommand*{\subcaplabelfont}{}
21 \newcommand*{\subcapfont}{}

```

---

File 410 **lwarp-subsubscripts.sty**

§ 513     Package **subsubscripts**

*(Emulates or patches code by RICCARDO BRESCIANI.)*

Pkg   subsubscripts   subsubscripts is used as-is for SVG math, and is emulated for MATHJAX.

**for HTML output:**

```
1 \LWR@ProvidesPackagePass{subsubscripts}[2009/10/27]
```

The larger skips are used here.

```

2 \begin{warpMathJax}
3 \CustomizeMathJax{%
4 \newcommand{\fourscriptsC}[7]{%
5 {}^{#2}_{#3}\hspace{#6}#1\hspace{#7}{ }^{#4}_{#5}%
6 }
7 }
8 \CustomizeMathJax{%
9 \newcommand{\lrsubscriptsC}[5]{%
10 \fourscriptsC{#1}{ }{#2}{ }{#3}{#4}{#5}%
11 }
12 }
13 \CustomizeMathJax{%
14 \newcommand{\lrsuperscriptsC}[5]{%
15 \fourscriptsC{#1}{#2}{ }{#3}{ }{#4}{#5}%
16 }
17 }
18 \CustomizeMathJax{%
19 \newcommand{\fourscripts}[5]{%
20 \fourscriptsC{#1}{#2}{#3}{#4}{#5}{0ex}{0ex}%
21 }
22 }
23 \CustomizeMathJax{%
24 \newcommand{\lrsubscripts}[3]{\fourscripts{#1}{ }{#2}{ }{#3}}
25 }
26 \CustomizeMathJax{%
27 \newcommand{\lrsuperscripts}[3]{\fourscripts{#1}{#2}{ }{#3}{ }}
28 }
29 \CustomizeMathJax{%
30 \newcommand{\twoscripts}[4]{- .16ex}{ }^{#3}_{#4}\hspace{#1}#2
31 }
32 \CustomizeMathJax{%
33 \newcommand{\twoscripts}[4]{- .07ex}{#2\hspace{#1}{ }^{#3}_{#4}}
34 }
35 \CustomizeMathJax{%
36 \newcommand{\lsubscript}[3]{- .16ex}{\twoscripts[#1]{#2}{ }{#3}}
37 }
38 \CustomizeMathJax{%
39 \newcommand{\lsuperscript}[3]{- .16ex}{\twoscripts[#1]{#2}{#3}{ }}
40 }
41 \CustomizeMathJax{%
42 \newcommand{\rsubscript}[3]{- .07ex}{\twoscripts[#1]{#2}{ }{#3}}
43 }
44 \CustomizeMathJax{%
45 \newcommand{\rsuperscript}[3]{- .07ex}{\twoscripts[#1]{#2}{#3}{ }}
46 }
47 \end{warpMathJax}

```

File 411 **lwarp-supertabular.sty**

§ 514 Package **supertabular**

*(Emulates or patches code by JOHANNES BRAAMS, THEO JURRIENS.)*

Pkg supertabular supertabular is emulated.

for HTML output: 1 \LWR@ProvidesPackageDrop{supertabular}[2004/02/20]

⚠ Misplaced alignment tab character &

```
\StartDefiningTabulars
\tablefirsthead
...
\StopDefiningTabulars
```

See section 8.10.1.

⚠ lateximage supertabular and xtab are not supported inside a lateximage.

```
2 \newcommand{\LWRST@firsthead}{}
3
4 \newcommand{\tablefirsthead}[1]{%
5 \long\gdef\LWRST@firsthead{#1}%
6 }
7
8 \newcommand{\tablehead}[1]{}
9 \newcommand{\tabletail}[1]{}
10
11 \newcommand{\LWRST@lasttail}{}
12
13 \newcommand{\tablelasttail}[1]{%
14 \long\gdef\LWRST@lasttail{#1}%
15 }

16 \newcommand{\tablecaption}[2][{}]{%
17 \long\gdef\LWRST@caption{%
18 \ifblank{#1}%
19 {\caption{#2}}%
20 {\caption[#1]{#2}}%
21 }%
22 }
23
24 \let\topcaption\tablecaption
25 \let\bottomcaption\tablecaption

26 \newcommand*{\LWRST@caption}{}
27
28 \newcommand*{\shrinkheight}[1]{}

```

```

29
30 \NewDocumentEnvironment{supertabular}{s o m}
31 {%
32 \LWR@traceinfo{supertabular}%
33 \begin{table}%
34 \LWRST@caption%
35 \begin{tabular}{#3}%
36 \TabularMacro\ifdefvoid{\LWRST@firsthead}%
37 {\LWR@getmynexttoken}%
38 {\expandafter\LWR@getmynexttoken\LWRST@firsthead}%
39 }%
40 {%
41 \ifdefvoid{\LWRST@lasttail}%
42 {}%
43 {%
44 \TabularMacro\ResumeTabular%
45 \LWRST@lasttail%
46 }%
47 \end{tabular}%
48 \end{table}%

49 \gdef\LWRST@caption{%

50 \LWR@traceinfo{supertabular done}%
51 }
52
53 \NewDocumentEnvironment{mpsupertabular}{s o m}
54 {\minipage{\linewidth}\supertabular{#3}}
55 {\endsupertabular\endminipage}

```

---

File 412 **lwarp-svg.sty**

§ 515      Package **svg**

(Emulates or patches code by PHILIP ILTEN, FALK HANISCH.)

Pkg    svg    **svg** is patched for use by **lwarp**.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{svg}[2019/10/22]

2 \xpretocmd{\includesvg}%
3 {\begin{lateximage}}%
4 {}%
5 {\LWR@patcherror{svg}{includesvg}}
6
7 \xapptocmd{\includesvg}%
8 {\end{lateximage}}%
9 {}%
10 {\LWR@patcherror{svg}{includesvg}}
11
12 \xpretocmd{\includeinkscape}%
13 {\begin{lateximage}}%

```

---

```

14 {}%
15 {\LWR@patcherror{svg}{includeinkscape}}
16
17 \xapptocmd{\includeinkscape}%
18 {\end{lateximage}}%
19 {}%
20 {\LWR@patcherror{svg}{includeinkscape}}

```

---

File 413 **lwarp-syntonly.sty**

§ 516     Package **syntonly**

*(Emulates or patches code by FRANK MITTELBACH, RAINER SCHÖPF.)*

Pkg   syntonly   syntonly is ignored.

**for HTML output:**   Discard all options for lwarp-syntonly:

```

1 \LWR@ProvidesPackageDrop{syntonly}[2017/06/30]

2 \newif\ifsyntax@
3 \syntax@false
4
5 \newcommand*{\syntonly}{}
6
7 \@onlypreamble\syntonly

8 \def\nopages@{}

```

---

File 414 **lwarp-tabfigures.sty**

§ 517     Package **tabfigures**

Pkg   tabfigures   tabfigures is ignored.

**for HTML output:**   1 \LWR@ProvidesPackageDrop{tabfigures}[2012/01/24]

---

File 415 **lwarp-tablefootnote.sty**

§ 518     Package **tablefootnote**

Pkg   tablefootnote   tablefootnote is ignored.

**for HTML output:**   1 \LWR@ProvidesPackageDrop{tablefootnote}[2014/01/26]

This works because in HTML tables are no longer floats.

```
2 \LetLtxMacro\tablefootnote\footnote
```

---

File 416 **lwarp-tables.sty**

§ 519 Package **tables**

*(Emulates or patches code by DONALD ARSENEAU.)*

Pkg tables **tables** is emulated. \LWR@hline is used to handle the optional argument when **tables** is loaded.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{tables}

```
2 \newdimen\tablinesep
3 \newdimen\arraylinesep
4 \newdimen\extrarulesep
```

---

File 417 **lwarp-tabularx.sty**

§ 520 Package **tabularx**

*(Emulates or patches code by DAVID CARLISLE.)*

Pkg tabularx **tabularx** is emulated by lwarp.

**for HTML output:** Discard all options for lwarp-tabularx:

```
1 \LWR@ProvidesPackageDrop{tabularx}[2016/02/03]
2 \RequirePackage{array}

3 \DeclareDocumentEnvironment{tabularx}{m o m}
4 {\tabular{#3}}
5 {\endtabular}
6
7 \DeclareDocumentEnvironment{tabularx*}{m o m}
8 {\tabular{#3}}
9 {\endtabular}
```

---

File 418 **lwarp-tabulary.sty**

§ 521 Package **tabulary**

*(Emulates or patches code by DAVID CARLISLE.)*

Pkg tabulary **tabulary** is emulated by lwarp.

**for HTML output:** Discard all options for lwarp-tabulary.

Column types L, C, R, and J are emulated by lwarp core code.

```

1 \LWR@ProvidesPackageDrop{tabulary}[2014/06/11]
2 \RequirePackage{array}

3 \NewDocumentEnvironment{tabulary}{m o m}
4 {\tabular{#3}}
5 {\endtabular}
6
7 \NewDocumentEnvironment{tabulary*}{m o m}
8 {\tabular{#3}}
9 {\endtabular}
10
11 \newdimen\tymin
12 \newdimen\tymax
13 \def\tyformat{}
```

---

File 419 **lwarp-tagpdf.sty**

§ 522      Package **tagpdf**

Pkg   tagpdf   tagpdf is mostly ignored, but emulates alt text, for images only. (HTML only has alternate text for images.)

(If left enabled for HTML output, tagpdf errors when producing HTML, somehow due to the HTML page numbers.)

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{tagpdf}[2019/07/02]

2 \ExplSyntaxOn
3
4 \tl_new:N \l__uhtag_mc_key_label_tl
5
6 \keys_define:nn { uhtag / mc }
7 {
8 tag .code:n = % the name (H,P,Span etc
9 },
10 raw .code:n =
11 {},
12 ,
13 alttext .code:n = % Alt property
14 {
15 \gdef\LWR@ThisAltText{\detokenize\expandafter{#1}}%
16 },
17 alttext-o .code:n = % Alt property
18 {
19 \gdef\LWR@ThisAltText{\detokenize\expandafter{#1}}%
20 },
21 actualtext .code:n = % ActualText property
22 {},
```

```

23 actualtext-o .code:n = % ActualText property
24 {},
25 label .tl_set:N = \l__uhtag_mc_key_label_tl,
26 artifact .code:n = {},
27 artifact .default:n = {notype}
28 }
29
30 \keys_define:nn { uhtag / struct }
31 {
32 label .tl_set:N = \l__uhtag_struct_key_label_tl,
33 stash .bool_set:N = \l__uhtag_struct_elem_stash_bool,
34 tag .code:n = % S property
35 {},
36 title .code:n = % T property
37 {},
38 title-o .code:n = % T property
39 {},
40 alttext .code:n = % Alt property
41 {
42 \gdef\LWR@ThisAltText{\detokenize\expandafter{#1}}%
43 },
44 alttext-o .code:n = % Alt property
45 {
46 \gdef\LWR@ThisAltText{\detokenize\expandafter{#1}}%
47 },
48 actualtext .code:n = % ActualText property
49 {},
50 actualtext-o .code:n = % ActualText property
51 {},
52 }
53
54 \NewDocumentCommand \tagpdfsetup { m }{}
55
56 \cs_set_eq:NN\tagpdfifluatexTF \sys_if_engine luatex:TF
57 \cs_set_eq:NN\tagpdfifluatexT \sys_if_engine luatex:T
58 \cs_set_eq:NN\tagpdfifpdfTeXT \sys_if_engine pdfTeX:T
59 \cs_new:Npn \tagpdfget #1 {}
60 \cs_new:Npn \uhtag_get:n #1 {}
61
62 \NewDocumentCommand \tagmcifinTF { m m }{}
63
64 \NewDocumentCommand \tagmcbegin { m }{\uhtag_mc_begin:n {#1}\ignorespaces}
65 \cs_new_protected:Nn \uhtag_mc_begin:n {
66 \group_begin:
67 \keys_set:nn { uhtag / mc } {#1}
68 \group_end:
69 }
70
71 \NewDocumentCommand \tagmcend {}{\ThisAltText{}}
72
73 \cs_new_protected:Nn \uhtag_mc_end: {\ThisAltText{}}
74
75 \NewDocumentCommand \tagmcuse { m }{}
76
77 \cs_new_protected:Nn \uhtag_mc_use:n {}

```

```

78
79 \NewDocumentCommand \tagstructbegin { m }{
80 \uftag_struct_begin:n {#1}
81 }
82
83 \cs_new_protected:Nn \uftag_struct_begin:n
84 {
85 \group_begin:
86 \keys_set:nn {uftag / struct} { #1 }
87 \group_end:
88 }
89
90 \NewDocumentCommand \tagstructend { }{\ThisAltText{}}
91
92 \cs_new_protected:Nn \uftag_struct_end: {\ThisAltText{}}
93
94 \NewDocumentCommand \tagstructuse { m }{}
95
96 % \NewDocumentCommand\showtagpdfmcddata { 0 {__uftag_get_mc_abs_cnt:} }{}
97 % What is the second argument?
98
99 \NewDocumentCommand\showtagpdfattributes { }{}
100
101 \sys_if_engine_luatex:T
102 {
103 \NewDocumentCommand\pdffakespace { }
104 {
105 __uftag_fakespace:
106 }
107 }
108
109 \ExplSyntaxOff

```

---

File 420 **lwarp-tascmac.sty**

§ 523     Package **tascmac**

Pkg    tascmac    tascmac is emulated.

**for HTML output:**    1 \LWR@ProvidesPackageDrop{tascmac}[2018/03/09]

```

2 \newenvironment*{boxnote}
3 {
4 \BlockClass[
5 padding: .5ex ;
6 border: 1px solid black ;
7 border-top: 1px dashed black ;
8]{boxnote}
9 }
10 {\endBlockClass}
11
12 \newenvironment*{screen}[1][[]

```

```

13 {
14 \BlockClass[
15 padding: .5ex ;
16 border: 1px solid gray ;
17 border-radius: 8pt
18]{boxnote}
19 }
20 {\endBlockClass}
21
22 \newenvironment*{itembox}[2][]
23 {
24 \BlockClass[
25 padding: .5ex ;
26 border: 1px solid gray ;
27 border-radius: 8pt
28]{boxnote}
29 \InlineClass{itemboxtitle}{#2}\par
30 }
31 {\endBlockClass}
32
33 \newenvironment*{shadebox}
34 {
35 \BlockClass[
36 padding: .5ex ;
37 border: 1px solid black ;
38 box-shadow: 3px 3px 3px \#808080 ;
39]{boxnote}
40 }
41 {\endBlockClass}
42
43 \newcommand*{\mask}[2]{%
44 \InlineClass[background: lightgray]{mask}{#1}%
45 }
46
47 \newcommand*{\maskbox}[5]{%
48 \InlineClass[background: lightgray]{mask}{#5}%
49 }
50
51 \newcommand*{\Maskbox}[6]{%
52 \InlineClass[
53 background: lightgray ;
54 border: #5 solid black
55]{mask}{#6}%
56 }
57
58 \newcommand*{\keytop}[2][]{%
59 \InlineClass[%
60 padding: .2ex ;
61 border: 1px solid black ;
62 border-radius: .7ex ;
63]{keytop}{#2}%
64 }
65
66 \def\yen{\HTMLUnicode{00A5}}
67

```

---

```

68 \def\return{\HTMLUnicode{23CE}}
69
70 \def\Return{\HTMLUnicode{23CE}}
71
72 \def\ascii{ASCII Corporation}
73
74 \def\Ascii{ASCII Corporation}
75
76 \def\ASCII{ASCII Corporation}

```

---

File 421 **lwarp-tcolorbox.sty**

§ 524     Package **tcolorbox**

*(Emulates or patches code by THOMAS F. STURM.)*

Pkg    tcolorbox    tcolorbox is patched for use by lwarp.

See section 8.3.8 for limitations.

**for HTML output:**    1 \LWR@ProvidesPackagePass{tcolorbox}[2020/04/28]

```

2 \newbool{LWR@havetcblower}
3 \boolfalse{LWR@havetcblower}

```

Colors are supported via HTML styles:

```

4 \newcommand{\LWR@tcolorbox@findcolors}{%
5 \convertcolorspec{named}{tcbcolback}{HTML}\LWR@tcbcolback
6 \convertcolorspec{named}{tcbcolframe}{HTML}\LWR@tcbcolframe
7 \iftcb@titlefilled%
8 \convertcolorspec{named}{tcbcolbacktitle}{HTML}\LWR@tcbcolbacktitle
9 \else
10 \convertcolorspec{named}{tcbcolframe}{HTML}\LWR@tcbcolbacktitle
11 \fi
12 \convertcolorspec{named}{tcbcoltitle}{HTML}\LWR@tcbcoltitle
13 \convertcolorspec{named}{tcbcolupper}{HTML}\LWR@tcbcolupper
14 \convertcolorspec{named}{tcbcollower}{HTML}\LWR@tcbcollower
15 }
16
17 \newcommand*{\LWR@tcolorbox@titlecolorstyles}{%
18 border-top: 1px solid \LWR@origpound\LWR@tcbcolframe ;
19 border-bottom: 1px solid \LWR@origpound\LWR@tcbcolframe ;
20 background: \LWR@origpound\LWR@tcbcolbacktitle ;
21 color: \LWR@origpound\LWR@tcbcoltitle ;
22 }

```

The title is placed inside its own <div> of class tcolorboxtitle.

```

23 \newcommand*{\LWR@showtitle@}[1]{%
24 \begin{BlockClass}[
25 \LWR@tcolorbox@titlecolorstyles

```

```

26]{tcolorboxtitle}
27 % \cmdKV@LWRtcolorbox@title\par
28 \kvtcb@before@title#1\kvtcb@after@title
29 \end{BlockClass}
30 }

```

If no title, a non-breakable space is used to take some vertical space.

```

31 \newcommand*{\LWR@showtitle}[1]{%
32 \iftcb@titlevisible
33 \LWR@showtitle@{#1}
34 \else
35 \LWR@showtitle@{~}
36 \fi
37 }
38
39 \newcommand*{\LWR@tcolorbox@dophantom}{%
40 % \sbox\tcb@phantombox{\kvtcb@phantom}%
41 % \iftcb@hasPhantom%
42 % \box\tcb@phantombox%
43 % \tcb@hasPhantomfalse%
44 % \fi%
45 \kvtcb@phantom
46 \let\kvtcb@phantom\empty%
47 }

```

The tcolorbox is placed inside an external <div> of class #1, which is tcolorbox or tcolorbox inlineminipage. The upper and lower parts are placed into their own internal <div>s of class tcolorboxupper and tcolorboxlower.

```

48 \newcommand*{\LWR@tcolorboxstart}[1]{
49 \LWR@tcolorbox@findcolors
50 \begin{BlockClass}[
51 border: 1px solid \LWR@origpound\LWR@tcbcolframe ;
52 background: \LWR@origpound\LWR@tcbcolback ;
53]{#1}
54 \LWR@tcolorbox@dophantom%
55 \ifdefined\kvtcb@title}
56 {
57 {
58 \LWR@showtitle{\kvtcb@title}
59 }
60 \begin{BlockClass}[
61 color: \LWR@origpound\LWR@tcbcolupper ;
62]{tcolorboxupper}
63 }

```

Floats enclose the tcolorbox.

```

64 \newcommand*{\LWR@tcolorbox@dostartfloat}{%
65 \ifx\kvtcb@float\empty%
66 % \tcb@set@normal@unbroken@beforeafter%
67 \else%
68 % \edef\tcb@before@unbroken{%
69 % \noexpand\tcb@float@env@begin{tcbfloat}[\kvtcb@float]%

```

```

70 % \noexpand\kvtcb@everyfloat%
71 % }%
72 % \let\tcb@after@unbroken=\tcb@float@env@end%
73 \tcb@float@env@begin{tcbfloat}[\kvtcb@float]
74 \noexpand\kvtcb@everyfloat
75 \fi%
76 }
77
78 \newcommand*{\LWR@tcolorbox@doendfloat}{%
79 \ifx\kvtcb@float\@empty%
80 \else%
81 \tcb@float@env@end%
82 \fi%
83 }

```

Footnotes are handled via the main footnote mechanism, and pending notes are printed before and after each tcolorbox. Footnote numbering will not match the print output.

```

84 \renewenvironment{tcolorbox}[1][[]
85 {
86 \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}%
87 {
88 \PackageError{lwarp}
89 {%
90 Lwarp cannot process a tcolorbox inside a lateximage\MessageBreak
91 or SVG math.\MessageBreak
92 Enter 'H' for possible solutions%
93 }
94 }%
95 Use \protect\tcbox, \protect\tcboxmath, or
96 \protect\tcbhighmath\space instead.\MessageBreak%
97 (Inside math, you probably want to use these anyhow.)%
98 }
99 {}
100 \LWR@printpendingfootnotes
101 \tcb@layer@inc
102 \tcb@apply@box@options{#1}
103 \LWR@tcolorbox@dostartfloat%
104 % \tcbset{title=,#1}
105 \boolfalse{LWR@havetcblower}
106 \LWR@tcolorboxstart{tcolorbox}
107 \tcb@insert@before@upper%
108 }
109 {
110 \ifbool{LWR@havetcblower}{%
111 \tcb@insert@after@lower%
112 }{%
113 \tcb@insert@after@upper%
114 }%
115 \end{BlockClass}
116 \LWR@printpendingfootnotes
117 \tcb@layer@dec
118 \end{BlockClass}
119 \LWR@tcolorbox@doendfloat%

```

```
120 }
```

For the lower part, the upper part is finished then the lower is started. `\tcblower` is only temporarily defined where appropriate, so the HTML version is defined globally via `\newcommand` instead of `\renewcommand`.

```
121 \newcommand{\tcblower}{
122 \tcb@insert@after@upper%
123 \end{BlockClass}
124 \begin{BlockClass}[%
125 border-top: 1px dashed \LWR@origpound\LWR@tcbscolframe ;
126 color: \LWR@origpound\LWR@tcbscollower ;
127]{tcolorboxlower}
128 \tcb@insert@before@lower%
129 }
```

Starred and unstarred `\tcbline` are simple `\hrules`.

```
130 \AtBeginDocument{
131 \ifdef{\tcbline}{
132 \newcommand*\LWR@sub@tcbline}{%
133 \begin{BlockClass}{hrule}
134 \end{BlockClass}
135 }
136 \newcommand{\LWR@HTML@tcbline}{\@ifstar\LWR@sub@tcbline\LWR@sub@tcbline}
137 \LWR@formatted{tcbline}
138 }{}
139 }
140
141 \newcommand{\LWR@HTML@tcbox}[2][]{
142 \LWR@printpendingfootnotes
143 \LWR@tcolorbox@dostartfloat%
144 \begingroup
145 \tcblayer@inc
146 \tcbox@apply@box@options{#1}
147 % \tcboxset{title=, #1}
148 \boolfalse\LWR@havetcblower}
149 \LWR@tcolorboxstart{tcolorbox inlineminipage}
150 \tcbox@insert@before@upper%
151 #2
152 \ifbool\LWR@havetcblower}{%
153 \tcbox@insert@after@lower%
154 }{%
155 \tcbox@insert@after@upper%
156 }%
157 \end{BlockClass}
158 \LWR@printpendingfootnotes
159 \end{BlockClass}
160 \tcblayer@dec%
161 \endgroup%
162 \LWR@tcolorbox@dostartfloat%
163 \global\booltrue\LWR@minipagethispar}%
164 }
165 \LWR@formatted{tcbox}
166
```

```

167 \appto\LWR@restoreMathJaxformatting{%
168 \renewcommand{\tcbox}[2][\]{#2}%
169 }

```

Patches for the subtitle, which is placed inside a <div> of class tcolorboxsubtitle.

```

170 \xpatchcmd{\tcbsubtitle}
171 {\begingroup}
172 {\begingroup\let\kv tcb@title\relax\begin{BlockClass}{tcolorboxsubtitle}}
173 {}
174 {\LWR@patcherror{tcolorbox}{tcbsubtitle}}
175
176 \xpatchcmd{\tcbsubtitle}
177 {\endgroup}
178 {\end{BlockClass}\endgroup}
179 {}
180 {\LWR@patcherror{tcolorbox}{tcbsubtitleB}}

```

\tcboxfit is the same as \tcbox.

```

181 \AtBeginDocument{
182 \ifdef{\tcboxfit}{%
183 \let\LWR@HTML@tcboxfit\tcbox%
184 \LWR@formatted{tcboxfit}
185 }{}
186 }

```

\tcbtitle is patched to support the text font.

```

187 \LetLtxMacro\LWR@HTML@tcbtitle\tcbtitle
188 \xpatchcmd{\LWR@HTML@tcbtitle}
189 {\kv tcb@before@title\tcbtitletext}
190 {\kv tcb@before@title\LWR@textcurrentfont{\LWR@textcurrentcolor{\tcbtitletext}}}
191 {}
192 {\LWR@patcherror{tcolorbox}{\LWR@HTML@tcbtitle}}
193 \LWR@formatted{tcbtitle}

```

List-of:

```

194 \renewcommand*\l@tcolorbox[2]{\hypertocfloat{1}{tcolorbox}{lof}{#1}{#2}}

```

Theorem limitations. An error is printed if the document uses math, ams equation, etc. \tcboxmath and \tcbhighmath are ignored for HTML.

```

195 \AtBeginDocument{
196 \pgfkeysifdefined{/tcb/libload/theorems}{
197
198 \def\LWR@HTML@tcb@hack@amsmath{%
199 \PackageError{lwarp}
200 {%
201 tcolorbox ‘math’, ‘ams equation’, and related\MessageBreak
202 are not supported.\MessageBreak
203 \protect\tcboxmath\space and
204 \protect\tcbhighmath\space are emulated.\MessageBreak

```

```

205 Enter 'H' for possible solutions%
206 }
207 {%
208 Remove tcolorbox math-related options, and instead\MessageBreak
209 use the usual math environments inside each tcolorbox.%
210 }
211 }
212 \LWR@formatted{tcb@hack@amsmath}
213
214 % Cause an error if using math:
215 \tcbset{%
216 math upper/.style={before upper*=\tcb@hack@amsmath,after upper*=$},%
217 math lower/.style={before lower*=\tcb@hack@amsmath,after lower*=$},%
218 }
219
220 \appto\LWR@restoreorigformatting{%
221 \tcbset{%
222 math upper/.style={before upper*=$\displaystyle,after upper*=$},%
223 math lower/.style={before lower*=$\displaystyle,after lower*=$},%
224 }%
225 }
226
227 \newcommand{\LWR@HTML@tcbboxmath}[2][{}]{#2}
228 \LWR@formatted{tcbboxmath}
229 \newcommand{\LWR@HTML@tcbhighmath}[2][{}]{#2}
230 \LWR@formatted{tcbhighmath}
231 \appto\LWR@restoreMathJaxformatting{%
232 \renewcommand{\tcbboxmath}[2][{}]{#2}%
233 \renewcommand{\tcbhighmath}[2][{}]{#2}%
234 }
235 }{}% theorems loaded
236 }% AtBeginDocument

```

For MATHJAX:

```

237 \CustomizeMathJax{\newcommand{\tcbset}[1]{} }
238 \CustomizeMathJax{\newcommand{\tcbsetforeverylayer}[1]{} }
239 \CustomizeMathJax{\newcommand{\tcbbox}[2][{}]{\boxed{\text{#2}}}}
240 \CustomizeMathJax{\newcommand{\tcbboxfit}[2][{}]{\boxed{#2}}}
241 \CustomizeMathJax{\newcommand{\tcbblower}{} }
242 \CustomizeMathJax{\newcommand{\tcbline}{} }
243 \CustomizeMathJax{\newcommand{\tcbtitle}{} }
244 \CustomizeMathJax{\newcommand{\tcbsubtitle}[2][{}]{\mathrm{#2}}}}
245 \CustomizeMathJax{\newcommand{\tcbboxmath}[2][{}]{\boxed{#2}}}
246 \CustomizeMathJax{\newcommand{\tcbhighmath}[2][{}]{\boxed{#2}}}

```

---

File 422 **lwarp-termcal.sty**

§ 525 Package **termcal**

(Emulates or patches code by BILL MITCHELL.)

Pkg termcal termcal is patched for use by lwarp.

for HTML output: 1 \LWR@ProvidesPackagePass{termcal}% questionable date in the .sty file

Nullify the @ because everything is being done in a token list.

```
2 \xpatchcmd{\endcalendar}
3 {@{}}
4 {}
5 {}
6 {\LWR@patcherror{termcal}{endcalendar}}
```

Remove the hbox:

```
7 \xpatchcmd{\ca@doaday}
8 {\hbox to \hsize{\calprintdate\hfill\ifclassday\calprintclass\fi}}
9 {%
10 \calprintdate\hfill\ifclassday\calprintclass\fi%
11 }
12 {}
13 {\LWR@patcherror{termcal}{ca@doaday}}
```

Change each of two ampersands to call the lwarp tabular version:

```
14 \xpatchcmd{\calday}
15 {@&}
16 {\LWR@tabularampersand}
17 {}
18 {\LWR@patcherror{termcal}{calday}}
19
20 \xpatchcmd{\calday}
21 {@&}
22 {\LWR@tabularampersand}
23 {}
24 {\LWR@patcherror{termcal}{calday B}}
```

---

File 423 **lwarp-textarea.sty**

§ 526 Package **textarea**

*(Emulates or patches code by ALEXANDER I. ROZHENKO.)*

Pkg textarea **textarea** is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{textarea}[2005/12/26]

```
2 \newcommand\StartFromTextArea{}
3 \newcommand\StartFromHeaderArea{}
4 \newcommand*\RestoreTextArea{}
5 \newcommand*\ExpandTextArea[1][*]{}
6 \let\NCC@restorettextarea\empty
```

File 424 **lwarp-textcomp.sty**


§ 527 Package **textcomp**

(Emulates or patches code by FRANK MITTELBACH, ROBIN FAIRBAIRNS, WERNER LEMBERG.)

Pkg textcomp textcomp is patched for use by lwarp.

### § 527.1 Limitations

Some textcomp symbols do not have Unicode equivalents, and thus are not supported.

 **missing symbols** Many textcomp symbols are not supported by many system / browser fonts. In the css try referencing fonts which are more complete, but expect to see gaps in coverage.

### § 527.2 Package loading

for HTML output: `1 \LWR@ProvidesPackagePass{textcomp}[2017/04/05]`

### § 527.3 HTML symbols

For HTML, use HTML entities or direct Unicode, depending on the engine.

`\AtBeginDocument` improves support for Lua<sup>A</sup>T<sub>E</sub>X and X<sub>Y</sub>L<sup>A</sup>T<sub>E</sub>X.

#### § 527.3.1 pdf<sup>A</sup>T<sub>E</sub>X symbols

```

2 \AtBeginDocument{
3 \ifPDFTeX% pdflatex or dvi latex
4 \newcommand*\LWR@HTML@textdegree{\HTMLentity{deg}}
5 \newcommand*\LWR@HTML@textcelsius{\HTMLUnicode{2103}}
6 \newcommand*\LWR@HTML@textohm{\HTMLUnicode{2126}}
7 \newcommand*\LWR@HTML@textmu{\HTMLUnicode{00B5}}
8 \newcommand*\LWR@HTML@textlquill{\HTMLUnicode{2045}}
9 \newcommand*\LWR@HTML@extrquill{\HTMLUnicode{2046}}
10 \newcommand*\LWR@HTML@textcircledP{\HTMLUnicode{2117}}
11 \newcommand*\LWR@HTML@texttwelveudash{\HTMLUnicode{2014}}% emdash
12 \newcommand*\LWR@HTML@textthreequartersemdash{\HTMLUnicode{2014}}% emdash
13 \newcommand*\LWR@HTML@textmho{\HTMLUnicode{2127}}
14 \newcommand*\LWR@HTML@textnaira{\HTMLUnicode{20A6}}
15 \newcommand*\LWR@HTML@textpeso{\HTMLUnicode{20B1}}
16 \newcommand*\LWR@HTML@textrecipe{\HTMLUnicode{211E}}
17 \newcommand*\LWR@HTML@textinterrobang{\HTMLUnicode{203D}}
18 \newcommand*\LWR@HTML@textinterrobangdown{\HTMLUnicode{2E18}}
19 \newcommand*\LWR@HTML@textperthousand{\HTMLUnicode{2030}}
20 \newcommand*\LWR@HTML@textpertenthousand{\HTMLUnicode{2031}}
21 \newcommand*\LWR@HTML@textbaht{\HTMLUnicode{0E3F}}
22 \newcommand*\LWR@HTML@textdiscount{\}%
23 \newcommand*\LWR@HTML@textservicemark{\HTMLUnicode{2120}}

```

24 \else

### § 527.3.2 **X<sub>Y</sub>LaTeX and LuaLaTeX symbols**

NOTE: Some of the following do not print well in the listing. Consult the .dtx or .sty file for the actual characters.

```

25 \newcommand*\LWR@HTML@textdegree}{°}
26 \newcommand*\LWR@HTML@textcelsius}{℃}
27 \newcommand*\LWR@HTML@textohm}{Ω}
28 \newcommand*\LWR@HTML@textmu}{μ}
29 \newcommand*\LWR@HTML@textlquill}{℣}
30 \newcommand*\LWR@HTML@textrquill}{ℚ}
31 \newcommand*\LWR@HTML@textcircledP}{Ⓟ}
32 \newcommand*\LWR@HTML@texttwelveudash}{—}% emdash
33 \newcommand*\LWR@HTML@textthreequartersemdash}{—}% emdash
34 \newcommand*\LWR@HTML@textmho}{℧}
35 \newcommand*\LWR@HTML@textnaira}{₦}
36 \newcommand*\LWR@HTML@textpeso}{₱}
37 \newcommand*\LWR@HTML@textrecipe}{℞}
38 \newcommand*\LWR@HTML@textinterrobang}{‡}
39 \newcommand*\LWR@HTML@textinterrobangdown}{‡}
40 \newcommand*\LWR@HTML@textperthousand}{‰}
41 \newcommand*\LWR@HTML@textpertenthousand}{‱}
42 \newcommand*\LWR@HTML@textbaht}{฿}
43 \newcommand*\LWR@HTML@textdiscount}{%}
44 \newcommand*\LWR@HTML@textservicemark}{™}
45 \fi
46
47 \LWR@formatted{textdegree}
48 \LWR@formatted{textcelsius}
49 \LWR@formatted{textohm}
50 \LWR@formatted{textmu}
51 \LWR@formatted{textlquill}
52 \LWR@formatted{textrquill}
53 \LWR@formatted{textcircledP}
54 \LWR@formatted{texttwelveudash}
55 \LWR@formatted{textthreequartersemdash}
56 \LWR@formatted{textmho}
57 \LWR@formatted{textnaira}
58 \LWR@formatted{textpeso}
59 \LWR@formatted{textrecipe}
60 \LWR@formatted{textinterrobang}
61 \LWR@formatted{textinterrobangdown}
62 \LWR@formatted{textperthousand}
63 \LWR@formatted{textpertenthousand}
64 \LWR@formatted{textbaht}
65 \LWR@formatted{textdiscount}
66 \LWR@formatted{textservicemark}

```

## § 527.4 HTML diacritics

For HTML, Unicode diacritical marks are used:

```
67 \newcommand*\LWR@HTML@capitalcedilla}[1]{#1\HTMLUnicode{0327}}
68 \newcommand*\LWR@HTML@capitalogonek}[1]{#1\HTMLUnicode{0328}}
69 \newcommand*\LWR@HTML@capitalgrave}[1]{#1\HTMLUnicode{0300}}
70 \newcommand*\LWR@HTML@capitalacute}[1]{#1\HTMLUnicode{0301}}
71 \newcommand*\LWR@HTML@capitalcircumflex}[1]{#1\HTMLUnicode{0302}}
72 \newcommand*\LWR@HTML@capitaltilde}[1]{#1\HTMLUnicode{0303}}
73 \newcommand*\LWR@HTML@capitaldieresis}[1]{#1\HTMLUnicode{0308}}
74 \newcommand*\LWR@HTML@capitalhungarumlaut}[1]{#1\HTMLUnicode{30B}}
75 \newcommand*\LWR@HTML@capitalring}[1]{#1\HTMLUnicode{30A}}
76 \newcommand*\LWR@HTML@capitalcaron}[1]{#1\HTMLUnicode{30C}}
77 \newcommand*\LWR@HTML@capitalbreve}[1]{#1\HTMLUnicode{306}}
78 \newcommand*\LWR@HTML@capitalmacron}[1]{#1\HTMLUnicode{304}}
79 \newcommand*\LWR@HTML@capitaldotaccent}[1]{#1\HTMLUnicode{307}}
```

`\textcircled` becomes a span with a rounded border. `\providecommand` is used to avoid conflict with `xunicode`.

```
80 \providecommand*\LWR@HTML@textcircled}[1]{%
81 \InlineClass[border: 1px solid \LWR@currenttextcolor]{textcircled}{#1}%
82 }
83
84 \LWR@formatted{capitalcedilla}
85 \LWR@formatted{capitalogonek}
86 \LWR@formatted{capitalgrave}
87 \LWR@formatted{capitalacute}
88 \LWR@formatted{capitalcircumflex}
89 \LWR@formatted{capitaltilde}
90 \LWR@formatted{capitaldieresis}
91 \LWR@formatted{capitalhungarumlaut}
92 \LWR@formatted{capitalring}
93 \LWR@formatted{capitalcaron}
94 \LWR@formatted{capitalbreve}
95 \LWR@formatted{capitalmacron}
96 \LWR@formatted{capitaldotaccent}
97
98 \LWR@formatted{textcircled}
```

Nullify `textcomp` macros when generating filenames:

```
99 \FilenameNullify{%
100 \renewcommand*\textdegree{}%
101 \renewcommand*\textcelsius{}%
102 \renewcommand*\textohm{}%
103 \renewcommand*\textmu{}%
104 \renewcommand*\textlquill{}%
105 \renewcommand*\textrquill{}%
106 \renewcommand*\textcircledP{}%
107 \renewcommand*\texttwelvewdash{}%
108 \renewcommand*\textthreequartersemdash{}%
109 \renewcommand*\textmho{}%
110 \renewcommand*\textnaira{}%
```

```

111 \renewcommand*\textpeso{}%
112 \renewcommand*\textrecipe{}%
113 \renewcommand*\textinterrobang{}%
114 \renewcommand*\textinterrobangdown{}%
115 \renewcommand*\textperthousand{}%
116 \renewcommand*\textpertenthousand{}%
117 \renewcommand*\textbaht{}%
118 \renewcommand*\textdiscount{}%
119 \renewcommand*\textservicemark{}%
120 \renewcommand*\textcircled[1]{#1}%
121 \renewcommand*\capitalcedilla[1]{#1}%
122 \renewcommand*\capitalogonek[1]{#1}%
123 \renewcommand*\capitalgrave[1]{#1}%
124 \renewcommand*\capitalacute[1]{#1}%
125 \renewcommand*\capitalcircumflex[1]{#1}%
126 \renewcommand*\capitaltilde[1]{#1}%
127 \renewcommand*\capitaldieresis[1]{#1}%
128 \renewcommand*\capitalhungarumlaut[1]{#1}%
129 \renewcommand*\capitalring[1]{#1}%
130 \renewcommand*\capitalcaron[1]{#1}%
131 \renewcommand*\capitalbreve[1]{#1}%
132 \renewcommand*\capitalmacron[1]{#1}%
133 \renewcommand*\capitaldotaccent[1]{#1}%
134 }% FilenameNullify
135
136 }% AtBeginDocument

```

---

File 425 **lwarp-textfit.sty**

§ 528 Package **textfit**

Pkg textfit textfit is emulated.

Text is placed into a <span> of class textfit. Sizes are approximated, and also limited by browser min/max font-size settings.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{textfit}[1994/04/15]

2 \newsavebox{\LWR@textfitbox}
3
4 \newcommand*\LWR@textfitscale[2]{%
5 \setlength{\LWR@templengthone}{#1}%
6 \setlength{\LWR@templengthone}{%
7 1em*\ratio{\LWR@templengthone}{\LWR@templengthtwo}%
8 }}%
9 \InlineClass[font-size:\LWR@printlength{\LWR@templengthone}]{textfit}{#2}%
10 }
11
12 \newcommand*\scaletowidth[2]{%
13 \sbox{\LWR@textfitbox}{#2}%
14 \settowidth{\LWR@templengthtwo}{\usebox{\LWR@textfitbox}}%
15 \LWR@textfitscale{#1}{#2}%
16 }

```

---

```

17
18 \newcommand*{\scaletoheight}[2]{%
19 \sbox{\LWR@textfitbox}{#2}%
20 \settoheight{\LWR@templengthtwo}{\usebox{\LWR@textfitbox}}%
21 \LWR@textfitscale{#1}{#2}%
22 }

```

---

File 426 **lwarp-textpos.sty**

§ 529      Package **textpos**

*(Emulates or patches code by NORMAN GRAY.)*

Pkg    textpos    **textpos** is emulated.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{textpos}[2019/04/15]

2 \NewDocumentEnvironment{textblock}{m o r()}{ }{ }
3 \NewDocumentEnvironment{textblock*}{m o r()}{ }{ }
4 \newcommand*{\TPGrid}[3][]{ }
5 \NewDocumentCommand{\TPMargin}{s o}{ }
6 \newcommand*{\textblockcolour}[1]{ }
7 \newcommand*{\textblockrulecolour}[1]{ }
8 \newcommand*{\textblockcolor}[1]{ }
9 \newcommand*{\textblockrulecolor}[1]{ }
10 \newcommand*{\tekstblokkulur}[1]{ }
11 \newcommand*{\tekstblokrulekulur}[1]{ }
12 \newlength{\TPHorizModule}
13 \newlength{\TPVertModule}
14 \newlength{\TPboxrulesize}
15 \newcommand{\textblocklabel}[1]{ }
16 \newcommand*{\showtextsize}{ }
17 \newcommand{\textblockorigin}[2]{ }
18 \newcommand*{\TPoptions}[1]{ }
19 \newcommand*{\TPReferencePosition}[1]{ }

```

---

File 427 **lwarp-theorem.sty**

§ 530      Package **theorem**

*(Emulates or patches code by FRANK MITTELBACH.)*

Pkg    theorem    **theorem** is patched for use by **lwarp**.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{theorem}[2014/10/28]

```

Table 18: Theorem package — css styling of theorems and proofs

**Theorem:** <div> of class theorembody<theoremstyle>

**Theorem Header:** <span> of class theoremheader

where <theoremstyle> is plain, break, etc.

### § 530.1 Remembering the theorem style

Storage for the style being used for new theorems:

```
2 \newcommand{\LWR@newtheoremstyle}{plain}
```

Patched to remember the style being used for new theorems:

```
3 \gdef\theoremstyle#1{%
4 \ifundefined{th@#1}{\@warning
5 {Unknown theoremstyle ‘#1’. Using ‘plain’}%
6 \theorem@style{plain}%
7 \renewcommand{\LWR@newtheoremstyle}{plain}% lwarp
8 }%
9 {%
10 \theorem@style{#1}%
11 \renewcommand{\LWR@newtheoremstyle}{#1}% lwarp
12 }%
13 \begingroup
14 \csname th@the\theorem@style \endcsname
15 \endgroup}
```

Patched to remember the style for this theorem type, and set it later when the environment is started.

```
16 \gdef\xnthm#1#2[#3]{%
17 \expandafter\ifdefinable\csname #1\endcsname
18 {%
19 \csedef{\LWR@thmstyle#1}{\LWR@newtheoremstyle}% lwarp
20 \@definecounter{#1}\@newctr{#1}[#3]%
21 \expandafter\xdef\csname the#1\endcsname
22 {\expandafter \noexpand \csname the#3\endcsname
23 \@thmcountersep \@thmcounter{#1}}}%
24 \def\@tempa{\global\@namedef{#1}}%
25 \expandafter \@tempa \expandafter{%
26 \csname th@the \theorem@style
27 \expandafter \endcsname \the \theorem@bodyfont
28 \@thm{#1}{#2}}%
29 \global \expandafter \let \csname end#1\endcsname \@endtheorem
30 \AtBeginEnvironment{#1}{\edef\LWR@thisthmstyle{\@nameuse{\LWR@thmstyle#1}}}% lwarp
31 }}
32
33 \gdef\@ynthm#1#2{%
34 \expandafter\ifdefinable\csname #1\endcsname
35 {
```

```

36 \csedef{LWR@thmstyle#1}{\LWR@newtheoremstyle}% lwarp
37 \@definecounter{#1}%
38 \expandafter\xdef\csname the#1\endcsname{\@thmcounter{#1}}%
39 \def\@tempa{\global\@namedef{#1}}\expandafter \@tempa
40 \expandafter{\csname th@the \theoremstyle \expandafter
41 \endcsname \the\theorem@bodyfont \@thm{#1}{#2}}%
42 \global \expandafter \let \csname end#1\endcsname \@endtheorem
43 \AtBeginEnvironment{#1}{\edef\LWR@thisthmstyle{\@nameuse{LWR@thmstyle#1}}}% lwarp
44 }}
45
46 \gdef\@othm#1[#2]#3{%
47 \expandafter\ifx\csname c#2\endcsname\relax
48 \@nocounterr{#2}%
49 \else
50 \expandafter\@ifdefinable\csname #1\endcsname
51 {
52 \csedef{LWR@thmstyle#1}{\LWR@newtheoremstyle}% lwarp
53 \expandafter \xdef \csname the#1\endcsname
54 {\expandafter \noexpand \csname the#2\endcsname}%
55 \def\@tempa{\global\@namedef{#1}}\expandafter \@tempa
56 \expandafter{\csname th@the \theoremstyle \expandafter
57 \endcsname \the\theorem@bodyfont \@thm{#2}{#3}}%
58 \global \expandafter \let \csname end#1\endcsname \@endtheorem
59 \AtBeginEnvironment{#1}{\edef\LWR@thisthmstyle{\@nameuse{LWR@thmstyle#1}}}% lwarp
60 }%
61 \fi}

```

## § 530.2 css patches

The following are patched for css.

These were in individual files thp.sty for plain, thmb.sty for margin break, etc. They are gathered together here.

Each theorem is encased in a BlockClass environment of class theorembody<style>.

Each header is encased in an \InlineClass of class theoremheader.

```

62 \gdef\th@plain{%
63 \def\@begintheorem##1##2{%
64 \item[
65 \InlineClass{theoremheader}{##1\ ##2}
66]
67 }%
68 \def\@opargbegintheorem##1##2##3{%
69 \item[
70 \InlineClass{theoremheader}{##1\ ##2\ (##3)}
71]
72 }
73 }
74
75 \gdef\th@break{%
76 \def\@begintheorem##1##2{%
77 \item[
78 \InlineClass{theoremheader}{##1\ ##2}\newline%

```

```

79]
80 }%
81 \def\@opargbegintheorem##1##2##3{%
82 \item[
83 \InlineClass{theoremheader}{##1\ ##2\ (##3)}\newline
84]
85 }
86 }
87
88 \gdef\th@marginbreak{%
89 \def\@begintheorem##1##2{
90 \item[
91 \InlineClass{theoremheader}{##2 \quad ##1}\newline
92]
93 }%
94 \def\@opargbegintheorem##1##2##3{%
95 \item[
96 \InlineClass{theoremheader}{##2 \quad ##1\ %
97 (##3)}\newline
98]
99 }
100 }
101
102 \gdef\th@changebreak{%
103 \def\@begintheorem##1##2{
104 \item[
105 \InlineClass{theoremheader}{##2\ ##1}\newline
106]
107 }%
108 \def\@opargbegintheorem##1##2##3{%
109 \item[
110 \InlineClass{theoremheader}{ ##2\ ##1\ %
111 (##3)}\newline
112]
113 }
114 }
115
116 \gdef\th@change{%
117 \def\@begintheorem##1##2{
118 \item[
119 \InlineClass{theoremheader}{##2\ ##1}
120]
121 }%
122 \def\@opargbegintheorem##1##2##3{%
123 \item[
124 \InlineClass{theoremheader}{##2\ ##1\ (##3)}
125]
126 }
127 }
128
129 \gdef\th@margin{%
130 \def\@begintheorem##1##2{
131 \item[
132 \InlineClass{theoremheader}{##2 \quad ##1}
133]

```

```

134 }%
135 \def\@opargbegintheorem##1##2##3{%
136 \item[
137 \InlineClass{theoremheader}{##2 \quad ##1\ (##3)}
138]
139 }
140 }

```

Patched for css:

```

141 \gdef\@thm#1#2{\refstepcounter{#1}%
142 \LWR@forcenewpage% lwarp
143 \BlockClass{theorembody\LWR@thisthmstyle}% lwarp
144 \trivlist
145 \@topsep \theorempreskipamount % used by first \item
146 \@topsepadd \theorempostskipamount % used by \@endparenv
147 \@ifnextchar [%
148 {\@yhtm{#1}{#2}}%
149 {\@begintheorem{#2}{\csname the#1\endcsname}\ignorespaces}}
150
151 \gdef\@endtheorem{%
152 \endtrivlist
153 \endBlockClass
154 }

```

---

File 428 **lwarp-thinsp.sty**

§ 531     Package **thinsp**

Pkg    thinsp    thinsp is emulated.

**for HTML output:**    1 \LWR@ProvidesPackageDrop{thinsp}[2016/10/02]

```

2 \AtBeginDocument{
3 \let\thinthinspace\relax% defined by some packages
4 \newcommand*{\thinthinspace}{\thinspace}
5 }
6
7 \newcommand*{\stretchthinspace}{\thinspace}
8 \newcommand*{\stretchthinthinspace}{\thinthinspace}
9 \newcommand*{\stretchnegthinspace}{\negthinspace}

```

---

File 429 **lwarp-thm-listof.sty**

§ 532     Package **thm-listof**

*(Emulates or patches code by ULRICH M. SCHWARZ.)*

Pkg    thm-listof    thm-listof is part of thmtools, and is patched for use by lwarp.

**for HTML output:** 1 \LWR@ProvidesPackagePass{thm-listof}[2019/12/22]

For font control, see the generated HTML and use CSS per amsthm or ntheorem.

Other thm-\* package may be loaded by thm-listof.

```

2 \xpatchcmd{\listoftheorems}
3 {%
4 \@xa\protected@edef\csname l@thmt@envname\endcsname{%
5 \@nx\@dottedtocline{1}{1.5em}{\@nx\thmt@listnumwidth}%
6 }%
7 }
8 {%
9 \csdef{l@thmt@envname}##1##2{\hypertocfloat{1}{figure}{lof}{##1}{##2}}%
10 }
11 {}
12 {\LWR@patcherror{thm-listof}{listoftheorems}}
13
14 \xpatchcmd{\thmt@mklistcmd}
15 {%
16 \@xa\protected@edef\csname l@thmt@envname\endcsname{%
17 \@nx\@dottedtocline{1}{1.5em}{\@nx\thmt@listnumwidth}%
18 }%
19 }
20 {%
21 \csdef{l@thmt@envname}##1##2{\hypertocfloat{1}{figure}{lof}{##1}{##2}}%
22 }
23 {}
24 {\LWR@patcherror{thm-listof}{thmt@mklistcmd}}

```

---

File 430 **lwarp-thm-restate.sty**

§ 533 Package **thm-restate**

(Emulates or patches code by ULRICH M. SCHWARZ.)

Pkg thm-restate thm-restate is part of thmtools, and is patched for use by lwarp.

**for HTML output:** 1 \LWR@ProvidesPackagePass{thm-restate}[2019/12/22]

```

2 \xpatchcmd{\thmt@restatable}
3 {\@ifstar}
4 {\edef\LWR@thisthmstyle{#2}\@ifstar}
5 {}
6 {\LWR@patcherror{thm-restate}{thmt@restatable}}

```

---

File 431 **lwarp-thmbox.sty**

§ 534 Package **thmbox**

(Emulates or patches code by EMMANUEL BEFFARA.)

Pkg thmbox **thmbox** is emulated for use by lwarp.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{thmbox}[2005/04/24]

2 \renewenvironment{thmbox}[2][]%
3 {%
4 \begin{BlockClass}{thmbox}
5 \begin{BlockClass}{thmboxtitle}
6 #2
7 \end{BlockClass}
8 }
9 {\end{BlockClass}}
10
11 \renewenvironment{proof}[1][]
12 {%
13 \begin{BlockClass}{thmboxproof}%
14 \InlineClass{thmboxproofname}{\proofname\ #1\unskip\,:}
15 }
16 {%
17 \quad\HTMLUnicode{220E}% end of proof symbol
18 \end{BlockClass}
19 }
20
21 \renewenvironment{example}[1][\examplename]%
22 {%
23 \begin{BlockClass}{thmboxexample}%
24 \InlineClass{thmboxexamplename}{#1\,:}
25 }
26 {\end{BlockClass}}
27
28 \renewenvironment{leftbar}[1][]%
29 {\begin{BlockClass}{thmboxleftbar}}
30 {\end{BlockClass}}
```

---

File 432 **lwarp-threadcol.sty**

§ 535 Package **threadcol**

Pkg threadcol **threadcol** is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{threadcol}[2013/01/06]

2 \newcommand{\setthreadname}[1]{}
```

---

File 433 **lwarp-threeparttable.sty**

§ 536 Package **threeparttable**

*(Emulates or patches code by DONALD ARSENEAU.)*

Pkg threeparttable threeparttable is emulated.

Table note are contained inside a css <div> of class tnotes. If `enumitem` is used, the note item labels are also individually highlighted with an additional css <span> of class tnoteitemheader, otherwise they are plain text.

for HTML output: 1 \LWR@ProvidesPackageDrop{threeparttable}[2003/06/13]

Env threeparttable [*<alignment>*]

```
2 \newenvironment*{threeparttable}[1][b]
3 {\def\@captype{table}}
4 {}
```

Env tablenotes [*<options>*]

```
5 \newenvironment*{tablenotes}[1][]
6 {}
7 \LWR@forcenewpage
8 \BlockClass{tnotes}%

9 \description%
10 }
11 {}
12 \enddescription%
13 \endBlockClass%
14 }
```

\tnote {*<text>*}

```
15 \newcommand{\tnote}[1]{\LWR@htmlspan{sup}{#1}}
```

Env measuredfigure [*<alignment>*]

```
16 \newenvironment*{measuredfigure}[1][t]
17 {\def\@captype{figure}}
18 {}
```

---

File 434 **lwarp-threeparttablex.sty**

§ 537 Package **threeparttablex**

Pkg threeparttablex threeparttablex is patched for use by lwarp.

threeparttablex is used with longtable and booktabs as follows:

```

\begin{longtable}{ [column specifiers] }
[. . .] \endfirsthead % or \endhead, for print and HTML
\warpprintonly{ % not used in HTML
[. . .] \endhead % or \endfirsthead
[. . .] \endfoot
\bottomrule \insertTableNotes \endlastfoot
}
. . . table contents . . .
\warppHTMLonly{ % HTML last footer
\bottomrule
\UseMinipageWidths % optional
\insertTableNotes
\endlastfoot
}
\end{longtable}

```

**table width** The table notes are created using a `\multicolumn`. By default the width is not specified to the browser, so long table notes can cause the table to be spread out horizontally. For HTML output, `lwarp` guesses the width of the table depending on the number of columns, then restricts its guess to a min/max range. To use this guess for the width of the table notes, use `\UseMinipageWidths` before `\insertTableNotes`. The width is then specified, and in many cases the result is an improvement in overall table layout.

**for HTML output:** 1 \LWR@ProvidesPackagePass{threeparttablex}[2013/07/23]

The width is guessed depending on the number of columns, then limited to a min/max.

```

2 \renewcommand\insertTableNotes{%
3 \setlength{\LWR@templelengthone}{.375in*\value{\LWR@tabletotalLaTeXcols}}%
4 \setlength{\LWR@templelengthone}{\minof{\textwidth}{\LWR@templelengthone}}%
5 \setlength{\LWR@templelengthone}{\maxof{2.5in}{\LWR@templelengthone}}%
6 \multicolumn{\value{\LWR@tabletotalLaTeXcols}}{c}{%
7 \parbox{\LWR@templelengthone}{%
8 \begin{tablenotes}[\TPTL@optarg]%
9 \TPTL@font%
10 \TPTL@body%
11 \end{tablenotes}%
12 }%
13 }%
14 }
15
16 \renewcommand\TPTL@tnotex[2]{\tnote{\nameref{#2}}}

```

---

File 435 **lwarp-thumb.sty**

§ 538     Package **thumb**

Pkg   thumb   thumb is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{thumb}[1997/12/24]

---

```

2 \newcommand*{\Overviewpage}{}
3 \newlength{\thumbheight}
4 \newlength{\thumbwidth}

```

---

File 436 **lwarp-thumbs.sty**

§ 539      Package **thumbs**

Pkg thumbs thumbs is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{thumbs}[2014/03/09]

```

2 \newcommand{\addthumb}[4]{}
3 \newcommand{\addtitlethumb}[5]{}
4 \newcommand{\stopthumb}{}
5 \newcommand{\continuethumb}{}
6 \newcommand{\thumbsoverview}[1]{}
7 \newcommand{\thumbsoverviewback}[1]{}
8 \newcommand{\thumbsoverviewverso}[1]{}
9 \newcommand{\thumbsoverviewdouble}[1]{}
10 \newcommand{\thumbnewcolumn}{}
11 \newcommand{\addthumbsoverviewtocontents}[2]{}
12 \newcommand{\thumbsnophantom}{}

```


---

File 437 **lwarp-tikz.sty**

§ 540      Package **tikz**

*(Emulates or patches code by TILL TANTAU.)*

Pkg tikz tikz is supported.

 **displaymath and matrices** If using display math with tikzpicture or \tikz, along with matrices with the & character, the document must be modified as follows:

```

\usepackage{tikz}
\tikzset{every picture/.style={ampersand replacement=\&}}

```

and each instance of & in the tikz expression must be replaced with \&.

Accept all options for lwarp-tikz:

```
1 \LWR@ProvidesPackagePass{tikz}[2015/08/07]
```

**catcodes** lwarp changes the catcode of \$ for its own use. The Tikz babel library temporarily changes catcodes back to normal for Tikz's use. tikz v3.0.0 introduced the babel library which handles catcode changes. For older versions, lwarp must change \$'s catcode itself.

Also see:

<https://tex.stackexchange.com/questions/16199/test-if-a-package-or-package-option-is-loaded>

```
2 \newbool{LWR@tikzbabel}
3
4 \@ifpackagelater{tikz}{2013/12/20}% Test for Tikz version v3.0.0
5 {\usetikzlibrary{babel}\booltrue{LWR@tikzbabel}}
6 {\boolfalse{LWR@tikzbabel}}
```

Env pgfpicture The `\pgfpicture` environment is enclosed inside a `\lateximage`. Enclose the low-level `\pgfpicture` in a `lateximage`. This is also used by the higher-level `\tikz` and `tikzpicture`.

```
7 \preto\pgfpicture{%
8 \begin{lateximage}[-tikz-~\PackageDiagramAltText]%
9 \ifbool{LWR@tikzbabel}% Test for Tikz version v3.0.0
10 {}%
11 {\catcode'\$=3}% dollar sign is math shift
12 }
13
14 \appto\endpgfpicture{\end{lateximage}}
```

`Tikz` is placed inside an `svg` image, so use the original meanings of the following:

```
15 \let\ltxMacro\pgfutil@minipage\LWR@print@minipage
16 \let\pgfutil@endminipage\endLWR@print@minipage
17
18 \let\pgfutil@raggedleft\LWR@print@raggedleft
19 \let\pgfutil@raggedright\LWR@print@raggedright
20
21 \def\pgfutil@font@tiny{\LWR@printtiny}
22 \def\pgfutil@font@scriptsize{\LWR@printscriptsize}
23 \def\pgfutil@font@footnotesize{\LWR@printfootnotesize}
24 \def\pgfutil@font@small{\LWR@print@small}
25 \def\pgfutil@font@normalsize{\LWR@print@normalsize}
26 \def\pgfutil@font@large{\LWR@printlarge}
27 \def\pgfutil@font@Large{\LWR@printLarge}
28 \def\pgfutil@font@huge{\LWR@printhuge}
29 \def\pgfutil@font@Huge{\LWR@printHuge}
30
31 \def\pgfutil@font@itshape{\LWR@origitshape}
32 \def\pgfutil@font@bfseries{\LWR@origbfseries}
33
34 \def\pgfutil@font@normalfont{\LWR@originormalfont}
```

---

File 438 **lwarp-titles.sty**

§ 541 Package **titles**

(Emulates or patches code by JAVIER BEZOS.)

Pkg titlesps titlesps is loaded and used by lwarp during HTML output. All user options and macros are ignored and disabled.

Discard all options for lwarp-titlesps:

for HTML output: 1 \LWR@ProvidesPackageDrop{titlesps}[2016/03/15]

\pagestyle and \thispagestyle are already disabled in the lwarp code.

\newpagestyle    {<name>}[<style>]{<commands>}  
2 \NewDocumentCommand{\newpagestyle}{m o m}{}{}

\renewpagestyle   {<name>}[<style>]{<commands>}  
3 \NewDocumentCommand{\renewpagestyle}{m o m}{}{}

\sethead        [<el>][<ec>][<er>]{<ol>}{<oc>}{<or>}  
4 \NewDocumentCommand{\sethead}{o o o m m m}{}{}

\setfoot        [<el>][<ec>][<er>]{<ol>}{<oc>}{<or>}  
5 \NewDocumentCommand{\setfoot}{o o o m m m}{}{}

\settitlemarks   \*{<names>}  
6 \NewDocumentCommand{\settitlemarks}{s m}{}{}

\headrule  
7 \newcommand\*{\headrule}{}{}

\footrule  
8 \newcommand\*{\footrule}{}{}

\setheadrule     {<length>}  
9 \newcommand\*{\setheadrule}[1]{}{}

\setfootrule     {<length>}  
10 \newcommand\*{\setfootrule}[1]{}{}

\makeheadrule  
11 \newcommand\*{\makeheadrule}{}{}

\makefootrule  
12 \newcommand\*{\makefootrule}{}{}

`\setmarkboth`     $\{\langle code \rangle\}$

13 `\newcommand{\setmarkboth}[1]{}`

`\widenhead`

14 `\NewDocumentCommand{\widenhead}{s o o m m}{}`

`\bottitlemarks`

15 `\newcommand*{\bottitlemarks}{}`

`\toptitlemarks`

16 `\newcommand*{\toptitlemarks}{}`

`\firsttitlemarks`

17 `\newcommand*{\firsttitlemarks}{}`

`\nexttitlemarks`

18 `\newcommand*{\nexttoptitlemarks}{}`

`\outertitlemarks`

19 `\newcommand*{\outertitlemarks}{}`

`\innertitlemarks`

20 `\newcommand*{\innertitlemarks}{}`

`\newtitlemark`     $*\{\langle name \rangle\}$

21 `\NewDocumentCommand{\newtitlemark}{s m}{}`

`\pretitlemark`     $*\{\langle section \rangle\} \{\langle text \rangle\}$

22 `\NewDocumentCommand{\pretitlemark}{s m m}{}`

`\ifsamemark`     $\{\langle group \rangle\} \{\langle command \rangle\} \{\langle true \rangle\} \{\langle false \rangle\}$

23 `\newcommand{\ifsamemark}[4]{}`

`\setfloathead`     $*[\langle . \rangle][\langle . \rangle][\langle . \rangle]\{\langle . \rangle\}\{\langle . \rangle\}\{\langle . \rangle\}\{\langle extra \rangle\}[\langle which \rangle]$

24 `\NewDocumentCommand{\setfloathead}{s o o o m m m m}{}`

`\setfloatfoot`     $*[\langle . \rangle][\langle . \rangle][\langle . \rangle]\{\langle . \rangle\}\{\langle . \rangle\}\{\langle . \rangle\}\{\langle extra \rangle\}[\langle which \rangle]$

25 `\NewDocumentCommand{\setfloatfoot}{s o o o m m m m}{}`

```

\nextfloathead * [\<.\>] [\<.\>] [\<.\>] {\<.\>} {\<.\>} {\<.\>} {\<extra>} [\<which>]
26 \NewDocumentCommand{\nextfloathead}{s o o m m m m m}{\}

\nextfloatfoot * [\<.\>] [\<.\>] [\<.\>] {\<.\>} {\<.\>} {\<.\>} {\<extra>} [\<which>]
27 \NewDocumentCommand{\nextfloatfoot}{s o o m m m m m}{\}

\newmarkset {\<markset>}
28 \newcommand{\newmarkset}[1]{\}

\newextramark * {\<markset>} {\<macro-name>}
29 \NewDocumentCommand{\newextramarkset}{s m m}{\}

\botextramarks {\<markset>}
30 \newcommand{\botextramarks}[1]{\}

\topextramarks {\<markset>}
31 \newcommand{\topextramarks}[1]{\}

\firstextramarks {\<markset>}
32 \newcommand{\firstextramarks}[1]{\}

\nextextramarks {\<markset>}
33 \newcommand{\nexttopextramarks}[1]{\}

\outerextramarks {\<markset>}
34 \newcommand{\outerextramarks}[1]{\}

\innerextramarks {\<markset>}
35 \newcommand{\innerextramarks}[1]{\}

```

---

File 439 **lwarp-titleref.sty**

§ 542 Package **titleref**

Pkg titleref titleref is emulated.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{titleref}[2001/04/05]
2
3 \LetLtxMacro\titleref\nameref

```

---

```

4
5 \providecounter{LWR@currenttitle}
6
7 \newcommand*{\currenttitle}{%
8 \addtocounter{LWR@currenttitle}{1}%
9 \label{currenttitle\arabic{LWR@currenttitle}}%
10 \nameref{currenttitle\arabic{LWR@currenttitle}}%
11 }
12
13 \newcommand*{\theTitleReference}[2]{}
```

---

File 440 **lwarp-titlesec.sty**

§ 543     Package **titlesec**

*(Emulates or patches code by JAVIER BEZOS.)*

Pkg   titlesec   titlesec is emulated. All user options and macros are ignored and disabled.

Discard all options for lwarp-titlesec:

**for HTML output:**

```

1 \PackageInfo{lwarp}{Using the lwarp version of package 'titlesec'.}%
2 \ProvidesPackage{lwarp-titlesec}[2016/03/21]
3
4 \newbool{LWR@loadtitles}
5 \boolfalse{LWR@loadtitles}
6
7 \DeclareOption{pagestyles}{
8 \booltrue{LWR@loadtitles}
9 }
10
11 \DeclareOption*{}
12
13 \ProcessOptions\relax
14
15 \ifbool{LWR@loadtitles}{
16 \RequirePackage{lwarp-titles}
17 }{}

\titlelabel {\langle label-format \rangle}

18 \newcommand*{\titlelabel}[1]{}

\titleformat* {\langle command \rangle} {\langle format \rangle}

\titleformat {\langle command \rangle} [\langle shape \rangle] {\langle format \rangle} {\langle label \rangle} {\langle sep \rangle} {\langle before \rangle} [\langle after \rangle]

19 \newcommand\titleformat{%
20 \@ifstar{\ttl@format@s}%
21 {\ttl@format@i}}
22 \newcommand{\ttl@format@s}[1]{}
23 \NewDocumentCommand{\ttl@format@i}{m o m m m o}{}

```

```

\chaptertitlename
24 \ifundefined{@chapapp}{\let\@chapapp\chaptername}{}
25 \newcommand\chaptertitlename{\@chapapp}

\titlespacing * {<command>}{<left>}{<before>}{<after>}[<right>]
26 \NewDocumentCommand{\titlespacing}{s m m m o}{}

\filright
27 \newcommand*\filright{}

\filcenter
28 \newcommand*\filcenter{}

\filleft
29 \newcommand*\filleft{}

\fillast
30 \newcommand*\fillast{}

\filinner
31 \newcommand*\filinner{}

\filouter
32 \newcommand*\filouter{}

\wordsep
33 \newcommand\wordsep{\fontdimen\tw@\font \@plus
34 \fontdimen\thr@\font \@minus \fontdimen4\font}

\titeline * [<align>]{<material>}
35 \NewDocumentCommand{\titeline}{s o m}{}

\titlerule [<height>]
36 \providecommand*\titlerule{\@ifstar{\ttl@row}{\ttl@rule}}
37 \newcommand*\ttl@rule[1]{}
38 \newcommand*\ttl@row[2]{}

\iftitlemeasuring {<true>}{<false>}
39 \newcommand{\iftitlemeasuring}[2]{#2}

```

```

\assignpagestyle {\langle command\rangle} {\langle pagestyle\rangle}
40 \newcommand{\assignpagestyle}[2]{#2}

\titleclass {\langle name\rangle} [\langle startlevel\rangle] {\langle class\rangle} [\langle cmd\rangle]
41 \NewDocumentCommand{\titleclass}{m o m o}{}
```

---

File 441 **lwarp-titletoc.sty**

§ 544      Package **titletoc**

*(Emulates or patches code by JAVIER BEZOS.)*

Pkg titletoc titletoc is emulated. All user options and macros are ignored and disabled.

Discard all options for lwarp-titletoc:

**for HTML output:**    1 \LWR@ProvidesPackageDrop{titletoc}[2011/12/15]

```

\dottedcontents {\langle section\rangle} [\langle left\rangle] {\langle above\rangle} {\langle label\rangle} {\langle leader\rangle}
2 \NewDocumentCommand{\dottedcontents}{m o m m m}{}
```

```

\titlecontents * {\langle section\rangle} [\langle left\rangle] {\langle above\rangle} {\langle numbered\rangle} {\langle numberless\rangle} {\langle filler\rangle} [\langle below or
begin\rangle] [\langle separator\rangle] [\langle end\rangle]
3 \newcommand{\titlecontents}{\ifstar{\ttl@tcstar}{\ttl@tcnostar}}
4 \NewDocumentCommand{\ttl@tcstar}{m o m m m m o o o}{}
5 \NewDocumentCommand{\ttl@tcnostar}{m o m m m m o}{}

```

```

\contentsmargin [\langle correction\rangle] {\langle right\rangle}
6 \newcommand{\contentsmargin}[2][]{}

```

```

\thecontentslabel
7 \newcommand*{\thecontentslabel}{thecontentslabel}

```

```

\thecontentspage
8 \newcommand*{\thecontentspage}{thecontentspage}

```

```

\contentslabel [\langle format\rangle] {\langle space\rangle}
9 \newcommand{\contentslabel}[2][]{\thecontentslabel}

```

```

\contentspage [\langle format\rangle]
10 \newcommand{\contentspage}[1][]{\thecontentspage}

```

```

\contentspush {\text}
11 \newcommand{\contentspush}[1]{}

\contentsuse {\name} {\text}
12 \newcommand{\contentsuse}[2]{}

\startcontents [\name]
13 \newcommand*{\startcontents}[1][{}]{

\stopcontents [\name]
14 \newcommand*{\stopcontents}[1][{}]{

\resumecontents [\name]
15 \newcommand*{\resumecontents}[1][{}]{

\printcontents [\name] {\prefix} {\start} {\code}
16 \newcommand{\printcontents}[4][{}]{

\startlist [\name] {\list}
17 \newcommand{\startlist}[2][{}]{

\stoplist [\name] {\list}
18 \newcommand{\stoplist}[2][{}]{

\resumelist [\name] {\list}
19 \newcommand{\resumelist}[2][{}]{

\printlist [\name] {\list} {\prefix} {\code}
20 \newcommand{\printlist}[4][{}]{

```

---


File 442 **lwarp-titling.sty**

§ 545     Package **titling**

(Emulates or patches code by PETER WILSON.)

Pkg    titling

[package support](#)    lwarp supports the native L<sup>A</sup>T<sub>E</sub>X titling commands, and also supports the packages

 **load order** authblk and titling. If both are used, authblk should be loaded before titling.

**\published and \subtitle** If using the titling package, additional titlepage fields for \published and \subtitle may be added by using \AddSubtitlePublished in the preamble. See section 66.8.

The various titling footnote restyling commands have no effect.

Pass all options to lwarp-titling:

**for HTML output:** 1 \LWR@ProvidesPackagePass{titling}[2009/09/04]

**\bsmtitleempty** Patch \bsmtitleempty:

```
2 \let\LWR@orig@bsmtitleempty\bsmtitleempty
3 \renewcommand*{\bsmtitleempty}{%
4 \LWR@orig@bsmtitleempty%
5 }
```

**\keepthetitle** Patch \keepthetitle:

```
6 \let\LWR@origkeepthetitle\keepthetitle
7 \renewcommand*{\keepthetitle}{%
8 \LWR@orig@keepthetitle%
9 }
```

**\killtitle** Patch \killtitle:

```
10 \let\LWR@origkilltitle\killtitle
11 \renewcommand*{\killtitle}{%
12 \LWR@orig@killtitle%
13 }
```

**Env titlingpage**

```
14 \renewenvironment*{titlingpage}
15 {%
```

Start an HTML titlepage div:

```
16 \LWR@printpendingfootnotes
17 \begin{titlepage}
```

Prepare for a custom version of \maketitle inside the titlingpage:

```
18 \LWR@maketitlesetup
19 \let\maketitle\LWR@titlingmaketitle
20 }
21 {
```

At the end of the environment, end the HTML titlepage div:

```
22 \end{titlepage}
23 }
```

Patch the pre/post title/author/date to add HTML tags, then initialize:

```

24 \AtBeginDocument{
25 \pretitle{}
26 \posttitle{}
27
28 \preauthor{}
29 \postauthor{}
30
31 \predate{}
32 \postdate{}
33 }
```

`\LWR@maketitlesetup` Patches `\thanks` macros.

```

34 \renewcommand*{\LWR@maketitlesetup}{%
```

Redefine the footnote mark:

```

35 \def\@makefnmark{\@thefnmark}%

 \thefootnote ⇒ \nameuse{arabic}{footnote}, or
 \thefootnote ⇒ \nameuse{fnsymbol}{footnote}
```

Redefine the footnote text:

```

36 \long\def\@makefntext##1{%
```

Make the footnote mark and some extra horizontal space for the tags:

```

37 \makethanksmark~%

 \makethanksmark ⇒ \thanksfootmark ⇒ \tamark ⇒
 \@thefnmark ⇒ \itshape a (or similar)
```

Print the text:

```

38 ##1%
39 }% \@makefntext
40 }
```

`\thanksfootmark`

```

41 \renewcommand{\thanksfootmark}{%
42 % \hb@xt@\thanksmarkwidth{\hfil\normalfont%
43 \thanksscript{%
44 \thanksfootpre \tamark \thanksfootpost%
45 }%
46 % }%
47 }
```

`\maketitle` HTML mode. Creates an HTML titlepage div and typesets the title, etc.

Code from the `titling` package is adapted, simplified, and modified for HTML output.

```
48 \renewcommand*{\maketitle}{%
```

An HTML titlepage `<div>` is used for all classes.

```
49 \begin{titlepage}
```

Select which kind of footnote marks to use:

```
50 \@bsmarkseries
```

Set up special patches:

```
51 \LWR@maketitlesetup
```

Typeset the title, etc:

```
52 \@maketitle
```

Immediately generate any `\thanks` footnotes:

```
53 \LWR@stoppars\@thanks\LWR@startpars
```

Close the HTML titlepage div:

```
54 \end{titlepage}
```

Reset the footnote counter:

```
55 \@bscontmark
56 }
```

`\@maketitle` Typesets the title, etc. Patched for HTML.

```
57 \DeclareDocumentCommand{\@maketitle}{*}{%
58 \maketitlehooka
59 {
60 \LWR@stoppars\LWR@htmltag{\LWR@tagtitle}%
61 \@bsprettitle \@title \@bsposttitle%
62 \LWR@htmltag{\LWR@tagtitleend}\LWR@startpars%
63 }
64 \maketitlehookb
65 {
66 \begin{BlockClass}{author}
67 \renewcommand{\and}{%
68 \end{BlockClass}%
69 \begin{BlockClass}{oneauthor}%
70 }
71 \begin{BlockClass}{oneauthor}%
```

```

72 \@bspreauthor \@author \@bspostauthor%
73 \end{BlockClass}%
74 \end{BlockClass}%
75 }
76 \maketitlehookc
77 {
78 \begin{BlockClass}{titledate}%
79 \@bspredate \@date \@bspostdate%
80 \end{BlockClass}%
81 }
82 \maketitlehookd
83 }

```

`\LWR@titlingmaketitle` \maketitle for use inside an HTML titlingpage environment.

```
84 \renewcommand*{\LWR@titlingmaketitle}{%
```

Keep pending footnotes out of the title block:

```
85 \LWR@stoppars\@thanks\LWR@startpars
```

Select which kind of footnote marks to use:

```
86 \@bsmarkseries
```

Set up special patches:

```
87 \LWR@maketitlesetup
```

Typeset the title, etc:

```
88 \@maketitle
```

Immediately generate any \thanks footnotes:

```
89 \LWR@stoppars\@thanks\LWR@startpars
```

Reset the footnote counter:

```
90 \@bscontmark
91 }
```

`\thanksmarkseries` `{\series}`

Sets the type of footnote marks used by \thanks, where type is ‘arabic’, ‘roman’, ‘fn-symbol’, etc.

```

92 \renewcommand{\thanksmarkseries}[1]{%
93 \def\@bsmarkseries{\renewcommand{\thefootnote}{\@nameuse{#1}{footnote}}}%
94 }

```

Set default titlepage thanks footnote marks. See section 66.7.

---

```

95 \@ifclassloaded{memoir}{
96 \thanksmarkseries{arabic}
97 }{% not memoir
98 \if@titlepage
99 \thanksmarkseries{arabic}
100 \else
101 \thanksmarkseries{fnsymbol}
102 \fi
103 }% not memoir

```

---

File 443 **lwarp-tocbasic.sty**

§ 546 Package **tocbasic**

*(Emulates or patches code by MARKUS KOHM.)*

Pkg tocbasic tocbasic is nullified for lwarp.

This package may be loaded standalone, but is also loaded automatically if koma-script classes are in use. \DeclareDocumentCommand is used to overwrite the koma-script definitions.

**for HTML output:** 1 \LWR@ProvidesPackagePass{tocbasic}[2018/12/30]

```

2 \DeclareDocumentCommand{\usetocbasicnumberline}{o}{}
3 \DeclareDocumentCommand{\DeclareTOCStyleEntry}{o m m}{}
4 \DeclareDocumentCommand{\DeclareTOCStyleEntries}{o m m}{}
5 \DeclareDocumentCommand{\DeclareTOCEntryStyle}{m o m}{}
6 \DeclareDocumentCommand{\DefineTOCEntryOption}{m o m}{}
7 \DeclareDocumentCommand{\DefineTOCEntryBooleanOption}{m o m m m}{}
8 \DeclareDocumentCommand{\DefineTOCEntryCommandOption}{m o m m m}{}
9 \DeclareDocumentCommand{\DefineTOCEntryIfOption}{m o m m m}{}
10 \DeclareDocumentCommand{\DefineTOCEntryLengthOption}{m o m m m}{}
11 \DeclareDocumentCommand{\DefineTOCEntryNumberOption}{m o m m m}{}
12 \DeclareDocumentCommand{\CloneTOCEntryStyle}{m m}{}
13 \DeclareDocumentCommand{\TOCEntryStyleInitCode}{m m}{}
14 \DeclareDocumentCommand{\TOCEntryStyleStartInitCode}{m m}{}

```

---

File 444 **lwarp-tocbibind.sty**

§ 547 Package **tocbibind**

*(Emulates or patches code by PETER WILSON.)*

Pkg tocbibind tocbibind is patched for use by lwarp.

[placement and toc options](#) An index may be placed inline with other HTML text, or on its own HTML page:

Pkg makeidx **Inline, with a manual toc entry:**

A commonly-used method to introduce an index in a  $\text{\LaTeX}$  document:

```
\cleardoublepage
\phantomsection
\addcontentsline{toc}{section}{\indexname}% or chapter
\printindex
```

Pkg makeidx **On its own HTML page, with a manual toc entry:**

```
\begin{warpprint}
\cleardoublepage
\phantomsection
\addcontentsline{toc}{section}{\indexname}% or chapter
\end{warpprint}
\ForceHTMLPage
\ForceHTMLTOC
\printindex
```

Pkg tocbibind **Inline, with an automatic toc entry:**

The tocbibind package may be used to automatically place an entry in the toc.

```
\usepackage[nottoc]{tocbibind}
...
\cleardoublepage
\phantomsection % to fix print-version index link
\printindex
```

Pkg tocbibind **On its own HTML page, with an automatic toc entry:**

```
\usepackage[nottoc]{tocbibind}
...
\cleardoublepage
\phantomsection % to fix print-version index link
\ForceHTMLPage
\printindex
```

Opt[tocbibind] numindex Use the tocbibind numindex option to generate a numbered index. Without this option, the index heading has no number.

Other packages, such as imakeidx, may also have options for including the index in the Table of Contents.

for HTML output:

```
1 \let\simplechapterdelim\relax
2
3 \LWR@ProvidesPackagePass{tocbibind}[2010/10/13]

4 \renewenvironment{theindex}%
5 {%
6 \if@bibchapter
7 \if@donumindex
8 \chapter{\indexname}
9 \else
10 \if@dotocind
11 \chapter*{\indexname}
12 \addcontentsline{toc}{chapter}{\LWR@isolate{\indexname}}
13 \else
14 \chapter*{\indexname}
```

```

15 \fi
16 \fi
17 \else
18 \if@donumindex
19 \section{\indexname}
20 \else
21 \if@dotocind
22 \section*{\indexname}
23 \addcontentsline{toc}{\@tocextra}{\LWR@isolate{\indexname}}
24 \else
25 \section*{\indexname}
26 \fi
27 \fi
28 \fi
29 \let\item\LWR@indexitem%
30 \let\subitem\LWR@indexsubitem%
31 \let\subsubitem\LWR@indexsubsubitem%
32 }{}

```

The following code is shared by anonchap.

```

33 \DeclareDocumentCommand{\simplechapter}{O{\@empty}}{%
34 \def\@chapcntformat##1{%
35 #1~\csname the##1\endcsname\simplechapterdelim\quad%
36 }%
37 }
38
39 \DeclareDocumentCommand{\restorechapter}{}{%
40 \let\@chapcntformat\@secntformat%
41 }

```

---

File 445 **lwarp-tocdata.sty**

§ 548     Package **tocdata**

*(Emulates or patches code by BRIAN DUNN.)*

Pkg    tocdata    **tocdata** is patched for use by lwarp.

**for HTML output:**    1 \LWR@ProvidesPackagePass{tocdata}[2019/07/06]

```

2 \renewcommand*{\LWR@maybetocdata}{%
3 \ifdefempty{\TD@thistocdata}{}{%
4 \quad \InlineClass{authorartist}{\tocdataformat{\TD@thistocdata}}%
5 \def\TD@thistocdata{}
6 }
7 }

8 \renewrobustcmd{\tocdatapartprint}[4]
9 {%
10 \InlineClass{authorartist}{%

```

```

11 \quad --- %
12 \TDoptionalnameprint{#1}\TDoptionalnameprint{#2}#3#4%
13 }%
14 }
15
16 \ifundefined{chapter}{}{
17 \let\tocdatachapterprint\tocdatapartprint
18 }
19 \let\tocdatasectionprint\tocdatapartprint
20 \let\tocdatasubsectionprint\tocdatapartprint
21
22 \newcommand*{\LWR@TD@settetalign}[1]{%
23 \def\LWR@TD@textalign{justify}%
24 \ifcsstring{TD@#1align}{\centering}%
25 {\def\LWR@TD@textalign{center}}%
26 {}%
27 \ifcsstring{TD@#1align}{\raggedleft}%
28 {\def\LWR@TD@textalign{right}}%
29 {}%
30 \ifcsstring{TD@#1align}{\raggedright}%
31 {\def\LWR@TD@textalign{left}}%
32 {}%
33 }
34
35 \renewcommand{\TDartistauthorprint}[5]{%
36 \LWR@TD@settetalign{#1}%
37 \begin{BlockClass}[text-align:\LWR@TD@textalign]{floatnotes}%
38 \InlineClass{authorartist}{\TDoptionalnameprint{#2}\TDoptionalnameprint{#3}#4#5}%
39 \end{BlockClass}%
40 }
41
42 \newcommand*{\LWR@TD@setnamealign}[1]{%
43 \def\LWR@TD@textalign{justify}%
44 \ifcsstring{TD@#1textalign}{\centering}%
45 {\def\LWR@TD@textalign{center}}%
46 {}%
47 \ifcsstring{TD@#1textalign}{\raggedleft}%
48 {\def\LWR@TD@textalign{right}}%
49 {}%
50 \ifcsstring{TD@#1textalign}{\raggedright}%
51 {\def\LWR@TD@textalign{left}}%
52 {}%
53 }
54
55 \renewcommand{\TDartistauthortextprint}[2]{%
56 \LWR@TD@setnamealign{#1}%
57 \begin{BlockClass}[text-align:\LWR@TD@textalign]{floatnotes}%
58 #2%
59 \end{BlockClass}%
60 }

```

File 446 **lwarp-tocenter.sty**

§ 549      Package **tocenter**

Pkg    tocenter    tocenter is ignored.

**for HTML output:**    1 \LWR@ProvidesPackageDrop{tocenter}[2004/12/09]

2 \NewDocumentCommand{\ToCenter}{s o m m}{}  
3 \NewDocumentCommand{\FromMargins}{s o m m m m}{}

File 447 **lwarp-tocloft.sty**

§ 550      Package **tocloft**

*(Emulates or patches code by PETER WILSON.)*

Pkg    tocloft    tocloft is emulated. Most user options and macros are ignored and disabled. \newlistof and \cftchapterprecis are supported.

Pkg    tocloft    If using tocloft with tocbibind, anonchap, fncychap, or other packages which change chapter title formatting, load tocloft with its titles option, which tells tocloft to use standard L<sup>A</sup>T<sub>E</sub>X commands to create the titles, allowing other packages to work with it.

 **tocloft & other packages**

Discard all options for lwarp-tocloft:

**for HTML output:**    1 \LWR@ProvidesPackageDrop{tocloft}[2017/08/31]

\tocloftpagestyle    {<style>}

2 \newcommand{\tocloftpagestyle}[1]{}

\cftmarktoc

3 \newcommand\*{\cftmarktoc}{}

\cfttoctitlefont

4 \newcommand\*{\cfttoctitlefont}{}

\cftaftertoctitle

5 \newcommand\*{\cftaftertoctitle}{}

6 \newlength{\cftbeforetoctitleskip}  
7 \newlength{\cftaftertoctitleskip}

`\cftmarklof`

8 `\newcommand*\cftmarklof{}`

`\cftloftitlefont`

9 `\newcommand*\cftloftitlefont{}`

`\cftafterloftitle`

10 `\newcommand*\cftafterloftitle{}`

11 `\newlength{\cftbeforeloftitleskip}`

12 `\newlength{\cftafterloftitleskip}`

`\cftmarklot`

13 `\newcommand*\cftmarklot{}`

`\cftlottitlefont`

14 `\newcommand*\cftlottitlefont{}`

`\cftafterlottitle`

15 `\newcommand*\cftafterlottitle{}`

16 `\newlength{\cftbeforelottitleskip}`

17 `\newlength{\cftafterlottitleskip}`

`\cftdot`

18 `\providecommand*\cftdot{.}`

`\cftdotsep`

19 `\providecommand*\cftdotsep{1}`

`\cftnodots`

20 `\providecommand*\cftnodots{5000}`

`\cftdotfill`     $\{\langle sep \rangle\}$

21 `\providecommand{\cftdotfill}[1]{}`

`\cftsetpnumwidth`     $\{\langle length \rangle\}$

22 `\DeclareDocumentCommand{\cftsetpnumwidth}{m}{}`

```

\cftsetrmarg {<length>}
23 \DeclareDocumentCommand{\cftsetrmarg}{m}{}

\cftpnumalign {<alignment>}
24 \DeclareDocumentCommand{\cftpnumalign}{m}{}

25 \LWR@providelength{\cftparskip}

```

The part-related items are also provided by memoir:

```

26 \LWR@providelength{\cftbeforepartskip}
27 \LWR@providelength{\cftpartindent}
28 \LWR@providelength{\cftpartnumwidth}
29 \providecommand*\cftpartfont{}
30 \providecommand*\cftpartpresnum{}
31 \providecommand*\cftpartaftersnum{}
32 \providecommand*\cftpartaftersnumb{}
33 \providecommand*\cftpartleader{}
34 \providecommand*\cftpartdotsep{1}
35 \providecommand*\cftpartpagefont{}
36 \providecommand*\cftpartafterpnum{}

```

memoir uses the full name “chapter” instead of “chap”:

```

37 \LWR@providelength{\cftbeforechapskip}
38 \LWR@providelength{\cftchapindent}
39 \LWR@providelength{\cftchapnumwidth}
40 \newcommand*\cftchapfont{}
41 \newcommand*\cftchappresnum{}
42 \newcommand*\cftchapaftersnum{}
43 \newcommand*\cftchapaftersnumb{}
44 \newcommand*\cftchapleader{}
45 \newcommand*\cftchapdotsep{1}
46 \newcommand*\cftchappagefont{}
47 \newcommand*\cftchapafterpnum{}

```

The following do not appear in memoir:

```

48 \LWR@providelength{\cftbeforesecskip}
49 \LWR@providelength{\cftsecindent}
50 \LWR@providelength{\cftsecnumwidth}
51 \newcommand*\cftsecfont{}
52 \newcommand*\cftsecpresnum{}
53 \newcommand*\cftsecaftersnum{}
54 \newcommand*\cftsecaftersnumb{}
55 \newcommand*\cftsecleader{}
56 \newcommand*\cftsecdotsep{1}
57 \newcommand*\cftsecpagefont{}
58 \newcommand*\cftsecafterpnum{}

59 \LWR@providelength{\cftbeforesubsecskip}

```

```
60 \LWR@providelength{\cftsubsecindent}
61 \LWR@providelength{\cftsubsecnumwidth}
62 \newcommand*{\cftsubsecfont}{}
63 \newcommand*{\cftsubsecpresnum}{}
64 \newcommand*{\cftsubsecaftersnum}{}
65 \newcommand*{\cftsubsecaftersnumb}{}
66 \newcommand*{\cftsubsecleader}{}
67 \newcommand*{\cftsubsecdotsep}{1}
68 \newcommand*{\cftsubsecpagefont}{}
69 \newcommand*{\cftsubsecafterpnum}{}

70 \LWR@providelength{\cftbeforesubsubsecskip}
71 \LWR@providelength{\cftsubsubsecindent}
72 \LWR@providelength{\cftsubsubsecnumwidth}
73 \newcommand*{\cftsubsubsecfont}{}
74 \newcommand*{\cftsubsubsecpresnum}{}
75 \newcommand*{\cftsubsubsecaftersnum}{}
76 \newcommand*{\cftsubsubsecaftersnumb}{}
77 \newcommand*{\cftsubsubsecleader}{}
78 \newcommand*{\cftsubsubsecdotsep}{1}
79 \newcommand*{\cftsubsubsecpagefont}{}
80 \newcommand*{\cftsubsubsecafterpnum}{}

81 \LWR@providelength{\cftbeforeparaskip}
82 \LWR@providelength{\cftparaindent}
83 \LWR@providelength{\cftparanumwidth}
84 \newcommand*{\cftparafont}{}
85 \newcommand*{\cftparapresnum}{}
86 \newcommand*{\cftparaaftersnum}{}
87 \newcommand*{\cftparaaftersnumb}{}
88 \newcommand*{\cftparaleader}{}
89 \newcommand*{\cftparadotsep}{1}
90 \newcommand*{\cftparapagefont}{}
91 \newcommand*{\cftparaafterpnum}{}

92 \LWR@providelength{\cftbeforesubparaskip}
93 \LWR@providelength{\cftsubparaindent}
94 \LWR@providelength{\cftsubparanumwidth}
95 \newcommand*{\cftsubparafont}{}
96 \newcommand*{\cftsubparapresnum}{}
97 \newcommand*{\cftsubparaaftersnum}{}
98 \newcommand*{\cftsubparaaftersnumb}{}
99 \newcommand*{\cftsubparaleader}{}
100 \newcommand*{\cftsubparadotsep}{1}
101 \newcommand*{\cftsubparapagefont}{}
102 \newcommand*{\cftsubparaafterpnum}{}

103 \LWR@providelength{\cftbeforefigskip}
104 \LWR@providelength{\cftfigindent}
105 \LWR@providelength{\cftfignumwidth}
106 \newcommand*{\cftfigfont}{}
107 \newcommand*{\cftfigpresnum}{}
108 \newcommand*{\cftfigaftersnum}{}
109 \newcommand*{\cftfigaftersnumb}{}
110 \newcommand*{\cftfigleader}{}

```

```

111 \newcommand*{\cftfigdotsep}{1}
112 \newcommand*{\cftfigpagefont}{}
113 \newcommand*{\cftfigafterpnum}{}

114 \LWR@providelength{\cftbeforesubfigskip}
115 \LWR@providelength{\cftsubfigindent}
116 \LWR@providelength{\cftsubfignumwidth}
117 \newcommand*{\cftsubfigfont}{}
118 \newcommand*{\cftsubfigpresnum}{}
119 \newcommand*{\cftsubfigaftersnum}{}
120 \newcommand*{\cftsubfigaftersnumb}{}
121 \newcommand*{\cftsubfigleader}{}
122 \newcommand*{\cftsubfigdotsep}{1}
123 \newcommand*{\cftsubfigpagefont}{}
124 \newcommand*{\cftsubfigafterpnum}{}

125 \LWR@providelength{\cftbeforetabskip}
126 \LWR@providelength{\cfttabindent}
127 \LWR@providelength{\cfttabnumwidth}
128 \newcommand*{\cfttabfont}{}
129 \newcommand*{\cfttabpresnum}{}
130 \newcommand*{\cfttabaftersnum}{}
131 \newcommand*{\cfttabaftersnumb}{}
132 \newcommand*{\cfttableader}{}
133 \newcommand*{\cfttabdotsep}{1}
134 \newcommand*{\cfttabpagefont}{}
135 \newcommand*{\cfttabafterpnum}{}

136 \LWR@providelength{\cftbeforesubtabskip}
137 \LWR@providelength{\cftsubtabindent}
138 \LWR@providelength{\cftsubtabnumwidth}
139 \newcommand*{\cftsubtabfont}{}
140 \newcommand*{\cftsubtabpresnum}{}
141 \newcommand*{\cftsubtabaftersnum}{}
142 \newcommand*{\cftsubtabaftersnumb}{}
143 \newcommand*{\cftsubtableader}{}
144 \newcommand*{\cftsubtabdotsep}{1}
145 \newcommand*{\cftsubtabpagefont}{}
146 \newcommand*{\cftsubtabafterpnum}{}

147 \DeclareDocumentCommand{\cftsetindents}{m m m}{}

148 \newcommand{\pagenumbersoff}[1]{}
149 \newcommand{\pagenumberson}[1]{}

\newlistentry [⟨within⟩] {⟨counter⟩} {⟨ext⟩} {⟨level-1⟩}

150 \DeclareDocumentCommand{\newlistentry}{o m m m}
151 {%
152 \LWR@traceinfo{newlistentry #2 #3 #4}%
153 \IfValueTF{#1}%
154 {%
155 \@ifundefined{c@#2}{%
156 \newcounter{#2}[#1]%

```

```

157 \expandafter\edef\csname the#2\endcsname{%
158 \expandafter\noexpand\csname the#1\endcsname.\noexpand\arabic{#2}%
159 }%
160 }{}%
161 }%
162 {%
163 \ifundefined{c@#2}{%
164 \newcounter{#2}%
165 }{}%
166 }%
167 \@namedef{l@#2}##1##2{%
168 \hypertocfloat{1}{#2}{#3}{##1}{##2}%
169 \def\cftwhatismyname{#2}% from memoir
170 }%
171 \expandafter\newlength\csname cftbefore#2skip\endcsname%
172 \expandafter\newlength\csname cft#2indent\endcsname%
173 \expandafter\newlength\csname cft#2numwidth\endcsname%
174 \@namedef{cft#2font}{}%
175 \@namedef{cft#2presnum}{}%
176 \@namedef{cft#2aftersnum}{}%
177 \@namedef{cft#2aftersnumb}{}%
178 \@namedef{cft#2leader}{}%
179 \@namedef{cft#2dotsep}{1}%
180 \@namedef{cft#2pagefont}{}%
181 \@namedef{cft#2afterpnum}{}%
182 \@namedef{toclevel@#2}{#4}%
183 \@namedef{cft#2fillnum}##1{}%
184 \LWR@traceinfo{newlistentry done}%
185 }

```

`\newlistof` [*<within>*] [*<type>*] [*<ext>*] [*<listofname>*]

Emulated through the `\newfloat` mechanism.

```

186 \DeclareDocumentCommand{\newlistof}{o m m}
187 {%
188 \IfValueTF{#1}%
189 {\newlistentry[#1]{#2}{#3}{0}}%
190 {\newlistentry{#2}{#3}{0}}%
191 \@namedef{ext@#2}{#3}%
192 \ifundefined{c@#3depth}{\newcounter{#3depth}}{}%
193 \setcounter{#3depth}{1}%
194 \@namedef{cftmark#3}{}%
195 \@namedef{listof#2}{\listof{#2}{#4}}%
196 \@namedef{@cftmake#3title}{}%
197 \expandafter\newlength\csname cftbefore#3titleskip\endcsname%
198 \expandafter\newlength\csname cftafter#3titleskip\endcsname%
199 \@namedef{cft#3titlefont}{}%
200 \@namedef{cftafter#3title}{}%
201 \@namedef{cft#3prehook}{}%
202 \@namedef{cft#3posthook}{}%
203 }

```

`\cftchapterprecis` [*<text>*]

```

204 \newcommand{\cftchapterprecis}[1]{%

```

```

205 \cftchapterprecishere{#1}
206 \cftchapterprecistoc{#1}}
207 \newcommand{\cftchapterprecishere}[1]{%
208 \begin{quote}\textit{#1}\end{quote}}
209 \newcommand{\cftchapterprecistoc}[1]{
210 \addtocontents{toc}{%
211 {
212 \protect\begin{quote}#1\protect\end{quote}}
213 }
214 }

```

---

File 448 **lwarp-tocstyle.sty**

§ 551 Package **tocstyle**

Pkg tocstyle tocstyle is ignored.

 **Not fully tested!** [Please send bug reports!](#)

**for HTML output:** 1 \LWR@ProvidesPackageDrop{tocstyle}[2017/02/23]

```

2 \newcommand*\usetocstyle[2][]{ }
3 \newcommand*\deactivatetocstyle[1][]{ }
4 \newcommand*\reactivatetocstyle[1][]{ }
5 \NewDocumentCommand{\settocfeature}{o o m m}{}
6 \NewDocumentCommand{\settocstylefeature}{o m m}{}
7 \NewDocumentCommand{\newtocstyle}{o o m m}{}
8 \newcommand*\aliastoc[2]{}
9 \newcommand*\showtoc[2][]{ }
10 \newcommand{\iftochasdepth}[4]{}

```

---

File 449 **lwarp-todo.sty**

§ 552 Package **todo**

*(Emulates or patches code by FEDERICO GARCIA.)*

Pkg todo todo is patched for use by lwarp.

**for HTML output:** 1 \LWR@ProvidesPackagePass{todo}[2010/03/31]

```

2 \renewcommand\todoitem[2]{%
3 \refstepcounter{todo}%
4 \item[%
5 \HTMLUnicode{2610} \quad
6 \ref{todopage:\thetodo}
7] : {\todoformat\ifx#1\todomark\else\textbf{#1} \fi}#2%
8 \label{todolbl:\thetodo}%
9}%
10

```

---

```

11 \renewcommand\doneitem[2]{%
12 \stepcounter{todo}%
13 \item[%
14 \HTMLUnicode{2611} \quad
15 \ref{todopage:\thetodo}
16] \@nameuse{@done\the\c@todo}:
17 {\todoformat\ifx#1\todotocmark\else\textbf{#1} \fi}#2%
18 }
19
20 \xpatchcmd{\@displaytodo}
21 {\todoformat #1}{\todoformat \textbf{#1}}{}
22 {\PackageWarning{lwarp-todo}{Unable to patch @displaytodo.}}
23
24 \xpatchcmd{\@displayfulltodo}
25 {\todoformat #1}{\todoformat \textbf{#1}}{}
26 {\PackageWarning{lwarp-todo}{Unable to patch @displayfulltodo.}}
27
28 \patchcmd{\todoenv}{\itshape see text.}{\textit{see text.}}{}
29 {\PackageWarning{lwarp-todo}{Unable to patch todoenv.}}
30
31 \patchcmd{\astodos}{\todoformat #1}{\todoformat \textbf{#1}}{}
32 {\PackageWarning{lwarp-todo}{Unable to patch astodos.}}
33
34 \AtBeginDocument{
35 \crefname{todo}{todo}{todos}
36 \Crefname{todo}{Todo}{Todos}
37 }

```

---

File 450 **lwarp-todonotes.sty**

## § 553 Package **todonotes**

(Emulates or patches code by HENRIK SKOV MIDTIBY.)

Pkg todonotes **todonotes** is emulated.

The documentation for **todonotes** and **luatodonotes** have an example with a **todo** inside a caption. If this example does not work it will be necessary to move the **todo** outside of the caption.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{todonotes}[2012/07/25]

2 \if@todonotes@disabled
3 \else
4
5 \newcommand{\ext@todo}{\tdo}
6
7 \renewcommand{\l@todo}[2]{\hypertocfloat{1}{\todo}{\ldo}{#1}{#2}}

8 \let\LWRTODONOTES@orig@todotoc\todotoc
9
10 \renewcommand*\l@todotoc{%

```

```

11 \LWR@phantomsection%
12 \LWRTODONOTES@orig@todotoc%
13 }
14
15 \renewcommand{\@todonotes@drawMarginNoteWithLine}{
16 \fcolorbox
17 {\@todonotes@currentbordercolor}
18 {\@todonotes@currentbackgroundcolor}
19 {\arabic{\@todonotes@numberoftodonotes}}
20 \marginpar{\@todonotes@drawMarginNote}
21 }
22
23 \renewcommand{\@todonotes@drawInlineNote}{%
24 \fcolorboxBlock%
25 {\@todonotes@currentbordercolor}%
26 {\@todonotes@currentbackgroundcolor}%
27 {%
28 \if@todonotes@authorgiven%
29 {\@todonotes@author:\,%
30 \fi%
31 \@todonotes@text%
32 }%
33 }
34
35 \renewcommand{\@todonotes@drawMarginNote}{%
36 \if@todonotes@authorgiven%
37 \@todonotes@author\par%
38 \fi%
39 \arabic{\@todonotes@numberoftodonotes}: %
40 \fcolorbox%
41 {\@todonotes@currentbordercolor}%
42 {\@todonotes@currentbackgroundcolor}%
43 {%
44 \@todonotes@sizecommand%
45 \@todonotes@text %
46 }%
47 }%
48
49 \renewcommand{\@todonotes@drawLineToRightMargin}{}
50
51 \renewcommand{\@todonotes@drawLineToLeftMargin}{}
52
53 \renewcommand{\missingfigure}[2][{}]{%
54 \setkeys{todonotes}{#1}%
55 \addcontentsline{tdo}{\todo}{\@todonotes@MissingFigureText: #2}%
56 \fcolorboxBlock%
57 {\@todonotes@currentbordercolor}%
58 {\@todonotes@currentfigcolor}%
59 {%
60 \setlength{\fboxrule}{4pt}%
61 \fcolorbox{red}{white}{Missing figure} \quad #2%
62 }
63 }
64
65 \LetLtxMacro\LWRTODONOTES@orig@todo\@todo

```

---

```

66
67 \RenewDocumentCommand{\@todo}{o m}{%
68 \begin{group}
69 \renewcommand*{\phantomsection}{}%
70 \IfValueTF{#1}{%
71 \LWRTODONOTES@orig@todo[#1]{#2}%
72 }{%
73 \LWRTODONOTES@orig@todo{#2}%
74 }
75 \end{group}%
76 }
77
78 \fi% \if@todonotes@disabled

```

---

#### File 451 **lwarp-topcapt.sty**

### § 554 Package **topcapt**

Pkg topcapt topcapt is emulated.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{topcapt}[2004/12/11]


2 \LetLtxMacro\topcaption\caption

---

#### File 452 **lwarp-tram.sty**

### § 555 Package **tram**

Pkg tram tram is emulated.

 **block only** The HTML emulation uses a <div>, which must not appear inside an HTML <span> or an HTML paragraph. For this reason, the tram environment should only be used to contain paragraphs inside a \parbox or minipage. tram should not be used to mark up inline text.

To disable tram, allowing source compatibility with inline uses:

```

\begin{warpHTML}
\renewenvironment{tram}[1][{}]{%
\end{warpHTML}

```

**for HTML output:** 1 \LWR@ProvidesPackageDrop{tram}[2013/04/04]

```

2 \newenvironment{tram}[1][{}%
3 {\BlockClass[background:lightgray]{tram}}
4 {\endBlockClass}

```

---

File 453 **lwarp-transparent.sty**

§ 556      Package **transparent**

*(Emulates or patches code by HEIKO OBERDIEK.)*

Pkg transparent transparent is emulated. \texttransparent works for inline objects. \transparent only works for \includegraphics.

 **Not X<sub>Y</sub>L<sup>A</sup>T<sub>E</sub>X!** Note that transparent does not work with X<sub>Y</sub>L<sup>A</sup>T<sub>E</sub>X.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{transparent}[2019/11/29]

2 \newcommand*{\LWR@HTML@transparent}[1]{\edef\LWR@opacity{#1}}
3
4 \LWR@formatted{transparent}
5
6
7 \newcommand*{\LWR@HTML@texttransparent}[2]{%
8 \begingroup%
9 \transparent{#1}%
10 \InlineClass[opacity: #1]{transparent}{#2}%
11 \endgroup%
12 }
13
14 \LWR@formatted{texttransparent}
```

---

File 454 **lwarp-trimclip.sty**

§ 557      Package **trimclip**

Pkg trimclip trimclip is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{trimclip}[2018/04/08]
```

The third argument, the text, is not touched. This allows \bgroup / \egroup, and verbatim content.

```

2 \csdef{trimbox}{\@ifstar\@gobble\@gobble}
3 \csletcs{trimbox*}{trimbox}
4 \def\endtrimbox{}
5 \csletcs{endtrimbox*}{endtrimbox}
6
7 \csletcs{clipbox}{trimbox}
8 \csletcs{clipbox*}{trimbox}
9 \csletcs{endclipbox}{endtrimbox}
10 \csletcs{endclipbox*}{endtrimbox}
11
```

---

```

12 \csletcs{marginbox}{trimbox}
13 \csletcs{marginbox*}{trimbox}
14 \csletcs{endmarginbox}{endtrimbox}
15 \csletcs{endmarginbox*}{endtrimbox}

```

---

File 455 **lwarp-trivfloat.sty**

§ 558      Package **trivfloat**

*(Emulates or patches code by JOSEPH WRIGHT.)*

Pkg    trivfloat    trivfloat is forced to use the built-in lwarp emulation for floats.

To create a new float type and change its name:

---

```

\trivfloat{example}
\renewcommand{\examplename}{Example Name}
\crefname{example}{example}{examples}
\Crefname{example}{Example}{Examples}

```

---

Discard all options for lwarp-trivfloat. This tells trivfloat not to use floatrow or memoir.

```

1 \LWR@ProvidesPackageDrop{trivfloat}[2009/04/23]
2 \LWR@origRequirePackage{trivfloat}

```

\tfl@chapter@fix    Nullified at the beginning of the document. Is used by trivfloat to correct float chapter numbers, but is not needed for lwarp.

**for HTML output:**    3 \begin{warpHTML}

```
4 \AtBeginDocument{\DeclareDocumentCommand{\tfl@chapter@fix}{m m}{}}
```

```
5 \end{warpHTML}
```

§ 558.1    **Combining \newfloat, \trivfloat, and algorithmicx**

**for HTML & PRINT:**    6 \begin{warpall}

**For both print and HTML output:**



When using float, trivfloat, or algorithmicx at the same time, be aware of conflicting file usage. algorithmicx uses .loa. trivfloat by default starts with .loa and goes up for additional floats, skipping .lof and .lot.



When using \newfloat, be sure to manually assign higher letters to the \newfloat files to avoid .loa used by algorithmicx, and any files used by trivfloat. Also avoid using .lof and .lot.



When using \trivfloat, you may force it to avoid conflicting with algorithmicx by starting trivfloat's file extensions with .lob:

---

```

\makeatletter
\setcounter{tfl@float@cnt}{1} % start trivfloats with .lob
\makeatletter

7 \end{warpall}

```

---

File 456 **lwarp-truncate.sty**

§ 559 Package **truncate**

Pkg truncate truncate is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{truncate}[2001/08/20]

2 \providecommand{\TruncateMarker}{}
3 \newcommand{\truncate}[3][\TruncateMarker]{#3}

```

---

File 457 **lwarp-turnthepage.sty**

§ 560 Package **turnthepage**

Pkg turnthepage turnthepage is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{turnthepage}[2011/03/24]

2 \newcommand{\turnthepage}{}

```

---

File 458 **lwarp-twoup.sty**

§ 561 Package **twoup**

Pkg twoup twoup is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{twoup}[2007/02/26]

2 \newcommand{\cleartolastpage}{}

```

---

File 459 **lwarp-typearea.sty**

§ 562 Package **typearea**

*(Emulates or patches code by MARKUS KOHM.)*

Pkg typearea typearea is emulated.

This package may be loaded standalone, but is also loaded automatically if koma-script classes are in use. `\DeclareDocumentCommand` is used to overwrite the koma-script definitions.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{typearea}[2018/03/30]

2 \DeclareDocumentCommand{\typearea}{o m}{}
3 \DeclareDocumentCommand{\recalc\typearea}{}{}
4 \ifundefined{footheight}{\newlength\footheight}{}
5 \DeclareDocumentCommand{\areaset}{o m m}{}
6 \DeclareDocumentCommand{\activateareas}{}{}
7 \DeclareDocumentCommand{\storeareas}{m}{}
8 \DeclareDocumentCommand{\BeforeRestoreareas}{s m}{}
9 \DeclareDocumentCommand{\AfterRestoreareas}{s m}{}
10 \DeclareDocumentCommand{\AfterCalculatingTypearea}{s m}{}
11 \DeclareDocumentCommand{\AfterSettingArea}{s m}{}

```

---

File 460 **lwarp-typicons.sty**

§ 563 Package **typicons**

*(Emulates or patches code by ARTHUR VIGIL, XAVIER DANAUX.)*

Pkg typicons typicons is patched for use by lwarp.

If `\ticon` is used, the name of the icon is used in the alt tag. Otherwise, for each of the individual icon macros, a generic alt tag is used.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{typicons}[2015/05/20]

2 \LetLtxMacro\LWR@orig@symbol\symbol
3
4 \let\LWR@orig@typicon@TI\TI
5
6 \newcommand*{\LWR@typicon@symbol}[1]{%
7 \begin{lateximage}*[typicon][typicon#1]%
8 \begingroup%
9 \LWR@orig@typicon@TI%
10 \LWR@orig@symbol{#1}%
11 \endgroup%
12 \end{lateximage}%
13 }
14
15 \renewcommand*{\TI}{%
16 \LetLtxMacro\symbol\LWR@typicon@symbol%
17 }
18
19 \renewcommand*{\ticon}[1]
20 {%
21 \begin{lateximage}*[#1 icon][typicon#1]%

```

```

22 \TI\csname ticon@#1\endcsname%
23 \end{lateximage}%
24 }

```

File 461 **lwarp-ulem.sty**

§ 564 Package **ulem**

*(Emulates or patches code by DONALD ARSENEAU.)*

Pkg ulem Patched for use by lwarp.

for HTML output: Use the original package:

```
1 \LWR@ProvidesPackagePass{ulem}[2012/05/18]
```

Basic markup commands, using css:

```

2 \NewDocumentCommand{\LWR@HTML@uline}{+m}{%
3 \InlineClass%
4 (text-decoration:underline; text-decoration-skip: auto)%
5 {uline}{\LWR@isolate{#1}}%
6 }
7 \LWR@formatted{uline}
8
9 \NewDocumentCommand{\LWR@HTML@uuline}{+m}{%
10 \InlineClass%
11 (%
12 text-decoration:underline; text-decoration-skip: auto;%
13 text-decoration-style:double%
14)%
15 {uuline}{\LWR@isolate{#1}}%
16 }
17 \LWR@formatted{uuline}
18
19 \NewDocumentCommand{\LWR@HTML@uwave}{+m}{%
20 \InlineClass%
21 (%
22 text-decoration:underline; text-decoration-skip: auto;%
23 text-decoration-style:wavy%
24)%
25 {uwave}{\LWR@isolate{#1}}%
26 }
27 \LWR@formatted{uwave}
28
29 \NewDocumentCommand{\LWR@HTML@sout}{+m}{%
30 \InlineClass%
31 (text-decoration:line-through)%
32 {sout}{\LWR@isolate{#1}}%
33 }
34 \LWR@formatted{sout}
35
36 \NewDocumentCommand{\LWR@HTML@xout}{+m}{%

```

```

37 \InlineClass%
38 (text-decoration:line-through)%
39 {xout}{\LWR@isolate{#1}}%
40 }
41 \LWR@formatted{xout}
42
43 \NewDocumentCommand{\LWR@HTML@dashuline}{+m}{%
44 \InlineClass%
45 (%
46 text-decoration:underline;%
47 text-decoration-skip: auto;%
48 text-decoration-style:dashed%
49)%
50 {dashuline}{\LWR@isolate{#1}}%
51 }
52 \LWR@formatted{dashuline}
53
54 \NewDocumentCommand{\LWR@HTML@dotuline}{+m}{%
55 \InlineClass%
56 (%
57 text-decoration:underline;%
58 text-decoration-skip: auto;%
59 text-decoration-style: dotted%
60)%
61 {dotuline}{\LWR@isolate{#1}}%
62 }
63 \LWR@formatted{dotuline}

```

Nullified/emulated macros:

```

64 \NewDocumentCommand{\LWR@HTML@markoverwith}{m}{}
65 \LWR@formatted{markoverwith}
66
67 \NewDocumentCommand{\LWR@HTML@ULon}{+m}{\uline{#1}\egroup}
68 \LWR@formatted{ULon}

```

---

File 462 **lwarp-umoline.sty**

§ 565     Package **umoline**

*(Emulates or patches code by HIROSHI NAKASHIMA.)*

Pkg    umoline    umoline is patched for use by lwarp.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{umoline}[2000/07/11]

2 \newcommand*{\LWR@HTML@Underline}[1]{%
3 \InlineClass{uline}{#1}%
4 }
5 \LWR@formatted{Underline}
6
7 \newcommand*{\LWR@HTML@Midline}[1]{%
8 \InlineClass{sout}{#1}%

```

---

```

9 }
10 \LWR@formatted{Midline}
11
12 \newcommand*{\LWR@HTML@Overline}[1]{%
13 \InlineClass{oline}{#1}%
14 }
15 \LWR@formatted{Overline}
16
17 \newcommand*{\LWR@HTML@UMoline}[2]{%
18 \InlineClass{uline}{#2}%
19 }
20 \LWR@formatted{UMoline}
21
22 \NewDocumentCommand{\LWR@HTML@UMospace}{s m o}{\hspace*{#2}}
23 \LWR@formatted{UMospace}
24
25 \NewDocumentCommand{\LWR@HTML@UMonewline}{s}{\newline}
26 \LWR@formatted{UMonewline}

```

---

File 463 **lwarp-underscore.sty**

§ 566      Package **underscore**

Pkg    underscore    underscore is ignored.

**for HTML output:**    1 \LWR@ProvidesPackageDrop{underscore}[2006/09/13]

---

File 464 **lwarp-unicode-math.sty**

§ 567      Package **unicode-math**

*(Emulates or patches code by WILL ROBERTSON.)*

Pkg    unicode-math    unicode-math is supported as-is for HTML with svgmath.

For MATHJAX, many characters may not be read correctly, such as bold letters, and so are not read correctly by *pdftotext* for HTML. Symbol font commands are emulated, but not all combinations are supported by MathJax.

**for HTML output:**    1 \LWR@ProvidesPackagePass{unicode-math}[2019/09/26]

```

2 \begin{warpMathJax}
3 \LWR@infoprocessingmathjax{unicode-math}
4
5 % Not all are possible in MathJax.
6 \CustomizeMathJax{\let\symnormal\mathit}
7 \CustomizeMathJax{\let\symliteral\mathrm}
8 \CustomizeMathJax{\let\symbb\mathbb}
9 \CustomizeMathJax{\let\symbbit\mathbb}% not italic
10 \CustomizeMathJax{\let\symcal\mathcal}

```

```

11 \CustomizeMathJax{\let\symscr\mathscr}
12 \CustomizeMathJax{\let\symfrac\mathfrak}
13 \CustomizeMathJax{\let\symsfup\mathsf}
14
15 % \CustomizeMathJax{\let\symsfit\mathit}% not sans
16 \CustomizeMathJax{\newcommand{\symsfit}[1]{%
17 \mmlToken{mi}[mathvariant="sans-serif-italic"]{#1}}%
18 }
19
20 % \CustomizeMathJax{\let\symbfsf\mathbf}% not sans
21 \CustomizeMathJax{\newcommand{\symbfsf}[1]{%
22 \mmlToken{mi}[mathvariant="bold-sans-serif"]{#1}}%
23 }
24
25 \CustomizeMathJax{\let\symbfup\mathbf}
26 \CustomizeMathJax{\newcommand{\symbfit}[1]{\boldsymbol{#1}}}
27 \CustomizeMathJax{\let\symbfcal\mathcal}% not bold
28
29 \CustomizeMathJax{\let\symbfscr\mathscr}% not bold
30 % \CustomizeMathJax{\newcommand{\symbfscr}[1]{
31 \mmlToken{mi}[mathvariant="math-bold-script"]{#1}}
32 % }
33
34 \CustomizeMathJax{\let\symbffrak\mathfrak}% not bold
35 % \CustomizeMathJax{\newcommand{\symbffrak}[1]{%
36 % \mmlToken{mi}[mathvariant="math-bold-fraktur"]{#1}}%
37 % }
38
39 % \CustomizeMathJax{\let\symbfsfup\mathbf}% not sans
40 \CustomizeMathJax{\newcommand{\symbfsfup}[1]{%
41 \mmlToken{mi}[mathvariant="bold-sans-serif"]{#1}}%
42 }
43
44 % \CustomizeMathJax{\let\symbfsfit\mathit}% not bold nor sans
45 \CustomizeMathJax{\newcommand{\symbfsfit}[1]{%
46 \mmlToken{mi}[mathvariant="sans-serif-bold-italic"]{#1}}%
47 }
48
49 % Duplicates below are commented out.
50 \CustomizeMathJax{\let\symup\mathrm}
51 \CustomizeMathJax{\let\symbf\mathbf}% \symbfup defined above
52 \CustomizeMathJax{\let\symit\mathit}
53 % \CustomizeMathJax{\let\symbfit\mathit}% not bold
54 \CustomizeMathJax{\let\symsf\mathsf}
55 % \CustomizeMathJax{\let\symbfsfup\mathbf}% not sans
56 % \CustomizeMathJax{\let\symsfit\mathit}% not sans
57 % \CustomizeMathJax{\let\symbfsfit\mathit}% not bold nor sans
58 \CustomizeMathJax{\let\symtt\mathtt}
59 % \CustomizeMathJax{\let\sybbb\mathbb}
60 % \CustomizeMathJax{\let\sybbbit\mathbb}% not italic
61 % \CustomizeMathJax{\let\symscr\mathscr}
62 % \CustomizeMathJax{\let\sybfscr\mathscr}% not bold
63 % \CustomizeMathJax{\let\symfrac\mathfrak}
64 \CustomizeMathJax{\let\symbffrac\mathbffrac}
65 \end{warpMathJax}

```

---

File 465 **lwarp-units.sty**

§ 568      Package **units**
*(Emulates or patches code by AXEL REICHERT.)*

Pkg    units    units is patched for use by lwarp.

Values are not styled by css, and take the style of the surrounding HTML text.

Units are styled according to the print version, so they will be forced to upright roman in HTML if the print version does so. It may be necessary to adjust the document's body css to match the print version.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{units}[1998/08/04]

2 \DeclareRobustCommand*\LWR@HTML@unit}[2][]{%
3 \ifblank{#1}%
4 {\LWR@textcurrentfont{#2}}%
5 {%
6 #1%
7 \ifthenelse{\boolean{B@UnitsLoose}}{~}{\,%
8 \LWR@textcurrentfont{#2}}%
9 }%
10 }
11 \LWR@formatted{unit}

12 \DeclareRobustCommand*\LWR@HTML@unitfrac}[3][]{%
13 \ifblank{#1}%
14 {%
15 \nicefrac{#2}{#3}%
16 }%
17 {%
18 #1%
19 \ifthenelse{\boolean{B@UnitsLoose}}{~}{\,%
20 \nicefrac{#2}{#3}}%
21 }%
22 }
23
24 \LWR@formatted{unitfrac}

```

For Mathjax:

```

25 \begin{warpMathJax}
26 \CustomizeMathJax{\newcommand{\unit}[2][{}]{#1 #2}}
27 \CustomizeMathJax{\newcommand{\unitfrac}[3][{}]{#1 #2/#3}}
28 \end{warpMathJax}

```

---

File 466 **lwarp-unitsdef.sty**

§ 569      Package **unitsdef**

*(Emulates or patches code by PATRICK HAPPEL.)*

Pkg    unitsdef    unitsdef is patched for use by lwarp.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{unitsdef}[2005/01/04]

2 \renewcommand{\unitvaluesep}{\,}
3
4 \renewcommand{\unittimes}{\@@setunitsepfalse\HTMLUnicode{22c5}}% \cdot
5
6 \renewunit{\arcmin}{%
7 \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}%
8 {\ensuremath{{}^{\prime}}}%
9 {\HTMLUnicode{2032}}% prime
10 }
11
12 \renewunit{\arcsec}{%
13 \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}%
14 {\ensuremath{{}^{\prime\prime}}}%
15 {\HTMLUnicode{2033}}% dbl prime
16 }
17
18 \renewrobustcmd{\SI}[2]{%
19 \begingroup%
20 \let\unit@@xspace\relax%
21 \unitSIdef\selectfont%
22 \LWR@textcurrentfont{#1#2}% lwarp
23 \endgroup%
24 }
```

---

File 467 **lwarp-upref.sty**

§ 570      Package **upref**

Pkg    upref    upref is ignored.

**for HTML output:**    Discard all options for lwarp-upref:

```

1 \LWR@ProvidesPackageDrop{upref}[2007/03/14]
```

---

File 468 **lwarp-url.sty**

§ 571 Package **url**

*(Emulates or patches code by DONALD ARSENEAU.)*

Pkg url url is patched for use by lwarp.

**for HTML output:**

```

1 \LetLtxMacro\LWR@url@orig@url\LWR@url
2
3 \LWR@ProvidesPackagePass{url}[2013/09/16]

4 \newcommand*\LWR@HTML@Url@FormatString}{%
5 \expandafter\LWR@url@orig@url\expandafter{\Url@String}%
6 }
7 \LWR@formatted{Url@FormatString}
```

---

File 469 **lwarp-ospace.sty**

§ 572 Package **ospace**

Pkg ospace ospace is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{ospace}[2016/11/06]
```

---

File 470 **lwarp-varioref.sty**

§ 573 Package **varioref**

*(Emulates or patches code by FRANK MITTELBACH.)*

Pkg varioref varioref is patched for use by lwarp.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{varioref}[2020/01/23]
```

Page-related output is not used for HTML output.

```

2 \def\reftextfaceafter {\unskip}%
3 \def\reftextfacebefore{\unskip}%
4 \def\reftextafter {\unskip}%
5 \def\reftextbefore {\unskip}%
6 \def\reftextcurrent {\unskip}%
7 \def\reftextfaraway#1{\unskip}%
8 \def\reftextpagerange#1#2{\unskip}%
```

File 471 **lwarp-verse.sty**

§ 574 Package **verse**

(Emulates or patches code by PETER WILSON.)

Pkg verse **verse** is supported and patched by lwarp.

for HTML output: Pass all options for lwarp-verse:

```
1 \LWR@ProvidesPackagePass{verse}[2009/09/04]
```

When using **verse** or **memoir**, always place a `\\` after each line.

`\attrib` The documentation for the **verse** and **memoir** packages suggest defining an `\attrib` command, which may already exist in current documents, but it will only work for print output. **lwarp** provides `\attribution`, which works for both print and HTML output. To combine the two so that `\attrib` is used for print and `\attribution` is used for HTML:

```
\begin{warpHTML}
\let\attrib\attribution
\end{warpHTML}
```

Len `\vleftskip` These lengths are used by **verse** and **memoir** to control the left margin, and they may already be set by the user for print output. New lengths `\HTMLvleftskip` and `\HTMLleftmargin` are provided to control the margins in HTML output. These new lengths may be set by the user before any **verse** environment, and persist until they are manually changed again. One reason to change `\HTMLleftmargin` is if there is a wide `\flagverse` in use, such as the word “Chorus”, in which case the value of `\HTMLleftmargin` should be set to a wide enough length to contain “Chorus”. The default is wide enough for a stanza number.

⚠ spacing Horizontal spacing relies on *pdftotext*’s ability to discern the layout (`-layout` option) of the text in the HTML-tagged PDF output. For some settings of `\HTMLleftmargin` or `\HTMLvleftskip` the horizontal alignment may not work out exactly, in which case a label may be shifted by one space. During translation to HTML, the stanza numbers are kept out of the left margin, which would have caused *pdftotext* to shift everything over.

⚠ verse margin

Env verse The verse environment will be placed inside a HTML `<pre>`.

```
2 \AfterEndPreamble{
3 \LWR@traceinfo{Patching verse.}
```

At the beginning of the verse environment:

```
4 \AtBeginEnvironment{verse}
5 {%
```

Use the original list environment inside a <pre> to attempt to preserve formatting.

```
6 \LWR@restoreoriglists%
```

|     |                         |                                                                                                                                                                                                                                                                         |
|-----|-------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Pkg | verse                   | The <b>verse</b> or <b>memoir</b> packages can place stanza numbers to the left with their <code>\flagverse</code> command. The following does not allow them to go into the left margin, which would cause <i>pdfcrop</i> to crop the entire page further to the left. |
| Cls | memoir                  |                                                                                                                                                                                                                                                                         |
|     | <code>\flagverse</code> |                                                                                                                                                                                                                                                                         |
| Len | <code>\vleftskip</code> | <pre> 7 \ifdef{\vleftskip}{% 8 \setlength{\vleftskip}{\HTMLvleftskip} 9 \setlength{\leftmargini}{\HTMLleftmargini} 10 }{} 11 \LWR@forcenewpage 12 \LWR@atbeginverbatim{3}{verse}% 13 } </pre>                                                                           |

After the end of the verse environment, which places the <pre> tag at the regular left margin:

```

14 \AtEndEnvironment{verse}{%
15 \leavevmode%
16 \LWR@afterendverbatim{1}%
17 }

```

Patch to place poemtitle inside an HTML <span> of class poemtitle:

```

18 \ifdef{\poemtitle}{
19 \DeclareDocumentCommand{\@vstypeptitle}{m}{%
20 \space{\beforepoemtitleskip}%
21 {\InlineClass{poemtitle}{\poemtitlefont #1}\par}%
22 \space{\afterpoemtitleskip}%
23 }
24 }{}
25
26 \LWR@traceinfo{Finished patching verse.}
27 }% AfterEndPreamble

```

---

File 472 **lwarp-verseonotes.sty**

§ 575      Package **verseonotes**

(Emulates or patches code by NORMAN GRAY.)

Pkg    verseonotes    **verseonotes** is emulated.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{verseonotes}[2019/07/06]

2 \newcommand{\versonote}[1]{\marginpar{#1}}
3 \newdimen\versotextwidth
4 \newdimen\versoleftmargin
5 \newcommand*\versolayout{}

```

In case the user changed the page number before loading `versionotes`:

```
6 \setcounter{page}{1}
```

---

File 473 **lwarp-vertbars.sty**

§ 576 Package **vertbars**

(Emulates or patches code by PETER WILSON.)

Pkg vertbars **vertbars** is emulated.

**for HTML output:**

```
1 \LWR@ProvidesPackageDrop{vertbars}[2010/11/27]

2 \newlength{\barwidth}
3 \setlength{\barwidth}{0.4pt}
4 \newlength{\barspace}
5 \setlength{\barspace}{1em}
6
7 \newenvironment{vertbar}{
8 \LWR@forcenewpage
9 \LWR@forceminwidth{\barwidth}
10 \begin{BlockClass}[%
11 border-left: \LWR@printlength{\LWR@atleastonept} solid black ; %
12 padding-left: \LWR@printlength{\barspace}%
13]{vertbar}
14 }{
15 \end{BlockClass}
16 }
```

---

File 474 **lwarp-vmargin.sty**

§ 577 Package **vmargin**

Pkg vmargin **vmargin** is ignored.

**for HTML output:**

```
1 \LWR@ProvidesPackageDrop{vmargin}[2004/07/15]

2 \newcommand*\LWRVM@customsize[2]{}
3 \newcommand*\setpapersize[2][\ifstrequal{#2}{custom}{\LWRVM@customsize}{}
4 \newcommand*\setmargins[8]{}
5 \newcommand*\setmarginsrb[8]{}
6 \newcommand*\setmargnohf[4]{}
7 \newcommand*\setmargnohfrb[4]{}
8 \newcommand*\setmarg[4]{}
9 \newcommand*\setmargrb[4]{}
10 \newlength{\PaperWidth}
11 \setlength{\PaperWidth}{8.5in}
12 \newlength{\PaperHeight}
```

---

```

13 \setlength{\PaperHeight}{11in}
14 \newif\ifLandscape

```

---

File 475 **lwarp-vowel.sty**

§ 578     Package **vowel**

*(Emulates or patches code by FUKUI REI.)*

Pkg    vowel    vowel is patched for use by lwarp.

This package has been tested with *pdf<sub>l</sub>atex* and the Type 1 TIPA fonts using the following package load sequence:

```

\usepackage[T3,T1]{fontenc}
\usepackage[utf8]{inputenc}
\usepackage[noenc]{tipa}
\usepackage{vowel}

```

**for HTML output:**    1 \LWR@ProvidesPackagePass{vowel}[2002/08/08]

```

2 \renewenvironment{vowel}[1][
3 {%
4 \begin{lateximage}[-vowel-~\PackageDiagramAltText]%
5 \@vowel[#1]%
6 }
7 {%
8 \@@vowel%
9 \end{lateximage}%
10 }

```

---

File 476 **lwarp-vpe.sty**

§ 579     Package **vpe**

Pkg    vpe    vpe is ignored.

**for HTML output:**    1 \LWR@ProvidesPackageDrop{vpe}[2012/04/18]

---

File 477 **lwarp-vwcol.sty**

§ 580     Package **vwcol**

*(Emulates or patches code by WILL ROBERTSON.)*

Pkg    vwcol    vwcol is patched for use with lwarp.

The width option is ignored. All vwcol environments adjust to 1–3 equal-width columns, depending on the width of the browser window.

The remaining options are supported, except for lines and maxrecursion.

**for HTML output:** 1 \LWR@ProvidesPackagePass{vwcol}[2015/02/10]

Factored from \vwcol. Each is given a style tag to append to the final style.

```
\LWR@vwcol@addrule {\langle style tag \rangle}
2 \newcommand*{\LWR@vwcol@addrule}[1]{%
3 \appto{\LWR@vwcolstyle}{%
4 #1: %
5 \LWR@printlength{\vwcol@rule} solid \LWR@origpound\LWR@vwcol@rulecolor ; %
6 }%
7 }
```

```
\LWR@vwcol@addrule {\langle style tag \rangle}
8 \newcommand*{\LWR@vwcol@addgap}[1]{%
9 \appto{\LWR@vwcolstyle}{%
10 #1: %
11 \LWR@printlength{\vwcol@sep} ; %
12 }%
13 }
```

Env vwcol {\langle key/values \rangle}

Redefine the environment to add a HTML style. The style is built depending on the required options.

```
14 \renewenvironment*{vwcol}[1][1]{%
```

New paragraph, and process the options:

```
15 \LWR@stoppars%
16 \vwcolsetup{#1}%
```

Begin with no style:

```
17 \newcommand*{\LWR@vwcolstyle}{{}
```

presep and postsep are created with HTML margins:

```
18 \if@vwcol@presep
19 \appto{\LWR@vwcolstyle}{margin-left: 1em ; padding-left: .5em ; }
20 \fi
21 \if@vwcol@postsep
22 \appto{\LWR@vwcolstyle}{margin-right: 1em ; padding-right: .5em ; }
23 \fi
```

sep becomes column-gap:

```
24 \ifdimgreater{\vwcol@sep}{1sp}{
25 \LWR@vwcol@addgap{column-gap}
26 \LWR@vwcol@addgap{-moz-column-gap}
27 \LWR@vwcol@addgap{-webkit-column-gap}
28 }{}
```

rule become column-rule, while prerule and postrule become HTML borders:

```

29 \convertcolorspec{named}{\vwcol@rulecol}{HTML}\LWR@vwcol@rulecolor%
30 \ifdimgreater{\vwcol@rule}{0pt}{
31 \ifdimless{\vwcol@rule}{1pt}{
32 \setlength{\vwcol@rule}{1pt}
33 }{}
34 \LWR@vwcol@addrule{column-rule}
35 \LWR@vwcol@addrule{-moz-column-rule}
36 \LWR@vwcol@addrule{-webkit-column-rule}
37 \if@vwcol@prerule\LWR@vwcol@addrule{border-left}\fi
38 \if@vwcol@postrule\LWR@vwcol@addrule{border-right}\fi
39 }{}

```

Each of the justify options becomes a text-align. Indentation is added where appropriate.

```

40 \ifdefequal{\vwcol@justify}{\RaggedRight}{
41 \appto{\LWR@vwcolstyle}{text-align: left ; }
42 \ifdimgreater{\vwcol@parindent}{0pt}{
43 \appto{\LWR@vwcolstyle}{%
44 text-indent: \LWR@printlength{\vwcol@parindent} ; %
45 }
46 }{}
47 }{}

48 \ifdefequal{\vwcol@justify}{\RaggedLeft}{
49 \appto{\LWR@vwcolstyle}{text-align: right ; }
50 }{}

51 \ifdefequal{\vwcol@justify}{\Centering}{
52 \appto{\LWR@vwcolstyle}{text-align: center ; }
53 }{}

54 \ifdefequal{\vwcol@justify}{\justifying}{
55 \appto{\LWR@vwcolstyle}{text-align: justify ; }
56 \ifdimgreater{\vwcol@parindent}{0pt}{
57 \appto{\LWR@vwcolstyle}{%
58 text-indent: \LWR@printlength{\vwcol@parindent} ; %
59 }
60 }{}
61 }{}

```

Create the <div> with the assembled style:

```

62 \BlockClass[\LWR@vwcolstyle]{multicols}
63 }

```

When the environment ends:

```

64 {
65 \endBlockClass
66 \LWR@startpars
67 }

```

---

File 478 **lwarp-wallpaper.sty**

§ 581      Package **wallpaper**

*(Emulates or patches code by MICHAEL H.F. WILKINSON.)*

Pkg    wallpaper    **wallpaper** is ignored.

**for HTML output:**    1 \LWR@ProvidesPackageDrop{wallpaper}[2005/01/18]

```

2 \newcommand*{\CenterWallPaper}[2]{}
3 \newcommand*{\ThisCenterWallPaper}[2]{}
4 \newcommand*{\TileWallPaper}[3]{}
5 \newcommand*{\ThisTileWallPaper}[3]{}
6 \newcommand*{\TileSquareWallPaper}[2]{}
7 \newcommand*{\ThisTileSquareWallPaper}[2]{}
8 \newcommand*{\ULCornerWallPaper}[2]{}
9 \newcommand*{\ThisULCornerWallPaper}[2]{}
10 \newcommand*{\LLCornerWallPaper}[2]{}
11 \newcommand*{\ThisLLCornerWallPaper}[2]{}
12 \newcommand*{\URCornerWallPaper}[2]{}
13 \newcommand*{\ThisURCornerWallPaper}[2]{}
14 \newcommand*{\LRCornerWallPaper}[2]{}
15 \newcommand*{\ThisLRCornerWallPaper}[2]{}
16 \newcommand*{\ClearWallPaper}{}
17 \newlength{\wpXoffset}
18 \newlength{\wpYoffset}

```

---

File 479 **lwarp-watermark.sty**

§ 582      Package **watermark**

*(Emulates or patches code by ALEXANDER I. ROZHENKO.)*

Pkg    watermark    **watermark** is ignored.

**for HTML output:**    1 \LWR@ProvidesPackageDrop{watermark}[2004/12/09]

```

2 \newcommand{\watermark}[1]{}
3 \newcommand{\leftwatermark}[1]{}
4 \newcommand{\rightwatermark}[1]{}
5 \newcommand{\thiswatermark}[1]{}
6 \newcommand{\thispageheading}[1]{}

```

---

File 480 **lwarp-widetable.sty**

§ 583      Package **widetable**

*(Emulates or patches code by CLAUDIO BECCARI.)*

Pkg    widetable    **widetable** is emulated.

**for HTML output:**    1 \LWR@ProvidesPackageDrop{widetable}[2019-06-25]

2 \newenvironment{widetable}{\begin{tabular\*}}{\end{tabular\*}}

---

File 481 **lwarp-widows-and-orphans.sty**

§ 584      Package **widows-and-orphans**

Pkg    widows-and-orphans    **widows-and-orphans** is ignored.

**for HTML output:**    1 \LWR@ProvidesPackageDrop{widows-and-orphans}[2018/09/01]

2 \NewDocumentCommand\Wa0setup{m}{}  
 3 \NewDocumentCommand\Wa0parameters{}{}  
 4 \NewDocumentCommand\Wa0ignorenext{}{}

---

File 482 **lwarp-witharrows.sty**

§ 585      Package **witharrows**

*(Emulates or patches code by F. PANTIGNY.)*

Pkg    witharrows    **witharrows** is patched for use by lwarp. Emulation is provided for MATHJAX.

**for HTML output:**    1 \LWR@ProvidesPackagePass{witharrows}[2019/12/27]

2 \begin{warpHTML}  
 3 \makeatletter  
 4 \ifbool{mathjax}{  
 5    % For the hidden print version in the HTML:  
 6    \newcommand{\Arrow}[2][{}]{  
 7    \newcommand{\unicode}[1]{  
 8    \NewDocumentEnvironment { DispWithArrows } { ! d < > ! 0 { } +b}  
 9    {  
 10        \IfValueTF{#1}{  
 11            \begin{displaymath}  
 12            #1 \left\lbrace

```

13 \begin{align}
14 #3
15 \end{align}
16 \right .
17 \end{displaymath}
18 }{
19 \begin{displaymath}
20 \begin{align}
21 #3
22 \end{align}
23 \end{displaymath}
24 }
25 }
26 {}
27 \NewDocumentEnvironment { DispWithArrows* } { ! d < > ! 0 { } } +b{
28 {
29 \IfValueTF{#1}{
30 \begin{displaymath}
31 #1 \left\lbracket
32 \begin{align*}
33 #3
34 \end{align*}
35 \right .
36 \end{displaymath}
37 }{
38 \begin{displaymath}
39 \begin{align*}
40 #3
41 \end{align*}
42 \end{displaymath}
43 }
44 }
45 {}
46 }{
47 % If not MathJax, use SVG images.
48 \BeforeBeginEnvironment{WithArrows}{\global\booltrue{LWR@unknownmathsize}}
49 \BeforeBeginEnvironment{DispWithArrows}{%
50 \begin{BlockClass}{displaymathnumbered}%
51 \begin{lateximage}%
52 }
53 \AfterEndEnvironment{DispWithArrows}{\end{lateximage}\end{BlockClass}}
54 \BeforeBeginEnvironment{DispWithArrows*}{%
55 \begin{BlockClass}{displaymath}%
56 \begin{lateximage}%
57 }
58 \AfterEndEnvironment{DispWithArrows*}{\end{lateximage}\end{BlockClass}}
59 }
60 \makeatother
61 \end{warpHTML}
62
63 \begin{warpMathJax}
64 \CustomizeMathJax{\newenvironment{WithArrows}[1][]{\begin{aligned}}{\end{aligned}}}}
65 % Unable to make a sized box.
66 \CustomizeMathJax{\newcommand{\Arrow}[2][]{\&\Large\unicode{x2938}}~\textit{#2}}{}}
67 \end{warpMathJax}

```

---

File 483 **lwarp-wrapfig.sty**

§ 586      Package **wrapfig**
*(Emulates or patches code by DONALD ARSENEAU.)*

Pkg wrapfig **wrapfig** is emulated.

```

for HTML output: 1 \LWR@ProvidesPackageDrop{wrapfig}[2003/01/31]

2 \newcommand*{\LWR@wrapposition}{}
3
4 \newcommand*{\LWR@subwrapfigure}[2]{%
5 \renewcommand*{\LWR@wrapposition}{}%
6 \ifthenelse{%
7 \equal{#1}{r}\OR\equal{#1}{R}\OR%
8 \equal{#1}{o}\OR\equal{#1}{O}%
9 }%
10 {\renewcommand*{\LWR@wrapposition}{float:right}}%
11 {\renewcommand*{\LWR@wrapposition}{float:left}}%
12 \setlength{\LWR@templengthone}{#2}%
13 \LWR@BlockClassWP{%
14 width:\LWR@printlength{\LWR@templengthone}; \LWR@wrapposition; %
15 margin:10pt%
16 }%
17 {%
18 width:\LWR@printlength{\LWR@templengthone}; \LWR@wrapposition; %
19 }%
20 {marginblock}%

21 \setlength{\linewidth}{\LWR@templengthone}%
22 }
23
24
25 \NewDocumentEnvironment{wrapfigure}{o m o m}
26 {%
27 \begin{LWR@setvirtualpage}*%
28 \LWR@subwrapfigure{#2}{#4}%
29 \renewcommand*{\@capttype}{figure}%
30 }
31 {%
32 \endLWR@BlockClassWP%
33 \end{LWR@setvirtualpage}%
34 }
35
36
37 \NewDocumentEnvironment{wraptable}{o m o m}
38 {%
39 \begin{LWR@setvirtualpage}*%
40 \LWR@subwrapfigure{#2}{#4}%

```

---

```

41 \renewcommand*{\@capttype}{table}%
42 }
43 {%
44 \endLWR@BlockClassWP%
45 \end{LWR@setvirtualpage}%
46 }
47
48
49 \NewDocumentEnvironment{wrapfloat}{m o m o m}
50 {%
51 \begin{LWR@setvirtualpage}*%
52 \LWR@subwrapfigure{#3}{#5}%
53 \renewcommand*{\@capttype}{#1}%
54 }
55 {%
56 \endLWR@BlockClassWP%
57 \end{LWR@setvirtualpage}%
58 }
59
60 \newlength{\wrapoverhang}

```

---

File 484 **lwarp-xbmks.sty**

§ 587 Package **xbmks**

Pkg xbmks xbmks is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{xbmks}[2018/07/04]

```

2 \newcommand{\xbmksetup}[1]{}
3 \NewDocumentCommand{\pdfbookmarkx}{o m o m}{}
4 \NewDocumentCommand{\currentpdfbookmarkx}{m o m}{}
5 \NewDocumentCommand{\subpdfbookmarkx}{m o m}{}
6 \NewDocumentCommand{\belowpdfbookmarkx}{m o m}{}

```

---

File 485 **lwarp-xcolor.sty**

§ 588 Package **xcolor**

*(Emulates or patches code by DR. UWE KERN.)*

Pkg xcolor xcolor is supported by lwarp.

### § 588.1 Limitations

|                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|--------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <code>\colorboxBlock</code> and <code>\fcolorboxBlock</code> | <code>\colorboxBlock</code> and <code>\fcolorboxBlock</code> are provided for increased HTML compatibility, and they are identical to <code>\colorbox</code> and <code>\fcolorbox</code> in print mode. In HTML mode they place their contents into a <code>&lt;div&gt;</code> instead of a <code>&lt;span&gt;</code> . These <code>&lt;div&gt;</code> s are set to display: inline-block so adjacent <code>\colorboxBlock</code> s appear side-by-side in HTML, although text is placed before or after each. |
|                                                              | Print-mode definitions for <code>\colorboxBlock</code> and <code>\fcolorboxBlock</code> are created by <code>lwarp</code> 's core if <code>xcolor</code> is loaded.                                                                                                                                                                                                                                                                                                                                            |
| <code>background: none</code>                                | <code>\fcolorbox</code> and <code>\fcolorboxBlock</code> allow a background color of none, in which case only the frame is drawn, which can be useful for HTML.                                                                                                                                                                                                                                                                                                                                                |
| color support                                                | Color definitions, models, and mixing are fully supported without any changes required.                                                                                                                                                                                                                                                                                                                                                                                                                        |
| colored tables                                               | <code>\rowcolors</code> is supported, except that the optional argument is ignored so far.                                                                                                                                                                                                                                                                                                                                                                                                                     |
| colored text and boxes                                       | <code>\textcolor</code> , <code>\colorbox</code> , and <code>\fcolorbox</code> are supported.                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <code>\color</code> and <code>\pagecolor</code>              | <code>\color</code> and <code>\pagecolor</code> are ignored. Use CSS or <code>\textcolor</code> where possible.                                                                                                                                                                                                                                                                                                                                                                                                |

### § 588.2 xcolor definitions: location and timing

The `lwarp` core and its `lwarp-xcolor` package are tightly integrated to allow comparable results for print, HTML, and print inside an HTML `lateximage`. This requires a number of definitions and redefinitions depending on whether each of `xcolor` and `lateximage` is being used, and whether print or HTML is being generated. Some of these actions are one-time when `xcolor` is loaded, and others are temporary as `lateximage` is used.

**When `xcolor` is loaded in print mode:** No special actions are taken at the time that `xcolor` is loaded in print mode, but see `\AtBeginDocument` below.

**When `lwarp-xcolor` is loaded in HTML mode:** `xcolor`'s original definitions are saved for later restoration. `\LWR@restoreorigformatting` is appended to restore these definitions for use inside a `lateximage`. New HTML-mode definitions are created for `\textcolor`, `\pagecolor`, `\nopagecolor`, `\colorbox`, `\colorboxBlock`, `\fcolorbox`, `\fcolorboxBlock`, and `fcolorminipage`.

**`\AtBeginDocument` in print or HTML mode:** See Section 86. If `xcolor` has been loaded, the print-mode `\fcolorbox` is modified to accept a background color of none, and additional definitions are created for `lwarp`'s new macros print-mode macros `\colorboxBlock`, `\fcolorboxBlock`, and `fcolorminipage`. The HTML versions of these macros will already have been created by `lwarp-xcolor` if it has been loaded.

For use inside an HTML `lateximage`, `\LWR@restoreorigformatting` is appended to temporarily set these functions to their print-mode versions.

**In a `lateximage` in HTML mode:** `\LWR@restoreorigformatting` temporarily restores the print-mode definitions of `xcolor`'s functions. See `\LWR@restoreorigformatting` on page 532.

`\color:`

**Print:** Used as-is.

**HTML:** Ignored by *pdftotext*, and will not appear.

**HTML lateximage:** Colors will appear in a lateximage.

**\textcolor:**

**Print:** Used as-is.

**HTML:** Redefined by lwarp-xcolor, page 1137.

**HTML lateximage:** Remembers and reuses the print version.

**\pagecolor:**

**Print:** Used as-is.

**HTML:** Ignored.

**HTML lateximage:** Colors will be picked up in a lateximage.

**\nopagecolor:**

**Print:** Used as-is.

**HTML:** Ignored.

**HTML lateximage:** Colors will be picked up in a lateximage.

**\colorbox:**

**Print:** Used as-is.

**HTML:** Redefined by lwarp-xcolor, page 1138.

**HTML lateximage:** Remembers and reuses the print version.

**\colorboxBlock:**

**Print:** Becomes \colorbox.

**HTML:** Newly defined by lwarp-xcolor to use a <div>, page 1138.

**HTML lateximage:** Remembers and reuses the print version \colorbox.

**\fcolorbox:**

**Print:** Modified to allow a background of none.

\LWR@print@fcolorbox at section 86

**HTML:** Redefined by lwarp-xcolor, page 1138.

**HTML lateximage:** Remembers and reuses the print version.

**\fcolorboxBlock:**

**Print:** Becomes \fcolorbox. Section 86

**HTML:** Newly defined by lwarp-xcolor to use a <div>, page 1139.

**HTML lateximage:** Remembers and reuses the print version \fcolorbox.

**fcolorminipage:**

**Print:** Newly defined in the lwarp core.

LWR@print@fcolorminipage at section 86

**HTML:** Newly defined by lwarp-xcolor, page 1140.

**HTML lateximage:** Uses the print version.

**\boxframe:**

**Print:** Used as-is.

**HTML:** Redefined by lwarp-xcolor, page 1141.

**HTML lateximage:** Remembers and reuses the print version.

### § 588.3 Package loading

**for HTML output:**

```
1 \LWR@ProvidesPackagePass{xcolor}[2016/05/11]
2 \begin{warpHTML}
```

### § 588.4 Remembering and restoring original definitions

Remember the following print-mode actions to be restored when inside a lateximage environment:

```
3 \LetLtxMacro\LWR@print@pagecolor\pagecolor
4 \LetLtxMacro\LWR@print@nopagecolor\nopagecolor
```

**\LWR@restoreorigformatting** Inside a lateximage the following gets restored to their print-mode actions:

```
5 \appto\LWR@restoreorigformatting{%
6 \LetLtxMacro\pagecolor\LWR@print@pagecolor%
7 \LetLtxMacro\nopagecolor\LWR@print@nopagecolor%
8 }
```

### § 588.5 \normalcolor

**\normalcolor**

```
9 \DeclareRobustCommand{\LWR@HTML@normalcolor}{\color{black}}%
10
11 \LWR@formatted{normalcolor}
```

### § 588.6 HTML color style

**\LWR@findcurrenttextcolor** Sets \LWR@tempcolor to the current color.

```
12 \renewcommand*{\LWR@findcurrenttextcolor}{%
13 \protect\colorlet{\LWR@current@color}{.}%
14 \protect\convertcolorspec{named}{\LWR@current@color}{HTML}\LWR@tempcolor%
15 }
```

Prints a color style for the current color.

**\LWR@currenttextcolorstyle**

```
16 \newcommand*{\LWR@currenttextcolorstyle}{%
17 \LWR@findcurrenttextcolor%
18 \ifdefstring{\LWR@tempcolor}{000000}%
19 {}%
20 {color: \LWR@origpound\LWR@tempcolor ; }%
21 }
```

`\LWR@textcurrentcolor`  $\{\langle text \rangle\}$  Like `\textcolor` but uses the current `\color` instead.

```

22 \DeclareDocumentCommand{\LWR@textcurrentcolor}{m}{%
23 \begingroup%
24 \LWR@FBcancel%
25 \LWR@findcurrenttextcolor%
26 \InlineClass[color:\LWR@origpound\LWR@tempcolor]{textcolor}{%
27 \renewcommand*{\LWR@currenttextcolor}{\LWR@origpound\LWR@tempcolor}%
28 #1%
29 }%
30 \endgroup%
31 }
```

`\LWR@colorstyle`  $\{\langle 1: model \rangle\} \{\langle 2: color \rangle\}$

For a color style, prints the color converted to HTML colors.

```

32 \NewDocumentCommand{\LWR@colorstyle}{m m}{%
33 \begingroup%
34 \LWR@FBcancel%
```

Use the `xcolor` package to convert to an HTML color space:

```

35 \convertcolorspec{#1}{#2}{HTML}\LWR@tempcolor%
```

Print the converted color:

```

36 \LWR@origpound\LWR@tempcolor%
37 \endgroup%
38 }
```

`\LWR@backgroundcolor`  $[\langle model \rangle] \{\langle color \rangle\} \{\langle text \rangle\}$

Similar to `\textcolor`, but prints black text against a color background.

Converted into an HTML hex color span.

```

39 \NewDocumentCommand{\LWR@backgroundcolor}{O{named} m m}{%
40 \begingroup%
41 \LWR@FBcancel%
42 \InlineClass[background:\LWR@colorstyle{#1}{#2}]{backgroundcolor}{%
43 #3%
44 }%
45 \endgroup%
46 }
```

### § 588.7 HTML border

`\LWR@borderpadding` `{<colorstyle>} {<color>}` Prints the HTML attributes for a black border and padding. `\LWR@forceminwidth` must be used first in order to set the border width.

```
47 \newcommand*{\LWR@borderpadding}[2]{%
48 border:\LWR@printlength{\LWR@atleastonept} solid \LWR@colorstyle{#1}{#2} ; %
49 padding:\LWR@printlength{\fboxsep}%
50 }
```

### § 588.8 High-level macros

`\color` `[<model>] {<color>}`



The current `\color` is used by HTML rules and frames, but does not affect the current HTML text output, due to the lack of HTML states and scoping limitations. Use `\textcolor` if possible.

```
51 \NewDocumentCommand{\LWR@HTML@color}{o m}{%
52 \IfValueTF{#1}{%
53 \LWR@print@color[#1]{#2}%
54 \convertcolorspec{#1}{#2}{HTML}\LWR@tempcolor%
55 }{%
56 \LWR@print@color{#2}%
57 \convertcolorspec{named}{#2}{HTML}\LWR@tempcolor%
58 }%
59 \edef\LWR@currenttextcolor{\LWR@origpound\LWR@tempcolor}%
60 }
61
62 \LWR@formatted{color}
```

`\textcolor` `[<model>] {<color>} {<text>}`

Converted into an HTML hex color span.

```
63 \NewDocumentCommand{\LWR@HTML@textcolor}{o m m}{%
64 \begingroup%
65 \LWR@FBcancel%
66 \IfValueTF{#1}{%
67 \color[#1]{#2}%
68 }{%
69 \color{#2}%
70 }%
71 \InlineClass[color:\LWR@currenttextcolor]{textcolor}{#3}%
72 \endgroup%
73 }%
74
75 \LWR@formatted{textcolor}
```

`\pagecolor` `[<model>] {<color>}`

Ignored. Use CSS instead.

```
76 \renewcommand*{\pagecolor}[2][named]{}
```

`\nopagecolor` Ignored.

```
77 \renewcommand*{\nopagecolor}{}

```

`\colorbox` [*<model>*] {<color>} {<text>}

Converted into an HTML hex background color <span>.

```
78 \NewDocumentCommand{\LWR@HTML@colorbox}{O{named} m +m}{%
79 \begingroup%
80 \LWR@FBcancel%
81 \InlineClass[%
82 background:\LWR@colorstyle{#1}{#2} ; %
83 padding:\LWR@printlength{\fboxsep}%
84]{colorbox}{#3}%
85 \endgroup%
86 }
87
88 \AtBeginDocument{
89 \LWR@formatted{colorbox}
90 }
```

`\colorboxBlock` [*<model>*] {<color>} {<text>}

Converted into an HTML hex background color <div>.

```
91 \NewDocumentCommand{\LWR@HTML@colorboxBlock}{O{named} m +m}{%
92 \begingroup%
93 \LWR@FBcancel%

94 \LWR@stoppars%

95 \begin{BlockClass}[%
96 background:\LWR@colorstyle{#1}{#2} ; %
97 padding:\LWR@printlength{\fboxsep}%
98]{colorboxBlock}
99 #3
100 \end{BlockClass}%
101 \endgroup%
```

Prevent paragraph tags around horizontal white space until the start of the next paragraph:

```
102 \global\booltrue{\LWR@minipagethispar}%
103 }
104
105 \AtBeginDocument{
106 \LWR@formatted{colorboxBlock}
107 }
```

`\fcolorbox` [*<framemodel>*] {<framecolor>} [*<boxmodel>*] {<boxcolor>} {<text>}

Converted into a framed HTML hex background color span.

A background color of none creates a colored frame without a background color.

```

108 \NewDocumentCommand{\LWR@HTML@fcolorbox}{O{named} m O{named} m +m}{%
109 \LWR@traceinfo{HTML fcolorbox #2 #4}%
110 \begingroup%
111 \LWR@FBcancel%
112 \LWR@forceminwidth{\fboxrule}%
113 \ifthenelse{\equal{#4}{none}}{%
114 {% no background color
115 \InlineClass[%
116 \LWR@borderpadding{#1}{#2}%
117]{fcolorbox}{#5}%
118 }%
119 {% yes background color
120 \InlineClass[%
121 \LWR@borderpadding{#1}{#2} ; %
122 background:\LWR@colorstyle{#3}{#4}%
123]{fcolorbox}{#5}%
124 }%
125 \endgroup%
126 }
127
128 \AtBeginDocument{
129 \LWR@formatted{fcolorbox}
130 }
```

`\fcolorboxBlock` [*<framemodel>*] {<framecolor>} [*<boxmodel>*] {<boxcolor>} {<text>}

Converted into a framed HTML hex background color span.

A background color of none creates a colored frame without a background color.

```

131 \NewDocumentCommand{\LWR@HTML@fcolorboxBlock}{O{named} m O{named} m +m}{%
132 \LWR@traceinfo{HTML fcolorboxBlock #2 #4}%
133 \begingroup%
134 \LWR@FBcancel%
135 \LWR@forceminwidth{\fboxrule}%

136 \LWR@stoppars%

137 \ifthenelse{\equal{#4}{none}}{%
138 {% no background color
139 \begin{BlockClass}[%
140 \LWR@borderpadding{#1}{#2}%
141]{fcolorboxBlock}
142 #5
143 \end{BlockClass}%
144 }%
145 {% yes background color
```

```

146 \convertcolorspec{#3}{#4}{HTML}\LWR@tempcolortwo%
147 \begin{BlockClass}[%
148 background:\LWR@origpound\LWR@tempcolortwo\ ; %
149 \LWR@borderpadding{#1}{#2}%
150]{fcolorboxBlock}
151 #5
152 \end{BlockClass}%
153 }%
154 \endgroup%

```

Prevent paragraph tags around horizontal white space until the start of the next paragraph:

```

155 \global\booltrue{LWR@minipagethispar}%
156 \LWR@traceinfo{HTML fcolorboxBlock done}%
157 }
158
159 \AtBeginDocument{
160 \LWR@formatted{fcolorboxBlock}
161 }

```

Creates a framed HTML <div> around its contents.

A print-output version is defined in the lwarp core: section 86

```

\LWR@subfcolorminipage {<1:framemodel>} {<2:framecolor>} {<3:background tag>} {<4:height>}
162 \NewDocumentCommand{\LWR@subfcolorminipage}{m m m m}{%
163 \LWR@stoppars%
164 \begin{BlockClass}[%
165 #3%
166 \LWR@borderpadding{#1}{#2} ; %
167 \IfValueT{#4}{height:\LWR@printlength{\LWR@tempheight} ; }%
168 width:\LWR@printlength{\LWR@tempwidth}%
169]{fcolorminipage}%
170 }

```

```

Env fcolorminipage [<1:framemodel>] [<2:framecolor>] [<3:boxmodel>] [<4:boxcolor>] [<5:align>] [<6:height>]
[<7:inner-align>] [<8:width>]

```

```

171 \NewDocumentEnvironment{LWR@HTML@fcolorminipage}{0{named} m 0{named} m 0{c} o o m}
172 {%
173 \LWR@FBcancel%
174 \setlength{\LWR@tempwidth}{#8}%
175 \IfValueT{#6}{\setlength{\LWR@tempheight}{#6}}%
176 \LWR@forceminwidth{\fboxrule}%
177 \convertcolorspec{#1}{#2}{HTML}\LWR@tempcolor%
178 \ifthenelse{\equal{#4}{none}}%
179 {\LWR@subfcolorminipage{#1}{#2}{#6}}%
180 {%
181 \convertcolorspec{#3}{#4}{HTML}\LWR@tempcolortwo%

```

```

182 \LWR@subfcolorminipage{#1}{#2}%
183 {background:\LWR@origpound\LWR@tempcolortwo\ ;}%
184 {#6}%
185 }%
186 }%
187 {%
188 \end{BlockClass}%

```

Prevent paragraph tags around horizontal white space until the start of the next paragraph:

```

189 \global\booltrue{LWR@minipagethispar}%
190 }
191
192 \AtBeginDocument{
193 \LWR@formattedenv{fcolorminipage}
194 }

```

`\boxframe`  $\{\langle width \rangle\} \{\langle height \rangle\} \{\langle depth \rangle\}$

The depth is added to the height, but the box is not decended below by the depth. `\textcolor` is honored.

```

195 \newcommand*{\LWR@HTML@boxframe}[3]{%
196 {%
197 \setlength{\LWR@tempwidth}{#1}%
198 \setlength{\LWR@tempheight}{#2}%
199 \addtolength{\LWR@tempheight}{#3}%
200 \LWR@forceminwidth{\fboxrule}%
201 \LWR@findcurrenttextcolor%
202 \InlineClass[%
203 display:inline-block ; %
204 border:\LWR@printlength{\LWR@atleastonept} solid \LWR@currenttextcolor{} ; %
205 width:\LWR@printlength{\LWR@tempwidth} ; %
206 height:\LWR@printlength{\LWR@tempheight}%
207]{\boxframe}{}%
208 }%
209 }
210
211 \LWR@formatted{boxframe}

```

## § 588.9 Row colors

`\rowcolor`  $[\langle cmds \rangle] \{\langle startrow \rangle\} \{\langle odd color \rangle\} \{\langle even color \rangle\}$

```

212 \newcommand*{\LWR@xcolortempcolor}{}
213
214 \def\rowcolor[#1]#2#3#4%
215 {
216 \rownum=1%
217 \@rowcolorstrue%
218 \@ifxempty{#3}%
219 {\def\@oddrowcolor{\@norowcolor}}%

```

```

220 {%
221 \convertcolorspec{named}{#3}{HTML}\LWR@xcolortempcolor%
222 \edef\@oddrowcolor{%
223 \csdef{LWR@xcolorrowHTMLcolor}{\LWR@xcolortempcolor}%
224 }%
225 }%
226 \@ifxempty{#4}%
227 {\def\@evenrowcolor{\@norowcolor}}%
228 {%
229 \convertcolorspec{named}{#4}{HTML}\LWR@xcolortempcolor%
230 \edef\@evenrowcolor{%
231 \csdef{LWR@xcolorrowHTMLcolor}{\LWR@xcolortempcolor}%
232 }%
233 }%
234 \if@rowcmd
235 \def\@rowcolors
236 {%
237 % #1%
238 \if@rowcolors
239 % \noalign{%
240 % \relax\ifnum\rownum<#2\@norowcolor\else
241 % \ifodd\rownum\@oddrowcolor\else\@evenrowcolor\fi\fi%
242 % }%
243 \fi%
244 }%
245 \else
246 \def\@rowcolors
247 {%
248 \if@rowcolors
249 \ifnum\rownum<#2%
250 % \noalign{%
251 % \@norowcolor
252 % }
253 \else
254 % #1%
255 % \noalign{%
256 % \ifodd\rownum\@oddrowcolor\else\@evenrowcolor\fi%
257 % }%
258 \fi
259 \fi%
260 }%
261 \fi
262 \ignorespaces%
263 }

```

\@norowcolor Turns off color for this row.

```

264 \def\@norowcolor{%
265 \renewcommand{\LWR@xcolorrowHTMLcolor}{}%
266 }

```

\@rowc@lors Executed at the end of each row.

```

267 \def\@rowc@lors{%
268 % \noalign{%

```

```

269 \advance\rownum\@ne%
270 % }%
271 \@rowcolors%
272 }

273 \end{warpHTML}

```

---

## File 486 **lwarp-xexchangebar.sty**

### § 589 Package **xexchangebar**

Pkg xexchangebar xexchangebar is ignored

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{xexchangebar}[2017/08/03]
2 \LWR@origRequirePackage{lwarp-changebar}

```

---

## File 487 **lwarp-xellipsis.sty**

### § 590 Package **xellipsis**

*(Emulates or patches code by DONALD P. GOODMAN III.)*

Pkg xellipsis xellipsis is patched for use by lwarp.

When non-zero, each of the spaces is converted to an HTML thin unbreakable space.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{xellipsis}[2015/11/01]

2 \newcommand*{\LWR@xellipsespace}[1]{%
3 \ifdim#1=0pt\else%
4 \ifdim#1<\fontdimen2\font%
5 \,%
6 \else%
7 ~%
8 \fi%
9 \fi%
10 }
11
12 \def\xelip{%
13 \mbox{%
14 \LWR@xellipsespace{\xelipprebef}%
15 \xelipprechar%
16 \LWR@xellipsespace{\xelippreaft}%
17 \LWR@xellipsespace{\xelipbef}%
18 \xelipchar%
19 \xel@loopi = 1%
20 \loop\ifnum\xelipnum>\xel@loopi%
21 \advance\xel@loopi by1%
22 \LWR@xellipsespace{\xelipgap}%

```

---

```

23 \xeligchar%
24 \repeat%
25 \LWR@xellipsespace{\xeligpaft}%
26 \LWR@xellipsespace{\xeligpostbef}%
27 \xeligpostchar%
28 \LWR@xellipsespace{\xeligpostaft}%
29 }%
30 }%

```

---

File 488 **lwarp-xetexko-vertical.sty**

§ 591      Package **xetexko-vertical**

*(Emulates or patches code by DOHYUN KIM.)*

Pkg    xetexko-vertical    **xetexko-vertical** is patched for use by lwarp.

**for HTML output:**

```

1 \LWR@loadbefore{xetexko-vertical}
2
3 \LWR@ProvidesPackagePass{xetexko-vertical}[2018/04/06]

4 \renewcommand{\verticaltypesetting}{}
5 \renewenvironment{vertical}[1]{\BlockClass{verticalrl}}{\endBlockClass}
6 \renewenvironment{horizontal}[1]{\BlockClass{horizontaltb}}{\endBlockClass}
7 \renewcommand{\vertlatin}[1]{#1}

```


---

File 489 **lwarp-xfakebold.sty**

§ 592      Package **xfakebold**

*(Emulates or patches code by HERBERT VOSS.)*

Pkg    xfakebold    **xfakebold** is patched for use by lwarp, and additional underlying support is found in the lwarp core.

 **text mode**    **xfakebold** is only used in svg math and lateximages. Text mode is not set bold, but `\setBold` in text will be applied to any following svg math.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{xfakebold}[2020/06/24]

2 \newcommand*{\LWR@HTML@setBold}{\booltrue{\LWR@xfakebold}}
3 \LWR@formatted{setBold}
4
5 \newcommand*{\LWR@HTML@unsetBold}{\boolfalse{\LWR@xfakebold}}
6 \LWR@formatted{unsetBold}
7
8 \renewcommand*{\LWR@applyxfakebold}{%
9 \ifbool{\LWR@xfakebold}{\LWR@print@setBold}{\LWR@print@unsetBold}%
10 }

```

For MATHJAX, xfakebold is ignored.

```
11 \begin{warpMathJax}
12 \CustomizeMathJax{\newcommand{\setBold}[1][{}]}
13 \CustomizeMathJax{\newcommand{\unsetBold}{}]}
14 \end{warpMathJax}
```

---

File 490 **lwarp-xfrac.sty**

§ 593 Package **xfrac**

(Emulates or patches code by THE L<sup>A</sup>T<sub>E</sub>X3 PROJECT.)

Pkg xfrac Supported by adding xfrac instances, and emulated for MATHJAX.

for HTML output: 1 \LWR@ProvidesPackagePass{xfrac}[2018-08-23]



font size

In the user's document preamble, lwarp should be loaded after font-related setup. During HTML conversion, this font is used by lwarp to generate its initial PDF output containing HTML tags, later to be converted by *pdftotext* to a plain text file. While the text may be in any font which *pdftotext* can read, the math is directly converted into SVG images using this same user-selected font. xfrac below is set for the Latin Modern (lmr) font. If another font is used, it may be desirable to redefine \xfracHTMLfontsize with a different em size.

\sfrac [*instance*] {<num>} [<sep>] {<denom>}

A text-mode instance for the default font is provided below. The numerator and denominator formats are adjusted to encase everything in HTML tags. \scalebox is made null inside the numerator and denominator, since the HTML tags should not be scaled, and we do not want to introduce additional HTML tags for scaling.

In math mode, which will appear inside a lateximage, no adjustments are necessary.

for HTML & PRINT: 2 \begin{warpall}

\xfracHTMLfontsize User-redefinable macro which controls the font size of the fraction.

```
3 \newcommand*{\xfracHTMLfontsize}{.6em}
```

```
4 \end{warpall}
```

for HTML output: 5 \begin{warpHTML}

instances Instances of xfrac for various font choices:

Produce css for a small raised numerator and a small denominator.

Scaling is turned off so that *pdftotext* correctly reads the result.

```
6 \DeclareInstance{xfrac}{default}{text}{
```

```

7 numerator-format = {%
8 \begingroup%
9 \RenewDocumentCommand{\scalebox}{m o m}{##3}%
10 \InlineClass{numerator}{#1}\,%
11 \endgroup%
12 },
13 denominator-format = {%
14 \begingroup%
15 \RenewDocumentCommand{\scalebox}{m o m}{##3}%
16 \InlineClass{denominator}{#1}%
17 \endgroup%
18 },

```

For *pdftotext*, do not scale the text:

```

19 scaling = false
20 }
21
22 \DeclareInstance{xfrac}{lmr}{text}{
23 numerator-format = {%
24 \begingroup%
25 \RenewDocumentCommand{\scalebox}{m o m}{##3}%
26 \InlineClass{numerator}{#1}\,%
27 \endgroup%
28 },
29 denominator-format = {%
30 \begingroup%
31 \RenewDocumentCommand{\scalebox}{m o m}{##3}%
32 \InlineClass{denominator}{#1}%
33 \endgroup%
34 },

```

For *pdftotext*, do not scale the text:

```

35 scaling = false
36 }
37
38 \DeclareInstance{xfrac}{lmss}{text}{
39 numerator-format = {%
40 \begingroup%
41 \RenewDocumentCommand{\scalebox}{m o m}{##3}%
42 \InlineClass{numerator}{#1}\,%
43 \endgroup%
44 },
45 denominator-format = {%
46 \begingroup%
47 \RenewDocumentCommand{\scalebox}{m o m}{##3}%
48 \InlineClass{denominator}{#1}%
49 \endgroup%
50 },

```

For *pdftotext*, do not scale the text:

```

51 scaling = false
52 }

```

```

53
54 \DeclareInstance{xfrac}{lmtt}{text}{
55 numerator-format = {%
56 \begingroup%
57 \RenewDocumentCommand{\scalebox}{m o m}{##3}%
58 \InlineClass{numerator}{#1}\,%
59 \endgroup%
60 },
61 denominator-format = {%
62 \begingroup%
63 \RenewDocumentCommand{\scalebox}{m o m}{##3}%
64 \InlineClass{denominator}{#1}%
65 \endgroup%
66 },

```

For *pdftotext*, do not scale the text:

```

67 scaling = false
68 }

```

For MATHJAX:

```

69 \begin{warpMathJax}
70 \CustomizeMathJax{\newcommand{\LWRsfrac}[2][\frac]{\LWRsfracnumerator\!#1}_{#2}}
71 \CustomizeMathJax{\newcommand{\sfrac}[2][\frac]{\def\LWRsfracnumerator{#2}\LWRsfrac}}
72 \end{warpMathJax}

73 \end{warpHTML}

```

---


File 491 **lwarp-xltabular.sty**

§ 594     Package **xltabular**

(Emulates or patches code by ROLF NIEPRASCHK, HERBERT VOSS.)

Pkg xltabular xltabular is emulated by lwarp.

for HTML output: Relies on tabularx.

 **table numbering** At present, an xltabular without a caption or with only a \caption\* may be misnumbered in HTML, so it may be necessary to place at the end of the table:

```
\warpHTMLonly{\addtocounter{table}{-1}}
```

```

1 \RequirePackage{tabularx}
2 \RequirePackage{ltablex}
3
4 \LWR@ProvidesPackageDrop{xltabular}[2018/05/23]
5
6 \DeclareDocumentEnvironment{xltabular}{o m m}
7 {\longtable{#3}}
8 {\endlongtable}

```

---

File 492 **lwarp-xltxtra.sty**

§ 595      Package **xltxtra**

*(Emulates or patches code by WILL ROBERTSON, JONATHAN KEW.)*

Pkg   xltxtra   xltxtra is emulated.

**for HTML output:**    1 \LWR@ProvidesPackageDrop{xltxtra}[2016/01/21]

2 \RequirePackage{realscripts}  
 3 \RequirePackage{metalogo}  
 4 \newcommand\*\TeX@logo@spacing[6]{  
 5  
 6 \newcommand\*{\vfrac}[2]{%  
 7 \textsuperscript{#1}/\textsubscript{#2}%  
 8 }  
 9  
 10 \newcommand\namedglyph[1]{%  
 11    \@tempcnta=\XeTeXglyphindex " #1 "\relax  
 12    \ifnum\@tempcnta>0  
 13      \XeTeXglyph\@tempcnta  
 14    \else  
 15      \xxt@namedglyph@fallback{#1}%  
 16    \fi}  
 17  
 18 \newcommand\xxt@namedglyph@fallback[1]{[#1]}  
 19  
 20 \DeclareDocumentCommand{\showhyphens}{m}{}

---

File 493 **lwarp-xmpincl.sty**

§ 596      Package **xmpincl**

*(Emulates or patches code by MAARTEN SNEEP.)*

Pkg   xmpincl   xmpincl is ignored.

**for HTML output:**    Discard all options for lwarp-xmpincl:

1 \LWR@ProvidesPackageDrop{xmpincl}[2008/05/10]

2 \newcommand\*\includexp[1]{}

---

File 494 **lwarp-xpiano.sty**

§ 597      Package **xpiano**

*(Emulates or patches code by ENRICO GREGORIO.)*

Pkg   xpiano   xpiano is patched for use by lwarp.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{xpiano}

2 \ExplSyntaxOn
3 \NewDocumentCommand{\LWR@print@keyboard}{ O{}m }
4 {
5 \xpiano_keyboard:nn { #1 } { #2 }
6 }
7
8 \NewDocumentCommand{\LWR@HTML@keyboard}{ O{}m }
9 {
10 \begin{lateximage}*
11 [%
12 -xpiano-~\PackageDiagramAltText{}: \detokenize\expandafter{#2}%
13]
14 [\detokenize\expandafter{#1}]
15 \xpiano_keyboard:nn { #1 } { #2 }
16 \end{lateximage}
17 }
18 \ExplSyntaxOff
19
20 \LWR@formatted{keyboard}
```

---

File 495 **lwarp-xpinyin.sty**

§ 598      Package **xpinyin**

*(Emulates or patches code by SOBEN LEE.)*

Pkg   xpinyin   xpinyin is supported.

Pinyin is disabled for file names, the sideroc, and regular footnotes, but is left enabled for minipage footnotes, as per the print mode.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{xpinyin}[2019-04-07]
```

The original's boxes are not used, instead the contents are used with <ruby>, <rb>, and <rt> tags per modern HTML. Color is detected. ratio is ignored for *pdf<sub>totext</sub>* to work correctly. Extra spaces are placed inside the tags to allow line breaks in the HTML text.

```

2 \ExplSyntaxOn
3 \cs_new_protected_nopar:Npn \LWR@HTML@__xpinyin_make_pinyin_box:nnn #1#2#3
4 {
5 \color_group_begin: \color_ensure_current:
6 \l__xpinyin_pinyin_box_hook_tl
7 \renewcommand*{\l__xpinyin_ratio_tl}{1}% for pdftotext
8 __xpinyin_select_font:
9 \clist_if_exist:cTF { c__xpinyin_multiple_ #1 _clist }
10 { \l__xpinyin_multiple_tl \l__xpinyin_format_tl }
11 { \l__xpinyin_format_tl }
12 \ifdefempty{\l__xpinyin_format_tl}
13 {#3}
14 {\LWR@textcurrentcolor{#3}}
15 \color_group_end:
16 }
17 \LWR@formatted{__xpinyin_make_pinyin_box:nnn}
18
19 \cs_new_protected_nopar:Npn \LWR@HTML@__xpinyin_CJKsymbol:nn #1#2
20 {
21 __xpinyin_leavevmode:
22 \LWR@htmltagc{ruby}
23 \LWR@htmltagc{rb}
24 __xpinyin_save_CJKsymbol:n {#2}\null% \null removes extra space
25 \LWR@htmltagc{/rb\space}
26 \LWR@htmltagc{rp}{\LWR@htmltagc{/rp\space}
27 \LWR@htmltagc{rt}
28 __xpinyin_make_pinyin_box:nnn {#1} {#2} { \use:c { c__xpinyin_ #1 _tl } }
29 \LWR@htmltagc{/rt\space}
30 \LWR@htmltagc{rp}}\LWR@htmltagc{/rp\space}
31 \LWR@htmltagc{/ruby\space}\null
32 }
33 \LWR@formatted{__xpinyin_CJKsymbol:nn}
34
35 \cs_new_protected_nopar:Npn \LWR@HTML@__xpinyin_single_CJKsymbol:nn #1#2
36 {
37 __xpinyin_leavevmode:
38 \LWR@htmltagc{ruby}
39 \LWR@htmltagc{rb}
40 __xpinyin_save_CJKsymbol:n {#1}\null% \null removes extra space
41 \LWR@htmltagc{/rb\space}
42 \LWR@htmltagc{rp}{\LWR@htmltagc{/rp\space}
43 \LWR@htmltagc{rt}
44 __xpinyin_make_pinyin_box:xnn
45 { __xpinyin_to_unicode:n {#1} } {#1} { __xpinyin_pinyin:n {#2} }
46 \LWR@htmltagc{/rt\space}
47 \LWR@htmltagc{rp}}\LWR@htmltagc{/rp\space}
48 \LWR@htmltagc{/ruby\space}\null
49 }
50 \LWR@formatted{__xpinyin_single_CJKsymbol:nn}
51
52 \ExplSyntaxOff

```

The lwarp core uses the following to disable CJK xpinyin for filenames, sideroc, and footnotes.

---

```

53 \renewcommand*{\LWR@disablepinyin}{\disablepinyin}
54
55 \FilenameNullify{\LWR@disablepinyin}

```

---

File 496 **lwarp-xr.sty**

§ 599 Package **xr**

(Emulates or patches code by JEAN-PIERRE DRUCBERT, DAVID CARLISLE.)

Pkg xr xr is patched for use by lwarp. The \*\_html.aux file is used. \externaldocument is modified to also accept the optional arguments for xr-hyper, which currently uses xr for HTML output.

See section 5.17.

for HTML output:

```

1 \LWR@ProvidesPackagePass{xr}[2019/07/22]%

2 \LetLtxMacro\LWR@orig@externaldocument\externaldocument
3
4 \RenewDocumentCommand{\externaldocument}{0{} 0{} m 0{}}{%
5 \ifblank{#1}{%
6 \LWR@orig@externaldocument{#3_html}%
7 }{%
8 \LWR@orig@externaldocument[#1]{#3_html}%
9 }%
10 }

```

---

File 497 **lwarp-xr-hyper.sty**

§ 600 Package **xr-hyper**

(Emulates or patches code by DAVID CARLISLE.)

Pkg xr-hyper xr-hyper is replaced by xr, which is modified to accept the optional arguments for \externaldocument. So far, no hyperlinks are provided for citations.

See section 5.17.

for HTML output:

```

1 \LWR@ProvidesPackageDrop{xr-hyper}[2019/10/03]%
2
3 \LWR@origRequirePackage{lwarp-xr}

```

---

File 498 **lwarp-xtab.sty**

§ 601 Package **xtab**

(Emulates or patches code by PETER WILSON.)

Pkg xtab xtab is emulated.

for HTML output: 1 \LWR@ProvidesPackageDrop{xtab}[2011/07/31]

⚠ Misplaced alignment For \tablefirsthead, etc., enclose them as follows:

tab character &  
`\StartDefiningTabulars`  
`\tablefirsthead`  
`...`  
`\StopDefiningTabulars`

See section 8.10.1.

⚠ lateximage supertabular and xtab are not supported inside a lateximage.

```

2 \newcommand{\LWRXT@firsthead}{}
3
4 \newcommand{\tablefirsthead}[1]{%
5 \long\gdef\LWRXT@firsthead{#1}%
6 }
7
8 \newcommand{\tablehead}[1]{}
9
10 \newcommand{\tablelasthead}[1]{}
11
12 \newcommand{\notablelasthead}{}
13
14 \newcommand{\tabletail}[1]{}
15
16 \newcommand{\LWRXT@lasttail}{}
17
18 \newcommand{\tablelasttail}[1]{%
19 \long\gdef\LWRXT@lasttail{#1}%
20 }

21 \newcommand{\tablecaption}[2][{}]{%
22 \long\gdef\LWRXT@caption{%
23 \ifblank{#1}%
24 {\caption{#2}}%
25 {\caption[#1]{#2}}%
26 }%
27 }
28
29 \let\topcaption\tablecaption
30 \let\bottomcaption\tablecaption

31 \newcommand*\LWRXT@caption{}
32
33 \newcommand*\shrinkheight[1]{}
34
35 \newcommand*\xentrystretch[1]{}
36
37 \NewDocumentEnvironment{xtabular}{s o m}
38 {%
39 \LWR@traceinfo{xtabular}%

```

```

40 \table%
41 \LWRXT@caption%
42 \begin{tabular}{#3}%
43 \TabularMacro\ifdefvoid{\LWRXT@firsthead}%
44 {\LWR@getmynexttoken}%
45 {\expandafter\LWR@getmynexttoken\LWRXT@firsthead}%
46 }%
47 {%
48 \ifdefvoid{\LWRXT@lasttail}%
49 {}%
50 {%
51 \TabularMacro\ResumeTabular%
52 \LWRXT@lasttail%
53 }%
54 \end{tabular}%
55 \endtable%

56 \gdef\LWRXT@caption{%

57 \LWR@traceinfo{xtabular done}%
58 }
59
60 \NewDocumentEnvironment{mpxtabular}{s o m}
61 {\minipage{\linewidth}\xtabular{#3}}
62 {\endxtabular\endminipage}

```

---

File 499 **lwarp-xunicode.sty**

§ 602      Package **xunicode**

Pkg    xunicode    Error if xunicode is loaded after lwarp.

Patch lwarp-xunicode, but also verify that it was loaded before lwarp:

**for HTML output:**

```

1 \LWR@loadbefore{xunicode}%
2
3 \LWR@ProvidesPackagePass{xunicode}[2011/09/09]

```

`\textcircled` becomes a span with a rounded border. `\providecommand` is used to avoid conflict with `textcomp`.

```

4 \providecommand*\LWR@HTML@textcircled[1]{%
5 \InlineClass[border: 1px solid \LWR@currenttextcolor]{textcircled}{#1}%
6 }
7
8 \LWR@formatted{textcircled}

```

Nullify xunicode macros when generating filenames:

```

9 \FilenameNullify{%
10 \renewcommand*\textdegree{}%

```

---

```

11 \renewcommand*\textcelsius{}%
12 \renewcommand*\textohm{}%
13 \renewcommand*\textmu{}%
14 \renewcommand*\textlquill{}%
15 \renewcommand*\textrquill{}%
16 \renewcommand*\textcircledP{}%
17 \renewcommand*\texttwelveudash{}%
18 \renewcommand*\textthreequartersemdash{}%
19 \renewcommand*\textmho{}%
20 \renewcommand*\textnaira{}%
21 \renewcommand*\textpeso{}%
22 \renewcommand*\textrecipe{}%
23 \renewcommand*\textinterrobang{}%
24 \renewcommand*\textinterrobangdown{}%
25 \renewcommand*\textperthousand{}%
26 \renewcommand*\textpertenthousand{}%
27 \renewcommand*\textbaht{}%
28 \renewcommand*\textdiscount{}%
29 \renewcommand*\textservicemark{}%
30 \renewcommand*\textcircled}[1]{#1}%
31 \renewcommand*\capitalcedilla}[1]{#1}%
32 \renewcommand*\capitalogonek}[1]{#1}%
33 \renewcommand*\capitalgrave}[1]{#1}%
34 \renewcommand*\capitalacute}[1]{#1}%
35 \renewcommand*\capitalcircumflex}[1]{#1}%
36 \renewcommand*\capitaltilde}[1]{#1}%
37 \renewcommand*\capitaldieresis}[1]{#1}%
38 \renewcommand*\capitalhungarumlaut}[1]{#1}%
39 \renewcommand*\capitalring}[1]{#1}%
40 \renewcommand*\capitalcaron}[1]{#1}%
41 \renewcommand*\capitalbreve}[1]{#1}%
42 \renewcommand*\capitalmacron}[1]{#1}%
43 \renewcommand*\capitaldotaccent}[1]{#1}%
44}% FilenameNullify

```

---

File 500 **lwarp-xurl.sty**

§ 603 Package **xurl**

Pkg xurl xurl is ignored.

for HTML output:

```

1 \LWR@ProvidesPackageDrop{xurl}[2020/01/14]
2
3 \def\useOriginalUrlSetting{}

```

---

File 501 **lwarp-xy.sty**

§ 604 Package **xy**

(Emulates or patches code by KRISTOFFER H. ROSE, ROSS MOORE.)

Pkg xy xy is patched for use by lwarp.

for HTML output: 1 \LWR@ProvidesPackagePass{xy}[2013/10/06]

After xy modules have been loaded:

```
2 \AtBeginDocument{
```

The original definitions without a lateximage:

```
3 \LetLtxMacro\LWR@orig@xy\xy
4 \LetLtxMacro\LWR@orig@endxy\endxy
```

The outer-most xy environment is placed in a lateximage, but not more than one level deep, which would conflict with xy:

```
5 \renewcommand*{\xy}{%
6 \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}%
7 {\addtocounter{LWR@lateximagedepth}{1}}%
8 {\begin{lateximage}[-xy-~\PackageDiagramAltText]}%
9 \LWR@orig@xy%
10 }
11
12 \renewcommand*{\endxy}{%
13 \LWR@orig@endxy%
14 \ifnumcomp{\value{LWR@lateximagedepth}}{>}{1}%
15 {\addtocounter{LWR@lateximagedepth}{-1}}%
16 {\end{lateximage}}%
17 }
```

The \xybox must use the original definitions of \xy, \endxy:

```
18 \def\xybox#1{%
19 \LWR@orig@xy#1\LWR@orig@endxy%
20 \Edge@c={\rectangleEdge}\computeLeftUpness@%
21 }
```

If \xygraph is used, it is placed inside a lateximage:

```
22 \@ifundefined{xygraph}{}{
23
24 \LetLtxMacro\LWR@origxygraph\xygraph
25
26 \renewcommand{\xygraph}[1]{%
27 \begin{lateximage}[-xy- xygraph \PackageDiagramAltText]
28 \LWR@origxygraph{#1}
29 \end{lateximage}
30 }
31
32 }% xygraph defined
33
34 }% AtBeginDocument
```

---

File 502 **lwarp-zhlineskip.sty**

§ 605      Package **zhlineskip**

Pkg    zhlineskip    zhlineskip is ignored.

**for HTML output:**    1 \LWR@ProvidesPackageDrop{zhlineskip}[2019/05/15]

```
2 \newcommand*\SetTextEnvironmentSinglespace[1]{}
3 \newcommand*\RestoreTextEnvironmentLeading[1]{}
4 \newcommand*\SetMathEnvironmentSinglespace[1]{}
5 \newcommand*\RestoreMathEnvironmentLeading[1]{}

```

---

File 503 **lwarp-zwpagelayout.sty**

§ 606      Package **zwpagelayout**

*(Emulates or patches code by ZDENĚK WAGNER.)*

Pkg    zwpagelayout    zwpagelayout is ignored.

**for HTML output:**    1 \LWR@ProvidesPackageDrop{zwpagelayout}[2013/01/13]

```
2 \def\noBboxes{}
3 \@onlypreamble\noBboxes
4
5 \expandafter\ifx\csname definecolor\endcsname\relax \else
6 \definecolor{cmykblack}{cmyk}{0,0,0,1}
7 \definecolor{grblack}{gray}{0}
8 % \ifzwpl@redefineblack
9 % \definecolor{black}{cmyk}{0,0,0,1}\color{black}
10 % \fi
11 \definecolor{cmykred}{cmyk}{0,1,1,0}
12 \definecolor{cmykgreen}{cmyk}{1,0,1,0}
13 \definecolor{cmykblue}{cmyk}{1,1,0,0}
14 \definecolor{rgbred}{rgb}{1,0,0}
15 \definecolor{rgbgreen}{rgb}{0,1,0}
16 \definecolor{rgbblue}{rgb}{0,0,1}
17 % \ifzwpl@redefinetcmyk
18 % \definecolor{red}{cmyk}{0,1,1,0}
19 % \definecolor{green}{cmyk}{1,0,1,0}
20 % \definecolor{blue}{cmyk}{1,1,0,0}
21 % \fi
22 \fi
23
24 \let\OverprintXeTeXExtGState\relax
25
26 \DeclareRobustCommand\SetOverprint{\ignorespaces}

```

```

27 \DeclareRobustCommand\SetKnockout{\ignorespaces}
28 \DeclareRobustCommand\textoverprint[1]{\SetOverprint#1}}
29 \DeclareRobustCommand\textknockout[1]{\SetKnockout#1}}
30
31 \def\SetPDFminorversion#1{}
32 \@onlypreamble\SetPDFminorversion
33
34 \newcommand*\Vcorr{}
35
36 \DeclareRobustCommand\vb[1][{}]{
37 \NewDocumentCommand{\NewOddPage}{* o}{}
38 \NewDocumentCommand{\NewEvenPage}{* o}{}
39 \def\SetOddPageMessage#{\gdef\ZW@oddwarning}
40 \def\SetEvenPageMessage#{\gdef\ZW@evenwarning}
41 \def\ZW@oddwarning{Empty page inserted}\let\ZW@evenwarning\ZW@oddwarning
42
43 \def\clap#1{#1}
44
45 \def\CropFlap{2in}
46 \def\CropSpine{1in}
47 \def\CropXSpine{1in}
48 \def\CropXtrim{.25in}
49 \def\CropYtrim{.25in}
50 \def\UserWidth{5in}
51 \def\UserLeftMargin{1in}
52 \def\UserRightMargin{1in}
53 \def\UserTopMargin{1in}
54 \def\UserBotMargin{1in}
55 \def\thePageNumber{\LWR@origpound\,\arabic{page}}
56 \ifXeTeX
57 \def\ifcaseZWdriver{\ifcase2}
58 \else
59 \def\ifcaseZWdriver{\ifcase1}
60 \fi
61 \DeclareRobustCommand\ZWifdriver[2]{}

```

---

File 504 **lwarp-patch-komascript.sty**

§ 607      Package **patch-komascript**

Pkg    lwarp-patch-komascript    Patches for komascript classes.

lwarp loads this package when scrbook, scrartcl, or scrreprt classes are detected.

Many features are ignored during the HTML conversion. The goal is source-level compatibility.

\captionformat, \figureformat, and \tableformat are not yet emulated.

 **Not fully tested!** [Please send bug reports!](#)

Some features have not yet been tested. Please contact the author with any bug reports.

for HTML output: 1 \ProvidesPackage{lwarp-patch-komascript}

typearea is emulated.

2 \RequirePackage{lwarp-typearea}

tocbasic is emulated.

3 \RequirePackage{lwarp-tocbasic}

scrextend patches most of the new macros.

4 \RequirePackage{lwarp-scrextend}

Indexing macros, simplified for lwarp:

```

5 \AtBeginDocument{
6
7 \renewcommand*{\idx@heading}{%
8 \idx@@heading{\indexname}%
9 }
10
11 \renewenvironment{theindex}{%
12 \idx@heading%
13 \index@preamble\par\nobreak
14 \let\item\LWR@indexitem%
15 \let\subitem\LWR@indexsubitem%
16 \let\subsubitem\LWR@indexsubsubitem%
17 }
18 {}
19
20 \renewcommand*\indexspace{}
21
22}% AtBeginDocument

```

The \minisec is placed inside a <div> of class minisec.

```

23 \renewcommand*{\minisec}[1]{
24 \begin{BlockClass}{minisec}
25 #1
26 \end{BlockClass}
27 }

```

The part and chapter preambles are placed as plain text just after each heading.

```

28 \ifundefined{setpartpreamble}{}{
29 \RenewDocumentCommand{\setpartpreamble}{o o +m}{%
30 \renewcommand{\part@preamble}{#3}%
31 }
32 }
33
34 \ifundefined{setchapterpreamble}{}{
35 \RenewDocumentCommand{\setchapterpreamble}{o o +m}{%
36 \renewcommand{\chapter@preamble}{#3}%

```

```
37 }
38 }
```

Do not use `\chaptername`:

```
39 \renewcommand*{\LWR@printchaptername}{{}
```

Simple captions are used in all cases.

```
40 \AtBeginDocument{
41 \AtBeginDocument{
42 \LetLtxMacro\captionbelow\caption
43 \LetLtxMacro\captionabove\caption
44
45 \LetLtxMacro\captionofbelow\captionof
46 \LetLtxMacro\captionofabove\captionof
47 }
48 }
49
50 \RenewDocumentEnvironment{captionbeside}{o m o o o s}
51 {}
52 {%
53 \IfValueTF{#1}%
54 {\caption[#1]{#2}}%
55 {\caption{#2}}%
56 }
57
58 \RenewDocumentEnvironment{captionofbeside}{m o m o o o s}
59 {}
60 {%
61 \IfValueTF{#2}%
62 {\captionof{#1}[#2]{#3}}%
63 {\captionof{#1}{#3}}%
64 }
65
66 \RenewDocumentCommand{\setcapindent}{s m}{}
67 \renewcommand*{\setcaphanging}{}
68 \renewcommand*{\setcapwidth}[2][{}]{
69 \renewcommand*{\setcapdynwidth}[2][{}]{
70 \RenewDocumentCommand{\setcapmargin}{s o m}{}

```

---

File 505 **lwarp-patch-memoir.sty**

§ 608      Package **patch-memoir**

*(Emulates or patches code by PETER WILSON.)*

Pkg lwarp-patch-memoir      Patches for memoir class.

 **Not fully tested!** [Please send bug reports!](#)

lwarp loads this package when the memoir class is detected.

⚠ **captions** `lwarp` uses `caption`, which causes a warning from `memoir`. This is normal. Adjust captions via `caption`, instead of `memoir`.

⚠ **options clash** While emulating `memoir`, `lwarp` pre-loads a number of packages (section 608.1). This can cause an options clash when the user's document later loads the same packages with options. To fix this problem, specify the options before loading `lwarp`:

```
\documentclass{memoir}
...
\PassOptionsToPackage{options_list}{package_name}
...
\usepackage{lwarp}
...
\usepackage{package_name}
```

⚠ **version numbers** `memoir` emulates a number of packages, and declares a version date for each which often does not match the date of the corresponding freestanding package. This can cause warnings about incorrect version numbers. Since `lwarp` is intended to support the freestanding packages, which are often newer than the date declared by `memoir`, it is hoped that `memoir` will update and change its emulated version numbers to match.

`\label{bookmark}{tag}` `\label` accepts an optional (bookmark) argument, but this is ignored in HTML.

⚠ **comment** The `comment` environment is from the `comment` package, and thus requires that the `\begin` and `\end` each be on its own line:

```
\begin{comment}
This is a comment.
\end{comment}
```

`\newcomment` Comments defined with `\newcomment` use `memoir`'s definitions, and behave as expected, where the `\begin` and `\end` do have to each be on its own line.

⚠ **verbatim footnotes** `\verbfootnote` is not supported.

⚠ **\newfootnoteseries** `\newfootnoteseries`, etc. are not supported.

⚠ **page notes** `lwarp` loads `pagenote` to perform `memoir`'s `pagenote` functions, but there are minor differences in `\pagenotesubhead` and related macros.

**page notes with cleveref** To add support for pagenotes with `cleveref`, add:

```
\crefname{pagenote}{page note}{page notes}
\Crefname{pagenote}{Page note}{Page notes}
```

**page note \nameref** Note that for print mode, `\nameref` print the section name where the page notes are declared in the text, but for HTML it prints the name where the page notes are printed.

⚠ **poems** Poem numbering is not supported.

⚠ **verbatim** The `verbatim` environment does not yet support the `memoir` enhancements. It is currently recommended to load and use `fancyvrb` instead.

⚠ **glossaries** The `memoir` glossary system is not yet supported by `lwarpmk`. The `glossaries` package may be used instead, but does require the glossary entries be changed from the `memoir` syntax to the `glossaries` syntax.

for HTML output: 1 \ProvidesPackage{lwarp-patch-memoir}

## § 608.1 Packages

These are pre-loaded to provide emulation for many of memoir's functions. memoir pretends that abstract, etc. are already loaded, via its “emulated” package mechanism, but lwarp is directly loading the “lwarp-” version of each, which happens to avoid memoir's emulation system.

```

2 \RequirePackage{lwarp-abstract}% req'd
3 % \RequirePackage{lwarp-array}% no longer req'd
4 \RequirePackage{lwarp-booktabs}% req'd
5 % \RequirePackage{lwarp-ccaption}% emulated below
6 \RequirePackage{lwarp-changepage}% req'd
7 \RequirePackage{lwarp-crop}
8 % \RequirePackage{lwarp-dcolumn}% no longer req'd
9 \RequirePackage{lwarp-enumerate}% req'd
10 \RequirePackage{lwarp-epigraph}% req'd
11 \RequirePackage{lwarp-fancyvrb}% req'd
12 \RequirePackage{lwarp-footmisc}% req'd

13 \let\framed\relax \let\endframed\relax
14 \let\shaded\relax \let\endshaded\relax
15 \let\leftbar\relax \let\endleftbar\relax
16 \let\snugshade\relax \let\endsnugshade\relax
17 \RequirePackage{lwarp-framed}% req'd
18
19 \RequirePackage{lwarp-hanging}% req'd
20 \RequirePackage{lwarp-makeidx}% req'd
21 \DisemulatePackage{moreverb}
22 \RequirePackage{lwarp-moreverb}
23 \RequirePackage{lwarp-mparhack}
24 \RequirePackage{lwarp-needspace}% req'd
25 \RequirePackage{lwarp-nextpage}% req'd
26 \RequirePackage{lwarp-pagenote}% req'd
27 \RequirePackage{lwarp-parskip}
28 \RequirePackage{lwarp-setspace}% req'd
29 \RequirePackage{lwarp-showidx}

30 \makeindex

31 % \RequirePackage{lwarp-tabularx}% no longer req'd
32 \RequirePackage{lwarp-titling}% req'd
33 % \RequirePackage{lwarp-tocbibind}% not emulated by memoir
34 \RequirePackage{lwarp-tocloft}% req'd
35 \RequirePackage{lwarp-verse}% req'd

```

## § 608.2 Label handling

Insert the `lwarp` label mechanism into the `memoir` package mechanism:

- `\@mem@old@label` is the  $\LaTeX$  definition of `\label`.
- `\LWR@orig@label` adds the `memoir` definition.
- `lwarp`'s `\LWR@new@label` uses `\LWR@orig@label`.
- Want `memoir`'s `\label` to use `lwarp`'s `\label`, which then would use  $\LaTeX$ 's `\label`.
- So:
  - `\@mem@old@label` becomes `\LWR@new@label`.
  - `\LWR@orig@label` becomes `\@mem@old@label`.
- `cleveref` then encapsulates all the above.
- For a subcaption, `cleveref` modifies `memoir`'s `\sf@memsub@label`.

```
36 \let\LWR@orig@label\@mem@old@label
37 \let\@mem@old@label\LWR@new@label
```

Patches for subfloats to support additional `lwarp` labels:

```
38 \AtBeginDocument{
39 \renewcommand*\sf@memsub@label[1]{%
40 \@bsphack
41 \sf@memsub@label@hook{#1}%
42 \@memoldlabel{#1}%
43 \LWR@label@createtag{sub@#1}%
44 \protected@write\@auxout{}\%
45 \string\newlabel{sub@#1}%
46 {\@nameuse{@thesub\@caption}}%
47 {\thepage}}%
48 \LWR@write@lwarp@label{sub@#1}%
49 \@esphack
50 }
51 }
```

## § 608.3 Page layout

`memoir` already set the page size to a default, so it must be forced large for `lwarp`'s use, to avoid tag overflows off the page.

```
52 \setstocksize{190in}{20in}
53 \setlrmarginsandblock{2in}{2in}{*}
54 \setulmarginsandblock{1in}{1in}{*}

55 \renewcommand*\stockavi{}
56 \renewcommand*\stockav{}
```

```
57 \renewcommand*{\stockaiv}{}
58 \renewcommand*{\stockaiii}{}
59 \renewcommand*{\stockavii}{}
60 \renewcommand*{\stockbvi}{}
61 \renewcommand*{\stockbv}{}
62 \renewcommand*{\stockbiv}{}
63 \renewcommand*{\stockbiii}{}
64 \renewcommand*{\stockbvii}{}
65 % \renewcommand*{\stockmetriccrownvo}{}% in docs but not in the package
66 \renewcommand*{\stockmlargecrownvo}{}
67 \renewcommand*{\stockmdemyvo}{}
68 \renewcommand*{\stocksmallroyalvo}{}
69 \renewcommand*{\pageavi}{}
70 \renewcommand*{\pageavii}{}
71 \renewcommand*{\pageav}{}
72 \renewcommand*{\pageaiv}{}
73 \renewcommand*{\pageaiii}{}
74 \renewcommand*{\pagebvi}{}
75 \renewcommand*{\pagebvii}{}
76 \renewcommand*{\pagebv}{}
77 \renewcommand*{\pagebiv}{}
78 \renewcommand*{\pagebiii}{}
79 % \renewcommand*{\pagetriccrownvo}{}% in docs but not in the package
80 \renewcommand*{\pagemlargecrownvo}{}
81 \renewcommand*{\pagemdemyvo}{}
82 \renewcommand*{\pagemsmallroyalvo}{}
83
84 \renewcommand*{\stockdbill}{}
85 \renewcommand*{\stockstatement}{}
86 \renewcommand*{\stockexecutive}{}
87 \renewcommand*{\stockletter}{}
88 \renewcommand*{\stockold}{}
89 \renewcommand*{\stocklegal}{}
90 \renewcommand*{\stockledger}{}
91 \renewcommand*{\stockbroadsheet}{}
92 \renewcommand*{\pagedbill}{}
93 \renewcommand*{\pagestatement}{}
94 \renewcommand*{\pageexecutive}{}
95 \renewcommand*{\pageletter}{}
96 \renewcommand*{\pageold}{}
97 \renewcommand*{\pagelegal}{}
98 \renewcommand*{\pageledger}{}
99 \renewcommand*{\pagebroadsheet}{}
100
101 \renewcommand*{\stockpottvo}{}
102 \renewcommand*{\stockfoolscapvo}{}
103 \renewcommand*{\stockcrownvo}{}
104 \renewcommand*{\stockpostvo}{}
105 \renewcommand*{\stocklargecrownvo}{}
106 \renewcommand*{\stocklargepostvo}{}
107 \renewcommand*{\stocksmalldemyvo}{}
108 \renewcommand*{\stockdemyvo}{}
109 \renewcommand*{\stockmediumvo}{}
110 \renewcommand*{\stocksmallroyalvo}{}
111 \renewcommand*{\stockroyalvo}{}

```

```
112 \renewcommand*{\stocksuperroyalvo}{}
113 \renewcommand*{\stockimperialvo}{}
114 \renewcommand*{\pagepottvo}{}
115 \renewcommand*{\pagefoolscapvo}{}
116 \renewcommand*{\pagecrownvo}{}
117 \renewcommand*{\pagepostvo}{}
118 \renewcommand*{\pagelargecrownvo}{}
119 \renewcommand*{\pagelargepostvo}{}
120 \renewcommand*{\pagesmalldemyvo}{}
121 \renewcommand*{\pagedemyvo}{}
122 \renewcommand*{\pagemediumvo}{}
123 \renewcommand*{\pagesmallroyalvo}{}
124 \renewcommand*{\pageroyalvo}{}
125 \renewcommand*{\pagesuperroyalvo}{}
126 \renewcommand*{\pageimperialvo}{}
127
128 \renewcommand*{\memfontfamily}{}
129 \renewcommand*{\memfontenc}{}
130 \renewcommand*{\memfontpack}{}
131
132 \renewcommand*{\anyptfilebase}{}
133 \renewcommand*{\anyptsize}{10}
134
135 \renewcommand*{\setstocksize}[2]{}
136 \renewcommand*{\settrimmedsize}[3]{}
137 \renewcommand*{\settrims}[2]{}
138
139 % \newlength{\lxvchars}
140 % \setlength{\lxvchars}{305pt}
141 % \newlength{\xlchars}
142 % \setlength{\xlchars}{190pt}
143 \renewcommand*{\setxlchars}[1]{}
144 \renewcommand*{\setlxvchars}[1]{}
145
146 \renewcommand*{\settypeblocksize}[3]{}
147 \renewcommand*{\setlrmargins}[3]{}
148 \renewcommand*{\setlrmarginsandblock}[3]{}
149 \renewcommand*{\setbinding}[1]{}
150 \renewcommand*{\setulmargins}[3]{}
151 \renewcommand*{\setulmarginsandblock}[3]{}
152 \renewcommand*{\setcolsepandrule}[2]{}
153
154 \renewcommand*{\setheadfoot}[2]{}
155 \renewcommand*{\setheaderspaces}[3]{}
156 \renewcommand*{\setmarginnotes}[3]{}
157 \renewcommand*{\setfootins}[2]{}
158 \renewcommand*{\checkandfixthelayout}[1][1]{}
159 \renewcommand*{\checkthelayout}[1]{}
160 \renewcommand*{\fixthelayout}{}
161 %
162 % \newlength{\stockheight}
163 % \newlength{\trimtop}
164 % \newlength{\trimedge}
165 % \newlength{\stockwidth}
166 % \newlength{\spinmargin}
```

```

167 % \newlength{\foremargin}
168 % \newlength{\uppermargin}
169 % \newlength{\headmargin}
170 %
171 \renewcommand*{\typeoutlayout}{}
172 \renewcommand*{\typeoutstandardlayout}{}
173 \renewcommand*{\settypeoutlayoutunit}[1]{}
174 \renewcommand*{\fixpdflayout}{}
175 \renewcommand*{\fixdvipslayout}{}
176
177 \renewcommand*{\medievalpage}[1][{}
178 \renewcommand*{\isopage}[1][{}
179 \renewcommand*{\semiisopage}[1][{}
180
181 \renewcommand{\setpagebl}[3]{}
182 \renewcommand{\setpageml}[3]{}
183 \renewcommand{\setpagetl}[3]{}
184 \renewcommand{\setpagetm}[3]{}
185 \renewcommand{\setpagetr}[3]{}
186 \renewcommand{\setpagemr}[3]{}
187 \renewcommand{\setpagebr}[3]{}
188 \renewcommand{\setpagebm}[3]{}
189 \renewcommand{\setpagecc}[3]{}

```

#### § 608.4 Text and fonts

```

190 \let\miniscule\tiny
191 \let\HUGE\Huge
192
193 \renewcommand*{\abnormalparskip}[1]{}
194 \renewcommand*{\nonzeroparskip}{}
195 \renewcommand*{\traditionalparskip}{}
196
197 \let\onelineskip\baselineskip
198
199 \let\OnehalfSpacing\onehalfspacing
200 \let\DoubleSpacing\doublespacing
201 \renewcommand*{\setPagenoteSpacing}[1]{}
202 \renewcommand*{\setFloatSpacing}[1]{}
203 \renewcommand{\SingleSpacing}{\@ifstar\singlespacing\singlespacing}
204 \let\setSingleSpace\SetSinglespace
205 \let\SingleSpace\singlespace
206 \let\endSingleSpace\endsinglespace
207 \let\Spacing\spacing
208 \let\endSpacing\endspacing
209 \let\OnehalfSpace\onehalfspace
210 \let\endOnehalfSpace\endonehalfspace
211 \csletcs{OnehalfSpace*}{onehalfspace}
212 \csletcs{endOnehalfSpace*}{endonehalfspace}
213 \let\DoubleSpace\doublespace
214 \let\endDoubleSpace\enddoublespace
215 \csletcs{DoubleSpace*}{doublespace}
216 \csletcs{endDoubleSpace*}{enddoublespace}

```

```

217 \renewcommand*{\setDisplayskipStretch}[1]{}
218 \renewcommand*{\memdskipstretch}{}
219 \renewcommand*{\noDisplayskipStretch}{}
220 \renewcommand*{\memdskips}{}
221
222 \renewcommand*{\midsloppy}{}
223 \renewenvironment*{midsloppypar}{}{}
224
225 \renewcommand*{\sloppybottom}{}

```

## § 608.5 Titles

```

226 \csletcs{titlingpage*}{titlingpage}
227 \csletcs{endtitlingpage*}{endtitlingpage}
228 \let\titlingpageend\relax
229 \newcommand{\titlingpageend}[2]{}
230 \let\andnext\and
231 \renewcommand*{\thanksmarkstyle}[1]{}
232
233 \renewcommand{\thanksfootmark}{%
234 \thanksscript{\tmark}%
235 }
236
237 % \newlength{\thanksmarksep}% already provided by memoir

238 \renewcommand\titlingpageend[2]{}

```

## § 608.6 Abstracts

```

239 % \newlength{\absindent}
240 % \newlength{\absparsep}
241 \renewcommand*{\abstractcol}{}
242 \renewcommand*{\abstractintoc}{}
243 \renewcommand*{\abstractnum}{}
244 \renewcommand*{\abstractrunin}{}

```

## § 608.7 Document divisions

```

\book * (\<2:PDF name>) [\<3:TOC name>] [\<4:PDF name>] (\<5:PDF name>) {\<6:name>}

245 \DeclareDocumentCommand{\book}{s d() o o d() m}{%
246 \LWR@section{#1}{#3}{#6}{book}%
247 }

248 \def\@apppage{%
249 \part*{\appendixpagename}
250 }
251 \renewcommand\mempreaddapppagetotochook{}
252 \renewcommand\mempostaddapppagetotochook{}
253
254 \def\@sapppage{%
255 \part*{\appendixpagename}
256 }

```

```

257 \DeclareDocumentCommand{\mainmatter}{s}{%
258 \booltrue{LWR@mainmatter}%
259 }
260
261 \DeclareDocumentCommand{\frontmatter}{s}{%
262 \boolfalse{LWR@mainmatter}%
263 }

264 \renewcommand*{\raggedbottomsection}{}
265 \renewcommand*{\normalbottomsection}{}
266 \renewcommand*{\bottomsectionskip}{}
267 \renewcommand*{\bottomsectionpenalty}{}
268 \csletcs{appendixpage*}{appendixpage}
269 \renewcommand*{\namedsubappendices}{}
270 \renewcommand*{\unnamedsubappendices}{}
271 \renewcommand*{\beforebookskip}{}
272 \renewcommand*{\afterbookskip}{}
273 \renewcommand*{\beforepartskip}{}
274 \renewcommand*{\afterpartskip}{}
275 \renewcommand*{\midbookskip}{}
276 \renewcommand*{\midpartskip}{}
277 \renewcommand*{\printbookname}{}
278 \renewcommand*{\booknamefont}{}
279 \renewcommand*{\booknamenum}{}
280 \renewcommand*{\printbooknum}{}
281 \renewcommand*{\booknumfont}{}
282 \renewcommand*{\printpartname}{}
283 \renewcommand*{\partnamefont}{}
284 \renewcommand*{\partnamenum}{}
285 \renewcommand*{\printpartnum}{}
286 \renewcommand*{\partnumfont}{}
287 \renewcommand*{\printbooktitle}[1]{}
288 \renewcommand*{\booktitlefont}{}
289 \renewcommand*{\printparttitle}[1]{}
290 \renewcommand*{\parttitlefont}{}
291 \renewcommand*{\bookpageend}{}
292 \renewcommand*{\bookblankpage}{}
293 \renewcommand*{\nobookblankpage}{}
294 \renewcommand*{\partpageend}{}
295 \renewcommand*{\partblankpage}{}
296 \renewcommand*{\nopartblankpage}{}
297 \RenewDocumentCommand{\newleadpage}{s o m}{}% todo
298 \RenewDocumentCommand{\renewleadpage}{s o m}{}% todo
299 \renewcommand*{\leadpagetoclevel}{chapter}
300
301 \renewcommand*{\openright}{}
302 \renewcommand*{\openleft}{}
303 \renewcommand*{\openany}{}
304 \renewcommand*{\clearforchapter}{}
305 \renewcommand*{\memendofchapterhook}{}
306 \renewcommand*{\chapterheadstart}{}
307 % \newlength{\beforechapskip}
308 \renewcommand*{\afterchapternum}{}
309 % \newlength{\midchapskip}
310 \renewcommand*{\afterchaptertitle}{}

```

```

311 % \newlength{\afterchapskip}
312 \renewcommand*{\printchaptername}{}
313 \renewcommand*{\chapnamefont}{}
314 \renewcommand*{\chapternamenum}{}
315 \renewcommand*{\printchapternum}{}
316 \renewcommand*{\chapnumfont}{}
317 \renewcommand{\printchaptertitle}[1]{}
318 \renewcommand*{\chaptitelfont}{}
319 \renewcommand*{\printchapternonum}{}
320 \renewcommand*{\indentafterchapter}{}
321 \renewcommand*{\noindentafterchapter}{}
322 \renewcommand*{\insertchapterspace}{}
323
324 \renewcommand*{\chapterstyle}[1]{}
325 \renewcommand{\makechapterstyle}[2]{}
326 \renewcommand*{\chapindent}{}
327 \let\chapterprecis\cftchapterprecis
328 \let\chapterprecishere\cftchapterprecishere
329 \let\chapterprecistoc\cftchapterprecistoc
330 \renewcommand*{\precisfont}{}
331 \renewcommand*{\prechapterprecis}{}
332 \renewcommand*{\postchapterprecis}{}
333 \renewcommand{\precistocetext}[1]{}
334 \renewcommand*{\precistocfont}{}
335 \renewcommand*{\precistocformat}{}
336 % \newlength{\prechapterprecisshift}
337
338 \renewcommand*{\setbeforesecskip}[1]{}
339 \renewcommand*{\setaftersecskip}[1]{}
340 \renewcommand*{\setsecindent}[1]{}
341 \renewcommand*{\setsecheadstyle}[1]{}
342 \renewcommand*{\setbeforesubsecskip}[1]{}
343 \renewcommand*{\setaftersubsecskip}[1]{}
344 \renewcommand*{\setsubsecindent}[1]{}
345 \renewcommand*{\setsubsecheadstyle}[1]{}
346 \renewcommand*{\setbeforesubsubsecskip}[1]{}
347 \renewcommand*{\setaftersubsubsecskip}[1]{}
348 \renewcommand*{\setsubsubsecindent}[1]{}
349 \renewcommand*{\setsubsubsecheadstyle}[1]{}
350 \renewcommand*{\setbeforeparaskip}[1]{}
351 \renewcommand*{\setafterparaskip}[1]{}
352 \renewcommand*{\setparaindent}[1]{}
353 \renewcommand*{\setparaheadstyle}[1]{}
354 \renewcommand*{\setbeforesubparaskip}[1]{}
355 \renewcommand*{\setaftersubparaskip}[1]{}
356 \renewcommand*{\setsubparaindent}[1]{}
357 \renewcommand*{\setsubparaheadstyle}[1]{}
358 \renewcommand{\@hangfrom}[1]{#1}
359 \renewcommand{\sethangfrom}[1]{}
360 \renewcommand{\setsecnumformat}[1]{}
361
362 \renewcommand*{\hangsecnum}{}
363 \renewcommand*{\defaultsecnum}{}
364
365 \renewcommand*{\sechook}{}

```

```

366 \renewcommand{\setsechook}[1]{}
367 \renewcommand*\{subsechook}{}
368 \renewcommand{\setsubsechook}[1]{}
369 \renewcommand*\{subsubsechook}{}
370 \renewcommand{\setsubsubsechook}[1]{}
371 \renewcommand*\{parahook}{}
372 \renewcommand{\setparahook}[1]{}
373 \renewcommand*\{subparahook}{}
374 \renewcommand{\setsubparahook}[1]{}
375
376 \RenewDocumentCommand{\plainbreak}{s m}{\begin{center}~\end{center}}
377
378 \RenewDocumentCommand{\fancybreak}{s +m}{%
379 \begin{center}#2\end{center}%
380 }
381
382 \RenewDocumentCommand{\plainfancybreak}{s m m +m}{%
383 \begin{center}#4\end{center}%
384 }
385
386 \RenewDocumentCommand{\pfbreak}{s}{%
387 \begin{center}
388 \pfbreakdisplay
389 \end{center}
390 }
391
392 % \newlength{\pfbreakskip}
393 \renewcommand{\pfbreakdisplay}{*\quad*\quad*}
394
395 \renewcommand{\makeheadstyles}[2]{}
396 \renewcommand*\{headstyles}[1]{}

```

## § 608.8 **Pagination and headers**

```

397 \renewcommand*\{savepagenumber}{}
398 \renewcommand*\{restorepagenumber}{}
399 \renewcommand*\{uppercaseheads}{}
400 \renewcommand*\{nouppercaseheads}{}
401
402 \renewcommand*\{bookpagemark}[1]{}
403 \renewcommand*\{partmark}[1]{}
404 \renewcommand*\{bibmark}{}
405 \renewcommand*\{indexmark}{}
406 \renewcommand*\{glossarymark}{}
407
408 \LWR@origpagestyle{empty}
409 \renewcommand*\{ps@empty}{}
410 \renewcommand*\{makepagestyle}[1]{}
411 \renewcommand*\{emptypshook}{}%
412 % \renewcommand*\{empty@oddhead}{}
413 % \renewcommand*\{empty@oddfoot}{}
414 % \renewcommand*\{empty@evenhead}{}
415 % \renewcommand*\{empty@evenfoot}{}
416 \renewcommand*\{oddhead}{}
417 \renewcommand*\{oddfoot}{}
418 \renewcommand*\{evenhead}{}

```

```

419 \renewcommand*{\@evenfoot}{}
420 \renewcommand*{\aliaspagestyle}[2]{}
421 \renewcommand*{\copypagestyle}[2]{}
422
423 \renewcommand*{\makeevenhead}[4]{}
424 \renewcommand*{\makeoddhead}[4]{}
425 \renewcommand*{\makeevenfoot}[4]{}
426 \renewcommand*{\makeoddfoot}[4]{}
427 \renewcommand*{\makerunningwidth}[3]{}
428 % \newlength{\headwidth}
429 \renewcommand*{\makeheadrule}[3]{}
430 \renewcommand*{\makefootrule}[3]{}
431 \renewcommand*{\makeheadfootruleprefix}[3]{}
432 % \newlength{\normalrulethickness}
433 % \setlength{\normalrulethickness}{.4pt}
434 % \newlength{\footruleheight}
435 % \newlength{\footruleskip}
436 \renewcommand*{\makeheadposition}[5]{}
437 \renewcommand{\makespmarks}[2]{}
438 \renewcommand*{\makeheadfootstrut}[3]{}

439 \renewcommand{\createmark}[5]{\csdef{#1mark}[1]{} }
440 \renewcommand{\createplainmark}[3]{\csdef{#1mark}{} }

441 \renewcommand{\memUChad}[1]{}
442 \renewcommand*{\clearplainmark}[1]{}
443 \renewcommand*{\clearmark}[1]{}
444 \renewcommand{\addtopsmarks}[3]{}
445 \renewcommand{\ifonlyfloats}[2]{#2}
446 \renewcommand*{\mergepagefloatstyle}[3]{}
447
448 \renewcommand*{\framepichead}{}
449 \renewcommand*{\framepictextfoot}{}
450 \renewcommand*{\framepichook}{}
451 \renewcommand*{\showheadfootlocoff}{}
452 \renewcommand*{\showtextblocklocoff}{}

```

## § 608.9 Paragraphs and lists

```

453 \renewcommand{\hangfrom}[1]{#1}
454 \let\centerfloat\centering
455 \renewcommand*{\raggedyright}[1]{}
456 % \newlength{\ragrparindent}
457 \renewcommand{\sourceatright}[2]{}{\attribution{#2}}
458 \let\memorigdbs\LWR@endofline
459 \let\memorigpar\par
460 \let\atcentercr\LWR@endofline
461
462 \renewcommand*{\linenottooshort}[1]{}
463 \renewcommand*{\russianpar}{}
464 \renewcommand*{\lastlinerulefill}{}
465 \renewcommand*{\lastlineparrule}{}
466 \renewcommand*{\justlastraggedleft}{}
467 \renewcommand*{\raggedrightthenleft}{}
468 \renewcommand*{\leftcenterright}{}

```

```

469
470 \renewcommand{\leftspringright}[4]{%
471 \begin{minipage}{#1\linewidth}#3\end{minipage}\quad%
472 \begin{minipage}{#2\linewidth}\begin{flushright}#4\end{flushright}\end{minipage}%
473 }
474
475 \renewenvironment*{blockdescription}
476 {\LWR@descriptionstart\LWR@origdescription}
477 {\enddescription}
478
479 \renewcommand*{\blockdescriptionlabel}[1]{\textbf{#1}}
480 \renewenvironment*{labelled}[1]{\begin{description}}{\end{description}}
481 \renewenvironment*{flexlabelled}[6]{\begin{description}}{\end{description}}
482 \renewcommand*{\tightlists}{}
483 \renewcommand*{\defaultlists}{}
484 \RenewDocumentCommand{\firmlists}{s}{}
485 \renewcommand*{\firmlist}{}
486 \renewcommand*{\tightlist}{}
487 \renewcommand*{\zerotrivseps}{}
488 \renewcommand*{\savetrivseps}{}
489 \renewcommand*{\restoretrivseps}{}

```

## § 608.10 Contents lists

```

490 \csletcs{tableofcontents*}{tableofcontents}
491 \csletcs{listoffigures*}{listoffigures}
492 \csletcs{listoftables*}{listoftables}
493 \renewenvironment{KeepFromToc}{}{}
494 \renewcommand*{\onecoltocetc}{}
495 \renewcommand*{\twocoltocetc}{}
496 \renewcommand*{\ensureonecol}{}
497 \renewcommand*{\restorefromonecol}{}
498 \renewcommand*{\doccoltocetc}{}
499
500 \renewcommand{\toheadstart}{}
501 \renewcommand{\printtoctitle}[1]{}
502 \renewcommand{\tocmark}{}
503 \renewcommand{\aftertoctitle}{}
504 \renewcommand{\lofheadstart}{}
505 \renewcommand{\printloftitle}[1]{}
506 \renewcommand{\lofmark}{}
507 \renewcommand{\afterloftitle}{}
508 \renewcommand{\lotheadstart}{}
509 \renewcommand{\printlottitle}[1]{}
510 \renewcommand{\lotmark}{}
511 \renewcommand{\afterlottitle}{}
512
513 \renewcommand*{\setpnumwidth}[1]{}
514 \renewcommand*{\setrmarg}[1]{}
515 \renewcommand*{\cftbookbreak}{}
516 \renewcommand*{\cftpartbreak}{}
517 \renewcommand*{\cftchapterbreak}{}

518 % \newlength{\cftbeforebookskip}
519 % \newlength{\cftbookindent}
520 % \newlength{\cftbooknumwidth}

```

```

521 \renewcommand*{\cftbookfont}{}
522 \renewcommand*{\cftbookname}{}
523 \renewcommand*{\cftbookpresnum}{}
524 \renewcommand*{\cftbookaftersnum}{}
525 \renewcommand*{\cftbookaftersnumb}{}
526 \renewcommand*{\cftbookleader}{}
527 \renewcommand*{\cftbookdotsep}{1}
528 \renewcommand*{\cftbookpagefont}{}
529 \renewcommand*{\cftbookafterpnum}{}
530 \renewcommand*{\cftbookformatpnum}[1]{}
531 \renewcommand*{\cftbookformatpnumhook}[1]{}

```

Part is already defined by `tocloft`.

```

532 % \newlength{\cftbeforechapterskip}
533 % \newlength{\cftchapterindent}
534 % \newlength{\cftchapternumwidth}
535 \renewcommand*{\cftchapterfont}{}
536 \renewcommand*{\cftchaptername}{}
537 \renewcommand*{\cftchapterpresnum}{}
538 \renewcommand*{\cftchapteraftersnum}{}
539 \renewcommand*{\cftchapteraftersnumb}{}
540 \renewcommand*{\cftchapterleader}{}
541 \renewcommand*{\cftchapterdotsep}{1}
542 \renewcommand*{\cftchapterpagefont}{}
543 \renewcommand*{\cftchapterafterpnum}{}
544 \renewcommand*{\cftchapterformatpnum}[1]{}
545 \renewcommand*{\cftchapterformatpnumhook}[1]{}

546 % \newlength{\cftbeforesections skip}
547 % \newlength{\cftsectionindent}
548 % \newlength{\cftsectionnumwidth}
549 \renewcommand*{\cftsectionfont}{}
550 \renewcommand*{\cftsectionname}{}
551 \renewcommand*{\cftsectionpresnum}{}
552 \renewcommand*{\cftsectionaftersnum}{}
553 \renewcommand*{\cftsectionaftersnumb}{}
554 \renewcommand*{\cftsectionleader}{}
555 \renewcommand*{\cftsectiondotsep}{1}
556 \renewcommand*{\cftsectionpagefont}{}
557 \renewcommand*{\cftsectionafterpnum}{}
558 \renewcommand*{\cftsectionformatpnum}[1]{}
559 \renewcommand*{\cftsectionformatpnumhook}[1]{}

560 % \newlength{\cftbeforesubsections skip}
561 % \newlength{\cftsubsectionindent}
562 % \newlength{\cftsubsectionnumwidth}
563 \renewcommand*{\cftsubsectionfont}{}
564 \renewcommand*{\cftsubsectionname}{}
565 \renewcommand*{\cftsubsectionpresnum}{}
566 \renewcommand*{\cftsubsectionaftersnum}{}
567 \renewcommand*{\cftsubsectionaftersnumb}{}
568 \renewcommand*{\cftsubsectionleader}{}
569 \renewcommand*{\cftsubsectiondotsep}{1}
570 \renewcommand*{\cftsubsectionpagefont}{}
571 \renewcommand*{\cftsubsectionafterpnum}{}

```

```
572 \renewcommand*{\cftsubsectionformatpnum}[1]{}
573 \renewcommand*{\cftsubsectionformatpnumhook}[1]{}

574 % \newlength{\cftbeforesubsubsectionsip}
575 % \newlength{\cftsubsubsectionindent}
576 % \newlength{\cftsubsubsectionnumwidth}
577 \renewcommand*{\cftsubsubsectionfont}{}
578 \renewcommand*{\cftsubsubsectionname}{}
579 \renewcommand*{\cftsubsubsectionpresnum}{}
580 \renewcommand*{\cftsubsubsectionaftersnum}{}
581 \renewcommand*{\cftsubsubsectionaftersnumb}{}
582 \renewcommand*{\cftsubsubsectionleader}{}
583 \renewcommand*{\cftsubsubsectiondotsep}{1}
584 \renewcommand*{\cftsubsubsectionpagefont}{}
585 \renewcommand*{\cftsubsubsectionafterpnum}{}
586 \renewcommand*{\cftsubsubsectionformatpnum}[1]{}
587 \renewcommand*{\cftsubsubsectionformatpnumhook}[1]{}

588 % \newlength{\cftbeforeparagraphskip}
589 % \newlength{\cftparagraphindent}
590 % \newlength{\cftparagraphnumwidth}
591 \renewcommand*{\cftparagraphfont}{}
592 \renewcommand*{\cftparagraphname}{}
593 \renewcommand*{\cftparagraphpresnum}{}
594 \renewcommand*{\cftparagraphaftersnum}{}
595 \renewcommand*{\cftparagraphaftersnumb}{}
596 \renewcommand*{\cftparagraphleader}{}
597 \renewcommand*{\cftparagraphdotsep}{1}
598 \renewcommand*{\cftparagraphpagefont}{}
599 \renewcommand*{\cftparagraphafterpnum}{}
600 \renewcommand*{\cftparagraphformatpnum}[1]{}
601 \renewcommand*{\cftparagraphformatpnumhook}[1]{}

602 % \newlength{\cftbeforesubparagraphskip}
603 % \newlength{\cftsubparagraphindent}
604 % \newlength{\cftsubparagraphnumwidth}
605 \renewcommand*{\cftsubparagraphfont}{}
606 \renewcommand*{\cftsubparagraphname}{}
607 \renewcommand*{\cftsubparagraphpresnum}{}
608 \renewcommand*{\cftsubparagraphaftersnum}{}
609 \renewcommand*{\cftsubparagraphaftersnumb}{}
610 \renewcommand*{\cftsubparagraphleader}{}
611 \renewcommand*{\cftsubparagraphdotsep}{1}
612 \renewcommand*{\cftsubparagraphpagefont}{}
613 \renewcommand*{\cftsubparagraphafterpnum}{}
614 \renewcommand*{\cftsubparagraphformatpnum}[1]{}
615 \renewcommand*{\cftsubparagraphformatpnumhook}[1]{}

616 % \newlength{\cftbeforefigureskip}
617 % \newlength{\cftfigureindent}
618 % \newlength{\cftfigurenumwidth}
619 \renewcommand*{\cftfigurefont}{}
620 \renewcommand*{\cftfigurename}{}
621 \renewcommand*{\cftfigurepresnum}{}
622 \renewcommand*{\cftfigureaftersnum}{}
623 \renewcommand*{\cftfigureaftersnumb}{}

```

```
624 \renewcommand*{\cftfigureleader}{}
625 \renewcommand*{\cftfiguredotsep}{1}
626 \renewcommand*{\cftfigurepagefont}{}
627 \renewcommand*{\cftfigureafterpnum}{}
628 \renewcommand*{\cftfigureformatpnum}[1]{}
629 \renewcommand*{\cftfigureformatpnumhook}[1]{}

630 % \newlength{\cftbeforesubfigureskip}
631 % \newlength{\cftsubfigureindent}
632 % \newlength{\cftsubfigurenumwidth}
633 \newcommand*{\cftsubfigurefont}{}
634 \newcommand*{\cftsubfigurename}{}
635 \newcommand*{\cftsubfigurepresnum}{}
636 \newcommand*{\cftsubfigureaftersnum}{}
637 \newcommand*{\cftsubfigureaftersnumb}{}
638 \newcommand*{\cftsubfigureleader}{}
639 \newcommand*{\cftsubfiguredotsep}{1}
640 \newcommand*{\cftsubfigurepagefont}{}
641 \newcommand*{\cftsubfigureafterpnum}{}
642 \newcommand*{\cftsubfigureformatpnum}[1]{}
643 \newcommand*{\cftsubfigureformatpnumhook}[1]{}

644 % \newlength{\cftbeforetableskip}
645 % \newlength{\cfttableindent}
646 % \newlength{\cfttablenumwidth}
647 \renewcommand*{\cfttablefont}{}
648 \renewcommand*{\cfttablename}{}
649 \renewcommand*{\cfttablepresnum}{}
650 \renewcommand*{\cfttableaftersnum}{}
651 \renewcommand*{\cfttableaftersnumb}{}
652 \renewcommand*{\cfttableleader}{}
653 \renewcommand*{\cfttabledotsep}{1}
654 \renewcommand*{\cfttablepagefont}{}
655 \renewcommand*{\cfttableafterpnum}{}
656 \renewcommand*{\cfttableformatpnum}[1]{}
657 \renewcommand*{\cfttableformatpnumhook}[1]{}

658 % \newlength{\cftbeforesubtableskip}
659 % \newlength{\cftsubtableindent}
660 % \newlength{\cftsubtablenumwidth}
661 \newcommand*{\cftsubtablefont}{}
662 \newcommand*{\cftsubtablename}{}
663 \newcommand*{\cftsubtablepresnum}{}
664 \newcommand*{\cftsubtableaftersnum}{}
665 \newcommand*{\cftsubtableaftersnumb}{}
666 \newcommand*{\cftsubtableleader}{}
667 \newcommand*{\cftsubtabledotsep}{1}
668 \newcommand*{\cftsubtablepagefont}{}
669 \newcommand*{\cftsubtableafterpnum}{}
670 \newcommand*{\cftsubtableformatpnum}[1]{}
671 \newcommand*{\cftsubtableformatpnumhook}[1]{}

672 \renewcommand*{\booknumberline}[1]{}
673 \renewcommand*{\partnumberline}[1]{}
674 \renewcommand*{\chapternumberline}[1]{}
675 \renewcommand*{\numberlinehook}[1]{}

```

```

676 % \renewcommand*{\cftwhatismyname}{}%
677 \renewcommand*{\booknumberlinehook}[1]{}
678 \renewcommand*{\partnumberlinehook}[1]{}
679 \renewcommand*{\chapternumberlinehook}[1]{}
680 \renewcommand{\numberlinebox}[2]{}
681 \renewcommand{\booknumberlinebox}[2]{}
682 \renewcommand{\partnumberlinebox}[2]{}
683 \renewcommand{\chapternumberlinebox}[2]{}
684 %
685 % \newlength{\cftparfillskip}
686 \renewcommand*{\cftpagenumbersoff}[1]{}
687 \renewcommand*{\cftpagenumberon}[1]{}
688 \renewcommand*{\cftlocalchange}[3]{}
689 \renewcommand*{\cftaddtitleline}[4]{}
690 \renewcommand*{\cftaddnumtitleline}[4]{}
691 \renewcommand{\cftinsertcode}[2]{}
692 \renewcommand{\cftinserthook}[2]{}
693 \renewcommand{\settocpreprocessor}[2]{}
694 \DeclareRobustCommand{\cftpagenumbersoff}[1]{}
695 \DeclareRobustCommand{\cftpagenumberon}[1]{}

```

## § 608.11 Floats and captions

\xfloat

\xdblfloat Reestablish lwarp's takeover the float handing, which memoir tried to grab:

```

696 \AtBeginDocument{
697 \def\xfloat #1[#2]{%
698 \LWR@floatbegin{#1}[#2]
699 \normalsize
700 \@nameuse{#1adjustment}%
701 \LWR@futurenonspacel\WR@mynexttoken\LWR@floatalignment%
702 }
703 \def\xdblfloat #1[#2]{%
704 \LWR@floatbegin{#1}[#2]
705 \normalsize
706 \@nameuse{#1adjustment}%
707 \LWR@futurenonspacel\WR@mynexttoken\LWR@floatalignment%
708 }
709 }

```

\newfloat [*1: within*] {*2: type*} {*3: ext*} {*4: capname*}

```

710 \RenewDocumentCommand{\newfloat}{o m m m}{%
711 \def\LWR@tempone{#4}%
712 \def\LWR@temptwo{\@nameuse{#2name}}%
713 \ifdefequal{\LWR@tempone}{\LWR@temptwo}{% recursive name, already defined
714 \IfValueTF{#1}%
715 {\DeclareFloatingEnvironment[fileext=#3,within=#1]{#2}}%
716 {\DeclareFloatingEnvironment[fileext=#3]{#2}}%
717 }{% not recursive name
718 \IfValueTF{#1}%
719 {\DeclareFloatingEnvironment[fileext=#3,within=#1,name={#4}]{#2}}%
720 {\DeclareFloatingEnvironment[fileext=#3,name={#4}]{#2}}%
721 }%

```

`newfloat` package automatically creates the `\listof` command for new floats, but `float` does not, so remove `\listof` here in case it is manually created later.

```
722 \cslet{listof#2s}\relax%
723 \cslet{listof#2es}\relax%
724 }
```

`\newlistof` [*within*] {<type>} {<ext>} {<listofname>}

Emulated through the `\newfloat` mechanism. Note that `memoir` uses a different syntax than `tocloft` for the name.

```
725 \RenewDocumentCommand{\newlistof}{o m m m}
726 {%
727 \IfValueTF{#1}%
728 {\newlistentry[#1]{#2}{#3}{0}}%
729 {\newlistentry{#2}{#3}{0}}%
730 \@namedef{ext@#2}{#3}%
731 \@ifundefined{c@#3depth}{\newcounter{#3depth}}{}%
732 \setcounter{#3depth}{1}%
733 \@namedef{#3mark}{}%
734 \@namedef{#2}{\listof{#2}{#4}}%
735 \@namedef{@cftmake#3title}{}%
736 \@ifundefined{cftbefore#3titleskip}{}%
737 \expandafter\newlength\csname cftbefore#3titleskip\endcsname%
738 \expandafter\newlength\csname cftafter#3titleskip\endcsname%
739 }{}%
740 \@namedef{cft#3titlefont}{}%
741 \@namedef{cftafter#3title}{}%
742 \@namedef{cft#3prehook}{}%
743 \@namedef{cft#3posthook}{}%
744 }

745 \renewcommand{\setfloatadjustment}[2]{}%
```

Borrowed from the `lwarp` version of `keyfloat`:

```
746 \NewDocumentEnvironment{KFLTmemoir@marginfloat}{0{-1.2ex} m}
747 {% start
748 \LWR@BlockClassWP{float:right; width:2in; margin:10pt}{}{marginblock}%
749 \renewcommand*{@capttype}{#2}%
750 }
751 {%
752 \endLWR@BlockClassWP%
753 }
754
755 \DeclareDocumentEnvironment{marginfigure}{o}
756 {\begin{KFLTmemoir@marginfloat}{figure}}
757 {\end{KFLTmemoir@marginfloat}}
758
759 \DeclareDocumentEnvironment{margintable}{o}
760 {\begin{KFLTmemoir@marginfloat}{table}}
761 {\end{KFLTmemoir@marginfloat}}

762 \renewcommand{\setmarginfloatcaptionadjustment}[2]{}%
```

```

763 \renewcommand{\setmpjustification}[2]{}
764 \renewcommand*{\mpjustification}{}
765 \renewcommand*{\setfloatlocations}[2]{}
766 \DeclareDocumentCommand{\suppressfloats}{o}{}
767 \renewcommand*{\FloatBlock}{}
768 \renewcommand*{\FloatBlockAllowAbove}{}
769 \renewcommand*{\FloatBlockAllowBelow}{}
770 \renewcommand*{\setFloatBlockFor}{}
771
772 \renewcommand{\captiontitlefinal}[1]{}
773
774 \renewcommand{\flegtable}{\tablename}
775 \renewcommand{\flegfigure}{\figurename}
776 \renewcommand{\flegtocatable}{}
777 \renewcommand{\flegtocfigure}{}

778 \renewcommand{\@makesubfloatcaption}[2]{%
779 \minipagefullwidth
780 \begin{minipage}{\linewidth}%
781 #1 \ignorespaces #2 \unskip%
782 \end{minipage}
783 }
784
785 \renewcommand*{\tightsubcaptions}{}
786 \renewcommand*{\loosesubcaptions}{}
787
788 \renewcommand*{\subcaptionsize}[1]{}
789 \renewcommand*{\subcaptionlabelfont}[1]{}
790 \renewcommand*{\subcaptionfont}[1]{}
791 \renewcommand*{\subcaptionstyle}[1]{}
792
793 \renewcommand*{\hangsubcaption}{}
794 \renewcommand*{\shortsubcaption}{}
795 \renewcommand*{\normalsubcaption}{}
796
797 \RenewDocumentEnvironment{sidecaption}{o m o}
798 {}
799 {%
800 \IfValueTF{#1}{\caption[#1]{#2}}{\caption{#2}}%
801 \IfValueT{#3}{\label{#3}}%
802 }
803
804 % \newlength{\sidecapwidth}
805 % \newlength{\sidecapsep}
806 \renewcommand*{\setsidecaps}[2]{}
807 \renewcommand*{\sidecapmargin}[1]{}
808 % \newif\ifscapmargleft
809 \scapmargleftfalse
810 \renewcommand*{\setsidecappos}[1]{}

Env sidecontcaption

811 \RenewDocumentEnvironment{sidecontcaption}{m o}
812 {}

```

```

813 {%
814 \ifdef{\ContinuedFloat}%
815 {\ContinuedFloat}%
816 {\addtocounter{\@capttype}{-1}}%
817 \caption{#1}%

```

Without \@capttype, the section is referred to instead.

```

818 \IfValueT{#2}{\label[\@capttype]{#2}}%
819 }

```

\sidenamedlegend does not appear to use the roc argument.

```

820 \renewenvironment{sidenamedlegend}[2][]{
821 \begin{center}
822 \@nameuse{\@capttype name}\CaptionSeparator#2
823 \end{center}
824 }
825 {}
826
827 \renewenvironment{sidelegend}[1]
828 {\begin{center}
829 #1
830
831 }
832 {\end{center}}
833
834 \renewcommand*{\sidecapstyle}{}
835 \renewcommand*{\overridescapmargin}[1]{}
836 % \newlength{\sidecapraise}
837 \renewcommand*{\sidecapfloatwidth}{\linewidth}
838
839 \LetLtxMacro\ctabular\tabular
840 \LetLtxMacro\endctabular\endtabular
841
842 \renewcommand{\autorows}[5][]{%
843 #5%
844 }
845
846 \renewcommand{\autocol}[5][]{%
847 #5%
848 }

```

## § 608.12 Footnotes and page notes

```

849 \renewcommand*{\feetabovelfloat}{}
850 \renewcommand*{\feetbelowfloat}{}
851 \renewcommand*{\feetatbottom}{}
852
853 \renewcommand*{\verbfootnote}[2][]{%
854 \PackageError{lwarp, memoir}%
855 {Verbatim footnotes are not yet supported by lwarp}%
856 {This may be improved some day.}%
857 }
858
859 \renewcommand*{\plainfootnotes}{}

```

```

860 \renewcommand*{\twocolumnfootnotes}{}
861 \renewcommand*{\threecolumnfootnotes}{}
862 \renewcommand*{\paragraphfootnotes}{}
863 \renewcommand*{\footfudgefiddle}{}
864
865 \renewcommand*{\newfootnoteseries}[1]{%
866 \PackageError{lwarp, memoir}%
867 {Memoir footnote series are not yet supported by lwarp}%
868 {This may be improved some day.}%
869 }
870
871 \renewcommand*{\plainfootstyle}[1]{}
872 \renewcommand*{\twocolumnfootstyle}[1]{}
873 \renewcommand*{\threecolumnfootstyle}[1]{}
874 \renewcommand*{\paragraphfootstyle}[1]{}
875
876 \renewcommand*{\footfootmark}{}
877 \renewcommand*{\footmarkstyle}[1]{}
878
879 % \newlength{\footmarkwidth}
880 % \newlength{\footmarksep}
881 % \newlength{\footparindent}
882
883 \renewcommand*{\foottextfont}{}
884
885 \renewcommand*{\marginparmargin}[1]{}
886 \renewcommand*{\sideparmargin}[1]{}
887
888 \LetLtxMacro\sidepar\marginpar
889 \renewcommand*{\sideparfont}{}
890 \renewcommand*{\sideparform}{}
891 \LWR@providelength{\sideparvshift}
892
893 \renewcommand*{\parnopar}{}
894
895 \renewcommand{\sidebar}[1]{\begin{quote}#1\end{quote}}
896 \renewcommand*{\sidebarmargin}[1]{}
897 \renewcommand*{\sidebarfont}{}
898 \renewcommand*{\sidebarform}{}
899 % \newlength{\sidebarhsep}
900 % \newlength{\sidebarvsep}
901 % \newlength{\sidebarwidth}
902 % \newlength{\sidebartopsep}
903 \renewcommand{\setsidebarheight}[1]{}
904 \renewcommand*{\setsidebars}[6]{}
905 \renewcommand*{\footnotesatfoot}{}
906 \renewcommand*{\footnotesinmargin}{}
907
908 \LetLtxMacro\sidefootnote\footnote
909 \LetLtxMacro\sidefootnotemark\footnotemark
910 \LetLtxMacro\sidefootnotetext\footnotetext
911
912 \renewcommand*{\sidefootmargin}[1]{}
913 % \newlength{\sidefoothsep}
914 % \newlength{\sidefootvsep}

```

```

915 % \newlength{\sidefootwidth}
916 % \newlength{\sidefootadjust}
917 % \newlength{\sidefootheight}
918 \renewcommand*{\setsidefootheight}[1]{}
919 % \renewcommand*{\sidefootfont}{}% in docs but not in the package
920 \renewcommand*{\setsidefeet}[6]{}
921 \renewcommand*{\sidefootmarkstyle}[1]{}
922 \renewcommand*{\sidefoottextfont}{}
923 \renewcommand*{\sidefootform}{}

924 \renewcommand*{\continuousnotenums}{\pncontopttrue}% from pagenote
925 \renewcommand*{\notepageref}{}
926 \renewcommand*{\prenotetext}{}
927 \renewcommand*{\postnotetext}{}
928 \LetLtxMacro\printpageinnoteshyperref\printpageinnotes
929 \renewcommand*{\foottopagenote}{}
930 \renewcommand*{\pagetofootnote}{}

```

\m@m@wrpnote

\startnoteentrystart To have **cleveref** work with page note labels, the following patch writes \thepagenote and also adds \arabic{pagenote} to the first argument written to the .ent file:

```
\startnoteentry{\thepagenote}{\arabic{pagenote}} . . .
```

The arabic value is required for **cleveref**. \thepagenote becomes \@firstoftwo#1 and the arabic value becomes \@secondoftwo#1.



**\nameref**

Note that for print mode, \nameref print the section name where the page notes are declared in the text, but for HTML it prints the name where the page notes are printed.

```

931 \xpatchcmd{\m@m@wrpnote}
932 {\string\startnoteentry{\thepagenote}}
933 {\string\startnoteentry{\thepagenote}{\arabic{pagenote}}}}
934 {}
935 {\LWR@patcherror{memoir}{m@m@wrpnote}}
936
937 \renewcommand\startnoteentrystart[4]{%
938 \prenoteinnotes%
939 \noteidinnotes{\@firstoftwo#1}{#2}%
940 \@ifmtarg{#2}{%
941 \phantomsection\def\@currentlabel{#1}% original
942 \def\@currentlabel{\@firstoftwo#1}% lwarp
943 \def\cref\@currentlabel{% lwarp
944 [pagenote][\@secondoftwo#1][\@firstoftwo#1% lwarp
945]% lwarp
946 }}%
947 \pagenoteanchor{#4}%
948 \pageinnotes{#3}%
949 \prenotetext%
950 }

```

## § 608.13 Decorative text

```

951 \renewcommand*{\epigraphposition}[1]{}
952 \renewcommand*{\epigraphtextposition}[1]{}

```

```

953 \renewcommand*{\epigraphsourceposition}[1]{}
954 \renewcommand*{\epigraphfontsize}[1]{}
955 \renewcommand*{\epigraphforheader}[2]{}
956 \renewcommand*{\epigraphpicture}{}

```

## § 608.14 Poetry

```

957 \renewcommand*{\vinphantom}{}
958 \renewcommand*{\vleftofline}[1]{#1}
959 % \let\linenumberfrequency\poemlines
960 % \renewcommand*{\linenumberfont}[1]{}
961
962 \DeclareDocumentCommand{\PoemTitle}{s o m}{%
963 \IfValueTF{#2}%
964 {\poemtitle[#2]{#4}}%
965 {\poemtitle{#4}}%
966 }
967
968 \renewcommand*{\NumberPoemTitle}{}
969 \renewcommand*{\PlainPoemTitle}{}
970 \renewcommand*{\poemtitlestyle}{}
971 \renewcommand*{\poemtitlestarmark}[1]{}
972 \renewcommand*{\poemtitlestarpstyle}{}
973 \renewcommand*{\PoemTitleheadstart}{}
974 \renewcommand*{\printPoemTitlenonum}{}
975 \renewcommand*{\printPoemTitlenum}{}
976 \renewcommand*{\afterPoemTitlenum}{}
977 \renewcommand*{\printPoemTitledtitle}[1]{}
978 \renewcommand*{\afterPoemTitle}{}
979 \newlength{\midpoemtitledskip}
980 \renewcommand*{\PoemTitlenumfont}{}
981 \renewcommand*{\PoemTitlefont}{}

```

## § 608.15 Boxes, verbatims and files

```

982 \renewenvironment{qframe}{\fboxed}{\endfboxed}
983 \renewenvironment{qshade}{\shaded}{\endshaded}

984 \renewcommand*{\setverbatimfont}[1]{}
985 \renewcommand*{\tabson}[1]{}
986 \renewcommand*{\tabsoff}{}
987 \renewcommand*{\wrappingon}{}
988 \renewcommand*{\wrappingoff}{}
989 \renewcommand*{\verbatimindent}{}
990 \renewcommand*{\verbatimbreakchar}[1]{}

991 \DefineVerbatimEnvironment{fboxverbatim}{Verbatim}{frame=single}

```

boxedverbatim is already defined by moreverb. boxedverbatim\* does not appear to work at all, even in a minimal print memoir document.

```

992 \renewcommand*{\bvbox}{}
993 \renewcommand*{\bvttopandtail}{}
994 \renewcommand*{\bvsides}{}
995 \renewcommand*{\nobvbox}{}

```

```

996 % \newlength\bvboxsep
997 \renewcommand*{\bvtoprulhook}{}
998 \renewcommand*{\bvtopmidhook}{}
999 \renewcommand*{\bvendrulehook}{}
1000 \renewcommand*{\bvleftsidehook}{}
1001 \renewcommand*{\bvrighsidehook}{}
1002 \renewcommand*{\bvperpagetrue}{}
1003 \renewcommand*{\bvperpagefalse}{}
1004 \renewcommand{\bvtopofpage}[1]{}
1005 \renewcommand{\bvendofpage}[1]{}
1006 \renewcommand*{\linenumberfrequency}[1]{}
1007 \renewcommand*{\resetbvlinenumber}{}
1008 \renewcommand*{\setbvlinenums}[2]{}
1009 \renewcommand*{\linenumberfont}[1]{}
1010 \renewcommand*{\bvnumbersinside}{}
1011 \renewcommand*{\bvnumbersoutside}{}

```

## § 608.16 Cross referencing

```

1012 \renewcommand*{\fref}[1]{\cref{#1}}
1013 \renewcommand*{\tref}[1]{\cref{#1}}
1014 \renewcommand*{\pref}[1]{\cpageref{#1}}
1015 \renewcommand*{\Aref}[1]{\cref{#1}}
1016 \renewcommand*{\Bref}[1]{\cref{#1}}
1017 \renewcommand*{\Pref}[1]{\cref{#1}}
1018 \renewcommand*{\Sref}[1]{\cref{#1}}
1019 \renewcommand*{\figurerefname}{Figure}
1020 \renewcommand*{\tablerefname}{Table}
1021 \renewcommand*{\pagerefname}{page}
1022 \renewcommand*{\bookrefname}{Book~}
1023 \renewcommand*{\partrefname}{Part~}
1024 \renewcommand*{\chapterrefname}{Chapter~}
1025 \renewcommand*{\sectionrefname}{\S}
1026 \renewcommand*{\appendixrefname}{Appendix~}
1027 \LetLtxMacro\titleref\nameref
1028 \renewcommand*{\headnameref}{}
1029 \renewcommand*{\tocnameref}{}
1030
1031 \providecounter{LWR@currenttitle}
1032
1033 \renewcommand*{\currenttitle}{%
1034 \addtocounter{LWR@currenttitle}{1}%
1035 \label{currenttitle\arabic{LWR@currenttitle}}%
1036 \nameref{currenttitle\arabic{LWR@currenttitle}}%
1037 }
1038
1039 \renewcommand*{\theTitleReference}[2]{}
1040 \renewcommand*{\namerefon}{}
1041 \renewcommand*{\namerefoff}{}

```

## § 608.17 Back matter

\@@wrindexhyp    Redefined to write the LWR@autoindex counter instead of page. Note that memoir has two versions, depending on the use of hyperref.

```

1042 \AtBeginDocument{

```

```

1043
1044 \def\@wrindexhyp#1||\{\%
1045 \addtocounter{LWR@autoindex}{1}%
1046 \label{LWRindex-\arabic{LWR@autoindex}}%
1047 % \ifshowindexmark\@showidx{#1}\fi
1048 \protected@write\@auxout{\%
1049 % {\string\@wrindexm@m{\@idxfile}{#1}{\thepage}}%
1050 % {\string\@wrindexm@m{\@idxfile}{#1}{\arabic{LWR@autoindex}}}%
1051 \endgroup
1052 \@esphack}%

```

`\@wrspindexhyp` `\specialindex` behaves like a regular `\index`, pointing to where `\specialindex` is used. If `\specialindex` is used inside a figure or table after the `\caption`, then the hyperlink will be given the name of that particular figure or table.

```

1053 \def\@wrspindexhyp#1||\{\%
1054 \addtocounter{LWR@autoindex}{1}%
1055 \label{LWRindex-\arabic{LWR@autoindex}}%
1056 % \ifshowindexmark\@showidx{#1}\fi
1057 \protected@write\@auxout{\%
1058 % {\string\@wrindexm@m{\@idxfile}{#1}{\@nameuse{the\@sptheid}}}%
1059 % {\string\@wrindexm@m{\@idxfile}{#1}{\arabic{LWR@autoindex}}}%
1060 \endgroup
1061 \@esphack}%
1062
1063 }% \AtBeginDocument

```

`\@spindex` Patched to append `_html` to the file:

```

1064 \renewcommand{\@spindex}[2]{%
1065 \@ifundefined{#1idxfile}%
1066 {\ifreportnoidxfile
1067 \@memwarn{Undefined index file #1}%
1068 \fi
1069 \begingroup
1070 \@sanitize
1071 \@nowrindex}%
1072 {\def\@idxfile{#1_html}%
1073 \def\@sptheid{#2}%
1074 \begingroup
1075 \@sanitize
1076 \@wrspindex}}

```

`\makeindex` Patched to use `_html` filename and `\BaseJobname`:

```

1077 \catcode'_ =12%
1078 \renewcommand*\makeindex[1][\BaseJobname]{%
1079 \if@filesw
1080 \def\gindex{\@bsphack%
1081 \@ifnextchar [{\@index}{\@index[\BaseJobname]}}
1082 \def\specialindex{\@bsphack\@spindex}%
1083 \makememindexhook
1084 \expandafter\newwrite\csname #1idxfile\endcsname
1085 \expandafter\immediate\openout \csname #1idxfile\endcsname #1_html.idx\relax
1086 \typeout{Writing index file #1_html.idx }%

```

```

1087 \fi}
1088 \catcode'_ =8%

```

\printindex   Patched to use \_html filename and \BaseJobname. This will later be patched by the lwarp core.

```

1089 \catcode'_ =12%
1090 \renewcommand{\printindex}[1][\BaseJobname]{\@input@{#1_html.ind}}
1091 \catcode'_ =8%

1092 \DeclareDocumentCommand{\newblock}{}{}
1093 %
1094 \renewcommand*\showindexmarks{}
1095 \renewcommand*\hideindexmarks{}
1096
1097 \renewcommand*\xindyindex{}

```

## § 608.18 Miscellaneous

```

1098 \renewcommand*\changemarks{}
1099 \renewcommand*\nochangemarks{}
1100 \renewcommand*\added[1]{}
1101 \renewcommand*\deleted[1]{}
1102 \renewcommand*\changed[1]{}
1103
1104 \renewcommand*\showtrimsoff{}
1105 \renewcommand*\showtrimson{}
1106 \renewcommand*\trimXmarks{}
1107 \renewcommand*\trimLmarks{}
1108 \renewcommand*\trimFrame{}
1109 \renewcommand*\trimNone{}
1110 \renewcommand*\trimmarkscolor{}
1111 \renewcommand*\trimmarks{}
1112 \renewcommand*\tmarktl{}
1113 \renewcommand*\tmarktr{}
1114 \renewcommand*\tmarkbr{}
1115 \renewcommand*\tmarkbl{}
1116 \renewcommand*\tmarktm{}
1117 \renewcommand*\tmarkmr{}
1118 \renewcommand*\tmarkbm{}
1119 \renewcommand*\tmarkml{}
1120 \renewcommand*\trimmark{}
1121 \renewcommand*\quarkmarks{}
1122 \renewcommand*\registrationColour[1]{}
1123
1124 \renewcommand*\leavespergathering[1]{}
1125
1126 \renewcommand*\noprelistbreak{}
1127
1128 \renewcommand*\cleartorecto{}
1129 \renewcommand*\cleartoverso{}
1130
1131 \renewenvironment{vplace}[1][1]{}{}

```

§ 608.19 **ccaption emulation**

```

1132 \renewcommand*{\captiondelim}[1]{\renewcommand*{\CaptionSeparator}{#1}}
1133 \renewcommand*{\captionnamefont}[1]{}
1134 \renewcommand*{\captiontitlefont}[1]{}
1135 \renewcommand*{\flushleft}{\right}
1136 \renewcommand*{\centerlastline}{}
1137 \renewcommand*{\captionstyle}[2][{}]{%
1138 \DeclareDocumentCommand{\captionwidth}{m}{}
1139 \renewcommand*{\changecaptionwidth}{}
1140 \renewcommand*{\normalcaptionwidth}{}
1141 \renewcommand*{\hangcaption}{}
1142 \renewcommand*{\indentcaption}[1]{}
1143 \renewcommand*{\normalcaption}{}
1144 \renewcommand{\precaption}[1]{}
1145 \renewcommand{\postcaption}[1]{}
1146 \renewcommand{\midbicapTION}[1]{}
1147 \renewcommand{\contcaption}[1]{%
1148 % \ContinuedFloat%
1149 % \caption{#1}%
1150 \begin{LWR@figcaption}% later becomes \caption*
1151 \LWR@isolate{\@nameuse{\@capttype name}}~%
1152 \thechapter.\the\value{\@capttype}\CaptionSeparator\LWR@isolate{#1}%
1153 \end{LWR@figcaption}%
1154 }

1155 \newlength{\abovelegendskip}
1156 \setlength{\abovelegendskip}{0.5\baselineskip}
1157 \newlength{\belowlegendskip}
1158 \setlength{\belowlegendskip}{\abovelegendskip}

```

The extra `\\` here forces a `<br>` in HTML when `\legend` is used in a `\marginpar`.

```

1159 \renewcommand{\legend}[1]{\begin{center}#1\\end{center}}
1160
1161 \renewcommand{\namedlegend}[2][{}]{%
1162 \begin{center}
1163 \@nameuse{fleg\@capttype}\CaptionSeparator#2\\
1164 \end{center}
1165 \@nameuse{flegtoc\@capttype}{#1}
1166 }
1167
1168 \renewcommand{\newfixedcaption}[3][\caption]{%
1169 \renewcommand{#2}{\def\@capttype{#3}#1}}
1170 \renewcommand{\renwfixedcaption}[3][\caption]{%
1171 \renewcommand{#2}{\def\@capttype{#3}#1}}
1172 \renewcommand{\providfixedcaption}[3][\caption]{%
1173 \providecommand{#2}{\def\@capttype{#3}#1}}
1174
1175 \renewcommand{\bitwonumcaption}[6][{}]{%
1176 \ifblank{#2}{\caption{#3}}{\caption{#2}{#3}}%
1177 \addtocounter{\@capttype}{-1}%
1178 \begingroup%
1179 \csdef{\@capttype name}{#4}%
1180 \ifblank{#5}{\caption{#6}}{\caption{#5}{#6}}%
1181 \endgroup%

```

```

1182 \ifblank{#1}{\label{#1}}%
1183 }
1184
1185 \LetLtxMacro\bionenumcaption\bitwonumcaption% todo
1186
1187 \renewcommand{\bicapcaption}[5][\%
1188 \ifblank{#2}{\caption{#3}}{\caption[#2]{#3}}%
1189 \begin{LWR@figcaption}% later becomes \caption*
1190 \LWR@isolate{#4} % space
1191 \thechapter.\the\value{\@capytype}\CaptionSeparator\LWR@isolate{#5}%
1192 \end{LWR@figcaption}%
1193 \ifblank{#1}{\label{#1}}%
1194 }
1195
1196 \renewcommand{\bicontcaption}[3]{%
1197 \contcaption{#1}%
1198 \begingroup%
1199 \csdef{\@capytype name}{#2}%
1200 \contcaption{#3}%
1201 \endgroup%
1202 }

1203 % only in ccaption, not in memoir:
1204 % \LetLtxMacro\longbitwonumcaption\bitwonumcaption%
1205 % \LetLtxMacro\longbionenumcaption\bitwonumcaption%
1206 % \LetLtxMacro\longbicaption\bicapcaption%

```

Patches for subfloats to support additional lwarp labels:

```

1207 \renewcommand{\@memsubbody}{%
1208 \bgroup
1209 \let\label=\memsub@label
1210 \ifdonemaincaption\else
1211 \advance\csname c@\@capytype\endcsname\@ne
1212 \fi
1213 % \refstepcounter{sub\@capytype}\@contkeep%
1214 % \leavevmode\lwarp
1215 \@ifnextchar [%
1216 {\@memsubfig}%
1217 {\@memsubfig[\@empty]}}
1218
1219 \renewcommand{\@memcontsubbody}{%
1220 \bgroup
1221 \let\label=\memsub@label
1222 \@contset
1223 % \refstepcounter{sub\@capytype}\@contkeep%
1224 % \leavevmode\lwarp
1225 \@ifnextchar [%
1226 {\@memsubfig}%
1227 {\@memsubfig[\@empty]}}
1228
1229
1230 \long\def\@memsubfloat#1[#2][#3]#4{%
1231 % \@tempcnta=\@ne
1232 % \if@tightsubcap
1233 % \if@minipage

```

```

1234 % \@tempcnta=\z@
1235 % \else
1236 % \ifdim\lastskip=\z@
1237 % \@tempcnta=\@ne
1238 % \else
1239 % \@tempcnta=\tw@
1240 % \fi
1241 % \fi
1242 % \fi
1243 % \if@contbotsub
1244 % \def\subfig@top{\subfloattopskip}%
1245 % \def\subfig@bottom{\subfloatbottomskip}%
1246 % \else
1247 % \def\subfig@top{\subfloatbottomskip}%
1248 % \def\subfig@bottom{\subfloattopskip}%
1249 % \fi
1250 % \setbox\@tempboxa \hbox{#4}%
1251 % \@tempdima=\wd\@tempboxa
1252 % \vbox
1253 % \bgroup%
1254 % \mem@step@subcounter%
1255 % \vbox
1256 % \LWR@stoppars%
1257 % \minipagefullwidth% lwarp
1258 % \begin{minipage}{\linewidth}% lwarp
1259 % \bgroup
1260 % \ifcase\@tempcnta
1261 % \@minipagefalse
1262 % \or
1263 % \vspace{\subfig@top}
1264 % \or
1265 % \ifdim \lastskip=\z@ \else
1266 % \@tempskipb\subfig@top\@xaddvskip
1267 % \fi
1268 % \fi
1269 % \if@contbotsub
1270 % #4% \box\@tempboxa
1271 % \egroup
1272 % \ifx \@empty#3\relax \else
1273 % \vskip\subfloatcapskip
1274 % \@memsubcaption{#1}{#2}{#3}%
1275 % \fi
1276 % \else
1277 % \ifx \@empty#3\relax \else
1278 % \@memsubcaption{#1}{#2}{#3}%
1279 % \vskip\subfloatcapskip
1280 % \vskip\subfloatcaptopadj
1281 % \fi\egroup
1282 % #4% \box\@tempboxa
1283 % \fi
1284 % \vspace{\subfig@bottom}
1285 % \end{minipage}% lwarp
1286 % \LWR@startpars% lwarp
1287 % \egroup
1288 % \egroup

```

1289 }

## § 608.20 Final patchwork

```
1290 \newlistof{tableofcontents}{toc}{\contentsname}
1291 \newlistof{listoffigures}{lof}{\listfigurename}
1292 \newlistof{listoftables}{lot}{\listtablename}
```

---

File 506 **lwarp-common-multimedia.sty**

## § 609 Package **common-multimedia**

Pkg lwarp-common-multimedia Common code for multimedia, movie15, and media9.

The packages multimedia, movie15, and media9 are supported.

HTML5 <audio> and <video> objects are created for .mp3 and .mp4 files.

HTML5 <embed> objects are created for http and ftp links.

\href links are created for other media types. (Unfortunately, there is not much overlap between the file types supported for print output and the file types supported by HTML5.)

For media9, a multimedia object is inserted for each addressource=, as well as each flashvars source= and src=. This may result in duplicate objects.

Undesired objects may be nullified by placing them inside \warpprintonly or the warpprint environment.

Each HTML multimedia object includes the poster text, except for <embed> objects. For movie15, the text option is supported to specify the poster text.

The width, height, and totalheight options are supported. The HTML object is scaled according to the display width, correctly compensating for either tall or wide viewports.

Other options are ignored.

media9 \addmediapath is supported. It is assumed that the same path structure will exist for the HTML document.

HTML5 media controls are always specified for each <audio> and <video> object.

media9 slideshows are not supported.

\hyperlinkmovie, \movieref, and \mediabutton are not supported.

3D objects are not supported.

If using a YOUTUBE™ video, use an “embedded” URL with .../embed/... instead of .../v/...

for HTML output: 1 \ProvidesPackage{lwarp-common-multimedia}[2019/04/22]

```

2 \RequirePackage{xkeyval}
3
4 \define@key{LWR@multimedia}{width}{\setlength{\LWR@multimedia@width}{#1}}
5 \define@key{LWR@multimedia}{height}{\setlength{\LWR@multimedia@height}{#1}}
6 \define@key{LWR@multimedia}{totalheight}{\setlength{\LWR@multimedia@height}{#1}}

7 \newlength{\LWR@multimedia@width}
8 \newlength{\LWR@multimedia@height}
9 \newlength{\LWR@multimedia@maxdimension}

```

`\LWR@multimedia@printsiz` Proportional to `\linewidth` and the viewport's smaller dimension. This scales each object such that it will always fit on the screen, even if a tall or wide object inside a tall or wide viewport.

```

10 \newcommand*{\LWR@multimedia@printsiz}{%
11 \setlength{\LWR@multimedia@maxdimension}{%
12 \maxof%
13 {\linewidth}%
14 {\maxof{\LWR@multimedia@width}{\LWR@multimedia@height}}%
15 }%
16 \setlength{\LWR@multimedia@maxdimension}{1.1\LWR@multimedia@maxdimension}%
17 \ifdimgreater{\LWR@multimedia@width}{0pt}{%
18 width:%
19 \LWR@printpercentlength%
20 {\LWR@multimedia@width}%
21 {\LWR@multimedia@maxdimension}vmin ; % space
22 }{}%
23 \ifdimgreater{\LWR@multimedia@height}{0pt}{%
24 height:%
25 \LWR@printpercentlength%
26 {\LWR@multimedia@height}%
27 {\LWR@multimedia@maxdimension}vmin ; % space
28 }{}%
29 }

```

`\LWR@multimedia@fileAV` `{<poster text>} {<filename>} {<audio/video>} {<mimetype>}`

Creates a video or audio from a file. The 2019/10 update of the L<sup>A</sup>T<sub>E</sub>X kernel may cause extra quotes to be added in the filenames. They are removed here.

```

30 \newcommand*{\LWR@multimedia@fileAV}[4]{%
31 \IfFileExists{#2}{% also sets \@filef@und
32 \StrSubstitute[100]{\@filef@und}{"}{}}[\LWR@parsedfilename]%

```

The container `<div>` is sized as desired.

```

33 \ifstrequal{#3}{audio}{%
34 \begin{BlockClass}{AVviewport}
35 }{%
36 \begin{BlockClass}[\LWR@multimedia@printsiz\ margin:auto]{AVviewport}
37 }

```

Paragraph tags are unnecessary for the A/V tags.

```
38 \LWR@stoppars
```

The A/V element is 100% of the container.

```

39 \LWR@htmltag{%
40 #3\ % space
41 \ifstrequal{#3}{audio}{}{%
42 width=\textquotedbl{}100%\textquotedbl\ % space
43 height=\textquotedbl{}100%\textquotedbl\ % space
44 }%
45 controls%
46 } \LWR@orignewline

```

The file source and type:

```

47 \LWR@htmltag{%
48 source % space
49 src=\textquotedbl%
50 \LWR@parsedfilename\unskip\textquotedbl\ % space
51 type=\textquotedbl{}#4\textquotedbl%

```

The poster text inside paragraph tags, along with a reference to the file.

```

52 \LWR@startpars
53 \LWR@href{\LWR@parsedfilename}{#1}
54 \LWR@stoppars

```

Finish.

```

55 \LWR@htmltag{/#3}\LWR@orignewline
56 \end{BlockClass}
57 }{%
58 \PackageError{lwarp-common-multimedia}
59 {File '#2' not found}
60 {Perhaps an incorrect path?}
61 }%
62 }

```

`\LWR@multimedia@httpAV`    `{\langle poster text \rangle}{\langle filename \rangle}{\langle audio/video \rangle}{\langle mimetype \rangle}`

Creates a video or audio from a URL link.

```

63 \newcommand*{\LWR@multimedia@httpAV}[4]{%

```

The container <div> is sized as desired.

```

64 \ifstrequal{#3}{audio}{}%
65 \begin{BlockClass}{AVviewport}
66 }{%
67 \begin{BlockClass}[\LWR@multimedia@printsize\ margin:auto]{AVviewport}
68 }

```

Paragraph tags are unnecessary for the A/V tags.

```

69 \LWR@stoppars

```

The A/V element is 100% of the container.

```

70 \LWR@htmltag{%
71 #3\ % space
72 \ifstrequal{#3}{audio}{}{%
73 width=\textquotedbl{}100%\textquotedbl\ % space
74 height=\textquotedbl{}100%\textquotedbl\ controls%
75 }%
76 } \LWR@orignewline

```

The file source and type:

```

77 \LWR@htmltag{%
78 source % space
79 src=\textquotedbl#2\textquotedbl\ % space
80 type=\textquotedbl#4\textquotedbl}

```

The poster text inside paragraph tags, along with a reference to the URL.

```

81 \LWR@startpars
82 \LWR@href{#2}{#1}
83 \LWR@stoppars

```

Finish.

```

84 \LWR@htmltag{/#3}\LWR@orignewline
85 \end{BlockClass}
86 }

```

`\LWR@multimedia@AV`    *{<poster text>} {<filename>} {<audio/video>} {<mimetype>}*

Creates an audio or video from a file or a URL.

```

87 \newcommand*{\LWR@multimedia@AV}[4]{%
88 \IfBeginWith{#2}{http}%
89 {\LWR@multimedia@httpAV{#1}{#2}{#3}{#4}}%
90 {%
91 \IfBeginWith{#2}{HTTP}%
92 {\LWR@multimedia@httpAV{#1}{#2}{#3}{#4}}%
93 {\LWR@multimedia@fileAV{#1}{#2}{#3}{#4}}%
94 }%
95 }

```

`\LWR@multimedia@embed`    *{<poster text>} {<URL or filename>} {<mime type>}*

Embeds multimedia of an arbitrary type. The poster text is not used, as it would appear along with the video if the <embed> element is supported.

```

96 \newcommand*{\LWR@multimedia@embed}[3]{%
97 \begin{BlockClass}[width:100\%]{AVviewport}%
98 \LWR@stoppars
99 \LWR@htmltag{%
100 embed % space
101 \ifblank{#3}{\type=\textquotedbl#3\textquotedbl\ }%
102 style=\textquotedbl\LWR@multimedia@printsize\ margin:auto\textquotedbl\ % space
103 src=\textquotedbl#2\textquotedbl\ % space
104 }%
105 \LWR@startpars
106 \end{BlockClass}
107 }

```

Error message if the comment character is used among the arguments of `\LWR@multimedia@b`.

`\LWR@multimedia@percenterror`

```

108 \newcommand*{\LWR@multimedia@percenterror}{%
109 \PackageError{lwarp-media9}
110 {%
111 Do not use a percent comment between\MessageBreak
112 \protect\includemedia\space arguments%

```

```

113 }
114 {%
115 Percent is changed to a regular character\MessageBreak
116 to allow its use inside a URL.%
117 }
118 }

```

`\LWR@multimediab` [*<options>*] [*<poster text>*] [*<filename>*]

Creates multimedia. Examines the file extension to determine the type. If not a supported type, creates an embedded object if it has a URL. If neither, create a link to the unsupported object.

```

119 \newcommand*{\LWR@multimediab}[3][[]]{%

```

Error if the percent character appears among the arguments. This could happen since the comment character has been temporarily disabled, for use in a URL.

```

120 \if#1\@percentchar\LWR@multimedia@percenterror\fi%
121 \if#2\@percentchar\LWR@multimedia@percenterror\fi%
122 \if#3\@percentchar\LWR@multimedia@percenterror\fi%

```

Paragraph handling:

```

123 \LWR@stoppars%

```

Record the desired size.

```

124 \setlength{\LWR@multimedia@width}{0pt}%
125 \setlength{\LWR@multimedia@height}{0pt}%
126 \setkeys*{\LWR@multimedia}{#1}%

```

If a known A/V type, create an HTML5 <video> or <audio>.

```

127 \IfEndWith{#3}{.mp4}{\LWR@multimedia@AV{#2}{#3}{video}{video/mp4}}{%
128 \IfEndWith{#3}{.MP4}{\LWR@multimedia@AV{#2}{#3}{video}{video/mp4}}{%
129 \IfEndWith{#3}{.mp3}{\LWR@multimedia@AV{#2}{#3}{audio}{audio/mpeg}}{%
130 \IfEndWith{#3}{.MP3}{\LWR@multimedia@AV{#2}{#3}{audio}{audio/mpeg}}{%

```

If an arbitrary URL, embed it.

```

131 \IfBeginWith{#3}{http}{\LWR@multimedia@embed{#2}{#3}}{%
132 \IfBeginWith{#3}{HTTP}{\LWR@multimedia@embed{#2}{#3}}{%
133 \IfBeginWith{#3}{ftp}{\LWR@multimedia@embed{#2}{#3}}{%
134 \IfBeginWith{#3}{FTP}{\LWR@multimedia@embed{#2}{#3}}{%

```

If unknown, create a link to it.

```

135 \LWR@href{#3}{#2}% unknown format
136 }}}}{}%

```

Paragraph handling:

```

137 \LWR@startpars%
138 \endgroup%
139 }

```

Catcodes which may appear in a URL.

```

140 \newrobustcmd*{\LWR@multimedia}{%
141 \begingroup%

```

---

```
142 \LWR@linkmediacatcodes%
143 \LWR@multimediab%
144 }
```

# Change History

## § 610 Chg Hist

For the most recent changes, see page 1228.

|       |                                                                |                                                                                    |
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| v0.10 | General: 2016/03/08 Initial version . . . 1                    | Test Suite: Assigned cleveref name for Test Float. . . . . 1                       |
| v0.11 | General: 2016/03/11 . . . . . 1                                | Test Suite: Floatrow . . . . . 1                                                   |
|       | Added section: Operating-System portability. . . . . 223       |                                                                                    |
|       | Added section: Selecting the operating system. . . . . 114     |                                                                                    |
|       | Test Suite: MS-WINDOWS in README.txt . . . . . 1               |                                                                                    |
|       | Test Suite: limages and index in README.txt . . . . . 1        |                                                                                    |
| v0.12 | \LWR@newhtmlfile: Bugfix: TOC with numbered files. . . . . 384 |                                                                                    |
|       | General: 2016/03/14 . . . . . 1                                |                                                                                    |
|       | Global: Uses \p@(type) in float captions. . . . . 1            |                                                                                    |
|       | Test Suite: Sub-figures . . . . . 1                            |                                                                                    |
| v0.13 | \CaptionSeparator: Fix for newer babel package. . . . . 509    |                                                                                    |
|       | \LWR@LwarpStart: \up and \fup . . . 404                        |                                                                                    |
|       | General: 2016/03/24 . . . . . 1                                |                                                                                    |
|       | Fix dollar-redefined bug for newer package. . . . . 1085       |                                                                                    |
|       | Removed package: subfig . . . . . 1                            |                                                                                    |
|       | Test Suite: Ordinals, Subcaption . . . 1                       |                                                                                    |
| v0.14 | \LWR@htmlsectionfilename: Fix: Links to home page. . . . . 338 |                                                                                    |
|       | General: 2016/03/31 . . . . . 1                                |                                                                                    |
|       | floatrow: Added. . . . . 786                                   |                                                                                    |
|       | Docs: Commands for a successful HTML conversion. . . . . 119   |                                                                                    |
|       | Docs: Commands into a warpprint environment. . . . . 116       |                                                                                    |
|       | Docs: Newclude limitations. . . . 172                          |                                                                                    |
|       | Docs: Table: Cross-referencing data structures. . . . . 493    |                                                                                    |
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|       | Docs: Trademarks section. . . . . 198                          |                                                                                    |
|       | Docs: Troubleshooting cross-references. . . . . 193            |                                                                                    |
|       |                                                                | General: 2016/04/06 . . . . . 1                                                    |
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|       |                                                                | Docs: Added warning icons for items needing special attention. 201                 |
|       |                                                                | Docs: Clarify print/HTML output. 115                                               |
|       |                                                                | Docs: Moved the supported features table to the introduction. 63                   |
|       |                                                                | Files: lwarp_formal.css added. . . . 1                                             |
|       |                                                                | Fix: steps counter . . . . . 790                                                   |
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|       |                                                                | Test Suite: test_suite_formal.css file added. . . . . 1                            |
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|       |                                                                | v0.15                                                                              |
|       |                                                                | General: 2016/04/11 . . . . . 1                                                    |
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|       |                                                                | Added XeLaTeX, LuaLaTeX support. . . . . 202                                       |
|       |                                                                | Docs: Font and UTF-8 support. . . 97                                               |
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| Test Suite: Mdfamed .....                                                        | 1    | \LWR@minipagestartpars: Suppresses<br>paragraph tags between<br>minipages. ....     | 607      |
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| \LWR@myshorttoc: Reorganize<br>\HomeHTMLFilename logic. ....                     | 514  | \LateximageFontSizeName: Add:<br>User-adjustable math/lateximage<br>font size. .... | 564      |
| \LWR@newhtmlfile: sideroc after title,<br>improving responsive design. ...       | 383  | \hspace: Fix: \hspace length<br>computations. ....                                  | 608      |
| \LWR@requesttoc: Reorganize<br>\HomeHTMLFilename logic. ....                     | 405  | \minipagefullwidth: Added: No<br>width tag for the next minipage in<br>HTML. ....   | 586      |
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| \LWR@subhyperrefclass: Improved<br>HTML output linebreaks. ....                  | 503  | \warpprintonly: Replaces<br>\rowprintedonly. ....                                   | 232      |
| \LWR@subinlineimage: Suppress extra<br>space. ....                               | 504  | \xfracHTMLfontsize: Added. ...                                                      | 1145     |
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| graphics: Add: svgz file extension. ....                                         | 818  | MATHJAX support added. ...                                                          | 551, 559 |
| graphics: Fix: \linewidth,<br>\textwidth, \textheight inside a<br>minipage. .... | 818  | multirow: Added optional args. ...                                                  | 920      |
| graphics: Improved HTML output<br>linebreaks. ....                               | 818  | xcolor: Supports colored \rule. ....                                                | 1136     |
| graphics: em, ex, %, px dimensions<br>preserved. ....                            | 818  | Adapts to tikz version. ....                                                        | 1085     |
| File: lwrap.css: Improved toc<br>outline display. ....                           | 1    | Avoids MATHJAX. ....                                                                | 539      |
| Files: lwrap.css and<br>lwrap_formal.css: Improved<br>responsive design. ....    | 1    | cleveref: Loaded \AtEndPreamble. ....                                               | 582      |
| Microtype disabled during HTML<br>generation .....                               | 234  | Docs: Math options. ....                                                            | 100      |
| PDF Unicode input characters. ...                                                | 217  | Docs: Table: Cross-referencing data<br>structures, updated. ....                    | 493      |
| Test Suite: Verse package .....                                                  | 1    | File: lwrap.css: tnoteitemheader<br>added. ....                                     | 1        |
| lateximage: pdfcrop: -- hires added. ....                                        | 567  | File: lwrap_mathjax.txt added. ...                                                  | 1        |
| Reorganize \HomeHTMLFilename<br>logic. ....                                      | 567  | Introduction: MATHJAX support<br>mentioned. ....                                    | 60       |
| Suppress extra space. ....                                                       | 567  | Options: mathsvg and mathjax ...                                                    | 226      |
| verse: Supports verse, memoir<br>packages. ....                                  | 1122 | titles: null \pagestyle and<br>\thispagestyle for HTML. ...                         | 1086     |
| minipage: Fix: \linewidth,<br>\textwidth, \textheight inside a<br>minipage. .... | 586  | v0.20                                                                               |          |
| v0.19                                                                            |      | \BlockClassSingle: Renamed from<br>"LWR@htmldivclassline". ....                     | 353      |
| \HTMLFilename: Docs: Escape<br>filename underscores. ....                        | 337  | \HTMLDescription: Added<br>\NewHTMLdescription. (Renamed<br>in v0.30.) ....         | 365      |
| \HomeHTMLFilename: Docs: Escape<br>filename underscores. ....                    | 337  | \HTMLFilename: No longer escape<br>underscores. ....                                | 337      |
| \LWR@LwrapStart: Enabled \ equal to<br>\newline. ....                            | 403  | \HomeHTMLFilename: No longer<br>escape underscores. ....                            | 337      |
| \LWR@doequation: MATHJAX support. ....                                           | 554  | \InlineClass: Renamed from<br>"inlineclass". ....                                   | 354      |
| \LWR@doubledollar: MATHJAX<br>support. ....                                      | 547  | \LWR@closeparagraph: \unskip extra<br>spaces. ....                                  | 358      |
|                                                                                  |      | No break tags in the start/end of a<br>tabular. ....                                | 358      |
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|                                                                                                        |     |                                                                              |      |
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| \LWR@filestart: Adds meta description. . . . .                                                         | 400 | letterspace: User-interface emulated. . . . .                                | 856  |
| \LWR@htmldivclass: Added optional style. . . . .                                                       | 352 | listings: Added. . . . .                                                     | 860  |
| \LWR@htmlElementclass: Added optional style. . . . .                                                   | 351 | lrcaption: Added. . . . .                                                    | 870  |
| \LWR@htmlsectionfilename: HTMLFilename: removed additional trailing '-', and may be empty. . . . .     | 338 | lwarp-newproject: Added. . . . .                                             | 260  |
| Sections called "Index" or "index" have an underscore prepended to their filenames if no prefix. . . . | 338 | microtype: User-interface emulated. . . . .                                  | 906  |
| \LWR@hyperindexrefsubtwo: Print mode provided in case hyperref not used. . . . .                       | 529 | needspace: Added. . . . .                                                    | 931  |
| \LWR@longtabledatacaptiontag: Fix: Pars in captions. . . . .                                           | 476 | nowidow: Added. . . . .                                                      | 942  |
| \LWR@section: Combined higher-level sections together into files. . . .                                | 391 | placeins: Added. . . . .                                                     | 977  |
| \LWR@setOSWindows: Auto-detects operating system. . . . .                                              | 225 | ragged2e: Added. . . . .                                                     | 985  |
| \LWR@subhtmlElementclass: Factored code. . . . .                                                       | 351 | setspace: Improved support. . .                                              | 1008 |
| \SetHTMLFileNumber: Add: Control file numbers. . . . .                                                 | 337 | textpos: Added. . . . .                                                      | 1075 |
| \cpagerefFor: User-redefinable word for page references. . . . .                                       | 721 | titleps: Added. . . . .                                                      | 1086 |
| \dotfill: Inserts an ellipsis. . . .                                                                   | 606 | titlesec: Added. . . . .                                                     | 1089 |
| \hfill: Inserts a \qqquad. . . . .                                                                     | 606 | titletoc: Added. . . . .                                                     | 1091 |
| \hrulefill: Inserts a short rule. . .                                                                  | 606 | titling: Improved compatibility.                                             | 1093 |
| \hspace: Add: Supports HTML thin breakable space. . . . .                                              | 608 | tocloft: Added. . . . .                                                      | 1101 |
| \pageref: Added. . . . .                                                                               | 501 | wallpaper: Added. . . . .                                                    | 1128 |
| \tracinglwarp: Added. . . . .                                                                          | 248 | wrapfig: Added. . . . .                                                      | 1131 |
| General: 2017/02/09 . . . . .                                                                          | 1   | xetexko-vertical: Added. . . . .                                             | 1144 |
| afterpage: Added. . . . .                                                                              | 634 | Added @, <, > columns. . . . .                                               | 432  |
| alltt: Added. . . . .                                                                                  | 638 | Added single-expansion data arrays. . . . .                                  | 334  |
| bookmark: Added. . . . .                                                                               | 674 | Code factored into independent lwarp_html files. . . . .                     | 623  |
| caption and subcaption supported. .                                                                    | 1   | Docs: Examples for generating HTML file names. . . . .                       | 112  |
| cleveref and referencing patches: Applied \AfterEndPreamble. . .                                       | 720 | Docs: Improved index. . . . .                                                | 1    |
| draftwatermark: Added. . . . .                                                                         | 736 | Enhanced titling support. . . . .                                            | 410  |
| eso-pic: Added. . . . .                                                                                | 758 | File: lwarp.css: Minor fixes for validation. . . . .                         | 1    |
| everypage: Added. . . . .                                                                              | 762 | File: lwarpmk used to compile print, HTML, indexes, and lateximages. . . . . | 1    |
| extramarks: Added. . . . .                                                                             | 763 | Fix: \linewidth in a floatrow. . .                                           | 789  |
| fancyhdr: Added. . . . .                                                                               | 768 | Moved sidebar and example code to test suite. . . . .                        | 1    |
| float: Improved float caption type handling. . . . .                                                   | 783 | Page geometry set to 6in wide with large margins. . . . .                    | 234  |
| graphics: Fix: Expands filename. .                                                                     | 818 | Parallel versions of aux files for print/HTML. . . . .                       | 1    |
| graphics: Fix: \linewidth in a floatrow. . . . .                                                       | 818 | Removed reliance on make, grep, gawk. . . . .                                | 1    |
| hyperref: Additional user macros. .                                                                    | 829 | Tabular: \unskip extra spaces. . .                                           | 432  |
| keyfloat: Added. . . . .                                                                               | 847 | Test Suite: HTML meta descriptions. .                                        | 1    |
|                                                                                                        |     | verbatim: Added. . . . .                                                     | 421  |
|                                                                                                        |     | BlockClass: Added optional style. .                                          | 353  |
|                                                                                                        |     | Renamed from "blockclass". . .                                               | 353  |
|                                                                                                        |     | LWR@nestspan: Fix: Minipages inside a span. . . . .                          | 348  |
|                                                                                                        |     | v0.21                                                                        |      |
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| \LWR@filestart: Skip title if not given. . . . .                                             | 400  | v0.24 | \LWR@htmlfileref: Fix: Index links while \tracinglwarp. . . . .                                                                                      | 495      |
| \LWR@newhtmlfile: Skip title if not given. . . . .                                           | 383  |       | \hspace: Add: \hspace \fill converts to 2em . . . . .                                                                                                | 608      |
| \marginpar: Fixed source listing. . .                                                        | 371  |       | \hypertocfloat: List of floats responds to lofdepth, lotdepth. . . . .                                                                               | 520      |
| \marginparBlock: Fixed source listing. . . . .                                               | 372  |       | General: 2017/03/15 . . . . .                                                                                                                        | 1        |
| General: 2017/02/23 . . . . .                                                                | 1    |       | floatrow: Support for subfig. . . .                                                                                                                  | 786      |
| fontenc: Added. . . . .                                                                      | 796  |       | subfig: Added. . . . .                                                                                                                               | 1049     |
| lwarpmk: Fix: <b>lwarpmk</b> again for WINDOWS. . . . .                                      | 313  |       | tikz: For tikz v3.0.0 or later, auto-loads tikz babel library if necessary. . . . .                                                                  | 1084     |
| lwarpmk: Fix: <b>lwarpmk</b> <b>limages</b> for WINDOWS. . . . .                             | 313  |       | Docs: Filename underscore. . . . .                                                                                                                   | 100, 122 |
| lwarpmk: Fix: <b>lwarpmk</b> uses lateximages text file instead of shell script. . . . .     | 313  |       | Fix for inline images. . . . .                                                                                                                       | 1085     |
| Add: Errors for misplaced packages. . . . .                                                  | 202  |       | No longer preloads subcaption; conflicted with subfig. . . . .                                                                                       | 238      |
| Docs: Added internet class. . . . .                                                          | 69   |       | picture: Fix for inline images. . . .                                                                                                                | 583      |
| Docs: Added TeX2page, GladTeX. . .                                                           | 69   | v0.25 |                                                                                                                                                      |          |
| Docs: Installing on WINDOWS. . . .                                                           | 75   |       | \LWR@loadnever: Added the ability to prevent conflicting packages. . . .                                                                             | 204      |
| File: lwarp_tutorial.txt added. . .                                                          | 79   |       | \addcontentsline: Handles theorems. . . . .                                                                                                          | 513      |
| v0.22                                                                                        |      |       | General: 2016/03/22 . . . . .                                                                                                                        | 1        |
| \LWR@parseDcolumn: Added tabular D column. . . . .                                           | 448  |       | amsthm: Added. . . . .                                                                                                                               | 643      |
| \LWR@parsebangcolumn: Added tabular ! column. . . . .                                        | 444  |       | ellipsis: Added. . . . .                                                                                                                             | 743      |
| \LWR@parsetablecols: Unknown table column types become l. Added tabular D, !, X columns. . . | 452  |       | emptypage: Added. . . . .                                                                                                                            | 745      |
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# General Index

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# Troubleshooting Index

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Entries with higher page numbers are often duplicates of entries with lower page numbers, as the same warning may occur within the user manual and again within the source code for a given package.

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