

Lwarp

L^AT_EX HTML5

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.

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.

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 1065.

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

packages

- 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.
- `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 `lylualatex`. (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`.

packages

- **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.

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 325.
- **changes**: Updated to v3.1.2.
- Added autonum, changelayout, inputtrc, mathtools, metalogox.

packages

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.

packages

- **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

- *lwarpmk*: Improved error handling for image generation if compile was incomplete.
- `tabular`: Fix for `\warpprintonly`.

packages

- `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 **`pdflatex 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

⚠ Possible filename changes

WINDOWS

floats

lists, table notes

tabular

indexing

minipage

colors

HTML

docs

packages

- Added `\FilenameLimit` to control the maximum length of the filenames generated by **lwarp**.
- Improved filename generation when special characters or macros are used in section names.
- Fix for **lwarpmk cleanlimages** with WINDOWS.
- Fixes for floats in the home page.
- Improved css for definition lists, table notes.
- **tabular**: Fixes for `\par` in column specifier, minipage inside **tabular**.
- **Indexing**: Fix for a long line of multiple entries.
- `\minipagefullwidth`: Fix for global changes.
- Added `\UseMinipageWidths` and `\IgnoreMinipageWidths`. See section 8.3.3.
- Improved `\fbox`, `\fboxBlock`, `\fminipage` to use current text color.
- Improved HTML output formatting.
- Added discussion regarding invalid HTML. See section 8.1.1.
- 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**, **picinpar**, **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`, `tascmac`.
 - 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 `embrac`, `footnoterange`, `multicolrule`, `versionotes`.

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

- Japanese
 - Added `utarticle` and related classes.
 - Improved `ujarticle` and related classes.
- Chinese
 - Fix for `biblatex` with `CTeX` and other classes.
- Koma-Script
 - Fixes for `sclayer`, `sclayer-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 `ckjpunct`, `upzhkinsoku`, `zhspacing`.
- Japanese
 - Verified to work with `zxjatype`, `luatexja`, `luatexja-fontspec`.
 - Added `bxjsarticle` and related classes.
 - Added `ltjsarticle` and related classes.
 - Added `pLATEX`, `upLATEX`, `ujarticle` and related classes.

- Prevented utarticle and related classes.
- Prevented bxcjkatype.
- Korean**
 - Verified to work with kotex, xetexko, luatexko.
- v0.62:** MiKTeX docs, HTML title, CTeX, xeCJK, bitpattern.
- docs**
 - Docs: Setting a UTF-8 locale. See section 9.8.
- MiKTeX**
 - MiKTeX: Docs for *MiKTeX 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 7.4.
- fixes**
 - Fix for package options handling.
 - Fixes for horizontal white space between fminipage, fcolorminipage, colorboxBlock, fcolorboxBlock.
 - Logos: Fix for XeTeX 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.
 - Fix: Added \slshape.
- Chinese**
 - Added ctex package and related classes, xeCJK.
 - Prevented CJK, CJKut8 unless xeCJK, ctex are used.
- packages**
 - chemfig: Docs for new macro \polymerdelim.
 - asymptote: Docs for compilation.
 - chngpage: 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. See page 1095.
 - Improved documentation regarding font selection. See section 7.2.
 - Added documentation regarding debugging options. See section 35.

custom compiling

⚠ changed names

- Added documentation regarding HTML entities inside program listings. See section 8.2.1.
- 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 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, brqen.

⚠ Reset the configuration

lwarpmk

- 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.
- 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*

- Added support for DVI *latex*. See section 7.3.

- latexmk*
 - Fix for `--shell-escape` with *latexmk*.
- math*
 - 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`, `fncbreak`, `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**
 - 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*
 - *lwarpmk*: Added the `-p` option to specify the project name.
- glossaries*
 - *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*.
- index and glossary*
 - Docs: Extra indexing options. See section 8.6.13.
 - 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 7.3.
 - Added *lwarp* options `makeindex` and `xindy` to set `PrintIndexCmd`, `HTMLIndexCmd`, and `LatexmkIndexCmd` to sensible values for a typical single index. See section 7.3.
 - Added *lwarp* option `makeindexStyle` to tell *lwarpmk* to use a custom style instead of *lwarp.ist*. See section 8.6.19.
 - Fix for index entries with `\see`, `\seealso`, `\emph`, `\textbf`, etc.
- misc. fixes*
 - Replaced each `\csuse` with `\@nameuse` for improved error detection.
 - Additional internal print/HTML macro selection improvements.

packages

- 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

lateximage alt tags

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

(-xy- diagram)

See section 7.4.

misc. fixes

packages

- Fix: Improved print/HTML macro selection.
- Fix: `\href` text catcodes.
- Fix: `\subref` text.
- Fixes: Colored `\rule` and `\boxframe`.
- float, `rotfloat`: 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.

- tabular
- Added support for `--shell-escape`. See section 7.1.
 - 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 `pdflatex 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
<code>xdyFilename</code>	<code>xindyStyle</code>
<code>IndexLanguage</code>	<code>xindyLanguage</code>
<code>-</code>	<code>xindyCodepage</code>
<code>-</code>	<code>pdftotextEnc</code>

floats with `\centering`, etc.

Use these options along with `inputenc` or `inputenx` to process documents in an encoding other than UTF-8. See section 7.2.

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



packages

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 7.2.

SVG math

- Fix: Limit the number of background tasks when generating `lateximages`.
- Added user-adjustable svg math font scaling. See section 80.3.
- 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
 - MathJax now handles \ensuremath in expressions.
- misc. fixes
 - 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.
- v0.50:** Improved svg math.
- svg math
 - svg math and other lateximages now are converted to svg using parallel background tasks, utilizing all available CPU cores.

- Inline svg math image file names now are MD5 hashes made from their source L^AT_EX code. Identical inline math expressions, such as multiple instance of $\$x\$$, now share a single image file. This reduces the number of images to store, transmit, process, and display. Each image file is only converted to svg a single time, and reused if it already exists. Display math and other forms of svg image such as `picture` and `Tikz` still use individual image files which are recreated each time `lwarpmk limages` is run.
- Fixes: SVG math and/or `\underline` in a sectioning file name.
- Improved svg display math and tags.
- Improved svg math and `siunitx alt` tags.
- Improved `siunitx` units.
- Fix: `\ensuremath` with MathJax now creates a `lateximage`.
- Fix: `\centering`, etc. in svg math, `lateximage`, `Tikz`.
- Fix: Made various macros robust, additionally fixing `authblk`.
- Fix: `ntheorem` if neither standard nor `amsthm` selected.
- Fix: `listings`: Improved column alignment.
- Fix: Load `fontspec` if necessary.
- Added `xy`, `epstopdf`, `diagbox`, `pbox`, `bytefield`, `axodraw2`, `phfqit`, `schemata`, `dblfloatfix`, `nonfloat`, `morefloats`.

v0.49:

- Added `xcolor \rowcolors`.
- Fix: `\noalign` inside a `tabular`.
- Fix: `\eqref` in a caption.
- Fix: Incorrect PDF font size changes caused occasional HTML corruption.
- Fix: `printlen` changes are now grouped for HTML output.
- Added `vwcol`, `vertbars`, `hyphenat`, `lineno`, `fnlineno`, `figsize`, `hypdestopt`, `pagegrid`, `pdfrender`, `luacolor`, `resizegather`.

v0.48:

- Added some documentation regarding converting an existing document. See section 6.
- Updated compatibility for new `cleveref` v0.21.
- Fix: Ignores optional `tabular` column arguments.
- Added `\leftline`, `\centerline`, `\rightline`.
- Lists have improved font control via `\makelabel`.
- Print-mode `lateximage` now boxed to the natural width of its multiline contents.
- `abstract` now allows an optional name, as required by some classes.
- Fix: Improved spacing, `\mbox`, and font sizes with svg math, `Tikz`.
- `siunitx`: Improved svg math, fraction compatibility, color output.
- Fix: LOF/LOT links.

- Fix: Virtual page size grouping caused excessive PDF page breaks.
- Fix: Parsing similar package names in a single `\usepackage`.
- Fix: Adapts to classes without `\part`.
- Fix: `\newline` in `\title` was causing `
` in window title.
- Fix: `\maketitle` with `\cr`, `\crrc`, `\noalign`, for `IEEEtran` class.
- Fix: `xfrac` neutralized `BlockClass` and others.
- Fix: `todonotes` and `luatodonotes`: Improved `\todotoc`.
- Added `colortbl`, `chapterbib`, `acro`, `acronym`, `hypernat`, `hypcap`, `stfloats`, `vmargin`, `fancyheadings`.
- `fancyref`: Now directly supported.

packages

v0.47:

math

- Improved SVG math baseline and sizing.
- Fixes: `svgmath` in captions, subcaptions, `\nameref`.
- Fixes: Line wrap at hyphen in HTML output.

packages

- Added `endheads`, `multitoc`, `sectionbreak`, `blowup`, `xurl`.

v0.46:

name change

misc. fixes

- `\PrintStack` changed to `\LWRPrintStack`.
- Fix: Empty lines between tabular rows.
- Fix: Stack unnesting.
- Fix: SVG math and `lateximages` in numerous situations.
- Fix: Spaces in `\usepackage`.
- Fix: Now allows `MATHJAX` inside verse.

v0.45:

documentation

- Improved *MiKTeX* install instructions.
- Improved `graphics` and `epstopdf` instructions.
- Updates to the **Introduction**.

memoir

- Added `memoir`, `memhfixc`. See section **8.13**.

cross-references

- Fix: Now allows underscores in labels.
- Fix: `_` and `\<blank>` in section/file names.

math

- Fix: Now allows `MATHJAX` inside tabbing.

bibliography

- Fix: Bibliography `\em` names.
- Added `cite`, `natbib`, `backref`. (Also works as-is with `biblatex`.)

misc. fixes

- Fix: Empty lines between tabular rows.
- Fix: “Improper `\prevdepth`” with `minipages`, `lists`.
- Fix: Incorrect `svg math` and `lateximages` with `subfig`.
- Fix: `Lateximages` from incorrect pages with `Mathjax`.
- Fix: Missing `sidetoc` if using `listings`.
- Fix: Added an array emulation package.

packages

- Added `subfigure`, `prettyref`, `hanging`, `midpage`, `flafter`, `fltrace`, `changebar`, `endfloat`, `continue`, `fwlw`, `turnthepage`, `footnpag`, `pagesel`, `textfit`, `titleref`.

v0.44:

- koma-script
 - Added koma-script classes (except scr_ltr2, scr_jura).
 - Added scrextend, scr_layer, scr_layer-notecolumn, scr_layer-scr_page, scr_hack, tocstyle, tocbasic.
- HTML title and author
 - Added \HTMLTitle. Fixed web page title if \HTMLTitle empty and no \title given and not using titling package.
 - Fixed web page author if \HTMLauthor is empty and \author is not given.
- encodings
 - If using *pdf_flatex*, automatically loads T1 and UTF-8 encodings. (Additional fontenc encodings may be loaded after lwarp.)
- lists
 - Added list and trivlist environments, hang.
- tabular
 - Fix: \multicolumn alignment if formatting for a word processor.
 - Added ltxtable.
- math
 - Fix: MATHJAX combined with lateximages.
 - algorithmicx: Improved comment symbol and floating.
- packages
 - Completed todonotes and luatodonotes.
 - Added todo, easy-todo, fixmetodonotes, fixme.
 - Added soulutf8, soulpos, cancel.
 - Added section, fancyref, ifoddpage.
 - Added preview, atbegshi, watermark.
 - Improved tocloft \newlistof and \newlistentry.

v0.43:

- Docs: Reorganized HTML customization, added an HTML settings table. See section 7.4.
- footnotes
 - Added FootnoteDepth to control the placement of pending footnotes before section breaks. By default, pending footnotes are printed before each \subparagraph or higher.
- sectioning
 - Fix: Expansion in section name.
- tabular
 - Fix: Ignore spaces in tabular column specification.
 - Fix: Tabular rules at bottom or when finishing incomplete rows.
 - Fix: \multicolumn at/bang/before/after specifications, trim, and vertical rules.
 - Fix: supertabular and xtab column misalignment.
- math
 - Fix: equation*.
 - Fix: svg math in a section name.
 - Fix: \ref and \eqref in svg math.
- packages
 - Added todonotes and luatodonotes (but only disabled).
 - Added breakurl.
 - hyperref: Fix: Several macros were made robust, \Gauge added.

v0.42:

Support \TeX !
word-processor conversion

⚠ name change
⚠ name change

tabbing
overpic
math

symbols

load order

- Added \TeX development support page. (See page 2.)
- Improved assistance for word-processor conversions when boolean `FormatWP` is set true. See section 11.
 - The boolean `FormatWordProcessor` has been renamed `FormatWP`.
 - The boolean `HTMLMarkFloats` has been renamed `WPMarkFloats`.
 - New booleans control whether to place additional marks around mini-pages, at the table of contents, at the `LOF` and `LOT`, and whether to print math as \LaTeX source for copy/paste into the *LibreOffice Writer TeXMaths* extension.
 - Improved formatting for numerous objects. See section 11.
- Add: `tabbing` environment.
- Add: `overpic` package. See section 360.
- Fix: Text copy/paste of \mathcal{MS} math environment numbers and names.
- Improved `\ensuremath`.
- `MATHJAX` with `siunitx`: Updated script and documentation.
- `textcomp`: Improved `\textinterrobangdown`.
- `realscripts`: Fix for subscripts in a `lateximage`.
- `morewrites`: Enforces loading before `lwarp`.

v0.41:

tabular

⚠ new syntax

- Added `tabular` vertical rules, subject to some limitations. See the rules section of section 8.10.1.
- Improved `booktabs`: Width and trim are honored.
- Added `\mcolrowcell` for empty cells inside a `\multicolumnrow`. Use `\mcolrowcell` instead of `\mrowcell` for two-dimensional cells created by `\multicolumnrow`. Continue to use `\mrowcell` for empty cells in a `\multirow`. See section 339.2 on page 824.
- Fix: Unfinished `tabular` rows are automatically filled.
- Fix for `tabular` column specifiers while using `babel-french`. (`\NoAutoSpacing` is activated then nullified inside the `tabular`, due to a conflict with the `tabular` column parsing code.)

v0.40:

graphics, `graphicx`

`\includegraphics path`
⚠ image file extensions

`bigdelim`
symbols
fixes

- `graphics` and `graphicx` have been moved from the `lwarp` core, and are only loaded if requested with `\usepackage`.
- Improved `graphics \graphicspath` support. Multiple image directories may now be used. Refer to **.pdf files without a file extension** to allow the HTML version to use a `.svg`, `.png`, `.jpg`, or `.gif` version instead. See section 8.8.
- `grffile` is now directly supported instead of emulated.
- Fix for `bigdelim`, and improved documentation. See section 139.
- Improved \LaTeX and `textcomp` symbols.
- Fix for \LaTeX logos and `\InlineClass`, etc. inside a `lateximage`.

- Fix for xltextra with Xe_{La}TeX.
- Fixes for tocibind with \simplechapter, etc.
- Fixes for \multicolumnrow and \nullfonts with older versions of multirow and xparse.
- Added \underline.
- Added adjmulticol.
- Added cuted, midfloat.
- Added pfnote, fnpos, dblfnote.
- Added stabular, tabs.
- Added sectsty, anonchap, quotchap.

margins
columns
footnotes
tabular
sectioning

v0.39:

- Improved the titlepage HTML code, \thanks notes, and \maketitle. titling is no longer required, but is still supported. The \published and \subtitle fields are no longer provided, but \AddSubTitlePublished replicates them using titling. See section 66.8. authblk is added, and should be loaded before titling. See section 66.
- \multirow now supports the new optional vpos argument.
- Added \multicolumnrow for combined \multicolumn and \multirow. See section 339.2.
- Tabular special cases:
 - Added \TabularMacro to mark custom macros inside tabular data cells, avoiding row corruption. See section 8.10.1.
 - Added \ResumeTabular for use when a tabular environment is defined inside another environment. See section 8.10.1.
- Added supertabular, xtab, bigstrut, bigdelim.
- Added fullwidth.
- Added addlines, anysize, a4, a4wide, a5comb, textarea, zwpagelayout, typearea, ebook.

title pages
⚠ \published and
 \subtitle
⚠ load order
 tabular
multi column/row cell

⚠ macros inside tabular
⚠ tabular defined inside
 another environment
 tabular
 margins
 page layout

v0.38:

- Added **lwarpmk print1** and **lwarpmk html1** actions to force a compile of the project a single time. Useful when multiple passes are not needed, or changes were not detected.
- Added \ForceHTMLPage and \ForceHTMLTOC to force a starred sectional unit onto its own HTML page and with its own TOC entry. See section 8.6.2.
- Modified the tutorial to use the new \ForceHTMLPage and \ForceHTMLTOC macros.
- Added appendix, tocibind, fncychap, fix2col.
- Added relsize, scalefnt.
- Added realscripts, metalogo, xltextra.
- Added grffile, romanbar.
- Added arabicfront, chappg, nonumonpart, nopageno, romanbarpagenumber.

forced single-pass compile

starred sections

updated tutorial

packages
font size

page numbering

front & back matter

- Docs: Improved description of the use of front/back matter. See section 8.6.
- Fix: color requests xcolor.
- Fix: \part for article class.

v0.37:

\include for HTML

latexmk

accents and symbols

babel-french

- \include now maintains independent .aux files for HTML versions.
- comment, used by lwarp, now maintains independent cut files for print and HTML versions, helping latexmk to better know whether to recompile.
- Improved support for L^AT_EX accents, textcomp, siunitx symbols.
- Improved babel-french handling for load order and ~ tilde.

v0.36:

boxes and frames

babel-french

footnotes

siunitx

- Recorganized the documentation section regarding special cases and limitations. (Section 8)
- Improved source formatting.
- \fbox and related now use \fboxsep and \fboxrule.
- \makebox and \framebox now use width and position.
- \fcolorbox and related now work inside a lateximage.
- babel-french: Improvements for French variants, load order, footnotes, ellipses.
- Improved footnote numbering. lateximage footnotes now appear as regular footnotes to match the numbering of the print version. Also fixed a regression with MATHJAX.
- Improved siunitx units.
- Fix for filenames while using MATHJAX.
- Fix for \rule when xcolor is not loaded.
- Added transparent, upref.

v0.35: Fix: \textbf and related.

v0.34:

⚠ Optional arguments

- BlockClass's optional argument has been moved in front of the mandatory argument:

BlockClass[style]{class} (NEW)

instead of:

BlockClass{class}[style] (OLD)

This change makes it more consistent with L^AT_EX standards, and avoids problems with space between arguments.

⚠ Optional arguments

- Likewise, \InlineClass's optional argument now comes before the mandatory arguments:

\InlineClass[style]{class}{text}

spans with minipages

framing minipages

lateximage, svg math,
tabular

eqnarray

verbatim packages

framing packages

list packages

babel-french

- Improved compatibility between spans, minipages, lists, frames, and math. Handles minipages and lists inside an HTML span, such as an `\fbox` containing a minipage, although with minimal HTML formatting. See section 8.3.3. `\fboxBlock` is added to frame minipages, tables, and lists with full HTML formatting but no longer inline, and behaves as `\fbox` for print output. The `fminipage` environment is added for framed minipages, as an environment with full HTML formatting, and draws a framed minipage in print output. See section 8.3.5. `\fbox` and minipages now often work in `svg math` and `lateximages`. MATHJAX supports `\fbox`, but not `\fboxBlock` nor `fminipage`.
- Improved compatibility between `lateximage` and `minipage`, `\parbox`, `\makebox`, `\fbox`, `\framebox`, `\raisebox`, `\scalebox`, `\reflectbox`, `tabular`, `booktabs`.
- Improved font control for `lateximages` and `svg math`.
- Added the `eqnarray` environments.
- `fancyvrb` is no longer required (preloaded), but is still supported.
- Added `verbatim` and `moreverb`.
- Added `fancybox`, `boxedminipage2e` and `shadow`.
- `enumitem` is no longer required, but is still supported.
- Added `enumerate` and `paralist`.
- `titleps` is no longer required, but is still supported.
- Added `crop`.
- Added `rotfloat`, `marginfit`, and several minor packages; see the change log.
- Adds fixed-width HTML spaces around punctuation when using `babel-french`. LuaTeX does not yet use the extra punctuation spacing.

v0.33:

- Tabular `@` and `!` columns now have their own HTML columns.
- `&` catcode changes are localized, perhaps causing errors about the tab alignment character `&`, so any definitions of macros or environments which themselves contain `tabular` and `&` must be enclosed within `\StartDefiningTabulars` and `\StopDefiningTabulars` (previously called `\EndDefiningTabulars`). See section 43. This change is not required for the routine use of tables, but only when a table is defined inside another macro or environment, and while also using the `&` character inside the definition. This may include the use inside conditional expressions.
- Several math environments were incorrectly placed inline. Also, for `amsmath` with `svg math`, the `fleqn` option has been removed, resulting in improved spacing for aligned equations.
- Bug fixes; see the changelog.

v0.32: Bug fixes; no source changes needed:

- `lwarpmk` has been adjusted to work with the latest `luatex`.
- Spaces in the `\usepackage` and `\RequirePackage` package lists are now accepted and ignored.
- Fix for the `glossaries` package and `\glo@name`.

v0.31: Bug fix; no source changes needed:

- Improved compatibility with `keyfloat`, including the new `keywrap` environment.

v0.30:

⚠ `lwarp-newproject`

- `lwarp-newproject` has been removed, and its functions have been combined with `lwarp`.

To modify existing documents, remove from the document source:

```
\usepackage{lwarp-newproject}
```

The `lwarp` package now produces the configuration files during print output, and also accepts the option `lwarpmk` if desired.

⚠ HTML setup changes.

- A number of macros related to HTML settings have been converted to options, and other macros and options have been renamed to create a consistent syntax:

Old Macro	New Package Option
<code>\HomeHTMLFileName</code>	<code>HomeHTMLFilename</code>
<code>\HTMLFileName</code>	<code>HTMLFilename</code>
<code>\useLatexmk</code>	<code>latexmk</code>
<code>\warpOSwindows</code>	<code>OSWindows</code>

Old Package Option	New Package Option
<code>lwarpmklang</code> (new)	<code>xindyLanguage</code> <code>xindyStyle</code>

Old Macro	New Macro
<code>\MetaLanguage</code>	<code>\HTMLLanguage</code>
<code>\HTMLauthor</code>	<code>\HTMLAuthor</code>
<code>\NewHTMLdescription</code>	<code>\HTMLDescription</code>
<code>\SetFirstPageTop</code>	<code>\HTMLFirstPageTop</code>
<code>\SetPageTop</code>	<code>\HTMLPageTop</code>
<code>\SetPageBottom</code>	<code>\HTMLPageBottom</code>
<code>\NewCSS</code>	<code>\CSSFilename</code>

- Per the above changes, in existing documents, modify the package load of `lwarp`, such as:

```
\usepackage[
  HomeHTMLFilename=index,
  HTMLFilename={},
  xindyLanguage=english
]{lwarp}
```

- The file `lwarp_html.xdy` has been renamed `lwarp.xdy`. To update each document's project:

1. Make the changes shown above.
2. Recompile the document in print mode. This updates the project's configuration files, and also generates the new file `lwarp.xdy`.

3. The old file `lwarp_html.xdy` may be deleted.

- The new `lwarp` package option `xindyStyle` may be used to tell *lwarpmk* to use a custom `.xdy` file instead of `lwarp.xdy`. See section 8.6.20.
- Improvements in index processing:
 - *xindy*'s language is now used for index processing as well as glossary.
 - Print mode without *latexmk* now uses *xindy* instead of *makeindex*.
 - *texindy*/*xindy* usage depends on *pdflatex* vs *xelatex*, *lualatex*.
 - For *pdflatex* and *texindy*, the `-C utf8` option is used. This is supported in modern distributions, but a customized `lwarpmk.lua` may need to be created for use with older distributions.

v0.29:

- Add: `lwarpmklang` option for `lwarp-newproject` and `lwarp`. Sets the language to use while processing the glossary. (As of v0.30, this has been changed to the `IndexLanguage` option.) (As of v0.54, this has been changed to the `xindyLanguage` option.)
- Fix: `\includegraphics` when no optional arguments.

v0.28:

- `\HTMLAuthor {<name>}` assigns HTML meta author if non-empty. Defaults to `\theauthor`.
- Boolean `HTMLDebugComments` controls whether HTML comments are added for closing `<div>`s, opening and closing sections, etc.
- Boolean `FormatEPUB` changes HTML output for easy EPUB conversion via an external program. Removes per-file headers, footers, and nav. Adds footnotes per chapter/section.
- Boolean `FormatWordProcessor` 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. Name changed to `FormatWP` as of v0.42.
- Boolean `HTMLMarkFloats` adds text marks around floats only if the boolean `FormatWordProcessor` is true. These make it easier to identify float boundaries, which are to be manually converted to word-processor frames. Name changed to `WPMarkFloats` as of v0.42.
- Updated for the new MATHJAX CDN repository.
- Adds `tabulary`.
- Supports the options syntax for `graphics`.
- Improved index references, now pointing exactly to their target.
- Adds glossaries. *lwarpmk* is modified to add `printglossary` and `htmlglossary` actions.

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.

²FIREFOX 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 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.

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:	scrextend , <i>scrhack</i> , 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 , plext , plextarray , plextarydshln , plextcolortbl , 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, pdfcrypt, pdfprivacy, preview, ragged2e , rmpage, sclayer-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, hypbmsec , indentfirst , quotchap , section, sectionbreak , secdot , sectsty, titlesec.
Table of contents, figures, tables:	Supported, with hyperlinks. minitoc, multitoc, shorttoc , titletoc, tocbasic, tocbibind , tocdata , tocloft, tocstyle.
Title page:	\maketitle, titlepage, authblk , titling .
Front & back matter:	abstract , appendix .
Indexing:	makeindex and xindy are supported, with hyperlinks. hvindex , idxlayout , imakeidx , index , makeidx , repeatindex , splitidx .
Glossary:	gloss , glossaries and xindy , nomencl .
Bibliography:	babelbib , backref , biblatex , bibunits , chapterbib , cite , hypernat , natbib , notes2bib , showtags .
Cross-references:	bookmark , breakurl , cleveref , fancyref , hypdestopt , hyperref , perpage , prettyref , titleref , url , varioref , xr , xr-hyper , xurl .
Margin notes:	marginal , marginfit , marginfix , sclayer-notecolumn , versionotes .

lwarp Supported Functions — continued

Category	Status
Footnotes:	Adds FootnoteDepth to print footnotes at section breaks. bigfoot , dblfnote , endheads , endnotes , fixfoot , fnbreak , fnpara , fnpos , footmisc , footnote , footnotebackref , footnoterange , footnpag , manyfoot , marginnote , nccfoots , pagenote , parnotes , pfnote , sepfootnotes , sidenotes , 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 : \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 , theorem .
Additional math:	Math fonts via SVG images, amscd , autonum , backnaur , bm , braket , breqn , cases , delarray , guass , jkmath , mathtools , nicematrix , pb-diagram , resizegather , xfakebold , xy . Many others work as-is.
Display math with $\backslash displaymath$ or other :	Complicated math objects in display math, such as tikz-cd , etc.
Units and fractions:	nicefrac , Slunits , siunitx , units , unitsdef , xfrac .
Floats:	Appear where declared. capt-of , caption , cutwin , dblfloatfix , endfloat , fix2col , flafter , float , floatflt , floatrow , fltrace , ftcap , hypcap , keyfloat , morefloats , multicap , newfloat , nonfloat , placeins , rotfloat , stfloats , subcaption , subfig , subfigure , subfloat , topcapt , trivfloat , wrapfig .
Tabular:	tabular environment, array , arydshln , bigdelim , booktabs , colortbl , ctable , diagbox , longtable , ltablex , ltxtable , multirow , supertabular , tabularx , tabulary , threeparttable , threeparttablex , xltabular , xtab .

lwarp Supported Functions — continued

Category	Status
Graphics:	<p><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.</p> <p><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>media9</code>, <code>movie15</code>, <code>multimedia</code>, <code>overpic</code>, <code>psfrag</code>, <code>psfragx</code>, <code>pst-eps</code>, <code>pstool</code>, <code>pstricks</code>, <code>rviewport</code>, <code>tikz-3dplot</code>.</p>
xcolor:	<p>Full package color names, any color models, and mixing. <code>\textcolor</code>, <code>\colorbox</code>, <code>\fcolorbox</code>. Enhanced for HTML compatibility.</p>
Lists:	<p>Standard L^AT_EX environments, <code>enumerate</code>, <code>enumitem</code>, <code>eqlist</code>, <code>hang</code>, <code>listliketab</code>, <code>paralist</code>.</p>
Environments:	Standard L ^A T _E X environments.
minipage, \parbox:	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>boxedminipage2e</code> , <code>fancybox</code> , <code>framed</code> , <code>mdframed</code> , <code>niceframe</code> , <code>shadow</code> , <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> .
Direct formatting:	<p><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>, <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>pdfrender</code>, <code>realscripts</code>, <code>resize</code>, <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>.</p>
Acronyms:	<code>acro</code> , <code>acronym</code> .
Ordinals:	<code>engord</code> , <code>fmcntcount</code> , <code>nth</code> .

lwarp Supported Functions — continued

Category	Status
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 thin-unbreakable, unbreakable, \enskip, \quad, \qquad, \hspace.
Rules:	\rule with width, height, raise, text color.
HTML reserved characters:	\&, \textless, and \textgreater 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>bbding</code> , <code>chemgreek</code> , <code>dingbat</code> , <code>euro</code> , <code>eurosym</code> , <code>fontawesome</code> , <code>fontawesome5</code> , <code>gensymb</code> , <code>marvosym</code> , <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> .
Science and engineering:	<code>algorithm2e</code> , <code>algorithmicx</code> , <code>ar</code> , <code>askmaps</code> , <code>axodraw2</code> , <code>bitpattern</code> , <code>blochsphere</code> , <code>bodegraph</code> , <code>bohr</code> , <code>bytefield</code> , <code>chemfig</code> , <code>chemformula</code> , <code>chemgreek</code> , <code>chemmacros</code> , <code>chemnum</code> , <code>circuitikz</code> , <code>elements</code> , <code>engtlc</code> , <code>fast-diagram</code> , <code>hepnicenames</code> , <code>heppennames</code> , <code>karnaughmap</code> , <code>karnaugh-map</code> , <code>listings</code> , <code>linop</code> , <code>mhchem</code> , <code>pgfgantt</code> , <code>phfqit</code> , <code>physics</code> , <code>qcircuit</code> , <code>register</code> , <code>simpler-wick</code> , <code>slashed</code> , <code>structmech</code> , <code>struktex</code> , <code>tikz-karnaugh</code> , <code>tikzcodeblocks</code>
Arts and humanities:	<code>foreign</code> , <code>forest</code> , <code>lyluatex</code> , <code>musicography</code> , <code>nameauth</code> , <code>octave</code> , <code>phonrule</code> , <code>piano</code> , <code>schemata</code> , <code>semantic-markup</code> , <code>tikz-dependency</code> , <code>vowel</code> , <code>xpiano</code>
Admonitions:	<code>notes</code> .
Editorial:	<code>changebar</code> , <code>changelog</code> , <code>changes</code> , <code>easy-todo</code> , <code>easyReview</code> , <code>ed</code> , <code>errata</code> , <code>fixme</code> , <code>fixmetodonotes</code> , <code>pdfcomment</code> , <code>pdfmarginpar</code> , <code>todo</code> , <code>todonotes</code> , <code>tram</code> , <code>xexchangebar</code> .

lwarp Supported Functions — continued

Category	Status
Accessibility:	accsupp, axessibility.
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 <code>calc</code> , <code>fileerr</code> , <code>somedefs</code> , <code>trace</code> , <code>xspace</code> . 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 \TeX 4 \H T

Prog \TeX 4ht <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. \TeX 4ht 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 **L^ATeXML**: <http://dlmf.nist.gov/LaTeXML/>

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

Prog LaTeX2HTML **L^ATeX2HTML**: <http://www.latex2html.org/>
and <http://ctan.org/pkg/latex2html>.

Prog TeX2page **T_EX2page**: <http://ds26gte.github.io/tex2page/index.html>

Finally, Glad \TeX 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:

Prog AsciiDoctor-LaTeX <http://www.noteshare.io/book/asciidoctor-latex-manual>
<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 MiK_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 *pdflatex* 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:

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.

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. The [Index of Objects](#) contains automated entries for each package, macro, environment, counter, boolean, and other objects; individually and also sorted by category. A [Troubleshooting](#) section is also available.

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. This file should not be modified by the user.
comment.cut:	A temporary file used by lwarp to conditionally process blocks of text. This file 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 8.6.11.

⁷Also see section 8.6.14 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 8.6.11.

¹¹Also see section 8.6.14 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 7.5 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 7.4 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 _ΛTeX 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 7.2 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 [8.6.10](#).

5.11.2 glossaries package

To process the glossary for the print version:

```
Enter ⇒ lwarpmk printglossary
```



(If **makeglossaries** is not found, see section [8.6.11](#).)

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 [8.6.11](#) 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*`:

```
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 `lateximages` 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

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 `lwarmk`:

```
Enter ⇒ lwarmk print -p project_a
```

```
Enter ⇒ lwarmk html -p project_b
```

5.18 Using the *make* utility

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

```
lwarmk pdftohtml [-p project]
```

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

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`, and/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 filename.) Or, use a short name for the toc entry without the math, or use `\texorpdfstring`:

```
\section{A name with math}
\texorpdfstring{$1+2=3$}{text description}}
```

⚠ **scale**

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

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

to:

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

- (c) Possible changes to tabular environments include: `* columns`, `multirow`, `longtable`, `supertabular`, `xtab`, `bigdelim`. See section 8.10.1.
- (d) Possible option clashes with `memoir`. See section 8.13.
- (e) If using indexes, see section 8.6.14.
- (f) If using many indexes, glossaries, `.aux` files, etc., see section 8.6.14 regarding `morewrites`. If `morewrites` is already used, be sure to add the setup with `allocate=10`.
- (g) 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. The **Index of Objects** contains automated entries for each package, macro, environment, counter, boolean, and other objects; individually and also sorted by category. A **Troubleshooting** section is also available.

7 Additional details

7.1 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*.

7.2 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 7.3.

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`

Pkg `lmodern`

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

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 and lualatex** Xe_LTeX and Lua_LTeX 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 \LaTeX or \LuaTeX :

Pkg `fontspec``ligatures`

- `fontspec` and font choices

`lwarp` sets the following to turn off \TeX 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 package
 - iii. `\pdfgentounicode=1`
- (f) Another option to assist with the PDF-HTML conversion:
 - `\usepackage{cmap}`
- (g) `\usepackage{textcomp}`

3. `\usepackage{lwarp}` (section 7.3) goes 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`.

5. `\setmonofont{TeX Gyre Cursor}` or similar may be required if using \LaTeX or \LuaTeX 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.

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

⚠ **fontspec with traditional font packages**

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

7.2.1 Indexes, glossaries, and encoding

`lwarp` uses the *xindy* program to processes indexes. *xelatex* and *lualatex* use *xindy* and *pdf \LaTeX* uses *texindy*.

The `lwarp` option `xindyLanguage` may be used to set the language option for *xindy*, and the `xindyCodepage` option may be used to set the codepage option for *xindy*. These are used for index generation.

7.3 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, mathjax: For math display, select mathsvg (default) or mathjax. For more information about the math options, see section 8.7.
Opt mathjax	
Opt latexmk	latexmk: Tells <i>lwarpmk</i> to use <i>latexmk</i> to recompile the document several times if necessary. Otherwise, <i>lwarpmk</i> attempts to determine for itself whether to recompile. See section 7.4.
Default: false	
Opt dvips	dvips: Tells <i>lwarpmk</i> to use <i>dvips</i> and <i>ps2pdf</i> to convert DVI output to PDF.
Default: false	
Opt dvipdfm	dvipdfm: Tells <i>lwarpmk</i> to use <i>dvipdfm</i> to convert DVI output to PDF.
Default: false	
Opt dvipdfmx	dvipdfmx: Tells <i>lwarpmk</i> to use <i>dvipdfmx</i> to convert DVI output to PDF.
Default: false	
Opt HomeHTMLFilename	HomeHTMLFilename: See section 7.4.
Default: {}	
Opt HTMLFilename	PrintLatexCmd: Sets the shell commands executed by lwarpmk print . If not specified, will automatically be set according to the detected L ^A T _E X engine and the use of <code>--shell-escape</code> .
Default: {}	
Opt PrintLatexCmd	HTMLLatexCmd: Sets the shell commands executed by lwarpmk html . If not specified, will automatically be set according to the detected L ^A T _E X engine and the use of <code>--shell-escape</code> .
Default: <automatic>	
Opt HTMLLatexCmd	
Default: <automatic>	
Opt makeindex	makeindex: Sets <code>PrintIndexCmd</code> , <code>HTMLIndexCmd</code> , and <code>LatexmkImageCmd</code> to use <i>makeindex</i> when generating indexes with lwarpmk printindex , lwarpmk htmlindex , or <i>latexmk</i> . If neither <code>makeindex</code> nor <code>xindy</code> is used, <code>makeindex</code> is assumed.
Default: makeindex	
Opt xindy	xindy: Sets <code>PrintIndexCmd</code> , <code>HTMLIndexCmd</code> , and <code>LatexmkImageCmd</code> to use <i>xindy</i> when generating indexes with lwarpmk printindex , lwarpmk htmlindex , or <i>latexmk</i> .
Default: makeindex	
Opt makeindexStyle	makeindexStyle: If you wish to use a custom .ist file for index generation, see section 28.
Default: lwarp.ist	
Opt xindyStyle	xindyStyle: If you wish to use a custom .xdy file for index generation, see section 28.
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 PrintIndexCmd	PrintIndexCmd: Sets the shell commands executed by lwarpmk printindex . If not specified, will be set by the selection of <code>makeindex</code> or <code>xindy</code> . May be used to specify the creation of multiple indexes. See section 8.6.14.
Default: <automatic>	

Table 5: 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.
PrintLatexCmd	The shell commands for lwarpmk print .
HTMLLatexCmd	The shell commands for lwarpmk html .
For indexing (section 8.6.14) and glossaries (section 8.6.11):	
makeindex	Use <i>makeindex</i> to generate indices.
xindy	Use <i>xindy</i> to generate indices.
makeindexStyle	Set a custom style for <i>makeindex</i> .
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.
PrintIndexCmd	Shell commands executed by lwarpmk printindex .
HTMLIndexCmd	Shell commands executed by lwarpmk htmlindex .
LatexmkIndexCmd	Shell commands executed by <i>latexmk</i> .
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.

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 8.6.14.

⚠ 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 8.6.14.

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 GlossaryCmd **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 8.6.11.
 Default: `makeglossaries`
- Opt OSWindows **OSWindows:** `lwarp` attempts to automatically sense WINDOWS, but it may be forced with this option. See section 7.6.
- Opt pdftotextEnc **pdftotextEnc:** Used to specify the encoding used by `pdftotext` during the PDF-HTML conversion. In most situations, the default is the correct choice.
 Default: `UTF-8`
- 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 **warpprint and warpHTML:** Usually controlled by `lwarpmk`, and not set in the document. 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 warpHTML
- Opt BaseJobname **BaseJobname:** Not intended for the user. Used internally by `lwarp` when creating the `*_html.tex` file used to compile the HTML version. See section 28.
 Default: `\jobname`

7.4 Customizing the HTML output

⚠ Placement!

Table 6 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`

Options for the lwarp package:

Use the following as options for `\usepackage[<options>]{lwarp}`:

Opt HomeHTMLFilename
Default: `\BaseJobname`

HomeHTMLFilename: 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 7.4.1 for examples of naming and numbering HTML files.

Opt HTMLFilename
Default: `<empty>`

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 7.4.1 for examples of naming and numbering HTML files.

Opt latexmk
Default: `false`

latexmk: Controls whether *lwarp* uses *latexmk* to compile the document. This setting is written to *lwarpmk*’s configuration files.

Opt mathsvg
Default: `true`

mathsvg: Selects SVG display for math output. (The default.)

Opt mathjax
Default: `false`

mathjax: Selects MATHJAX for math output.

Opt makeindex
Default: `makeindex`

makeindex: Selects *makeindex* for index generation by *lwarpmk*.

Opt xindy

xindy: Selects *xindy* for index generation by *lwarpmk*.

Default: `makeindex`

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

`\linkhomepage`
Default: `Home`

\linkhomepage: Name of the link to the home page. Paragraphs are allowed. Redefine with `\renewcommand`.

Table 6: HTML settings

Macro/Cntr/Bool	Description
<code>\linkhomename</code>	Name of the link to the homepage.
<code>SideTOCDepth</code>	Sectioning depth of the sideroc.
<code>\sidetocname</code>	Name of the sideroc.
<code>FileDepth</code>	Sectioning depth of the file splits.
<code>CombineHigherDepths</code>	Combine higher section levels.
<code>FileSectionNames</code>	Use section names for file names, else use numbers.
<code>\FilenameLimit</code>	Maximum length of the generated filenames.
<code>FootnoteDepth</code>	Sectioning depth of footnotes.
<code>\abstractname</code>	The name of the abstract.
<code>\mathimagenam</code>	The svg math image lateximage alt tag.
<code>\packagediagramname</code>	The suffix for a package's lateximage alt tags.
<code>\CSSFilename</code>	The css for the following files.
<code>\MathJaxFilename</code>	The MathJax script for the following files.
<code>\HTMLLanguage</code>	The HTML lang tag.
<code>\HTMLTitle</code>	The homepage's <title>, overriding <code>\title</code> .
<code>\HTMLTitleBeforeSection</code>	Set subpage <title>s to <code>\HTMLTitle - sectionname</code>
<code>\HTMLTitleAfterSection</code>	Set subpage <title>s to <code>sectionname - \HTMLTitle</code>
<code>\HTMLAuthor</code>	The HTML author meta tag, overriding <code>\author</code> .
<code>\HTMLDescription</code>	The HTML description meta tag.
<code>\HTMLFirstPageTop</code>	Heading for the home page.
<code>\HTMLPageTop</code>	Heading for the other pages.
<code>\HTMLPageBottom</code>	Footing for all pages.
<code>HTMLDebugComments</code>	Boolean to generate HTML comments.

Ctrl `tocdepth` **tocdepth:** Sectioning depth of the table of contents. See section 16 for a list of \LaTeX stack depths.

Ctrl `SideTOCDepth` **SideTOCDepth:** Sectioning depth of the sideroc. Defaults to 1, causing the sideroc to show sections but not subsections.

Default: 1

sideroc

Each subpage of the website has its own small table of contents on the side (the “sideroc”). Its depth is set by `SideTOCDepth`. This sideroc is only shown if the web page 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 and a link back to **Home** at the bottom.

It is recommended to set:

`SideTOCDepth=FileDepth`

or

`SideTOCDepth=FileDepth+1`

⚠ inaccessible pages

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

`\sidetocname`
Default: Contents

\sidetocname: 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

⚠ **Unique filename!**

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 7.4.1 for examples of naming and numbering HTML files. The user must ensure that filenames are unique after begin sanitizing. 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.

`\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 footnotes 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 `HTMLDebugComments`
Default: false

HTMLDebugComments: Set true to generate HTML comments, such as which section or `<div>` is being opened or closed.

`\abstractname`
Default: Abstract

\abstractname: The name of the abstract. This may also be over-written by the `babel` package. Defaults to “Abstract”. Redefine with `\renewcommand`.

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. De-

faults 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.

`\HTMLTitleAfterSection`

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

`custom <title>`

To customize subpage `<title>`s, redefine `\theHTMLTitleSection`, which defaults to:

```
\def\theHTMLTitleSection{%
  \theHTMLTitle\theHTMLTitleSeparator\theHTMLSection%
}
```

`\HTMLAuthor`
Default: `\theauthor`

\HTMLAuthor: `{\langle author \rangle}` The HTML header's meta author. Defaults to `\theauthor`, which is set by `\author` if using the titling package, but is empty otherwise. There are several ways to represent the author and affiliations, especially if using the `authblk` package, most of which do not result in a sensible `\theauthor`, so `\HTMLAuthor` is useful to create a list of authors without their affiliations.

`\HTMLDescription`
Default: `<empty>`

\HTMLDescription: `{\langle description \rangle}` Sets the HTML description tag for the following files. May be changed before each each sectioning command which would cause a file split.

`\HTMLFirstPageTop`
Default: `<empty>`

\HTMLFirstPageTop: `{\langle contents \rangle}` A user-definable custom action applied to the top of the home page. Useful for logos, etc. Defaults empty. Ignored in print output.


`\HTMLPageTop`
Default: `<empty>`

\HTMLPageTop: `{\langle contents \rangle}` A user-definable custom action applied to the top of pages other than the home page. Useful for logos, etc. Defaults empty. `\LinkHome` may be used to place a link back to the homepage. Ignored in print output.

`\HTMLPageBottom`
Default: `<empty>`

\HTMLPageBottom: `{\langle contents \rangle}` A user-definable custom action applied to the bottom of each web page. Useful for authors, copyright notices, contact information, etc. Defaults empty. `\LinkHome` may be used to place a link back to the homepage. Ignored in print output.

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

`\tableofcontents`
 **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 `tocdepth`.

Placed in the document wherever necessary:

`\mathimagername`
Default: `math image`

\mathimagername: Redefine with `\renewcommand`. When creating an svg math image, its `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 `\mathimasename`, and the image is not reused.

This 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.

`\packagediagramname`
Default: `diagram`

\packagediagramname: 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 `\packagediagramname`. 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 `lateximages`.

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}`.

Env `warpHTML`

warpHTML: An environment which is only used 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}`.

`\warpprintonly`

\warpprintonly: `{\langle contents \rangle}` A macro version of the `warpprint` environment.

`\warpHTMLonly`

\warpHTMLonly: `{\langle contents \rangle}` A macro version of the `warpHTML` environment.

7.4.1 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

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

```

\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}

```

7.5 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	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:
File project.css	
File sample_project.css	

```

/* ( --- 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.

7.6 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	

7.7 Selecting actions for print or HTML output


The following environments and macros are used to select actions which only apply to either traditional L^AT_EX print-formatted PDF generation, or to HTML generation.

For most of built-in L^AT_EX 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.

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}`.

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}
```

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

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

`\warpprintonly {<actions>}`

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.

7.8 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](#).

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

 **newlines**

Avoid newlines in the `\title`; these will interfere with the file break and css detection. 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` `{\langle author \rangle}`

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` `{\langle date \rangle}`

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

`\thanks` `{\langle text \rangle}`

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

7.10 HTML page meta descriptions

`\HTMLDescription` `{\langle A description of the web page. \rangle}`

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{}
```

7.11 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 7.4 for `\HTMLTitleBeforeSection` and `\HTMLTitleAfterSection`, used to set the title for HTML subpages.

7.12 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 \LaTeX 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. The [Index of Objects](#) contains automated entries for each package, macro, environment, counter, boolean, and other objects; individually and also sorted by category. A [Troubleshooting](#) section is also available.

8.1 Things to avoid

In the document, avoid the following:

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 Horizontal space

- `\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`.
- `\,`, `\sim` and `\,` are converted to HTML entities.
- `\kern` `\kern` and `\hspace` are entered into the HTML PDF output as-is, then interpreted by *pdftotext*, and thus usually appear as a single space.
- `\hskip`

8.2.3 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}
...
```

8.2.4 Accents

Native L^AT_EX accents such as \" will work, but many more kinds of accents are available when using Unicode-aware X_YL^AT_EX and LuaL^AT_EX.

8.2.5 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.

8.2.6 Superscripts and other non-math uses of math mode

Use `x` instead of `x`

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

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

8.2.8 Filenames and URLs in lists or footnotes

filename underscore Escape underscores in the filenames:


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

8.2.9 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 contains paragraphs, but in order to re-

main 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

 **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 `\linewidth`, `\textwidth`, and `\textheight`, widths and heights in HTML are scaled proportionally to a 6×9 inch text area, and inside a `multicols` `\linewidth` is divided by the specified number of columns.

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 `\IgnoreMinipageWidths`

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.

 **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`, `\qqquad`, `\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 L^AT_EX 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 85 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 514 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 217 for the `fancybox` package.

For fancy framed minipages: See packages `boxedminipage2e`, `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 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 loses 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 *pdf_{to}text* 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.

8.4 Section names

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


`\FilenameSimplify` `{\langle text \rangle}`

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` `{\langle macros \rangle}`

 **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 nullfied during filename generation. Low-level macros such as `\begingroup` will cause problems when nullfied. Many macros such as `\textbf` are already nullfied. `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`:

```
\section{A name with math
\texorpdfstring{$1+2=3$}{text description}}
```

8.5 Cross-references

- 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).

⚠ **label characters**

- \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.

⚠ **empty link**

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 **461**.

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”.

Pkg varioref

⚠ **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 **535** to redefine the message which is printed for page number references.


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.

Pkg `url`

 **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 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.

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+verbtim+.}
```

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 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 .

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

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.

 **missing TOC**

8.6.4 titling and authblk

`Pkg titling` `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`.

`Pkg authblk`

package support

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.

 **load order**

`\published` and `\subtitle`


8.6.5 tocloft package

Opt [tocloft]	titles	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 ^A T _E X commands to create the titles, allowing other packages to work with it.
Pkg	tocloft	
Pkg	tocloft	

tocloft & other packages

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.
-----	----------	--

 **incorrect TOC link**

8.6.7 pagenote package

Pkg	pagenote	pagenote works as-is, but the page option is disabled.
-----	----------	--

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
```

8.6.9 BibTeX

\etalchar	Displays a superscript “+” to indicate “and others”.
-----------	--

 **Modify *.bib** When enough authors are cited for a source, BibT_EX 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 gloss package

Pkg gloss To process the HTML glossary:

 **compiling** `bibtex <projectname>_html.gls`

8.6.11 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.

8.6.12 nomencl package

Pkg `nomencl` To process the HTML nomenclature:

```
makeindex <project>_html.nlo -s nomencl.ist -o <project>_html.nls
```

8.6.13 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 8.6.19 and 8.6.20.

source code See section 76 for *lwarp*'s core index and glossary code, section 283 for index, section 441 for *splitidx*, section 282 for *imakeidx*, section 477 for *toctibind*, and section 534.17 for *memoir*'s indexing patches.

8.6.14 Indexing with basic \LaTeX and *makeidx*

***lwarpmk* processing** The following allow the user to process indexes automatically, or using *lwarpmk*'s commands:

```
Enter ⇒ lwarpmk printindex
```

```
Enter ⇒ lwarpmk htmlindex
```

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.

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.

8.6.15 Indexing with 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}{sidx}{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.

8.6.16 Indexing with *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 534.17 in the `lwarp-patch-memoir` package for the `\@wrsindexhyp` 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 \Rightarrow **lwarpmk htmlindex**
to compile the indexes.

8.6.17 Indexing with 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 8.6.19 and 8.6.20. The `splitindex` option is also available of 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.

8.6.18 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,           <optional>
  xindyCodepage=utf8,             <optional>
  latexmk                          <optional>
]{lwarp}
...
\xindyindex
\makeindex
```

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,           <optional>
  xindyCodepage=utf8,             <optional>
  latexmk
]{lwarp}
...
\xindyindex
\makeindex
\makeindex[secondname]
```

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.

8.6.19 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.

Opt	makeindexStyle
-----	----------------

3. In the document source use the `makeindexStyle` option for *lwarp*:

```
\usepackage[
  ... other options ...
```

```
\textred{makeindexStyle=projectname.ist},
]{lwarp}
```

Likewise, refer to the custom style file if using `\PrintIndexCmd`, `\HTMLIndexCmd`, or `\LatexmkIndexCmd`.

4. 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`.

8.6.20 Using a custom *xindy* style file

Prog <code>xindy</code> File <code>lwarp.xdy</code>	When using <i>xindy</i> , <code>lwarpmk</code> uses the file <code>lwarp.xdy</code> to process the index. This file is over-written by <code>lwarp</code> 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`.

Opt <code>xindyStyle</code>	3. In the document source use the <code>xindyStyle</code> option for <code>lwarp</code> :
-----------------------------	---

```
\usepackage[
... other options ...
\textred{xindyStyle=projectname.xdy},
]{lwarp}
```

Likewise, refer to the custom style file if using `\PrintIndexCmd`, `\HTMLIndexCmd`, or `\LatexmkIndexCmd`.

4. 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`.


8.6.21 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.

8.6.22 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`



tocloft & other packages

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.

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`:

```

\section{A name with math
\texorpdfstring{$1+2=3$}{text description}}

```

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 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

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

¹⁴See section 519 regarding fonts and fractions.

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

MATHJAX does not have preexisting support every possible math function. Additional MATHJAX function definitions may be defined. These will be declared at the start of each HTML page, and thus will have a global effect.

Examples:

```
\CustomizeMathJax{
  \newcommand{\expval}[1]{\langle#1\rangle}
  \newcommand{\abs}[1]{\lvert#1\rvert}
}
\CustomizeMathJax{\newcommand{\arsinh}{\text{arsinh}}}
\CustomizeMathJax{\newcommand{\arcosh}{\text{arcosh}}}
\CustomizeMathJax{\newcommand{\NN}{\mathbb{N}}}
```

8.7.6 MATHJAX limitations

MATHJAX limitations

Limitations when using MATHJAX include:

Prog MathJax

subequations

- MATHJAX itself does not support subequations. This may be improved by parsing the L^AT_EX math expression to manually insert tags, but this has not yet been done.

footnotes in math

- Footnotes inside equations are not yet supported while using MATHJAX.

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

- Usage of siunitx inside a math equation is supported via a third-party MATHJAX extension. While inside a math expression, do not use \SI or \si inside \text, where it will be rendered as normal text.

⚠ siunitx inside an equation

<https://github.com/burnpanck/MathJax-siunitx>

Also see section 8.7.11.

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 supported by MATHJAX, including \ensuremath and bigdelim, along with occasionally-used macros such as \relax. lwarp emulates footnotes, units, and nicefrac for MathJax.

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`

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.

changing contents

complicated alt tag

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 44.

8.7.9 Complicated display math objects

`\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` 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

This conversion is not total. Font control is via CSS, and the custom L^AT_EX font settings are ignored.



Font control

- ⚠ **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.

8.7.11 `siunitx` package

Pkg `siunitx` Due to *pdftotext* limitations, fraction output is replaced by symbol output for per-mode and quotient-mode.
 Pkg `fractions`

- ⚠ **math mode required** Some units will require that the expression be placed inside math mode.

NOTE: As of this writing, the `siunitx` extension for `MATHJAX` is not currently hosted at any public CDN, thus `siunitx` is not usable with `MATHJAX` unless a local copy of this extension is created first. See `\MathJaxFilename` to select a custom `MathJax` script.

- ⚠ **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`.

8.7.12 `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`.
 Pkg `nicefrac`

8.7.13 `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 of “(image)”.
- `\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.

<code>background: none</code>	<code>\colorbox</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.
<code>color support</code>	Color definitions, models, and mixing are fully supported without any changes required.
<code>colored tables</code>	<code>\rowcolors</code> is supported, except that the optional argument is ignored so far.
<code>colored text and boxes</code>	<code>\textcolor</code> , <code>\colorbox</code> , and <code>\fcolorbox</code> are supported.
<code>\color and \pagecolor</code>	<code>\color</code> and <code>\pagecolor</code> are ignored. Use <code>css</code> or <code>\textcolor</code> 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


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.


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:

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`.

 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 ⇒ **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 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.

 **scaling**

8.8.12 Multimedia packages

Pkg multimedia The packages multimedia, movie15, and media9 are supported.

Pkg movie15 HTML5 <audio> and <video> objects are created for .mp3 and .mp4 files.

Pkg media9

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 &

⚠ floatrow

⚠ tabular inside another
environment

- 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
```

This includes before and after defining any macro which used \ttabbox from floatrow.

- 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 !

\multirow

⚠ \newcolumntype

- Only one each of @ and ! is used at each column, and they are used in that order.
- 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 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.

full-width rules

- \toprule, \midrule, \bottomrule, and \hline 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.

- 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:

- tabularx ignores the width, but X columns do produce paragraph columns or multicolumns.

longtable headings

- For longtable, place headings and footings which do not apply to HTML inside \warpprintonly{ }.

S columns

- 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 L^AT_EX, 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.

8.10.2 multirow package

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 & ...
```

⚠ \warpprintonly
⚠ Misplaced \noalign

⚠ tabular inside a

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 339.2 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 & ...
```

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 ...
\warpHTMLonly{
[ <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 . . .
\warpHTMLonly{           % 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}
```

```
<->    a    b
      {
left {  c    d
      {  e    f
      {  g    h
<->    i    j
```

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 488.1.

Pkg trivfloat

Pkg algorithmicx

 **package conflicts** **8.11.3 caption and subcaption packages**

Pkg caption To pass options to `caption`, select the options before loading `lwarp`:


Pkg subcaption

 **options**

```

\documentclass{article}
...
\PassOptionsToPackage{options_list}{caption}
...
\usepackage{lwarp}
...
\usepackage{caption}

```

 **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
tab character &
subfig package**

Use `\StartDefiningTabulars` and `\StopDefiningTabulars` before and after defining macros using `\ttabbox` with a tabular inside. See section 8.10.1.

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.

`\titlehead`, `\subject`, `\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 While emulating memoir, lwarp pre-loads a number of packages (section 534.1). 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:

⚠ options clash

```
\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.

`\verbfootnote` is not supported.

`\newfootnoteseries`, etc. are not supported.

lwarp loads `pagenote` to perform memoir's `pagenote` functions, but there are minor differences in `\pagenotesubhead` and related macros.

Poem numbering is not supported.

The verbatim environment does not yet support the memoir enhancements. It is currently recommended to load and use `fancyvrb` instead.

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.

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 `\leftmargin`

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 `\HTMLleftskip` the horizontal alignment may not work out exactly, in which case a label may be shifted by one space.

8.15.2 newclude package

Pkg *newclude* *newclude* modifies `\label` in a non-adaptive way, so *newclude* must be loaded before

 **loading** lwarp is loaded:

```
\documentclass{article}
... <font setup>
\usepackage{newclude}
\usepackage[warpHTML]{lwarp}
...
```

8.15.3 babel package

Pkg babel When French is used, the caption separator is changed to a dash. The following may be used to restore it to a colon:

 **\CaptionSeparator**

```
\renewcommand*{\CaptionSeparator}{:~}
```

punctuation spaces Also when French is used, lwarp creates fixed-width space around punctuation by patching \FBcolonspace, \FBthinspace, \FBguillemet, \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 chemfig package

If using `\polymerdelim` to add delimiters to a `\chemfig`, wrap both inside a single `lateximage`:

```
\begin{lateximage}[(-chemfig~\packagediagramname)]
\chemfig{...}
\polymerdelim[...]{...}
\end{lateximage}
```

8.15.8 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.

8.15.9 mhchem package

See section 325.

8.15.10 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}
```

8.15.11 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 7. `\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 7: 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 9. 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: <code>false</code>
	Adds
	<pre> === begin table === ... === end === </pre>
	or
	<pre> === begin figure === ... === end === </pre>
	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 \mathscr{AMS} math environments.

Table 8: Section HTML headings for word-processor conversion

Section	HTML headings*			
	With \chapter		Without \chapter	
	WPTitleHeading		WPTitleHeading	
	true	false	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 9 on page 183.

	WPTitleHeading	
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	
	section headings	
		See table 8 on page 167.

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 \LaTeX and HTML versions.

Equation numbering is not automatic, but the equation numbers in SVG math will match the \LaTeX 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 88 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 36.
-  **TeX boxes** Any TeX boxes must be undone, as `svg math` or `lateximages` require `\newpage`, which will not work in a TeX box.
- index recreation** To recreate the index for the lwarp documentation:

```
makeindex -s gglo.ist -o lwarp.gls lwarp.glo
splitindex lwarp.idx -- -s gind.ist
```

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 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:

```
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}
```

12.2 Modifying a package 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.

When creating HTML, `lwarp` redefines the `\usepackage` and `\RequirePackage` macros such that it first looks to see if a `lwarp-<packagename>.sty` version exists. If so, the `lwarp` version is used instead. This modular system allows users to create their own versions of packages for `lwarp` to use for HTML, simply by creating a new package with

a `lwarp-` 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 `lwarp-` packages where `TEX` can see it, then the user's new package will be seen by any documents using `lwarp`. (Remember `mktexlsr` or `texhash`.)

An `lwarp-<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 `lwarp-` packages for examples.

Anything the user might expect of the original package must be replaced or emulated by the new `lwarp-` 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 `lwarp-*` package should first call either of:

```
\LWR@ProvidesPackageDrop
-or-
\LWR@ProvidesPackagePass
```

If “Drop”ped, the original print-version package is ignored, and only the `lwarp-` 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 `lwarp-` version continues loading as well. See section 358 (ntheorem) 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 `lwarp-` 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`
File `lwarpmk.lua`

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.

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.

13.1.5 Compiling

Duplicate filenames: lwarp may generate file names from section names. While doing so, the filenames are simplified and special characters are removed. If this process generates a duplicate filename, an error is generated, describing the filename and which section name generated it.

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 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_ΛTeX logo can use the reversed “E”.

“It is recommended to use `[width=xx\linewidth]` instead of `[scale=yy]`”: Browser support of `scale` is not the same effect as \LaTeX .

13.2 Using the lwarp package

The following address problems which may occur, and possible solutions to each.

Also see:

Section 7.8: [Commands to be placed into the warpprint environment](#)

Section 8: [Special cases and limitations](#)

Text is not converting correctly / corrupted HTML tags:

- Font-related UTF-8 information must be embedded in the PDF file. See section 7.2 regarding bitmapped vs. vector fonts.
- See section 8.2.1 regarding HTML entities and the characters `&`, `<`, and `>`.

Undefined HTML settings:

- See the warning regarding the placement of the HTML settings at section 7.4.

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 \LaTeX code is correct, before attempting to generate an HTML version.

`\end{warppHTML}`, `\end{warpprint}`, `\end{warppall}`: Each of these must be without any other characters on the same line.

Options clash: If using memoir, see section 8.13.

“No room for a new `\write`.”: Before `\usepackage{lwarp}`, add:

```
\usepackage{morewrites}
\morewritessetup{allocate=10}
```

“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.

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.

⚠ macros in
section, table, figure names

⚠ BibTeX

⚠ polyglossia

“! Undefined control sequence. . . . `\@begindocumenthook`”: See section 8.15.4 if using polyglossia.

⚠ custom macros for
environments

“`\begin{equation}` ended by `\end{document}`”: Do not use custom macros such as `\beq` and `\eeq` to replace

```
\begin{equation}
```

```
. . .
```

```
\end{equation}
```

⚠ `\LWR@formatted`

“Misplaced `\omit`”: If using `\LWR@formatted` to define new macros for print and HTML modes, see section 36 regarding `\LWR@expandableformatted`.

⚠ “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

⚠ 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 7.4 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 7.4.
- Ensure that the filenames are unique after math and short words are removed. See `FileSectionNames` at section 7.4.

Missing / incorrect cross-references:

labels

⚠ label characters

\nameref

⚠ empty link

⚠ cleveref page numbers

- 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”.

Ex:

`\cpageref{tab:first,tab:second}`

in html becomes:

“pages **for** table 4.1 and **for** table 4.2”See `\cpagerefFor` at page 535 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 `XLaTeX` or `LuaLaTeX`.**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.¹⁵ 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

¹⁵This becomes important when dealing with a document containing thousands of images.

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.

Expressing math as svg images has the advantage of representing the math exactly as L^AT_EX 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 L^AT_EX 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.

⚠ Lots of files!

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.

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 7.4.
- 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 **pdf_latex lwarp.ins** to generate a new `lwarp.sty` file.
3. Enter **pdf_latex 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 9: Section depths and HTML headings

Section	L ^A T _E X depth	HTML headings *
Title of the entire website		<h1>
(none)	-5	new for this package
book	-2	<div class = "book">
part	-1	<h2>
chapter	0	<h3>
section	1	<h4>
subsection	2	<h5>
subsubsection	3	<h6>
paragraph	4	
subparagraph	5	
listitem	7	new for this package, used for list items

* If FormatWP is true, section headings may be adjusted, depending on WPTitleHeading. See table 8 on page 167.

16 Section depths and HTML headings

Stacks are created to track depth inside the L^AT_EX document structure. This depth is translated to HTML headings as shown in table 9. “Depth” here is not depth in the traditional computer-science stack-usage sense, but rather a representation of the nesting depth inside the L^AT_EX 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}
2 \newif\ifxetexorluatex
3 \ifXeTeX
4   \xetexorluatextrue
5 \else
6   \ifLuaTeX
7     \xetexorluatextrue
8   \else
9     \xetexorluatexfalse
10  \fi
11 \fi
12
13 \ifLuaTeX
14 \RequirePackage{luatex85}% until the geometry package is updated
15 \fi
16
17 \RequirePackage{ifpdf}

18 \RequirePackage{ifptex}

```

19 Early package requirements

Pkg etoolbox Provides \ifbool and other functions.

Pkg xpatch Patches macros with optional arguments.

```

19 \RequirePackage{etoolbox}[2011/01/03]% v2.6 for \BeforeBeginEnvironment, etc.
20 \RequirePackage{xpatch}

```

Pkg ifplatform Provides \ifwindows to try to automatically detect WINDOWS OS.

```

21 \RequirePackage{ifplatform}% sense op-system platform

```

Pkg letltxmacro

```

22 \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` `{<packagename>}` Error if this package was loaded before `lwarp`.

```

23 \newcommand*{\LWR@loadafter}[1]{%
24 \@ifpackageloaded{#1}
25 {
26   \PackageError{lwarp}
27     {%
28       Package #1,\MessageBreak
29       or one which uses #1,\MessageBreak
30       must be loaded after lwarp
31     }
32     {\Move \detokenize{\usepackage}{#1} after
33      \detokenize{\usepackage}{lwarp}.\MessageBreak
34      Package #1 may also be loaded by something else,\MessageBreak
35      which must also be moved after lwarp.}
36 }
37 {}
38 }
```

`\LWR@notmemoirloadafter` `{<packagename>}` Error if not `memoir` class and this package was loaded before `lwarp`.

`memoir` emulates many packages, and pretends that they have already been loaded.

```

39 \@ifclassloaded{memoir}
40 {\newcommand*{\LWR@notmemoirloadafter}[1]{} }
41 {\LetLtxMacro\LWR@notmemoirloadafter\LWR@loadafter}
```

`\LWR@notltjloadafter` `{<packagename>}` Error if not a `ltjs*` class and this package was loaded before `lwarp`.

```

42 \LetLtxMacro\LWR@notltjloadafter\LWR@loadafter
43
44 \@ifclassloaded{ltjarticle}{\renewcommand*{\LWR@notltjloadafter}[1]{} }
45 \@ifclassloaded{ltjbook}{\renewcommand*{\LWR@notltjloadafter}[1]{} }
46 \@ifclassloaded{ltjreport}{\renewcommand*{\LWR@notltjloadafter}[1]{} }
47 \@ifclassloaded{ltjsarticle}{\renewcommand*{\LWR@notltjloadafter}[1]{} }
48 \@ifclassloaded{ltjsbook}{\renewcommand*{\LWR@notltjloadafter}[1]{} }
```

```

49 \@ifclassloaded{ltjsreport}{\renewcommand*\LWR@notltjloadafter}[1]{}{}}
50 \@ifclassloaded{ltjspf}{\renewcommand*\LWR@notltjloadafter}[1]{}{}}
51 \@ifclassloaded{ltjskiyou}{\renewcommand*\LWR@notltjloadafter}[1]{}{}}
52 \@ifclassloaded{ltjtarticle}{\renewcommand*\LWR@notltjloadafter}[1]{}{}}
53 \@ifclassloaded{ltjtbook}{\renewcommand*\LWR@notltjloadafter}[1]{}{}}
54 \@ifclassloaded{ltjtreport}{\renewcommand*\LWR@notltjloadafter}[1]{}{}}

```

`\LWR@loadbefore` $\{\langle packagename \rangle\}$ Error if this package is loaded after lwarp.

```

55 \newcommand*\LWR@loadbefore}[1]{%
56 \@ifpackageloaded{#1}
57 {}
58 {
59 \PackageError{lwarp}
60 {Package #1 must be loaded before lwarp}
61 {Move \detokenize{\usepackage}{#1} before \detokenize{\usepackage}{lwarp}.}
62 }
63 }

```

`\LWR@checkloadbefore` $\{\langle thispackagename \rangle\} \{\langle packagename \rangle\}$

If package names match, error if it is loaded after lwarp.

```

64 \newcommand*\LWR@checkloadbefore}[2]{%
65   \edef\LWR@tempone{#1}%
66   \ifdefstring{\LWR@tempone}{#2}{%
67     \LWR@loadbefore{#1}%
68   }{}%
69 }

```

`\LWR@loadnever` $\{\langle badpackagename \rangle\} \{\langle replacementpkgnames \rangle\}$

The first packages is not supported, so tell the user to use the second instead.

```

70 \newcommand*\LWR@loadnever}[2]{%
71 \PackageError{lwarp}
72 {%
73   Package #1 is not supported\MessageBreak
74   by lwarp's HTML conversion.\MessageBreak
75   Package(s) #2 may be useful instead
76 }
77 {%
78   Package #1 might conflict with lwarp in some way,\MessageBreak
79   or is superceded by another package.\MessageBreak
80   For a possible alternative, see package(s) #2.
81 }
82 }

```

`\LWR@checkloadnever` $\{\langle thispackagename \rangle\} \{\langle badpackagename \rangle\} \{\langle replacementpkgnames \rangle\}$

If this package name is the bad packagename, suggest the replacements instead.

```

83 \newcommand*{\LWR@checkloadnever}[3]{%
84     \edef\LWR@tempone{#1}%
85     \ifdefstring{\LWR@tempone}{#2}{%
86         \LWR@loadnever{#2}{#3}%
87     }{}%
88 }

```

`\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`.

```

89 \newcommand*{\LWR@earlyloadnever}[2]{%
90 \@ifpackageloaded{#1}{%
91     \PackageError{lwarp}
92 {%
93     Package #1 is not supported\MessageBreak
94     by lwarp's HTML conversion.\MessageBreak
95     Package(s) #2 may be useful instead
96 }
97 {%
98     Package #1 might conflict with lwarp in some way,\MessageBreak
99     or is superceded by another package.\MessageBreak
100     For a possible alternative, see package(s) #2.
101 }
102 }{}%
103 }

```

`\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`.

```

104 \newcommand*{\LWR@earlyclassloadnever}[2]{%
105 \@ifclassloaded{#1}{%
106     \PackageError{lwarp}
107 {%
108     Class #1 is not supported\MessageBreak
109     by lwarp's HTML conversion.\MessageBreak
110     Class(es) #2 may be useful instead
111 }
112 {%
113     Class #1 might conflict with lwarp in some way,\MessageBreak
114     or is superceded by another class.\MessageBreak
115     For a possible alternative, see class(es) #2.
116 }
117 }{}%
118 }

```

20.2 Error for disallowed packages and classes loaded before `lwarp`

```

119 \LWR@earlyclassloadnever{jarticle}{ujarticle}
120 \LWR@earlyclassloadnever{jbook}{ujbook}
121 \LWR@earlyclassloadnever{jreport}{ujreport}
122 \LWR@earlyclassloadnever{tarticle}{utarticle}
123 \LWR@earlyclassloadnever{tbook}{utbook}
124 \LWR@earlyclassloadnever{treport}{utreport}
125 \LWR@earlyloadnever{ae}{cm-super, lmodern}
126 \LWR@earlyloadnever{aecc}{cm-super, lmodern}
127 \LWR@earlyloadnever{alg}{algorithm2e, algorithmicx}
128 \LWR@earlyloadnever{algorithms}{algorithm2e, algorithmicx}
129 \LWR@earlyloadnever{boxedminipage}{boxedminipage2e}
130 \LWR@earlyloadnever{caption2}{caption}
131 \LWR@earlyloadnever{ccaption}{caption}% might be preloaded by memoir
132 % \LWR@earlyloadnever{ccaption}{caption}% might be preloaded by memoir

```

The older CJK and CJKutf8 only work with xeCJK:

```

133 \ifpackageloaded{xeCJK}{}{
134   \LWR@earlyloadnever{CJK}{ctex, xeCJK}
135   \LWR@earlyloadnever{CJKutf8}{ctex, xeCJK}
136 }

```

bxckatype is based on CJK:

```

137 \LWR@earlyloadnever{bxckatype}{upLaTeX, bxjsarticle, ujarticle, utarticle}

```

hangul is not in TeXLive, and is not tested:

```

138 \LWR@earlyloadnever{hangul}{kotex, xetexko, luatexko}

```

Others:

```

139 \LWR@earlyloadnever{colortab}{colortbl}
140 \LWR@earlyloadnever{epsf}{graphicx}
141 \LWR@earlyloadnever{fancyheadings}{fancyhdr}
142 \LWR@earlyloadnever{fncylab}{cleveref}
143 \LWR@earlyloadnever{glossary}{glossaries}
144 \LWR@earlyloadnever{hyper}{hyperref}
145 \LWR@earlyloadnever{pdfcpot}{microtype}
146 \LWR@earlyloadnever{picinpar}{floatflt, wrapfig}
147 \LWR@earlyloadnever{picins}{floatflt, wrapfig}
148 \LWR@earlyloadnever{sistyle}{siunitx}
149 \LWR@earlyloadnever{tlenc}{fontenc, inputenc, inputenx}
150 \LWR@earlyloadnever{ucs}{inputenc, inputencx}
151 \LWR@earlyloadnever{wasysym}{textcomp, amssymb, amsfonts, mnsymbol, fdsymbol}

```

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:

```

152 \LWR@loadafter{2in1}

```

```
153 \LWR@loadafter{2up}
154 \LWR@loadafter{a4}
155 \LWR@loadafter{a4wide}
156 \LWR@loadafter{a5comb}
157 \LWR@notmemoirloadafter{abstract}
158 \LWR@loadafter{academicons}
159 \LWR@loadafter{accsupp}
160 \LWR@loadafter{acro}
161 \LWR@loadafter{acronym}
162 \LWR@loadafter{adjmulticol}
163 \LWR@loadafter{addlines}
164 \LWR@loadafter{ae}
165 \LWR@loadafter{aecc}
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{autonum}
185 \LWR@loadafter{axessibility}
186 \LWR@loadafter{axodraw2}
187 \LWR@loadafter{backnaur}
188 \LWR@loadafter{backref}
189 \LWR@loadafter{balance}
190 \LWR@loadafter{bbding}
191 \LWR@loadafter{bigdelim}
192 \LWR@loadafter{bigfoot}
193 \LWR@loadafter{bigstrut}
194 \LWR@loadafter{bitpattern}
195 \LWR@loadafter{blowup}
196 \LWR@loadafter{booklet}
197 \LWR@loadafter{bookmark}
198 \LWR@notmemoirloadafter{booktabs}
199 \LWR@loadafter{bophook}
200 \LWR@loadafter{bounddvi}
201 \LWR@loadafter{boxedminipage}
202 \LWR@loadafter{boxedminipage2e}
203 \LWR@loadafter{breakurl}
204 \LWR@loadafter{breqn}
205 \LWR@loadafter{bsheaders}
206 \LWR@loadafter{bypapersize}
207 \LWR@loadafter{bytefield}
```

```
208 \LWR@loadafter{cancel}
209 \LWR@loadafter{canoniclayout}
210 \LWR@loadafter{caption}
211 \LWR@loadafter{caption2}
212 \LWR@loadafter{cases}
213 % \LWR@loadafter{ccaption}% may be preloaded by memoir
214 \LWR@loadafter{changebar}
215 \LWR@loadafter{changelayout}
216 \LWR@notmemoirloadafter{changepage}
217 \LWR@loadafter{changes}
218 \LWR@loadafter{chappg}
219 \LWR@loadafter{chapterbib}
220 \LWR@loadafter{chemfig}
221 \LWR@loadafter{chemformula}
222 \LWR@loadafter{chemgreek}
223 \LWR@loadafter{chemmacros}
224 \LWR@loadafter{chemnum}
225 \LWR@loadafter{chkfloat}
226 \LWR@notmemoirloadafter{chnpage}
227 \LWR@loadafter{cite}
228 \LWR@loadafter{cmdtrack}
229 \LWR@loadafter{color}
230 \LWR@loadafter{colortbl}
231 \LWR@loadafter{continue}
232 \LWR@loadafter{copyrightbox}
233 \LWR@notmemoirloadafter{crop}
234 % ctex must be loaded before lwarp
235 \LWR@loadafter{ctable}
236 \LWR@loadafter{cuted}
237 \LWR@loadafter{cutwin}
238 \LWR@loadafter{dblfloatfix}
239 \LWR@loadafter{dblfnote}
240 \LWR@notmemoirloadafter{dcolumn}
241 \LWR@loadafter{diagbox}
242 \LWR@loadafter{dingbat}
243 \LWR@loadafter{dprogress}
244 \LWR@loadafter{draftcopy}
245 \LWR@loadafter{draftfigure}
246 \LWR@loadafter{draftwatermark}
247 \LWR@loadafter{easy-todo}
248 \LWR@loadafter{ebook}
249 \LWR@loadafter{ed}
250 \LWR@loadafter{ellipsis}
251 \LWR@loadafter{embrac}
252 \LWR@loadafter{emptypage}
253 \LWR@loadafter{endfloat}
254 \LWR@loadafter{endheads}
255 \LWR@loadafter{endnotes}
256 \LWR@notmemoirloadafter{enumerate}
257 \LWR@loadafter{enumitem}
258 \LWR@notmemoirloadafter{epigraph}
259 \LWR@loadafter{epsfig}
260 \LWR@loadafter{epstopdf}
261 \LWR@loadafter{epstopdf-base}
262 \LWR@loadafter{eqlist}
```

```
263 \LWR@loadafter{eqparbox}
264 \LWR@loadafter{errata}
265 \LWR@loadafter{eso-pic}
266 \LWR@loadafter{eurowsym}
267 \LWR@loadafter{everypage}
268 \LWR@loadafter{everyshi}
269 \LWR@loadafter{extramarks}
270 \LWR@loadafter{fancybox}
271 \LWR@loadafter{fancyhdr}
272 \LWR@loadafter{fancyheadings}
273 \LWR@loadafter{fancyref}
274 \LWR@loadafter{fancytabs}
275 \LWR@loadafter{fancyvrb}
276 \LWR@loadafter{figcaps}
277 \LWR@loadafter{figsize}
278 \LWR@loadafter{fitbox}
279 \LWR@loadafter{fix2col}
280 \LWR@loadafter{fixme}
281 \LWR@loadafter{fixmetodonotes}
282 \LWR@loadafter{flafter}
283 \LWR@loadafter{flippdf}
284 \LWR@loadafter{float}
285 \LWR@loadafter{floatflt}
286 \LWR@loadafter{floatpag}
287 \LWR@loadafter{floatrow}
288 \LWR@loadafter{fltrace}
289 \LWR@loadafter{flushend}
290 \LWR@loadafter{fnbreak}
291 \LWR@loadafter{fncychap}
292 \LWR@loadafter{fnlineno}
293 \LWR@loadafter{fnpara}
294 \LWR@loadafter{fnpos}
295 \LWR@loadafter{fontawesome}
296 \LWR@loadafter{fontawesome5}
297 % fontenc must be loaded before lwarp
298 % fontspec must be loaded before lwarp
299 \LWR@loadafter{footmisc}
300 \LWR@loadafter{footnote}
301 \LWR@loadafter{footnotebackref}
302 \LWR@loadafter{footnotehyper}
303 \LWR@loadafter{footnoterange}
304 \LWR@loadafter{footnpag}
305 \LWR@loadafter{foreign}
306 \LWR@loadafter{forest}
307 \LWR@loadafter{framed}
308 \LWR@loadafter{ftcap}
309 \LWR@loadafter{ftnright}
310 \LWR@loadafter{fullminipage}
311 \LWR@loadafter{fullpage}
312 \LWR@loadafter{fullwidth}
313 \LWR@loadafter{fwlw}
314 \LWR@loadafter{gentombow}
315 % geometry is always loaded by lwarp, and lwarp-geometry is AtBeginDocument
316 \LWR@loadafter{gmeometric}
317 \LWR@loadafter{glossaries}
```

```
318 % \LWR@loadafter{graphics}% pre-loaded by xunicode
319 % \LWR@loadafter{graphicx}% pre-loaded by xunicode
320 \LWR@loadafter{gloss}
321 \LWR@loadafter{glossary}
322 \LWR@loadafter{grffile}
323 \LWR@loadafter{grid}
324 \LWR@loadafter{grid-system}
325 \LWR@loadafter{gridset}
326 \LWR@loadafter{hang}
327 \LWR@loadafter{hanging}
328 \LWR@loadafter{hybpmsec}
329 \LWR@loadafter{hypcap}
330 \LWR@loadafter{hypdestopt}
331 \LWR@loadafter{hypernat}
332 \LWR@loadafter{hyperref}
333 \LWR@loadafter{hyperxmp}
334 \LWR@loadafter{hyphenat}
335 \LWR@loadafter{idxlayout}
336 \LWR@loadafter{ifoddpages}
337 \LWR@loadafter{imakeidx}
338 \LWR@notmemoirloadafter{index}
339 % inputenc must be loaded before lwarp
340 % inputenx must be loaded before lwarp
341 % inputtrc may be loaded before lwarp
342 \LWR@loadafter{intopdf}
343 \LWR@loadafter{karnaugh-map}
344 \LWR@loadafter{keyfloat}
345 \LWR@loadafter{layaureo}
346 \LWR@loadafter{layout}
347 \LWR@loadafter{layouts}
348 \LWR@loadafter{leading}
349 \LWR@loadafter{letterspace}
350 \LWR@loadafter{lettrine}
351 \LWR@loadafter{lineno}
352 \LWR@loadafter{lips}
353 \LWR@loadafter{listings}
354 \LWR@loadafter{listliketab}
355 \LWR@loadafter{longtable}
356 \LWR@loadafter{lscapex}
357 \LWR@loadafter{ltabx}
358 \LWR@loadafter{ltcaption}
359 \LWR@loadafter{ltxgrid}
360 \LWR@loadafter{ltxtab}
361 \LWR@loadafter{lua-check-hyphen}
362 \LWR@loadafter{lua-visual-debug}
363 \LWR@loadafter{luacolor}
364 \LWR@loadafter{luatodonotes}
365 \LWR@loadafter{lyluatex}
366 \LWR@loadafter{magaz}
367 \LWR@notmemoirloadafter{makeidx}
368 \LWR@loadafter{manyfoot}
369 \LWR@loadafter{marginfit}
370 \LWR@loadafter{marginfix}
371 \LWR@loadafter{marginnote}
372 \LWR@loadafter{marvosym}
```

```
373 \LWR@loadafter{mathtools}
374 \LWR@loadafter{mcaption}
375 \LWR@loadafter{mdframed}
376 \LWR@loadafter{media9}
377 \LWR@loadafter{memhfixc}
378 \LWR@loadafter{metalogo}
379 \LWR@loadafter{metalogoX}
380 \LWR@loadafter{mhchem}
381 \LWR@loadafter{microtype}
382 \LWR@loadafter{midfloat}
383 \LWR@loadafter{midpage}
384 \LWR@loadafter{minibox}
385 \LWR@loadafter{minitoc}
386 % morefloats must be allowed early for print mode
387 \LWR@notmemoirloadafter{moreverb}
388 % morewrites must be loaded before lwarp
389 \LWR@notmemoirloadafter{movie15}
390 \LWR@notmemoirloadafter{mparhack}
391 \LWR@loadafter{multicap}
392 %\LWR@loadafter{multicol}% loaded by ltxdoc
393 \LWR@loadafter{multicolrule}
394 \LWR@loadafter{multimedia}
395 \LWR@loadafter{multirow}
396 \LWR@loadafter{multitoc}
397 \LWR@loadafter{musicography}
398 \LWR@loadafter{nameauth}
399 \LWR@loadafter{nameref}
400 \LWR@loadafter{natbib}
401 \LWR@notmemoirloadafter{nccfancyhdr}
402 \LWR@notmemoirloadafter{needspace}
403 % newclue must be loaded before lwarp
404 \LWR@loadafter{newtxmath}
405 % newunicodechar must be loaded before lwarp
406 \LWR@notmemoirloadafter{nextpage}
407 \LWR@loadafter{nicefrac}
408 \LWR@loadafter{niceframe}
409 \LWR@loadafter{nomencl}
410 \LWR@loadafter{nonfloat}
411 \LWR@loadafter{nonumonpart}
412 \LWR@loadafter{nopageno}
413 \LWR@loadafter{notes}
414 \LWR@loadafter{notespages}
415 \LWR@loadafter{nowidow}
416 \LWR@loadafter{ntheorem}
417 \LWR@loadafter{octave}
418 \LWR@loadafter{overpic}
419 \LWR@loadafter{pagegrid}
420 \LWR@notmemoirloadafter{pagenote}
421 \LWR@loadafter{pagesel}
422 \LWR@loadafter{paralist}
423 \LWR@loadafter{parnotes}
424 \LWR@notmemoirloadafter{parskip}
425 \LWR@loadafter{pbox}
426 \LWR@loadafter{pdfcomment}
427 \LWR@loadafter{pdfcrypt}
```

```
428 \LWR@loadafter{pdfscape}
429 \LWR@loadafter{pdfmarginpar}
430 \LWR@loadafter{pdfpages}
431 \LWR@loadafter{pdfprivacy}
432 \LWR@loadafter{pdfrender}
433 \LWR@loadafter{pdfsync}
434 \LWR@loadafter{pdftricks}
435 \LWR@loadafter{pdfx}
436 \LWR@loadafter{perpage}
437 \LWR@loadafter{pfnote}
438 \LWR@loadafter{phfqit}
439 \LWR@loadafter{pifont}
440 \LWR@loadafter{placeins}
441 \LWR@loadafter{plarray}
442 \LWR@loadafter{plarydshln}
443 \LWR@loadafter{plextarray}
444 \LWR@loadafter{plextarydshln}
445 \LWR@loadafter{plcolortbl}
446 \LWR@loadafter{plextdelarray}
447 \LWR@loadafter{prelim2e}
448 \LWR@loadafter{prettyref}
449 \LWR@loadafter{preview}
450 \LWR@loadafter{psfrag}
451 \LWR@loadafter{psfragx}
452 \LWR@loadafter{pst-eps}
453 \LWR@loadafter{pstool}
454 \LWR@loadafter{pstricks}
455 % \LWR@loadafter{pxatbegshi}% may be used by morewrites
456 \LWR@loadafter{pxeveryshi}
457 \LWR@loadafter{pxftnright}
458 \LWR@loadafter{pxjahyper}
459 \LWR@loadafter{quotchap}
460 \LWR@loadafter{quoting}
461 \LWR@loadafter{ragged2e}
462 \LWR@loadafter{realscripts}
463 \LWR@loadafter{refcheck}
464 \LWR@loadafter{register}
465 \LWR@loadafter{relsize}
466 \LWR@loadafter{repeatindex}
467 \LWR@loadafter{resizegather}
468 \LWR@loadafter{rmpage}
469 \LWR@loadafter{romanbar}
470 \LWR@loadafter{romanbarpagenumber}
471 \LWR@loadafter{rotating}
472 \LWR@loadafter{rotfloat}
473 \LWR@loadafter{rviewport}
474 \LWR@loadafter{savetrees}
475 % scalefnt is loaded by babel-french
476 \LWR@loadafter{schemata}
477 \LWR@loadafter{scrextend}
478 \LWR@loadafter{scrhack}
479 \LWR@loadafter{scrlayer}
480 \LWR@loadafter{scrlayer-notecolumn}
481 \LWR@loadafter{scrlayer-scrpage}
482 \LWR@loadafter{scrpage2}
```

```
483 \LWR@loadafter{section}
484 \LWR@loadafter{sectionbreak}
485 \LWR@loadafter{sectsty}
486 \LWR@loadafter{semantic-markup}
487 \LWR@notmemoirloadafter{setspace}
488 \LWR@loadafter{shadow}
489 \LWR@loadafter{shapepar}
490 \LWR@notmemoirloadafter{showidx}
491 \LWR@loadafter{showkeys}
492 \LWR@loadafter{showtags}
493 \LWR@loadafter{sidecap}
494 \LWR@loadafter{sidenotes}
495 \LWR@loadafter{SIunits}
496 \LWR@loadafter{siunitx}
497 \LWR@loadafter{slantsc}
498 \LWR@loadafter{soul}
499 \LWR@loadafter{soulpos}
500 \LWR@loadafter{soulutf8}
501 \LWR@loadafter{splitidx}
502 \LWR@loadafter{srcltx}
503 \LWR@loadafter{srctex}
504 \LWR@loadafter{stabular}
505 \LWR@loadafter{stackengine}
506 \LWR@notltjloadafter{stfloats}
507 \LWR@loadafter{struktex}
508 \LWR@loadafter{subcaption}
509 \LWR@loadafter{subfig}
510 \LWR@loadafter{subfigure}
511 \LWR@loadafter{supertabular}
512 \LWR@loadafter{t1inc}
513 \LWR@loadafter{tabfigures}
514 \LWR@loadafter{tabls}
515 \LWR@loadafter{tablefootnote}
516 \LWR@notmemoirloadafter{tabularx}
517 \LWR@loadafter{tabulary}
518 \LWR@loadafter{tascmac}
519 \LWR@loadafter{textarea}
520 % \LWR@loadafter{textcomp}% maybe before lwarp with font packages
521 \LWR@loadafter{textfit}
522 \LWR@loadafter{textpos}
523 \LWR@loadafter{theorem}
524 \LWR@loadafter{thinsp}
525 \LWR@loadafter{threadcol}
526 \LWR@loadafter{threeparttable}
527 \LWR@loadafter{threeparttablex}
528 \LWR@loadafter{thumb}
529 \LWR@loadafter{thumbs}
530 \LWR@loadafter{tikz}
531 \LWR@loadafter{titleps}
532 \LWR@loadafter{titlesec}
533 \LWR@loadafter{titletoc}
534 \LWR@notmemoirloadafter{titling}
535 % \LWR@loadafter{tocbasic}% preloaded by koma-script classes
536 \LWR@notmemoirloadafter{tocbibind}
537 \LWR@loadafter{tocdata}
```

```
538 \LWR@loadafter{tocenter}
539 \LWR@notmemoirloadafter{tocloft}
540 \LWR@loadafter{tocstyle}
541 \LWR@loadafter{todo}
542 \LWR@loadafter{todonotes}
543 \LWR@loadafter{topcapt}
544 \LWR@loadafter{tram}
545 \LWR@loadafter{transparent}
546 \LWR@loadafter{trimclip}
547 \LWR@loadafter{trivfloat}
548 \LWR@loadafter{truncate}
549 \LWR@loadafter{turnthepage}
550 \LWR@loadafter{twoup}

551 % \LWR@loadafter{typearea}% preloaded by koma-script classes
552 \LWR@loadafter{typicons}
553 % \LWR@loadafter{ulem}% preloaded by ctexart and related classes
554 \LWR@loadafter{umoline}
555 \LWR@loadafter{underscore}
556 \LWR@loadafter{units}
557 \LWR@loadafter{unitsdef}
558 \LWR@loadafter{upref}
559 \LWR@loadafter{url}
560 \LWR@loadafter{uspace}
561 \LWR@loadafter{varioref}% no lwarp package provided
562 \LWR@notmemoirloadafter{verse}
563 \LWR@loadafter{versionotes}
564 \LWR@loadafter{vertbars}
565 \LWR@loadafter{vmargin}
566 \LWR@loadafter{vowel}
567 \LWR@loadafter{vpe}
568 \LWR@loadafter{vwcol}
569 \LWR@loadafter{wallpaper}
570 \LWR@loadafter{watermark}
571 \LWR@loadafter{widows-and-orphans}
572 \LWR@loadafter{wrapfig}
573 \LWR@loadafter{xbmks}
574 \LWR@loadafter{xcolor}
575 \LWR@loadafter{xexchangebar}
576 \LWR@loadafter{xellipsis}
577 % xetexko-vertical must be loaded before lwarp
578 \LWR@loadafter{xfakebold}
579 \LWR@loadafter{xfrac}
580 \LWR@loadafter{xltabular}
581 \LWR@loadafter{xltxtra}
582 \LWR@loadafter{xmpincl}
583 \LWR@loadafter{xpiano}
584 \LWR@loadafter{xpinyin}
585 \LWR@loadafter{xr}
586 \LWR@loadafter{xr-hyper}
587 \LWR@loadafter{xtab}
588 % xunicode must be loaded before lwarp
589 \LWR@loadafter{xurl}
590 \LWR@loadafter{xy}
591 \LWR@loadafter{zwpageLayout}
```

21 MD5 hashing

The MD5 hash is used for `lateximage` filenames for `svg math`.

```
592 \newcommand{\LWR@mdfive}[1]{%
593 \PackageError{lwarp}
594 {No MD5 macro was found}
595 {Lwarp must find the macros pdfmdfivesum or mdfivesum.}
596 }
```

The default for `pdf \LaTeX` , `dvi \LaTeX` , `up \LaTeX` , etc:

```
597 \let\LWR@mdfive\pdfmdfivesum
```

For `Lua \LaTeX` :

```
598 \ifLuaTeX
599 \RequirePackage{pdftexcmds}
600 \let\LWR@mdfive\pdfmdfivesum
601 \fi
```

For `X \LaTeX` :

```
602 \ifXeTeX
603 \@ifundefined{pdfdfivesum}{}
604   {\let\LWR@mdfive\pdfmdfivesum}
605 \@ifundefined{mdfivesum}{}
606   {\let\LWR@mdfive\mdfivesum}
607 \fi
```

22 pdf \LaTeX T1 and UTF-8 encoding

When using `pdf \LaTeX` , `lwarp` requires T1 encoding, and recommends UTF-8 encoding.

If some other input encoding is already defined, `lwarp` will try to use it instead, and hope for the best.

`X \LaTeX` and `Lua \LaTeX` are both UTF-8 by nature.

`\LWR@pdfencoding` Sets T1, and also utf8 if not already set.

```
608 \newcommand*{\LWR@pdfencoding}{%
609   \RequirePackage[T1]{fontenc}
610
611   \@ifpackageloaded{inputenc}{}{
612     \@ifpackageloaded{inputenx}{}{
613       \RequirePackage[utf8]{inputenc}
614     }
615   }
616 }
```

```

617 \ifPDFTeX% pdflatex or dvi latex
618     \LWR@pdfencoding
619 \fi
620
621 \ifpTeX
622     \LWR@pdfencoding
623 \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.

```

624 \ifpTeX
625 \else
626 \RequirePackage{newunicodechar}
627
628 \newunicodechar{×}{\texttimes}
629
630 \ifPDFTeX% pdflatex or dvi latex
631 \newunicodechar{ff}{ff}% the first arguments are ligatures
632 \newunicodechar{fi}{fi}
633 \newunicodechar{fl}{fl}
634 \newunicodechar{ffi}{ffi}
635 \newunicodechar{ffl}{ffl}
636 \newunicodechar{---}{---}
637 \newunicodechar{--}{--}
638 \fi
639
640 \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.

```

641 \ifxetexorluatex
642 \else
643     \ifdefstring{\f@family}{cmr}{
644         \IfFileExists{type1ec.sty}% found in cm-super
645         {}
646         {% cm-super not installed
647             \IfFileExists{lmodern.sty}{
648                 \PackageInfo{lwarp}{cm-super not installed, loading lmodern}

```

```

649         \RequirePackage{lmodern}
650     }{
651         \PackageError{lwarp}
652         {%
653             Lwarp requires a vector font.\MessageBreak
654             Install and load cm-super, lmodern, or another\MessageBreak
655             Type-1 vector font before loading lwarp%
656         }
657         {%
658             Install cm-super or lmodern.\MessageBreak
659             If lmodern, load it before lwarp:\MessageBreak
660             \space\space\protect\usepackage{lmodern}\MessageBreak
661             \space\space\protect\usepackage{lwarp}%
662         }
663     }
664 }% cm-super not installed
665 }{}% f@family
666 \fi

```

25 Upright quotes

In PDFTEX, preserve upright quotes in verbatim text. upquote also loads textcomp.

```

667 \ifPDFTeX
668 \RequirePackage{upquote}
669 \fi
670
671 \ifpTeX
672     \RequirePackage{upquote}
673 \fi

```

26 Miscellaneous tools

26.1 Lengths and units

`\LWR@providelength` `{\lengthname}` 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.

```

674 \newcommand*\LWR@providelength[1]{%
675     \ifdeflength{#1}{\newlength{#1}}%
676 }

```

`\LWR@convertto` `{\dest unit} {\length}`

Prints a length in the given units, without printing the unit itself.

```
677 \newcommand*{\LWR@convertto}[2]{\strip@pt\dimexpr #2*65536/\number\dimexpr 1#1}
```

`\LWR@printpercentlength` $\{\langle smaller \rangle\} \{\langle larger \rangle\}$

Prints a percent ratio of the two lengths.

```
678 \newcommand*{\LWR@printpercentlength}[2]{%
679   \setcounter{LWR@tempcountone}{100*\ratio{#1}{#2}}%
680   \arabic{LWR@tempcountone}%
681 }
```

26.2 Patching

`\LWR@patcherror` $\{\langle packagename \rangle\} \{\langle macroname \rangle\}$

Prints an error if could not patch a macro.

```
682 \newcommand*{\LWR@patcherror}[2]{%
683 \PackageError{lwarp}
684 {Unable to patch package #1, macro #2}
685 {Please contact the author of the lwarp package.}
686 }
```

26.3 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.

```
687 \newcommand{\LWR@isolate}[1]{#1}%
688
689 \ifpackageloaded{ctexpatch}{
690   \renewcommand{\LWR@isolate}[1]{\null#1\null}%
691 }{}
692
693 \ifpackageloaded{xeCJK}{
694   \renewcommand{\LWR@isolate}[1]{\null#1\null}%
695 }{}
```

26.4 Inserting vertical space

`\LWR@forceemptyline` Extra vertical space in the HTML output. Use after `\LWR@stoppars`.

```

696 \newcommand*{\LWR@forceemptyline}{%
697     \LWR@origrule{0pt}{1\baselineskip}%
698     \LWR@originewline%
699 }

```

26.5 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@thirdoffour  {\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 *nth* of the four arguments. Used for extra cross referencing.

```

700 \long\def\LWR@firstoffour#1#2#3#4{#1}
701 \long\def\LWR@secondoffour#1#2#3#4{#2}
702 \long\def\LWR@thirdoffour#1#2#3#4{#3}
703 \long\def\LWR@fourthoffour#1#2#3#4{#4}

```

26.6 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>

```

704 \DeclareRobustCommand\LWR@gsavebox[1]{%
705     \@ifnextchar(%)
706     {\LWR@@gsavepicbox#1}{\@ifnextchar[\LWR@gsavebox#1]{\LWR@gsbox#1}}}%
707 \long\def\LWR@gsbox#1#2{\global\setbox#1\hbox{%
708     \color@setgroup#2\color@endgroup}}
709 \def\LWR@gsavebox#1[#2]{%
710     \@ifnextchar [{\LWR@@gsavebox#1[#2]}{\LWR@@gsavebox#1[#2][c]}}
711 \long\def\LWR@@gsavebox#1[#2][#3]#4{%
712     \LWR@gsbox#1{\@imakebox[#2][#3]{#4}}
713 \def\LWR@@gsavepicbox#1(#2,#3){%
714     \@ifnextchar[%]
715     {\LWR@@gsavepicbox#1(#2,#3)}{\LWR@@gsavepicbox#1(#2,#3)[]}}
716 \long\def\LWR@@gsavepicbox#1(#2,#3)[#4]#5{%
717     \LWR@gsbox#1{\@imakepicbox(#2,#3)[#4]{#5}}

```

```

Env   \LWR@glrbox {\langle macroname \rangle}

```

```

718 \def\LWR@glrbox#1{%

```

```

719 \edef\reserved@a{%
720   \endgroup
721   \global\setbox#1\hbox{%
722     \begingroup\aftergroup}%
723     \def\noexpand\@currenvir{\@currenvir}%
724     \def\noexpand\@currencline{\on@line}}%
725 \reserved@a
726   \@endpfalse
727   \color@setgroup
728   \ignorespaces}
729 \let\LWR@endglrbox\LWR@endlrbox

```

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 OSWindows.
Prog	Windows	
Opt	OSWindows	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.

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:

```
730 \let\LWRpercent\@percentchar
```

The literal \$ character:

```

731 \catcode'\$=12
732 \def\LWRdollar{$}
733 \catcode'\$=3

```

The literal & character:

```

734 \catcode'\&=12
735 \def\LWRamp{&}
736 \catcode'\&=4

```

The literal \ character. The ampersand is temporarily set to the escape character during the definition of the backslash macro.

```
737 \catcode'\&=0
```

```

738 &catcode'\=12
739 &def\LWRbackslash{\}
740 &catcode'\=0
741 \catcode'\&=4

```

The literal { character. The ampersand is temporarily set to the begin group character during the definition of the leftbrace macro.

```

742 \catcode'\&=1
743 \catcode'\{=12
744 \def\LWRleftbrace&{\}
745 \catcode'\{=1
746 \catcode'\&=4

```

The literal } character. The ampersand is temporarily set to the end group character during the definition of the leftbrace macro.

```

747 \catcode'\&=2
748 \catcode'\}=12
749 \def\LWRrightbrace&{\}
750 \catcode'\}=2
751 \catcode'\&=4

```

The literal # character:

```

752 \catcode'\#=12
753 \def\LWRhash{\#}
754 \catcode'\#=6

```

`\LWRopquote` The operating system's quote mark, UNIX default. For WINDOWS, see `\LWR@setOSWindows`, below.

```

755 \def\LWRopquote{' }

```

`\LWRopseq` The operating system's sequential execution command, UNIX default. For WINDOWS, see `\LWR@setOSWindows`, below.

```

756 \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.

```

757 \newbool{usingOSWindows}
758 \boolfalse{usingOSWindows}

```

27.3 UNIX, LINUX, and MAC OS

`\OSPathSymbol` Symbol used to separate directories in a path.

```
759 \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.

```
760 \newcommand*{\LWR@setOSWindows}
761 {
762 \booltrue{usingOSWindows}
763 \renewcommand*{\OSPathSymbol}{\@backslashchar}
764 \def\LWRopquote{"}
765 \def\LWRopseq{\space\LWRamp\space\space}
766 }
```

Test for windows during compile. The user may also specify `OSWindows` package option in case this test fails.

```
767 \ifwindows
768 \LWR@setOSWindows
769 \fi
```

28 Package options

`Pkg kvoptions` Allows key/value package options.

```
770 \RequirePackage{kvoptions}
771 \SetupKeyvalOptions{family=LWR,prefix=LWR@}
```

`\lwarpsetup` A user interface to set the keys:

```
772 \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`.

```
773 \newbool{warpingprint}
774 \newbool{warpingHTML}
775 \newbool{mathjax}
776 \newbool{LWR@origmathjax}
```

defaults The default is print output, and svg math if the user chose HTML output.

```
777 \booltrue{warpingprint}%
778 \boolfalse{warpingHTML}%
779 \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.

```
780 \DeclareVoidOption{warpprint}{%
781 \PackageInfo{lwarp}{Using option 'warpprint'}
782 \booltrue{warpingprint}%
783 \boolfalse{warpingHTML}%
784 }
```

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.

```
785 \DeclareVoidOption{warpHTML}{%
786 \PackageInfo{lwarp}{Using option 'warpHTML'}%
787 \booltrue{warpingHTML}%
788 \boolfalse{warpingprint}%
789 }
```

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.

```
790 \DeclareVoidOption{mathsvg}{%
791 \PackageInfo{lwarp}{Using option 'mathsvg'}
792 \boolfalse{mathjax}%
793 \boolfalse{LWR@origmathjax}%

794 }
```

Opt mathjax Option mathjax selects MATHJAX math display: If the mathjax option is given, boolean mathjax is true, may be used for `\ifbool` tests.

```
795 \DeclareVoidOption{mathjax}{%
796 \PackageInfo{lwarp}{Using option 'mathjax'}
797 \booltrue{mathjax}%
798 \booltrue{LWR@origmathjax}%

799 }
```

- 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.
- ```
800 \DeclareStringOption[\jobname]{BaseJobname}
```
- Opt ImagesDirectory Option ImagesDirectory sets the name of the directory to use for the `lateximage` images.  
 Default: `\jobname-images`
- ```
801 \DeclareStringOption[\BaseJobname-images]{ImagesDirectory}
```
- Opt ImagesName Option ImagesName sets the prefix to use for the `lateximage` images.
 Default: `image-`
- ```
802 \DeclareStringOption[image-]{ImagesName}
```
- Opt makeindexStyle Selects a custom `.ist` file. A customized file should be based on `lwarp.ist`, and must retain the lines related to `\hyperindexref`.  
 Default: `lwarp.ist`
- ```
803 \DeclareStringOption[lwarp.ist]{makeindexStyle}
```
- Opt xindyStyle Selects a custom `.xdy` file. A customized file should be based on `lwarp.xdy`, and must retain the line
 Default: `lwarp.xdy`
- ```
(markup-locref :open "\hyperindexref{" :close "}")
```
- ```
804 \DeclareStringOption[lwarp.xdy]{xindyStyle}
```
- Opt xindyLanguage Sets the xindy language to be assigned in *lwarpmk*'s configuration files. This is then used by *lwarpmk* while processing the index and glossary.
 Default: `english`
- ```
805 \DeclareStringOption[english]{xindyLanguage}
```
- Opt xindyCodepage Sets the xindy codepage to be assigned in *lwarpmk*'s configuration files. This is then used by *lwarpmk* while processing the index.  
 Default: `utf8`
- ```
806 \DeclareStringOption[utf8]{xindyCodepage}
```
- Opt pdftotextEnc The option `pdftotextEnc` sets the encoding used by *pdftotext*. This is passed to *pdftotext* using its `-enc` option, and is used when converting L^AT_EX PDF output with HTML tags into a plain-text file with HTML tags.
 Default: `UTF-8`
- ```
807 \DeclareStringOption[UTF-8]{pdftotextEnc}
```
- Opt lwarpmk Tells *lwarp* to generate a local copy of *lwarpmk* called `lwarpmk.lua`. Useful for archiving for future use. This file may be made executable and acts just like *lwarpmk*.  
 If *lwarpmk* option, creates a local copy of `lwarpmk.lua`:

```

808 \newbool{LWR@creatinglwarpmk}
809 \boolfalse{LWR@creatinglwarpmk}
810
811 \DeclareVoidOption{lwarpmk}{
812 \PackageInfo{lwarp}{Using option 'lwarpmk'}
813 \booltrue{LWR@creatinglwarpmk}
814 }

```

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.

```

815 \DeclareVoidOption{OSWindows}{
816 \PackageInfo{lwarp}{Using option 'OSWindows'}
817 \LWR@setOSWindows
818 }

```

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.

```

819 \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.

```

820 \DeclareStringOption[]{HTMLFilename}

```

Opt PrintLatexCmd The shell commands to use to compile the print document.  
Default: `<automatic>`

```

821 \DeclareStringOption[]{PrintLatexCmd}

```

Opt HTMLLatexCmd The shell commands to use to compile the HTML document.  
Default: `<automatic>`

```

822 \DeclareStringOption[]{HTMLLatexCmd}

```

Opt PrintIndexCmd The shell commands to use to compile the print indexes.  
Default: `<empty>`

```

823 \DeclareStringOption[]{PrintIndexCmd}

```

Opt HTMLIndexCmd The shell commands to use to compile the HTML indexes.  
Default: `<empty>`

```

824 \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*.

```

825 \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.

```
826 \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.

```
827 \DeclareBoolOption[false]{xindy}
```

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`

```
828 \DeclareStringOption[makeglossaries]{GlossaryCmd}
```

Opt `latexmk` Option `latexmk` tells **lwarpmk** to use **latexmk** when compiling documents.

```
829 \DeclareBoolOption[false]{latexmk}
```

Opt `dvips` Option `dvips` tells **lwarpmk** to use **dvips** when compiling DVI *latex* documents.

```
830 \DeclareBoolOption[false]{dvips}
```

Opt `dvipdfm` Option `dvipdfm` tells **lwarpmk** to use **dvipdfm** when compiling DVI *latex* documents.

```
831 \DeclareBoolOption[false]{dvipdfm}
```

Opt `dvipdfmx` Option `dvipdfmx` tells **lwarpmk** to use **dvipdfmx** when compiling DVI *latex* documents.

```
832 \DeclareBoolOption[false]{dvipdfmx}
```

**Execute options** Execute the package options, with the defaults which have been set just above:

```
833 \ProcessKeyvalOptions*\relax
```

## 28.1 Additional options support

Assign the `\BaseJobname` if the user hasn't provided one:

```
834 \providecommand*\BaseJobname{\LWR@BaseJobname}
```

Defaults unless already over-ridden by the user:

```
835 \ifcsemtyp{LWR@HomeHTMLFilename}{
836 \newcommand*\HomeHTMLFilename{\BaseJobname}
837 }{
838 \csedef{HomeHTMLFilename}{\LWR@HomeHTMLFilename}
```

```

839 }
840
841 \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.

```

842 \newcommand*{\LWR@sanitized}{}

```

`\LWR@sanitize`  $\langle text \rangle$

Sanitizes the text and returns the result in `\LWR@sanitized`.

```

843 \newcommand*{\LWR@sanitize}[1]{%
844 \edef\LWR@sanitized{#1}%
845 \edef\LWR@sanitized{\detokenize\expandafter{\LWR@sanitized}}%
846 }

```

Sanitize some string options to neutralize underscores.

```

847 \LWR@sanitize{\LWR@BaseJobname}
848 \edef\LWR@BaseJobname{\LWR@sanitized}
849
850 \LWR@sanitize{\LWR@ImagesDirectory}
851 \edef\LWR@ImagesDirectory{\LWR@sanitized}
852
853 \LWR@sanitize{\LWR@ImagesName}
854 \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.

```

855 \ifdefempty{\LWR@PrintIndexCmd}{
856 \renewcommand{\LWR@PrintIndexCmd}{%
857 makeindex -s \LWR@makeindexStyle \space \jobname.idx%
858 }
859 \ifbool{\LWR@xindy}{
860 \renewcommand{\LWR@PrintIndexCmd}{%
861 xindy
862 -M \LWR@xindyStyle \space
863 -L \LWR@xindyLanguage \space
864 -C \LWR@xindyCodepage \space
865 \jobname.idx%
866 }
867 }{}
868 }{}
869
870 \ifdefempty{\LWR@HTMLIndexCmd}{
871 \renewcommand{\LWR@HTMLIndexCmd}{%

```

```

872 makeindex -s \LWR@makeindexStyle \space \jobname_html.idx%
873 }
874 \ifbool{LWR@xindy}{
875 \renewcommand{\LWR@HTMLIndexCmd}{%
876 xindy
877 -M \LWR@xindyStyle \space
878 -L \LWR@xindyLanguage \space
879 -C \LWR@xindyCodepage \space
880 \jobname_html.idx%
881 }
882 }{}
883 }{}
884
885 \ifdefempty{\LWR@LatexmkIndexCmd}{
886 \renewcommand{\LWR@LatexmkIndexCmd}{%
887 makeindex -s \LWR@makeindexStyle%
888 }
889 \ifbool{LWR@xindy}{
890 \renewcommand{\LWR@LatexmkIndexCmd}{%
891 xindy
892 -M \LWR@xindyStyle \space
893 -L \LWR@xindyLanguage \space
894 -C \LWR@xindyCodepage%
895 }
896 }{}
897 }{}

```

## 28.2 Conditional compilation

`\warpprintonly` {<contents>}

Only process the contents if producing printed output.

```
898 \newcommand{\warpprintonly}[1]{\ifbool{warpingprint}{#1}{}}
```

`\warpHTMLonly` {<contents>}

Only process the contents if producing HTML output.

```
899 \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.

```
900 \RequirePackage{comment}
```

Use `comment_print.cut` for print mode, and `comment_html.cut` for HTML mode. This helps *latexmk* to more reliably know whether to recompile.

```

901 \ifbool{warpingHTML}{
902 \def\DefaultCutFileName{\def\CommentCutFile{comment_html.cut}}
903 }{}
904
905 \ifbool{warpingprint}{
906 \def\DefaultCutFileName{\def\CommentCutFile{comment_print.cut}}
907 }{}

```

Env `warpall` Anything in the `warpall` environment will be generated for print or HTML outputs.

```

908 \includecomment{warpall}

```

Env `warpprint` Anything in the `warpprint` environment will be generated for print output only.

Env `warpHTML`

For HTML output:

```

909 \ifbool{warpingHTML}
910 {\includecomment{warpHTML}}
911 {\excludecomment{warpHTML}}%

912 \ifbool{warpingprint}
913 {\includecomment{warpprint}}
914 {\excludecomment{warpprint}}

```

Optionally generate a local copy of *lwarpmk*. Default to no.

```

915 \ifbool{LWR@creatinglwarpmk}
916 {\includecomment{LWR@createlwarpmk}}
917 {\excludecomment{LWR@createlwarpmk}}

```

## 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: 918 \begin{warpHTML}

Load `fontspec` if necessary:

```

919 \ifxetexorluatex
920 \@ifpackageloaded{fontspec}{}{
921 \usepackage[no-math]{fontspec}
922 }

```

The monospaced font is used for HTML tags, so turn off its TeX ligatures and common ligatures:

```

923 \defaultfontfeatures[\rmfamily]{Ligatures={NoCommon,TeX}}

```

```

924 \defaultfontfeatures[\sffamily]{Ligatures={NoCommon,TeX}}
925 \defaultfontfeatures[\ttfamily]{Ligatures=NoCommon}
926 \else

```

*pdf<sub>l</sub>atex* only: Only pre-loaded if *pdf<sub>l</sub>atex* is being used.

Pkg microtype

**ligatures** Older browsers don't display ligatures. Turn off letter ligatures, keeping L<sup>A</sup>T<sub>E</sub>X dash and quote ligatures, which may fail on older browsers but at least won't corrupt written words.

```

927 \RequirePackage {microtype}
928
929 \microtypesetup{
930 protrusion=false,
931 expansion=false,
932 tracking=false,
933 kerning=false,
934 spacing=false}
935
936 \DisableLigatures[f,q,t,T,Q]{encoding = *,family = *}
937 \fi
938 \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: 939 \begin{warpHTML}

```

940 \RequirePackage{geometry}

```

Avoid class and option conflict by changing settings after package load:

```

941 \geometry{
942 paperheight=190in,%
943 paperwidth=20in,%
944 left=2in,right=6in,%
945 top=1in,bottom=1in,%
946 }

```

ltjtarticle and other classes may require these to be reset by lwarp:

```
947 \setlength{\textheight}{0.8\paperheight}
948 \setlength{\textwidth}{0.7\paperwidth}
949
950 \@twosidefalse
951 \@mparswitchfalse
952
953 \end{warpHTML}
```

**for HTML & PRINT:** 954 \begin{warpall}

Pkg xparse

L<sup>A</sup>T<sub>E</sub>X3 command argument parsing

```
955 \RequirePackage{xparse}
```

Pkg calc

```
956 \RequirePackage{calc}
```

```
957 \end{warpall}
```

**for HTML output:** 958 \begin{warpHTML}

Pkg expl3

L<sup>A</sup>T<sub>E</sub>X3 programming

```
959 \RequirePackage{expl3}
```

Pkg gettitlestring

Used to emulate \nameref.

```
960 \RequirePackage{gettitlestring}
```

Pkg everyhook

everyhook is used to patch paragraph handling.

```
961 \@ifundefined{bxjs@everypar}{}{\let\everypar\bxjs@everypar}
962
963 \RequirePackage{everyhook}
964 \end{warpHTML}
```

**for HTML & PRINT:** 965 \begin{warpall}

Pkg filecontents

Used to write helper files, done in print mode.

Patched 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>

```

966 \RequirePackage{filecontents}
967
968 \@ifpackagelater{filecontents}{2011/10/09}%
969 {}
970 {
971 \newwrite\fcwrite
972 \let\LWR@origfilec@ntents\filec@ntents
973 \def\filec@ntents{\def\chardef##1\write{\let\reservedc\fcwrite}\LWR@origfilec@ntents}
974 }

975 \end{warpall}

```

**for HTML output:** 976 \begin{warpHTML}

Pkg xifthen

```

977 \RequirePackage{xifthen}

```

Pkg verbatim

```

978 \RequirePackage{verbatim}

```

Pkg refcount

Provides `\setcounterref`, `\setcounterpageref`, etc.

```

979 \RequirePackage{refcount}

```

Pkg newfloat

```

980 \RequirePackage{newfloat}

```

```

981 \end{warpHTML}

```

**for HTML & PRINT:** 982 \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

```

983 \RequirePackage{xstring}[2019/02/01]

```

Pkg environ Used to encapsulate math environments for re-use in HTML `<alt>` text.

```

984 \RequirePackage{environ}

```

```

985 \end{warpall}

```

**for HTML output:** 986 \begin{warpHTML}

Pkg printlen Used to convert lengths for image width/height options.

```
987 \RequirePackage{printlen}
```

\LWR@printlength  $\{\langle length \rangle\}$

Prints a length using a locally-controlled unit and space. Rounding is used unless the length is small.

```
988 \newrobustcmd*\LWR@printlength[1]{%
989 \begingroup%
990 \uselengthunit{PT}%
991 \renewcommand*\unitspace}{}%
992 \ifdimless{#1}{10pt}{%
993 \printlength{#1}%
994 }{%
995 \rndprintlength{#1}%
996 }%
997 \endgroup%
998 }
```

```
999 \end{warpHTML}
```

**for PRINT output:** 1000 \begin{warpprint}

Pkg varwidth Used for print-mode lateximage.

```
1001 \RequirePackage{varwidth}
```

```
1002 \end{warpprint}
```

## 30 Loading packages

**for HTML & PRINT:** 1003 \begin{warppall}

Remember the original \RequirePackage:

```
1004 \LetLtxMacro\LWR@origRequirePackage\RequirePackage
```

\LWR@requirepackagenames Stores the list of required package names.

```
1005 \newcommand*\LWR@requirepackagenames{}
```

\LWR@parsedrequirepackagenames Stores the parsed list of required package names after spaces are removed and lwarp- is prepended.

```
1006 \newcommand*\LWR@parsedrequirepackagenames{}
```

`\LWR@nullifycomment` Remove the preexisting comment environment. Certain packages define it for their own use.

```
1007 \newcommand*\LWR@nullifycomment{%
1008 \PackageInfo{lwarp}%
1009 {Nullifying the comment environment before loading \LWR@strresulttwo,}%
1010 \let\comment\relax%
1011 \let\endcomment\relax%
1012 }
```

`\LWR@findword` [*<1: separator>*] [*<2: list>*] [*<3: index>*] [*<4: destination>*]

Note that argument 4 is passed directly to `\StrBetween`.

```
1013 \newcommand*\LWR@findword[3][,]{%
1014 \StrBetween[#3,\numexpr#3+1]{#1#2#1}{#1}{#1}%
1015 }
```

`\LWR@checkloadfilename` {*<filename>*} Checks if this filename should be loaded after `lwarp`, or never at all.

The following should never be loaded:

```
1016 \newcommand*\LWR@checkloadfilename[1]{%
1017 \LWR@checkloadnever{#1}{ae}{latinmodern}
1018 \LWR@checkloadnever{#1}{aecc}{latinmodern}
1019 \LWR@checkloadnever{#1}{alg}{algorithm2e, algorithmicx}
1020 \LWR@checkloadnever{#1}{algorithmic}{algorithm2e, algorithmicx}
1021 \LWR@checkloadnever{#1}{bitfield}{bytefield}
1022 \LWR@checkloadnever{#1}{boxedminipage}{boxedminipage2e}
1023 \LWR@checkloadnever{#1}{caption2}{caption}
1024 \LWR@checkloadnever{#1}{ccaption}{caption}
1025 \LWR@checkloadnever{#1}{colortab}{colortbl}
1026 \LWR@checkloadnever{#1}{doublespace}{setspace}
1027 \LWR@checkloadnever{#1}{epsf}{graphicx}
1028 \LWR@checkloadnever{#1}{fancyheadings}{fancyhdr}
1029 \LWR@checkloadnever{#1}{fncylab}{cleveref}
1030 \LWR@checkloadnever{#1}{glossary}{glossaries}
1031 \LWR@checkloadnever{#1}{hyper}{hyperref}
1032 \LWR@checkloadnever{#1}{newthm}{ntheorem}
1033 \LWR@checkloadnever{#1}{pdfcprot}{microtype}
1034 \LWR@checkloadnever{#1}{picinpar}{floatflt, wrapfig}
1035 \LWR@checkloadnever{#1}{picins}{floatflt, wrapfig}
1036 \LWR@checkloadnever{#1}{rplain}{fancyhdr}
1037 \LWR@checkloadnever{#1}{si}{siunitx}
1038 \LWR@checkloadnever{#1}{sistyle}{siunitx}
1039 \LWR@checkloadnever{#1}{t1enc}{fontenc, inputenc, inputenx}
1040 \LWR@checkloadnever{#1}{ucs}{inputenc, inputencx}
1041 \LWR@checkloadnever{#1}{wasysym}{textcomp, amssymb, amsfonts, mnsymbol, fdsymbol}
```

The following should only be loaded before `lwarp`:

```
1042 \LWR@checkloadbefore{#1}{ctex}
1043 \LWR@checkloadbefore{#1}{fontspec}
1044 \LWR@checkloadbefore{#1}{inputenc}
```

```

1045 \LWR@checkloadbefore{#1}{inputenx}
1046 \LWR@checkloadbefore{#1}{nfssect-cfr}
1047 \LWR@checkloadbefore{#1}{fontaxes}
1048 \LWR@checkloadbefore{#1}{kotex}
1049 \LWR@checkloadbefore{#1}{luatexja}
1050 \LWR@checkloadbefore{#1}{luatexja-fontspec}
1051 \LWR@checkloadbefore{#1}{luatexko}
1052 \LWR@checkloadbefore{#1}{morewrites}
1053 \LWR@checkloadbefore{#1}{newclude}
1054 \LWR@checkloadbefore{#1}{newunicodechar}
1055 \LWR@checkloadbefore{#1}{plext}
1056 \LWR@checkloadbefore{#1}{xeCJK}
1057 \LWR@checkloadbefore{#1}{xetexko}
1058 \LWR@checkloadbefore{#1}{zxjatype}
1059 }

```

`\LWR@lookforpackagename` `{\index}`

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.

```
1060 \newcommand*{\LWR@lookforpackagename}[1]{%
```

Find the index'th package name from the list:

```
1061 \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.

```
1062 \StrSubstitute[100]{\LWR@strresult}{ }{ }[\LWR@strresulttwo]%
```

See if the package name was found:

```

1063 \IfStrEq{\LWR@strresulttwo}{}%
1064 {}% no filename
1065 {% 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.

```

1066 \ifdefstring{\LWR@strresulttwo}{easyReview}{\LWR@nullifycomment}{}%
1067 \ifdefstring{\LWR@strresulttwo}{changes}{\LWR@nullifycomment}{}%

```

If HTML, check if the package should be loaded before lwarp, or never at all:

```
1068 \ifbool{warpingHTML}{\LWR@checkloadfilename{\LWR@strresulttwo}}{%
```

If HTML, and if found, and if an lwarp-equivalent name exists, use lwarp-\* instead.

```

1069 \ifboolexpr{
1070 bool{warpingHTML} and
1071 test{\IfFileExists{lwarp-\LWR@strresulttwo.sty}}
1072 }%
1073 {% lwarp-* file found
1074 \ifdefvoid{\LWR@parsedrequirepackagenames}{%
1075 \edef\LWR@parsedrequirepackagenames{lwarp-\LWR@strresulttwo}%
1076 }{%
1077 \edef\LWR@parsedrequirepackagenames{%
1078 \LWR@parsedrequirepackagenames,lwarp-\LWR@strresulttwo%
1079 }%
1080 }%
1081 }%
1082 {%

```

Otherwise, use the current package name.

```

1083 \ifdefvoid{\LWR@parsedrequirepackagenames}{%
1084 \edef\LWR@parsedrequirepackagenames{\LWR@strresulttwo}%
1085 }{%
1086 \edef\LWR@parsedrequirepackagenames{%
1087 \LWR@parsedrequirepackagenames,\LWR@strresulttwo%
1088 }%
1089 }%
1090 }% no lwarp-* file
1091 }% yes filename
1092 }

```

`\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<sup>A</sup>T<sub>E</sub>X version.

```

1093 \RenewDocumentCommand{\RequirePackage}{o m o}{%

```

Redirect up to twenty names:<sup>16</sup>

```

1094 \renewcommand*{\LWR@requirepackagenames}{#2}%
1095 \renewcommand*{\LWR@parsedrequirepackagenames}{}%
1096 \LWR@lookforpackagename{1}%
1097 \LWR@lookforpackagename{2}%
1098 \LWR@lookforpackagename{3}%
1099 \LWR@lookforpackagename{4}%
1100 \LWR@lookforpackagename{5}%
1101 \LWR@lookforpackagename{6}%
1102 \LWR@lookforpackagename{7}%
1103 \LWR@lookforpackagename{8}%
1104 \LWR@lookforpackagename{9}%
1105 \LWR@lookforpackagename{10}%
1106 \LWR@lookforpackagename{11}%
1107 \LWR@lookforpackagename{12}%
1108 \LWR@lookforpackagename{13}%

```

<sup>16</sup>This was originally nine names, but then I came across a package which used twelve...

```

1109 \LWR@lookforpackagename{14}%
1110 \LWR@lookforpackagename{15}%
1111 \LWR@lookforpackagename{16}%
1112 \LWR@lookforpackagename{17}%
1113 \LWR@lookforpackagename{18}%
1114 \LWR@lookforpackagename{19}%
1115 \LWR@lookforpackagename{20}%

```

\RequirePackage depending on the options and version:

```

1116 \IfValueTF{#1}%
1117 {% options given
1118 \IfValueTF{#3}% version given?
1119 {\LWR@origRequirePackage[#1]{\LWR@parsedrequirepackagenames}[#3]}%
1120 {\LWR@origRequirePackage[#1]{\LWR@parsedrequirepackagenames}}%
1121 }%
1122 {% no options given
1123 \IfValueTF{#3}% version given?
1124 {\LWR@origRequirePackage{\LWR@parsedrequirepackagenames}[#3]}%
1125 {\LWR@origRequirePackage{\LWR@parsedrequirepackagenames}}%
1126 }%
1127 }
1128 \LetLtxMacro\usepackage\RequirePackage

1129 \end{warpall}

```

**for HTML output:** 1130 \begin{warpHTML}

\LWR@ProvidesPackagePass {<pkgrname>} [<version>]

Uses the original package, including options.

```

1131 \NewDocumentCommand{\LWR@ProvidesPackagePass}{m o}{
1132 \PackageInfo{lwarp}{%
1133 Using package ‘#1’ and adding lwarp modifications,\MessageBreak
1134 including options,}%
1135 \IfValueTF{#2}
1136 {\ProvidesPackage{lwarp-#1}[#2]}
1137 {\ProvidesPackage{lwarp-#1}}
1138 \DeclareOption*{\PassOptionsToPackage{\CurrentOption}{#1}}
1139 \ProcessOptions\relax
1140 \IfValueTF{#2}
1141 {\LWR@origRequirePackage{#1}[#2]}
1142 {\LWR@origRequirePackage{#1}}

```

In some cases, the following seems to be required to avoid an “unknown option” error, such as when loading xcolor with options.

```

1143 \DeclareOption*{}%
1144 \ProcessOptions\relax
1145 }

```

\LWR@ProvidesPackageDrop {<pkgrname>} [<version>]

Ignores the original package and uses lwarp’s version instead. Drops/discards all options.

```
1146 \NewDocumentCommand{\LWR@ProvidesPackageDrop}{m o}{
1147 \PackageInfo{lwarp}{%
1148 Replacing package ‘#1’ with the lwarp version,\MessageBreak
1149 and discarding options,%
1150 }%
1151 \IfValueTF{#2}
1152 {\ProvidesPackage{lwarp-#1}[#2]}
1153 {\ProvidesPackage{lwarp-#1}}
```

Ignore all options.

```
1154 \DeclareOption*{}
```

Nullifies then processes the options. Seems to be required when options contain curly braces, which were causing “Missing \begin{document}”.

```
1155 % \ProcessOptions\relax% original LaTeX code
1156 \let\ds@empty% from the original \ProcessOptions
1157 \edef\@curroptions{}% lwarp modification to \ProcessOptions
1158 \@process@ptions\relax% from the original \ProcessOptions
1159 }

1160 \end{warpHTML}
```

## 31 Additional required packages

**for HTML output:** 1161 \begin{warpHTML}

Pkg caption

```
1162 \LWR@origRequirePackage{caption}
1163 \AtBeginDocument{\RequirePackage{lwarp-caption}}%

1164 \end{warpHTML}
```

## 32 File handles

Defines file handles for writes.

**for HTML & PRINT:** 1165 \begin{warppall}

\LWR@quickfile For quick temporary use only. This is reused in several places.

```
1166 \newwrite\LWR@quickfile%
```

```
1167 \end{warpall}
```

**for HTML output:** 1168 \begin{warpHTML}

\LWR@lateximagesfile For <project>-images.txt:

```
1169 \newwrite\LWR@lateximagesfile
```

```
1170 \end{warpHTML}
```

### 33 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<sup>A</sup>T<sub>E</sub>X.

**for HTML output:** 1171 \begin{warpHTML}

\@include {<filename>}} Modified to load \_html\_inc files.

(Below, \clearpage caused missing text, and was changed to \newpage.)

```
1172 \def\@include#1 {%
1173 \immediate\openout\LWR@quickfile #1_html_inc.tex% lwarp
1174 \immediate\write\LWR@quickfile{\string\input{#1.tex}}% lwarp
1175 \immediate\closeout\LWR@quickfile% lwarp
1176 \LWR@orignewpage% changed from clearpage
1177 \if@files
1178 \immediate\write\@mainaux{\string\@input{#1_html_inc.aux}}% changed
1179 \fi
1180 \@tempswatrue
1181 \if@partsw
1182 \@tempswafalse
1183 \edef\reserved@a{#1}%
1184 \@for\reserved@a:=\@partlist\do
1185 {\ifx\reserved@a\reserved@b\@tempswatrue\fi}%
1186 \fi
1187 \if@tempswa
1188 \let\@auxout\@partaux
1189 \if@files
1190 \immediate\openout\@partaux #1_html_inc.aux % changed
1191 \immediate\write\@partaux{\relax}%
1192 \fi
```

```

1193 \input@{#1_html_inc.tex}% changed
1194 \LWR@orignewpage% changed from clearpage
1195 \writeckpt{#1}%
1196 \if@filesw
1197 \immediate\closeout\@partaux
1198 \fi
1199 \else
1200 \deadcycles\z@
1201 \@nameuse{cp@#1}%
1202 \fi
1203 \let\@auxout\@mainaux%
1204 }

1205 \end{warpHTML}

```

## 34 Copying a file

for HTML output: 1206 \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.

```

1207 \newwrite\LWR@copyoutfile % open the file to write to
1208 \newread\LWR@copyinfile % open the file to read from
1209
1210 \newcommand*{\LWR@copyfile}[2]{%
1211 \LWR@traceinfo{LWR@copyfile: copying #1 to #2}
1212
1213 \immediate\openout\LWR@copyoutfile=#2
1214 \openin\LWR@copyinfile=#1
1215 \begingroup\endlinechar=-1
1216 \makeatletter
1217
1218 \LWR@traceinfo{LWR@copyfile: about to loop}
1219
1220 \loop\unless\ifeof\LWR@copyinfile
1221 \LWR@traceinfo{LWR@copyfile: one line}
1222 \read\LWR@copyinfile to\LWR@fileline % Read one line and store it into \LWR@fileline
1223 % \LWR@fileline\par % print the content into the pdf
1224 % print the content:
1225 \immediate\write\LWR@copyoutfile{\unexpanded\expandafter{\LWR@fileline}}%
1226 \repeat
1227 \immediate\closeout\LWR@copyoutfile
1228 \LWR@traceinfo{LWR@copyfile: done}
1229 \endgroup
1230 }

1231 \end{warpHTML}

```

## 35 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:** 1232 \begin{warpall}

Bool LWR@tracinglwarp True if tracing is turned on.

```
1233 \newbool{LWR@tracinglwarp}
```

\tracinglwarp Turns on the debug tracing messages.

```
1234 \newcommand{\tracinglwarp}{\booltrue{LWR@tracinglwarp}}
```

\LWR@traceinfo *{<text>}* If tracing is turned on, writes the text to the .log file.

```
1235 \newcommand{\LWR@traceinfo}[1]{%
1236 \ifbool{LWR@tracinglwarp}%
1237 {%
1238 \typeout{*** lwarp: #1}%
1239 }%
1240 {}%
1241 }
```

Bool HTMLDebugComments Add comments in HTML about closing `<div>`s, sections, etc.

Default: false

```
1242 \newbool{HTMLDebugComments}
1243 \boolfalse{HTMLDebugComments}
```

If \tracinglwarp, show where preamble hooks occur:

```
1244 \AfterEndPreamble{
1245 \LWR@traceinfo{AfterEndPreamble}
1246 }
1247
1248 \AtBeginDocument{
1249 \LWR@traceinfo{AtBeginDocument}
1250 }
```

```
1251 \end{warpall}
```

## 36 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  $\text{\LaTeX}$  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 copies of the print versions may also be used by the HTML versions, such as when the HTML version merely encloses the print version inside HTML tags.

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`.

**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.

**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}{\endLWR@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: 1252 `\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”.

```
1253 \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.

```
1254 \newcommand*{\LWR@formatted}[1]{%
1255 \ifcsundef{\LWR@print@#1}{%
1256 \expandafter\LetLtxMacro\csname LWR@print@#1\expandafter\endcsname%
1257 \csname#1\endcsname%
1258 }{}%
1259 \ifcsundef{#1}{%
```

```

1260 \expandafter\newrobustcmd\csname #1\endcsname{%
1261 \@nameuse{LWR@LWR@formatting @#1}%
1262 }%
1263 }{%
1264 \expandafter\renewrobustcmd\csname #1\endcsname{%
1265 \@nameuse{LWR@LWR@formatting @#1}%
1266 }%
1267 }%
1268 }

```

`\LWR@expandableformatted` {*<macroname>*} No backslash in the macro name.

An expandable version of `\LWR@formatted`.

```

1269 \newcommand*{\LWR@expandableformatted}[1]{%
1270 \ifcsundef{LWR@print@#1}{%
1271 \expandafter\LetLtxMacro\csname LWR@print@#1\expandafter\endcsname%
1272 \csname#1\endcsname%
1273 }{%
1274 \ifcsundef{#1}{%
1275 \expandafter\newcommand\csname #1\endcsname{%
1276 \@nameuse{LWR@LWR@formatting @#1}%
1277 }%
1278 }{%
1279 \expandafter\renewcommand\csname #1\endcsname{%
1280 \@nameuse{LWR@LWR@formatting @#1}%
1281 }%
1282 }%
1283 }

```

`\LWR@formattedenv` {*<environmentname>*}

If not yet defined, defines the environment `LWR@print@<name>` as the original `print-mode <name>`. Also redefines the environment `<name>` to use environment `LWR@<format>@<name>`, where `<format>` is set by `\LWR@formatting`, and is `print` or `HTML`.

```

1284 \newcommand*{\LWR@formattedenv}[1]{%
1285 \ifcsundef{LWR@print@#1}{%
1286 \expandafter\LetLtxMacro\csname LWR@print@#1\expandafter\endcsname%
1287 \csname#1\endcsname%
1288 \csletcs{endLWR@print@#1}{end#1}%
1289 }{%
1290 \DeclareDocumentEnvironment{#1}{}%
1291 {%
1292 \@nameuse{LWR@LWR@formatting @#1}%
1293 }%
1294 {%
1295 \@nameuse{endLWR@LWR@formatting @#1}%
1296 }%
1297 }

```

`\LWR@expandableformattedenv` {*<environmentname>*}

An expandable version of LWR@formattedenv.

```

1298 \newcommand*{\LWR@expandableformattedenv}[1]{%
1299 \ifcsundef\LWR@print@#1}{%
1300 \expandafter\LetLtxMacro\csname LWR@print@#1\expandafter\endcsname%
1301 \csname#1\endcsname%
1302 \csletcs{endLWR@print@#1}{end#1}%
1303 }{%
1304 \DeclareExpandableDocumentEnvironment{#1}{}%
1305 {%
1306 \@nameuse{LWR@\LWR@formatting @#1}%
1307 }%
1308 {%
1309 \@nameuse{endLWR@\LWR@formatting @#1}%
1310 }%
1311 }

1312 \end{warpHTML}

```

## 37 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:** 1313 \begin{warpall}

### 37.1 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*

```

1314 \newbool{FormatEPUB}
1315 \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*

```

1316 \newbool{FormatWP}
1317 \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.<sup>17</sup>

```

1318 \newbool{WPMarkFloats}
1319 \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.

```

1320 \newbool{WPMarkMinipages}
1321 \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.*

```

1322 \newbool{WPMarkTOC}
1323 \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.*

```

1324 \newbool{WPMarkLOFT}
1325 \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.

---

<sup>17</sup>Perhaps some day word processors will have HTML import options for identifying <figure> and caption tags for figures and tables.

```
1326 \newbool{WPMarkMath}
1327 \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 8 on page 167.

```
1328 \newbool{WPTitleHeading}
1329 \boolfalse{WPTitleHeading}
```

```
1330 \end{warpall}
```

## 37.2 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: 1331 \begin{warpHTML}

```
1332 \AtBeginDocument{
1333 \ifbool{FormatWP}{
1334 \ifundefined{chapter}{
1335 \ifbool{WPTitleHeading}{% part and section starting at h2
1336 \renewcommand*{\LWR@tagtitle}{h1}
1337 \renewcommand*{\LWR@tagtitleend}{/h1}
1338 \renewcommand*{\LWR@tagpart}{h2}
1339 \renewcommand*{\LWR@tagpartend}{/h2}
1340 \renewcommand*{\LWR@tagsection}{h3}
1341 \renewcommand*{\LWR@tagsectionend}{/h3}
1342 \renewcommand*{\LWR@tagsubsection}{h4}
1343 \renewcommand*{\LWR@tagsubsectionend}{/h4}
1344 \renewcommand*{\LWR@tagsubsubsection}{h5}
1345 \renewcommand*{\LWR@tagsubsubsectionend}{/h5}
1346 \renewcommand*{\LWR@tagparagraph}{h6}
1347 \renewcommand*{\LWR@tagparagraphend}{/h6}
1348 \renewcommand*{\LWR@tagsubparagraph}{span class="subparagraph"}
1349 \renewcommand*{\LWR@tagsubparagraphend}{/span}
1350 }% WPTitleHeading
1351 }{% not WPTitleHeading, part and section starting at h1
1352 \renewcommand*{\LWR@tagtitle}{div class="title"}
1353 \renewcommand*{\LWR@tagtitleend}{/div}
1354 \renewcommand*{\LWR@tagpart}{h1}
1355 \renewcommand*{\LWR@tagpartend}{/h1}
1356 \renewcommand*{\LWR@tagsection}{h2}
1357 \renewcommand*{\LWR@tagsectionend}{/h2}
1358 \renewcommand*{\LWR@tagsubsection}{h3}
1359 \renewcommand*{\LWR@tagsubsectionend}{/h3}
```

```

1360 \renewcommand*\LWR@tagssubsubsection}{h4}
1361 \renewcommand*\LWR@tagssubsubsectionend}{/h4}
1362 \renewcommand*\LWR@tagparagraph}{h5}
1363 \renewcommand*\LWR@tagparagraphend}{/h5}
1364 \renewcommand*\LWR@tagsubparagraph}{h6}
1365 \renewcommand*\LWR@tagsubparagraphend}{/h6}
1366 }% not WPTitleHeading
1367 }% chapter undefined
1368 {% chapter defined
1369 \ifbool{WPTitleHeading}{%
1370 {% not WPTitleHeading, part and chapter starting at h1
1371 \renewcommand*\LWR@tagtitle}{div class="title"}
1372 \renewcommand*\LWR@tagtitleend}{/div}
1373 \renewcommand*\LWR@tagpart}{h1}
1374 \renewcommand*\LWR@tagpartend}{/h1}
1375 \renewcommand*\LWR@tagchapter}{h2}
1376 \renewcommand*\LWR@tagchapterend}{/h2}
1377 \renewcommand*\LWR@tagsection}{h3}
1378 \renewcommand*\LWR@tagsectionend}{/h3}
1379 \renewcommand*\LWR@tagsubsection}{h4}
1380 \renewcommand*\LWR@tagsubsectionend}{/h4}
1381 \renewcommand*\LWR@tagssubsubsection}{h5}
1382 \renewcommand*\LWR@tagssubsubsectionend}{/h5}
1383 \renewcommand*\LWR@tagparagraph}{h6}
1384 \renewcommand*\LWR@tagparagraphend}{/h6}
1385 \renewcommand*\LWR@tagsubparagraph}{span class="subparagraph"}
1386 \renewcommand*\LWR@tagsubparagraphend}{/span}
1387 }% not WPTitleHeading
1388 }% chapter defined
1389 }{}% FormatWP
1390 }% AtBeginDocument

1391 \end{warpHTML}

```

## 38 Remembering original formatting macros

for HTML output: 1392 \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.

```

1393 \chardef\LWR@origpound='\#

1394 \let\LWR@origcomma\,
1395 \let\LWR@origthinspace\thinspace
1396 \let\LWR@orignegthinspace\negthinspace
1397 \let\LWR@origtilde~
1398 \let\LWR@origenskip\enskip

```

```
1399 \let\LWR@origquad\quad
1400 \let\LWR@origqquad\qquad
1401 \let\LWR@origofil\hfil
1402 \let\LWR@orighss\hss
1403 \let\LWR@origllap\llap
1404 \let\LWR@origrlap\rlap
1405 \let\LWR@origfilneg\hfilneg
1406 \let\LWR@origspace\hspace
1407
1408 \let\LWR@origrule\rule
1409
1410 \let\LWR@origmedskip\medskip
1411 \let\LWR@origbigskip\bigskip
1412
1413 \let\LWR@origtextellipsis\textellipsis
1414 \let\LWR@orig@textquotedbl\textquotedbl
1415
1416 \LetLtxMacro\LWR@origttfamily\ttfamily
1417
1418 \LetLtxMacro\LWR@origem\em
1419 \LetLtxMacro\LWR@orignormalfont\normalfont
1420
1421 \let\LWR@origonecolumn\onecolumn
1422
1423 \let\LWR@origsp\sp
1424 \let\LWR@origsb\sb
1425 \LetLtxMacro\LWR@origtextsuperscript\textsuperscript
1426 \LetLtxMacro\LWR@orig@textsuperscript\@textsuperscript
1427
1428 \AtBeginDocument{
1429 \LetLtxMacro\LWR@origtextsubscript\textsubscript
1430 \LetLtxMacro\LWR@orig@textsubscript\@textsubscript
1431 }
1432
1433 \LetLtxMacro\LWR@origunderline\underline

1434 \let\LWR@orignewpage\newpage
1435
1436 \let\LWR@origpagestyle\pagestyle
1437 \let\LWR@origthispagestyle\thispagestyle
1438 \LetLtxMacro\LWR@origpagenumbering\pagenumbering
1439
1440 \let\LWR@orignewline\newline
1441
1442
1443 \AtBeginDocument{% in case packages change definition
1444 \let\LWR@orig@trivlist\@trivlist
1445 \let\LWR@origtrivlist\trivlist
1446 \let\LWR@origendtrivlist\endtrivlist
1447 \LetLtxMacro\LWR@origitem\item
1448 \LetLtxMacro\LWR@origitemize\itemize
1449 \LetLtxMacro\LWR@endorigitemize\enditemize
1450 \LetLtxMacro\LWR@origenumerate\enumerate
1451 \LetLtxMacro\LWR@endorigenumerate\endenumerate
1452 \LetLtxMacro\LWR@origdescription\description
```

```

1453 \LetLtxMacro\LWR@endorigdescription\enddescription
1454 \let\LWR@orig@mklab\@mklab
1455 \let\LWR@origmakelabel\makelabel
1456 \let\LWR@orig@donoparitem\@donoparitem
1457 \LetLtxMacro\LWR@orig@item\@item
1458 \let\LWR@orig@nbitem\@nbitem
1459 }
1460
1461 \let\LWR@origpar\par
1462
1463 \LetLtxMacro\LWR@origfootnote\footnote
1464 \let\LWR@orig@mpfootnotetext\@mpfootnotetext
1465
1466
1467 \AtBeginDocument{% in case packages change definition
1468 \LetLtxMacro\LWR@orighline\hline%
1469 \LetLtxMacro\LWR@origcline\cline%
1470 }

1471 \end{warpHTML}

```

## 39 Accents

Native  $\text{\LaTeX}$  accents such as `\`` will work, but many more kinds of accents are available when using Unicode-aware  $\text{\XeLaTeX}$  and  $\text{\LuaLaTeX}$ .

for HTML output: 1472 \begin{warpHTML}

Without `\AtBeginDocument`, `\t` was being re-defined somewhere.

```
1473 \AtBeginDocument{
```

The following are restored for print when inside a `lateximage`.

For Unicode engines, only `\t` needs to be redefined:

```
1474 \LetLtxMacro\LWR@origt\t
```

For  $\text{\pdfLaTeX}$ , additional work is required:

```

1475 \ifPDFTeX% pdflatex or dvi latex
1476 \LetLtxMacro\LWR@origequalaccent\=
1477 \LetLtxMacro\LWR@origdotaccent\.`
1478 \LetLtxMacro\LWR@origu\u
1479 \LetLtxMacro\LWR@origv\v
1480 \LetLtxMacro\LWR@origc\c
1481 \LetLtxMacro\LWR@origd\d
1482 \LetLtxMacro\LWR@origb\b

```

The HTML redefinitions follow.

For pdf<sub>l</sub>ATEX, Unicode diacritical marks are used:

```
1483 \renewcommand*{\=}[1]{#1\HTMLUnicode{0305}}
1484 \renewcommand*{\.}[1]{#1\HTMLUnicode{0307}}
1485 \renewcommand*{\u}[1]{#1\HTMLUnicode{0306}}
1486 \renewcommand*{\v}[1]{#1\HTMLUnicode{030C}}
1487 \renewcommand*{\c}[1]{#1\HTMLUnicode{0327}}
1488 \renewcommand*{\d}[1]{#1\HTMLUnicode{0323}}
1489 \renewcommand*{\b}[1]{#1\HTMLUnicode{0331}}
1490 \fi
```

For all engines, a Unicode diacritical tie is used:

```
1491 \def\LWR@t#1#2{#1\HTMLUnicode{0361}#2}
1492 \renewcommand*{\t}[1]{\LWR@t#1}
```

`\LWR@restoreorigaccents` Called from `\restoreoriginalformatting` when a lateximage is begun.

```
1493 \ifPDFTeX% pdflatex or dvi latex
1494 \newcommand*{\LWR@restoreorigaccents}{%
1495 \LetLtxMacro\=\LWR@origequalaccent%
1496 \LetLtxMacro\.\LWR@origdotaccent%
1497 \LetLtxMacro\u\LWR@origu%
1498 \LetLtxMacro\v\LWR@origv%
1499 \LetLtxMacro\t\LWR@origt%
1500 \LetLtxMacro\c\LWR@origc%
1501 \LetLtxMacro\d\LWR@origd%
1502 \LetLtxMacro\b\LWR@origb%
1503 }%
1504 \else% XeLaTeX, LuaLaTeX:
1505 \newcommand*{\LWR@restoreorigaccents}{%
1506 \LetLtxMacro\t\LWR@origt%
1507 }%
1508 \fi%
1509 }% AtBeginDocument

1510 \end{warpHTML}
```

## 40 Configuration files

### 40.1 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:

```
1511 \excludecomment{LWRwriteconf}
```

Generate configuration files if print mode and not -pstool:

```

for PRINT output: 1512 \begin{warpprint}
1513 \fullexpandarg%
1514 \IfSubStr*{\jobname}{-pstool}
1515 {
1516 \PackageInfo{lwarp}{%
1517 Jobname with -pstool is found.\MessageBreak
1518 Not generating lwarp configuration files,%
1519 }
1520 }
1521 {
1522 \PackageInfo{lwarp}{Generating lwarp configuration files,}%
1523 \includecomment{LWRwriteconf}
1524 }
1525 \end{warpprint}

```

## 40.2 <project>\_html.tex

File \*\_html.tex Used to allow an HTML version of the document to exist alongside the print version.

```

Config file: 1526 \begin{LWRwriteconf}
1527 \immediate\openout\LWR@quickfile=\jobname_html.tex
1528 \immediate\write\LWR@quickfile{%
1529 \detokenize{\PassOptionsToPackage}%
1530 {warpHTML,BaseJobname=\jobname}{lwarp}%
1531 }
1532 \immediate\write\LWR@quickfile{%
1533 \detokenize{\input}\string{\jobname.tex}\string }%
1534 }
1535 \immediate\closeout\LWR@quickfile
1536 \end{LWRwriteconf}

```

## 40.3 lwarpmk configuration files

```

Config file: 1537 \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.)

```

1538 \newcommand*{\LWR@lwarpcnfversion}{2}% also in lwarpmk.lua

```

### 40.3.1 Helper macros

\LWR@shellescapecmd The LaTeX compile option for shell escape, if used.

```

1539 \ifshellescape
1540 \def\LWR@shellescapecmd{--shell-escape }

```

```

1541 \else
1542 \def\LWR@shellescapecmd{}
1543 \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 *pdflatex*, etc. Suffix is empty or `_html`

```

1544 \newcommand*\LWR@compilecmd}[2]{%
1545 #1 \LWR@shellescapecmd \jobname#2%
1546 }

```

`\LWR@addcompilecmd`  $\{\langle cmd \rangle\} \{\langle suffix \rangle\}$

Adds to the compilation command.

Cmd is *dvipdfmx*, etc. Suffix is empty or `_html`

```

1547 \newcommand*\LWR@addcompilecmd}[2]{%
1548 \LWRopseq
1549 #1 \jobname#2%
1550 }

```

`\LWR@unknownengine` Error message if not sure which L<sup>A</sup>T<sub>E</sub>X engine is being used.

```

1551 \newcommand*\LWR@unknownengine{%
1552 \PackageError{lwarp}
1553 {Unknown LaTeX engine.}
1554 {Lwarp only knows about pdflatex, dvi latex, xelatex, lualatex, and upLatex.}
1555 }

```

`\LWR@latexmkvar`  $\{\langle varname \rangle\} \{\langle value \rangle\}$

Adds a *latexmk* variable assignment.

```

1556 \newcommand*\LWR@latexmkvar}[2]{%
1557 -e
1558 \LWRopquote%
1559 \LWRdollar #1=q/#2/%
1560 \LWRopquote
1561 }

```

`\LWR@latexmkcmd`  $\{\langle latexmk options \rangle\}$

Sets a call to *latexmk* with the given options, possibly adding `--shell-escape`, and also adding the indexing program.

```

1562 \newcommand*\LWR@latexmkcmd}[1]{%
1563 latexmk \space \LWR@shellescapecmd \space #1 \space

```

```

1564 -recorder \space
1565 \LWR@latexmkvar{makeindex}{\LWR@LatexmkIndexCmd}
1566 }

```

`\LWR@latexmkdvipdfm` `{(dvipdfm or dvipdfmx)}`

Adds the options settings for *dvipdfm* or *dvipdfmx*.

```

1567 \newcommand*\LWR@latexmkdvipdfm[1]{%
1568 -pdfdvi \space
1569 \LWR@latexmkvar{dvipdf}{%
1570 #1
1571 \@percentchar 0
1572 -o \@percentchar D
1573 \@percentchar S%
1574 }
1575 }

```

`\LWR@compileuplatex` Sets compile options for up<sup>L</sup>A<sup>T</sup>E<sup>X</sup> with *ujarticle* or related classes.

```

1576 \newcommand*\LWR@compileuplatex{
1577 \def\LWR@tempprintlatexcmd{%
1578 \LWR@compilecmd{uplatex}{}}
1579 \LWR@addcompilecmd{dvipdfmx}{}
1580 }
1581 \def\LWR@tempHTMLlatexcmd{%
1582 \LWR@compilecmd{uplatex}{_html}
1583 \LWR@addcompilecmd{dvipdfmx}{_html}
1584 }
1585 }

```

`\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.

```
1586 \ifbool{LWR@latexmk}{
```

For *latexmk* with *pdflatex* or *lualatex*:

```
1587 \ifpdf
```

For *latexmk* with *pdflatex*:

```
1588 \ifPDFTeX
1589 \def\LWR@latexcmd{\LWR@latexmkcmd{-pdf -dvi- -ps-}}
1590 \else
```

For *latexmk* with *lualatex*:

```
1591 \ifLuaTeX
1592 \def\LWR@latexcmd{\LWR@latexmkcmd{-lualatex}}
1593 \else
1594 \LWR@unknownengine
1595 \fi
1596 \fi
1597 \else% \ifpdf
```

For *latexmk* with *xelatex* or DVI *latex*:

```
1598 \ifXeTeX
```

For *latexmk* with *xelatex*:

```
1599 \def\LWR@latexcmd{\LWR@latexmkcmd{-xelatex}}
1600 \else% \ifXeTeX
```

For *latexmk* with DVI *latex*:

```
1601 \ifbool{LWR@dvipdfm}{
1602 \def\LWR@latexcmd{%
1603 \LWR@latexmkcmd{%
1604 \LWR@latexmkdvipdfm{dvipdfm}%
1605 }
1606 }
1607 }{
1608 \ifbool{LWR@dvipdfmx}{
1609 \def\LWR@latexcmd{%
1610 \LWR@latexmkcmd{%
1611 \LWR@latexmkdvipdfm{dvipdfmx}%
1612 }
1613 }
1614 }{
1615 \def\LWR@latexcmd{\LWR@latexmkcmd{-pdfps}}
1616 }
1617 }
1618 \fi
```

```
1619 \fi% \ifpdf
```

The final assignment if *latexmk*:

```
1620 \def\LWR@tempprintlatexcmd{\LWR@latexcmd \space \jobname}
1621 \def\LWR@tempHTMLlatexcmd{\LWR@latexcmd \space \jobname_html}
1622 }% latexmk
```

Without *latexmk*, the compiling command is simply the compiler name and the optional shell escape:

```
1623 {% not latexmk
1624 \ifpdf
```

For *pdflatex* or *lualatex*:

```
1625 \ifPDFTeX
```

For *pdflatex*:

```
1626 \def\LWR@tempprintlatexcmd{\LWR@compilecmd{pdflatex}{}}
1627 \def\LWR@tempHTMLlatexcmd{\LWR@compilecmd{pdflatex}{_html}}
1628 \else
1629 \ifLuaTeX
```

For *lualatex*:

```
1630 \def\LWR@tempprintlatexcmd{\LWR@compilecmd{lualatex}{}}
1631 \def\LWR@tempHTMLlatexcmd{\LWR@compilecmd{lualatex}{_html}}
1632 \else
1633 \LWR@unknownengine
1634 \fi
1635 \fi
1636 \else% \ifpdf
```

For DVI *latex* or *xelatex*:

```
1637 \ifXeTeX
```

For *xelatex*:

```
1638 \def\LWR@tempprintlatexcmd{\LWR@compilecmd{xelatex}{}}
1639 \def\LWR@tempHTMLlatexcmd{\LWR@compilecmd{xelatex}{_html}}
1640 \else
```

For DVI *latex*. Default to *dvips*, unless told to use *dvipdfm* or *dvipdfmx*:

```
1641 \ifbool{LWR@dvipdfm}{
```

For DVI *latex* with *dvipdfm*:

```
1642 \def\LWR@tempprintlatexcmd{%
1643 \LWR@compilecmd{latex}{}}
```

```

1644 \LWR@addcompilecmd{dvipdfm}{}
1645 }
1646 \def\LWR@tempHTMLlatexcmd{%
1647 \LWR@compilecmd{latex}{_html}
1648 \LWR@addcompilecmd{dvipdfm}{_html}
1649 }
1650 }{
1651 \ifbool{LWR@dvipdfmx}{

```

For DVI *latex* with *dvipdfmx*:

```

1652 \def\LWR@tempprintlatexcmd{%
1653 \LWR@compilecmd{latex}{}
1654 \LWR@addcompilecmd{dvipdfmx}{}
1655 }
1656 \def\LWR@tempHTMLlatexcmd{%
1657 \LWR@compilecmd{latex}{_html}
1658 \LWR@addcompilecmd{dvipdfmx}{_html}
1659 }
1660 }{% dvips

```

For DVI *latex* with *dvips* and *ps2pdf*:

```

1661 \def\LWR@tempprintlatexcmd{%
1662 \LWR@compilecmd{latex}{}
1663 \LWR@addcompilecmd{dvips}{}
1664 \LWR@addcompilecmd{ps2pdf}{} .ps
1665 }
1666 \def\LWR@tempHTMLlatexcmd{%
1667 \LWR@compilecmd{latex}{_html}
1668 \LWR@addcompilecmd{dvips}{_html}
1669 \LWR@addcompilecmd{ps2pdf}{_html}.ps
1670 }
1671 }
1672 }
1673 \fi% \ifXeTeX
1674 \fi% \ifpdf
1675 }% latexmk

```

For *ujarticle*, *utarticle*, and related, using up $\LaTeX$  and *dvipdfmx*:

```

1676 \@ifclassloaded{ujarticle}{\LWR@compileuplatex}{}
1677 \@ifclassloaded{ujbook}{\LWR@compileuplatex}{}
1678 \@ifclassloaded{ujreport}{\LWR@compileuplatex}{}
1679 \@ifclassloaded{utarticle}{\LWR@compileuplatex}{}
1680 \@ifclassloaded{utbook}{\LWR@compileuplatex}{}
1681 \@ifclassloaded{utreport}{\LWR@compileuplatex}{}

```

Only make the setting permanent if the original was empty:

```

1682 \ifdefempty{\LWR@PrintLatexCmd}{
1683 \def\LWR@PrintLatexCmd{\LWR@tempprintlatexcmd}
1684 }{}
1685 \ifdefempty{\LWR@HTMLLatexCmd}{
1686 \def\LWR@HTMLLatexCmd{\LWR@tempHTMLlatexcmd}

```

```
1687 }{}
```

```
\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.

```
1688 \newcommand{\LWR@writeconf}[1]{
1689 \ifcsdef{\LWR@quickfile}{\newwrite{\LWR@quickfile}}
1690 \immediate\openout\LWR@quickfile=#1
1691 \immediate\write\LWR@quickfile{confversion = [[\LWR@lwarpconfversion]]}
1692 \ifbool{usingOSWindows}{
1693 \immediate\write\LWR@quickfile{opsystem = [[Windows]]}
1694 }{
1695 \immediate\write\LWR@quickfile{opsystem = [[Unix]]}
1696 }
1697 \immediate\write\LWR@quickfile{sourcename = [[\jobname]]}
1698 \immediate\write\LWR@quickfile{homehtmlfilename = [[\HomeHTMLFilename]]}
1699 \immediate\write\LWR@quickfile{htmlfilename = [[\HTMLFilename]]}
1700 \immediate\write\LWR@quickfile{imagesdirectory = [[\LWR@ImagesDirectory]]}
1701 \immediate\write\LWR@quickfile{imagesname = [[\LWR@ImagesName]]}
1702 \immediate\write\LWR@quickfile{latexmk = [[\ifbool{\LWR@latexmk}{true}{false}]]}
1703 \immediate\write\LWR@quickfile{printlatexcmd = [[\LWR@PrintLatexCmd]]}
1704 \immediate\write\LWR@quickfile{HTMLlatexcmd = [[\LWR@HTMLLatexCmd]]}
1705 \immediate\write\LWR@quickfile{printindexcmd = [[\LWR@PrintIndexCmd]]}
1706 \immediate\write\LWR@quickfile{HTMLindexcmd = [[\LWR@HTMLIndexCmd]]}
1707 \immediate\write\LWR@quickfile{latexmkindexcmd = [[\LWR@LatexmkIndexCmd]]}
1708 \immediate\write\LWR@quickfile{glossarycmd = [[\LWR@GlossaryCmd]]}
1709 \immediate\write\LWR@quickfile{pdftotextenc = [[\LWR@pdftotextEnc]]}
1710 \immediate\closeout\LWR@quickfile
1711 }
1712
1713 \end{\LWRwriteconf}
```

### 40.3.2 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:** 1714 \begin{\LWRwriteconf}  
 1715  
 1716 \AtBeginDocument{\LWR@writeconf{lwarpmk.conf}}  
 1717  
 1718 \end{\LWRwriteconf}

### 40.3.3 <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:**

```

1719 \begin{LWRwriteconf}
1720
1721 \AtBeginDocument{\LWRwriteconf{\jobname.lwarpmkconf}}
1722
1723 \end{LWRwriteconf}

```

## 40.4 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:**

```

1724 \begin{LWRwriteconf}
1725 \begin{filecontents*}{lwarp.css}
1726 /*
1727 CSS stylesheet for the LaTeX lwarp package
1728 Copyright 2016-2019 Brian Dunn – BD Tech Concepts LLC
1729 */
1730
1731
1732 /* a fix for older browsers: */
1733 header, section, footer, aside, nav, main,
1734 article, figure { display: block; }
1735
1736
1737 A:link {color:#000080 ; text-decoration: none ; }
1738 A:visited {color:#800000 ; }
1739 A:hover {color:#000080 ; text-decoration: underline ;}
1740 A:active {color:#800000 ; }
1741
1742 a.tocbook {display: inline-block ; margin-left: 0em ;
1743 font-weight: bold ; margin-top: 1ex ; margin-bottom: 1ex ; }
1744 a.tocpart {display: inline-block ; margin-left: 0em ;
1745 font-weight: bold ;}
1746 a.tocchapter {display: inline-block ; margin-left: 0em ;
1747 font-weight: bold ;}
1748 a.tocsection {display: inline-block ; margin-left: 1em ;
1749 text-indent: -.5em ; font-weight: bold ; }
1750 a.tocsubsection {display: inline-block ; margin-left: 2em ;
1751 text-indent: -.5em ; }
1752 a.tocsubsubsection {display: inline-block ; margin-left: 3em ;
1753 text-indent: -.5em ; }
1754 a.tocparagraph {display: inline-block ; margin-left: 4em ;
1755 text-indent: -.5em ; }
1756 a.tocsubparagraph {display: inline-block ; margin-left: 5em ;
1757 text-indent: -.5em ; }

```

```
1758 a.tocfigure {margin-left: 0em}
1759 a.tocsubfigure {margin-left: 2em}
1760 a.toctable {margin-left: 0em}
1761 a.tocsubtable {margin-left: 2em}
1762 a.toctheorem {margin-left: 0em}
1763 a.toclstlisting {margin-left: 0em}
1764
1765 body {
1766 font-family: "DejaVu Serif", "Bitstream Vera Serif",
1767 "Lucida Bright", Georgia, serif;
1768 background: #FAF7F4 ;
1769 color: black ;
1770 margin: 0em ;
1771 padding: 0em ;
1772 font-size: 100% ;
1773 line-height: 1.2 ;
1774 }
1775
1776 p {margin: 1.5ex 0em 1.5ex 0em ;}
1777 table p {margin: .5ex 0em .5ex 0em ;}
1778
1779 /* Holds a section number */
1780 span.sectionnumber { margin-right: 0em }
1781
1782 /* Inserted in front of index lines */
1783 span.indexitem {margin-left: 0em}
1784 span.indexsubitem {margin-left: 2em}
1785 span.indexsubsubitem {margin-left: 4em}
1786
1787 div.hidden, span.hidden { display: none ; }
1788
1789 kbd, span.texttt {
1790 font-family: "DejaVu Mono", "Bitstream Vera Mono", "Lucida Console",
1791 "Nimbus Mono L", "Liberation Mono", "FreeMono", "Andale Mono",
1792 "Courier New", monospace;
1793 font-size: 100% ;
1794 }
1795
1796 pre { padding: 3pt ; }
1797
1798 span.strong, span.textbf, div.strong, div.textbf { font-weight: bold; }
1799
1800 span.textit, div.textit { font-style: italic; }
1801
1802 span.textmd, div.textmd { font-weight: normal; }
1803
1804 span.texteb { font-weight: bolder; }
1805
1806 span.textlg { font-weight: lighter; }
1807
1808 span.textsc, div.textsc {
1809 font-variant: small-caps;
1810 font-variant-numeric: oldstyle-nums ;
1811 }
1812
```

```
1813 span.textulc, div.textulc {
1814 font-variant: normal ;
1815 font-variant-numeric: normal ;
1816 }
1817
1818 span.textsl, div.textsl { font-style: oblique; }
1819
1820 span.textup, div.textup {
1821 font-style: normal;
1822 font-variant: normal;
1823 font-variant-numeric: normal ;
1824 }
1825
1826 span.textrm, div.textrm {
1827 font-family: "DejaVu Serif", "Bitstream Vera Serif",
1828 "Lucida Bright", Georgia, serif;
1829 }
1830
1831 span.textsf, div.textsf {
1832 font-family: "DejaVu Sans", "Bitstream Vera Sans",
1833 Geneva, Verdana, sans-serif ;
1834 }
1835
1836 span.textcircled { border: 1px solid black ; border-radius: 1ex ; }
1837
1838 span.underline {
1839 text-decoration: underline ;
1840 text-decoration-skip: auto ;
1841 }
1842
1843 span.overline {
1844 text-decoration: overline ;
1845 text-decoration-skip: auto ;
1846 }
1847
1848
1849 /* for vertical text: */
1850 div.verticalrl { writing-mode: vertical-rl }
1851 div.horizontalTB { writing-mode: horizontal-tb }
1852
1853
1854 /* for diagbox */
1855 div.diagboxtitleN { border-bottom: 1px solid gray }
1856 div.diagboxtitleS { border-top: 1px solid gray }
1857
1858 div.diagboxE {
1859 padding-left: 2em ;
1860 text-align: right ;
1861 }
1862
1863 div.diagboxW {
1864 padding-right: 2em ;
1865 text-align: left ;
1866 }
1867
```

```
1868
1869
1870 /* For realscripts */
1871 .supsubscript {
1872 display: inline-block;
1873 text-align:left ;
1874 }
1875
1876 .supsubscript sup,
1877 .supsubscript sub {
1878 position: relative;
1879 display: block;
1880 font-size: .5em;
1881 line-height: 1;
1882 }
1883
1884 .supsubscript sup {
1885 top: .5em;
1886 }
1887
1888 .supsubscript sub {
1889 top: .5em;
1890 }
1891
1892 div.attribution p {
1893 text-align: right ;
1894 font-size: 80%
1895 }
1896
1897 span.poemtitle {
1898 font-size: 120% ; font-weight: bold;
1899 }
1900
1901 pre.tabbing {
1902 font-family: "Linux Libertine Mono O", "Lucida Console",
1903 "Droid Sans Mono", "DejaVu Mono", "Bitstream Vera Mono",
1904 "Liberation Mono", "FreeMono", "Andale Mono",
1905 "Nimbus Mono L", "Courier New", monospace;
1906 }
1907
1908 blockquote {
1909 display: block ;
1910 margin-left: 2em ;
1911 margin-right: 2em ;
1912 }
1913
1914 /* quotchap is for the quotchap package */
1915 div.quotchap {
1916 display: block ;
1917 font-style: oblique ;
1918 overflow-x: auto ;
1919 margin-left: 2em ;
1920 margin-right: 2em ;
1921 }
1922
```

```
1923 blockquote p, div.quotchap p {
1924 line-height: 1.5;
1925 text-align: left ;
1926 font-size: .85em ;
1927 }
1928
1929 /* qauthor is for the quotchap package */
1930 div.qauthor {
1931 display: block ;
1932 text-align: right ;
1933 margin-left: auto ;
1934 margin-right: 2em ;
1935 font-size: 80% ;
1936 font-variant: small-caps;
1937 }
1938
1939 div.qauthor p {
1940 text-align: right ;
1941 }
1942
1943 div.epigraph, div.dictum {
1944 line-height: 1.2;
1945 text-align: left ;
1946 padding: 3ex 1em 0ex 1em ;
1947 /* margin: 3ex auto 3ex auto ; */ /* Epigraph centered */
1948 margin: 3ex 1em 3ex auto ; /* Epigraph to the right */
1949 /* margin: 3ex 1em 3ex 1em ; */ /* Epigraph to the left */
1950 font-size: .85em ;
1951 max-width: 27em ;
1952 }
1953
1954 div.epigraphsource, div.dictumauthor {
1955 text-align:right ;
1956 margin-left:auto ;
1957 /* max-width: 50% ; */
1958 border-top: 1px solid #A0A0A0 ;
1959 padding-bottom: 3ex ;
1960 line-height: 1.2;
1961 }
1962
1963 div.epigraph p, div.dictum p { padding: .5ex ; margin: 0ex ;}
1964 div.epigraphsource p, div.dictumauthor p { padding: .5ex 0ex 0ex 0ex ; margin: 0ex ;}
1965 div.dictumauthor { font-style:italic }
1966
1967
1968 /* copyrightbox package */
1969 div.copyrightbox { margin: .5ex .5em }
1970 div.copyrightbox p {margin: 0px .5em ; padding: 0px}
1971 div.copyrightboxnote {text-align: left ; font-size: 60%}
1972
1973
1974 /* lettrine package: */
1975 span.lettrine { font-size: 4ex ; float: left ; }
1976 span.lettrinetext { font-variant: small-caps ; }
1977
```

```
1978 /* ulem, soul, umoline packages: */
1979 span.underline {
1980 text-decoration: underline ;
1981 text-decoration-skip: auto ;
1982 }
1983
1984 span.uuline {
1985 text-decoration: underline ;
1986 text-decoration-skip: auto ;
1987 text-decoration-style: double ;
1988 }
1989
1990 span.uwave {
1991 text-decoration: underline ;
1992 text-decoration-skip: auto ;
1993 text-decoration-style: wavy ;
1994 }
1995
1996 span.sout {
1997 text-decoration: line-through ;
1998 }
1999
2000 span.oline {
2001 text-decoration: overline ;
2002 text-decoration-skip: auto ;
2003 }
2004
2005 span.xout {
2006 text-decoration: line-through ;
2007 }
2008
2009 span.dashuline {
2010 text-decoration: underline ;
2011 text-decoration-skip: auto ;
2012 text-decoration-style: dashed ;
2013 }
2014
2015 span.dotuline {
2016 text-decoration: underline ;
2017 text-decoration-skip: auto ;
2018 text-decoration-style: dotted ;
2019 }
2020
2021 span.letterspacing { letter-spacing: .2ex ; }
2022
2023 span.capsspacing {
2024 font-variant: small-caps ;
2025 letter-spacing: .1ex ;
2026 }
2027
2028 span.highlight { background: #F8E800 ; }
2029
2030
2031
2032
```

```
2033 html body {
2034 margin: 0 ;
2035 line-height: 1.2;
2036 }
2037
2038
2039 body div {
2040 margin: 0ex;
2041 }
2042
2043
2044 div.book, h1, h2, h3, h4, h5, h6, span.paragraph, span.subparagraph
2045 {
2046 font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
2047 "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
2048 "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
2049 "Times New Roman", serif;
2050 font-style: normal ;
2051 font-weight: bold ;
2052 text-align: left ;
2053 }
2054
2055 h1 { /* title of the entire website, used on each page */
2056 text-align: center ;
2057 font-size: 2.5em ;
2058 padding: .4ex 0em 0ex 0em ;
2059 }
2060
2061 div.book {
2062 text-align: center ;
2063 font-size: 2.325em ;
2064 padding: .4ex 0em 0ex 0em ;
2065 }
2066
2067 h2 { font-size: 2.25em }
2068 h3 { font-size: 2em }
2069 h4 { font-size: 1.75em }
2070 h5 { font-size: 1.5em }
2071 h6 { font-size: 1.25em }
2072 span.paragraph {font-size: 1em ; font-variant: normal ;
2073 margin-right: 1em ; }
2074 span.subparagraph {font-size: 1em ; font-variant: normal ;
2075 margin-right: 1em ; }
2076
2077 div.minisec {
2078 font-family: "DejaVu Sans", "Bitstream Vera Sans",
2079 Geneva, Verdana, sans-serif ;
2080 font-style: normal ;
2081 font-weight: bold ;
2082 text-align: left ;
2083 }
2084
2085 h1 {
2086 margin: 0ex 0em 0ex 0em ;
2087 line-height: 1.3;
```

```
2088 text-align: center ;
2089 }
2090
2091 h2 {
2092 margin: 1ex 0em 1ex 0em ;
2093 line-height: 1.3;
2094 text-align: center ;
2095 }
2096
2097 h3 {
2098 margin: 3ex 0em 1ex 0em ;
2099 line-height: 1.3;
2100 }
2101
2102 h4 {
2103 margin: 3ex 0em 1ex 0em ;
2104 line-height: 1.3;
2105 }
2106
2107 h5 {
2108 margin: 3ex 0em 1ex 0em ;
2109 line-height: 1.3;
2110 }
2111
2112 h6 {
2113 margin: 3ex 0em 1ex 0em ;
2114 line-height: 1.3;
2115 }
2116
2117
2118 div.titlepage {
2119 text-align: center ;
2120 }
2121
2122 .footnotes {
2123 text-align: left ;
2124 font-size: .85em ;
2125 margin: 3ex 2em 0ex 2em ;
2126 border-top: 1px solid silver ;
2127 }
2128
2129 .marginpar, .marginparblock {
2130 max-width: 50%;
2131 float: right ;
2132 clear: both ;
2133 text-align: left ;
2134 margin: 1ex 0.5em 1ex 1em ;
2135 padding: 1ex 0.5em 1ex 0.5em ;
2136 font-size: 85% ;
2137 border-top: 1px solid silver ;
2138 border-bottom: 1px solid silver ;
2139 overflow-x: auto ;
2140 }
2141
2142 .marginpar br { margin-bottom: 2ex ; }
```

```
2143
2144 div.marginblock, div.marginparblock {
2145 max-width:50%;
2146 min-width: 10em; /* room for caption */
2147 float:right;
2148 text-align:left;
2149 margin: 1ex 0.5em 1ex 1em ;
2150 padding: 1ex 0.5em 1ex 0.5em ;
2151 overflow-x: auto;
2152 }
2153
2154 div.marginblock div.minipage,
2155 div.marginparblock div.minipage {
2156 display: block ;
2157 margin: 0pt auto 0pt auto ;
2158 }
2159
2160 div.marginblock div.minipage p ,
2161 div.marginparblock div.minipage p
2162 { font-size: 85%}
2163
2164 div.marginblock br ,
2165 div.marginparblock br
2166 { margin-bottom: 2ex ; }
2167
2168 div.bodycontainer {
2169 float: left ;
2170 width: 80% ;
2171 }
2172
2173 div.bodywithoutsidetoc div.bodycontainer {
2174 float: none ;
2175 width: 100% ;
2176 }
2177
2178 section.textbody div.footnotes{
2179 margin: 3ex 2em 0ex 2em ;
2180 border-bottom: 2px solid silver ;
2181 }
2182
2183 .footnoteheader {
2184 border-top: 2px solid silver ;
2185 margin-top: 3ex ;
2186 padding-top: 1ex ;
2187 font-weight: bold ;
2188 }
2189
2190 .mpfootnotes {
2191 text-align: left ;
2192 font-size: .85em ;
2193 margin-left: 1em ;
2194 border-top: 1px solid silver ;
2195 }
2196
2197 /* Remove footnote top border in the title page. */
```

```
2198 div.titlepage div.mpfootnotes {
2199 border-top: none ;
2200 }
2201
2202
2203
2204 ul, ol {
2205 margin: 1ex 1em 1ex 0em;
2206 line-height: 1.2;
2207 }
2208
2209 body dir, body menu {
2210 margin: 3ex 1em 3ex 0em;
2211 line-height: 1.2;
2212 }
2213
2214 li { margin: 0ex 0em 1ex 0em; }
2215
2216 html {
2217 margin: 0;
2218 padding: 0;
2219 }
2220
2221 .programlisting {
2222 font-family: "DejaVu Mono", "Bitstream Vera Mono", "Lucida Console",
2223 "Nimbus Mono L", "Liberation Mono", "FreeMono", "Andale Mono",
2224 "Courier New", monospace;
2225 margin: 1ex 0ex 1ex 0ex ;
2226 padding: .5ex 0pt .5ex 0pt ;
2227 overflow-x: auto;
2228 }
2229
2230 section.textbody>pre.programlisting {
2231 border-top: 1px solid silver ;
2232 border-bottom: 1px solid silver ;
2233 }
2234
2235
2236 div.displaymath {
2237 text-align: center ;
2238 }
2239
2240 div.displaymathnumbered {
2241 text-align: right ;
2242 margin-left: 5% ;
2243 margin-right: 5% ;
2244 min-width: 2.5in ;
2245 }
2246
2247 @media all and (min-width: 400px) {
2248 div.displaymathnumbered {
2249 margin-left: 10% ;
2250 margin-right: 10% ;
2251 }
2252 }
```

```
2253
2254 @media all and (min-width: 800px) {
2255 div.displaymathnumbered {
2256 margin-right: 20% ;
2257 }
2258 }
2259
2260 @media all and (min-width: 1200px) {
2261 div.displaymathnumbered {
2262 margin-right: 30% ;
2263 }
2264 }
2265
2266
2267 .inlineprogramlisting {
2268 font-family: "DejaVu Mono", "Bitstream Vera Mono", "Lucida Console",
2269 "Nimbus Mono L", "Liberation Mono", "FreeMono", "Andale Mono",
2270 "Courier New", monospace;
2271 overflow-x: auto;
2272 }
2273
2274 span.listinglabel {
2275 display: inline-block ;
2276 font-size: 70% ;
2277 width: 4em ;
2278 text-align: right ;
2279 margin-right: 2em ;
2280 }
2281
2282 div.abstract {
2283 margin: 2em 5% 2em 5% ;
2284 padding: 1ex 1em 1ex 1em ;
2285 /* font-weight: bold ; */
2286 font-size: 90% ;
2287 text-align: left ;
2288 }
2289
2290 div.abstract dl {line-height:1.5;}
2291 div.abstract dt {color:#304070;}
2292
2293 div.abstracttitle{
2294 font-family: "URW Classico", Optima, "Linux Biolinum O",
2295 "Linux Libertine O", "Liberation Serif", "Nimbus Roman No 9 L",
2296 "FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
2297 font-weight:bold;
2298 font-size:1.25em;
2299 text-align: center ;
2300 }
2301
2302 span.abstractrunintitle{
2303 font-family: "URW Classico", Optima, "Linux Biolinum O",
2304 "Linux Libertine O", "Liberation Serif", "Nimbus Roman No 9 L",
2305 "FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
2306 font-weight:bold;
2307 }
```

```
2308
2309
2310 .verbatim {
2311 overflow-x: auto ;
2312 }
2313
2314 .alltt {
2315 overflow-x: auto ;
2316 }
2317
2318
2319 .bverbatim {
2320 margin: 1ex 0pt 1ex 0pt ;
2321 padding: .5ex 0pt .5ex 0pt ;
2322 overflow-x: auto ;
2323 }
2324
2325 .lverbatim {
2326 margin: 1ex 0pt 1ex 0pt ;
2327 padding: .5ex 0pt .5ex 0pt ;
2328 overflow-x: auto ;
2329 }
2330
2331 .fancyvrb {
2332 font-size:.85em ;
2333 margin: 3ex 0pt 3ex 0pt
2334 }
2335
2336 .fancyvrblabel {
2337 font-size: .85em ;
2338 text-align: center ;
2339 font-weight: bold ;
2340 margin-top: 1ex ;
2341 margin-bottom: 1ex ;
2342 }
2343
2344
2345 .verse {
2346 font-family: "Linux Libertine Mono O", "Lucida Console",
2347 "Droid Sans Mono", "DejaVu Mono", "Bitstream Vera Mono",
2348 "Liberation Mono", "FreeMono", "Andale Mono",
2349 "Nimbus Mono L", "Courier New", monospace;
2350 margin-left: 1em ;
2351 }
2352
2353
2354 div.singlespace { line-height: 1.2 ; }
2355 div.onehalfspace { line-height: 1.5 ; }
2356 div.doublespace { line-height: 2 ; }
2357
2358
2359 /* Word processor format output: */
2360 div.wpfigure { border: 1px solid red ; margin: .5ex ; padding: .5ex ; }
2361 div.wptable { border: 1px solid blue ; margin: .5ex ; padding: .5ex ; }
2362 div.wpminipage { border: 1px solid green ; margin: .5ex ; padding: .5ex ; }
```

```
2363
2364
2365
2366
2367 /* Minipage environments, vertically aligned to top, center, bottom: */
2368 .minipage, .fminipage, .fcolorminipage {
2369 /* display: inline-block ; */
2370 /* Mini pages which follow each other will be tiled. */
2371 margin: .25em .25em .25em .25em;
2372 padding: .25em .25em .25em .25em;
2373 display: inline-flex;
2374 flex-direction: column ;
2375 overflow: auto;
2376 }
2377
2378 .inlineminipage {
2379 display: inline-block ;
2380 text-align: left
2381 }
2382
2383 /* Paragraphs in the flexbox did not collapse their margins. */
2384 /* Have not yet researched this. */
2385 .minipage p {margin: .75ex 0em .75ex 0em ;}
2386
2387 .fboxBlock .minipage, .colorbox .minipage, .colorboxBlock .minipage,
2388 .fcolorbox .minipage, .fcolorboxBlock .minipage
2389 {border: none ; background: none;}
2390
2391 .fbox, .fboxBlock { border: 1px solid black ; }
2392
2393 .fbox, .fboxBlock, .fcolorbox, .fcolorboxBlock, .colorbox, .colorboxBlock,
2394 .fminipage, .fcolorminipage
2395 {display: inline-block}
2396
2397 .shadowbox, .shabox {
2398 border: 1px solid black;
2399 box-shadow: 3px 3px 3px #808080 ;
2400 border-radius: 0px ;
2401 padding: .4ex .3em .4ex .3em ;
2402 margin: 0pt .3ex 0pt .3ex ;
2403 display: inline-block ;
2404 }
2405
2406 .doublebox {
2407 border: 3px double black;
2408 border-radius: 0px ;
2409 padding: .4ex .3em .4ex .3em ;
2410 margin: 0pt .3ex 0pt .3ex ;
2411 display: inline-block ;
2412 }
2413
2414 .ovalbox, .Ovalbox {
2415 border: 1px solid black;
2416 border-radius: 1ex ;
2417 padding: .4ex .3em .4ex .3em ;
```

```
2418 margin: 0pt .3ex 0pt .3ex ;
2419 display: inline-block ;
2420 }
2421
2422 .Ovalbox { border-width: 2px ; }
2423
2424 .framebox {
2425 border: 1px solid black;
2426 border-radius: 0px ;
2427 padding: .3ex .2em 0ex .2em ;
2428 margin: 0pt .1ex 0pt .1ex ;
2429 display: inline-block ;
2430 }
2431
2432
2433 .mdframed {
2434 padding: 0ex ;
2435 margin: 2ex 0em 2ex 0em ;
2436 }
2437
2438 .mdframed p { padding: 0ex .5em 0ex .5em ; }
2439
2440 .mdframed dl { padding: 1ex .5em 0ex .5em ; }
2441
2442 .mdframedtitle {
2443 padding: .5ex 0pt 0pt 0pt ;
2444 border-radius: 10pt 10pt 0pt 0pt ;
2445 display: block ;
2446 margin-bottom: 1ex ;
2447 }
2448
2449 .mdframedsubtitle {
2450 display: block ;
2451 }
2452
2453 .mdframedsubsubtitle {
2454 display: block ;
2455 }
2456
2457 .mdtheorem {
2458 padding: 0ex .5em 0ex .5em ;
2459 margin: 3ex 5% 3ex 5% ;
2460 }
2461
2462
2463 /* framed package */
2464 .framed, pre.boxedverbatim, fcolorbox {
2465 margin: 3ex 0em 3ex 0em ;
2466 border: 1px solid black;
2467 border-radius: 0px ;
2468 padding: .3ex 1em 0ex 1em ;
2469 display: block ;
2470 }
2471
2472 .shaded {
```

```
2473 margin: 3ex 0em 3ex 0em ;
2474 padding: .3ex 1em .3ex 1em ;
2475 display: block ;
2476 }
2477
2478 .snugframed {
2479 margin: 3ex 0em 3ex 0em ;
2480 border: 1px solid black;
2481 border-radius: 0px ;
2482 display: block ;
2483 }
2484
2485 .framedleftbar {
2486 margin: 3ex 0em 3ex 0em ;
2487 border-left: 3pt solid black;
2488 border-radius: 0px ;
2489 padding: .3ex .2em .3ex 1em ;
2490 display: block ;
2491 }
2492
2493 .framedtitle {
2494 margin: 0em ;
2495 padding: 0em ;
2496 font-size: 130%
2497 }
2498
2499 .framedtitle p { padding: .3em }
2500
2501
2502 /* For the niceframe package: */
2503
2504 div.niceframe, div.curlyframe, div.artdecoframe, div.generalframe {
2505 padding: 1ex ;
2506 margin: 2ex auto ;
2507 border-radius: 2ex ;
2508 }
2509
2510 div.niceframe {
2511 border: 6px groove black ;
2512 }
2513
2514 div.curlyframe {
2515 border-left: 3px dotted black ;
2516 border-right: 3px dotted black ;
2517 border-radius: 6ex ;
2518 }
2519
2520 div.artdecoframe {
2521 border-left: 10px double black ;
2522 border-right: 10px double black ;
2523 border-radius: 6ex ;
2524 }
2525
2526 div.generalframe {
2527 border: 6px groove black ;
```

```
2528 }
2529
2530
2531
2532 dl {
2533 margin: 1ex 2em 1ex 0em;
2534 line-height: 1.3;
2535 }
2536
2537 dl dt {
2538 display: block ;
2539 float:left ;
2540 font-weight: bold;
2541 padding-right: 1em ;
2542 }
2543
2544 dl dd { display: block ; }
2545
2546 dl dd:after { content: "" ; display: block ; clear: both }
2547
2548 dl dd p { margin-top: 0em; }
2549
2550 dd ul, dd ol, dd dl { clear: both ; padding-top: 1ex }
2551
2552
2553 nav {
2554 font-family: "URW Classico", Optima, "Linux Biolinum O",
2555 "DejaVu Sans", "Bitstream Vera Sans",
2556 Geneva, Verdana, sans-serif ;
2557 margin-bottom: 4ex ;
2558 }
2559
2560 nav p {
2561 line-height: 1.2 ;
2562 margin-top:.5ex ;
2563 margin-bottom:.5ex;
2564 font-size: .9em ;
2565 }
2566
2567
2568
2569 img, img.hyperimage, img.borderimage {
2570 max-width: 600px;
2571 border: 1px solid silver;
2572 box-shadow: 3px 3px 3px #808080 ;
2573 padding: .5% ;
2574 margin: .5% ;
2575 background: none ;
2576 }
2577
2578 img.inlineimage{
2579 padding: 0px ;
2580 box-shadow: none ;
2581 border: none ;
2582 background: none ;
```

```
2583 margin: 0px ;
2584 display: inline-block ;
2585 border-radius: 0px ;
2586 }
2587
2588 img.logoimage{
2589 max-width: 300px ;
2590 box-shadow: 3px 3px 3px #808080 ;
2591 border: 1px solid black ;
2592 background:none ;
2593 padding:0 ;
2594 margin:.5ex ;
2595 border-radius: 10px ;
2596 }
2597
2598
2599 .section {
2600 /*
2601 To have each section float relative to each other:
2602 */
2603 /*
2604 display: block ;
2605 float: left ;
2606 position: relative ;
2607 background: white ;
2608 border: 1px solid silver ;
2609 padding: .5em ;
2610 */
2611 margin: 0ex .5em 0ex .5em ;
2612 padding: 0 ;
2613 }
2614
2615
2616 figure {
2617 margin: 5ex auto 5ex auto ;
2618 padding: 1ex 1em 1ex 1em ;
2619 overflow-x: auto ;
2620 }
2621
2622
2623 /* To automatically center images in figures: */
2624 /*
2625 figure img.inlineimage {
2626 margin: 0ex auto 0ex auto ;
2627 display: block ;
2628 }
2629 */
2630
2631 /* To automatically center minipages in figures: */
2632 /*
2633 figure div.minipage, figure div.minipage div.minipage {
2634 margin: 1ex auto 1ex auto ;
2635 display: block ;
2636 }
2637 */
```

```
2638
2639 figure figure { margin: 0pt }
2640
2641 figure div.minipage p { font-size: 85% ; }
2642
2643 figure.subfigure, figure.subtable {
2644 display: inline-block ; margin: 3ex 1em 3ex 1em ;
2645 }
2646
2647 div.figurecaption .minipage { margin:0 ; padding: 0 }
2648
2649 div.minipage figure { border: none ; box-shadow: none ; }
2650 div.minipage figure.table { margin: 0ex }
2651 div.minipage div.footnotes { margin: 1ex 2em 0ex 2em }
2652
2653 div.floatrow { text-align: center; }
2654
2655 div.floatrow figure { display: inline-block ; margin: 1ex 2% ; }
2656
2657 div.floatfoot { font-size: .85em ;
2658 border-top: 1px solid silver ; line-height: 1.2 ; }
2659
2660 div.figurecaption , .lstlistingtitle {
2661 font-size: .85em ;
2662 text-align: center ;
2663 font-weight: bold ;
2664 margin-top: 1ex ;
2665 margin-bottom: 1ex ;
2666 }
2667
2668 figure.subfigure div.figurecaption, figure.subtable div.figurecaption {
2669 border-bottom: none ; background: none ;
2670 }
2671
2672 div.nonfloatcaption {
2673 margin: 1ex auto 1ex auto ;
2674 font-size: .85em ;
2675 text-align: center ;
2676 font-weight: bold ;
2677 }
2678
2679 /* For a \RawCaption inside a minipage inside a figure's floatrow: */
2680 figure div.floatrow div.minipage div.figurecaption {
2681 border: none ;
2682 background: none ;
2683 }
2684
2685
2686 /* For packages such as float, rotfloat, and algorithm2e: */
2687
2688 figure.boxed, figure.boxruled {
2689 border: 1px solid black ;
2690 }
2691
2692 figure.ruled {
```

```

2693 border-top: 1px solid black ;
2694 border-bottom: 1px solid black ;
2695 border-left: 0px ;
2696 border-right: 0px ;
2697 border-radius: 0px ;
2698 background: none ;
2699 box-shadow: none ;
2700 }
2701
2702 figure.ruled div.figurecaption, figure.boxruled div.figurecaption {
2703 border-top: 1px solid silver ;
2704 border-bottom: 1px solid silver ;
2705 }
2706
2707
2708 table {
2709 margin: 1ex auto 1ex auto ;
2710 border-collapse: separate ;
2711 border-spacing: 0px ;
2712 line-height: 1.3 ;
2713 }
2714
2715 tr.hline td {border-top: 1px solid #808080 ; margin-top: 0ex ;
2716 margin-bottom: 0ex ; } /* for \hline */
2717
2718 tr.tbrule td {border-top: 1px solid black ; margin-top: 0ex ;
2719 margin-bottom: 0ex ; } /* for \toprule, \bottomrule */
2720
2721 td {padding: .5ex .5em .5ex .5em ;}
2722
2723 table td.tdl { text-align: left ; vertical-align: middle ; }
2724 table td.tdc { text-align: center ; vertical-align: middle ; }
2725 table td.tdat { text-align: center ; vertical-align: middle ; padding: 0px ; margin: 0px ; }
2726 table td.tdbang { text-align: center ; vertical-align: middle ; }
2727 table td.tdr { text-align: right ; vertical-align: middle ; }
2728 table td.tdp { text-align: left ; vertical-align: bottom ; }
2729 table td.tdm { text-align: left ; vertical-align: middle ; }
2730 table td.tdb { text-align: left ; vertical-align: top ; }
2731 table td.tdP { text-align: center ; vertical-align: bottom ; }
2732 table td.tdM { text-align: center ; vertical-align: middle ; }
2733 table td.tdB { text-align: center ; vertical-align: top ; }
2734
2735 table td.tvertbarl { border-left: 1px solid black }
2736 table td.tvertbarldouble { border-left: 4px double black }
2737 table td.tvertbarr { border-right: 1px solid black }
2738 table td.tvertbarrdouble { border-right: 4px double black }
2739
2740 table td.tvertbarldash { border-left: 1px dashed black }
2741 table td.tvertbarldoubledash { border-left: 2px dashed black }
2742 table td.tvertbarrdash { border-right: 1px dashed black }
2743 table td.tvertbarrdoubledash { border-right: 2px dashed black }
2744
2745
2746 /* for cmidrules: */
2747 table td.tdrule {

```

```

2748 border-top: 1px solid #A0A0A0 ;
2749 }
2750
2751 table td.tdrulel {
2752 border-top-left-radius:.5em ;
2753 border-top: 1px solid #A0A0A0 ;
2754 }
2755
2756 table td.tdruler {
2757 border-top-right-radius:.5em ;
2758 border-top: 1px solid #A0A0A0 ;
2759 }
2760
2761 table td.tdrulelr {
2762 border-top-left-radius:.5em ;
2763 border-top-right-radius:.5em ;
2764 border-top: 1px solid #A0A0A0 ;
2765 }
2766
2767
2768 /* Margins of paragraphs inside table cells: */
2769 td.tdp p , td.tdprule p , td.tdP p , td.tdPrule p { padding-top: 1ex ;
2770 padding-bottom: 1ex ; margin: 0ex ; }
2771 td.tdm p , td.tdmrule p , td.tdM p , td.tdMrule p { padding-top: 1ex ;
2772 padding-bottom: 1ex ; margin: 0ex ; }
2773 td.tdb p , td.tdbrule p , td.tdB p , td.tdBrule p { padding-top: 1ex ;
2774 padding-bottom: 1ex ; margin: 0ex ; }
2775
2776 td.tdp , td.tdprule , td.tdP , td.tdPrule
2777 { padding: 0ex .5em 0ex .5em ; }
2778 td.tdm , td.tdmrule , td.tdM , td.tdMrule
2779 { padding: 0ex .5em 0ex .5em ; }
2780 td.tdb , td.tdbrule , td.tdB , td.tdBrule
2781 { padding: 0ex .5em 0ex .5em ; }
2782
2783
2784 /* table notes: */
2785 .tnotes {
2786 margin: 0ex 5% 1ex 5% ;
2787 padding: 0.5ex 1em 0.5ex 1em;
2788 font-size:.80em;
2789 text-align: left ;
2790 }
2791
2792 .minipage .tnotes {
2793 margin: 0pt ;
2794 padding: 0pt ;
2795 }
2796
2797 .tnotes dl dt p {margin-bottom:0px;}
2798
2799 .tnoteitemheader {margin-right: 1em;}
2800
2801
2802 /* for colortbl and cell color */

```

```
2803 div.cellcolor {
2804 width: 100% ;
2805 padding: .5ex .5em .5ex .5em ;
2806 margin: -.5ex -.5em -.5ex -.5em ;
2807 }
2808
2809
2810 /* for bigdelim */
2811 .ldelim, .rdelim { font-size: 200% }
2812
2813
2814 /* center, flushleft, flushright environments */
2815 div.center{text-align:center;}
2816 div.center table {margin-left:auto;margin-right:auto;}
2817 div.flushleft{text-align:left;}
2818 div.flushleft table {margin-left:0em ; margin-right:auto;}
2819 div.flushright{text-align:right;}
2820 div.flushright table {margin-left:auto ; margin-right: 0em ;}
2821
2822
2823 /* Fancybox */
2824 div.Btrivlist table tr td {
2825 padding: .2ex 0em ;
2826 }
2827
2828
2829 /* program listing callouts: */
2830 span.callout {
2831 font-family: "DejaVu Sans", "Bitstream Vera Sans",
2832 Geneva, Verdana, sans-serif ;
2833 border-radius: .5em;
2834 background-color:black;
2835 color:white;
2836 padding:0px .25em 0px .25em;
2837 margin: 0 ;
2838 font-weight: bold;
2839 font-size:.72em ;
2840 }
2841
2842 div.programlisting pre.verbatim span.callout{
2843 font-size: .85em ;
2844 }
2845
2846 span.verbatim {
2847 font-family: "DejaVu Mono", "Bitstream Vera Mono", "Lucida Console",
2848 "Nimbus Mono L", "Liberation Mono", "FreeMono", "Andale Mono",
2849 "Courier New", monospace;
2850 }
2851
2852
2853
2854 div.published
2855 {
2856 text-align: center ;
2857 font-variant: normal ;
```

```
2858 font-style: italic ;
2859 font-size: 1em ;
2860 margin: 1ex 0em 1ex 0em ;
2861 }
2862
2863 div.subtitle
2864 {
2865 text-align: center ;
2866 font-variant: normal ;
2867 font-style: italic ;
2868 font-size: 1.25em ;
2869 margin: 1ex 0em 1ex 0em ;
2870 }
2871
2872 div.subtitle p { margin: 1ex ; }
2873
2874 div.author
2875 {
2876 font-variant: normal ;
2877 font-style: normal ;
2878 font-size: 1em ;
2879 margin: 1ex 0em 1ex 0em ;
2880 }
2881
2882 div.oneauthor {
2883 display: inline-block ;
2884 margin: 0ex 1em 0ex 1em ;
2885 }
2886
2887 /*
2888 div.author table {
2889 margin: 1ex auto 0ex auto ;
2890 background: none ;
2891 }
2892
2893 div.author table tbody tr td { padding: .25ex ; }
2894 */
2895
2896 span.affiliation {font-size: .85em ; font-variant: small-caps; }
2897
2898 div.titledate {
2899 text-align: center ;
2900 font-size: .85em ;
2901 font-style: italic;
2902 margin: 1ex 0em 1ex 0em ;
2903 }
2904
2905
2906 nav.topnavigation{
2907 text-align: left ;
2908 padding: 0.5ex 1em 0.5ex 1em ;
2909 /* margin: 2ex 0em 3ex 0em ; */
2910 margin: 0 ;
2911 border-bottom: 1px solid silver ;
2912 border-top: 1px solid silver ;
```

```
2913 clear:both ;
2914 }
2915
2916 nav.botnavigation{
2917 text-align: left ;
2918 padding: 0.5ex 1em 0.5ex 1em ;
2919 /* margin: 3ex 0em 2ex 0em ; */
2920 margin: 0 ;
2921 border-top: 1px solid silver ;
2922 border-bottom: 1px solid silver ;
2923 clear:both ;
2924 }
2925
2926
2927 header {
2928 line-height: 1.2 ;
2929 font-size: 1em ;
2930 border-bottom: 1px solid silver ;
2931 margin: 0px ;
2932 padding: 2ex 1em 2ex 1em ;
2933 text-align:left ;
2934 }
2935
2936
2937 footer {
2938 font-size: .85em ;
2939 line-height: 1.2 ;
2940 margin-top: 1ex ;
2941 border-top: 1px solid silver ;
2942 padding: 2ex 1em 2ex 1em ;
2943 clear:both ;
2944 text-align:left ;
2945 }
2946
2947
2948 a.linkhome { font-weight:bold ; font-size: 1em ;}
2949
2950
2951 div.lateximagesource { padding: 0px ; margin: 0px ; display: none; }
2952
2953 img.lateximage{
2954 padding: 0pt ;
2955 margin: 0pt ;
2956 box-shadow: none ;
2957 border: none ;
2958 background: none ;
2959 max-width: 100% ;
2960 border-radius: 0ex ;
2961 border: none ;
2962 }
2963
2964
2965 /* The -1px right margin compensates for the 1px right border. */
2966 /* Without this -1px margin, the body container appears below instead */
2967 /* of floating to the side. */
```

```
2968 div.sidetoccontainer {
2969 font-family: "DejaVu Serif", "Bitstream Vera Serif",
2970 "Lucida Bright", Georgia, serif;
2971 float: left ;
2972 width: 20%;
2973 margin: 0pt -1px 3ex 0pt ;
2974 border-right: 1px solid silver;
2975 border-bottom: 1px solid silver;
2976 background: #FAF7F4 ;
2977 font-size:.9em ;
2978 border-radius: 0px 0px 20px 0px ;
2979 }
2980
2981 div.sidetoccontents {
2982 overflow-y: auto ;
2983 width: 100% ;
2984 text-align: left ;
2985 }
2986
2987
2988 nav.sidetoc p {line-height:1.2 ; margin: 1ex .5em 1ex .5em ;
2989 text-indent: 0 ; }
2990
2991 nav.sidetoc p a {color:black ; font-size: .7em ;}
2992
2993 div.sidetocitle {font-size: 1.2em; font-weight:bold; text-align:center;
2994 border-bottom: 1px solid silver ; }
2995
2996 nav.sidetoc a:hover {text-decoration: underline ; }
2997
2998
2999
3000 section.textbody { margin: 0ex 1em 0ex 1em ;}
3001
3002
3003 div.multicolsheading { -webkit-column-span: all;
3004 -moz-column-span: all; column-span: all; }
3005 div.multicols { -webkit-columns: 3 380px ;
3006 -moz-columns: 3 380px ; columns: 3 380px ; }
3007 div.multicols p {margin-top: 0ex}
3008
3009
3010 /* Used for xfrac and nicefrac: */
3011 span.numerator {
3012 font-size: 60% ;
3013 vertical-align: .4em ;
3014 }
3015
3016 span.denominator {
3017 font-size: 60%
3018 }
3019
3020
3021 /* Used for algorithm2e: */
3022 div.alg2evline{
```

```

3023 margin-left: 1em ;
3024 padding-left: 1em ;
3025 border-left: 1px solid black ;
3026 border-radius: 0px 0px 0px 1ex ;
3027 }
3028
3029 div.alg2evsline{
3030 margin-left: 1em ;
3031 padding-left: 1em ;
3032 border-left: 1px solid black ;
3033 }
3034
3035 div.alg2enoline{
3036 margin-left: 1em ;
3037 padding-left: 1em ;
3038 }
3039
3040 span.alg2elinenumber{
3041 margin-right: .5em ;
3042 font-size: 50% ;
3043 color: red ;
3044 }
3045
3046
3047 /* Used for algorithmicx: */
3048 span.floatright { float: right ; }
3049
3050
3051 /* keyfloat and tocdata: */
3052 .floatnotes {
3053 margin: 0ex 5% 0ex 5% ;
3054 padding: 0ex 1em 0ex 1em ;
3055 font-size:.80em ;
3056 text-align: left ;
3057 }
3058
3059 .authorartist{
3060 display:block ;
3061 font-size:.70em ;
3062 font-style: italic;
3063 }
3064
3065 nav .authorartist{ display:inline; }
3066
3067
3068
3069 /* Native LaTeX theorems: */
3070
3071 .theoremcontents { font-style: italic; margin-top: 3ex ; margin-bottom: 3ex ; }
3072 .theoremlabel { font-style: normal; font-weight: bold ; margin-right: .5em ; }
3073
3074
3075 /* theorem, amsthm, and ntheorem packages */
3076
3077 span.theoremheader,

```

```
3078 span.theoremheaderplain,
3079 span.theoremheaderdefinition,
3080 span.theoremheaderbreak,
3081 span.theoremheadermarginbreak,
3082 span.theoremheaderchangebreak,
3083 span.theoremheaderchange,
3084 span.theoremheadermargin
3085 {
3086 font-style:normal ; font-weight: bold ; margin-right: 1em ;
3087 }
3088
3089 span.amsthmnameplain,
3090 span.amsthmnamedefinition,
3091 span.amsthmnumberplain,
3092 span.amsthmnumberdefinition
3093 {
3094 font-style:normal ; font-weight: bold ;
3095 }
3096
3097
3098 span.amsthmnameremark,
3099 span.amsthmnumberremark
3100 {font-style:italic ; font-weight: normal ; }
3101
3102
3103 span.amsthmnoteplain,
3104 span.amsthmnotedefinition
3105 {font-style:normal ;}
3106
3107
3108 span.theoremheaderremark,
3109 span.theoremheaderproof,
3110 span.amsthmproofname
3111 {font-style:italic ; font-weight: normal ; margin-right: 1em ; }
3112
3113 span.theoremheadersc
3114 {
3115 font-style:normal ;
3116 font-variant: small-caps ;
3117 font-weight: normal ;
3118 margin-right: 1em ;
3119 }
3120
3121 .theoremendmark {float:right}
3122
3123 div.amsthmbodyplain, div.theorembodyplain, div.theorembodynonumberplain,
3124 div.theorembodybreak, div.theorembodynonumberbreak,
3125 div.theorembodymarginbreak,
3126 div.theorembodychangebreak,
3127 div.theorembodychange,
3128 div.theorembodymargin
3129 {
3130 font-style:italic;
3131 margin-top: 3ex ; margin-bottom: 3ex ;
3132 }
```

```
3133
3134 div.theorembodydefinition, div.theorembodyremark, div.theorembodyproof,
3135 div.theorembodyplainupright, nonumberplainuprightsc,
3136 div.amsthmbodydefinition, div.amsthmbodyremark,
3137 div.amsthmproof
3138 {
3139 font-style: normal ;
3140 margin-top: 3ex ; margin-bottom: 3ex ;
3141 }
3142
3143 span.amsthmnoteremark {}
3144
3145
3146 /* For the backnaur package: */
3147 div.backnaur {
3148 display: block ;
3149 margin: 2ex 2em 2ex 2em ;
3150 }
3151
3152 div.backnaur p {
3153 margin: .25ex 0ex .25ex 0ex ;
3154 }
3155
3156 div.backnaurprod {
3157 display: inline-block ;
3158 min-width: 8em ;
3159 text-align:right ;
3160 }
3161
3162 div.backnaurdsc {
3163 display: inline-block ;
3164 }
3165
3166
3167 /* For the notes package: */
3168 div.notesimportantnote, div.noteswarningnote, div.notesinformationnote {
3169 clear: both ;
3170 margin: 2ex 2em 2ex 2em ;
3171 border: 1px solid silver ;
3172 }
3173
3174 div.notesicon {
3175 float:left ;
3176 display: inline-block ;
3177 background: gold ;
3178 padding: 0ex 1em 0ex 1em ;
3179 margin-right: 1em ;
3180 font-weight: bold ;
3181 }
3182
3183 div.notescontents { font-style: italic }
3184
3185
3186 /*
3187 For CSS LaTeX and related logos:
```

```
3188 Based on spacing demonstrated by the metafont package.
3189 */
3190
3191 .latexlogofont {
3192 font-family: "Linux Libertine O", "Nimbus Roman No 9 L",
3193 "FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
3194 font-variant: normal ;
3195 }
3196
3197 .latexlogo {
3198 font-family: "Linux Libertine O", "Nimbus Roman No 9 L",
3199 "FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
3200 font-size: 1.1em;
3201 }
3202
3203 .latexlogosup {
3204 text-transform: uppercase;
3205 letter-spacing: .03em ;
3206 font-size: 0.7em;
3207 vertical-align: 0.25em;
3208 margin-left: -0.4em;
3209 margin-right: -0.15em;
3210 }
3211
3212 .latexlogosub {
3213 text-transform: uppercase;
3214 vertical-align: -0.27ex;
3215 margin-left: -0.08em;
3216 margin-right: -0.07em;
3217 font-size: 1em;
3218 }
3219
3220 .latexlogotwoe {
3221 text-transform: none ;
3222 font-variant-numeric: oldstyle-nums ;
3223 }
3224
3225 .latexlogotwoesub {
3226 font-style: italic ;
3227 vertical-align: -0.27ex;
3228 margin-left: -0.11em;
3229 margin-right: -0.1em;
3230 font-size: 1em;
3231 }
3232
3233 .xelatexlogo {
3234 font-family: "Linux Libertine O", "Nimbus Roman No 9 L",
3235 "FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
3236 letter-spacing: .03em ;
3237 font-size: 1.1em;
3238 }
3239
3240 .xelatexlogosub {
3241 vertical-align: -0.27ex;
3242 margin-left: -0.0667em;
```

```
3243 margin-right: -.05em;
3244 font-size: 1em;
3245 letter-spacing: .03em ;
3246 }
3247
3248 .amslogo {
3249 font-family: "TeXGyreChorus","URW Chancery L",
3250 "Apple Chancery","ITC Zapf Chancery","Monotype Corsiva",
3251 "Linux Libertine O", "Nimbus Roman No 9 L", "FreeSerif",
3252 "Hoefler Text", Times, "Times New Roman", serif ;
3253 font-style: italic ;
3254 }
3255
3256 .lyxlogo {
3257 font-family: "URW Classico", Optima, "Linux Biolinum O",
3258 "DejaVu Sans", "Bitstream Vera Sans", Geneva,
3259 Verdana, sans-serif ;
3260 }
3261
3262
3263 /* Only display top and bottom navigation if a small screen: */
3264 /* Hide the sidetoc if a small screen: */
3265 nav.topnavigation { display:none; }
3266 nav.botnavigation { display:none; }
3267
3268 /* Only display the sidetoc's webpage title if a small screen */
3269 span.sidetocthetitle { display: none }
3270
3271 @media screen and (max-width: 50em) {
3272 div.sidetoccontainer {
3273 float: none ;
3274 width: 100% ;
3275 padding: 0 ;
3276 border-radius: 0 ;
3277 border-bottom: 1px solid black ;
3278 border-top: 1px solid black ;
3279 box-shadow: none ;
3280 }
3281 span.sidetocthetitle { display: inline }
3282 nav.botnavigation { display:block }
3283 div.bodycontainer { width: 100% }
3284 .marginpar {
3285 max-width: 100%;
3286 float: none;
3287 display:block ;
3288 margin: 1ex 1em 1ex 1em ;
3289 }
3290 }
3291
3292 @media print {
3293 body {
3294 font-family: "Linux Libertine O",
3295 "DejaVu Serif", "Bitstream Vera Serif",
3296 "Liberation Serif", "Nimbus Roman No 9 L",
3297 "FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
```

```

3298 }
3299 div.sidetoccontainer { display:none; }
3300 nav.topnavigation { display: none; }
3301 nav.botnavigation { display: none; }
3302 div.bodycontainer { width: 100% }
3303 }
3304
3305 @media handheld {
3306 div.sidetoccontainer { display:none; }
3307 nav.topnavigation { display:block }
3308 nav.botnavigation { display:block }
3309 div.bodycontainer { width: 100% }
3310 }
3311
3312 @media projection {
3313 div.sidetoccontainer { display:none; }
3314 nav.topnavigation { display:block }
3315 nav.botnavigation { display:block }
3316 div.bodycontainer { width: 100% }
3317 }
3318 \end{filecontents*}
3319 % \end{Verbatim}% for syntax highlighting
3320 \end{LWRwriteconf}

```

## 40.5 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:**

```

3321 \begin{LWRwriteconf}
3322 \begin{filecontents*}{lwarp_sagebrush.css}
3323 @import url("lwarp.css") ;
3324
3325
3326 A:link {color:#105030 ; text-decoration: none ; }
3327 A:visited {color:#705030 ; text-shadow:1px 1px 2px #a0a0a0;}
3328 A:hover {color:#006000 ; text-decoration: underline ; text-shadow:0px 0px 2px #a0a0a0;}
3329 A:active {color:#00C000 ; text-shadow:1px 1px 2px #a0a0a0;}
3330
3331
3332
3333 div.book, h1, h2, h3, h4, h5, h6, span.paragraph, span.subparagraph
3334 {
3335 font-family: "URW Classico", Optima, "Linux Biolinum O",
3336 "Linux Libertine O", "Liberation Serif",
3337 "Nimbus Roman No 9 L", "FreeSerif",
3338 "Hoefler Text", Times, "Times New Roman", serif;
3339 font-variant: small-caps ;
3340 font-weight: normal ;
3341 color: #304070 ;
3342 text-shadow: 2px 2px 3px #808080;
3343 }

```

```
3344
3345 h1 { /* title of the entire website, used on each page */
3346 font-variant: small-caps ;
3347 color: #304070 ;
3348 text-shadow: 2px 2px 3px #808080;
3349 background-color: #F7F7F0 ;
3350 background-image: linear-gradient(to bottom, #F7F7F0, #C0C0C4);
3351 }
3352
3353 h1 {
3354 border-bottom: 1px solid #304070;
3355 /* border-top: 2px solid #304070; */
3356 }
3357
3358 h2 {
3359 border-bottom: 1px solid #304070;
3360 /* border-top: 2px solid #304070; */
3361 background-color: #F7F7F0 ;
3362 background-image: linear-gradient(to bottom, #F7F7F0, #DAD0C0);
3363 }
3364
3365
3366
3367 div.abstract {
3368 background: #f5f5eb ;
3369 background-image: linear-gradient(to bottom, #f5f5eb, #C8C8B8);
3370
3371 border: 1px solid silver;
3372 border-radius: 1em ;
3373 }
3374
3375 div.abstract dl {line-height:1.5;}
3376 div.abstract dt {color:#304070;}
3377
3378 div.abstracttitle{
3379 font-family: "URW Classico", Optima, "Linux Biolinum O",
3380 "Linux Libertine O", "Liberation Serif", "Nimbus Roman No 9 L",
3381 "FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
3382 font-weight:bold;
3383 font-variant: small-caps ;
3384 font-size:1.5em;
3385 border-bottom: 1px solid silver ;
3386 color: #304070 ;
3387 text-align: center ;
3388 text-shadow: 1px 1px 2px #808080;
3389 }
3390
3391 span.abstracrunintitle{
3392 font-family: "URW Classico", Optima, "Linux Biolinum O",
3393 "Linux Libertine O", "Liberation Serif", "Nimbus Roman No 9 L",
3394 "FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
3395 font-weight:bold;
3396 }
3397
3398
```

```
3399 div.epigraph, div.dictum {
3400 background: #f5f5eb ;
3401 background-image: linear-gradient(to bottom, #f5f5eb, #C8C8B8);
3402
3403 border: 1px solid silver ;
3404 border-radius: 1ex ;
3405 box-shadow: 3px 3px 3px #808080 ;
3406 }
3407
3408
3409 .example {
3410 background-color: #f5f5eb ;
3411 background-image: linear-gradient(to bottom, #f5f5eb, #C8C8B8);
3412
3413 }
3414
3415 div.exampletitle{
3416 font-family: "URW Classico", Optima, "Linux Biolinum O",
3417 "Linux Libertine O", "Liberation Serif", "Nimbus Roman No 9 L",
3418 "FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
3419 font-weight:bold;
3420 font-variant: small-caps ;
3421 border-bottom: 1px solid silver ;
3422 color: #304070 ;
3423 text-align: center ;
3424 text-shadow: 1px 1px 2px #808080;
3425 }
3426
3427
3428 .sidebar {
3429 background-color: #f5f5eb ;
3430 background-image: linear-gradient(to bottom, #f5f5eb, #C8C8B8);
3431
3432 }
3433
3434 div.sidebartitle{
3435 font-family: "URW Classico", Optima, "Linux Biolinum O",
3436 "Linux Libertine O", "Liberation Serif", "Nimbus Roman No 9 L",
3437 "FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
3438 font-weight:bold;
3439 font-variant: small-caps ;
3440 border-bottom: 1px solid silver ;
3441 color: #304070 ;
3442 text-align: center ;
3443 text-shadow: 1px 1px 2px #808080;
3444 }
3445
3446
3447 .fancyvrblabel {
3448 font-family: "URW Classico", Optima, "Linux Biolinum O",
3449 "Linux Libertine O", "Liberation Serif", "Nimbus Roman No 9 L",
3450 "FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
3451 font-weight:bold;
3452 font-variant: small-caps ;
3453 font-size: 1.5em ;
```

```
3454 color: #304070 ;
3455 text-align: center ;
3456 text-shadow: 1px 1px 2px #808080;
3457 }
3458
3459 div.minipage {
3460 background-color: #eeeeee7 ;
3461 border: 1px solid silver ;
3462 border-radius: 1ex ;
3463 }
3464
3465 table div.minipage { background: none ; border: none ; }
3466
3467 div.framebox div.minipage {border:none ; background:none}
3468
3469 section.textbody > div.minipage {
3470 box-shadow: 3px 3px 3px #808080 ;
3471 }
3472
3473 div.fboxBlock div.minipage { box-shadow: none ; }
3474
3475 .framed .minipage , .framedleftbar .minipage {
3476 border: none ;
3477 background: none ;
3478 padding: 0ex ;
3479 margin: 0ex ;
3480 }
3481
3482 figure.figure .minipage, div.figurecaption .minipage { border: none; }
3483
3484 div.marginblock div.minipage ,
3485 div.marginparblock div.minipage
3486 { border: none; }
3487
3488 figure , div.marginblock {
3489 background-color: #eeeeee7 ;
3490 border: 1px solid silver ;
3491 border-radius: 1ex ;
3492 box-shadow: 3px 3px 3px #808080 ;
3493 }
3494
3495 figure figure {
3496 border: 1px solid silver ;
3497 margin: 0em ;
3498 box-shadow: none ;
3499 }
3500
3501 /*
3502 div.figurecaption {
3503 border-top: 1px solid silver ;
3504 border-bottom: 1px solid silver ;
3505 background-color: #e8e8e8 ;
3506 }
3507 */
3508
```

```
3509
3510 div.table {
3511 box-shadow: 3px 3px 3px #808080 ;
3512 }
3513
3514 /*
3515 .tnotes {
3516 background: #e8e8e8;
3517 border: 1px solid silver;
3518 }
3519 */
3520
3521
3522 nav.topnavigation{
3523 background-color: #b0b8b0 ;
3524 background-image: linear-gradient(to bottom,#e0e0e0,#b0b8b0) ;
3525 }
3526
3527 nav.botnavigation{
3528 background-color: #b0b8b0 ;
3529 background-image: linear-gradient(to top,#e0e0e0,#b0b8b0) ;
3530 }
3531
3532
3533
3534 header{
3535 background-color: #F7F7F0 ;
3536 background-image: linear-gradient(to top, #F7F7F0, #b0b8b0);
3537 }
3538
3539 footer{
3540 background-color: #F7F7F0 ;
3541 background-image: linear-gradient(to bottom, #F7F7F0, #b0b8b0);
3542 }
3543
3544
3545
3546 div.sidetoccontainer {
3547 background-color: #F7F7F0 ;
3548 background-image: linear-gradient(to bottom, #F7F7F0, #C0C0C0);
3549 box-shadow: 3px 3px 3px #808080 ;
3550 }
3551
3552 div.sidetocitle {color: #304070 ; }
3553
3554 nav.sidetoc a:hover {
3555 color:#006000 ;
3556 text-decoration: none ;
3557 text-shadow:0px 0px 2px #a0a0a0;
3558 }
3559
3560
3561 @media screen and (max-width: 45em) {
3562 div.sidetoccontainer { border-radius: 0 ; }
3563 }
```

```

3564
3565
3566 \end{filecontents*}
3567 % \end{Verbatim}% for syntax highlighting
3568 \end{LWRwriteconf}

```

## 40.6 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:**

```

3569 \begin{LWRwriteconf}
3570 \begin{filecontents*}{lwarp_formal.css}
3571 \import url("lwarp.css") ;
3572
3573
3574
3575 A:link {color:#802020 ; text-decoration:none; }
3576 A:visited {color:#802020 ; text-shadow:none ;}
3577 A:hover {color:#400000 ; text-shadow:none ;}
3578 A:active {color:#C00000 ; text-shadow:none ;}
3579
3580
3581 body {
3582 font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
3583 "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
3584 "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
3585 "Times New Roman", serif;
3586 background: #fffcf5;
3587 }
3588
3589 span.textrm {
3590 font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
3591 "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
3592 "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
3593 "Times New Roman", serif;
3594 }
3595
3596 span.textsf {
3597 font-family: "DejaVu Sans", "Bitstream Vera Sans",
3598 Geneva, Verdana, sans-serif ;
3599 }
3600
3601
3602
3603 div.book, h1, h2, h3, h4, h5, h6, span.paragraph, span.subparagraph
3604 {
3605 font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
3606 "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
3607 "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
3608 "Times New Roman", serif;
3609 color: #800000 ;

```

```
3610 text-shadow: none ;
3611 }
3612
3613 h1, h2 {
3614 background-color: #fffcf5 ;
3615 background-image: none ;
3616 border-bottom: 1px solid #808080;
3617 /* border-top: 2px solid #808080; */
3618 }
3619
3620 div.abstracttitle {
3621 font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
3622 "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
3623 "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
3624 "Times New Roman", serif;
3625 color: black ;
3626 text-shadow: none ;
3627 }
3628
3629 span.abstracrunintitle {
3630 font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
3631 "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
3632 "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
3633 "Times New Roman", serif;
3634 color: black ;
3635 text-shadow: none ;
3636 }
3637
3638 div.abstract { font-size: 100% }
3639
3640 .sidebar {
3641 background: #fffcf5;
3642 background-image: none ;
3643 margin: 2em 5% 2em 5%;
3644 padding: 0.5em 1em;
3645 border: none ;
3646 border-top : 1px solid silver;
3647 border-bottom : 1px solid silver;
3648 font-size: 90% ;
3649 }
3650
3651 div.sidebartitle{
3652 font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
3653 "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
3654 "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
3655 "Times New Roman", serif;
3656 color: #800000 ;
3657 text-shadow: none ;
3658 border: none ;
3659 }
3660
3661 .example {
3662 background: #fffcf5;
3663 background-image: none ;
3664 margin: 2em 5% 2em 5%;
```

```
3665 padding: 0.5em 1em;
3666 border: none ;
3667 border-top : 1px solid silver;
3668 border-bottom : 1px solid silver;
3669 }
3670
3671 div.exampltitle{
3672 font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
3673 "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
3674 "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
3675 "Times New Roman", serif;
3676 color: #800000 ;
3677 text-shadow: none ;
3678 border: none ;
3679 }
3680
3681 div.fancyvrblabel{
3682 font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
3683 "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
3684 "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
3685 "Times New Roman", serif;
3686 color: #800000 ;
3687 text-shadow: none ;
3688 border: none ;
3689 }
3690
3691
3692
3693 figure {
3694 margin: 5ex 5% 5ex 5% ;
3695 padding: 1ex 1em 1ex 1em ;
3696 background-color: #ffffcf5 ;
3697 overflow-x: auto ;
3698 border: none ;
3699 /* border-top: 1px solid silver; */
3700 /* border-bottom: 1px solid silver; */
3701 }
3702
3703
3704 div.figurecaption , .lstlisting {
3705 border: none ;
3706 /* border-top: 1px solid silver ; */
3707 /* border-bottom: 1px solid silver ; */
3708 background-color: #ffffcf5 ;
3709 }
3710
3711 .tnotes {
3712 background: #ffffcf5 ;
3713 border-top: 1px solid silver ;
3714 border-bottom: 1px solid silver ;
3715 }
3716
3717 .theorem {
3718 background: none ;
3719 }
```

```
3720
3721 .minipage {
3722 background-color: #ffffcf5 ;
3723 border: none ;
3724 }
3725
3726 div.floatrow figure { border: none ; }
3727
3728 figure figure { border: none ; }
3729
3730
3731 nav.toc, nav.lof, nav.lot, nav.lol {
3732 font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
3733 "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
3734 "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
3735 "Times New Roman", serif;
3736 }
3737
3738 div.sidetoccontainer {
3739 font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
3740 "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
3741 "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
3742 "Times New Roman", serif;
3743 background-image: linear-gradient(to bottom, #ffffcf5, #C0C0C0);
3744 }
3745
3746 div.sidetoc{
3747 color: #800000 ;
3748 }
3749
3750 header{
3751 background-color: #e0e0e0 ;
3752 background-image: linear-gradient(to top, #ffffcf5, #b0b0b0);
3753 text-align:center ;
3754 }
3755
3756 footer{
3757 background-color: #e0e0e0 ;
3758 background-image: linear-gradient(to bottom, #ffffcf5, #b0b0b0);
3759 padding: 2ex 1em 2ex 1em ;
3760 text-align:left ;
3761 }
3762
3763 nav.botnavigation {
3764 background: #dedcd5 ;
3765 border-top: 1px solid black ;
3766 }
3767 \end{filecontents*}
3768 % \end{Verbatim}% for syntax highlighting
3769 \end{LWRwriteconf}
```

## 40.7 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:**

```

3770 \begin{LWRwriteconf}
3771 \begin{filecontents*}{sample_project.css}
3772 /* (--- Start of project.css ---) */
3773 /* (--- A sample project-specific CSS file for lwarp ---) */
3774
3775 /* Uncomment one of the following: */
3776 @import url("lwarp.css") ;
3777 /* @import url("lwarp_formal.css") ; */
3778 /* @import url("lwarp_sagebrush.css") ; */
3779
3780 /* Project-specific CSS setting follow here. */
3781 /* . . . */
3782
3783 /* (--- End of project.css ---) */
3784 \end{filecontents*}
3785 % \end{Verbatim}% for syntax highlighting
3786 \end{LWRwriteconf}

```

## 40.8 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:**

```

3787 \begin{LWRwriteconf}
3788 \begin{filecontents*}{lwarp.ist}
3789 preamble
3790 "\begin{theindex}
3791 \providecommand*\lettergroupDefault[1]{}
3792 \providecommand*\lettergroup[1]{%
3793 \par\textbf{#1}\par
3794 \nopagebreak
3795 }
3796 "
3797 headings_flag 1
3798 heading_prefix "
3799 \lettergroup{"
3800 heading_suffix "}"
3801 delim_0 " , \hyperindexref{"
3802 delim_1 " , \hyperindexref{"
3803 delim_2 " , \hyperindexref{"
3804 delim_n " }, \hyperindexref{"
3805 delim_r " } -- \hyperindexref{"

```

```

3806 delim_t "]"
3807 page_compositor "."
3808 \end{filecontents*}
3809 % \end{Verbatim}% for syntax highlighting
3810 \end{LWRwriteconf}

```

## 40.9 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:**

```

3811 \begin{LWRwriteconf}
3812 \begin{filecontents*}{lwarp.xdy}
3813 (require "tex/inputenc/latin.xdy")
3814 (merge-rule "\\PS *" "Postscript")
3815 (require "texindy.xdy")
3816 (require "page-ranges.xdy")
3817 (require "book-order.xdy")
3818 (define-location-class "arabic-page-numbers"
3819 ("arabic-numbers") :min-range-length 1)
3820 (require "makeindex.xdy")
3821 (define-attributes (("hyperindexref")))
3822 (markup-locref :open "\hyperindexref{" :close "}" :attr "hyperpage")
3823 (markup-locref :open "\textbf{\hyperindexref{" :close "}" :attr "textbf")
3824 (markup-locref :open "\textit{\hyperindexref{" :close "}" :attr "textit")
3825 (markup-locref :open "\textit{\hyperindexref{" :close "}" :attr "textit")
3826 (define-location-class-order ("roman-page-numbers"
3827 "arabic-page-numbers"
3828 "alpha-page-numbers"
3829 "Roman-page-numbers"
3830 "Alpha-page-numbers"
3831 "see"
3832 "seealso"))
3833 \end{filecontents*}
3834 % \end{Verbatim}% for syntax highlighting
3835 \end{LWRwriteconf}

```

## 40.10 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:**

```

3836 \begin{LWRwriteconf}
3837 \immediate\openout\LWR@quickfile=lwarp_one_limage.txt
3838 \immediate\write\LWR@quickfile{%
3839 pdfseparate -f \LWRpercent 1 -l \LWRpercent 1 \LWRpercent 4_html.pdf %
3840 \LWR@ImagesDirectory\OSPathSymbol lateximagetemp-\LWRpercent\LWRpercent d.pdf%
3841 }
3842 \immediate\write\LWR@quickfile{%
3843 pdfcrop --hires \LWR@ImagesDirectory\OSPathSymbol lateximagetemp-\LWRpercent 1.pdf %
3844 \LWR@ImagesDirectory\OSPathSymbol\LWRpercent 3.pdf%
3845 }
3846 \immediate\write\LWR@quickfile{%
3847 pdftocairo -svg -noshrink \LWR@ImagesDirectory\OSPathSymbol\LWRpercent 3.pdf %
3848 \LWR@ImagesDirectory\OSPathSymbol\LWRpercent 3.svg%
3849 }
3850 \immediate\write\LWR@quickfile{%
3851 del \LWR@ImagesDirectory\OSPathSymbol\LWRpercent 3.pdf%
3852 }
3853 \immediate\write\LWR@quickfile{%
3854 del \LWR@ImagesDirectory\OSPathSymbol lateximagetemp-\LWRpercent 1.pdf%
3855 }
3856 \immediate\write\LWR@quickfile{exit}
3857 \immediate\closeout\LWR@quickfile
3858 \end{LWRwriteconf}

```

## 40.11 lwarp\_mathjax.txt

**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<sup>A</sup>T<sub>E</sub>X* to control the equation tags.

`\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 use `\MathJaxFilename` to select new filename.

**Config file:**

```

3859 \begin{LWRwriteconf}
3860 \begin{filecontents*}{lwarp_mathjax.txt}
3861 <!-- https://groups.google.com/forum/#!topic/
3862 mathjax-users/jUtewUcE2bY -->
3863 <script type="text/x-mathjax-config">
3864 MathJax.Hub.Register.StartupHook("TeX AMSmath Ready",function () {
3865 var seteqsectionDefault = {name: "", num: 0};
3866 var seteqsections = {}, seteqsection = seteqsectionDefault;

```

```

3867 var TEX = MathJax.InputJax.TeX, PARSE = TEX.Parse;
3868 var AMS = MathJax.Extension["TeX/AMSmath"];
3869 TEX.Definitions.Add({
3870 macros: {
3871 seteqsection: "mySection",
3872 seteqnumber: "mySetEqNumber"
3873 }
3874 });
3875
3876 PARSE.Augment({
3877 mySection: function (name) {
3878 seteqsection.num = AMS.number;
3879 var n = this.GetArgument(name);
3880 if (n === "") {
3881 seteqsection = seteqsectionDefault;
3882 } else {
3883 if (!seteqsections["_"+n])
3884 seteqsections["_"+n] = {name:n, num:0};
3885 seteqsection = seteqsections["_"+n];
3886 }
3887 AMS.number = seteqsection.num;
3888 },
3889 mySetEqNumber: function (name) {
3890 var n = this.GetArgument(name);
3891 if (!n || !n.match(/^ *[0-9]+ *$/))
3892 n = "";
3893 else
3894 n = parseInt(n)-1;
3895 <!-- $ syntax highlighting -->
3896 if (n === "" || n < 1)
3897 TEX.Error
3898 ("Argument to "+name+" should be a positive integer");
3899 AMS.number = n;
3900 }
3901 });
3902 MathJax.Hub.Config({
3903 TeX: {
3904 equationNumbers: {
3905 formatTag: function (n) {
3906 <!-- if not numeric, don't include the chapter -->
3907 if (!n.match(/^ *[0-9]+ *$/))
3908 <!-- $ syntax highlighting -->
3909 return "("+n.replace(/\./, "")+")" ;
3910 else
3911 return "("+(seteqsection.name+"."+n).replace(/\./, "")+")" ;
3912 },
3913 formatID: function (n) {
3914 n = (seteqsection.name+'.'+n).replace
3915 (/[:"'<>&]/g, "").replace(/\./, "");
3916 return 'mjax-eqn-' + n;
3917 }
3918 }
3919 }
3920 });
3921 });

```

```

3922 </script>
3923
3924 <!-- http://docs.mathjax.org/en/latest/options/ThirdParty.html -->
3925 <script type="text/x-mathjax-config">
3926 MathJax.Ajax.config.path["Contrib"] =
3927 "https://cdn.mathjax.org/mathjax/contrib";
3928 </script>
3929
3930 <script type="text/x-mathjax-config">
3931 MathJax.Hub.Config({
3932 TeX: {
3933 extensions: ["autoload-all.js"] ,
3934 equationNumbers: {
3935 autoNumber: "AMS"
3936 }
3937 }
3938 });
3939 </script>
3940
3941 <!-- Alternative CDN provider: -->
3942 <script type="text/javascript" async
3943 src="https://cdnjs.cloudflare.com/ajax/libs/mathjax/2.7.5/MathJax.js?config=TeX-AMS_HTML-full">
3944 </script>
3945
3946 <!-- No longer supported after April 30, 2017: -->
3947 <!--
3948 <script
3949 src="https://cdn.mathjax.org/mathjax/latest/MathJax.js?config=TeX-AMS_HTML-full">
3950 </script>
3951 -->
3952
3953 \end{filecontents*}
3954 % \end{Verbatim}% for syntax highlighting
3955 \end{LWRwriteconf}

```

## 40.12 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`.

```

3956 \begin{LWR@createlwarpmk}

3957 \begin{filecontents*}{lwarpmk.lua}
3958 #!/usr/bin/env texlua
3959
3960 -- Copyright 2016-2019 Brian Dunn
3961
3962
3963 printversion = "v0.73"
3964 requiredconfversion = "2" -- also at *lwarpmk.conf
3965
3966 function printhelp ()
3967 print ("lwarpmk: Use lwarpmk -h or lwarpmk --help for help.") ;
3968 end
3969
3970
3971 function printusage ()
3972 --
3973 -- Print the usage of the lwarpmk command:
3974 --
3975 print ([[
3976
3977 lwarpmk print [-p project]: Compile the print version if necessary.
3978 lwarpmk print1 [-p project]: Forced single compile of the print version.
3979 lwarpmk printindex [-p project]: Process print indexes.
3980 lwarpmk printglossary [-p project]: Process the glossary for the print version.
3981 lwarpmk html [-p project]: Compile the HTML version if necessary.
3982 lwarpmk html1 [-p project]: Forced single compile of the HTML version.
3983 lwarpmk htmlindex [-p project]: Process HTML indexes.
3984 lwarpmk htmlglossary [-p project]: Process the glossary for the html version.
3985 lwarpmk again [-p project]: Touch the source code to trigger recompiles.
3986 lwarpmk limages [-p project]: Process the "lateximages" created by lwarp.sty.
3987 lwarpmk pdftohtml [-p project]:
3988 For use with latexmk or a Makefile:
3989 Converts project_html.pdf to project_html.html and individual HTML files.
3990 Finishes the HTML conversion even if there was a compile error.
3991 lwarpmk pdftosvg <list of file names>: Converts each PDF file to SVG.
3992 lwarpmk epstopdf <list of file names>: Converts each EPS file to PDF.
3993 lwarpmk clean [-p project]: Remove *.aux, *.toc, *.lof/t,
3994 *.idx, *.ind, *.log, *_html_inc.*, .gl*
3995 lwarpmk cleanall [-p project]: Remove auxiliary files, project.pdf, *.html
3996 lwarpmk cleanlimages: Removes all images from the "lateximages" directory.
3997 lwarpmk -h: Print this help message.
3998 lwarpmk --help: Print this help message.
3999
4000]])
4001 -- printconf ()
4002 end
4003
4004
4005 function splitfile (destfile,sourcefile)
4006 --
4007 -- Split one large sourcefile into a number of files,

```

```

4008 -- starting with destfile.
4009 -- The file is split at each occurrence of <!--|Start file|newfilename|*
4010 --
4011 print ("lwarpmk: Splitting " .. sourcefile .. " into " .. destfile) ;
4012 local sfile = io.open(sourcefile)
4013 io.output(destfile)
4014 for line in sfile:lines() do
4015 i,j,copen,cstart,newfilename = string.find (line,"(.*)|(.*)|(.*|)") ;
4016 if ((i~= nil) and (copen == "<!--") and (cstart == "Start file")) then
4017 -- split the file
4018 io.output(newfilename) ;
4019 else
4020 -- not a splitpoint
4021 io.write (line .. "\n") ;
4022 end
4023 end -- do
4024 io.close(sfile)
4025 end -- function
4026
4027
4028 function cvalueerror (line, linenum , cvalue)
4029 --
4030 -- Incorrect value, so print an error and exit.
4031 --
4032 print ("lwarpmk: ===")
4033 print ("lwarpmk: " .. linenum .. " : " .. line) ;
4034 print (
4035 "lwarpmk: incorrect variable value \"" .. cvalue ..
4036 "\" in lwarpmk.conf.\n"
4037) ;
4038 print ("lwarpmk: ===")
4039 -- printconf () ;
4040 os.exit(1) ;
4041 end
4042
4043
4044 function printhowtorecompile ()
4045 -- Tells the user how to recompile to regenerate the configuration files.
4046 print ("lwarpmk: The configuration files lwarpmk.conf and "..sourcename.."lwarpmkconf")
4047 print ("lwarpmk: must be updated. To do so, recompile")
4048 print ("lwarpmk: " , sourcename.."tex")
4049 if (printlatexcmd == "") then
4050 print ("lwarpmk: using xe/luatex/pdflatex,")
4051 else
4052 print ("lwarpmk: using the command:")
4053 print ("lwarpmk: " , printlatexcmd)
4054 end
4055 print ("lwarpmk: then use lwarpmk again.")
4056 end -- printhowtorecompile
4057
4058
4059 function ignoreconf ()
4060 -- Global argument index
4061 argindex = 2
4062 end

```

```

4063
4064 function loadconf ()
4065 --
4066 -- Load settings from the project's "lwarpmk.conf" file:
4067 --
4068 -- Default configuration filename:
4069 local conffile = "lwarpmk.conf"
4070 local confroot = "lwarpmk"
4071 -- Global argument index
4072 argindex = 2
4073 -- Optional configuration filename:
4074 if (arg[argindex] == "-p") then
4075 argindex = argindex + 1
4076 confroot = arg[argindex]
4077 conffile = confroot.."lwarpmk.conf"
4078 argindex = argindex + 1
4079 end
4080 -- Additional defaults:
4081 confversion = "0"
4082 opsystem = "Unix"
4083 imagesdirectory = "lateximages"
4084 imagesname = "image-"
4085 latexmk = "false"
4086 printlatexcmd = ""
4087 HTMLlatexcmd = ""
4088 printindexcmd = ""
4089 HTMLindexcmd = ""
4090 latexmkindexcmd = ""
4091 -- to be removed:
4092 -- indexprog = "makeindex"
4093 -- makeindexstyle = "lwarp.ist"
4094 -- xindylanguage = "english"
4095 -- xindycodepage = "utf8"
4096 -- xindystyle = "lwarp.xdy"
4097 -- pdftotextenc = "UTF-8"
4098 glossarycmd = "makeglossaries"
4099 -- Verify the file exists:
4100 if (lfs.attributes(conffile,"mode")==nil) then
4101 -- file not exists
4102 print ("lwarpmk: ===")
4103 print ("lwarpmk: File \" .. conffile ..\" does not exist.")
4104 print ("lwarpmk: Move to the project's source directory,")
4105 print ("lwarpmk: recompile using pdflatex, xelatex, or lualatex,")
4106 print ("lwarpmk: then try using lwarpmk again.")
4107 if (arg[argindex] ~= nil) then
4108 print (
4109 "lwarpmk: (\" .. confroot ..
4110 "\" does not appear to be a project name.)"
4111)
4112 end
4113 print ("lwarpmk: ===")
4114 printhelp () ;
4115 os.exit(1) -- exit the entire lwarpmk script
4116 else -- file exists
4117 -- Read the file:

```

```

4118 print ("lwarpmk: Reading " .. conffile .. ".")
4119 local cfile = io.open(conffile)
4120 -- Scan each line, parsing each line as: name = [[string]]
4121 local linenum = 0
4122 for line in cfile:lines() do -- scan lines
4123 linenum = linenum + 1
4124 i,j,cvarname,cvalue = string.find (line,"([%w-]*)%s*=%s*%[%[(^%)]*)%]") ;
4125 -- Error if incorrect enclosing characters:
4126 if (i == nil) then
4127 print ("lwarpmk: ===")
4128 print ("lwarpmk: " .. linenum .. " : " .. line) ;
4129 print ("lwarpmk: Incorrect entry in " .. conffile .. ".\n") ;
4130 print ("lwarpmk: ===")
4131 -- printconf () ;
4132 os.exit(1) ;
4133 end -- nil
4134 if (cvarname == "confversion") then
4135 confversion = cvalue
4136 elseif (cvarname == "opsystem") then
4137 -- Verify choice of opsystem:
4138 if ((cvalue == "Unix") or (cvalue == "Windows")) then
4139 opsystem = cvalue
4140 else
4141 cvalueerror (line, linenum , cvalue)
4142 end
4143 elseif (cvarname == "sourcename") then sourcename = cvalue
4144 elseif (cvarname == "homehtmlfilename") then homehtmlfilename = cvalue
4145 elseif (cvarname == "htmlfilename") then htmlfilename = cvalue
4146 elseif (cvarname == "imagesdirectory") then imagesdirectory = cvalue
4147 elseif (cvarname == "imagesname") then imagesname = cvalue
4148 elseif (cvarname == "latexmk") then latexmk = cvalue
4149 elseif (cvarname == "printlatexcmd") then printlatexcmd = cvalue
4150 elseif (cvarname == "HTMLlatexcmd") then HTMLlatexcmd = cvalue
4151 elseif (cvarname == "printindexcmd") then printindexcmd = cvalue
4152 elseif (cvarname == "HTMLindexcmd") then HTMLindexcmd = cvalue
4153 elseif (cvarname == "latexmkindexcmd") then latexmkindexcmd = cvalue
4154 elseif (cvarname == "glossarycmd") then glossarycmd = cvalue
4155 elseif (cvarname == "pdftotextenc") then pdftotextenc = cvalue
4156 else
4157 print ("lwarpmk: ===")
4158 print ("lwarpmk: " .. linenum .. " : " .. line) ;
4159 print (
4160 "lwarpmk: Incorrect variable name \"" .. cvarname .. "\" in " ..
4161 conffile .. ".\n"
4162) ;
4163 print ("lwarpmk: ===")
4164 -- printconf () ;
4165 os.exit(1) ;
4166 end -- cvarname
4167 end -- do scan lines
4168 io.close(cfile)
4169 end -- file exists
4170 -- Error if sourcename is "lwarp".
4171 -- This could happen if a local copy of lwarp has recently been recompiled.
4172 if sourcename=="lwarp" then

```

```

4173 print ("lwarpmk: ===")
4174 print ("lwarpmk: lwarp.sty has recently been recompiled in this directory,")
4175 print ("lwarpmk: and \"lwarpmk.conf\" is no longer set for your own project.")
4176 print ("lwarpmk: Recompile your own project using pdf/latex/xelatex <projectname>.")
4177 print ("lwarpmk: After a recompile, \"lwarpmk.conf\" will be set for your project,")
4178 print ("lwarpmk: and you may again use lwarpmk.")
4179 print ("lwarpmk: ===")
4180 os.exit(1)
4181 end -- sourcename of "lwarp"
4182 -- Select some operating-system commands:
4183 if opsystem=="Unix" then -- For Unix / Linux / Mac OS:
4184 rmname = "rm"
4185 mvname = "mv"
4186 cpname = "cp"
4187 touchnamepre = "touch"
4188 touchnamepost = ""
4189 newtouchname = "touch"
4190 dirslash = "/"
4191 opquote= "\""
4192 cmdgroupopenname = " ("
4193 cmdgroupclosename = ") "
4194 seqname = " && "
4195 bname = " &"
4196 elseif opsystem=="Windows" then -- For Windows
4197 rmname = "DEL"
4198 mvname = "MOVE"
4199 cpname = "COPY"
4200 touchnamepre = "COPY /b"
4201 touchnamepost = "+,,"
4202 newtouchname = "echo empty >"
4203 dirslash = "\\"
4204 opquote= "\""
4205 cmdgroupopenname = ""
4206 cmdgroupclosename = ""
4207 seqname = " & "
4208 bname = ""
4209 else
4210 print ("lwarpmk: ===")
4211 print ("lwarpmk: Select Unix or Windows for opsystem.")
4212 print ("lwarpmk: ===")
4213 os.exit(1)
4214 end --- for Windows
4215 -- Warning if the operating system does not appear to be correct,
4216 -- in case files were transferred to another system.
4217 if ((package.config:sub(1,1)) ~= dirslash) then
4218 print ("lwarpmk: ===")
4219 print ("lwarpmk: It appears that lwarpmk.conf is for a different operating system.")
4220 printhowtorecompile ()
4221 print ("lwarpmk: ===")
4222 os.exit(1)
4223 end
4224 -- Error if the configuration file's version is not current:
4225 if (confversion ~= requiredconfversion) then
4226 print ("lwarpmk: ===")
4227 printhowtorecompile ()

```

```
4228 print ("lwarpmk: ===")
4229 os.exit(1)
4230 end
4231 end -- loadconf
4232
4233
4234 function executecheckerror (executecommands , errormessage)
4235 --
4236 -- Execute an operating system call,
4237 -- and maybe exit with an error message.
4238 --
4239 local err
4240 err = os.execute (executecommands)
4241 if (err ~= 0) then
4242 print ("lwarpmk: ===")
4243 print ("lwarpmk: " .. errormessage)
4244 print ("lwarpmk: ===")
4245 os.exit(1)
4246 end
4247 end -- executecheckerror
4248
4249
4250 function refreshdate ()
4251 os.execute(touchnamepre .. " " .. sourcename .. ".tex " .. touchnamepost)
4252 end
4253
4254
4255
4256 function reruntoget (filesourse)
4257 --
4258 -- Scan the LaTeX log file for the phrase "Rerun to get",
4259 -- indicating that the file should be compiled again.
4260 -- Return true if found.
4261 --
4262 local fsource = io.open(filesourse)
4263 for line in fsource:lines() do
4264 if (string.find(line,"Rerun to get") ~= nil) then
4265 io.close(fsource)
4266 return true
4267 end -- if
4268 end -- do
4269 io.close(fsource)
4270 return false
4271 end
4272
4273
4274
4275 function onetime (latexcmd, fsuffix)
4276 --
4277 -- Compile one time, return true if should compile again.
4278 -- fsuffix is "" for print, "_html" for HTML output.
4279 --
4280 print("lwarpmk: Compiling with: " .. latexcmd)
4281 executecheckerror (
4282 latexcmd ,
```

```
4283 "Compile error."
4284)
4285 return (reruntoget(sourcename .. fsuffix .. ".log")) ;
4286 end
4287
4288
4289 function manytimes (latexcmd, fsuffix)
4290 --
4291 -- Compile up to five times.
4292 -- fsuffix is "" for print, "_html" for HTML output
4293 --
4294 if onetime(latexcmd, fsuffix) == true then
4295 if onetime(latexcmd, fsuffix) == true then
4296 if onetime(latexcmd, fsuffix) == true then
4297 if onetime(latexcmd, fsuffix) == true then
4298 if onetime(latexcmd, fsuffix) == true then
4299 end end end end end
4300 end
4301
4302
4303 function verifyfileexists (filename)
4304 --
4305 -- Exit if the given file does not exist.
4306 --
4307 if (lfs.attributes (filename , "modification") == nil) then
4308 print ("lwarpmk: ===")
4309 print ("lwarpmk: " .. filename .. " not found.") ;
4310 print ("lwarpmk: ===")
4311 os.exit (1) ;
4312 end
4313 end
4314
4315
4316
4317 function pdftohtml ()
4318 --
4319 -- Convert <project>_html.pdf into HTML files:
4320 --
4321 -- Convert to text:
4322 print ("lwarpmk: Converting " .. sourcename
4323 .. "_html.pdf to " .. sourcename .. "_html.html")
4324 os.execute("pdftotext -enc " .. pdftotextenc .. " -nopgbrk -layout "
4325 .. sourcename .. "_html.pdf " .. sourcename .. "_html.html")
4326 -- Split the result into individual HTML files:
4327 splitfile (homehtmlfilename .. ".html" , sourcename .. "_html.html")
4328 end
4329
4330
4331 function removeaux ()
4332 --
4333 -- Remove auxiliary files:
4334 -- All .aux files are removed since there may be many bbl*.aux files.
4335 --
4336 os.execute (rmname .. " *.aux " ..
4337 sourcename .. ".toc " .. sourcename .. "_html.toc " ..
```

```

4338 sourcename .. ".lof " .. sourcename .. "_html.lof " ..
4339 sourcename .. ".lot " .. sourcename .. "_html.lot " ..
4340 " *.idx " ..
4341 " *.ind " ..
4342 sourcename .. ".ps " .. sourcename .. "_html.ps " ..
4343 sourcename .. ".log " .. sourcename .. "_html.log " ..
4344 sourcename .. ".gl*" .. sourcename .. "_html.gl*" ..
4345 " *_html_inc.* "
4346)
4347 end
4348
4349 function checkhtmlpdfexists ()
4350 --
4351 -- Error if the HTML document does not exist.
4352 -- The lateximages are drawn from the HTML PDF version of the document,
4353 -- so "lwarpmk html" must be done before "lwarpmk limages".
4354 --
4355 local htmlpdffile = io.open(sourcename .. "_html.pdf", "r")
4356 if (htmlpdffile == nil) then
4357 print ("")
4358 print ("lwarpmk: ===")
4359 print ("lwarpmk: The HTML version of the document does not exist.")
4360 print ("lwarpmk: Enter \"lwarpmk html\" to compile the HTML version.")
4361 print ("lwarpmk: ===")
4362 os.exit(1)
4363 end
4364 io.close (htmlpdffile)
4365 end -- checkhtmlpdfexists
4366
4367
4368 function warnlimages ()
4369 --
4370 -- Warning of a missing <sourcename>-images.txt file:
4371 print ("lwarpmk: ===")
4372 print ("lwarpmk: \"\" .. sourcename .. "-images.txt\" does not exist.")
4373 print ("lwarpmk: Your project does not use SVG math or other lateximages,")
4374 print ("lwarpmk: or the file has been deleted somehow.")
4375 print ("lwarpmk: Use \"lwarpmk html1\" to recompile your project")
4376 print ("lwarpmk: and recreate \"\" .. sourcename .. "-images.txt\".")
4377 print ("lwarpmk: If your project does not use SVG math or other lateximages,")
4378 print ("lwarpmk: then \"\" .. sourcename .. "-images.txt\" will never exist, and")
4379 print ("lwarpmk: \"lwarpmk limages\" will not be necessary.")
4380 print ("lwarpmk: ===")
4381 end -- warnlimages
4382
4383
4384 function warnlimagesrecompile ()
4385 -- Warning if must recompile before creating limages:
4386 print ("")
4387 print ("lwarpmk: ===")
4388 print ("lwarpmk: Cross-references are not yet correct.")
4389 print ("lwarpmk: The document must be recompiled before creating the lateximages.")
4390 print ("lwarpmk: Enter \"lwarpmk html1\" again, then try \"lwarpmk limages\" again.")
4391 print ("lwarpmk: ===")
4392 end --warnlimagesrecompile

```

```

4393
4394
4395 function checklimages ()
4396 --
4397 -- Check <sourcename>.txt to see if need to recompile first.
4398 -- If any entry has a page number of zero, then there were incorrect images.
4399 --
4400 print ("lwarpmk: Checking for a valid " .. sourcename .. "-images.txt file.")
4401 local limagesfile = io.open(sourcename .. "-images.txt", "r")
4402 if (limagesfile == nil) then
4403 warnlimages ()
4404 os.exit(1)
4405 end
4406 -- Track warning to recompile if find a page 0
4407 local pagezerowarning = false
4408 -- Scan <sourcename>.txt
4409 for line in limagesfile:lines() do
4410 -- lwimgpage is the page number in the PDF which has the image
4411 -- lwimghash is true if this filename is a hash
4412 -- lwimgname is the lateximage filename root to assign for the image
4413 i,j,lwimgpage,lwimghash,lwimgname = string.find (line,"|(.*)|(.*)|(.*)|")
4414 -- For each entry:
4415 if ((i~=nil)) then
4416 -- If the page number is 0, image references are incorrect
4417 -- and must recompile the soure document:
4418 if (lwimgpage == "0") then
4419 pagezerowarning = true
4420 end
4421 end -- if i~=nil
4422 end -- do
4423 -- The last line should be |end|end|end|.
4424 -- If not, the compile must have aborted, and the images are incomplete.
4425 if (lwimgpage ~= "end") then
4426 warnlimagesrecompile()
4427 os.exit(1) ;
4428 end
4429 if (pagezerowarning) then
4430 warnlimagesrecompile()
4431 os.exit(1) ;
4432 end -- pagezerowarning
4433 end -- checklimages
4434
4435
4436 function createuniximage (lwimgfullname)
4437 --
4438 -- Create one lateximage for Unix / Linux / Mac OS.
4439 --
4440 executecheckerror (
4441 cmdgroupopenname ..
4442 "pdfseparate -f " .. lwimgpage .. " -l " .. lwimgpage .. " " ..
4443 sourcename .. "_html.pdf " ..
4444 imagesdirectory .. dirslash .. "lateximagetemp-%d" .. ".pdf" ..
4445 seqname ..
4446 -- Crop the image:
4447 "pdfcrop --hires " .. imagesdirectory .. dirslash .. "lateximagetemp-" ..

```

```

4448 lwimgpage .. ".pdf" " ..
4449 imagesdirectory .. dirslash .. lwimgname .. ".pdf" ..
4450 seqname ..
4451 -- Convert the image to svg:
4452 "pdftocairo -svg -noshrink " .. imagesdirectory .. dirslash .. lwimgname .. ".pdf" ..
4453 imagesdirectory .. dirslash .. lwimgname .. ".svg" ..
4454 seqname ..
4455 -- Remove the temporary files:
4456 rmname .. " " .. imagesdirectory .. dirslash .. lwimgname .. ".pdf" .. seqname ..
4457 rmname .. " " .. imagesdirectory .. dirslash .. "lateximagetemp-" .. lwimgpage .. ".pdf" ..
4458 cmdgroupclosename .. " >/dev/null " .. bname
4459 ,
4460 "File error trying to convert " .. lwimgfullname
4461)
4462 -- Every 32 images, wait for completion at below normal priority,
4463 -- allowing other image tasks to catch up.
4464 numimageprocesses = numimageprocesses + 1
4465 if (numimageprocesses > 32) then
4466 numimageprocesses = 0
4467 print ("lwarpmk: waiting")
4468 executecheckerror ("wait" , "File error trying to wait.")
4469 end
4470 end -- createuniximage
4471
4472
4473 function createwindowsimage (lwimgfullname)
4474 --
4475 -- Create one lateximage for Windows.
4476 --
4477 -- Every 32 images, wait for completion at below normal priority,
4478 -- allowing other image tasks to catch up.
4479 numimageprocesses = numimageprocesses + 1
4480 if (numimageprocesses > 32) then
4481 numimageprocesses = 0
4482 thiswaitcommand = "/WAIT /BELOWNORMAL"
4483 print ("lwarpmk: waiting")
4484 else
4485 thiswaitcommand = ""
4486 end
4487 -- Execute the image generation command
4488 executecheckerror (
4489 "start /B " .. thiswaitcommand .. " \"\" lwarp_one_limage " ..
4490 lwimgpage .. " " ..
4491 lwimghash .. " " ..
4492 lwimgname .. " " ..
4493 sourcename .. " <nul >nul"
4494 ,
4495 "File error trying to create image."
4496)
4497 end -- createwindowsimage
4498
4499
4500 function createonelateximage (line)
4501 --
4502 -- Given the next line of <sourcename>.txt, convert a single image.

```

```

4503 --
4504 -- lwimpage is the page number in the PDF which has the image
4505 -- lwimghash is true if this filename is a hash
4506 -- lwimgname is the lateximage filename root to assign for the image
4507 i,j,lwimpage,lwimghash,lwimgname = string.find (line,"|(.*)|(.*)|(.*)|")
4508 -- For each entry:
4509 if ((i~=nil)) then
4510 -- Skip if the page number is 0:
4511 if (lwimpage == "0") then
4512 pagezerowarning = true
4513 -- Skip if the page number is "end":
4514 else if (lwimpage == "end") then
4515 else
4516 -- Skip is this image is hashed and already exists:
4517 local lwimgfullname = imagesdirectory .. dirslash .. lwimgname .. ".svg"
4518 if (
4519 (lwimghash ~= "true") or
4520 (lfs.attributes(lwimgfullname,"mode")==nil) -- file not exists
4521)
4522 then -- not hashed or not exists:
4523 -- Print the name of the file being generated:
4524 print ("lwarpmk: " .. lwimgname)
4525 -- Touch/create the dest so that only once instance tries to build it:
4526 executecheckerror (
4527 newtouchname .. " " .. lwimgfullname ,
4528 "File error trying to touch " .. lwimgfullname
4529)
4530 -- Separate out the image into its own single-page pdf:
4531 if opsystem=="Unix" then
4532 createuniximage (lwimgfullname)
4533 elseif opsystem=="Windows" then
4534 createwindowsimage (lwimgfullname)
4535 end
4536 end -- not hashed or not exists
4537 end -- not page "end"
4538 end -- not page 0
4539 end -- not nil
4540 end -- createonelateximage
4541
4542
4543 function createlateximages ()
4544 --
4545 -- Create lateximages based on <sourcename>-images.txt:
4546 --
4547 -- See if the document must be recompiled first:
4548 checklimages ()
4549 -- See if the HTML version exists:
4550 checkhtmlpdfexists ()
4551 -- Attempt to create the lateximages:
4552 print ("lwarpmk: Creating lateximages.")
4553 local limagesfile = io.open(sourcename .. "-images.txt", "r")
4554 if (limagesfile == nil) then
4555 warnlimages ()
4556 os.exit(1)
4557 end

```

```
4558 -- Create the lateximages directory, ignore error if already exists
4559 err = os.execute("mkdir " .. imagesdirectory)
4560 -- For Windows, create lwarp_one_limage.cmd from lwarp_one_limage.txt:
4561 if opsystem=="Windows" then
4562 executecheckerror (
4563 cpname .. " lwarp_one_limage.txt lwarp_one_limage.cmd" ,
4564 "File error trying to copy lwarp_one_limage.txt to lwarp_one_limage.cmd"
4565)
4566 end -- create lwarp_one_limage.cmd
4567 -- Track the number of parallel processes
4568 numimageprocesses = 0
4569 -- Track warning to recompile if find a page 0
4570 pagezerowarning = false
4571 -- Scan <sourcename>.txt
4572 for line in limagesfile:lines() do
4573 createonelateximage (line)
4574 end -- do
4575 io.close(limagesfile)
4576 print ("lwarpmk limages: ===")
4577 print ("lwarpmk limages: Wait a moment for the images to complete")
4578 print ("lwarpmk limages: before reloading the page.")
4579 print ("lwarpmk limages: ===")
4580 print ("lwarpmk limages: Done.")
4581 if (pagezerowarning == true) then
4582 print ("lwarpmk limages: WARNING: Images will be incorrect.")
4583 print ("lwarpmk limages: Enter \"lwarpmk cleanlimages\", then")
4584 print ("lwarpmk limages: recompile the document one more time, then")
4585 print ("lwarpmk limages: repeat \"lwarpmk images\" again.")
4586 end -- pagezerowarning
4587 end -- function
4588
4589
4590 function convertepstopdf ()
4591 --
4592 -- Converts EPS files to PDF files.
4593 -- The filenames are arg[argindex] and up.
4594 -- arg[1] is the command "pdftosvg".
4595 --
4596 ignoreconf ()
4597 for i = argindex , #arg do
4598 if (lfs.attributes(arg[i],"mode")==nil) then
4599 print ("lwarpmk: File \"" .. arg[i] .. "\" does not exist.")
4600 else
4601 print ("lwarpmk: Converting \"" .. arg[i] .. "\"")
4602 os.execute ("epstopdf " .. arg[i])
4603 end -- if
4604 end -- do
4605 end --function
4606
4607
4608 function convertpdftosvg ()
4609 --
4610 -- Converts PDF files to SVG files.
4611 -- The filenames are arg[argindex] and up.
4612 -- arg[1] is the command "pdftosvg".
```

```
4613 --
4614 ignoreconf ()
4615 for i = argindex , #arg do
4616 if (lfs.attributes(arg[i],"mode")==nil) then
4617 print ("lwarpmk: File \"" .. arg[i] .. "\" does not exist.")
4618 else
4619 print ("lwarpmk: Converting \"" .. arg[i] .. "\"")
4620 os.execute ("pdftocairo -svg " .. arg[i])
4621 end -- if
4622 end -- do
4623 end --function
4624
4625
4626 -- Force an update and conclude processing:
4627 function updateanddone ()
4628 print ("lwarpmk: Forcing an update of " .. sourcename .. ".tex.")
4629 refreshdate ()
4630 print ("lwarpmk: " .. sourcename .. ".tex is ready to be recompiled.")
4631 print ("lwarpmk: Done.")
4632 end -- function
4633
4634
4635 -- Start of the main code: --
4636
4637
4638 -- lwarpmk --version :
4639
4640 if (arg[1] == "--version") then
4641 print ("lwarpmk: " .. printversion)
4642
4643 else -- not --version
4644
4645
4646 -- print intro:
4647
4648 print ("lwarpmk: " .. printversion .. " Automated make for the LaTeX lwarp package.")
4649
4650
4651 -- lwarpmk print:
4652
4653 if arg[1] == "print" then
4654 loadconf ()
4655 if (latexmk == "true") then
4656 print ("lwarpmk: Compiling with: " .. printlatexcmd)
4657 executecheckerror (
4658 printlatexcmd ,
4659 "Compile error."
4660)
4661 print ("lwarpmk: Done.")
4662 else -- not latexmk
4663 verifyfileexists (sourcename .. ".tex") ;
4664 -- See if up to date:
4665 if (
4666 (lfs.attributes (sourcename .. ".pdf" , "modification") == nil) or
4667 (
```

```
4668 lfs.attributes (sourcename .. ".tex" , "modification") >
4669 lfs.attributes (sourcename .. ".pdf" , "modification")
4670)
4671) then
4672 -- Recompile if not yet up to date:
4673 manytimes(printlatexcmd, "")
4674 print ("lwarpmk: Done.") ;
4675 else
4676 print ("lwarpmk: " .. sourcename .. ".pdf is up to date.") ;
4677 end
4678 end -- not latexmk
4679
4680
4681 -- lwarpmk print1:
4682
4683 elseif arg[1] == "print1" then
4684 loadconf ()
4685 verifyfileexists (sourcename .. ".tex") ;
4686 onetime(printlatexcmd, "")
4687 print ("lwarpmk: Done.") ;
4688
4689
4690 -- lwarpmk printindex:
4691 -- Compile the index then touch the source
4692 -- to trigger a recompile of the document:
4693
4694 elseif arg[1] == "printindex" then
4695 loadconf ()
4696 os.execute (printindexcmd)
4697 print ("lwarpmk: -----")
4698 updateanddone ()
4699
4700
4701 -- lwarpmk printglossary:
4702 -- Compile the glossary then touch the source
4703 -- to trigger a recompile of the document:
4704
4705 elseif arg[1] == "printglossary" then
4706 loadconf ()
4707 print ("lwarpmk: Processing the glossary.")
4708
4709 os.execute(glossarycmd .. " " .. sourcename)
4710 updateanddone ()
4711
4712
4713 -- lwarpmk html:
4714
4715 elseif arg[1] == "html" then
4716 loadconf ()
4717 if (latexmk == "true") then
4718 print ("lwarpmk: Compiling with: " .. HTMLlatexcmd)
4719 executecheckerror (
4720 HTMLlatexcmd ,
4721 "Compile error."
4722)
```

```
4723 pdftohtml ()
4724 print ("lwarpmk: Done.")
4725 else -- not latexmk
4726 verifyfileexists (sourcename .. ".tex") ;
4727 -- See if exists and is up to date:
4728 if (
4729 (lfs.attributes (homehtmlfilename .. ".html" , "modification") == nil) or
4730 (
4731 lfs.attributes (sourcename .. ".tex" , "modification") >
4732 lfs.attributes (homehtmlfilename .. ".html" , "modification")
4733)
4734) then
4735 -- Recompile if not yet up to date:
4736 manytimes(HTMLlatexcmd, "_html")
4737 pdftohtml ()
4738 print ("lwarpmk: Done.")
4739 else
4740 print ("lwarpmk: " .. homehtmlfilename .. ".html is up to date.")
4741 end
4742 end -- not latexmk
4743
4744
4745 -- lwarpmk html1:
4746
4747 elseif arg[1] == "html1" then
4748 loadconf ()
4749 verifyfileexists (sourcename .. ".tex") ;
4750 onetime(HTMLlatexcmd, "_html")
4751 pdftohtml ()
4752 print ("lwarpmk: Done.")
4753
4754
4755 -- lwarpmk pdftohtml:
4756 elseif arg[1] == "pdftohtml" then
4757 loadconf ()
4758 pdftohtml ()
4759
4760
4761 -- lwarpmk htmlindex:
4762 -- Compile the index then touch the source
4763 -- to trigger a recompile of the document:
4764
4765 elseif arg[1] == "htmlindex" then
4766 loadconf ()
4767 os.execute (HTMLindexcmd)
4768 print ("lwarpmk: -----")
4769 updateanddone ()
4770
4771
4772 -- lwarpmk htmlglossary:
4773 -- Compile the glossary then touch the source
4774 -- to trigger a recompile of the document.
4775 -- The <sourcename>.xdy file is created by the glossaries package.
4776
4777 elseif arg[1] == "htmlglossary" then
```

```
4778 loadconf ()
4779 print ("lwarpmk: Processing the glossary.")
4780 os.execute(glossarycmd .. " " .. sourcename .. "_html")
4781 updateanddone ()
4782
4783
4784 -- lwarpmk limages:
4785 -- Scan the <sourcename>.txt file to create lateximages.
4786
4787 elseif arg[1] == "limages" then
4788 loadconf ()
4789 print ("lwarpmk: Processing images.")
4790 createlateximages ()
4791 print ("lwarpmk: Done.")
4792
4793
4794 -- lwarpmk again:
4795 -- Touch the source to trigger a recompile.
4796
4797 elseif arg[1] == "again" then
4798 loadconf ()
4799 updateanddone ()
4800
4801
4802 -- lwarpmk clean:
4803 -- Remove project.aux, .toc, .lof, .lot, .log, *.idx, *.ind, *_html_inc.*, .gl*
4804
4805 elseif arg[1] == "clean" then
4806 loadconf ()
4807 removeaux ()
4808 print ("lwarpmk: Done.")
4809
4810
4811 -- lwarpmk cleanall
4812 -- Remove project.aux, .toc, .lof, .lot, .log, *.idx, *.ind, *_html_inc.*, .gl*
4813 -- and also project.pdf, project.dvi, *.html
4814
4815 elseif arg[1] == "cleanall" then
4816 loadconf ()
4817 removeaux ()
4818 os.execute (rmname .. " " ..
4819 sourcename .. ".pdf " .. sourcename .. "_html.pdf " ..
4820 sourcename .. ".dvi " .. sourcename .. "_html.dvi " ..
4821 "*.html"
4822)
4823 print ("lwarpmk: Done.")
4824
4825
4826 -- lwarpmk cleanlimages
4827 -- Remove images from the imagesdirectory.
4828
4829 elseif arg[1] == "cleanlimages" then
4830 loadconf ()
4831 os.execute (rmname .. " " .. imagesdirectory .. dirsslash .. "*")
4832 print ("lwarpmk: Done.")
```

```

4833
4834 -- lwarpmk epstopdf <list of file names>
4835 -- Convert EPS files to PDF using epstopdf
4836 elseif arg[1] == "epstopdf" then
4837 convertepstopdf ()
4838 print ("lwarpmk: Done.")
4839
4840
4841 -- lwarpmk pdftosvg <list of file names>
4842 -- Convert PDF files to SVG using pdftocairo
4843 elseif arg[1] == "pdftosvg" then
4844 convertpdftosvg ()
4845 print ("lwarpmk: Done.")
4846
4847
4848 -- lwarpmk with no argument :
4849
4850 elseif (arg[1] == nil) then
4851 printhelp ()
4852
4853
4854 -- lwarpmk -h or lwarpmk --help :
4855
4856 elseif (arg[1] == "-h") or (arg[1] == "--help") then
4857 printusage ()
4858
4859
4860 -- Unknown command:
4861
4862 else
4863 printhelp ()
4864 print ("\nlwarpmk: ***** Unknown command \""..arg[1].."\". *****\n")
4865 end
4866
4867 end -- not --version
4868 \end{filecontents*}
4869 % \end{Verbatim}% for syntax highlighting
4870 \end{LWR@createlwarpmk}

```

## 41 Stacks

for HTML output: 4871 \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.

## 41.1 Assigning depths

initial depths for empty stack entries:

```
4872 \newcommand*\LWR@depthnone}{-5}
```

All sectioning depths are deeper than LWR@depthfinished:

```
4873 \newcommand*\LWR@depthfinished}{-4}
4874 \newcommand*\LWR@depthbook}{-2}
4875 \newcommand*\LWR@depthpart}{-1}
4876 \newcommand*\LWR@depthchapter}{0}
4877 \newcommand*\LWR@depthsection}{1}
4878 \newcommand*\LWR@depthsubsection}{2}
4879 \newcommand*\LWR@depthsubsubsection}{3}
4880 \newcommand*\LWR@depthparagraph}{4}
4881 \newcommand*\LWR@depthsubparagraph}{5}
```

Used by \itemize, \enumerate, \description:

```
4882 \newcommand*\LWR@depthlist}{6}
```

Used by \item:

```
4883 \newcommand*\LWR@depthlistitem}{7}
4884 \let\LWR@depthdescitem\LWR@depthlistitem
```

## 41.2 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.

```
4885 \newcommand*\LWR@closeone}{% top of the stack
4886 \newcommand*\LWR@closetwo}{%
4887 \newcommand*\LWR@closethree}{%
4888 \newcommand*\LWR@closefour}{%
4889 \newcommand*\LWR@closefive}{%
4890 \newcommand*\LWR@closesix}{%
4891 \newcommand*\LWR@closeseven}{%
4892 \newcommand*\LWR@closeeight}{%
4893 \newcommand*\LWR@closenine}{%
4894 \newcommand*\LWR@closeten}{%
4895 \newcommand*\LWR@closeeleven}{%
4896 \newcommand*\LWR@closetwelve}{%
```

### 41.3 Closing depths

A stack to record the depth of each level:



Note that nested L<sup>A</sup>T<sub>E</sub>X structures may push depths which are non-sequential.

*Ex:*

---

```
\begin{itemize}
 \item{A}
 \begin{description}
 \item{B}
 \end{description}
\end{itemize}
```

---

```
4897 \newcommand*\LWR@closedepthone{\LWR@depthnone}% top of the stack
4898 \newcommand*\LWR@closedepthtwo{\LWR@depthnone}
4899 \newcommand*\LWR@closedepththree{\LWR@depthnone}
4900 \newcommand*\LWR@closedepthfour{\LWR@depthnone}
4901 \newcommand*\LWR@closedepthfive{\LWR@depthnone}
4902 \newcommand*\LWR@closedepthsix{\LWR@depthnone}
4903 \newcommand*\LWR@closedepthseven{\LWR@depthnone}
4904 \newcommand*\LWR@closedeptheight{\LWR@depthnone}
4905 \newcommand*\LWR@closedepthnine{\LWR@depthnone}
4906 \newcommand*\LWR@closedephten{\LWR@depthnone}
4907 \newcommand*\LWR@closedeptheleven{\LWR@depthnone}
4908 \newcommand*\LWR@closedephtwelve{\LWR@depthnone}
```

### 41.4 Pushing and popping the stack

`\LWR@pushclose` {<sectiontype>}

Pushes one return action and its L<sup>A</sup>T<sub>E</sub>X depth onto the stacks.

```
4909 \NewDocumentCommand{\LWR@pushclose}{m}
4910 {%
4911 \global\let\LWR@closetwelve\LWR@closeeeleven%
4912 \global\let\LWR@closeeeleven\LWR@closeeten%
4913 \global\let\LWR@closeeten\LWR@closeenine%
4914 \global\let\LWR@closeenine\LWR@closeeeight%
4915 \global\let\LWR@closeeeight\LWR@closeeseven%
4916 \global\let\LWR@closeeseven\LWR@closeesix%
4917 \global\let\LWR@closeesix\LWR@closeefive%
4918 \global\let\LWR@closeefive\LWR@closeefour%
4919 \global\let\LWR@closeefour\LWR@closethree%
4920 \global\let\LWR@closethree\LWR@closetwo%
4921 \global\let\LWR@closetwo\LWR@closeone%
4922 \global\csletcs{LWR@closeone}{LWR@printclose#1}%
4923 \global\let\LWR@closedephtwelve\LWR@closedeptheleven%
4924 \global\let\LWR@closedeptheleven\LWR@closedephten%
```

```

4925 \global\let\LWR@closedepthten\LWR@closedepthnine%
4926 \global\let\LWR@closedepthnine\LWR@closedeptheight%
4927 \global\let\LWR@closedeptheight\LWR@closedepthseven%
4928 \global\let\LWR@closedepthseven\LWR@closedepthsix%
4929 \global\let\LWR@closedepthsix\LWR@closedepthfive%
4930 \global\let\LWR@closedepthfive\LWR@closedepthfour%
4931 \global\let\LWR@closedepthfour\LWR@closedepththree%
4932 \global\let\LWR@closedepththree\LWR@closedepthtwo%
4933 \global\let\LWR@closedepthtwo\LWR@closedepthone%
4934 \global\csletcs{LWR@closedepthone}{LWR@depth#1}%
4935 }

```

`\LWR@popclose` Pops one action and its depth off the stacks.

```

4936 \newcommand*{\LWR@popclose}
4937 {%
4938 \global\let\LWR@closeone\LWR@closetwo%
4939 \global\let\LWR@closetwo\LWR@closethree%
4940 \global\let\LWR@closethree\LWR@closefour%
4941 \global\let\LWR@closefour\LWR@closefive%
4942 \global\let\LWR@closefive\LWR@closesix%
4943 \global\let\LWR@closesix\LWR@closeseven%
4944 \global\let\LWR@closeseven\LWR@closeeight%
4945 \global\let\LWR@closeeight\LWR@closenine%
4946 \global\let\LWR@closenine\LWR@closeten%
4947 \global\let\LWR@closeten\LWR@closeeleven%
4948 \global\let\LWR@closeeleven\LWR@closetwelve%
4949 \global\let\LWR@closedepthone\LWR@closedepthtwo%
4950 \global\let\LWR@closedepthtwo\LWR@closedepththree%
4951 \global\let\LWR@closedepththree\LWR@closedepthfour%
4952 \global\let\LWR@closedepthfour\LWR@closedepthfive%
4953 \global\let\LWR@closedepthfive\LWR@closedepthsix%
4954 \global\let\LWR@closedepthsix\LWR@closedepthseven%
4955 \global\let\LWR@closedepthseven\LWR@closedeptheight%
4956 \global\let\LWR@closedeptheight\LWR@closedepthnine%
4957 \global\let\LWR@closedepthnine\LWR@closedepthten%
4958 \global\let\LWR@closedepthten\LWR@closedeptheleven%
4959 \global\let\LWR@closedeptheleven\LWR@closedepthtwelve%
4960 }

4961 \end{warpHTML}

```

## 42 Data arrays

These macros are similar to the `arrayjobx` package, except that `\LWR@setexpparray'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@setexpparray{name}{index}{}
```

**for HTML output:** 4962 \begin{warpHTML}

```
\LWR@setexpparray {<name>} {<index>} {<contents>}
```

```
4963 \NewDocumentCommand{\LWR@setexpparray}{m m m}{%
4964 \begingroup%
4965 \let\par\relax%
4966 \xdef\LWR@thisexpparrayname{#1#2}%
4967 \ifstrempy{#3}%
4968 {\csgdef{\LWR@thisexpparrayname}{}}%
4969 {\csxdef{\LWR@thisexpparrayname}{#3}}%
4970 \endgroup%
4971 }
```


```
\LWR@getexpparray {<name>} {<index>}
```

```
4972 \newcommand*{\LWR@getexpparray}[2]{%
4973 \@nameuse{#1#2}%
4974 }

4975 \end{warpHTML}
```

## 43 Localizing catcodes

**for HTML & PRINT:** 4976 \begin{warpall}

 **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.

```
4977 \newcommand{\StartDefiningTabulars}{%
4978 \LWR@traceinfo{StartDefiningTabulars}%
4979 \warpHTMLonly{\catcode'\&=\active}%
4980 }
```

**\StopDefiningTabulars** Place after defining something with & in it.

```
4981 \newcommand{\StopDefiningTabulars}{%
4982 \LWR@traceinfo{StopDefiningTabulars}%
4983 \warpHTMLonly{\catcode'\&=4}%
4984 }
```

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.

```
4985 \newbool{LWR@mathmacro}
4986 \boolfalse{LWR@mathmacro}
```

\StartDefiningMath Place before defining something with \$ in it.

```
4987 \newcommand{\StartDefiningMath}{%
4988 \LWR@traceinfo{StartDefiningMath}%
4989 \warpHTMLonly{\catcode'\$=\active}%
4990 }
```

\StopDefiningMath Place after defining something with \$ in it.

```
4991 \newcommand{\StopDefiningMath}{%
4992 \LWR@traceinfo{StopDefiningMath}%
4993 \warpHTMLonly{\catcode'\$=3}% math shift
4994 }
```

```
4995 \end{warpall}
```

## 44 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`:

---

```
\xpatchcmd{\macroname}
 {$math expression$}
 {\inlinemathother$math expression$\inlinemathnormal}
 {}
 {\typeout{Error patching macroname.}}
```

---

**for HTML & PRINT:** 4996 \begin{warpall}

Bool LWR@dynamicmath True to mark inline math which is dynamic in nature, thus should not be hashed for reuse.  
 Default: false

```
4997 \newbool{LWR@dynamicmath}
4998 \boolfalse{LWR@dynamicmath}
```

\inlinemathother Place before using \$ ... \$ or \(\dots\) if the contents of the math are not static, depending on counters or dynamic macros.

```
4999 \newcommand{\inlinemathother}{%
5000 \LWR@traceinfo{inlinemathother}%
5001 \booltrue{LWR@dynamicmath}%
5002 }
```

\inlinemathnormal Place after using \$ ... \$ or \(\dots\) with dynamic contents.

```
5003 \newcommand{\inlinemathnormal}{%
5004 \LWR@traceinfo{inlinemathnormal}%
5005 \boolfalse{LWR@dynamicmath}%
5006 }
```

```
5007 \end{warpall}
```

## 45 HTML entities

for HTML output: 5008 \begin{warpHTML}

HTML Unicode entities:

```
5009 \let\LWR@origampersand\&
```

\HTMLentity {*<entitytag>*}

```
5010 \newcommand*{\HTMLentity}[1]{%
5011 % \LWR@traceinfo{HTMLentity \detokenize{#1}}%
5012 \begingroup%
5013 \LWR@FBcancel%
5014 \LWR@origampersand#1;%
5015 \endgroup%
5016 % \LWR@traceinfo{HTMLentity done}%
5017 }
```

\HTMLunicode {*<hex\_unicode>*}

```
5018 \newcommand*{\HTMLunicode}[1]{\HTMLentity{\LWR@origpound{#1}}}
```

\&

```
5019 \renewrobustcmd*{\&}{\HTMLentity{amp}}
```

\textless

```
5020 \let\LWR@origtextless\textless
5021 \renewrobustcmd*{\textless}{\HTMLentity{lt}}
```

\textgreater

```
5022 \let\LWR@origtextgreater\textgreater
5023 \renewrobustcmd*{\textgreater}{\HTMLentity{gt}}

5024 \end{warpHTML}
```

## 46 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:** 5025 \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.

```
5026 \providecommand*{\BaseJobname}{\jobname}
```

\HTMLFilename The prefix for all generated HTML files other than the home page, defaulting to empty. See section 7.4.1.

```
5027 \providecommand*{\HTMLFilename}{}
```

\HomeHTMLFilename The filename of the home page, defaulting to the \BaseJobname. See section 7.4.1.

```
5028 \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.

```
5029 \newcommand*{\SetHTMLFileNumber}[1]{%
5030 \setcounter{LWR@htmlfilenumber}{#1}%
5031 }
```

Bool FileSectionNames Selects how to create HTML file names.

Defaults to use section names in the filenames.

```
5032 \newbool{FileSectionNames}
5033 \booltrue{FileSectionNames}

5034 \end{warpall}
```

**for HTML output:** 5035 \begin{warpHTML}

Ctr LWR@htmlfilenumber Records the number of each HTML file as it is being created. Number 0 is the home page.

```
5036 \newcounter{LWR@htmlfilenumber}
5037 \setcounter{LWR@htmlfilenumber}{0}
```

\LWR@htmlsectionfilename *{\htmlfilenumber or name}*

Prints the filename for a given section: \HTMLFilename{ }filenumber/name.html

```
5038 \newcommand*{\LWR@htmlsectionfilename}[1]{%
5039 \LWR@traceinfo{LWR@htmlsectionfilename A !\detokenize{#1}!}%
```

Section 0 or empty is given the home filename. The filename must be detokenized for underscores.

```
5040 % \LWR@traceinfo{about to assign temp}%
5041 \LWR@sanitize{#1}%
5042 \LWR@traceinfo{about to compare with ??}%
5043 \ifthenelse{\equal{\LWR@sanitized}{??}}{%
5044 {\LWR@traceinfo{found ??}}%
5045 {\LWR@traceinfo{not found ??}}%
5046 \LWR@traceinfo{about to compare with zero or empty}%
5047 \ifthenelse{%
5048 \equal{\LWR@sanitized}{0}%
5049 \OR \equal{\LWR@sanitized}{ }%
5050 \OR \equal{\LWR@sanitized}{??}}%
5051 }%
5052 {%
5053 \LWR@traceinfo{LWR@htmlsectionfilename B \HomeHTMLFilename.html}%
5054 \HomeHTMLFilename.html%
5055 }%
```

For a L<sup>A</sup>T<sub>E</sub>X section named “Index” or “index” without a prefix, create a filename with a leading underscore to avoid colliding with the HTML filename index.html:

```
5056 {%
5057 \LWR@traceinfo{LWR@htmlsectionfilename C \LWR@sanitized}%
5058 \ifthenelse{%
5059 \equal{\HTMLFilename}{ } \AND
5060 \equal{\LWR@sanitized}{Index} \OR
5061 \equal{\LWR@sanitized}{index}%
```

```

5062 }%
5063 {%
5064 \LWR@traceinfo{Prefixing the index name with an underscore.}%
5065 _ \LWR@sanitized.html%
5066 }%

```

Otherwise, create a filename with the chosen prefix:

```

5067 {%
5068 \HTMLFilename\LWR@isolate{\LWR@sanitized}.html%
5069 }%
5070 }%
5071 \LWR@traceinfo{LWR@htmlsectionfilename Z}%
5072 }

```

\LWR@htmlrefsectionfilename {<label>}

Prints the filename for the given label

```

5073 \newcommand*{\LWR@htmlrefsectionfilename}[1]{%
5074 \LWR@traceinfo{LWR@htmlrefsectionfilename: !\detokenize{#1}!}%

```

\LWR@nullfonts to allow math in a section name.

```

5075 \begingroup%
5076 \LWR@nullfonts%
5077 \LWR@htmlsectionfilename{\LWR@htmlfileref{#1}}%
5078 \endgroup%
5079 \LWR@traceinfo{LWR@htmlrefsectionfilename: done}%
5080 }

```

```

5081 \end{warpHTML}

```

## 47 Homepage link

**for HTML & PRINT:** 5082 \begin{warpall}

\linkhomenam Holds the default name for the home link.

```

5083 \newcommand{\linkhomenam}{Home}

```

```

5084 \end{warpall}

```

**for HTML output:** 5085 \begin{warpHTML}

\LinkHome May be used wherever you wish to place a link back to the homepage. The filename must be detokenized for underscores.

```

5086 \newcommand*{\LinkHome}{%
5087 \LWR@subhyperrefclass{\HomeHTMLFilename.html}{\linkhomename}{linkhome}%
5088 }

```

```

5089 \end{warpHTML}

```

**for PRINT output:** 5090 \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.

```

5091 \AtBeginDocument{
5092 \ifundefined{hyperref}{
5093 \newcommand*{\LinkHome}{%
5094 \linkhomename\ --- page \pageref{\BaseJobname-page-LWRfirstpage}%
5095 }
5096 }{
5097 \newcommand*{\LinkHome}{%
5098 \hyperref[\BaseJobname-page-LWRfirstpage]{\linkhomename}%
5099 }
5100 }
5101 }
5102
5103 \AfterEndPreamble{\label{\BaseJobname-page-LWRfirstpage}}

```

5104 \end{warpprint}

**for HTML output:** 5105 \begin{warpHTML}

`\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.

```

5106 \newcommand*{\LWR@topnavigation}{
5107 \LWR@htmllementclassline{nav}{topnavigation}{\LinkHome}
5108 }

```

`\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.

```

5109 \newcommand*{\LWR@botnavigation}{
5110 \LWR@htmllementclassline{nav}{botnavigation}{\LinkHome}
5111 }

```

5112 \end{warpHTML}

## 48 \LWRPrintStack diagnostic tool



Diagnostics tool: Prints the L<sup>A</sup>T<sub>E</sub>X 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:** 5113 \begin{warpHTML}

\LWRPrintStack Prints the closedepth stack.

```
5114 \newcommand*\LWR@subprintstack){
5115 \LWR@closedepthone\ \LWR@closedepthtwo\ \LWR@closedepththree\
5116 \LWR@closedepthfour\ \LWR@closedepthfive\ \LWR@closedepthsix\
5117 \LWR@closedepthseven\ \LWR@closedeptheight\ \LWR@closedepthnine\
5118 \LWR@closedepthten\ \LWR@closedeptheleven\ \LWR@closedepthtwelve\
5119 }
5120
5121 \newcommand*\LWRPrintStack){
5122 \LWR@startpars
5123 \LWR@subprintstack
5124 }

5125 \end{warpHTML}
```

**for PRINT output:** 5126 \begin{warpprint}

```
5127 \newcommand*\LWRPrintStack){}

5128 \end{warpprint}
```

## 49 Closing stack levels

**for HTML output:** 5129 \begin{warpHTML}

Close one nested level:

```
5130 \newcommand*\LWR@closeoneprevious){%
5131
5132 \LWR@closeone
5133
5134 \LWR@popclose
5135 }
```

\LWR@closeprevious {<*sectintype*>)} Close everything up to the given depth:

```
5136 \newcommand*\LWR@closeprevious}[1]{
5137 \LWR@traceinfo{%
5138 \LWR@closeprevious to depth \csuse{LWR@depth#1}, %
5139 depths are \LWR@subprintstack%
5140 }%
```

Close any pending paragraph:

```
5141 \LWR@stoppars%
```

Close anything nested deeper than the desired depth. First close anything deeper, then at most one of the same level.

```
5142 \whileboolexpr{test{\ifnumcomp{\LWR@closedepthone}{>}{\csuse{\LWR@depth#1}}}}%
5143 {%
5144 \LWR@traceinfo{\LWR@closeprevious: closing out depth \LWR@closedepthone}%
5145 \LWR@closeoneprevious%
5146 }%
5147 \ifboolexpr{test{\ifnumcomp{\LWR@closedepthone}{=}{\csuse{\LWR@depth#1}}}}%
5148 {%
5149 \LWR@traceinfo{\LWR@closeprevious: closing out depth \LWR@closedepthone}%
5150 \LWR@closeoneprevious%
5151 }{}%
5152 \LWR@traceinfo{\LWR@closeprevious: done, depths are \LWR@subprintstack}%
5153 }

5154 \end{warpHTML}
```

## 50 PDF pages and styles

**for HTML output:** 5155 \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.

```
5156 \newcommand{\LWR@forcenewpage}{%
5157 \LWR@traceinfo{\LWR@forcenewpage}%
5158 \ifinner\else%
5159 \LWR@stoppars\LWR@orignewpage\LWR@startpars%
5160 \fi%
5161 }
```

\pagestyle, etc. are nullified for HTML output.

\pagestyle {<style>}

```
5162 \renewcommand*{\pagestyle}[1]{}
```

\thispagestyle {<style>}

```
5163 \renewcommand*{\thispagestyle}[1]{}
```

`\markboth`  $\{\langle left \rangle\} \{\langle right \rangle\}$

5164 `\renewcommand*\markboth[2]{}{}`

`\markright`  $\{\langle right \rangle\}$

5165 `\renewcommand*\markright[1]{}{}`

`\raggedbottom`

5166 `\renewcommand*\raggedbottom{}{}`

`\flushbottom`

5167 `\renewcommand*\flushbottom{}{}`

`\sloppy`

5168 `\renewcommand*\sloppy{}{}`

`\fussy`

5169 `\renewcommand*\fussy{}{}`

`\pagenumbering`  $*\{\langle commands \rangle\}$

5170 `\RenewDocumentCommand{\pagenumbering}{s m}{}{}`

5171 `\end{warpHTML}`

## 51 HTML tags, spans, divs, elements

for HTML output: 5172 `\begin{warpHTML}`

### 51.1 Mapping L<sup>A</sup>T<sub>E</sub>X sections to HTML sections

```
5173 \newcommand*\LWR@tagtitle{h1}
5174 \newcommand*\LWR@tagtitleend{/h1}
5175 \newcommand*\LWR@tagbook{div class="book"}
5176 \newcommand*\LWR@tagbookend{/div}
5177 \newcommand*\LWR@tagpart{h2}
5178 \newcommand*\LWR@tagpartend{/h2}
5179 \newcommand*\LWR@tagchapter{h3}
5180 \newcommand*\LWR@tagchapterend{/h3}
5181 \newcommand*\LWR@tagsection{h4}
```

```

5182 \newcommand*\LWR@tagsectionend{/h4}
5183 \newcommand*\LWR@tagsubsection{/h5}
5184 \newcommand*\LWR@tagsubsectionend{/h5}
5185 \newcommand*\LWR@tagsubsubsection{/h6}
5186 \newcommand*\LWR@tagsubsubsectionend{/h6}
5187 \newcommand*\LWR@tagparagraph{\span class="paragraph"}
5188 \newcommand*\LWR@tagparagraphend{/span}
5189 \newcommand*\LWR@tagsubparagraph{\span class="subparagraph"}
5190 \newcommand*\LWR@tagsubparagraphend{/span}
5191
5192 \newcommand*\LWR@tagregularparagraph{p}

```

## 51.2 Babel-French tag modifications

Adjust babel-french for HTML spaces. So far, this only works for *pdf<sub>l</sub>atex* and *xelatex*.

*(Emulates or patches code by DANIEL FLIPO.)*

```

5193 \providecommand*\LWR@FBcancel{}
5194
5195 \AtBeginDocument{%
5196 \ifundefined{frenchbsetup}%
5197 {}%
5198 {%
5199 \frenchbsetup{FrenchFootnotes=false}%
5200 %
5201 \LetLtxMacro\LWR@FBcancel\NoAutoSpacing%
5202 \renewrobustcmd*\FBcolonspace{%
5203 \begingroup%
5204 \LWR@FBcancel%
5205 \LWR@origampersand{}nbsp;%
5206 \endgroup%
5207 }%
5208 \renewrobustcmd*\FBthinspace{%
5209 \begingroup%
5210 \LWR@FBcancel%
5211 \LWR@origampersand\LWR@origpound{x202f;% \,
5212 \endgroup%
5213 }%
5214 \renewrobustcmd*\FBguillspace{%
5215 \begingroup%
5216 \LWR@FBcancel%
5217 \LWR@origampersand{}nbsp;% ~, for \og xyz \fg{}
5218 \endgroup%
5219 }%
5220 \DeclareDocumentCommand\FBmedkern{}{}{%
5221 \begingroup%
5222 \LWR@FBcancel%
5223 \LWR@origampersand\LWR@origpound{x202f;% \,
5224 \endgroup%
5225 }%
5226 \DeclareDocumentCommand\FBthickkern{}{}{%
5227 \begingroup%

```

```

5228 \LWR@FBcancel%
5229 \LWR@origampersand{}nbsp;% ~
5230 \endgroup%
5231 }%
5232 \renewrobustcmd*{~}{\HTMLentity{nbsp}}% was overwritten by babel-french
5233 \ifFBunicode%
5234 \else%
5235 \DeclareTextSymbol{\FBtextellipsis}{LY1}{133}%
5236 \DeclareTextCommandDefault{\FBtextellipsis}{\textellipsis\xspace}%
5237 \fi%
5238 }%
5239 }

```

### 51.3 HTML output formatting

Helps format the output HTML code for human readability.

`\LWR@indentHTML` Newline and indent the output HTML code.

```

5240 \newcommand*{\LWR@indentHTML}{%
5241 \LWR@orignewline\LWR@origrule{2em}{0pt}%
5242 }

```

`\LWR@indentHTMLtwo` Newline and indent the output HTML code.

```

5243 \newcommand*{\LWR@indentHTMLtwo}{%
5244 \LWR@orignewline\LWR@origrule{4em}{0pt}%
5245 }

```

### 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.

```

5246 \newcommand*{\LWR@htmltagc}[1]{%
5247 \LWR@traceinfo{\LWR@htmltagc !\detokenize{#1}!}%
5248 \begingroup%
5249 \LWR@FBcancel%
5250 \ifmmode\else\protect\LWR@origttfamily\fi%
5251 \protect\LWR@origtextless%
5252 \LWR@isolate{#1}%
5253 \protect\LWR@origtextgreater%
5254 \endgroup%
5255 }

```

Env `LWR@nestspan` Disable minipage, \parbox, and HTML <div>s inside a <span>.

⚠ `\begin{LWR@nestspan}` must follow the opening `<span>` tag to allow a paragraph to start if the span is at the beginning of a new paragraph.

⚠ `\end{LWR@nestspan}` must follow the `</span>` or a `<p>` may appear inside the span.

```

5256 \newcommand*{LWR@nestspanitem}{%
5257 \ifnewlist\else{LWR@htmltagc{br /}}\fi%
5258 LWR@origitem%
5259 }
5260
5261 \newenvironment*{LWR@nestspan}
5262 {%
5263 LWR@traceinfo{LWR@nestspan starting}%
5264 \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}%
5265 {%
5266 LWR@traceinfo{LWR@nestspan: inside a lateximage}%
5267 }%
5268 {% not in a lateximage
5269 LWR@traceinfo{LWR@nestspan: NOT inside a lateximage}%
5270 \addtocounter{LWR@spandepth}{1}%
5271 \RenewDocumentEnvironment{minipage}{O{t} o O{t} m}%
5272 {\LWR@subhtmltagc{span}{inlineminipage}}%
5273 {\LWR@htmltagc{/span}}%
5274 \RenewDocumentEnvironment{BlockClass}{o m}{}{}%
5275 \renewcommand{\BlockClassSingle}[2]{##2}%
5276 \renewcommand{\LWR@forcenewpage}{}%
5277 \renewcommand{\LWR@liststart}{%
5278 \let\item\LWR@nestspanitem%
5279 }%
5280 \renewcommand{\LWR@listend}{\LWR@htmltagc{br /}\LWR@htmltagc{br /}}%
5281 \renewenvironment{quote}{\LWR@htmltagc{br /}}{\LWR@htmltagc{br /}}%
5282 \renewenvironment{quotation}{\LWR@htmltagc{br /}}{\LWR@htmltagc{br /}}%
5283 }% not in a lateximage
5284 LWR@traceinfo{LWR@nestspan starting: done}%
5285 % starting env
5286 % ending env
5287 LWR@traceinfo{LWR@nestspan ending}%
5288 \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}%
5289 {}%
5290 {\addtocounter{LWR@spandepth}{-1}}%
5291 LWR@traceinfo{LWR@nestspan ending: done}%
5292 }
5293
5294 \AfterEndEnvironment{LWR@nestspan}{\global\let\par\LWR@closeparagraph}

```

`\LWR@htmlspan` `{\tag}{\text}`

⚠ `\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.

```

5295 \NewDocumentCommand{\LWR@htmlspan}{m +m}{%
5296 LWR@ensuredoingapar%
5297 \LWR@htmltagc{#1}%

```

```

5298 \begin{LWR@nestspan}%
5299 #2%
5300 \LWR@htmltagc{/#1}%
5301 \end{LWR@nestspan}%
5302 }

```

`\LWR@htmlspanclass` [*<style>*] {*<class>*} {*<text>*}

```

5303 \NewDocumentCommand{\LWR@htmlspanclass}{o m +m}{%
5304 \LWR@traceinfo{LWR@htmlspanclass |#1|#2|}%
5305 \LWR@ensuredoingapar%
5306 \LWR@subhtml@elementclass{span}[#1]{#2}%
5307 \begin{LWR@nestspan}%
5308 #3%
5309 \LWR@htmltagc{/span}%
5310 \LWR@traceinfo{LWR@htmlspanclass done}%
5311 \end{LWR@nestspan}%
5312 }

```

`\LWR@htmltag` {*<tag>*}

Print an HTML tag: <tag>

```

5313 \newcommand*{\LWR@htmltag}[1]{%
5314 % \LWR@traceinfo{LWR@htmltagb !\detokenize{#1}!}%
5315 \LWR@htmltagc{#1}%
5316 % \LWR@traceinfo{LWR@htmltagb: done}%
5317 }

```

## 51.5 Block tags and comments

In the following, `\origttfamily` breaks ligatures, which may not be used for HTML codes:

`\LWR@html@opencomment`  
`\LWR@html@closecomment`

```

5318 \newcommand*{\LWR@html@opencomment}{%
5319 {%
5320 % \LWR@traceinfo{LWR@html@opencomment}%
5321 \begingroup%
5322 \LWR@FBcancel%
5323 \ifmmode\else\protect\LWR@origttfamily\fi%
5324 \LWR@print@mbox{\LWR@origtextless{}!-\/-}%
5325 \endgroup%
5326 }%
5327 }
5328
5329 \newcommand*{\LWR@html@closecomment}{%
5330 {%
5331 % \LWR@traceinfo{LWR@html@closecomment}%

```

```

5332 \begingroup%
5333 \LWR@FBcancel%
5334 \ifmode\else\protect\LWR@origttfamily\fi%
5335 \LWR@print@mbox{-/-\LWR@origtextgreater}%
5336 \endgroup%
5337 }%
5338 }

```

`\LWR@htmlcomment` {*<comment>*}

```

5339 \newcommand{\LWR@htmlcomment}[1]{%
5340 \LWR@htmlopencomment}%
5341 {%
5342 \LWR@origttfamily% break ligatures
5343 #1%
5344 }%
5345 \LWR@htmlclosecomment{}}

```

`\LWR@htmlblockcomment` {*<comment>*}

```

5346 \newcommand{\LWR@htmlblockcomment}[1]
5347 {\LWR@stoppars\LWR@htmlcomment{#1}\LWR@startpars}

```

`\LWR@htmlblocktag` {*<tag>*} print a stand-alone HTML tag

```

5348 \newcommand*\LWR@htmlblocktag[1]{%
5349 \LWR@stoppars%
5350 \LWR@htmltag{#1}%
5351 \LWR@startpars%
5352 }

```

## 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.

```

5353 \NewDocumentCommand{\LWR@subhtmllementclass}{m O{} m}{%
5354 \LWR@traceinfo{\LWR@subhtmllementclass !#1!#2!#3!}%
5355 \ifblank{#2}%
5356 {% empty option
5357 \LWR@htmltag{%
5358 #1 % space
5359 class=\textquotedbl#3\textquotedbl\ % space
5360 }%
5361 }%

```

```

5362 {% non-empty option
5363 \LWR@htmltag{%
5364 #1\LWR@indentHTML%
5365 class=\textquotedbl#3\textquotedbl\LWR@indentHTML%
5366 style=\textquotedbl#2\textquotedbl\LWR@orignewline%
5367 }%
5368 }%
5369 \LWR@traceinfo{LWR@subhtmlclass done}%
5370 }

```

`\LWR@htmlclass` {*element*} {*class*} [*style*]

```

5371 \NewDocumentCommand{\LWR@htmlclass}{m o m}{%
5372 \LWR@stoppars%
5373 \LWR@forceemptyline%
5374 \LWR@subhtmlclass{#1}[#2]{#3}%
5375 \LWR@startpars%
5376 }

```

`\LWR@htmlclassend` {*element*} {*class*}

```

5377 \newcommand*{\LWR@htmlclassend}[2]{%
5378 \LWR@stoppars%
5379 \LWR@htmltag{/#1}%
5380 \ifbool{HTMLDebugComments}{%
5381 \LWR@htmlcomment{End of #1 ‘#2’}%
5382 }{}%
5383 \LWR@startpars%
5384 }

```

`\LWR@htmldivclass` [*style*] {*class*}

```

5385 \NewDocumentCommand{\LWR@htmldivclass}{o m}{%
5386 \LWR@htmlclass{div}[#1]{#2}%
5387 }

```

`\LWR@htmldivclassend` {*class*}

```

5388 \newcommand*{\LWR@htmldivclassend}[1]{%
5389 \LWR@htmlclassend{div}{#1}%
5390 }

```

## 51.7 Single-line elements

A single-line element, without a paragraph tag for the line of text:

`\LWR@htmlclassline` {*element*} [*style*] {*class*} {*text*}

```

5391 \NewDocumentCommand{\LWR@html@elementclassline}{m o m +m}{%
5392 \LWR@stoppars
5393 \LWR@forceemptyline%
5394 \LWR@subhtml@elementclass{#1}[#2]{#3}%
5395 #4%
5396 \LWR@htmltag{/#1}
5397 \LWR@startpars
5398 }

```

## 51.8 HTML5 semantic elements

`\LWR@html@element`  $\{\langle element \rangle\}$

```

5399 \newcommand*{\LWR@html@element}[1]{%
5400 \LWR@html@blocktag{#1}
5401 }

```

`\LWR@html@elementend`  $\{\langle element \rangle\}$

```

5402 \newcommand*{\LWR@html@elementend}[1]{%
5403 \LWR@stoppars
5404 \LWR@htmltag{/#1}
5405 \LWR@startpars
5406 }
5407
5408 \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 90.

`Env` `BlockClass`  $[\langle style \rangle] \{\langle class \rangle\}$  High-level interface for <div> classes.

Ex: `\begin{BlockClass}{class} text \end{BlockClass}`

**for PRINT output:** `5409 \begin{warpprint}`  
`5410 \NewDocumentEnvironment{BlockClass}{o m}{\}\{\}`  
`5411 \end{warpprint}`

**for HTML output:** `5412 \begin{warpHTML}`  
`5413 \NewDocumentEnvironment{LWR@print@BlockClass}{o m}{\}\{\}`  
`5414 \NewDocumentEnvironment{LWR@HTML@BlockClass}{o m}`  
`5415 {\}`

```

5416 \LWR@htmldivclass[#1]{#2}%
5417 }
5418 {\LWR@htmldivclassend{#2}}
5419
5420 \LWR@formattedenv{BlockClass}
5421 \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:**

```

5422 \begin{warpall}
5423 \newcommand{\BlockClassSingle}[2]{#2}
5424 \end{warpall}

```

**for HTML output:**

```

5425 \begin{warpHTML}
5426 \newcommand{\LWR@HTML@BlockClassSingle}[2]{%
5427 \LWR@html@elementclassline{div}{#1}{#2}%
5428 }
5429
5430 \LWR@formatted{BlockClassSingle}
5431 \end{warpHTML}

```

`\InlineClass` `((\langle WP style \rangle))` `[\langle style \rangle]{\langle class \rangle}{\langle text \rangle}`

High-level interface for inline span classes.

`((\langle WP style \rangle))` is css styling to add when formatting for a word processor import.

`[\langle style \rangle]` is the css styling to add when not formatting for a word processor.

**for PRINT output:**

```

5432 \begin{warpprint}
5433 \NewDocumentCommand{\InlineClass}{D{({})}{}}{ o m +m}{#4}%
5434 \end{warpprint}

```

**for HTML output:**

```

5435 \begin{warpHTML}
5436 \NewDocumentCommand{\LWR@print@InlineClass}{D{({})}{}}{ o m +m}{#4}%
5437
5438 \NewDocumentCommand{\LWR@HTML@InlineClass}{D{({})}{}}{ o m +m}{%
5439 \ifbool{FormatWP}{%
5440 \LWR@htmlspanclass[#1]{#3}{#4}%
5441 }{%
5442 \LWR@htmlspanclass[#2]{#3}{#4}%
5443 }%
5444 }
5445
5446 \LWR@formatted{InlineClass}
5447 \end{warpHTML}

```

Env `\LWR@BlockClassWP` `{\langle WP style \rangle}{\langle HTML style \rangle}{\langle class \rangle}` 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:**

```

5448 \begin{warpprint}
5449 \NewDocumentEnvironment{\LWR@BlockClassWP}{m m m}{}{}%

```

```
5450 \end{warpprint}
```

**for HTML output:**

```
5451 \begin{warpHTML}
5452 \NewDocumentEnvironment{LWR@print@LWR@BlockClassWP}{m m m}{}{}%
5453 \NewDocumentEnvironment{LWR@HTML@LWR@BlockClassWP}{m m m}%
5454 {%
5455 \LWR@stoppars%
5456 \ifbool{FormatWP}%
5457 {%
5458 \addtocounter{LWR@thisautoidWP}{1}%

5459 \LWR@htmltag{%
5460 div class=\textquotedbl#3\textquotedbl\ % space
5461 id=\textquotedbl%
5462 \LWR@print@mbox{autoidWP-\arabic{LWR@thisautoidWP}}%
5463 \textquotedbl%
5464 \ifblank{#1}{}{ style=\textquotedbl#1\textquotedbl}%
5465 }%
5466 }% FormatWP
5467 {% not FormatWP
5468 \LWR@htmltag{%
5469 div class=\textquotedbl#3\textquotedbl%
5470 \ifblank{#2}{}{ style=\textquotedbl#2\textquotedbl}%
5471 }%
5472 }% not FormatWP
5473 \LWR@startpars%
5474 }
5475 {\LWR@htmldivclassend{#3}}
5476
5477 \LWR@formattedenv{LWR@BlockClassWP}
5478 \end{warpHTML}
```

## 51.10 Closing HTML tags

**for HTML output:**

```
5479 \begin{warpHTML}
```

Sections H1, H2, etc. do not need a closing HTML tag, but we add a comment for readability:

```
5480 \newcommand*{\LWR@printclosebook}
5481 {\ifbool{HTMLDebugComments}{\LWR@htmlcomment{Closing book}}{}}
5482 \newcommand*{\LWR@printclosepart}
5483 {\ifbool{HTMLDebugComments}{\LWR@htmlcomment{Closing part}}{}}
5484 \newcommand*{\LWR@printclosechapter}
5485 {\ifbool{HTMLDebugComments}{\LWR@htmlcomment{Closing chapter}}{}}
5486 \newcommand*{\LWR@printclosesection}
5487 {\ifbool{HTMLDebugComments}{\LWR@htmlcomment{Closing section}}{}}
5488 \newcommand*{\LWR@printclosesubsection}
5489 {\ifbool{HTMLDebugComments}{\LWR@htmlcomment{Closing subsection}}{}}
5490 \newcommand*{\LWR@printclosesubsubsection}
5491 {\ifbool{HTMLDebugComments}{\LWR@htmlcomment{Closing subsubsection}}{}}
5492 \newcommand*{\LWR@printcloseparagraph}
```

```

5493 {\ifbool{HTMLDebugComments}{\LWR@htmlcomment{Closing paragraph}}{}}
5494 \newcommand*{\LWR@printclosesubparagraph}
5495 {\ifbool{HTMLDebugComments}{\LWR@htmlcomment{Closing subparagraph}}{}}

```

Lists require closing HTML tags:

```

5496 \newcommand*{\LWR@printcloselistitem}
5497 {\LWR@htmltag{/li}}
5498 \newcommand*{\LWR@printclosedescitem}
5499 {\LWR@htmltag{/dd}}
5500 \newcommand*{\LWR@printcloseitemize}
5501 {\LWR@htmltag{/ul}}
5502 \newcommand*{\LWR@printcloseenumerate}
5503 {\LWR@htmltag{/ol}}
5504 \newcommand*{\LWR@printclosedescription}
5505 {\LWR@htmltag{/dl}}

5506 \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:** 5507 `\begin{warpHTML}`

**Ctrl** `LWR@spandepth` Do not create paragraph tags inside of an HTML span.

```

5508 \newcounter{LWR@spandepth}
5509 \setcounter{LWR@spandepth}{0}

```

**Bool** `LWR@doingstartpars` Tells whether paragraphs may be generated.

```

5510 \newbool{LWR@doingstartpars}
5511 \boolfalse{LWR@doingstartpars}

```

**Bool** `LWR@doingapar` Tells whether have actually generated and are currently processing paragraph text.

```

5512 \newbool{LWR@doingapar}
5513 \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:

```

5514 \newcommand*{\LWR@ensuredoingapar}{%
5515 \ifbool{\LWR@doingstartpars}%
5516 {\global\booltrue{\LWR@doingapar}}%
5517 {}}%
5518 }

```

`\PN@parnotes@auto` Redefined by `parnotes` to print paragraph notes at the end of each paragraph.

```

5519 \def\P@parnotes@auto{}%

```

`\LWR@openparagraph`

```

5520 \newcommand*{\LWR@openparagraph}
5521 {}%

```

See if paragraph handling is enabled:

```

5522 \ifbool{\LWR@doingstartpars}%
5523 {% handling pars

```

See if have already started a `lateximage` or a `<span>`. If so, do not generate nested paragraph tags.

```

5524 \ifboolexpr{
5525 test {\ifnumcomp{\value{\LWR@lateximagedepth}}{>}{0}} or
5526 test {\ifnumcomp{\value{\LWR@spandepth}}{>}{0}}
5527 }{% nested par tags?

```

If so: Do nothing if already started a `lateximage` page. Cannot nest a `lateximage`. Also do nothing if already inside a `<span>`. Do not nest paragraph tags inside a `<span>`.

```

5528 {}% no nested par tags

```

Else: No `lateximage` or `<span>` has been started yet, so it's OK to generate paragraph tags.

```

5529 {% yes nest par tags

```

If `parnotes` is used, paragraph notes are inserted before starting the next paragraph:

```

5530 \PN@parnotes@auto%

```

The opening paragraph tag:

```

5531 \LWR@htmltagc{\LWR@tagregularparagraph}\LWR@orignewline%

```

Now have started a paragraph.

```

5532 \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.)

```

5533 \let\par\LWR@closeparagraph%
5534 }% end of yes nest par tags
5535 }% end of handling pars
5536 {}% not handling pars
5537 }

```

`\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`.

```

5538 \newcommand*{\LWR@closeparagraph@br}
5539 {%
5540 \ifboolexpr{
5541 test {\ifnumcomp{\value{LWR@spandepth}}{>}{0}} and
5542 test {\ifnumcomp{\value{LWR@lateximagedepth}}{=}{0}} and
5543 not bool {LWR@intabularmetadata}
5544 }%
5545 {\unskip\LWR@htmltagc{br /}}%
5546 {}%
5547 }

```

`\LWR@closeparagraph`

```

5548 \newcommand*{\LWR@closeparagraph}
5549 {%
5550 % \LWR@traceinfo{LWR@closeparagraph}%

```

See if paragraph handling is enabled:

```

5551 \ifbool{LWR@doingapar}%

```

If currently in paragraph mode:

```

5552 {% handling pars

```

See if already started a `lateximage` or a `<span>`:

```

5553 \ifboolexpr{
5554 test {\ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}} or
5555 test {\ifnumcomp{\value{LWR@spandepth}}{>}{0}}
5556 }%

```

Add a `parbreak` if in a span, not in a `lateximage`, and not in table metadata.

```

5557 {% no nested par tags
5558 \LWR@closeparagraph@br%
5559 }% no nested par tags

```

If have not already started a `lateximage` or a `<span>`:

```

5560 {% 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.)

```
5561 \@hspacer{\fill}% \hspace*{\fill}
5562 \leavevmode\LWR@orignewline%
5563 \LWR@htmltagc{/LWR@tagregularparagraph}%
```

No longer doing a paragraph:

```
5564 \global\boolfalse{LWR@doingapar}%
```

Disable the special minipage & \hspace interaction until a new minipage is found:

```
5565 \global\boolfalse{LWR@minipagethispar}%
```

If parnotes is used, paragraph notes are inserted after ending the previous paragraph:

```
5566 \PN@parnotes@auto%
5567 }% end of yes nest par tags
5568 }% end of handling pars
```

Add a parbreak if in a span, not in a lateximage, and not in table metadata.

```
5569 {% not handling pars
5570 \LWR@closeparagraph@br%
5571 }% 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:

```
5572 \ifboolexpr{%
5573 not bool {LWR@doingapar} and
5574 test {\ifnumcomp{\value{LWR@tabulardepth}}{>}{0}} and
5575 test {
5576 \ifnumcomp{\value{LWR@tabulardepth}}{=}{\value{LWR@tabularpardepth}}
5577 } and
5578 bool {LWR@intabularmetadata} and
5579 not bool {LWR@tableparcell} and
5580 test {\ifnumcomp{\value{LWR@lateximagedepth}}{=}{0}}
5581 }%
5582 {%
5583 \LWR@getmynexttoken%
5584 }{%
5585 \LWR@origpar%
5586 }%
5587 }

5588 \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:** 5589 `\begin{warpHTML}`

`\LWR@startpars` Begin handling HTML paragraphs. This allows an HTML paragraph to start, but one has not yet begun.

```
5590 \newcommand*{\LWR@startpars}%
5591 {%
5592 % \LWR@traceinfo{\LWR@startpars}%
```

Ignore if inside a span:

```
5593 \ifnumcomp{\value{\LWR@spandepth}}{>}{0}%
5594 {%
5595 {%
```

See if currently handling HTML paragraphs:

```
5596 \ifbool{\LWR@doingstartpars}%
```

If already in paragraph mode, do nothing.

```
5597 {%
```

If not currently in paragraph mode:

```
5598 {%
```

At the start of each paragraph, generate an opening tag:

```
5599 \PushPreHook{par}{\LWR@openparagraph}%
```

At the end of each paragraph, generate closing tag then do regular `/par` actions:

```
5600 \let\par\LWR@closeparagraph
5601
5602 }% an intentionally blank line
```

Are now handling paragraphs, but have not yet actually started one:

```
5603 \global\setbool{\LWR@doingstartpars}{true}%
```

No `<par>` tag yet to undo:

```

5604 \global\boolfalse{LWR@doingapar}%
5605 }% nestspan
5606 % \LWR@traceinfo{LWR@startpars: done}%
5607 }

```

\LWR@stoppars Stop handling HTML paragraphs. Any currently open HTML paragraph is closed, and no more will be opened.

```

5608 \newcommand*{\LWR@stoppars}%
5609 {%

```

Ignore if inside a span:

```

5610 \ifnumcomp{\value{LWR@spandepth}}{>}{0}%
5611 {}%
5612 {%

```

See if currently handling HTML paragraphs:

```

5613 \ifbool{LWR@doingapar}%

```

if currently in an HTML paragraph:

```

5614 {%

```

Print a closing tag:

```

5615 \leavevmode\LWR@orignewline%
5616 \LWR@htmltagc{/LWR@tagregularparagraph}%
5617 \LWR@orignewline%

```

No longer have an open HTML paragraph:

```

5618 \global\boolfalse{LWR@doingapar}%

```

Disable the special minipage & \hspace interaction until a new minipage is found:

```

5619 \global\boolfalse{LWR@minipagethispar}
5620 }%

```

If was not in an HTML paragraph:

```

5621 {}%

```

See if currently allowing HTML paragraphs:

```

5622 \ifbool{LWR@doingstartpars}%

```

If so: clear the par hook to no longer catch paragraphs:

```

5623 {\ClearPreHook{par}}%

```

Else: Do nothing:

```
5624 {}%
```

No longer in paragraph mode:

```
5625 \global\setbool{LWR@doingstartpars}{false}%
```

No <p> tag to undo:

```
5626 \global\boolfalse{LWR@doingapar}%
```

```
5627 }% nestspan
```

```
5628 }
```

```
5629 \end{warpHTML}
```

## 54 Indentfirst

**Pkg indentfirst** `indentfirst` redefines `\@afterindentfalse` to be `\@afterindenttrue`. This is reversed `\AtBeginDocument` here.

**for HTML output:** 5630 `\begin{warpHTML}`

```
5631 \AtBeginDocument{
```

```
5632 \def\@afterindentfalse{\let\if@afterindent\iffalse}
```

```
5633 \@afterindentfalse
```

```
5634 }
```

```
5635 \let\LWR@afterindent@syntaxhighlight\fi% syntax highlighting
```

```
5636 \end{warpHTML}
```

## 55 Page headers and footers

**for HTML & PRINT:** 5637 `\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.

```
5638 \newcommand{\LWR@firstpagetop}{} % for the home page alone
```

```
5639 \newcommand{\LWR@pagetop}{} % for all other pages
```

```
5640 \newcommand{\LWR@pagebottom}{}%
```

`\HTMLFirstPageTop` `{\text and logos}`

```
5641 \newcommand{\HTMLFirstPageTop}[1]{%
```

```
5642 \renewcommand{\LWR@firstpagetop}{#1}%
```

```
5643 }
```

`\HTMLPageTop` {*<text and logos>*}

```
5644 \newcommand{\HTMLPageTop}[1]{%
5645 \renewcommand{\LWR@pagetop}{#1}%
5646 }
```

`\HTMLPageBottom` {*<text and logos>*}

```
5647 \newcommand{\HTMLPageBottom}[1]{%
5648 \renewcommand{\LWR@pagebottom}{#1}%
5649 }
```

```
5650 \end{warpall}
```

## 56 CSS

**for HTML output:** 5651 `\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.

```
5652 \newcommand*{\LWR@currentcss}{lwarp.css}
```

`\CSSFilename` {*<new-css-filename.css>*} Assigns the css file to be used by the following HTML pages.

```
5653 \newcommand*{\CSSFilename}[1]{%
5654 \renewcommand*{\LWR@currentcss}{#1}%
5655 \@onelevel@sanitize\LWR@currentcss%
5656 }
5657
5658 \end{warpHTML}
```

**for PRINT output:** 5659 `\begin{warpprint}`  
 5660 `\newcommand*{\CSSFilename}[1]{}`  
 5661 `\end{warpprint}`

## 57 MathJax script

**for HTML output:** 5662 `\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.

```
5663 \newcommand*{\LWR@mathjaxfilename}{lwarp_mathjax.txt}
```

`\MathJaxFilename`  $\{\langle filename \rangle\}$  Assigns the MathJax script file to be used by the following HTML pages.

```
5664 \newcommand*{\MathJaxFilename}[1]{%
5665 \renewcommand*{\LWR@mathjaxfilename}{#1}%
5666 \@onelevel@sanitize\LWR@mathjaxfilename%
5667 }
5668
5669 \end{warpHTML}
```

**for PRINT output:** `\begin{warpprint}`

```
5670 \begin{warpprint}
5671 \newcommand*{\MathJaxFilename}[1]{}
5672 \end{warpprint}
```

## 58 Title, HTML meta author, HTML meta description

**for HTML output:** `\begin{warpHTML}`

`\title`  $\{\langle title \rangle\}$  Modified to remember `\thetitle`, which is used to set the HTML page titles.

```
5674 \let\LWR@origtitle\title
5675
5676 \renewcommand*{\title}[1]{%
5677 \LWR@origtitle{#1}%
5678 \begingroup%
5679 \renewcommand{\thanks}[1]{}%
5680 \protected@xdef\thetitle{#1}%
5681 \endgroup%
5682 }
```

```
5683 \end{warpHTML}
```

**for HTML & PRINT:** `\begin{warppall}`


`\HTMLTitle`  $\{\langle Titlename \rangle\}$  The Title to place into an HTML meta tag. The default is to use the document `\title`'s setting.

```
5685 \providecommand{\thetitle}{\BaseJobname}
5686
5687 \newcommand{\theHTMLTitle}{\thetitle}
5688
5689 \newcommand{\HTMLTitle}[1]{\renewcommand{\theHTMLTitle}{#1}}
```

`\HTMLAuthor` `{\langle $\textit{authorname}$ \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.

```
5690 \providecommand{\theauthor}{}
5691
5692 \newcommand{\theHTMLAuthor}{\theauthor}
5693
5694 \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 $\textit{New HTML meta description}$ \rangle}` Assigns the HTML file's description meta tag.

```
5695 \newcommand{\LWR@currentHTMLDescription}{}
5696
5697 \newcommand{\HTMLDescription}[1]{%
5698 \renewcommand{\LWR@currentHTMLDescription}{#1}
5699 }
5700
5701 \end{warpall}
```

## 59 Footnotes

`lwarp` uses native  $\text{\LaTeX}$  footnote code, although with its own `\box` to avoid the  $\text{\LaTeX}$  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.

**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<sup>A</sup>T<sub>E</sub>X 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 89.3 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: 5702 `\begin{warppall}`

Ctrl FootnoteDepth

Default: 3

Determines how deeply to place footnotes in the HTML files, similar to `tocdepth`. The default of 3 places footnotes before each `\subsubsection` or higher. See table 9 for a table of L<sup>A</sup>T<sub>E</sub>X section headings.

```
5703 \newcounter{FootnoteDepth}
5704 \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.)

```
5705 \newcounter{footnoteReset}
5706 \setcounter{footnoteReset}{0}
```

```
5707 \end{warpall}
```

**for HTML output:** 5708 \begin{warpHTML}

\LWR@footnotetext Patch L<sup>A</sup>T<sub>E</sub>X 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.

```
5709 \newbox\LWR@footnotetext
```

Much of the following has unneeded print-mode formatting removed.

\@makefnmark {<text>}

```
5710 \long\def\@makefnmark#1{\@thefnmark~#1}
```

\@makefnmark

```
5711 \def\@makefnmark{%
5712 \@thefnmark%
5713 }
```

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**.

```

5714 \long\def\LWR@@footnotetext#1#2{%
5715 \LWR@traceinfo{LWR@footnotetext}%
5716 \global\setbox\csname #2\endcsname=\vbox{%

```

Add to any current footnotes:

```

5717 \unvbox\csname #2\endcsname%

```

Remember the footnote number for \ref:

```

5718 \protected@edef\@currentlabel{%
5719 \csname p@footnote\endcsname\@thefnmark%
5720 }% @currentlabel

```

Open a group:

```

5721 \color@begingroup%

```

Use HTML superscripts in the footnote even inside a lateximage:

```

5722 \renewrobustcmd{\textsuperscript}[1]{\LWR@htmlspan{sup}{##1}}%

```

Use paragraph tags if in a tabular data cell or a lateximage:

```

5723 \ifthenelse{%
5724 \boolean{LWR@doingstartpars} \AND%
5725 \cnttest{\value{LWR@lateximagedepth}}{=}{0}}%
5726 }%
5727 {}%
5728 {\LWR@htmltagc{\LWR@tagregularparagraph}\LWR@orignewline}%

```

Append the footnote to the list:

```

5729 \@makefntext{#1}%

```

Closing paragraph tag:

```

5730 \ifthenelse{%
5731 \boolean{LWR@doingstartpars} \AND%
5732 \cnttest{\value{LWR@lateximagedepth}}{=}{0}}%
5733 }%
5734 {\par}%
5735 {}%
5736 \LWR@htmltagc{/\LWR@tagregularparagraph}%
5737 \LWR@orignewline%
5738 }%

```

Close the group:

```

5739 \color@endgroup%
5740 }% vbox

```

Paragraph handling:

```
5741 \LWR@ensuredoingapar%
5742 }%
```

```
\LWR@footnotetext {<text>}
```

```
5743 \long\def\LWR@footnotetext#1{\LWR@footnotetext{#1}\LWR@footnotebox}}
```

```
\@footnotetext {<text>}
```

```
5744 \LetLtxMacro\@footnotetext\LWR@footnotetext
```

## 59.5 Minipage footnote implementation

Patch L<sup>A</sup>T<sub>E</sub>X 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.

```
5745 \newbox\LWR@mpfootnotes
```

```
\@mpfootnotetext {<text>}
```

```
5746 \long\def\@mpfootnotetext#1{%
5747 \LWR@traceinfo{\@mpfootnotetext}%
5748 \global\setbox\LWR@mpfootnotes\ vbox{%
5749 \unvbox\LWR@mpfootnotes%
5750 \reset@font\footnotesize%
5751 \hsize\columnwidth%
5752 \@parboxrestore%
5753 \protected@edef\@currentlabel%
5754 {\csname p@mpfootnote\endcsname\@thefnmark}%
5755 \color@begingroup%
```

Use paragraph tags if in a tabular data cell or a `lateximage`:

```
5756 \ifthenelse{%
5757 \boolean{LWR@doingstartpars} \AND%
5758 \cnttest{\value{LWR@lateximagedepth}}{>}{0}%
5759 }%
5760 {}%
5761 {\LWR@htmltagc{\LWR@tagregularparagraph}\LWR@orignewline}%

5762 \@makefntext{%
5763 \ignorespaces#1%
5764 }%
```

Don't add the closing paragraph tag if are inside a `lateximage`:

```
5765 \ifthenelse{\cnttest{\value{LWR@lateximagedepth}}{>}{0}}%
5766 {}%
```

```

5767 {%
5768 \leavevmode\LWR@orignewline%
5769 \LWR@htmltagc{/LWR@tagregularparagraph}%
5770 \LWR@origpar%
5771 }%
5772 \color@endgroup%
5773 }% vbox

```

### Paragraph handling:

```

5774 \LWR@ensuredoingapar%
5775 \LWR@traceinfo{@mpfootnotetext: done}%
5776 }

```

`\thempfootnote` Redefined to remove the `\itshape`, which caused an obscure compiling error in some situations.

```

5777 \AtBeginDocument{
5778 \def\thempfootnote{\@alph\c@mpfootnote}
5779 }

```

## 59.6 Printing pending footnotes

`\LWR@printpendingfootnotes` *{(footnote counter name)}*

```

5780 \newcommand*{\LWR@printpendingfootnotes}[1]{%
5781 \expandafter\ifvoid\csname LWR@#1box\endcsname\else
5782 \LWR@forcenewpage
5783 \begin{BlockClass}{footnotes}
5784 \LWR@origmedskip
5785 \unvbox\csuse{LWR@#1box}
5786 \setbox\csuse{LWR@#1box}=\vbox{}
5787 \end{BlockClass}
5788 \ifltxcounter{#1Reset}{%
5789 \ifnumgreater{\value{#1Reset}}{0}{%
5790 \setcounter{#1}{\value{#1Reset}}%
5791 \addtocounter{#1}{-1}%
5792 }{}%
5793 }{}%
5794 \fi
5795 }

```

`\LWR@printpendingfootnotes` Enclose the footnotes in a class, print, then clear. For `manynotes`, new footnotes may be added via `\appto`.

```

5796 \newcommand*{\LWR@printpendingfootnotes}{%
5797 \LWR@printpendingfootnotes{footnote}%
5798 }

```

`\LWR@maybeprintpendingfootnotes`  $\langle depth \rangle$  Used to print footnotes before sections only if formatting for an EPUB or word processor:

```

5799 \newcommand*{\LWR@maybeprintpendingfootnotes}[1]{%
5800 \ifbool{expr{
5801 not test{\ifnumcomp{#1}{>}{\value{FootnoteDepth}}}} or
5802 bool{FormatEPUB} or
5803 bool{FormatWP}
5804 }%
5805 {\LWR@printpendingfootnotes}%
5806 {}%
5807 }

```

`\LWR@printpendingmpfootnotes` Enclose the minipage footnotes in a class, print, then clear.

```

5808 \newcommand*{\LWR@printpendingmpfootnotes}{%
5809 \ifvoid\LWR@mpfootnotes\else
5810 \LWR@forcenewpage
5811 \begin{BlockClass}{footnotes}
5812 \LWR@print@vspace*{\baselineskip}
5813 \unvbox\LWR@mpfootnotes
5814 \setbox\LWR@mpfootnotes=\vbox{}
5815 \end{BlockClass}
5816 \fi
5817 }

5818 \end{warpHTML}

```

## 60 Marginpars

`\marginpar`  $[\langle left \rangle] \{\langle right \rangle\}$  `\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 `<br />` tags.

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

**for HTML output:** `5819 \begin{warpHTML}`

`\marginpar`  $[\langle left \rangle] \{\langle right \rangle\}$

```

5820 \renewcommand{\marginpar}[2][{}]{%
5821 \ifbool{FormatWP}%
5822 {%
5823 \begin{LWR@BlockClassWP}{width:2in; float:right; margin:10pt}{\marginblock}
5824 #2
5825 \end{LWR@BlockClassWP}
5826 }%
5827 {%

```

```

5828 \LWR@htmlspanclass{marginpar}{#2}%
5829 }%
5830 }

```

`\marginparBlock` [*<left>*] [*<right>*]

For use when the marginpar will be more than one paragraph, and/or contains more than simple text.

HTML version.

```

5831 \newcommand{\marginparBlock}[2][{}]{%
5832 \LWR@stoppars%
5833 \ifbool{FormatWP}%
5834 {%
5835 \begin{LWR@BlockClassWP}{width:2in; float:right; margin:10pt}{}{marginblock}
5836 #2
5837 \end{LWR@BlockClassWP}
5838 }{%
5839 \begin{BlockClass}[width:2in; float:right; margin:10pt]{marginparblock}
5840 #2
5841 \end{BlockClass}
5842 }%
5843 \LWR@startpars%
5844 }

```

`\reversemarginpar`

```

5845 \renewcommand*{\reversemarginpar}{}

```

`\normalmarginpar`

```

5846 \renewcommand*{\normalmarginpar}{}

```

```

5847 \end{warpHTML}

```

**for PRINT output:** 5848 \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.

```

5849 \LetLtxMacro\marginparBlock\marginpar

```

```

5850 \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:** 5851 \begin{warpall}

**Ctrl FileDepth**  $\{\langle section\ depth \rangle\}$  determines how deeply to break into new HTML files, similar to tocdepth. The default of -5 produces one large HTML file.

```
5852 \newcounter{FileDepth}
5853 \setcounter{FileDepth}{-5}
```

**Bool CombineHigherDepths** Combile higher-level sections together into one file?

```
5854 \newbool{CombineHigherDepths}
5855 \booltrue{CombineHigherDepths}
```

**\FilenameLimit** Maximum length of the generated filenames.

```
5856 \newcommand*{\FilenameLimit}{80}

5857 \end{warpall}
```

**for HTML output:** 5858 \begin{warpHTML}

**\LWR@thisfilename** The currently-active filename or number. At first, this is the homepage.

```
5859 \AtBeginDocument{
5860 \ifbool{FileSectionNames}%
5861 {\newcommand*{\LWR@thisfilename}{\HomeHTMLFilename}}
5862 {\newcommand*{\LWR@thisfilename}{0}}
5863 }
```

**\LWR@thisnewfilename** The filename being sanitized.

```
5864 \newcommand*{\LWR@thisnewfilename}{}
```

**\LWR@simplifname**  $\ast\{\langle expression \rangle\}$  Simplify \LWR@thisnewfilename.

If starred, detokenizes the input expression. If found, changes the expression to a single detokenized dash.

```
5865 \NewDocumentCommand{\LWR@simplifname}{s m}{%
5866 \IfBooleanTF{#1}{%
```

```

5867 \StrSubstitute{\LWR@thisnewfilename}%
5868 {\detokenize{#2}}%
5869 {\detokenize{-}}[\LWR@thisnewfilename]%
5870 }{%
5871 \StrSubstitute{\LWR@thisnewfilename}%
5872 {#2}%
5873 {\detokenize{-}}[\LWR@thisnewfilename]%
5874 }
5875 }

```

`\LWR@simplifycustom` User-defined filename simplifications. Redefine with `\newcommand`.

```
5876 \newcommand*\LWR@simplifycustom{}
```

`\FilenameSimplify` \*{<*phrase*>} Assign a user-defined filename simplification. Appends to `\LWR@simplifycustom`.

```

5877 \NewDocumentCommand{\FilenameSimplify}{s m}{%
5878 \IfBooleanTF{#1}{%
5879 \appto{\LWR@simplifycustom}{%
5880 \LWR@simplifiname*{#2}%
5881 }%
5882 }{%
5883 \appto{\LWR@simplifycustom}{%
5884 \LWR@simplifiname{#2}%
5885 }%
5886 }%
5887 }

```

`\LWR@filenamenoblanks` {<*filename*>}

Convert blanks into dashes, removes short words, store result in `\LWR@thisfilename`.

Also see `\LWR@nullfonts` for nullified macros.

```

5888 \newcommand*\LWR@filenamenoblanks}[1]{%
5889 \begingroup

```

Locally temporarily disable direct-formatting commands, not used in filenames:

```

5890 \LWR@nullfonts%
5891 \renewcommand*\LWR@htmltagc}[1]{%

```

```
5892 \edef\LWR@thisnewfilename{#1}%
```

Replaces common macros with hyphens. (& is done by `\LWR@nullfonts`.)

```

5893 \RenewDocumentCommand{\LWR@subsingledollar}{s m m m}{%
5894 \LWR@simplifiname{_}
5895 \LWR@simplifiname{\#}
5896 \LWR@simplifiname{\textbackslash}

```

```

5897 \LWR@simplifyname{\protect}
5898 \LWR@simplifyname{\ }
5899 \LWR@simplifyname{\textless}
5900 \LWR@simplifyname{\textgreater}

5901 \edef\LWR@thisnewfilename{\detokenize\expandafter{\LWR@thisnewfilename}}%

5902 \LWR@traceinfo{LWR@filenamenoblanks edef: !\LWR@thisnewfilename!}%
5903 \fullexpandarg%

```

Convert spaces into hyphens:

```

5904 \LWR@simplifyname*{ }

```

Convert punctutation into hyphens:

```

5905 \LWR@simplifyname*{!}
5906 \LWR@simplifyname*{,}
5907 \LWR@simplifyname*{' }
5908 \LWR@simplifyname*{+}
5909 \LWR@simplifyname*{,}
5910 \LWR@simplifyname*{/}
5911 \LWR@simplifyname*{:}
5912 \LWR@simplifyname*{;}
5913 \LWR@simplifyname*{=}
5914 \LWR@simplifyname*{?}
5915 \LWR@simplifyname*{@}
5916 \LWR@simplifyname*{^}
5917 \LWR@simplifyname*{&}
5918 \LWR@simplifyname*{"}
5919 \LWR@simplifyname*{<}
5920 \LWR@simplifyname*{>}

5921 \LWR@simplifyname{\LWRbackslash}

```

Braces are removed entirely to avoid extra dashes in the result.

```

5922 \StrSubstitute{\LWR@thisnewfilename}%
5923 {\LWRleftbrace}{ }[\LWR@thisnewfilename]%
5924 \StrSubstitute{\LWR@thisnewfilename}%
5925 {\LWRrightbrace}{ }[\LWR@thisnewfilename]%

5926 \LWR@simplifyname{\LWRpercent}
5927 \LWR@simplifyname{\LWRdollar}

5928 \LWR@simplifyname*{|}
5929 \LWR@simplifyname*{^}
5930 \LWR@simplifyname*{~}
5931 \LWR@simplifyname*{[}
5932 \LWR@simplifyname*{]}
5933 \LWR@simplifyname*{' }

```

### Convert short words:

```

5934 \LWR@simplifynam*{-s-}
5935 \LWR@simplifynam*{-S-}
5936 \LWR@simplifynam*{-a-}
5937 \LWR@simplifynam*{-A-}
5938 \LWR@simplifynam*{-an-}
5939 \LWR@simplifynam*{-AN-}
5940 \LWR@simplifynam*{-to-}
5941 \LWR@simplifynam*{-TO-}
5942 \LWR@simplifynam*{-by-}
5943 \LWR@simplifynam*{-BY-}
5944 \LWR@simplifynam*{-of-}
5945 \LWR@simplifynam*{-OF-}
5946 \LWR@simplifynam*{-and-}
5947 \LWR@simplifynam*{-AND-}
5948 \LWR@simplifynam*{-for-}
5949 \LWR@simplifynam*{-FOR-}
5950 \LWR@simplifynam*{-the-}
5951 \LWR@simplifynam*{-THE-}

```

### Convert custom words:

```

5952 \LWR@simplifycustom%

```

### Convert multiple hyphens:

```

5953 \LWR@simplifynam*{-----}
5954 \LWR@simplifynam*{----}
5955 \LWR@simplifynam*{---}
5956 \LWR@simplifynam*{--}

```

If pdf $\LaTeX$  and not utf8 encoding, don't try to convert emdash, endash:

```

5957 \ifPDFTeX% pdflatex or dvi latex
5958 \ifdefstring{\inputencodingname}{utf8}{%
5959 \LWR@simplifynam*{-}
5960 % emdash
5961 \LWR@simplifynam*{-}
5962 % endash
5963 }{}%
5964 \else% not PDFTeX
5965 \LWR@simplifynam*{-}
5966 \LWR@simplifynam*{-}
5967 \fi%

```

If starts with a dash, remove the leading dash:

```

5968 \IfBeginWith{\LWR@thisnewfilename}{\detokenize{-}}{%
5969 \StrGobbleLeft{\LWR@thisnewfilename}{1}[\LWR@thisnewfilename]%
5970 }{}%

```

If ends with a dash, remove the trailing dash:

```

5971 \IfEndWith{\LWR@thisnewfilename}{\detokenize{-}}{%
5972 \StrGobbleRight{\LWR@thisnewfilename}{1}[\LWR@thisnewfilename]%
5973 }{%}%

```

Limits the length of the filename:

```

5974 \StrLeft{\LWR@thisnewfilename}{\FilenameLimit}[\LWR@thisnewfilename]%

```

Return the global result:

```

5975 \global\let\LWR@thisfilename\LWR@thisnewfilename%
5976 \endgroup%
5977 \LWR@traceinfo{\LWR@filenameno blanks: result is \LWR@thisfilename}%
5978 }

```

**Ctrl** **LWR@previousautopagelabel** Remembers which autopage label was most recently generated. Used to avoid duplicates.

```

5979 \newcounter{\LWR@previousautopagelabel}
5980 \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.

```

5981 \newcommand*{\LWR@newautopagelabel}[1]{%
5982 \ifnumequal{\value{\LWR@previousautopagelabel}}{\value{page}}{%
5983 }% no action if this autopage label has already been defined
5984 {%
5985 \label{\BaseJobname-autopage-\arabic{#1}}%
5986 \setcounter{\LWR@previousautopagelabel}{\value{page}}
5987 }%
5988 }

```

## 61.1 Customizing MATHJAX

**\LWR@customizedMathJax** Additional MATHJAX definitions to be added to the start of each HTML page.

```

5989 \newcommand*{\LWR@customizedMathJax}{}

```

**\CustomizeMathJax** MATHJAX does not have preexisting support every possible math function. Additional MATHJAX function definitions may be defined. These will be declared at the start of each HTML page, and thus will have a global effect.

Examples:

```

\CustomizeMathJax{
 \newcommand{\expval}[1]{\langle#1\rangle}
 \newcommand{\abs}[1]{\lvert#1\rvert}
}
\CustomizeMathJax{\newcommand{\arsinh}{\text{arsinh}}}
\CustomizeMathJax{\newcommand{\arcosh}{\text{arcosh}}}
\CustomizeMathJax{\newcommand{\NN}{\mathbb{N}}}

5990 \newcommand*{\CustomizeMathJax}[1]{%
5991 \appto{\LWR@customizeMathJax}{%
5992 \(#1\)\par
5993 }%
5994 }

\LWR@customizeMathJax

5995 \newcommand{\LWR@customizeMathJax}{%
5996 \ifbool{mathjax}{

5997 \LWR@stoppars
5998 \LWR@htmlcomment{Nullify \textbackslash{}ensuremath, footnotes for MathJax:}
5999
6000 \(\newcommand\ensuremath[1]{##1}\)
6001
6002 \(\newcommand\footnote[2][]{\text{(Footnote ##1)}}\backslash
6003
6004 \(\newcommand\footnotemark[1][]{\text{(Footnote ##1)}}\backslash
6005
6006 \LWR@htmlcomment{Additional customizations for MathJax:}
6007
6008 \LWR@customizedMathJax
6009
6010 \LWR@startpars
6011 }{}
6012 }

6013 \end{warpHTML}

```

**for PRINT output:** 6014 \begin{warpprint}

\CustomizeMathJax    The print-mode version:

```
6015 \newcommand*{\CustomizeMathJax}[1]{}
```

\FilenameSimplify    \*  $\langle expression \rangle$

```
6016 \NewDocumentCommand{\FilenameSimplify}{s m}{}

6017 \end{warpprint}
```

**for HTML output:** 6018 \begin{warpHTML}

\LWR@newhtmlfile {*<section name>*}

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.

```
6019 \newcommand*{\LWR@newhtmlfile}[1]{
6020 \LWR@traceinfo{\LWR@newhtmlfile}
```

At the bottom of the ending file:

```
6021 \LWR@htmlelementclassend{section}{textbody}
6022 \LWR@htmlelementclassend{div}{bodycontainer}
6023 \LWR@htmlelementclassend{div}{bodyandsidetoc}
6024
6025 \LWR@printpendingfootnotes
6026
```

No footer between files if EPUB:

```
6027 \ifbool{FormatEpub}
6028 {}
6029 {

6030 \ifdefempty{\LWR@pagebottom}{\}%
6031 \LWR@htmlelement{footer}
6032
6033 \LWR@pagebottom
6034
6035 \LWR@htmlelementend{footer}
6036 }
6037 }
```

No bottom navigation if are finishing the home page or formatting for EPUB or a word-processor.

```
6038 \ifthenelse{\boolean{FormatEpub}\OR\boolean{FormatWP}}
6039 {}
6040 {\ifnumcomp{\value{\LWR@htmlfilenumber}}{>}{0}}{\LWR@botnavigation}{}}
```

End of this HTML file:

```
6041 \LWR@stoppars
6042 \LWR@htmltag{/body}\LWR@orignewline
6043 \LWR@htmltag{/html}\LWR@orignewline
6044 \LWR@traceinfo{\LWR@newhtmlfile: about to LWR@orignewpage}
6045 \LWR@orignewpage
6046
6047 \addtocounter{\LWR@htmlfilenumber}{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.

```
6048 \ifbool{FileSectionNames}%
6049 {%
```

Convert the section name to a filename with blanks and common words removed. The resulting filename is in \LWR@thisfilename.

```
6050 \LWR@filenamenoblanks{#1}%
```

Create a macro name from the MD5 hash of the file name, to detect duplicates:

```
6051 \edef\LWR@hashedname{\LWR@mdfive{\LWR@thisfilename}}%
```

If the macro name is not yet defined, this filename is unique.

```
6052 \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.

```
6053 \csdef\LWR@filename\LWR@hashedname}{}%
6054 }{%
```

If the filename is not unique, create an error.

```
6055 \PackageError{lwarp}
6056 {%
6057 Section name\MessageBreak
6058 ‘‘#1’’,\MessageBreak
6059 at the line number listed below,\MessageBreak
6060 generates the filename\MessageBreak
6061 ‘‘\LWR@thisfilename’’,\MessageBreak
6062 which appears to be a duplicate.\MessageBreak
6063 There is a previous section with an\MessageBreak
6064 identical or similar name%
6065 }
6066 {%
6067 Lwarp sanitizes most symbols and a few common short words
6068 when generating file names, and this may cause a conflict.
6069 }
6070 }
6071 }
```

If using file numbers instead of names, the name is set to the next file number.

```
6072 {\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.

```
6073 \LWR@traceinfo{LWR@newhtmlfile: about to print start file}%
```

\LWR@nullfonts to allow math in a section name.

```
6074 \begingroup%
6075 \LWR@nullfonts%
6076 \LWR@htmlblockcomment{%
6077 |Start file|}%
6078 \LWR@htmlsectionfilename{\LWR@thisfilename}|%
6079 }
6080 \endgroup%
```

At the top of the starting file:

```
6081 \LWR@stoppars
6082
```

Start a new file with the given section name:

```
6083 \LWR@filestart[#1]
6084
```

Track the page numbers:

```
6085 \setcounter{\LWR@latestautopage}{\value{page}}%
6086 \LWR@newautopagelabel{\LWR@latestautopage}%
```

No navigation between files if formatting for an EPUB or word processor:

```
6087 \ifthenelse{\boolean{FormatEPUB}\OR\boolean{FormatWP}}
6088 {}
6089 {\LWR@topnavigation}
6090
```

No header if between files if formatting for an EPUB or word processor:

```
6091 \ifthenelse{\boolean{FormatEPUB}\OR\boolean{FormatWP}}
6092 {}
6093 {
6094 \ifdefempty{\LWR@pagetop}{}{
6095 \LWR@htmllement{header}
6096
6097 \LWR@pagetop
6098
6099 \LWR@htmllementend{header}
6100 }
6101 }
6102
```

The container for the sidetoc and text body:

```
6103 \LWR@htmllementclass{div}{bodyandsidetoc}
```

No sideroc if formatting for an EPUB or word processor:

```

6104 \ifthenelse{\boolean{FormatEPUB}\OR\boolean{FormatWP}}
6105 {}
6106 {\LWR@sidetoc}
6107

```

Start of the <tbody>:

```

6108 \LWR@htmlclass{div}{bodycontainer}
6109 \LWR@htmlclass{section}{tbody}
6110

```

Print title only if there is one. Skip if formatting for an EPUB or word processor:

```

6111 \ifthenelse{\boolean{FormatEPUB}\OR\boolean{FormatWP}}%
6112 {}%
6113 {%
6114 \ifcsvoid{thetitle}{}{%
6115 \LWR@printthetitle%
6116 }%
6117 }%

```

Keep paragraph tags disabled for now:

```

6118 \LWR@stoppars
6119

```

If using MATHJAX, disable \ensuremath by printing a nullified definition at the start of each file, and add further customizations:

```

6120 \LWR@customizeMathJax

6121 \LWR@traceinfo{LWR@newhtmlfile: done}
6122 }

6123 \end{warpHTML}

```

## 62 Sectioning

Sectioning and cross-references have been emulated from scratch, rather than try to patch several layers of existing L<sup>A</sup>T<sub>E</sub>X 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<sub>l</sub>atex* to generate characters and *pdf<sub>t</sub>otext* to read them. If extra symbols appear in the text, it may be that *pdf<sub>l</sub>atex* is actually producing a symbol over or under a character, resulting in *pdf<sub>t</sub>otext* picking up the accent symbol separately.

X<sub>L</sub>L<sup>A</sup>T<sub>E</sub>X and Lua<sup>A</sup>T<sub>E</sub>X directly support accented section and file names.

for HTML output: 6124 \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.

```
6125 \newbool{LWR@forcinghtmlpage}
6126 \boolfalse{LWR@forcinghtmlpage}
6127
6128 \newcommand*{\ForceHTMLPage}{%
6129 \global\booltrue{LWR@forcinghtmlpage}%
6130 }
```

`\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.

```
6131 \newbool{LWR@forcinghtmltoc}
6132 \boolfalse{LWR@forcinghtmltoc}
6133
6134 \newcommand*{\ForceHTMLTOC}{%
6135 \global\booltrue{LWR@forcinghtmltoc}%
6136 }
```

```
6137 \end{warpHTML}
```


**for PRINT output:**

```
6138 \begin{warpprint}
6139 \newcommand*{\ForceHTMLPage}{}
6140 \newcommand*{\ForceHTMLTOC}{}
6141 \end{warpprint}
```

**for HTML output:**

```
6142 \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.

```
6143 \newbool{LWR@mainmatter}
6144 \DeclareDocumentCommand{\mainmatter}{}{}%
6145 \booltrue{LWR@mainmatter}%
6146 }
```

`\frontmatter` Declare the front matter section of the document, using arabic numbering for the internal numbering. Does not reset the page number.

```

6147 \DeclareDocumentCommand{\frontmatter}{}{%
6148 \boolfalse{LWR@mainmatter}%
6149 }

```

`\backmatter` Declare the back matter section of the document. Does not reset the page number.

```

6150 \DeclareDocumentCommand{\backmatter}{}{%
6151 \boolfalse{LWR@mainmatter}
6152 }

```

## 62.3 Sectioning support macros

`\LWR@sectionnumber` {*<section type>*}

Typeset a section number and its trailing space with css formatting:

```

6153 \newcommand*{\LWR@sectionnumber}[1]{%
6154 \InlineClass{sectionnumber}{#1}%
6155 }

```

`autosec` A tag used by the toc and index.

`\LWR@createautosec` {*<section type>*}

Create an autosection tag.

```

6156 \newcommand*{\LWR@createautosec}[1]{%
6157 \LWR@htmltag{%
6158 #1 % space
6159 id=\textquotedbl\LWR@print@mbbox{autosec-\arabic{page}}\textquotedbl%
6160 }%
6161 }

```

`\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.

```

6162 \NewDocumentCommand{\LWR@pushoneclose}{m}{%
6163 \LWR@traceinfo{\LWR@pushoneclose #1}%
6164 \LWR@pushclose{#1}%
6165 }

```

`\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.

```
6166 \NewDocumentCommand{\LWR@startnewdepth}{m}{%
```

Close any stacked sections up to this new one.

```
6167 \LWR@closeprevious{#1}%
```

Push a new section depth:

```
6168 \LWR@pushoneclose{#1}%
6169 }
```

Ctrl 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.

```
6170 \newcounter{LWR@prevFileDepth}
6171 \setcounter{LWR@prevFileDepth}{\LWR@depthsubparagraph}
```

\@secntformat {<sectiontype>}

```
6172 \def\@secntformat#1{\csname the#1\endcsname\quad}
```

\simplechapterdelim Used by tocbibind and anonchap.

```
6173 \newcommand*\simplechapterdelim{}
```

\@chapcntformat {<sectiontype>}

\let to \@secntformat by default, but may be redefined by \simplechapter and \restorechapter from tocbibind or anonchap.

```
6174 \let\@chapcntformat\@secntformat
```

\@partcntformat {<sectiontype>}

\let to \@secntformat by default, but may be redefined by ctex.

```
6175 \let\@partcntformat\@secntformat
```

\@partnameformat Prints “Part” for part sections.

Nullified by ctex.

```
6176 \newcommand*\@partnameformat{\LWR@isolate{\partname}~}%
```

Ctrl 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.

```
6177 \newcounter{LWR@currentautosec}
6178 \setcounter{LWR@currentautosec}{1}
```

`\LWR@section` \* [*<TOC name>*] {*<name>*} {*<sectiontype>*}

The common actions for the high-level sectioning commands.

```
6179 \DeclareDocumentCommand{\LWR@section}{m m m m}{%
6180 \IfValueTF{#2}%
6181 {\LWR@traceinfo{LWR@section: starting #4 #2}}%
6182 {\LWR@traceinfo{LWR@section: starting #4 #3}}%
6183 \LWR@maybeprintpendingfootnotes{\csuse{LWR@depth#4}}%
6184 \LWR@stoppars%
6185 \LWR@startnewdepth{#4}}%
```

Cancel special minipage horizontal space interaction:

```
6186 \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 L<sup>A</sup>T<sub>E</sub>X page so that toc and index page number points to the section:

```
6187 \LWR@traceinfo{LWR@section: testing whether to start a new HTML file}%
6188 \IfBooleanT{#1}{\LWR@traceinfo{LWR@section: starred}}%
6189 \ifbool{LWR@forcinghtmlpage}{\LWR@traceinfo{LWR@section: forcinghtmlpage}}{}%
6190 \ifthenelse{%
6191 \(%
6192 \(\NOT\equal{#1}{\BooleanTrue}\)\OR%
6193 \(\cnttest{\@nameuse{LWR@depth#4}}{=}{\LWR@depthpart}\)\OR%
6194 \(\boolean{LWR@forcinghtmlpage}\)%
6195 \)%
6196 \AND%
6197 \cnttest{\@nameuse{LWR@depth#4}}{<=}{\value{FileDepth}}%
6198 \AND%
6199 \(%
6200 \NOT\boolean{CombineHigherDepths}\OR%
6201 \cnttest{\@nameuse{LWR@depth#4}}{<=}{\value{LWR@prevFileDepth}}%
6202 \)%
6203 \AND%

6204 \(% phantomsection
6205 \NOT\isempty{#3}%
6206 \OR%
6207 \(\NOT\equal{#1}{\BooleanTrue}\)\%
6208 \)%
6209 }%
```

If so: start a new HTML file:

```
6210 {% new file
6211 \LWR@traceinfo{LWR@section: new HTML file}%
```

See if there was an optional TOC name entry:

```
6212 \IfNoValueTF{#2}%
```

If no optional entry

```
6213 {\LWR@newhtmlfile{#3}}%
```

If yes an optional entry

```
6214 {\LWR@newhtmlfile{#2}}%
6215 }% new file
```

Else: No new HTML file:

```
6216 {% not new file
```

Generate a new L<sup>A</sup>T<sub>E</sub>X page so that TOC and index page number points to the section:

```
6217 \LWR@traceinfo{LWR@section: not a new HTML file, about to LWR@orignewpage}%
6218 \LWR@orignewpage%
6219 }% not new file
6220
```

Remember this section's name for \nameref:

```
6221 \IfValueT{#3}{%
6222 \LWR@traceinfo{LWR@section: about to LWR@setlatestname}%
6223 \IfValueTF{#2}{\LWR@setlatestname{#2}}{\LWR@setlatestname{#3}}%
6224 }%
```

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.

```
6225 \ifbool{HTMLDebugComments}{%
6226 \begingroup%
6227 \LWR@nullfonts%
6228 \IfBooleanTF{#1}% starred
6229 {\LWR@htmlcomment{Opening #4*}}%
6230 {%
6231 \IfNoValueTF{#2}% short TOC
6232 {\LWR@htmlcomment{Opening #4 ‘#3’}}%
6233 {\LWR@htmlcomment{Opening #4 ‘#2’}}%
6234 }\LWR@orignewline%
6235 \endgroup%
6236 }{}
```

For inline sections paragraph and subparagraph, start a new paragraph now:

```
6237 \ifthenelse{%
6238 \cnttest{\@nameuse{LWR@depth#4}}{>=}{\LWR@depthparagraph}%
6239 }%
6240 {\LWR@startpars}%
6241 {}%
```

Create the opening tag with an autosec:

```
6242 \LWR@traceinfo{LWR@section: about to LWR@createautosec}%
6243 \LWR@createautosec{\@nameuse{LWR@tag#4}}%
```

```
6244 \setcounter{LWR@currentautosec}{\value{page}}%
```

Check if starred:

```
6245 \IfBooleanTF{#1}%
6246 {%
6247 \LWR@traceinfo{LWR@section: starred}%
```

Starred, but also forcing a toc entry, so add unnumbered toc name or regular name:

```
6248 \ifbool{LWR@forcinghtmltoc}%
6249 {%
6250 \addcontentsline{toc}{#4}{%
6251 \IfValueTF{#2}{\LWR@isolate{#2}}{\LWR@isolate{#3}}%
6252 }%
6253 }%
6254 {}%
6255 }% starred
```

Not starred, so step counter and add to toc:

```
6256 {% not starred
```

Only add a numbered toc entry if section number is not too deep:

```
6257 \ifthenelse{%
6258 \cnttest{\@nameuse{LWR@depth#4}}{<=}{\value{secnumdepth}}%
6259 }%
6260 {% if secnumdepth
```

If in the main matter, step the counter and add the toc entry. For article class, lwarp assumes that all is mainmatter.

```
6261 \LWR@traceinfo{LWR@section: about to test main matter}%
6262 \ifbool{LWR@mainmatter}%
6263 {%
6264 \LWR@traceinfo{LWR@section: yes mainmatter}%
6265 \refstepcounter{#4}%
```

Add main matter numbered toc entry with the toc name or the regular name:

```

6266 \LWR@traceinfo{LWR@section: about to addcontentsline}%
6267 \addcontentsline{toc}{#4}%
6268 {%
6269 \protect\numberline{%
6270 \@nameuse{pre#4name}%
6271 \@nameuse{the#4}%
6272 \@nameuse{post#4name}%
6273 }%
6274 {%
6275 \ignorespaces%
6276 \IfValueTF{#2}{\LWR@isolate{#2}}{\LWR@isolate{#3}}\protect\relax%
6277 }%
6278 }%
6279 \LWR@traceinfo{LWR@section: finished addcontentsline}%
6280 }% end of if main matter

```

If not main matter, add unnumbered toc name or regular name:

```

6281 {% not main matter
6282 \LWR@traceinfo{LWR@section: no main matter}%
6283 \addcontentsline{toc}{#4}{%
6284 \IfValueTF{#2}{\LWR@isolate{#2}}{\LWR@isolate{#3}}%
6285 }%
6286 }% end of not main matter
6287 }% end of secnumdepth

```

Deeper than secnumdepth, so add an unnumbered toc entry:

```

6288 {%
6289 \addcontentsline{toc}{#4}{%
6290 \IfValueTF{#2}{\LWR@isolate{#2}}{\LWR@isolate{#3}}%
6291 }%
6292 }%

```

For part, print “Part”:

```

6293 \ifbool{LWR@mainmatter}%
6294 {%
6295 \ifthenelse{%
6296 \(\cnttest{\@nameuse{LWR@depth#4}}{<=}%
6297 {\value{secnumdepth}}\)\ AND%
6298 \(\cnttest{\@nameuse{LWR@depth#4}}{=}{\LWR@depthpart}\)%
6299 }%
6300 {\@partnameformat}%
6301 {}%

```

Print the section number:

```

6302 \LWR@traceinfo{LWR@section: about to print section number}%
6303 \ifthenelse{%
6304 \cnttest{\@nameuse{LWR@depth#4}}{<=}{\value{secnumdepth}}%
6305 }%
6306 {%
6307 \ifstrequal{#4}{part}%
6308 {\protect\LWR@sectionnumber{\@partcntformat{#4}}}%

```

```

6309 {%
6310 \ifstrequal{#4}{chapter}%
6311 {\protect\LWR@sectionnumber{\@chapcntformat{#4}}}%
6312 {\protect\LWR@sectionnumber{\@secntformat{#4}}}%
6313 }%
6314 }%
6315 {%
6316 \LWR@traceinfo{LWR@section: finished print section number}%
6317 }{%
6318 }% end of not starred

```

Print the section name:

```

6319 \LWR@traceinfo{LWR@section: about to print the section name}%
6320 \LWR@isolate{#3}%

```

Close the heading tag, such as /H2:

```

6321 \LWR@traceinfo{LWR@section: about to close the heading tag}%
6322 \LWR@htmltag{\@nameuse{LWR@tag#4end}}%
6323 \LWR@orignewline%

```

Generate a L<sup>A</sup>T<sub>E</sub>X label:

```

6324 \LWR@traceinfo{LWR@section: about to create the LaTeX label}%
6325 \setcounter{LWR@latestautopage}{\value{page}}%
6326 \LWR@newautopagelabel{LWR@currentautosec}\LWR@orignewline%

```

Start paragraph handing unless is an inline paragraph or subparagraph:

```

6327 \ifthenelse{%
6328 \cnttest{\@nameuse{LWR@depth#4}}{<}{\LWR@depthparagraph}%
6329 }%
6330 {\LWR@startpars}%
6331 {}%

```

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.

```

6332 \ifthenelse{%
6333 \NOT\equal{#1}{\BooleanTrue}\OR%
6334 \cnttest{\@nameuse{LWR@depth#4}}{=}{\LWR@depthpart}%
6335 }%
6336 {% not starred
6337 \setcounter{LWR@prevFileDepth}{\@nameuse{LWR@depth#4}}%
6338 }% not starred
6339 {}%

```

Reset to defaults if not a phantomsection:

```

6340 \ifstrempy{#3}%
6341 {}%
6342 {%
6343 \global\boolfalse{LWR@forcinghtmlpage}%
6344 \global\boolfalse{LWR@forcinghtmltoc}%
6345 }%
6346 %
6347 \LWR@traceinfo{LWR@section: done}%
6348 }
```

## 62.4 Pre- and post- sectioning names

`\prebookname` Usually null, but is used by `uj*` and `ut*` Japanese classes.

`\postbookname`

```

6349 \providecommand*\prebookname{}
6350 \providecommand*\postbookname{}

```

`\prepartname` Usually null, but is used by `uj*` and `ut*` Japanese classes.

`\postpartname`

```

6351 \providecommand*\prepartname{}
6352 \providecommand*\postpartname{}

```

`\prechaptername` Usually null, but is used by `uj*` and `ut*` Japanese classes.

`\postchaptername`

```

6353 \providecommand*\prechaptername{}
6354 \providecommand*\postchaptername{}

```

`\presectionname` Always null, but provided here for algorithmic simplicity in `\LWR@section`.

`\postsectionname`

```

6355 \providecommand*\presectionname{}
6356 \let\postsectionname\presectionname
6357
6358 \let\presubsectionname\presectionname
6359 \let\postsubsectionname\postsectionname
6360
6361 \let\presubsubsectionname\presectionname
6362 \let\postsubsubsectionname\postsectionname
6363
6364 \let\preparagraphname\presectionname
6365 \let\postparagraphname\postsectionname
6366
6367 \let\presubparagraphname\presectionname
6368 \let\postsubparagraphname\postsectionname

```

## 62.5 \section and friends

For memoir, a second optional argument is allowed.

For `hypbmsec`, 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*}

```
6369 \newcommand{\part@preamble}{}% for koma-script
6370
6371 \DeclareDocumentCommand{\part}{s d() o o d() m}{%
6372 \LWR@section{#1}{#3}{#6}{part}%
6373
6374 \part@preamble% for koma-script
6375 \renewcommand{\part@preamble}{}%
6376 }
```

`\chapter` \* (*2:PDF name*) [*3:TOC name*] [*4:PDF name*] (*5:PDF name*) {*6:name*}

```
6377 \let\@printcites\relax% for quotchap package
6378
6379 \newcommand{\chapter@preamble}{}% for koma-script
6380
6381 \ifundefined{chapter}
6382 {}
6383 {%
6384 \DeclareDocumentCommand{\chapter}{s d() o o d() m}{%
6385 \LWR@section{#1}{#3}{#6}{chapter}%
6386
6387 \@printcites% for quotchap package
6388
6389 \chapter@preamble% for koma-script
6390 \renewcommand{\chapter@preamble}{}%
6391 }
6392 }
```

`\section` \* (*2:PDF name*) [*3:TOC name*] [*4:PDF name*] (*5:PDF name*) {*6:name*}

```
6393 \DeclareDocumentCommand{\section}{s d() o o d() m}{%
6394 \LWR@section{#1}{#3}{#6}{section}%
6395 }
```

`\subsection` \* (*2:PDF name*) [*3:TOC name*] [*4:PDF name*] (*5:PDF name*) {*6:name*}

```
6396 \DeclareDocumentCommand{\subsection}{s d() o o d() m}{%
6397 \LWR@section{#1}{#3}{#6}{subsection}%
6398 }
```

`\subsubsection` \* (*2:PDF name*) [*3:TOC name*] [*4:PDF name*] (*5:PDF name*) {*6:name*}

```
6399 \DeclareDocumentCommand{\subsubsection}{s d() o o d() m}{%
6400 \LWR@section{#1}{#3}{#6}{subsubsection}%
6401 }
```

`\paragraph` \* (`\langle 2:PDF name \rangle`) [`\langle 3:TOC name \rangle`] [`\langle 4:PDF name \rangle`] (`\langle 5:PDF name \rangle`) {`\langle 6:name \rangle`}

```
6402 \DeclareDocumentCommand{\paragraph}{s d() o o d() m}{%
6403 \LWR@section{#1}{#3}{#6}{paragraph}%
6404 }
```

`\subparagraph` \* (`\langle 2:PDF name \rangle`) [`\langle 3:TOC name \rangle`] [`\langle 4:PDF name \rangle`] (`\langle 5:PDF name \rangle`) {`\langle 6:name \rangle`}

```
6405 \DeclareDocumentCommand{\subparagraph}{s d() o o d() m}{%
6406 \LWR@section{#1}{#3}{#6}{subparagraph}%
6407 }
```

```
6408 \end{warpHTML}
```

## 63 Starting a new file

**for HTML & PRINT:** 6409 `\begin{warpall}`

`\HTMLLanguage` Default language for the HTML lang tag.

```
6410 \newcommand*{\LWR@currentHTMLLanguage}{en-US}
6411
6412 \newcommand*{\HTMLLanguage}[1]{%
6413 \renewcommand*{\LWR@currentHTMLLanguage}{#1}%
6414 }
```

`\theHTMLTitleSeparator` May be used inside `\theHTMLTitleSection` to separate the website's overall HTML title and the particular page's section name.

```
6415 \ifPDFTeX% pdflatex or dvi latex
6416 \ifdefstring{\inputencodingname}{utf8}{%
6417 \newcommand*{\theHTMLTitleSeparator}{ - }% Emdash
6418 }{%
6419 \newcommand*{\theHTMLTitleSeparator}{ - }% hyphen
6420 }%
6421 \else%
6422 \ifpTeX
6423 \newcommand*{\theHTMLTitleSeparator}{ - }% hyphen
6424 \else
6425 \newcommand*{\theHTMLTitleSeparator}{ - }% Emdash
6426 \fi%
6427 \fi%
```

`\HTMLTitleBeforeSection` Sets the HTML page's meta title tag to show the website title before the section name.

```
6428 \newcommand*{\HTMLTitleBeforeSection}{%
6429 \def\theHTMLTitleSection{%
6430 \theHTMLTitle\theHTMLTitleSeparator\theHTMLSection%
6431 }%
6432 }
```

`\HTMLTitleAfterSection` Sets the HTML page's meta title tag to show the section name before the website title.

```
6433 \newcommand*{\HTMLTitleAfterSection}{%
6434 \def\theHTMLTitleSection{%
6435 \theHTMLSection\theHTMLTitleSeparator\theHTMLTitle%
6436 }%
6437 }
```

`\theHTMLTitleSection` Forms the HTML page's meta title tag. The default is to show the website title before the section name.

```
6438 \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.

```
6439 \newcommand*{\theHTMLSection}{}

6440 \end{warpall}
```

**for HTML output:** `6441 \begin{warpHTML}`

`\LWR@filestart` [`<sectionname>`] Creates the opening HTML tags.

```
6442 \newcommand*{\LWR@filestart}[1][]{%
6443 \LWR@traceinfo{\LWR@filestart !#1!}%
```

Locally temporarily disable direct-formatting commands:

```
6444 \begingroup%
6445 \LWR@nullfonts%
```

Save the section name for use while creating the HTML meta title tag:

```
6446 \edef\theHTMLSection{#1}%
```

Create the page's HTML header:

```
6447 \LWR@htmltag{!DOCTYPE html}\LWR@orignewline
```

The language is user-adjustable:

```
6448 \LWR@htmltag{%
6449 html lang=\LWR@orig@textquotedbl\LWR@currentHTMLLanguage\LWR@orig@textquotedbl%
6450 }\LWR@orignewline
```

Start of the meta data:

```
6451 \LWR@htmltag{head}\LWR@orignewline
```

Charset is fixed at UTF-8:

```
6452 \LWR@htmltag{%
6453 meta charset=\LWR@orig@textquotedbl{}UTF-8\LWR@orig@textquotedbl\ /\%
6454 }\LWR@orignewline
```

Author:

```
6455 \ifthenelse{\equal{\theHTMLAuthor}{}}{%
6456 {}%
6457 {%
6458 \LWR@htmltag{%
6459 meta name=\LWR@orig@textquotedbl{}author\LWR@orig@textquotedbl\ % space
6460 content=\LWR@orig@textquotedbl\theHTMLAuthor\LWR@orig@textquotedbl\ /\%
6461 }\LWR@orignewline%
6462 }%
```

lwarp is the generator:

```
6463 \LWR@htmltag{%
6464 meta % space
6465 name=\LWR@orig@textquotedbl{}generator\LWR@orig@textquotedbl\ % space
6466 content=\LWR@orig@textquotedbl{}LaTeX lwarp package\LWR@orig@textquotedbl\ /\%
6467 }\LWR@orignewline%
```

If there is a description, add it now:

```
6468 \ifdefempty{\LWR@currentHTMLDescription}{}%
6469 \LWR@htmltag{%
6470 meta name=\LWR@orig@textquotedbl{}description\LWR@orig@textquotedbl\ % space
6471 content=\LWR@orig@textquotedbl\LWR@currentHTMLDescription\LWR@orig@textquotedbl\ /\%
6472 }\LWR@orignewline
6473 }%
```

Mobile-friendly viewport:

```
6474 \LWR@htmltag{%
6475 meta % space
6476 name=\LWR@orig@textquotedbl{}viewport\LWR@orig@textquotedbl\ % space
6477 content=\LWR@orig@textquotedbl{}width=device-width, initial-scale=1.0\LWR@orig@textquotedbl\ /\%
6478 }\LWR@orignewline
```

IE patch:

```
6479 \LWR@htmltag{!-/-[if lt IE 9]}\LWR@orignewline
6480 \LWR@htmltag{%
6481 script % space
6482 src=\LWR@orig@textquotedbl{}%
6483 http://html5shiv.googlecode.com/svn/trunk/html5.js%
6484 \LWR@orig@textquotedbl%
6485 }%
6486 \LWR@htmltag{/script}\LWR@orignewline
6487 \LWR@htmltag{![endif]-/-}\LWR@orignewline
```

The page's title, if there is one. A section name is also added if given.

```

6488 \ifthenelse{\equal{\theHTMLTitle}{}}%
6489 {}%
6490 {%
6491 \LWR@htmltag{title}%
6492 \ifdefempty{\theHTMLSection}%
6493 {\theHTMLTitle}%
6494 {\theHTMLTitleSection}%
6495 \LWR@htmltag{/title}\LWR@orignewline%
6496 }%

```

The page's stylesheet:

```

6497 \LWR@htmltag{%
6498 link % space
6499 rel=\LWR@orig@textquotedbl{}stylesheet\LWR@orig@textquotedbl\ % space
6500 type=\LWR@orig@textquotedbl{}text/css\LWR@orig@textquotedbl\ % space
6501 href=\LWR@orig@textquotedbl\LWR@currentcss\LWR@orig@textquotedbl\ /%
6502 }%
6503 \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.

```

6504 \ifbool{mathjax}%
6505 {%
6506 \begingroup%
6507 \LWR@restoreoriglists%
6508 \boolfalse{LWR@verbtags}%
6509
6510 \verbatiminput{\LWR@mathjaxfilename}%
6511
6512 \booltrue{LWR@verbtags}%
6513 \endgroup%
6514 \LWR@stoppars%
6515 }% end of mathjax
6516 {}%

```

End of the header:

```

6515 \LWR@htmltag{/head}\LWR@orignewline

```

Start of the body:

```

6516 \LWR@htmltag{body}\LWR@orignewline
6517 \endgroup
6518 \LWR@traceinfo{LWR@filestart: done}
6519 }

6520 \end{warpHTML}

```

## 64 Starting HTML output

for HTML output: 6521 \begin{warpHTML}

\LWR@LwarpStart Executed at the beginning of the entire document.

The use of \textquotedbl instead of " improves compatibility with xeCJK.

```
6522 \catcode'\$=\active
6523 \newcommand*\LWR@LwarpStart{
6524 {%
6525 \LWR@traceinfo\LWR@lwrapStart}
```

If formatting for a word processor, force filedepth to single-file only, force HTML debug comments off.

```
6526 \ifbool{FormatWP}{%
6527 \setcounter{FileDepth}{-5}%
6528 \boolfalse{HTMLDebugComments}%
6529 }{}
```

Expand and detokenize \HomeHTMLFilename and \HTMLFilename:

```
6530 \edef\LWR@strresult{\HomeHTMLFilename}
6531 \edef\HomeHTMLFilename{\detokenize\expandafter\LWR@strresult}
6532 \edef\LWR@strresult{\HTMLFilename}
6533 \edef\HTMLFilename{\detokenize\expandafter\LWR@strresult}
```

Force onecolumn and empty page style:

```
6534 \LWR@origonecolumn%
6535 \LWR@origpagestyle{empty}%
```

No black box for overfull lines:

```
6536 \overfullrule=0pt
```

Reduce chance of line overflow when HTML tags are added:

```
6537 \LWR@print@footnotesize%
```

In PDF output, don't allow line breaks to interfere with HTML tags:

```
6538 \LWR@print@raggedright%
6539 \LetLtxMacro{\}\LWR@endofline%
```

Spread the lines for *pdftotext* to read them well:

```
6540 \linespread{1.3}%
```

For *pdftotext* to reliably identify paragraph splits:

```
6541 \setlength{\parindent}{0pt}
6542 \setlength{\parskip}{2ex}
```

For the lateximage record file:

```
6543 \immediate\openout\LWR@lateximagesfile=\BaseJobname-images.txt
```

Removes space around the caption in the HTML:

```
6544 \setlength{\belowcaptionskip}{0ex}
6545 \setlength{\abovecaptionskip}{0ex}
```

Redefine the plain page style to be empty when used by index pages:

```
6546 \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:

```
6547 \let\LWR@origcaption\caption
```

Labels: `\ltx@label` is used in `amsmath` environments and is also patched by `cleveref`.

Label in HTML

```
6548 \let\LWR@origltx@label\ltx@label
6549 \let\ltx@label\LWR@htmlmathlabel
```

Not yet started any paragraph handling:

```
6550 \global\boolfalse\LWR@doingapar}
6551 \global\boolfalse\LWR@doingstartpars}
```

Document and page settings:

```
6552 \mainmatter
6553 \LWR@origpagenumbering{arabic}
```

Start a new HTML file and a header:

```
6554 \LWR@traceinfo{LWR@lwarpStart: Starting new file.}
6555 \LWR@filestart
6556 \LWR@traceinfo{LWR@lwarpStart: Generating first header.}
```

```
6557 \ifdefempty{\LWR@firstpagetop}{}{%
6558 \LWR@htmltag{header}\LWR@orignewline
6559 \LWR@startpars
6560 \LWR@firstpagetop
6561 \LWR@stoppars
6562 \LWR@htmltag{/header}\LWR@orignewline
6563 }%
```

```

6564 \LWR@html@elementclass{div}{bodywithoutsidetoc}
6565 \LWR@html@elementclass{div}{bodycontainer}
6566 \LWR@traceinfo{\LWR@lwarpStart: Generating textbody.}
6567 \LWR@html@elementclass{section}{textbody}

```

Patch the `itemize`, `enumerate`, and `description` environments and `\item`. This works with the native  $\text{\LaTeX}$  environments, as well as those provided by `enumitem`, `enumerate`, and `paralist`.

```
6568 \LWR@patchlists
```

Ensure that math mode is active to call `lwarp`'s patches:

```
6569 \catcode'\$=\active
```

Required for `\nameref` to work with SVG math:

```

6570 \immediate\write\@mainaux{\catcode'\string\$\active}%
6571 \LetLtxMacro\LWR@syntaxhighlighttone$% balance for editor syntax highlighting

```

Allow HTML paragraphs to begin:

```
6572 \LWR@startpars
```

If using `MATHJAX`, disable `\ensuremath` by printing a nullified definition at the start of each file, and add further customizations:

```
6573 \LWR@customizeMathJax
```

First autopage label in case a figure occurs early.

```

6574 \setcounter{\LWR@latestautopage}{\value{page}}%
6575 \LWR@newautopagelabel{\LWR@currentautosec}%

```

```

6576 \LWR@traceinfo{\LWR@lwarpStart: done}
6577 }
6578 \catcode'\$=3% math shift until lwarp starts

```

```
6579 \end{warpHTML}
```

## 65 Ending HTML output

**for HTML output:** `6580 \begin{warpHTML}`

`\LWR@requesttoc` `{\langle boolean\rangle}{\langle suffix\rangle}` Requests that a TOC, LOF, or LOT be generated.

```

6581 \newcommand*{\LWR@requesttoc}[2]{%
6582 \ifbool{#1}
6583 {

```

```

6584 \expandafter\newwrite\@nameuse{tf@#2}
6585 \immediate\openout \@nameuse{tf@#2} \jobname.#2\relax
6586 }{}
6587 }

```

\LWR@LwarpEnd Final stop of all HTML output:

```

6588 \newcommand*{\LWR@LwarpEnd}
6589 {
6590 \LWR@stoppars
6591 \LWR@closeprevious{finished}

```

At the bottom of the ending file:

Close the textbody:

```

6592 \LWR@htmlelementclassend{section}{textbody}
6593 \LWR@htmlelementclassend{div}{bodycontainer}
6594 \LWR@htmlelementclassend{div}{bodyandsidetoc}

```

Print any pending footnotes:

```

6595 \LWR@printpendingfootnotes

```

Create the footer:

```

6596 \ifdefempty{\LWR@pagebottom}{\}%
6597 \LWR@htmlelement{footer}
6598
6599 \LWR@pagebottom
6600
6601 \LWR@htmlelementend{footer}
6602 }

```

No bottom navigation if are finishing the home page, or if formatting for an EPUB or word processor.

Presumably has a table-of-contents.

```

6603 \ifthenelse{\boolean{FormatEPUB}\OR\boolean{FormatWP}}
6604 {}
6605 {
6606 \ifnumcomp{\value{LWR@htmlfilenumber}}{>}{0}{\LWR@botnavigation}{}
6607 }

```

```

6608 \LWR@stoppars% final stop of all paragraphs

```

Finish the HTML file:

```

6609 \LWR@htmltag{/body}\LWR@orignewline
6610 \LWR@htmltag{/html}\LWR@orignewline

```

Seems to be required sometimes:

```
6611 \LWR@orignewpage
6612 }
```

`\enddocument` If labels have not changed, mark successful completion of the `lateximages` file. Executed as everything is being shut down.

```
6613 \xpatchcmd{\enddocument}
6614 {%
6615 \if@tempswa
6616 \@latex@warning@no@line{Label(s) may have changed.
6617 Rerun to get cross-references right}%
6618 \fi
6619 }
6620 {%
6621 \if@tempswa
6622 \@latex@warning@no@line{Label(s) may have changed.
6623 Rerun to get cross-references right}%
6624 \else
6625 \immediate\write\LWR@lateximagesfile{%
6626 |end|end|end|}%
6627 }%
6628 \fi
6629 }
6630 {}
6631 {
6632 \PackageWarningNoLine{lwarp}
6633 {%
6634 Could not patch \protect\enddocument.\MessageBreak
6635 If labels have changed, be sure to recompile before\MessageBreak
6636 creating lateximages with\MessageBreak
6637 \space\space lwarpmk limages,\MessageBreak
6638 or the images may be corrupt%
6639 }
6640 }

6641 \end{warpHTML}
```

## 66 Title page



**package support** `lwarp` supports the native L<sup>A</sup>T<sub>E</sub>X titling commands, and also supports the packages `authblk` and `titling`. If both are used, `authblk` should be loaded before `titling`.



**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.

**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 <code>\thetitle</code> , <code>\theauthor</code> , 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 <code>\thanks</code> and <code>\affiliation</code> removed, and for <code>\author</code> the <code>\and</code> is replaced to generate a simple inline list of authors separated by commas. Note: <code>\theauthor</code> does not work well with <code>authblk</code> unless the traditional L <sup>A</sup> T <sub>E</sub> X syntax is used. |
|  <code>\theauthor</code> , <code>authblk</code> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| custom titlepages                                                                                                              | <code>\printtitle</code> , <code>\printauthor</code> , etc., are provided for use inside a custom titlepage or titlingpage environment, and these retain the <code>\thanks</code> and <code>\affiliation</code> .                                                                                                                                                                                                                                                                                                                                                                                                       |
| <code>\printthanks</code>                                                                                                      | <code>\printthanks</code> has been added to force the printing of thanks inside a titlingpage environment when <code>\maketitle</code> is not used.                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|  <code>\thanks</code>                         | Inside a <code>\titlepage</code> or <code>\titlingpage</code> environment, use <code>\thanks</code> instead of <code>\footnote</code> 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` `\thedate` `\thetitle`, `\theauthor`, and `\thedate` 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<sup>A</sup>T<sub>E</sub>X 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:** 6642 `\begin{warpall}`

`\if@titlepage` Some classes do not provide `\if@titlepage`. In this case, provide it and force it false.

```
6643 \ifcvoid{@titlepagefalse}{
6644 \newif\if@titlepage
6645 \@titlepagefalse
6646 }{}

6647 \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:** 6648 `\begin{warpall}`  
 6649 `\providerobustcmd{\affiliation}[1]{}{}`  
 6650 `\end{warpall}`

**for PRINT output:** 6651 `\begin{warpprint}`

```
6652 \AtBeginEnvironment{titlepage}{
6653 \renewrobustcmd{\affiliation}[1]{\ \ \ \textsc{\small#1}}
6654 }
6655
6656 \AtBeginDocument{
6657 \ifpackageloaded{titling}{
6658 \AtBeginEnvironment{titlingpage}{
```

```

6659 \renewrobustcmd{\affiliation}[1]{\ \textsc{\small#1}}
6660 }
6661 }{}% titling loaded
6662 }% AtBeginDocument

6663 \end{warpprint}

```

**for HTML output:** 6664 \begin{warppHTML}

Env titlepage Sets up a <div> of class titlepage. Provided even for memoir class, since it is used by \maketitle.

```

6665 \DeclareDocumentEnvironment{titlepage}{}
6666 {
6667 \renewrobustcmd{\affiliation}[1]{\ \InlineClass{affiliation}{##1}}
6668 \LWR@printpendingfootnotes
6669 \LWR@forcenewpage
6670 \BlockClass{titlepage}
6671 }
6672 {
6673 \endBlockClass
6674 \LWR@printpendingfootnotes
6675 }

6676 \end{warppHTML}

```

## 66.4 Printing the thanks

**for HTML & PRINT:** 6677 \begin{warppall}

\printthanks Forces the \thanks to be printed.

This is necessary in a titlingpage environment when \maketitle was not used.

```

6678 \newcommand*{\printthanks}{\LWR@stoppars\@thanks\LWR@startpars}

6679 \end{warppall}

```

## 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:** 6680 \begin{warppHTML}

\printtitle

```

6681 \newcommand*{\printtitle}
6682 {

```

```

6683 \LWR@stoppars%
6684 \LWR@htmltag{\LWR@tagtitle}%
6685 \@title%
6686 \LWR@htmltag{\LWR@tagtitleend}%
6687 \LWR@startpars%
6688 }

```

`\LWR@printthetitle` A private version which prints the title without footnotes, used to title each HTML page.

```

6689 \newcommand*{\LWR@printthetitle}
6690 {%
6691 \LWR@stoppars%
6692 \LWR@htmltag{\LWR@tagtitle}%
6693 \thetitle%
6694 \LWR@htmltag{\LWR@tagtitleend}%
6695 \LWR@startpars%
6696 }

```

`\printauthor` HTML version.

```

6697 \newcommand*{\printauthor}{

```

The entire author block is contained in a <div> named author:

```

6698 \begin{BlockClass}{author}

```

\and finishes one author and starts the next:

```

6699 \renewcommand{\and}{%
6700 \end{BlockClass}
6701 \begin{BlockClass}{oneauthor}
6702 }

```

Individual authors are contained in a <div> named oneauthor:

```

6703 \begin{BlockClass}{oneauthor}
6704 \@author
6705 \end{BlockClass}
6706 \end{BlockClass}
6707 }

```

`\printdate`

```

6708 \newcommand*{\printdate}{%
6709 \begin{BlockClass}{titledate}
6710 \@date
6711 \end{BlockClass}
6712 }

```

```

6713 \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:** 6714 \begin{warpprint}

\printtitle

6715 \newcommand\*{\printtitle}{\Huge\@title}}

\printauthor    Print mode.

6716 \newcommand\*{\printauthor}

6717     {\large\begin{tabular}[t]{c}\@author\end{tabular}}}

\printdate

6718 \newcommand\*{\printdate}{\small\textit{\@date}}}

6719 \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:** 6720 \begin{warppHTML}

6721 \@ifclassloaded{memoir}

6722 {

6723 \newcommand{\LWR@setfootnoteseries}{%

6724     \renewcommand\thefootnote{\@arabic\c@footnote}%

6725 }

6726 }{% not memoir

6727 \if@titlepage

6728 \newcommand{\LWR@setfootnoteseries}{%

6729     \renewcommand\thefootnote{\@arabic\c@footnote}%

6730 }

6731 \else

6732 \newcommand{\LWR@setfootnoteseries}{%

6733     \renewcommand\thefootnote{\@fnsymbol\c@footnote}%

6734 }

6735 \fi

6736 }{% not memoir

`\LWR@maketitlesetup` Patches `\thanks` macros.

```
6737 \newcommand*{\LWR@maketitlesetup}{%
```

Redefine the footnote mark:

```
6738 \LWR@setfootnoteseries%
6739 \def\@makefnmark{\thefootnote}
```

```
\thefootnote ⇒ \nameuse{arabic}{footnote}, or
\thefootnote ⇒ \nameuse{fnsymbol}{footnote}
```

Redefine the footnote text:

```
6740 \long\def\@makefntext##1{%
```

Make the footnote mark and some extra horizontal space for the tags:

```
6741 \@thefnmark~%
```

```
\makethanksmark ⇒ \thanksfootmark ⇒ \tamark ⇒
\@thefnmark ⇒ \itshape a (or similar)
```

Print the text:

```
6742 ##1%
6743 }%
6744 }
```

`\@fnsymbol` {*<counter>*}

Re-defined to use an HTML entity for the double vertical bar symbol. The original definition used `\|` which was not being seen by *pdfotext*.

```
6745 \def\@fnsymbol#1{\ifcase#1\or *\or \HTMLentity{dagger}\or \HTMLentity{Dagger}\or
6746 \HTMLentity{sect}\or \HTMLentity{para}\or \text{\HTMLUnicode{2016}}\or
6747 **\or \HTMLentity{dagger}\HTMLentity{dagger} \or
6748 \HTMLentity{Dagger}\HTMLentity{Dagger} \else\@ctrerr\fi}
```

`\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.

```
6749 \renewcommand*{\maketitle}{%
```

An HTML titlepage `<div>` is used for all classes.

```
6750 \begin{titlepage}
```

Set up special patches:

```
6751 \LWR@maketitlesetup
```

Typeset the title, etc:

```
6752 \@maketitle
```

Immediately generate any \thanks footnotes:

```
6753 \LWR@stoppars\@thanks\LWR@startpars
```

Close the HTML titlepage div and cleanup:

```
6754 \end{titlepage}
6755 \setcounter{footnote}{0}%
6756 \global\let\thanks\relax
6757 \global\let\maketitle\relax
6758 \global\let\@maketitle\relax
6759 \global\let\@thanks\@empty
6760 \global\let\@author\@empty
6761 \global\let\@date\@empty
6762 \global\let\@title\@empty
6763 \global\let\title\relax
6764 \global\let\author\relax
6765 \global\let\date\relax
6766 \global\let\and\relax
6767 }
```

`\@maketitle` HTML mode. Typesets the title, etc.:

```
6768 \DeclareDocumentCommand{\@maketitle}{*}{%
6769 \LWR@stoppars%
6770 \LWR@htmltag{\LWR@tagtitle}%
6771 \@title%
6772 \LWR@htmltag{\LWR@tagtitleend}%
6773 \LWR@startpars%
6774 \begin{BlockClass}{author}%
```

For IEEEtran class:

```
6775 \renewcommand*{\cr}{}%
6776 \renewcommand*{\crr}{}%
6777 \renewcommand*{\noalign}{}%

6778 \renewcommand{\and}{%
6779 \end{BlockClass}%
6780 \begin{BlockClass}{oneauthor}%
6781 }%
6782 \begin{BlockClass}{oneauthor}%
6783 \@author%
6784 \end{BlockClass}%
6785 \end{BlockClass}%
```

```

6786 \begin{BlockClass}{titledate}%
6787 \@date%
6788 \end{BlockClass}%
6789 }

```

`\LWR@titlingmaketitle` \maketitle for use inside an HTML titlingpage environment.

```

6790 \newcommand*{\LWR@titlingmaketitle}{%

```

Keep pending footnotes out of the title block:

```

6791 \LWR@stoppars\@thanks\LWR@startpars

```

Set up special patches:

```

6792 \LWR@maketitlesetup

```

Typeset the title, etc:

```

6793 \@maketitle

```

Immediately generate any \thanks footnotes:

```

6794 \LWR@stoppars\@thanks\LWR@startpars
6795 }

```

```

6796 \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 warpall.

**for HTML & PRINT:** 6797 \begin{warpall}

`\AddSubtitlePublished` Adds \published and \subtitle, and related.

```

6798 \newcommand*{\AddSubtitlePublished}{%
6799 \@ifpackageloaded{titling}{% yes titling package

```

```

6800 \newcommand{\@published}{}%
6801 \newcommand{\published}[1]{\gdef\@published{##1}}%
6802 \renewcommand*\maketitlehooka{\printpublished}%
6803 \newcommand*\printpublished{%
6804 \warpprintonly{\begin{center}\unskip}%
6805 \begin{BlockClass}{published}%
6806 \warpprintonly{\large\itshape}%
6807 \@published%
6808 \end{BlockClass}%
6809 \warpprintonly{\end{center}}%
6810 }%
6811 \newcommand{\@subtitle}{}%
6812 \newcommand{\subtitle}[1]{\gdef\@subtitle{##1}}%
6813 \renewcommand*\maketitlehookb{\printsubtitle}%
6814 \newcommand*\printsubtitle{%
6815 \warpprintonly{\begin{center}\unskip}%
6816 \begin{BlockClass}{subtitle}%
6817 \warpprintonly{\Large\itshape}%
6818 \@subtitle%
6819 \end{BlockClass}%
6820 \warpprintonly{\end{center}}%
6821 }%
6822 }% yes titling package
6823 {% no titling package
6824 \newcommand{\published}[1]{}%
6825 \newcommand*\printpublished{}%
6826 \newcommand{\subtitle}{}%
6827 \newcommand*\printsubtitle}%
6828 }% no titling package
6829 }% \AddSubtitlePublished

6830 \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:** 6831 \begin{warppHTML}

\abstractname User-redefinable title for the abstract.

Also over-written by the `babel` package.

```
6832 \providecommand*\abstractname{Abstract}
```

Some classes allow an optional name, so it is allowed here.

Env abstract

```

6833 \DeclareDocumentEnvironment{abstract}{0}{\abstractname}}
6834 {
6835 \LWR@forcenewpage
6836 \BlockClass{abstract}
6837 \BlockClassSingle{abstracttitle}{#1}
6838 }
6839 {
6840 \endBlockClass
6841 }

6842 \end{warpHTML}

```

## 68 Quote and verse

### 68.1 Attributions

`\attribution`  $\{ \langle name \rangle \}$

For use with quote, quotation, verse:

Ex: "A quotation." `\attribution{\textsc{Author Name}\\\textsl{Book Title}}`

**for HTML output:**

```

6843 \begin{warpHTML}
6844 \newcommand{\attribution}[1]{%
6845 \LWR@stoppars%
6846 \begin{BlockClass}{attribution}
6847 #1
6848 \end{BlockClass}
6849 \LWR@startpars%
6850 }
6851 \end{warpHTML}

```

**for PRINT output:**

```

6852 \begin{warpprint}
6853 \newcommand{\attribution}[1]{
6854 \begin{flushright}
6855 \unskip
6856 #1
6857 \end{flushright}%
6858 }
6859 \end{warpprint}

```

### 68.2 Quotes, quotations

**for HTML output:** 6860 `\begin{warpHTML}`

Env quote

```

6861 \renewenvironment*{quote}

```

```

6862 {
6863 \LWR@forcenewpage
6864 \LWR@htmlblocktag{blockquote}
6865 }
6866 {\LWR@htmlblocktag{/blockquote}}

```

Env quotation

```

6867 \renewenvironment*{quotation}
6868 {
6869 \LWR@forcenewpage
6870 \LWR@htmlblocktag{blockquote}
6871 }
6872 {\LWR@htmlblocktag{/blockquote}}

6873 \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 `\HTML\vleftskip` 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.

Len `\leftmargini`

Len `\HTML\vleftskip`

Len `\HTMLleftmargini`

 **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 `\HTML\vleftskip` the horizontal alignment may not work out exactly, in which case a label may be shifted by one space.

### 68.3.1 L<sup>A</sup>T<sub>E</sub>X core verse environment

for HTML output: 6874 `\begin{warpHTML}`

Env    verse

```

6875 \renewenvironment{verse}
6876 {\let\\newline% lwarp
6877 \list{}{\itemsep \z@
6878 \itemindent -1.5em%
6879 \listparindent\itemindent
6880 \rightmargin \leftmargin
6881 \advance\leftmargin 1.5em}%
6882 \item\relax}
6883 {\endlist}

6884 \end{warpHTML}

```

**for HTML & PRINT:** 6885 \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 \vleftskip and \leftmargini for print output, and optionally select different values for HTML.

Len    \HTMLvleftskip    Sets \vleftskip inside a verse environment in HTML.

```

6886 \newlength{\HTMLvleftskip}
6887 \setlength{\HTMLvleftskip}{1em}

```

Len    \HTMLleftmargini    Sets \leftmargini inside a verse environment in HTML.

```

6888 \newlength{\HTMLleftmargini}
6889 \setlength{\HTMLleftmargini}{4.5em}

```

```

6890 \end{warpall}

```

## 69 Verbatim and tabbing

**for HTML & PRINT:** 6891 \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.

```

6892 \newlength{\VerbatimHTMLWidth}
6893 \setlength{\VerbatimHTMLWidth}{4in}
6894 \end{warpall}

```

**for HTML output:** 6895 \begin{warpHTML}

Bool LWR@verbtags Used to temporarily turn off verbatim tags while doing `\verbatiminput` in the HTML head.

```
6896 \newbool{LWR@verbtags}
6897 \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.

```
6898 \newcommand*{\LWR@atbeginverbatim}[3]{}
6899 {%
```

Avoid excessive space between lines:

```
6900 \setlength{\parskip}{0ex}%
```

Stop generating HTML paragraph tags:

```
6901 \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.

```
6902 \ifbool{LWR@verbtags}{%
6903 \LWR@htmltag{pre class=\textquotedbl#3\textquotedbl%
6904 \ifthenelse{\equal{#1}{}}{}{\ style=\textquotedbl#1\textquotedbl}%
6905 }%
6906 \LWR@orignewline% pre
6907 \leavevmode\unskip\LWR@print@vspace*{-#2\baselineskip}%
6908 }{%}
```

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.

```
6909 \begingroup%
```

```
6910 % \LWR@print@normalsize%
6911 \LWR@origttfamily%
6912 \LWR@print@small%
```

Since inside a `<pre>`, restore the original list processing:

```
6913 \LWR@restoreoriglists%
```

Turn off babel-french extra space before punctuation:

```
6914 \LWR@FBcancel%
```

Do not produce HTML tags for \hspace inside a verse par. Restore plain L<sup>A</sup>T<sub>E</sub>X \hspace functionality:

```
6915 \LWR@select@print@hspace%
6916 }
```

```
\LWR@afterendverbatim {(\negative \baselineskip \vspace)}
```

Finishes enclosing a verbatim environment.

```
6917 \newcommand*{\LWR@afterendverbatim}[1]{%
6918 \endgroup%
6919 \par%
```

At the end of the environment, close the pre:

```
6920 \ifbool{LWR@verbtags}{%
6921 \LWR@print@vspace*{-#1\baselineskip}%
6922 \noindent\LWR@htmltag{/pre}\LWR@orignewline% pre
6923 }{}%
```

Resume regular paragraph handling:

```
6924 \LWR@startpars%
6925 }
```

```
\verbatiminput {(\filename)}
```

Patch \verbatiminput to add HTML tags:

```
6926 \let\LWRV@origverbatim@input\verbatim@input
6927
6928 \renewcommand{\verbatim@input}[2]{%
6929 \ifbool{LWR@verbtags}{\LWR@forcenewpage}{}%
6930 \LWR@atbeginverbatim{2.5}{Verbatim}%
6931 \LWRV@origverbatim@input{#1}{#2}%
6932 \LWR@afterendverbatim{1.5}%
6933 }
```

Env verbatim

```
6934 \AfterEndPreamble{
6935 \LWR@traceinfo{Patching verbatim.}
6936 \AtBeginEnvironment{verbatim}{%
6937 \LWR@forcenewpage%
6938 \LWR@atbeginverbatim{2.5}{verbatim}%
6939 }
6940 \AfterEndEnvironment{verbatim}{%
6941 \LWR@afterendverbatim{1}%
6942 }
6943 }
```

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.

```

6944 \newcommand*{\LWR@HTML@tabbing}{%
6945 \LWR@forcenewpage%
6946 \LWR@atbeginverbatim{3}{tabbing}%
6947 \LWR@print@tabbing%
6948 }
6949
6950 \newcommand*{\LWR@HTML@endtabbing}{%
6951 \LWR@print@endtabbing%
6952 \LWR@afterendverbatim{1}%
6953 }
6954
6955 \LWR@formatted{tabbing}
6956 \LWR@formatted{endtabbing}

6957 \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 `<span>` of class `theoremlabel`.
- The contents are placed inside a `<div>` of class `theoremcontents`.

**for HTML output:** `6958 \begin{warpHTML}`

`\@begintheorem`  $\{\langle name \rangle\} \{\langle number \rangle\}$

```

6959 \renewcommand{\@begintheorem}[2]{%
6960 \LWR@forcenewpage
6961 \BlockClass{theoremcontents}
6962 \trivlist
6963 \item[\InlineClass{theoremlabel}{#1\ #2\ }]\itshape
6964 }

```

`\@opargbegintheorem`  $\{\langle name \rangle\} \{\langle number \rangle\} \{\langle oparg \rangle\}$

```

6965 \renewcommand{\@opargbegintheorem}[3]{%
6966 \LWR@forcenewpage

```

```

6967 \BlockClass{theoremcontents}
6968 \trivlist
6969 \item[\InlineClass{theoremlabel}{#1\ #2\ (#3)\ }]\itshape
6970 }

```

\endtheorem

```

6971 \renewcommand*{\endtheorem}{%
6972 \endtrivlist
6973 \endBlockClass% theoremcontents
6974 }

6975 \end{warpHTML}

```

## 71 Lists

The environments `itemize`, `enumerate`, and `description` are patched when `lwarp` is started. These patches support the standard  $\text{\LaTeX}$  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  $\text{\LaTeX}$  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  $\text{\TeX}$  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:

```
6976 \begin{warpHTML}
```

`\LWR@printcloselist` May be locally redefined by `enumerate` or `description`.

```
6977 \newcommand*{\LWR@printcloselist}{\LWR@printcloseitemize}
```

`\LWR@printopenlist` May be locally redefined by `enumerate` or `description`.

```
6978 \newcommand*{\LWR@printopenlist}{ul style="\LWR@print@mbbox{list-style-type:none}"}
```

`\@mklab` Removes PDF spacing.

```
6979 \AtBeginDocument{
6980 \def\@mklab#1{%
6981 % \hfil %
6982 #1}
6983 \let\makeLabel\@mklab
6984 }
```

`\@donoparitem` Modified for HTML output by replacing TeX boxes with plain text. Also removes PDF spacing.

```
6985 \def\@donoparitem{%
6986 \@noparitemfalse
6987 % \global\setbox\@labels\hbox{\hskip -\leftmargin
6988 % \unhbox\@labels
6989 % \hskip \leftmargin}%
6990 % \if@minipage\else
6991 % \@tempskipa\lastskip
6992 % \vskip -\lastskip
6993 % \advance\@tempskipa\@outerparskip
6994 % \advance\@tempskipa -\parskip
6995 % \vskip\@tempskipa
6996 % \fi
6997 }
```

`\@item` Modified for HTML output by replacing TeX boxes with plain text. Also removes PDF spacing.

```
6998 \def\LWR@HTML@item[#1]{%
6999 \LWR@traceinfo{\@item}
7000 \if@noparitem
7001 \@donoparitem
7002 \else
7003 % \if@inlabel
7004 % \indent
7005 % \par
7006 % \fi
7007 \ifhmode
7008 % \unskip\unskip
7009 \par
```

```

7010 \fi
7011 \if@newlist
7012 \if@nobreak
7013 \@nbitem
7014 \else
7015 % \addpenalty\@beginparpenalty
7016 % \addvspace\@topsep
7017 % \addvspace[-\parskip]%
7018 \fi
7019 \else
7020 % \addpenalty\@itempenalty
7021 % \addvspace\itemsep
7022 \fi
7023 \global\@inlabeltrue
7024 \fi
7025 % \everypar{%
7026 % \@minipagefalse
7027 % \global\@newlistfalse

7028 % \if@inlabel
7029 % \global\@inlabelfalse

7030 % {\setbox\z@\lastbox
7031 % \ifvoid\z@
7032 % \kern-\itemindent
7033 % \fi}%

7034 % \box\@labels
7035 % \penalty\z@
7036 % \fi

7037 % \if@nobreak
7038 % \@nobreakfalse
7039 % \clubpenalty \@M
7040 % \else
7041 % \clubpenalty \@clubpenalty
7042 % \everypar{}%
7043 % \fi}%

7044 \if@noitemarg
7045 \@noitemargfalse
7046 \if@nmbrlist

7047 \refstepcounter\@listctr
7048 \fi
7049 \fi

7050 \makelabel{#1} % extra space
7051 % \sbox\@tempboxa{\makelabel{#1}}%
7052 % \global\setbox\@labels\hbox{%
7053 % \unhbox\@labels
7054 % \hskip \itemindent
7055 % \hskip -\labelwidth

```

```

7056 % \hskip -\labelsep
7057 % \ifdim \wd\@tempboxa >\labelwidth
7058 % \box\@tempboxa

7059 % \else
7060 % \hbox to\labelwidth {\unhbox\@tempboxa}%
7061 % \fi
7062 % \hskip \labelsep}%
7063 \ignorespaces%
7064 }

```

`\@nbitem`

```

7065 \def\@nbitem{%
7066 % \@tempskipa\@outerparskip
7067 % \advance\@tempskipa -\parskip
7068 % \addvspace\@tempskipa
7069 }

```

`\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.

```

7070 \newcommand*\LWR@listitem{%
7071 \LWR@stoppars%
7072 \LWR@startnewdepth{listitem}%
7073 \LWR@htmltag{li}%
7074 \LWR@startpars%
7075 \LWR@origitem%
7076 }

```

`\LWR@nulllistfills` Nullifies various TeX fill commands, in case they are used inside `\makeLabel`. Problems are caused when these are nullified all the time.

```

7077 \newcommand*\LWR@nulllistfills{%
7078 \renewcommand*\hss{}%
7079 \renewcommand*\llap}[1]{##1}%
7080 \renewcommand*\rlap}[1]{##1}%
7081 \renewcommand*\hfil{}%
7082 \renewcommand*\hfilneg{}%
7083 \renewcommand*\hfill{}%
7084 }

```

Env `list` {*⟨label⟩*} {*⟨commands⟩*}

```

7085 \newcommand*\LWR@liststart{%
7086 \LWR@traceinfo\LWR@liststart%
7087 \LWR@stoppars%
7088 \LWR@pushoneclose{list}%

```

```

7089 \LWR@htmltag{\LWR@printopenlist}\LWR@orignewline%
7090 \LWR@startpars%
7091 \setlength{\topsep}{0pt}%
7092 \setlength{\partopsep}{0pt}%
7093 \setlength{\itemsep}{0pt}%
7094 \setlength{\parsep}{0pt}%
7095 \setlength{\leftmargin}{0pt}%
7096 \setlength{\rightmargin}{0pt}%
7097 \setlength{\listparindent}{0pt}%
7098 \setlength{\itemindent}{0pt}%
7099 \setlength{\labelsep}{1em}%
7100 \LWR@nulllistfills%
7101 }

7102 \newcommand*{\LWR@listend}{%
7103 \LWR@traceinfo{\LWR@listend}%
7104 \LWR@stoppars%
7105 \LWR@closeprevious{list}%
7106 \LWR@startpars%
7107 }

```

## 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.

```

7108 \newcommand*{\LWR@itemizeitem}{%
7109 \LWR@stoppars%
7110 \LWR@startnewdepth{listitem}%
7111 \LWR@htmltag{li}%
7112 \LWR@startpars%
7113 \LWR@origitem%
7114 }

```

Env `itemize` [*<options>*]

```

7115 \newcommand*{\LWR@itemizestart}{%
7116 \renewcommand*{\LWR@printcloselist}{\LWR@printcloseitemize}
7117 \renewcommand*{\LWR@printopenlist}{\ul style="\LWR@print@box{list-style-type:none}}
7118 \let\item\LWR@itemizeitem%
7119 \LWR@nulllistfills%
7120 }

```

## 71.3 Enumerate

An HTML unordered list is used with customized L<sup>A</sup>T<sub>E</sub>X-generated labels.

Env enumerate [*options*]

```

7121 \newcommand*{\LWR@enumeratestart}{%
7122 \renewcommand*{\LWR@printcloselist}{\LWR@printcloseitemize}
7123 \renewcommand*{\LWR@printopenlist}{\ul style="\LWR@print@box{list-style-type:none}}
7124 \let\item\LWR@itemizeitem%
7125 \LWR@nulllistfills%
7126 }

```

## 71.4 Description

\LWR@descitem [*label*] Handles an \item inside a description.

```

7127 \newcommand*{\LWR@descitem}[1][]%
7128 {%
7129 \LWR@stoppars%
7130 \LWR@setlatestname{#1}%
7131 \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.

```

7132 \begingroup%
7133 \let\LWR@orig@desc@makelabel\makelabel
7134 \renewcommand*{\makelabel}[1]{%
7135 \LWR@htmltag{dt}%
7136 \LWR@orig@desc@makelabel{#1}%
7137 \LWR@htmltag{/dt}%
7138 }
7139 \LWR@select@html@nohspace%
7140 \LWR@origitem[#1]%
7141 \endgroup%
7142 \LWR@orignewline%
7143 \LWR@htmltag{dd}%
7144 \LWR@startpars%
7145 }

```

Env description [*options*]

```

7146 \newcommand*{\LWR@descriptionstart}{%
7147 \renewcommand*{\LWR@printcloselist}{\LWR@printclosedescription}
7148 \renewcommand*{\LWR@printopenlist}{\dl}
7149 \let\item\LWR@descitem%
7150 \LWR@nulllistfills%
7151 }

```

## 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  $\text{\LaTeX}$  environments, as well as those provided by `enumitem`, `enumerate`, and `paralist`.

```

7152 \newcommand*{\LWR@patchlists}{%
7153 \LetLtxMacro\item\LWR@listitem%
7154 \LetLtxMacro\@item\LWR@HTML@item%
7155 \renewcommand*{\@trivlist}{%
7156 \LWR@traceinfo{@trivlist start}%
7157 \LWR@liststart%
7158 \LWR@orig@trivlist%
7159 \LWR@traceinfo{@trivlist done}%
7160 }%
7161 \renewcommand*{\@trivlist}{%
7162 \LWR@traceinfo{trivlist}%
7163 \LWR@origtrivlist%
7164 }%
7165 \renewcommand*{\endtrivlist}{%
7166 \LWR@traceinfo{endtrivlist start}%
7167 \LWR@origendtrivlist\LWR@listend%
7168 \LWR@traceinfo{endtrivlist done}%
7169 }%
7170 \renewcommand*{\itemize}{%
7171 \LWR@itemizestart\LWR@origitemize%
7172 }%
7173 \renewcommand*{\enumerate}{%
7174 \LWR@enumeratestart\LWR@origenumerate%
7175 }%
7176 \renewcommand*{\description}{%
7177 \LWR@descriptionstart\LWR@origdescription%
7178 }%
7179 }
```

`\LWR@restoreoriglists` Restores the original `trivlist` environment.

```

7180 \newcommand*{\LWR@restoreoriglists}{%
7181 \LWR@traceinfo{\LWR@restoreoriglists}%
7182 \LetLtxMacro\item\LWR@origitem%
7183 \LetLtxMacro\@item\LWR@orig@item%
7184 \let\@trivlist\LWR@orig@trivlist%
7185 \let\trivlist\LWR@origtrivlist%
7186 \let\endtrivlist\LWR@origendtrivlist%
7187 \LetLtxMacro\itemize\LWR@origitemize%
7188 \LetLtxMacro\enditemize\LWR@endorigitemize%
7189 \LetLtxMacro\enumerate\LWR@origenumerate%
7190 \LetLtxMacro\endenumerate\LWR@endorigenumerate%
7191 \LetLtxMacro\description\LWR@origdescription%
7192 \LetLtxMacro\enddescription\LWR@endorigdescription%
7193 \let\@mklab\LWR@orig@mklab%
7194 \let\makeLabel\LWR@origmakeLabel%
7195 \let\@donoparitem\LWR@orig@donoparitem%
7196 \let\@nbitem\LWR@orig@nbitem%
7197 }
```

7198 \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.

⚠ `\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.

full-width rules

- `\toprule`, `\midrule`, `\bottomrule`, and `\hline` 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

- `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{}`.

⚠ S columns

- 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:** 7199 \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.

```
7200 \LetLtxMacro\hdashline\hline
7201 \LetLtxMacro\cdashline\cline
7202 \LetLtxMacro\firsthdashline\hline
7203 \LetLtxMacro\lasthdashline\hline
```

## 72.3 Token lookahead

Used by \LWR@futurenonSPACElet to look at the next token.

\LWR@mynexttoken

```
7204 \newcommand\LWR@mynexttoken\relax
```

\futurelet copies the next token then executes a function to analyze

\LWR@futurenonSPACElet does the same, but ignores intervening white space

Based on the booktabs style:

\LWR@futurenonSPACElet

```
7205 \def\LWR@futurenonSPACElet#1{\def\LWR@cs{#1}%
7206 \afterassignment\LWR@fnslone\let\nexttoken= }
7207 \def\LWR@fnslone{\expandafter\futurelet\LWR@cs\LWR@fnsltwo}
7208 \def\LWR@fnsltwo{%
7209 \expandafter\ifx\LWR@cs@sptoken\let\next=\LWR@fnslthree%
7210 \else\let\next=\nexttoken\fi\next}
7211 \def\LWR@fnslthree{\afterassignment\LWR@fnslone\let\next= }
```

`\LWR@getmynexttoken` Looks ahead and copies the next token into `\LWR@mynexttoken`.

```
7212 \newcommand*{\LWR@getmynexttoken}{%
7213 \LWR@traceinfo{\LWR@getmynexttoken}%
7214 % nothing must follow this next line
7215 \LWR@futurenonpacelet\LWR@mynexttoken\LWR@tabledatacolumnntag
7216 }
```

## 72.4 Tabular variables

`Bool LWR@startedrow` True if should print a row tag before this column.

```
7217 \newbool{\LWR@startedrow}
7218 \boolfalse{\LWR@startedrow}
```

`Bool LWR@tabularcelladded` True if have added a data cell for this position.

```
7219 \newbool{\LWR@tabularcelladded}
7220 \boolfalse{\LWR@tabularcelladded}
```

`Ctr LWR@hlines` Number of `\hlines` or `\midrules` above the next row.

```
7221 \newcounter{\LWR@hlines}
```

`Ctr LWR@hdashedlines` Number of `\arydshln` dashed lines above the next row.

```
7222 \newcounter{\LWR@hdashedlines}
```

`Bool LWR@doingtbrule` True if the next row will have a top/bottom rule above it.

```
7223 \newbool{\LWR@doingtbrule}
7224 \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`.

```
7225 \newbool{\LWR@doingcmidrule}
7226 \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.

```
7227 \newbool{\LWR@tableparcell}
```

`Bool LWR@skippingmrowcell` True if are doing an empty `\multirow` cell, and thus there is no data tag to close.

```
7228 \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.                                                                                                                                                                                                |
|      | 7229                    | \newbool{LWR@skippingmcolrowcell}                                                                                                                                                                                                                                                                                         |
| Bool | LWR@usedmultirow        | Used to error if used \multirow or \multicolumnrow without using \mrowcell or \mcolrowcell.                                                                                                                                                                                                                               |
|      | 7230                    | \newbool{LWR@usedmultirow}                                                                                                                                                                                                                                                                                                |
| Bool | LWR@foundmrowcell       | Used to error if used \multirow or \multicolumnrow without using \mrowcell or \mcolrowcell.                                                                                                                                                                                                                               |
|      | 7231                    | \newbool{LWR@foundmrowcell}                                                                                                                                                                                                                                                                                               |
| Bool | LWR@skipatbang          | True if just finished a \multicolumn so should not create the trailing @ or ! columns table data cells.                                                                                                                                                                                                                   |
|      | 7232                    | \newbool{LWR@skipatbang}                                                                                                                                                                                                                                                                                                  |
| Bool | LWR@emptyatbang         | True if finishing a row and should print empty @ or ! column table data cells.                                                                                                                                                                                                                                            |
|      | 7233                    | \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.                                                                                                                                                                                                              |
|      | 7234                    | \newbool{LWR@intabularmetadata}                                                                                                                                                                                                                                                                                           |
|      | 7235                    | \boolfalse{LWR@intabularmetadata}                                                                                                                                                                                                                                                                                         |
| Ctr  | LWR@tabularDepth        | Tracks whether & is being used inside a tabular.                                                                                                                                                                                                                                                                          |
|      | 7236                    | \newcounter{LWR@tabulardepth}                                                                                                                                                                                                                                                                                             |
|      | 7237                    | \setcounter{LWR@tabulardepth}{0}                                                                                                                                                                                                                                                                                          |
| Ctr  | LWR@tabularpardepth     | Tracks whether should look ahead at the next token when encountering a \par while processing tabular contents.<br><br>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. |
|      | 7238                    | \newcounter{LWR@tabularpardepth}                                                                                                                                                                                                                                                                                          |
|      | 7239                    | \setcounter{LWR@tabularpardepth}{0}                                                                                                                                                                                                                                                                                       |
|      | 7240                    | \newcommand*{\LWR@colsresult}{\temp storage for column format results}                                                                                                                                                                                                                                                    |
|      | 7241                    | \newcommand*{\LWR@pposition}{}                                                                                                                                                                                                                                                                                            |
|      | 7242                    | \newcommand*{\LWR@pleft}{}                                                                                                                                                                                                                                                                                                |
|      | 7243                    | \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  $\LaTeX$  table column, without @, !, >, <, or the vertical bar.

`\LWR@strresult` Holds the result of `Str` functions.

```
7244 \providecommand*\LWR@strresult{}\{}
7245 \providecommand*\LWR@strresulttwo{}\{}
```

`\LWR@origcolspec` Holds the original column specs given to `tabular`.

```
7246 \newcommand*\LWR@origcolspec{}\{}
```

Ctr `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  $\LaTeX$  columns in the table.)

```
7247 \newcounter{LWR@tablecolspecwidth}
```

Ctr `LWR@tablecolspecindex` While parsing the  $\LaTeX$  table column specification, starts at 1 and is incremented per token of the specification.

```
7248 \newcounter{LWR@tablecolspecindex}
```

Ctr `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.

```
7249 \newcounter{LWR@tableLaTeXcolindex}
```

Ctr `LWR@tabletotalLaTeXcols` While parsing a table column specification, begins at 0 and increments by 1 per  $\LaTeX$  table column. Eventually holds the final number of  $\LaTeX$  table columns in each row, not counting @ and ! columns. (In HTML, @ and ! cells become their own columns, but are not included in `LWR@tabletotalLaTeXcols`.)

```
7250 \newcounter{LWR@tabletotalLaTeXcols}
```

Ctr `LWR@tabletotalLaTeXcolsnext` Holds the next  $\LaTeX$  table column index while parsing, equal to one more than `LWR@tabletotalLaTeXcols`.

```
7251 \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 42.

`LWR@colbangspec` A data array of specifications for ! columns. The leftmost's index is `leftedge`, the others are counter values. See section 42.

`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.

## 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@insertatbangcols

```
7252 \newcommand*{\LWR@insertatbangcols}{%
7253 \ifbool{\LWR@skipatbang}%
7254 {}}%
7255 {%
7256 \LWR@printatbang{at}{\arabic{\LWR@tableLaTeXcolindex}}%
7257 \LWR@printatbang{bang}{\arabic{\LWR@tableLaTeXcolindex}}}%
7258 }%
7259 }
```

\LWR@closetabledatcell If LWR@skippingmrowcell or LWR@skippingmcolrowcell then there is no data tag to close. Otherwise, close any paragraphs, then close the data tag.

```
7260 \newcommand*{\LWR@closetabledatcell}{%
7261 \global\booltrue{\LWR@intabularmetadata}%
7262 \ifbool{\LWR@exitingtabular}%
7263 {%
7264 \LWR@stoppars%
7265 }%
7266 {% not exiting tabular
7267 \ifboolexpr{bool{\LWR@skippingmrowcell} or bool{\LWR@skippingmcolrowcell}}%
7268 {%
7269 \LWR@stoppars%
```

If not skipping a \multicolumnrow cell, insert the @ and ! columns after this non-existent column.

```
7270 \ifbool{\LWR@skippingmcolrowcell}%
7271 {}%
7272 {\LWR@insertatbangcols}%
7273 }%
7274 {% not skippingmrowcell
```

Insert any < then any @ and ! column contents, unless muted for the \bottomrule or a \multicolumn:

```
7275 \unskip%
7276 \ifboolexpr{%
```

```

7277 bool{LWR@tabularmutemods} or
7278 bool{LWR@skipatbang} or
7279 bool{LWR@emptyatbang}
7280 }%
7281 {}%
7282 {\LWR@getexparray{LWR@colafterspec}{\arabic{LWR@tableLaTeXcolindex}}}%

```

Close paragraphs:

```

7283 \LWR@stoppars%
7284 \global\boolfalse{LWR@tableparcell}%

```

Close the table data cell.

Close any color <div>s.

```

7285 \whileboolexpr{test {\ifnumcomp{\value{LWR@cellcolordepth}}{>}{0}}}{%
7286 \LWR@htmltag{/div}\LWR@orignewline%
7287 \addtocounter{LWR@cellcolordepth}{-1}%
7288 }%

```

Skip the @ and ! cells if are closing a multicolumn cell.

```

7289 \leavevmode\unskip\LWR@htmltag{/td}\LWR@orignewline%
7290 \global\booltrue{LWR@tabularcelladded}%
7291 \LWR@insertatbangcols%
7292 }% not skipping mrowcell
7293 }% not exiting tabular
7294 \global\boolfalse{LWR@skippingmrowcell}%
7295 \global\boolfalse{LWR@skippingmcolrowcell}%
7296 \global\boolfalse{LWR@skipatbang}%

```

Color control. Column is set by >{} for each cell, so it must be cleared here.

```

7297 \gdef\LWR@cellHTMLcolor{}
7298 \gdef\LWR@columnHTMLcolor{}
7299 \setcounter{LWR@cellcolordepth}{0}
7300 }

```

When not used inside a tabular, & performs its original function as recorded here ( with catcode 4 ).

```

7301 \let\LWR@origampmacro&

7302 \end{warpHTML}

```

### 72.5.1 Handling &

for HTML output: 7303 \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.

```
7304 \newcommand*{\LWR@tabularampersand}{%
7305 \LWR@traceinfo{\LWR@tabularampersand}%
7306 \ifnumcomp{\value{\LWR@tabulardepth}}{>}{0}%
7307 {%
```

If not skipping a multirow cell, close the current data cell.

```
7308 \unskip%
7309 \LWR@closetabledatacell%
```

Move to the next column.

```
7310 \addtocounter{\LWR@tableLaTeXcolindex}{1}%
```

Have not yet added data in this column:

```
7311 \global\boolfalse{\LWR@tabularcelladded}%
```

Look at the next token to decide multi or single column data tag.

```
7312 \LWR@getmynexttoken%
7313 }%
```

If not inside a tabular, performs the original action:

```
7314 {\LWR@origampmacro}%
7315 }
```

& 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.

```
7316 \newcommand*{\LWR@tabularfinishrow}{%
```

If not exiting the tabular, or doing a rule, or have already started a row, finish this row:

```

7317 \ifboolexpr{%
7318 not bool {LWR@exitingtabular} or%
7319 bool{LWR@doingtbrule} or%
7320 bool{LWR@doingcmidrule} or%
7321 test{\ifnumcomp{\value{LWR@hlines}}{>}{0}} or%
7322 test{\ifnumcomp{\value{LWR@hdashedlines}}{>}{0}} or%
7323 bool{LWR@startedrow}%
7324 }{%

```

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:

```

7325 \ifbool{LWR@exitingtabular}{%
7326 \global\booltrue{LWR@tabularmutemods}%
7327 }{%
7328 \global\boolfalse{LWR@tabularmutemods}%
7329 }%

```

Locally reenale the table data tags until finished with the final row:

```

7330 \global\boolfalse{LWR@exitingtabular}%

```

Generate table data tags and ampersands until the right edge:

```

7331 \whileboolexpr{%
7332 test {
7333 \ifnumcomp{\value{LWR@tableLaTeXcolindex}}{<}{\value{LWR@tabletotalLaTeXcols}}
7334 } or %
7335 (%
7336 bool{LWR@intabularmetadata} and%
7337 not bool{LWR@tabularcellladded} and%
7338 test {
7339 \ifnumcomp{\value{LWR@tableLaTeXcolindex}}{=}{\value{LWR@tabletotalLaTeXcols}}
7340 }%
7341)%
7342 }%
7343 {%
7344 \LWR@tabledatasinglecolumnntag%

```

The following is essentially \LWR@tabularampersand with LWR@emptyatbang added to empty the following cells:

```

7345 \LWR@closetabledatacell%
7346 \addtocounter{LWR@tableLaTeXcolindex}{1}%
7347 \global\boolfalse{LWR@tabularcellladded}%
7348 \global\booltrue{LWR@emptyatbang}%

```

Starts the next cell:

```

7349 \ifnumcomp{\value{LWR@tableLaTeXcolindex}}{<}{\value{LWR@tabletotalLaTeXcols}}%
7350 {\LWR@getmynexttoken}%

```

```

7351 {}%
7352 }%

```

Reenable the original LWR@exitingtabular to close the entire table:

```

7353 \ifbool{LWR@tabularmutemods}{%
7354 \global\booltrue{LWR@exitingtabular}%
7355 }{%
7356 \global\boolfalse{LWR@exitingtabular}%
7357 }%
7358 \global\boolfalse{LWR@tabularmutemods}%

7359 \global\boolfalse{LWR@emptyatbang}%
7360 {}% ifboolexpr
7361 }

```

## 72.6 Handling \

Inside tabular, \ is redefined to \LWR@tabularendofline

Throws away options \[dim] or \\*

\LWR@tabularendofline

```

7362 \NewDocumentCommand{\LWR@tabularendofline}{s o}{%

```

Finish the row:

```

7363 \ifnumcomp{\value{LWR@tableLaTeXcolindex}}{<}{\value{LWR@tabletotalLaTeXcols}}{%
7364 {\LWR@tabularfinishrow}%
7365 {\LWR@closetabledatacell}%
7366 \LWR@htmltag{/tr}\LWR@orignewline%

```

**xcolor** row color support:

```

7367 \@rowcolor%

```

No longer inside a data cell:

```

7368 \global\booltrue{LWR@intabularmetadata}%

```

Not yet started a table row:

```

7369 \global\boolfalse{LWR@startedrow}%

```

Additional setup:

```

7370 \setcounter{LWR@hlines}{0}%
7371 \setcounter{LWR@hdashedlines}{0}%
7372 \global\boolfalse{LWR@doingtbrule}%

```

```

7373 \global\boolfalse{LWR@doingcmidrule}%
7374 \LWR@clearmidrules%
7375 \gdef\LWR@rowHTMLcolor{}%

```

Start at first column:

```

7376 \setcounter{LWR@tableLaTeXcolindex}{1}%

```

Have not yet added data in this column:

```

7377 \global\boolfalse{LWR@tabularcelladded}%

```

Allow T<sub>E</sub>X to flush the pending paragraph. Not doing so causes a slowdown for very large tables.

```

7378 \LWR@stoppars
7379 \LWR@origpar

```

Look at the next token to decide between single column data tag or a special case:

```

7380 \LWR@getmynexttoken%
7381 }

```

## 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}.

```

7382 \newcommand*{\LWR@columnspeclookahead}[1]{%
7383 \setcounter{LWR@tempcountone}{\value{LWR@tablecolspecindex}}%
7384 \addtocounter{LWR@tempcountone}{#1}%
7385 \fullexpandarg%
7386 \StrChar{\LWR@origcolspec}{\arabic{LWR@tempcountone}}[\LWR@strresulttwo]%

```

Get the contents of the first group in `\LWR@strresulttwo`:

```

7387 \exploregroups%
7388 \StrChar{\LWR@strresulttwo}{1}[\LWR@strresulttwo]%
7389 \noexploregroups%
7390 }

```

## 72.8 Parsing @, >, <, !, bar columns

Holds the parsed argument for @, >, <, or ! columns:

```

7391 \newcommand*{\LWR@colparameter}{}

```

`\LWR@parseatcolumn` Handles `@{text}` columns.

```
7392 \newcommand*{\LWR@parseatcolumn}{%
```

Move to the next token after the '@':

```
7393 \LWR@traceinfo{at column}%
7394 \addtocounter{LWR@tablecolspecindex}{1}%
```

Read the next token into `\LWR@colparameter`, expanding once:

```
7395 \LWR@traceinfo{about to read the next token:}%
7396 \expandarg%
7397 \StrChar{\LWR@origcolspec}%
7398 {\arabic{LWR@tablecolspecindex}}[\LWR@colparameter]
7399 \fullexpandarg%
```

Store the result into a data array, expanding once out of `\LWR@colparameter`:

```
7400 \LWR@traceinfo{have now read the next token}%
7401 \ifnumcomp{\value{LWR@tabletotalLaTeXcols}}{=}{0}%
7402 {% left edge of the table:
7403 \LWR@traceinfo{at the left edge}%
7404 \LWR@setexparray{LWR@colatspec}{leftedge}{\LWR@colparameter}%
7405 \LWR@traceinfo{at the left edge: %
7406 \LWR@getexparray{LWR@colatspec}{leftedge}}%
7407 }%
7408 {% not at the left edge:
7409 \LWR@traceinfo{not at the left edge}%
7410 \LWR@setexparray{LWR@colatspec}%
7411 {\arabic{LWR@tabletotalLaTeXcols}}{\LWR@colparameter}%
7412 \LWR@traceinfo{at \arabic{LWR@tabletotalLaTeXcols}: %
7413 \LWR@getexparray{LWR@colatspec}{\arabic{LWR@tabletotalLaTeXcols}}}%
7414 }%
7415 \let\LWR@colparameter\relax%
7416 \global\booltrue{LWR@validtablecol}%
7417 }
```

`\LWR@parsebangcolumn` Handles `!{text}` columns.

```
7418 \newcommand*{\LWR@parsebangcolumn}{%
```

Move to the next token after the '!':

```
7419 \LWR@traceinfo{bang column}%
7420 \addtocounter{LWR@tablecolspecindex}{1}%
```

Read the next token into `\LWR@colparameter`, expanding once:

```
7421 \LWR@traceinfo{about to read the next token:}%
7422 \expandarg%
7423 \StrChar{\LWR@origcolspec}%
7424 {\arabic{LWR@tablecolspecindex}}[\LWR@colparameter]
7425 \fullexpandarg%
```

Store the result into a data array, expanding once out of \LWR@colparameter:

```

7426 \LWR@traceinfo{have now read the next token}%
7427 \ifnumcomp{\value{LWR@tabletotalLaTeXcols}}{=}{0}%
7428 {% left edge of the table:
7429 \LWR@traceinfo{at the left edge}%
7430 \LWR@setexparray{LWR@colbangspec}{leftedge}{\LWR@colparameter}%
7431 }%
7432 {% not at the left edge:
7433 \LWR@traceinfo{not at the left edge}%
7434 \LWR@setexparray{LWR@colbangspec}%
7435 {\arabic{LWR@tabletotalLaTeXcols}}{\LWR@colparameter}%
7436 \LWR@traceinfo{bang \arabic{LWR@tabletotalLaTeXcols}: \LWR@colparameter!}%
7437 }%
7438 \let\LWR@colparameter\relax%
7439 \global\booltrue{LWR@validtablecol}%
7440 }
```

\LWR@parsebeforecolumn Handles >{text} columns.

```

7441 \newcommand*{\LWR@parsebeforecolumn}{%
```

Move to the next token after the '>':

```

7442 \addtocounter{LWR@tablecolspecindex}{1}%
```

Read the next token, expanding once into \LWR@colparameter:

```

7443 \expandarg%
7444 \StrChar{\LWR@origcolspec}%
7445 {\arabic{LWR@tablecolspecindex}}[\LWR@colparameter]%
7446 \fullexpandarg%
```

Store the result into a data array, expanding once out of \LWR@colparameter:

```

7447 \LWR@setexparray{LWR@colbeforespec}%
7448 {\arabic{LWR@tabletotalLaTeXcolsnext}}{\LWR@colparameter}%
7449 \let\LWR@colparameter\relax%
7450 \global\booltrue{LWR@validtablecol}%
7451 }
```

\LWR@parseaftercolumn Handles <{text} columns.

```

7452 \newcommand*{\LWR@parseaftercolumn}{%
```

Move to the next token after the '<':

```

7453 \addtocounter{LWR@tablecolspecindex}{1}%
```

Read the next token, expanding once into \LWR@colparameter:

```

7454 \expandarg%
```

```

7455 \StrChar{\LWR@origcolspec}%
7456 {\arabic{\LWR@tablecolspecindex}}[\LWR@colparameter]%
7457 \fullexpandarg%

```

Store the result into a data array, expanding once out of \LWR@colparameter:

```

7458 \LWR@setexparray{\LWR@colafterspec}%
7459 {\arabic{\LWR@tabletotalLaTeXcols}}{\LWR@colparameter}%
7460 \let\LWR@colparameter\relax%
7461 \global\booltrue{\LWR@validtablecol}%
7462 }

```

\LWR@parsebarcolumn      Handles vertical rules.

```

7463 \newcommand*{\LWR@parsebarcolumn}{%
7464 \LWR@traceinfo{\LWR@parsebarcolumn}%

```

Remember the bar at this position:

```

7465 \ifnumcomp{\value{\LWR@tabletotalLaTeXcols}}{=}{0}%
7466 {% left edge of the table:
7467 \edef\LWR@tempone{\LWR@getexparray{\LWR@colbarspec}{leftedge}}%
7468 \ifdefstring{\LWR@tempone}{tvertbarl}%
7469 {\LWR@setexparray{\LWR@colbarspec}{leftedge}{tvertbarldouble}}%
7470 {\LWR@setexparray{\LWR@colbarspec}{leftedge}{tvertbarl}}%
7471 }%
7472 {% not at the left edge:
7473 \edef\LWR@tempone{%
7474 \LWR@getexparray{\LWR@colbarspec}{\arabic{\LWR@tabletotalLaTeXcols}}%
7475 }%
7476 \ifdefstring{\LWR@tempone}{tvertbarr}%
7477 {%
7478 \LWR@setexparray{\LWR@colbarspec}%
7479 {\arabic{\LWR@tabletotalLaTeXcols}}{tvertbarrdouble}%
7480 }%
7481 {%
7482 \LWR@setexparray{\LWR@colbarspec}%
7483 {\arabic{\LWR@tabletotalLaTeXcols}}{tvertbarr}%
7484 }%
7485 }%
7486 \global\booltrue{\LWR@validtablecol}%
7487 }

```

\LWR@parsecoloncolumn      Handles vertical rules.

```

7488 \newcommand*{\LWR@parsecoloncolumn}{%
7489 \LWR@traceinfo{\LWR@parsecoloncolumn}%

```

Remember the bar at this position:

```

7490 \ifnumcomp{\value{\LWR@tabletotalLaTeXcols}}{=}{0}%
7491 {% left edge of the table:
7492 \edef\LWR@tempone{\LWR@getexparray{\LWR@colbarspec}{leftedge}}%

```

```

7493 \ifdefstring{\LWR@tempone}{tvertbarldash}%
7494 {\LWR@setexparray{\LWR@colbarspec}{leftedge}{tvertbarldoubledash}}%
7495 {\LWR@setexparray{\LWR@colbarspec}{leftedge}{tvertbarldash}}%
7496 }%
7497 {% not at the left edge:
7498 \edef\LWR@tempone{%
7499 \LWR@getexparray{\LWR@colbarspec}{\arabic{\LWR@tabletotalLaTeXcols}}%
7500 }%
7501 \ifdefstring{\LWR@tempone}{tvertbarrdash}%
7502 {\LWR@setexparray{\LWR@colbarspec}%
7503 {\arabic{\LWR@tabletotalLaTeXcols}}{tvertbarrdoubledash}}%
7504 {\LWR@setexparray{\LWR@colbarspec}%
7505 {\arabic{\LWR@tabletotalLaTeXcols}}{tvertbarrdash}}%
7506 }%
7507 \global\booltrue{\LWR@validtablecol}%
7508 }

```

`\LWR@parsesemicoloncolumn` Handles vertical rules.

```

7509 \newcommand*{\LWR@parsesemicoloncolumn}{%

```

Treat ; as a : column:

```

7510 \LWR@parsecoloncolumn%

```

Skip the following width token:

```

7511 \addtocounter{\LWR@tablecolspecindex}{1}%
7512 }

```

## 72.9 Parsing ‘l’, ‘c’, or ‘r’ columns

`\LWR@parsenormalcolumn`  $\{\langle thiscolumn \rangle\}$

Add to the accumulated column specs, advance counters, and pre-clear another column of at, before, and after specs.

```

7513 \newcommand*{\LWR@parsenormalcolumn}[1]{%
7514 \addtocounter{\LWR@tabletotalLaTeXcols}{1}%
7515 \addtocounter{\LWR@tabletotalLaTeXcolsnext}{1}%

7516 \LWR@setexparray{\LWR@tablecolspec}{\arabic{\LWR@tabletotalLaTeXcols}}{\#1}%

7517 \LWR@traceinfo{normal column \arabic{\LWR@tabletotalLaTeXcols}: #1}%
7518 \LWR@setexparray{\LWR@colatspec}{\arabic{\LWR@tabletotalLaTeXcolsnext}}{}%
7519 \LWR@setexparray{\LWR@colbangspec}{\arabic{\LWR@tabletotalLaTeXcolsnext}}{}%
7520 \LWR@setexparray{\LWR@colbeforespec}{\arabic{\LWR@tabletotalLaTeXcolsnext}}{}%
7521 \LWR@setexparray{\LWR@colafterspec}{\arabic{\LWR@tabletotalLaTeXcolsnext}}{}%
7522 \LWR@setexparray{\LWR@colbarspec}{\arabic{\LWR@tabletotalLaTeXcolsnext}}{}%
7523 \global\booltrue{\LWR@validtablecol}%
7524 }

```

## 72.10 Parsing ‘p’, ‘m’, or ‘b’ columns

`\LWR@parsepcolumn`  $\{\langle thiscolumn \rangle\}$  The width will be ignored.

```
7525 \newcommand*{\LWR@parsepcolumn}[1]{%
```

Converts to the given column type:

```
7526 \LWR@parsenormalcolumn{#1}%
```

Skips the following width token:

```
7527 \addtocounter{\LWR@tablecolspecindex}{1}%
7528 }
```

## 72.11 Parsing ‘w’ columns

`\LWR@parsewcolumn` The width will be ignored.

```
7529 \newcommand*{\LWR@parsewcolumn}{%
```

```
7530 \LWR@columnspeclookahead{1}%
```

```
7531 \expandafter\LWR@parsenormalcolumn\expandafter{\LWR@strresulttwo}%
```

Skips the following width and alignment tokens:

```
7532 \addtocounter{\LWR@tablecolspecindex}{2}%
7533 }
```

## 72.12 Parsing ‘\*’ columns

`\LWR@parsestarcolumn` Star columns should already have been expanded, so this should never be used.

```
7534 \newcommand*{\LWR@parsestarcolumn}{%
7535 \addtocounter{\LWR@tablecolspecindex}{2}%
7536 }
```

## 72.13 Parsing ‘D’ columns

From the `dcolumn` package.

`\LWR@parseDcolumn`  $\{\langle thiscolumn \rangle\}$  The three parameters will be ignored.

```
7537 \newcommand*{\LWR@parseDcolumn}[1]{%
```

Converts to the given column type.

```
7538 \LWR@parsenormalcolumn{#1}%
```

Skips the following three parameters.

```
7539 \addtocounter{LWR@tablecolspecindex}{3}%
7540 }
```

## 72.14 Expanding the star column specifications

Ctrl LWR@starcount Internal count for duplicating star columns.

```
7541 \newcount\LWR@starcount
```

\LWR@expcolspec Temporary storage used to build the expanded column specifier.

```
7542 \newcommand*{\LWR@expcolspec}{}
```

Ctrl LWR@splitstarindex Indexes into the column specifiers.

```
7543 \newcounter{LWR@splitstarindex}
```

Ctrl LWR@splitstarcopies Number of copies.

```
7544 \newcounter{LWR@splitstarcopies}
```

\LWR@splitstarcontents Contents to duplicate.

```
7545 \newcommand*{\LWR@splitstarcontents}{}
```

\expandcolspec Expands \LWR@origcolspec for star columns.

```
7546 \newcommand*{\expandcolspec}{%
```

Find the position of any star token.

```
7547 \StrPosition{\LWR@origcolspec}{*}[\LWR@tempone]%
```

Expand until no stars are found:

```
7548 \whileboolexpr{ test {\ifnumgreater{\LWR@tempone}{0}}}%
7549 {%
```

Begin with any characters to the left of the star.

```
7550 \setcounter{LWR@splitstarindex}{\LWR@tempone}%
7551 \addtocounter{LWR@splitstarindex}{-1}%
7552 \StrLeft{\LWR@origcolspec}{\value{LWR@splitstarindex}}[\LWR@expcolspec]%
```

Move past the star to remember its number of copies.

```
7553 \addtocounter{LWR@splitstarindex}{2}%
7554 \StrChar{\LWR@origcolspec}{\value{LWR@splitstarindex}}[\LWR@tempone]%
7555 \setcounter{LWR@splitstarcopies}{\expandafter\@firstofone\LWR@tempone}%
```

Move past the number of copies and remember the contents.

```
7556 \addtocounter{LWR@splitstarindex}{1}%
7557 \StrChar{\LWR@origcolspec}{\value{LWR@splitstarindex}}[\LWR@splitstarcontents]%
```

For each copy, append the contents.

```
7558 \ifnumgreater{\value{LWR@splitstarcopies}}{0}%
7559 {%
7560 \LWR@starcount=\value{LWR@splitstarcopies}%
7561 \loop
7562 \appto\LWR@expcolspec{%
```

(Remove the enclosing braces.)

```
7563 \expandafter\@firstofone\LWR@splitstarcontents%
7564 }%
7565 \advance \LWR@starcount -1
7566 \ifnum \LWR@starcount>0 \repeat
7567 }{%}%
```

Remove any token to the left, and append the rightmost remaining tokens.

```
7568 \StrGobbleLeft{\LWR@origcolspec}{\value{LWR@splitstarindex}}[\colspecremainder]%
7569 \appto{\LWR@expcolspec}{\colspecremainder}%
```

Remember the final result.

```
7570 \edef\LWR@origcolspec{\LWR@expcolspec}%
```

See if more stars exist.

```
7571 \StrPosition{\LWR@origcolspec}{*}{\LWR@tempone}%
7572 }%
7573 }
```

## 72.15 Parsing the column specifications


 **tabular baselines** HTML CSS cannot exactly match the  $\text{\LaTeX}$  concept of a baseline for a table row. Table 10 shows the  $\text{\LaTeX}$  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 11 for details.

Table 11 describes how each kind of column is converted to HTML.

Table 10: Tabular baseline

|   |     |     |     |   |
|---|-----|-----|-----|---|
| l | p   | m   | b   | r |
|   |     |     | bot |   |
|   |     | mid | bot |   |
| l | par | mid | bot | r |
|   | par | mid |     |   |
|   | par |     |     |   |

Table 11: Tabular HTML column conversions

- l, r, c:** Converted to table cells without paragraph tags.  
Uses `css vertical-align:middle` so that top or bottom-aligned cells may go above or below this cell.
- p:** Converted to table cells with paragraph tags. Ref: Table 10,  $\text{\LaTeX}$  places the top line of a parbox aligned with the rest of the text line, so `css vertical-align:bottom` 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 `td.tdp`, `td.tdP`, `td.tdprule`, and `td.tdPrule` to `vertical-align: middle`. Another possibility is to change L,R,C, and P to `vertical-align: top` and not worry about the alignment of B and M cells or trying to approximate  $\text{\LaTeX}$  baselines.
- m:** With paragraph tags, `css vertical-align:middle`.
- b:** With paragraph tags, `css vertical-align:top` so that the bottom of the text is closest to the middle of the text line.
- P, M, B:** Horizontally-centered versions.
- S:** Converted to 'r'. Ignores optional argument. From the `siunitx` package.
- D:** Converted to 'c'. From the `dcolumn` package.
- @, !, >, <:** One each, in that order.
- |:** Vertical rule.
- Unknown:** Converted to 'l'.
- \newcolumn:** Currently treated as unknown.

Bool LWR@validtablecol True if found a valid table column type.

```
7574 \newbool{LWR@validtablecol}
```

Bool LWR@opttablecol True if found a table column optional argument.

```
7575 \newbool{LWR@opttablecol}
```

\LWR@parsetablecols  $\{\langle colspecs \rangle\}$

Scans the column specification left to right.

Builds \LWR@tablecolspec with the final specification, one L<sup>A</sup>T<sub>E</sub>X column per entry. The final number of L<sup>A</sup>T<sub>E</sub>X columns in each row is stored in LWR@tabletotalLaTeXcols, which is the number of & and \\ in each line, but which does not include @, !, <, > specifications in the count.

```
7576 \newcommand*{\LWR@parsetablecols}[1]{%
```

```
7577 \LWR@traceinfo{LWR@parsetablecols}%
```

Remember the original supplied column spec:

```
7578 \renewcommand*{\LWR@origcolspec}{#1}%
```

Remove spaces:

```
7579 \expandarg%
```

```
7580 \StrSubstitute{\LWR@origcolspec}{ }{}[\LWR@origcolspec]%
```

Expand any star columns:

```
7581 \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:

```
7582 \setcounter{LWR@tabletotalLaTeXcols}{0}%
```

```
7583 \setcounter{LWR@tabletotalLaTeXcolsnext}{1}%
```

```
7584 \LWR@setexparray{LWR@colatspec}{leftedge}{}%
```

```
7585 \LWR@setexparray{LWR@colatspec}{1}{}%
```

```
7586 \LWR@setexparray{LWR@colatspec}{2}{}%
```

```
7587 \LWR@setexparray{LWR@colatspec}{3}{}%
```

```
7588 \LWR@setexparray{LWR@colbangspec}{leftedge}{}%
```

```
7589 \LWR@setexparray{LWR@colbangspec}{1}{}%
```

```
7590 \LWR@setexparray{LWR@colbangspec}{2}{}%
```

```
7591 \LWR@setexparray{LWR@colbangspec}{3}{}%
```

```
7592 \LWR@setexparray{LWR@colbeforespec}{1}{}%
```

```
7593 \LWR@setexparray{LWR@colbeforespec}{2}{}%
```

```
7594 \LWR@setexparray{LWR@colbeforespec}{3}{}%
```

```
7595 \LWR@setexparray{LWR@colafterspec}{1}{}%
```

```

7596 \LWR@setexparray{LWR@colafterspec}{2}{}%
7597 \LWR@setexparray{LWR@colafterspec}{3}{}%
7598 \LWR@setexparray{LWR@colbarspec}{leftedge}{}%
7599 \LWR@setexparray{LWR@colbarspec}{1}{}%
7600 \LWR@setexparray{LWR@colbarspec}{2}{}%
7601 \LWR@setexparray{LWR@colbarspec}{3}{}%

```

Starting at the first column specification:

```

7602 \setcounter{LWR@tablecolspecindex}{1}%

```

Place the colspecs string length into \LWR@strresult, and remember the number of characters in the column specification:

```

7603 \expandarg%
7604 \StrLen{LWR@origcolspec}[LWR@strresult]%
7605 \fullexpandarg%
7606 \LWR@traceinfo{original column spec length: LWR@strresult}%
7607 \setcounter{LWR@tablecolspecwidth}{LWR@strresult}%

```

Haven't seen any optional arguments so far

```

7608 \global\boolfalse{LWR@opttablecol}%

```

Scan through the column specifications:

```

7609 \whilebool{expr}%
7610 not test{%
7611 \ifnumcomp{value{LWR@tablecolspecindex}}{>}%
7612 {value{LWR@tablecolspecwidth}}%
7613 }%
7614 }%
7615 {%

```

Place the next single-character column type into \LWR@strresult:

```

7616 \expandarg%
7617 \StrChar{LWR@origcolspec}{\arabic{LWR@tablecolspecindex}}[LWR@strresult]%
7618 \LWR@traceinfo{position \arabic{LWR@tablecolspecindex}: LWR@strresult}%
7619 \fullexpandarg%

```

Not yet found a valid column type:

```

7620 \global\boolfalse{LWR@validtablecol}%

```

Skip over any optional arguments, such as siunitx S column:

```

7621 \IfStrEq{LWR@strresult}{[]}{\global\booltrue{LWR@opttablecol}}{}%

```

Throw away anything found inside the optional argument:

```

7622 \ifbool{LWR@opttablecol}%
7623 {}% inside an optional argument
7624 {}% not an optional tabular argument

```

Not inside an optional argument, so consider the column type:

```

7625 \IfStrEq{\LWR@strresult}{l}{\LWR@parsenormalcolumn{l}}{}%
7626 \IfStrEq{\LWR@strresult}{c}{\LWR@parsenormalcolumn{c}}{}%
7627 \IfStrEq{\LWR@strresult}{r}{\LWR@parsenormalcolumn{r}}{}%
7628 \IfStrEq{\LWR@strresult}{L}{\LWR@parsenormalcolumn{L}}{}%
7629 \IfStrEq{\LWR@strresult}{C}{\LWR@parsenormalcolumn{C}}{}%
7630 \IfStrEq{\LWR@strresult}{R}{\LWR@parsenormalcolumn{R}}{}%
7631 \IfStrEq{\LWR@strresult}{J}{\LWR@parsenormalcolumn{J}}{}%

7632 \IfStrEq{\LWR@strresult}{S}{\LWR@parsenormalcolumn{S}}{}%
7633 \IfStrEq{\LWR@strresult}{s}{\LWR@parsenormalcolumn{s}}{}%

7634 \IfStrEq{\LWR@strresult}{\detokenize{@}}{\LWR@parseatcolumn{}}{}%
7635 \IfStrEq{\LWR@strresult}{!}{\LWR@parsebangcolumn{}}{}%
7636 \IfStrEq{\LWR@strresult}{>}{\LWR@parsebeforecolumn{}}{}%
7637 \IfStrEq{\LWR@strresult}{<}{\LWR@parseaftercolumn{}}{}%
7638 \IfStrEq{\LWR@strresult}{|}{\LWR@parsebarcolumn{}}{}%
7639 \IfStrEq{\LWR@strresult}{:}{\LWR@parsecoloncolumn{}}{}%
7640 \IfStrEq{\LWR@strresult}{;}{\LWR@parsesemicoloncolumn{}}{}%

7641 \IfStrEq{\LWR@strresult}{p}{\LWR@parsepcolumn{p}}{}{}%
7642 \IfStrEq{\LWR@strresult}{m}{\LWR@parsepcolumn{m}}{}{}%
7643 \IfStrEq{\LWR@strresult}{b}{\LWR@parsepcolumn{b}}{}{}%

7644 \IfStrEq{\LWR@strresult}{w}{\LWR@parsewcolumn{}}{}%
7645 \IfStrEq{\LWR@strresult}{W}{\LWR@parsewcolumn{}}{}%

```

A star column:

```

7646 \IfStrEq{\LWR@strresult}{*}{\LWR@parsestarcolumn{}}{}%

```

From the dcolumn package:

```

7647 \IfStrEq{\LWR@strresult}{D}{\LWR@parseDcolumn{c}}{}{}%

```

From the tabularx package. X column has no parameter, but will be given paragraph tags.

```

7648 \IfStrEq{\LWR@strresult}{X}{\LWR@parsenormalcolumn{X}}{}{}%

```

---

Many people define centered versions “P”, “M”, and “B”:

```

\newcolumnntype{P}[1]{>{\centering\arraybackslash}p{#1}}

```

---

```

7649 \IfStrEq{\LWR@strresult}{P}{\LWR@parsepcolumn{P}}{}{}%
7650 \IfStrEq{\LWR@strresult}{M}{\LWR@parsepcolumn{M}}{}{}%
7651 \IfStrEq{\LWR@strresult}{B}{\LWR@parsepcolumn{B}}{}{}%

```

If this column was an invalid column type, convert it to an l column:

```
7652 \ifbool{LWR@validtablecol}{%}{%
7653 \LWR@traceinfo{invalid column type: \LWR@strresult}%
7654 \LWR@parsenormalcolumn{l}%
7655 }%
7656 }% not an optional column argument
```

If read the closing bracket, no longer inside the optional argument:

```
7657 \IfStrEq{\LWR@strresult}{\global\boolfalse{LWR@opttablecol}}{}
```

Move to the next character:

```
7658 \addtocounter{LWR@tablecolspecindex}{1}%
7659 }% while do
7660 }%
```

## 72.16 colortbl and xparse 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.

```
7661 \@ifundefined{rownum}{\newcount\rownum}{}
```

`\@rowcolors` Emulated in case xcolor is not used.

```
7662 \newcommand*{\@rowcolors}{}%
```

`\@rowc@lors` Emulated in case xcolor is not used.

```
7663 \newcommand*{\@rowc@lors}{}%
```

`\LWR@xcolorrowHTMLcolor` Emulated xcolor row color.

```
7664 \newcommand*{\LWR@xcolorrowHTMLcolor}{}%
```

`\LWR@columnHTMLcolor` HTMLstyle code for the column color.

```
7665 \def\LWR@columnHTMLcolor{}
```

`\LWR@rowHTMLcolor` HTMLstyle code for the row color.

```
7666 \def\LWR@rowHTMLcolor{}
```

`\LWR@cellHTMLcolor` HTMLstyle code for the cell color.

```
7667 \def\LWR@cellHTMLcolor{}
```

`\LWR@ruleHTMLcolor` HTMLstyle code for the cell color.

```
7668 \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`.

```
7669 \newcommand*\rowcolor{\LWR@getmynexttoken}%
```

`\arrayrulecolor` [*model*] {*color*}

`\arrayrulecolornexttoken` [*model*] {*color*}

Print versions for use outside and inside a tabular:

```
7670 \newcommand{\arrayrulecolor}[2][named]{}
```

```
7671 \newcommand{\arrayrulecolornexttoken}[2][named]{\LWR@getmynexttoken}
```

`\doublerulesepcolor` [*model*] {*color*}

`\doublerulesepcolornexttoken` [*model*] {*color*}

Print versions for use inside and outside a tabular:

```
7672 \newcommand{\doublerulesepcolor}[2][named]{}
```

```
7673 \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.

```
7674 \newcommand*\LWR@maybenewtablerow{
```

```
7675 {%
```

```
7676 \ifbool{LWR@startedrow}%
```

```
7677 {}% started the row
```

```
7678 {}% not started the row
```

Remember that now have started the row:

```
7679 \global\booltrue{LWR@startedrow}%
```

Create the row tag, with a class if necessary.

```

7680 \global\booltrue{LWR@intabularmetadata}%
7681 \ifboolexpr{%
7682 test{\ifnumcomp{\value{LWR@hlines}}{>}{0}} or%
7683 test{\ifnumcomp{\value{LWR@hdashedlines}}{>}{0}}%
7684 }%
7685 {%
7686 \LWR@htmltag{tr class="hline" }%
7687 \LWR@orignewline%
7688 }%
7689 {% not doing hline
7690 \ifbool{LWR@doingtbrule}%
7691 {%
7692 \ifdefvoid{\LWR@ruleHTMLcolor}{%
7693 \LWR@htmltag{tr class="tbrule"%
7694 }{%
7695 \LWR@htmltag{%
7696 tr class="tbrule" % space
7697 style="border-top: 1px solid % space
7698 \LWR@origpound\LWR@ruleHTMLcolor "%
7699 }%
7700 }%
7701 \LWR@orignewline%
7702 }%
7703 {\LWR@htmltag{tr}\LWR@orignewline}%
7704 }% end of not doing hline
7705 }% end of not started the row
7706 }
```

## 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.

```

7707 \newcommand*{\LWR@printbartag}[1]{%
7708 \LWR@traceinfo{LWR@printbartag !#1!}%
7709 \ifboolexpr{bool{LWR@tabularmutemods} or bool{LWR@emptyatbang}}%
7710 {% muting or empty
7711 }{% not muting
7712 \edef\LWR@tempone{\LWR@getexparray{LWR@colbarspec}{#1}}%
7713 \ifdefempty{\LWR@tempone}{{ \LWR@tempone}%
7714 }% not muting
7715 \LWR@traceinfo{LWR@printbartag done}%
7716 }
```

## 72.19 Printing at or bang tags

`\LWR@printatbang {⟨at -or- bang⟩} {⟨index⟩}`

```
7717 \newcommand*{\LWR@printatbang}[2]{%
```

Fetch the column at or bang spec:

```
7718 \xdef\LWR@atbangspec{\LWR@getexparray{\LWR@col#1spec}{#2}}%
7719 \LWR@traceinfo{atbang: #2 !\LWR@atbangspec!}%
```

Only generate if is not empty;

```
7720 \ifdefempty{\LWR@atbangspec}%
7721 {}%
7722 {% not empty
7723 \LWR@htmltag{%
7724 td class="td#1%
7725 \LWR@subaddcmidruletrim{}}}%
7726 \LWR@printbartag{#2}%
7727 "%
7728 \LWR@tdstartstyles%
7729 \LWR@addcmidrulewidth%
7730 \LWR@addcdashline%
7731 \LWR@addtabularrulecolors%
7732 \LWR@tdendstyles%
7733 }%
```

Create an empty cell if muting for the `\bottomrule`:

```
7734 \ifboolexpr{bool{\LWR@tabularmutemods} or bool{\LWR@emptyatbang}}%
7735 {}%
7736 {\LWR@atbangspec}%
7737 %
7738 \LWR@htmltag{/td}\LWR@orignewline%
7739 \global\booltrue{\LWR@tabularcelladded}%
7740 }% not empty
7741 }%
```

`\LWR@addleftmostbartag`

```
7742 \newcommand*{\LWR@addleftmostbartag}{%
7743 \ifnumcomp{\value{\LWR@tableLaTeXcolindex}}{=}{1}{%
7744 \LWR@printbartag{leftedge}%
7745 }{}%
7746 }
```

`\LWR@tabularleftedge`

```
7747 \newcommand*{\LWR@tabularleftedge}{%
7748 \ifnumcomp{\value{\LWR@tableLaTeXcolindex}}{=}{1}%
7749 {%
```

```

7750 \LWR@printatbang{at}{leftedge}%
7751 \LWR@printatbang{bang}{leftedge}%
7752 }% left edge
7753 {}% not left edge
7754 }

```

## 72.20 Data opening tag

`\LWR@thiscolspec` Temporary storage.

```

7755 \newcommand*{\LWR@thiscolspec}{}

```

`\LWR@tabledatasinglecolumntag` Print a table data opening tag with style for alignment and color.

```

7756 \newcommand*{\LWR@tabledatasinglecolumntag}%
7757 {%
7758 \LWR@traceinfo{\LWR@tabledatasinglecolumntag}%
7759 \LWR@maybenewtablerow%

```

Don't start a new paragraph tag if have already started one:

```

7760 \ifbool{\LWR@intabularmetadata}%
7761 {%

```

If have found the end of tabular command, do not create the next data cell:

```

7762 \ifbool{\LWR@exitingtabular}{}%
7763 {% not exiting tabular

```

Print the @ and ! contents before first column:

```

7764 \LWR@tabularleftedge%

```

Fetch the current column's alignment character into `\LWR@strresult`:

```

7765 \xdef\LWR@strresult{%
7766 \LWR@getexparray{\LWR@tablecolspec}{\arabic{\LWR@tableLaTeXcolindex}}%
7767 }%

```

print the start of a new table data cell:

```

7768 \LWR@traceinfo{\LWR@tabledatasinglecolumntag: about to print td tag}%
7769 \LWR@htmltag{td class="td%

```

append this column's spec:

```

7770 \LWR@strresult%

```

If this column has a `cmidrule`, add “rule” to the end of the HTML class tag. Also add vertical bar tags.

```
7771 \LWR@addcmidruletrim%
7772 \LWR@addleftmostbartag%
7773 \LWR@printbartag{\arabic{LWR@tableLaTeXcolindex}}%
7774 "%
```

Add styles for rules, alignment:

```
7775 \LWR@tdstartstyles%
7776 \LWR@addcmidrulewidth%
7777 \LWR@addcdashline%

7778 \xdef\LWR@thiscolspec{%
7779 \LWR@getexparray{LWR@tablecolspec}{\arabic{LWR@tableLaTeXcolindex}}%
7780 }%
7781 \LWR@addformatwpalignment{\LWR@thiscolspec}%
```

Add styles for cell and rule colors:

```
7782 \LWR@addtabulararrowcolor%
7783 \LWR@addtabularrulecolors%

7784 \LWR@tdendstyles%
7785 }% HTML td
7786 \LWR@traceinfo{LWR@tabledatasinglecolumntag: done printing td tag}%
```

If this is a p, m, b, or X column, allow paragraphs:

```
7787 \ifboolexpr{%
7788 test{ \ifdefstring{\LWR@strresult}{p} } or
7789 test{ \ifdefstring{\LWR@strresult}{m} } or
7790 test{ \ifdefstring{\LWR@strresult}{b} } or
7791 test{ \ifdefstring{\LWR@strresult}{P} } or
7792 test{ \ifdefstring{\LWR@strresult}{M} } or
7793 test{ \ifdefstring{\LWR@strresult}{B} } or
7794 test{ \ifdefstring{\LWR@strresult}{X} }
7795 }%
7796 {% allow pars
7797 \LWR@traceinfo{LWR@tabledatasinglecolumntag: about to LWR@startpars}%
7798 \global\booltrue{LWR@tableparcell}%
7799 \LWR@startpars%
7800 \LWR@traceinfo{LWR@tabledatasinglecolumntag: done with LWR@startpars}%
7801 }% allow pars
7802 }% no pars
```

Print the > contents unless muted for the \bottomrule:

```
7803 \ifboolexpr{bool{LWR@tabularmutemods} or bool{LWR@emptyatbang}}%
7804 }%
7805 {%
7806 \LWR@getexparray{LWR@colbeforespec}{\arabic{LWR@tableLaTeXcolindex}}%
```

```

7807 }%
7808 \global\boolfalse{LWR@intabularmetadata}%
7809 }% not exiting tabular
7810 }{}% in tabular metadata
7811 \LWR@traceinfo{LWR@tabledatasinglecolumntag: done}%
7812 }%

```

## 72.21 Midrules

**LWR@midrules** LWR@midrules is a data array (section 42) 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 42) of columns containing l if a midrule should be left trimmed for each column.

**LWR@trimrrules** LWR@trimrrules is a data array (section 42) of columns containing r if a midrule should be right trimmed for each column.

**LWR@cdashlines** LWR@cdashlines is a data array (section 42) of columns each containing a Y if an arydshln package "cdashed line" should be created for this column.

**Ctr LWR@midrulecounter** Indexes across the LWR@midrules and LWR@trim<l/r>rules data arrays.

```
7813 \newcounter{LWR@midrulecounter}
```

**Len \LWR@heavyrulewidth** The default width of the rule.

```
7814 \newlength{\LWR@heavyrulewidth}
7815 \setlength{\LWR@heavyrulewidth}{.08em}
```

**Len \LWR@lightrulewidth** The default width of the rule.

```
7816 \newlength{\LWR@lightrulewidth}
7817 \setlength{\LWR@lightrulewidth}{.05em}
```

**Len \LWR@cmidrulewidth** The default width of the rule.

```
7818 \newlength{\LWR@cmidrulewidth}
7819 \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.

```
7820 \newlength{\LWR@thiscmidrulewidth}
7821 \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.

```

7822 \newcommand*{\LWR@clearmidrules}
7823 {%
7824 \setcounter{LWR@midrulecounter}{1}%
7825 \whilebool{expr}%
7826 not test{%
7827 \ifnumcomp{\value{LWR@midrulecounter}}{>}%
7828 {\value{LWR@tabletotalLaTeXcols}}%
7829 }%
7830 }%
7831 {%
7832 \LWR@setexparray{LWR@midrules}{\arabic{LWR@midrulecounter}}{0pt}%
7833 \setlength{\LWR@thiscmidrulewidth}{\LWR@cmidrulewidth}%
7834 \LWR@setexparray{LWR@trimlrules}{\arabic{LWR@midrulecounter}}{}%
7835 \LWR@setexparray{LWR@trimrrules}{\arabic{LWR@midrulecounter}}{}%
7836 \LWR@setexparray{LWR@cdashlines}{\arabic{LWR@midrulecounter}}{N}%
7837 \addtocounter{LWR@midrulecounter}{1}%
7838 }%
7839 }

```

`\LWR@subcmidrule`  $\{\langle width \rangle\} \{\langle trim \rangle\} \{\langle leftcolumn \rangle\} \{\langle rightcolumn \rangle\}$

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.

```

7840 \newcommand*{\LWR@subcmidrule}[4]{%
7841 \setcounter{LWR@midrulecounter}{#3}%
7842 \whilebool{expr}%
7843 not test {%
7844 \ifnumcomp{\value{LWR@midrulecounter}}{>}{#4}%
7845 }%
7846 }%
7847 {%
7848 \LWR@setexparray{LWR@midrules}{\arabic{LWR@midrulecounter}}{#1}%
7849 \addtocounter{LWR@midrulecounter}{1}%
7850 }% \whiledo
7851 \IfSubStr{#2}{l}{\LWR@setexparray{LWR@trimlrules}{#3}{l}}{}%
7852 \IfSubStr{#2}{r}{\LWR@setexparray{LWR@trimrrules}{#4}{r}}{}%
7853 \global\booltrue{LWR@doingcmidrule}%
7854 }

```

`\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.

```

7855 \NewDocumentCommand{\LWR@docmidrule}
7856 {O{\LWR@cmidrulewidth} D(){} >\SplitArgument{1}{-}m}
7857 {\LWR@subcmidrule{#1}{#2}{#3}}

```

`\LWR@subcdashline`  $\{\langle leftcolumn \rangle\} \{\langle rightcolumn \rangle\}$

Marks `LWR@cdashlines` data array elements to be  $\gamma$  from left to right columns.

`LWR@doingcmidrule` is set to force an empty row at the end of the tabular to create the rule.

```

7858 \newcommand*{\LWR@subcdashline}[2]{%
7859 \setcounter{LWR@midrulecounter}{#1}%
7860 \whilebool{expr{%
7861 not test {%
7862 \ifnumcomp{\value{LWR@midrulecounter}}{>}{#2}%
7863 }}%
7864 }%
7865 {%
7866 \LWR@setexparray{LWR@cdashlines}{\arabic{LWR@midrulecounter}}{\gamma}%
7867 \addtocounter{LWR@midrulecounter}{1}%
7868 }% \whiledo
7869 \global\booltrue{LWR@doingcmidrule}%
7870 }
```

`\LWR@docdashline`  $\{\langle leftcolumn-rightcolumn \rangle\}$

Marks `LWR@cdashlines` data array elements to be  $\gamma$  from left to right columns.

```

7871 \NewDocumentCommand{\LWR@docdashline}
7872 {>\SplitArgument{1}{-}m}%
7873 {%
7874 \LWR@subcdashline#1%
7875 }
```

Used to compute margins, tabular trims, column offsets:

```

7876 \newlength{\LWR@templengthone}
7877 \newlength{\LWR@templengthtwo}
7878 \newlength{\LWR@templengththree}
7879 \newcounter{LWR@tempcountone}
```

Used to add a style to a table data cell:

```

7880 \newbool{LWR@tdhavecellstyle}
```

`\LWR@tdstartstyles` Begins possibly adding a table data cell style.

```

7881 \newcommand*{\LWR@tdstartstyles}{\global\boolfalse{LWR@tdhavecellstyle}}
```

`\LWR@tdaddstyle` Starts adding a table data cell style.

```

7882 \newcommand*{\LWR@tdaddstyle}{%
7883 \ifbool{LWR@tdhavecellstyle}%
7884 {; }%
7885 { style="}%
```

```
7886 \booltrue{LWR@tdhavecellstyle}%
7887 }
```

`\LWR@tdendstyles` Finishes possibly adding a table data cell style. Prints the closing quote.

```
7888 \newcommand*{\LWR@tdendstyles}{%
7889 \ifbool{LWR@tdhavecellstyle}{%
7890 "%
7891 \global\boolfalse{LWR@tdhavecellstyle}%
7892 }{}%
7893 }
```

`\LWR@subaddcmidruletrim` `{\lefttrim}` `{\righttrim}` Adds a `\cmidrule` with optional trim.

```
7894 \newcommand*{\LWR@subaddcmidruletrim}[2]{%
7895 \setlength{\LWR@templengthone}{%
7896 \LWR@getexparray{LWR@midrules}{\arabic{LWR@tableLaTeXcolindex}}}%
7897 }%
7898 \ifdimcomp{\LWR@templengthone}{>}{0pt}%
7899 {%
```

Print the class with left and right trim letters appended:

```
7900 \LWR@origtilde tdrule#1#2%
```

Remember the width of the rule:

```
7901 \setlength{\LWR@thiscmidrulewidth}{\LWR@templengthone}%
7902 }%
7903 {%
7904 \setlength{\LWR@thiscmidrulewidth}{0pt}%
7905 }%
7906 }
```

`\LWR@addcmidruletrim` Adds left or right trim to a `\cmidrule`.

```
7907 \newcommand*{\LWR@addcmidruletrim}{%
7908 \LWR@subaddcmidruletrim%
7909 {\LWR@getexparray{LWR@trimlrules}{\arabic{LWR@tableLaTeXcolindex}}}%
7910 {\LWR@getexparray{LWR@trimrrules}{\arabic{LWR@tableLaTeXcolindex}}}%
7911 }
```

`\LWR@addrulewidth` `{\thiswidth}` `{\defaultwidth}`

If not default width, add a custom style with width and color depending on `thiswidth`.

Must be placed between `\LWR@tdstartstyles` and `\LWR@tdendstyles`.

```
7912 \newcommand{\LWR@addrulewidth}[2]{%
```

Only add a custom width if thiswidth is different than the defaultwidth, or if a color is being used:

```

7913 \ifboolexpr{%
7914 test{\ifdimcomp{#1}{=}{0pt}} or
7915 (
7916 (test{\ifdimcomp{#1}{=}{#2}} and not bool{FormatWP})
7917 and (test {\ifdefvoid{\LWR@ruleHTMLcolor}})
7918)
7919 }%
7920 {}% default width and color
7921 {% custom width and/or color

```

Ensure that the width is wide enough to display in the browser:

```

7922 \LWR@forceminwidth{#1}%

```

Begin adding another style:

```

7923 \LWR@tdaddstyle%

```

The style itself:

```

7924 border-top:\LWR@printlength{\LWR@atleastonept} solid %

```

If default gray, the darkness of the color depends on the thickness of the rule:

```

7925 \ifdefvoid{\LWR@ruleHTMLcolor}{%
7926 \ifdimcomp{#1}{<}{\LWR@lightrulewidth}%
7927 {\LWR@origpound{ }A0A0A0}%
7928 {% lightrule or heavier
7929 \ifdimcomp{#1}{<}{\LWR@heavyrulewidth}%
7930 {\LWR@origpound{ }808080}%
7931 {black}%
7932 }% lightrule or heavier
7933 }{%
7934 \LWR@origpound\LWR@ruleHTMLcolor%
7935 }
7936 }% custom width and/or color
7937 }

```

`\LWR@addcmidrulewidth` Adds a style for the rule width.

Must be placed between `\LWR@tdstartstyles` and `\LWR@tdendstyles`.

```

7938 \newcommand{\LWR@addcmidrulewidth}{%
7939 \LWR@addrulewidth{\LWR@thiscmidrulewidth}{\LWR@cmidrulewidth}%
7940 }

```

`\LWR@addcdashline` Must be placed between `\LWR@tdstartstyles` and `\LWR@tdendstyles`.

```

7941 \newcommand{\LWR@addcdashline}{%
7942 \edef\LWR@tempone{%

```

```

7943 \LWR@getexparray{LWR@cdashlines}{\arabic{LWR@tableLaTeXcolindex}}%
7944 }%
7945 \ifdefstring{LWR@tempone}{Y}{%
7946 \LWR@tdaddstyle%
7947 border-top: 1pt dashed %
7948 \ifdefvoid{LWR@ruleHTMLcolor}%
7949 {black}%
7950 {LWR@origpound\LWR@ruleHTMLcolor}%
7951 }{}%
7952 }

```

`\LWR@WPcell` {*⟨text-align⟩*} {*⟨vertical-align⟩*}

```

7953 \newcommand*{\LWR@WPcell}[2]{%
7954 \LWR@tdaddstyle%
7955 \LWR@print@mbbox{text-align:#1}; \LWR@print@mbbox{vertical-align:#2}%
7956 }

```

`\LWR@addformatwpalignment` If FormatWP, adds a style for the alignment.

Must be placed between `\LWR@tdstartstyles` and `\LWR@tdendstyles`.

```

7957 \newcommand*{\LWR@addformatwpalignment}[1]{%
7958 \ifbool{FormatWP}{%
7959 \IfSubStr{#1}{l}{\LWR@WPcell{left}{middle}}{}%
7960 \IfSubStr{#1}{c}{\LWR@WPcell{center}{middle}}{}%
7961 \IfSubStr{#1}{r}{\LWR@WPcell{right}{middle}}{}%
7962 \IfSubStr{#1}{p}{\LWR@WPcell{left}{bottom}}{}%
7963 \IfSubStr{#1}{m}{\LWR@WPcell{left}{middle}}{}%
7964 \IfSubStr{#1}{b}{\LWR@WPcell{left}{top}}{}%
7965 \IfSubStr{#1}{P}{\LWR@WPcell{center}{bottom}}{}%
7966 \IfSubStr{#1}{M}{\LWR@WPcell{center}{middle}}{}%
7967 \IfSubStr{#1}{B}{\LWR@WPcell{center}{top}}{}%
7968 }{}%
7969 }

```

## 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.

```

7970 \newcommand*{\LWR@addtabulararrowcolor}{%
7971 \ifbool{LWR@tabularmutemods}{}%
7972 \ifdefvoid{LWR@rowHTMLcolor}{%
7973 \ifdefvoid{LWR@xcolorrowHTMLcolor}{}%
7974 {% xcolor row color
7975 \LWR@tdaddstyle%
7976 background:LWR@origpound\LWR@xcolorrowHTMLcolor%
7977 }%
7978 }%

```

```

7979 {% explicit row color
7980 \LWR@tdaddstyle%
7981 background:\LWR@origpound\LWR@rowHTMLcolor%
7982 }%
7983 }%
7984 }

```

`\LWR@addtabularhrulecolor` Adds a cell's horizontal rule color style, if needed.

```

7985 \newcommand*{\LWR@addtabularhrulecolor}{%

```

If either form of horizontal rule is requested:

```

7986 \ifboolexpr{%
7987 test{\ifnumcomp{\value{\LWR@hlines}}{>}{0}} or%
7988 test{\ifnumcomp{\value{\LWR@hdashedlines}}{>}{0}} or%
7989 bool{\LWR@doingtbrule}%
7990 }{%

```

If there is a no custom color:

```

7991 \ifdefvoid{\LWR@ruleHTMLcolor}%
7992 {%
7993 \ifnumcomp{\value{\LWR@hlines}}{>}{1}%
7994 {%
7995 \LWR@tdaddstyle%
7996 border-top: 4px double%
7997 }{% else
7998 \ifnumcomp{\value{\LWR@hdashedlines}}{>}{1}%
7999 {%
8000 \LWR@tdaddstyle%
8001 border-top: 2px dashed%
8002 }{% else
8003 \ifnumcomp{\value{\LWR@hdashedlines}}{=}{1}%
8004 {%
8005 \LWR@tdaddstyle%
8006 border-top: 1px dashed%
8007 }{}}}%

```

If no color and not doubled or dashed, then add nothing, since a simpler rule is the default.

```

8008 }%

```

If there is a custom color:

```

8009 {%
8010 \ifnumcomp{\value{\LWR@hlines}}{>}{1}%
8011 {%
8012 \LWR@tdaddstyle%
8013 border-top: 4px double \LWR@origpound\LWR@ruleHTMLcolor%
8014 }{% else
8015 \ifnumcomp{\value{\LWR@hdashedlines}}{>}{1}%
8016 {%

```

```

8017 \LWR@tdaddstyle%
8018 border-top: 2px dashed \LWR@origpound\LWR@ruleHTMLcolor%
8019 }{% else
8020 \ifnumcomp{\value{\LWR@hdashedlines}}{=}{1}%
8021 {%
8022 \LWR@tdaddstyle%
8023 border-top: 1px dashed \LWR@origpound\LWR@ruleHTMLcolor%
8024 }{% else
8025 \LWR@tdaddstyle%
8026 border-top: 1px solid \LWR@origpound\LWR@ruleHTMLcolor%
8027 }}%
8028 }%
8029 }{%
8030 }

```

`\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.

```
8031 \newcommand*{\LWR@addtabularrulecolors}{%
```

Custom horizontal rule color:

```
8032 \LWR@addtabularhrulecolor%
```

No vertical rules if finishing the tabular with a row of empty cells:

```
8033 \ifbool{\LWR@tabularmutemods}{}%
```

If at the leftmost cell, possibly add a leftmost vertical rule:

```
8034 \ifnumequal{\value{\LWR@tableLaTeXcolindex}}{1}{%
```

Fetch the left edge's vertical bar specification:

```
8035 \edef\LWR@tempone{\LWR@getexpparray{\LWR@colbarspec}{leftedge}}%
```

Add a custom style if a vertical bar was requested:

```

8036 \ifdefstring{\LWR@tempone}{tvertbarl}{%
8037 \LWR@tdaddstyle%
8038 border-left: 1px solid % space
8039 \LWR@vertruleHTMLcolor%
8040 }{%
8041 \ifdefstring{\LWR@tempone}{tvertbarldouble}{%
8042 \LWR@tdaddstyle%
8043 border-left: 4px double % space
8044 \LWR@vertruleHTMLcolor%
8045 }{%
8046 \ifdefstring{\LWR@tempone}{tvertbardash}{%
8047 \LWR@tdaddstyle%
8048 border-left: 1px dashed % space
8049 \LWR@vertruleHTMLcolor%

```

```

8050 {}%
8051 \ifdefstring{\LWR@tempone}{tvertbarldoubledash}{%
8052 \LWR@tdaddstyle%
8053 border-left: 2px dashed % space
8054 \LWR@vertruleHTMLcolor%
8055 }{}%
8056 }{}%

```

Possibly add a right vertical rule for this cell:

```

8057 \edef\LWR@tempone{%
8058 \LWR@getexparray{\LWR@colbarspec}{\arabic{\LWR@tableLaTeXcolindex}}%
8059 }%
8060 \ifdefstring{\LWR@tempone}{tvertbarr}{%

```

Add a custom style if a vertical bar was requested:

```

8061 \LWR@tdaddstyle%
8062 border-right: 1px solid \LWR@vertruleHTMLcolor%
8063 }{}%
8064 \ifdefstring{\LWR@tempone}{tvertbarrdouble}{%
8065 \LWR@tdaddstyle%
8066 border-right: 4px double \LWR@vertruleHTMLcolor%
8067 }{}%
8068 \ifdefstring{\LWR@tempone}{tvertbarrdash}{%
8069 \LWR@tdaddstyle%
8070 border-right: 1px dashed \LWR@vertruleHTMLcolor%
8071 }{}%
8072 \ifdefstring{\LWR@tempone}{tvertbarrdoubledash}{%
8073 \LWR@tdaddstyle%
8074 border-right: 2px dashed \LWR@vertruleHTMLcolor%
8075 }{}%
8076 }%
8077 }

```

Ctrl LWR@cellcolordepth Counts how many cell color <div>s were added to the current tabular data cell.

```

8078 \newcounter{\LWR@cellcolordepth}

```

\LWR@subaddtabularcellcolor {<HTML color>}

```

8079 \newcommand*{\LWR@subaddtabularcellcolor}[1]{%
8080 \LWR@htmltag{div class="cellcolor" style="%
8081 background:\LWR@origpound{}}{#1 %
8082 "}%
8083 \addtocounter{\LWR@cellcolordepth}{1}%
8084 }

```

\LWR@addtabularcellcolor Adds a cell color style, if needed.

```

8085 \newcommand*{\LWR@addtabularcellcolor}{%
8086 \ifdefvoid{\LWR@cellHTMLcolor}%
8087 {%

```

```

8088 \ifdefvoid{\LWR@rowHTMLcolor}%
8089 {%
8090 \ifdefvoid{\LWR@xcolorrowHTMLcolor}%
8091 {%
8092 \ifdefvoid{\LWR@columnHTMLcolor}%
8093 {%
8094 {\LWR@subadddtabularcellcolor{\LWR@columnHTMLcolor}}%
8095 }%
8096 {\LWR@subadddtabularcellcolor{\LWR@xcolorrowHTMLcolor}}%
8097 }%
8098 {\LWR@subadddtabularcellcolor{\LWR@rowHTMLcolor}}%
8099 }%
8100 {\LWR@subadddtabularcellcolor{\LWR@cellHTMLcolor}}%
8101 }

```

## 72.23 Multicolumns

### 72.23.1 Parsing multicolumns

```
8102 \newcounter{\LWR@tablemulticolwidth}
```

Indexes into the multicolumn specification:

```
8103 \newcounter{\LWR@tablemulticolspos}
```

Remembers multicolumn vertical rules if found in the column spec.

```

8104 \newcounter{\LWR@mcolvertbarsl}
8105 \newcounter{\LWR@mcolvertbarsr}
8106 \newcounter{\LWR@mcolvertbarsldash}
8107 \newcounter{\LWR@mcolvertbarsrdash}
8108 \newbool{\LWR@mcolvertbaronleft}%

```

`\LWR@printmccoltype` `{\colspec}` 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.

```

8109 \newcommand*{\LWR@printmccoltype}[1]{%
8110 \LWR@traceinfo{\LWR@printmccoltype -#1-}%

```

Get one token of the column spec:

```
8111 \StrChar{#1}{\arabic{\LWR@tablemulticolspos}}[\LWR@strresult]%
```

Add to the HTML tag depending on which column type is found:

```

8112 \IfStrEq{\LWR@strresult}{l}{l}{}%
8113 \IfStrEq{\LWR@strresult}{c}{c}{}%
8114 \IfStrEq{\LWR@strresult}{r}{r}{}%
8115 \IfStrEq{\LWR@strresult}{p}{p}{}%

```

```

8116 \IfStrEq{\LWR@strresult}{m}{m}{}%
8117 \IfStrEq{\LWR@strresult}{b}{b}{}%
8118 \IfStrEq{\LWR@strresult}{P}{P}{}%
8119 \IfStrEq{\LWR@strresult}{M}{M}{}%
8120 \IfStrEq{\LWR@strresult}{B}{B}{}%

8121 \IfStrEq{\LWR@strresult}{w}{w}{}%
8122 \IfStrEq{\LWR@strresult}{W}{W}{}%

8123 \IfStrEq{\LWR@strresult}{S}{c}{}%
8124 \IfStrEq{\LWR@strresult}{s}{c}{}%

8125 \IfStrEq{\LWR@strresult}{X}{p}{}%

8126 \IfStrEq{\LWR@strresult}{|}{}%
8127 {%
8128 \ifbool{\LWR@mcolvertbaronleft}%
8129 {\addtocounter{\LWR@mcolvertbarsl}{1}}% left edge
8130 {\addtocounter{\LWR@mcolvertbarsr}{1}}% not left edge
8131 }%
8132 {%
8133 \IfStrEq{\LWR@strresult}{:}{}%
8134 {%
8135 \ifbool{\LWR@mcolvertbaronleft}%
8136 {\addtocounter{\LWR@mcolvertbarsldash}{1}}% left edge
8137 {\addtocounter{\LWR@mcolvertbarsrdash}{1}}% not left edge
8138 }%
8139 {%
8140 \IfStrEq{\LWR@strresult}{;}{}%
8141 {%
8142 \ifbool{\LWR@mcolvertbaronleft}%
8143 {\addtocounter{\LWR@mcolvertbarsldash}{1}}% left edge
8144 {\addtocounter{\LWR@mcolvertbarsrdash}{1}}% not left edge
8145 }%
8146 {\boolfalse{\LWR@mcolvertbaronleft}}%
8147 }%
8148 }%
8149 \LWR@traceinfo{\lwr@printmccoltype done}%
8150 }

```

`\LWR@multicolpartext`  $\langle num\ parameters \rangle$  Print the data with paragraph tags, advance to bypass the given number of parameters.

```

8151 \newcommand*{\LWR@multicolpartext}[1]{%
8152 \LWR@startpars%
8153 \LWR@multicoltext%
8154 \addtocounter{\LWR@tablemulticolspos}{#1}%
8155 \LWR@stoppars%
8156 }

```

`\LWR@multicolother`  $\langle colspec \rangle$  For @, !, >, <, print the next token without paragraph tags:

```

8157 \newcommand*{\LWR@multicolother}[1]{%
8158 \addtocounter{\LWR@tablemulticolspos}{1}%
8159 \StrChar{#1}{\arabic{\LWR@tablemulticolspos}}[\LWR@strresult]%
8160 \LWR@strresult%

```

A valid column data type was found:

```

8161 \global\booltrue{\LWR@validtablecol}%
8162 }

```

\LWR@multicolskip Nothing to print for this column type.

```

8163 \newcommand*{\LWR@multicolskip}{%

```

A valid column data type was found:

```

8164 \global\booltrue{\LWR@validtablecol}%
8165 }

```

\LWR@printmccoldata {<colspec>} Print the data for any valid column type found.

```

8166 \newcommand*{\LWR@printmccoldata}[1]{%
8167 \LWR@traceinfo{\LWR@printmccoldata -#1}%

```

Not yet found a valid column type:

```

8168 \global\boolfalse{\LWR@validtablecol}%

```

Get one token of the column spec:

```

8169 \StrChar{#1}{\arabic{\LWR@tablemulticolspos}}[\LWR@strresult]%

```

Print the text depending on which column type is found. Also handles @, >, < as it comes to them.

```

8170 \IfStrEq{\LWR@strresult}{l}{\LWR@multicoltext}{}%
8171 \IfStrEq{\LWR@strresult}{c}{\LWR@multicoltext}{}%
8172 \IfStrEq{\LWR@strresult}{r}{\LWR@multicoltext}{}%
8173 \IfStrEq{\LWR@strresult}{D}{}%
8174 \addtocounter{\LWR@tablemulticolspos}{3}% skip parameters
8175 \LWR@multicoltext%
8176 }{}%

```

```

8177 \IfStrEq{\LWR@strresult}{p}{\LWR@multicolpartext{2}}{%
8178 \IfStrEq{\LWR@strresult}{m}{\LWR@multicolpartext{2}}{%
8179 \IfStrEq{\LWR@strresult}{b}{\LWR@multicolpartext{2}}{%
8180 \IfStrEq{\LWR@strresult}{P}{\LWR@multicolpartext{2}}{%
8181 \IfStrEq{\LWR@strresult}{M}{\LWR@multicolpartext{2}}{%
8182 \IfStrEq{\LWR@strresult}{B}{\LWR@multicolpartext{2}}{%

```

```

8183 \IfStrEq{\LWR@strresult}{w}{\LWR@multicolpartext{3}}{%
8184 \IfStrEq{\LWR@strresult}{W}{\LWR@multicolpartext{3}}{%

```

```

8185 \IfStrEq{\LWR@strresult}{S}{\LWR@multicoltext}{}%
8186 \IfStrEq{\LWR@strresult}{s}{\LWR@multicoltext}{}%

8187 \IfStrEq{\LWR@strresult}{X}{\LWR@multicolpartext{1}}{%
8188 \IfStrEq{\LWR@strresult}{|}{\LWR@multicolskip}{}%
8189 \IfStrEq{\LWR@strresult}{:}{\LWR@multicolskip}{}%
8190 \IfStrEq{\LWR@strresult}{;}{\LWR@multicolskip}{}%
8191 \LWR@multicolskip%
8192 \addtocounter{LWR@tablemulticolspos}{1}% skip parameter
8193 }{%
8194 \IfStrEq{\LWR@strresult}{\detokenize{@}}{\LWR@multicolother{#1}}{%
8195 \IfStrEq{\LWR@strresult}{\detokenize{!}}{\LWR@multicolother{#1}}{%
8196 \IfStrEq{\LWR@strresult}{\detokenize{>}}{\LWR@multicolother{#1}}{%
8197 \IfStrEq{\LWR@strresult}{\detokenize{<}}{\LWR@multicolother{#1}}{%

```

If an invalid column type:

```

8198 \ifbool{LWR@validtablecol}{\LWR@multicoltext}%

```

Tracing:

```

8199 \LWR@traceinfo{lw@printmccoldata done}%
8200 }

```

`\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.

```

8201 \newcommand*{\LWR@parsemulticolumnalignment}[2]{%
8202 \setcounter{LWR@tablemulticolspos}{1}%
8203 \StrLen{#1}[\LWR@strresult]%
8204 \setcounter{LWR@tablemulticolswidth}{\LWR@strresult}%

```

Scan across the tokens in the column spec:

```

8205 \whileboolexpr{%
8206 not test {%
8207 \ifnumcomp{\value{LWR@tablemulticolspos}}{>}%
8208 {\value{LWR@tablemulticolswidth}}%
8209 }%
8210 }%
8211 {%

```

Execute the assigned print function for each token in the column spec:

```

8212 #2{#1}%

```

Move to the next token in the column spec:

```

8213 \addtocounter{LWR@tablemulticolspos}{1}%

```

```
8214 }%
8215 }
```

### 72.23.2 Multicolumn factored code

\LWR@addmulticolvertrulecolor

```
8216 \newcommand*{\LWR@addmulticolvertrulecolor}{%
```

No vertical rules if finishing the tabular with a row of empty cells:

```
8217 \ifbool{\LWR@tabularmutemods}{}{%
```

Left side:

```
8218 \ifnumcomp{\value{\LWR@mccolvertbarsl}}{=}{1}{%
8219 \LWR@tdaddstyle%
8220 border-left: 1px solid \LWR@vertruleHTMLcolor%
8221 }{}%
8222 \ifnumcomp{\value{\LWR@mccolvertbarsl}}{>}{1}{%
8223 \LWR@tdaddstyle%
8224 border-left: 4px double \LWR@vertruleHTMLcolor%
8225 }{}%
8226 \ifnumcomp{\value{\LWR@mccolvertbarsldash}}{=}{1}{%
8227 \LWR@tdaddstyle%
8228 border-left: 1px dashed \LWR@vertruleHTMLcolor%
8229 }{}%
8230 \ifnumcomp{\value{\LWR@mccolvertbarsldash}}{>}{1}{%
8231 \LWR@tdaddstyle%
8232 border-left: 2px dashed \LWR@vertruleHTMLcolor%
8233 }{}%
```

Right side:

```
8234 \ifnumcomp{\value{\LWR@mccolvertbarsr}}{=}{1}{%
8235 \LWR@tdaddstyle%
8236 border-right: 1px solid \LWR@vertruleHTMLcolor%
8237 }{}%
8238 \ifnumcomp{\value{\LWR@mccolvertbarsr}}{>}{1}{%
8239 \LWR@tdaddstyle%
8240 border-right: 4px double \LWR@vertruleHTMLcolor%
8241 }{}%
8242 \ifnumcomp{\value{\LWR@mccolvertbarsrdash}}{=}{1}{%
8243 \LWR@tdaddstyle%
8244 border-right: 1px dashed \LWR@vertruleHTMLcolor%
8245 }{}%
8246 \ifnumcomp{\value{\LWR@mccolvertbarsrdash}}{>}{1}{%
8247 \LWR@tdaddstyle%
8248 border-right: 2px dashed \LWR@vertruleHTMLcolor%
8249 }{}%
8250 }%
8251 }
```

```
8252 \newcommand{\LWR@multicoltext}{}%
```

To find multicolumn right trim:

```
8253 \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}
```

```
8254 \NewDocumentCommand{\LWR@domulticolumn}{o o m m m +m}{%
```

```
8255 \LWR@traceinfo{\LWR@domulticolumn -#1- -#2- -#4- -#5-}%
```

Remember the text to be inserted, and remember that a valid column type was found:

```
8256 \renewcommand{\LWR@multicoltext}{%
```

```
8257 #6%
```

```
8258 \global\booltrue{LWR@validtablecol}%
```

```
8259 }%
```

Compute the rightmost column to be included. This is used to create the right trim.

```
8260 \setcounter{LWR@lastmulticolumn}{\value{LWR@tableLaTeXcolindex}}%
```

```
8261 \addtocounter{LWR@lastmulticolumn}{#3}%
```

```
8262 \addtocounter{LWR@lastmulticolumn}{-1}%
```

Row processing:

```
8263 \LWR@maybe newtablerow%
```

Begin the opening table data tag:

```
8264 \LWR@htmltag{td colspan="#4" %
```

```
8265 \IfValueT{#2}{ % rows?
```

```
8266 rowspan="#2" %
```

```
8267 \IfValueT{#1}{% vpos?
```

```
8268 \ifstrequal{#1}{b}{\style="\LWR@print@box{vertical-align:bottom}" }{ }%
```

```
8269 \ifstrequal{#1}{t}{\style="\LWR@print@box{vertical-align:top}" }{ }%
```

```
8270 }% vpos?
```

```
8271 }% rows?
```

```
8272 class="td%
```

Print the column type and vertical bars:

```
8273 \setcounter{LWR@mcolvertbarsl}{0}%
```

```
8274 \setcounter{LWR@mcolvertbarsr}{0}%
```

```
8275 \setcounter{LWR@mcolvertbarsldash}{0}%
```

```
8276 \setcounter{LWR@mcolvertbarsrdash}{0}%
```

```
8277 \booltrue{LWR@mcolvertbaronleft}%
```

```
8278 \LWR@parsemulticolumnalignment{#5}{\LWR@printmccoltype}%
```

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:

```
8279 \LWR@subaddcmidruletrim%
8280 {\LWR@getexparray{\LWR@trimlrules}{\arabic{\LWR@tableLaTeXcolindex}}}%
8281 {\LWR@getexparray{\LWR@trimrrules}{\arabic{\LWR@lastmulticolumn}}}%
```

Also add vertical bar class.

```
8282 \ifnumcomp{\value{\LWR@mcolvertbarsl}}{=}{1}{ tvertbarl}{}%
8283 \ifnumcomp{\value{\LWR@mcolvertbarsl}}{>}{1}{ tvertbarldouble}{}%
8284 \ifnumcomp{\value{\LWR@mcolvertbarsr}}{=}{1}{ tvertbarr}{}%
8285 \ifnumcomp{\value{\LWR@mcolvertbarsr}}{>}{1}{ tvertbarrdouble}{}%
8286 \ifnumcomp{\value{\LWR@mcolvertbarsldash}}{=}{1}{ tvertbarldash}{}%
8287 \ifnumcomp{\value{\LWR@mcolvertbarsldash}}{>}{1}{ tvertbarldoubledash}{}%
8288 \ifnumcomp{\value{\LWR@mcolvertbarsrdash}}{=}{1}{ tvertbarrdash}{}%
8289 \ifnumcomp{\value{\LWR@mcolvertbarsrdash}}{>}{1}{ tvertbarrdoubledash}{}%
```

Close the class tag's opening quote: " NOT A TYPO

```
8290 %
```

```
8291 \LWR@tdstartstyles%
```

```
8292 \LWR@addtabulararrowcolor%
```

```
8293 \LWR@addcmidrulewidth%
```

```
8294 \LWR@addcdashline%
```

```
8295 \LWR@addtabularhrulecolor%
```

```
8296 \LWR@addmulticolverterulecolor%
```

```
8297 \LWR@addformatwppalignment{#5}%
```

```
8298 \LWR@tdendstyles%
```

```
8299 }% end of the opening table data tag
```

```
8300 \global\boolfalse{\LWR@intabularmetadata}%
```

```
8301 \LWR@parsemulticolumnalignment{#5}{\LWR@printmccoldata}%
```

```
8302 }
```

### 72.23.3 Multicolumn

`\LWR@htmlmulticolumn` {*<numcols>*} {*<alignment>*} {*<text>*}

```
8303 \NewDocumentCommand{\LWR@htmlmulticolumn}{m m +m}%
```

```
8304 {%
```

Figure out how many extra HTML columns to add for @ and ! columns:

```
8305 \LWR@tabularhtmlcolumns{\arabic{\LWR@tableLaTeXcolindex}}{#1}
```

Create the multicolumn tag:

```
8306 \LWR@domulticolumn{#1}{\arabic{\LWR@tabhtmlcoltotal}}{#2}{#3}%
```

Move to the next L<sup>A</sup>T<sub>E</sub>X column:

```
8307 \addtocounter{LWR@tableLaTeXcolindex}{#1}%
8308 \addtocounter{LWR@tableLaTeXcolindex}{-1}%
```

Skip any trailing @ or ! columns for this cell:

```
8309 \global\booltrue{LWR@skipatbang}%
8310 }
```

#### 72.23.4 Longtable captions

longtable captions use \multicolumn.

Bool LWR@starredlongtable Per the caption package, step the counter if longtable\*.

```
8311 \newbool{LWR@starredlongtable}
8312 \boolfalse{LWR@starredlongtable}
```

Per the caption package. User-redefinable float type.

```
8313 \providecommand*{\LTcaptype}{table}
```

\LWR@longtabledatacaptiontag \* [*toc entry*] {*caption*}

```
8314 \NewDocumentCommand{\LWR@longtabledatacaptiontag}{s o +m}
8315 {%
```

Remember the latest name for \nameref:

```
8316 \IfValueTF{#2}{% optional given?
8317 \ifblank{#2}% optional empty?
8318 {\LWR@setlatestname{#3}}% empty
8319 {\LWR@setlatestname{#2}}% given and non-empty
8320 }% optional given
8321 {\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:

```
8322 \LWR@tabularhtmlcolumns{1}{\arabic{LWR@tabletotalLaTeXcols}}
```

Create the multicolumn tag:

```
8323 \LWR@domulticolumn{\arabic{LWR@tabletotalLaTeXcols}}%
8324 {\arabic{LWR@tabhtmlcoltotal}}%
8325 {P}%
8326 {% \LWR@domulticolumn
8327 \IfBooleanTF{#1}% star?
```

Star version, show a caption but do not make a LOT entry:

```
8328 {% yes star
8329 \LWR@figcaption%
8330 \LWR@isolate{#3}%
8331 \endLWR@figcaption%
8332 }%
8333 {% No star:
```

Not the star version:

Don't step the counter if \caption[] {A caption.}

```
8334 \ifbool{LWR@starredlongtable}%
8335 {%
8336 \ifblank{#2}% TOC entry
8337 {}%
8338 {%
8339 \refstepcounter{\LTcaption}%
8340 \protected@edef\@currentlabel{%
8341 \@nameuse{p@\LTcaption}\@nameuse{the\LTcaption}%
8342 }%
8343 }%
8344 }{%}
```

Create an HTML caption. Afterwards, maybe make a LOT entry.

```
8345 \LWR@figcaption%
8346 \LWR@isolate{\@nameuse{fnum@\LTcaption}}%
8347 \CaptionSeparator%
8348 \LWR@isolate{#3}%
8349 \endLWR@figcaption%
```

See if an optional caption was given:

```
8350 \ifblank{#2}% TOC entry empty
```

if the optional caption was given, but empty, do not form a TOC entry

```
8351 {}%
```

If the optional caption was given, but might only be []:

```
8352 {% TOC entry not empty
8353 \IfNoValueTF{#2}% No TOC entry?
```

The optional caption is []:

```
8354 {% No TOC entry
8355 \addcontentsline%
8356 {\@nameuse{ext@\LTcaption}}%
8357 {\LTcaption}%
8358 {%
8359 \protect\numberline%
```

```

8360 {\LWR@isolate{\@nameuse{p@LTcaption}}\@nameuse{theLTcaption}}%
8361 {\ignorespaces \LWR@isolate{#3}\protect\relax}%
8362 }%
8363 }% end of No TOC entry

```

The optional caption has text enclosed:

```

8364 {% yes TOC entry
8365 \addcontentsline%
8366 {\@nameuse{ext@LTcaption}}%
8367 {LTcaption}%
8368 {%
8369 \protect\numberline%
8370 {\LWR@isolate{\@nameuse{p@LTcaption}}\@nameuse{theLTcaption}}%
8371 {\ignorespaces \LWR@isolate{#2}\protect\relax}%
8372 }%
8373 }% end of yes TOC entry
8374 }% end of TOC entry not empty
8375 }% end of no star

```

Skip any trailing @ or ! columns for this cell:

```

8376 \global\booltrue{LWR@skipatbang}%
8377 }% end of \LWR@domulticolumn
8378
8379 \addtocounter{LWR@tableLaTeXcolindex}{\arabic{LWR@tabletotalLaTeXcols}}
8380 \addtocounter{LWR@tableLaTeXcolindex}{-1}
8381
8382 }

```

### 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.

```

8383 \newcounter{LWR@tabhtmlcolindex}
8384 \newcounter{LWR@tabhtmlcolend}
8385 \newcounter{LWR@tabhtmlcoltotal}

```

\LWR@subtabularhtmlcolumns {<index>}

Factored from \LWR@tabularhtmlcolumns, which follows.

```

8386 \newcommand*{\LWR@subtabularhtmlcolumns}[1]{%

```

Temporarily define a macro equal to the @ specification for this column:

```
8387 \edef\LWR@atbangspec{\LWR@getexparray{\LWR@colatspec}{#1}}%
```

If the @ specification is not empty, add to the count:

```
8388 \ifdefempty{\LWR@atbangspec}%
8389 {}%
8390 {\addtocounter{\LWR@tabhtmlcoltotal}{1}}%
```

Likewise for the ! columns:

```
8391 \edef\LWR@atbangspec{\LWR@getexparray{\LWR@colbangspec}{#1}}%
8392 \ifdefempty{\LWR@atbangspec}%
8393 {}%
8394 {\addtocounter{\LWR@tabhtmlcoltotal}{1}}%
8395 }
```

```
\LWR@tabularhtmlcolumns {\langle starting LATEX column \rangle} {\langle number LATEX columns \rangle}
```

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`.

```
8396 \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:

```
8397 \setcounter{\LWR@tabhtmlcolindex}{#1}%
8398 \setcounter{\LWR@tabhtmlcoltotal}{#2}%
8399 \setcounter{\LWR@tabhtmlcolend}{#1}%
8400 \addtocounter{\LWR@tabhtmlcolend}{#2}%
```

If at the left edge, add the at/bang columns for the left edge:

```
8401 \ifnumcomp{\value{\LWR@tabhtmlcolindex}}{=}{1}{}%
8402 \LWR@subtabularhtmlcolumns{leftedge}%
8403 }{ }%
```

Walk across the L<sup>A</sup>T<sub>E</sub>X columns looking for @ and ! columns:

```
8404 \whileboolexpr{%
8405 test {%
8406 \ifnumcomp{\value{\LWR@tabhtmlcolindex}}{<}{\value{\LWR@tabhtmlcolend}}%
8407 }%
8408 }%
8409 {%
8410 \LWR@subtabularhtmlcolumns{\arabic{\LWR@tabhtmlcolindex}}%
8411 \addtocounter{\LWR@tabhtmlcolindex}{1}%
8412 }% whiledo
8413 }
```

```
8414 \end{warpHTML}
```

## 72.24 Multirow if not loaded

A default definition in case `multirow` is not loaded. This is used during table parsing.

```
8415 \begin{warpHTML}
8416 \newcommand{\multirow}[2][c]{}
8417 \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 339 for the HTML versions.

**for HTML & PRINT:** 8418 \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/](https://tex.stackexchange.com/questions/168434/problem-with-abbreviation-of-multirow-and-multicolumn-latex)  
[problem-with-abbreviation-of-multirow-and-multicolumn-latex](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.

```
8419 \AtBeginDocument{
```

`\@ifundefined{@xmultirow}` determines if `multirow` was never loaded.

Null action if not loaded:

```
8420 \@ifundefined{@xmultirow}
8421 {
8422 \DeclareExpandableDocumentCommand{\LWR@print@multicolumnrow}%
8423 {+m +m +O{c} +m +O{0} +m +O{0pt} +m}%
8424 {}%
8425 }% no version of multirow was loaded
8426 {% \@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:

```
8427 \@ifpackageloaded{multirow}{% v2.0 or newer
8428 \@ifpackagelater{multirow}{2016/09/01}% 2016/09/27 for v2.0
```

```

8429 {% v2.0+:
8430 \DeclareExpandableDocumentCommand{\LWR@print@multicolumnrow}%
8431 {+m +m +O{c} +m +O{0} +m +O{0pt} +m}%
8432 {\multicolumn{#1}{#2}{\@xmultirow[#3][#4][#5][#6][#7][#8]}}%
8433 }
8434 {% loaded but older, probably not executed:
8435 \DeclareExpandableDocumentCommand{\LWR@print@multicolumnrow}%
8436 {+m +m +O{c} +m +O{0} +m +O{0pt} +m}%
8437 {\multicolumn{#1}{#2}{\@xmultirow{#4}[#5][#6][#7][#8]}}%
8438 }
8439}% \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.

```

8440 {% v1.6 or older did not \ProvidePackage
8441 \DeclareExpandableDocumentCommand{\LWR@print@multicolumnrow}%
8442 {+m +m +O{c} +m +O{0} +m +O{0pt} +m}%
8443 {\multicolumn{#1}{#2}{\@xmultirow{#4}[#5][#6][#7][#8]}}%
8444 }
8445
8446}% \@ifundefined{@xmultirow}
8447
8448 \providecommand*\multicolumnrow{\LWR@print@multicolumnrow}
8449
8450}% \AtBeginDocument

8451 \end{warpall}

```

## 72.26 Utility macros inside a table

for HTML output: 8452 \begin{warpHTML}

Used to prevent opening a tabular data cell if the following token is one which does not create tabular data:

```
8453 \newcommand*\LWR@donothing{}
```

In case array is not loaded:

```

8454 \let\firstline\relax
8455 \let\lasthline\relax
8456 \newcommand*\firstline{}
8457 \newcommand*\lasthline{}

```

In case bigdelim is not loaded:

```

8458 \newcommand*\ldelim{}
8459 \newcommand*\rdelim{}

```

```
8460 \end{warpHTML}
```

## 72.27 Special-case tabular markers


**for HTML & PRINT:** 8461 \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.

8462 \newcommand\*{\TabularMacro}{}

8463 \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:** 8464 \begin{warpHTML}

8465 \newcommand\*{\ResumeTabular}{%
8466 \global\boolfalse{LWR@exitingtabular}%
8467 \global\boolfalse{LWR@tabularmutemods}%
8468 \LWR@getmynexttoken%
8469 }

8470 \end{warpHTML}

**for PRINT output:** 8471 \begin{warpprint}

8472 \newcommand\*{\ResumeTabular}{}

8473 \end{warpprint}

## 72.28 Checking for a new table cell

**for HTML output:** 8474 \begin{warpHTML}

Bool LWR@exitingtabular When \end is found, turns off the next opening data tag.

8475 \newbool{LWR@exitingtabular}

Bool LWR@tabularmutemods Mutes HTML output for @, !, < and >.

This is used while printing the final row to generate \bottomrules.

8476 \newbool{LWR@tabularmutemods}

\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:

8477 \newcommand\*{\LWR@tabledatacolumnntag}%

8478 {%

8479 \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:

8480 \global\let\LWR@mynextaction\LWR@tabledatasinglecolumnntag%

If exiting the tabular:

8481 \ifdefequal{\LWR@mynexttoken}{\end}%

8482 {\global\booltrue{LWR@exitingtabular}}}%

longtable can have a caption in a cell

8483 \ifdefequal{\LWR@mynexttoken}{\caption}%

8484 {\global\let\LWR@mynextaction\LWR@donothing}}}%

Look for other things which would not start a table cell:

8485 \ifdefequal{\LWR@mynexttoken}{\multicolumn}%

8486 {\global\let\LWR@mynextaction\LWR@donothing}}}%

8487 \ifdefequal{\LWR@mynexttoken}{\multirow}%

8488 {\global\let\LWR@mynextaction\LWR@donothing}}}%

8489 \ifdefequal{\LWR@mynexttoken}{\multicolumnrow}%

8490 {\global\let\LWR@mynextaction\LWR@donothing}}}%

8491 \ifdefequal{\LWR@mynexttoken}{\noalign}%

8492 {\global\let\LWR@mynextaction\LWR@donothing}}}%

If an \mrowcell, this is a cell to be skipped over:

8493 \ifdefequal{\LWR@mynexttoken}{\mrowcell}%

8494 {\global\let\LWR@mynextaction\LWR@donothing}}}%

If an `\mcolrowcell`, this is a cell to be skipped over:

```
8495 \ifdefequal{\LWR@mynexttoken}{\mcolrowcell}%
8496 {\global\let\LWR@mynextaction\LWR@donothing}{}%

8497 \ifdefequal{\LWR@mynexttoken}{\TabularMacro}%
8498 {\global\let\LWR@mynextaction\LWR@donothing}{}%

8499 \ifdefequal{\LWR@mynexttoken}{\hline}%
8500 {\global\let\LWR@mynextaction\LWR@donothing}{}%

8501 \ifdefequal{\LWR@mynexttoken}{\firsthline}%
8502 {\global\let\LWR@mynextaction\LWR@donothing}{}%

8503 \ifdefequal{\LWR@mynexttoken}{\lasthline}%
8504 {\global\let\LWR@mynextaction\LWR@donothing}{}%

8505 \ifdefequal{\LWR@mynexttoken}{\toprule}%
8506 {\global\let\LWR@mynextaction\LWR@donothing}{}%

8507 \ifdefequal{\LWR@mynexttoken}{\midrule}%
8508 {\global\let\LWR@mynextaction\LWR@donothing}{}%

8509 \ifdefequal{\LWR@mynexttoken}{\cmidrule}%
8510 {\global\let\LWR@mynextaction\LWR@donothing}{}%

8511 \ifdefequal{\LWR@mynexttoken}{\morecmidrules}%
8512 {\global\let\LWR@mynextaction\LWR@donothing}{}%

8513 \ifdefequal{\LWR@mynexttoken}{\specialrule}%
8514 {\global\let\LWR@mynextaction\LWR@donothing}{}%

8515 \ifdefequal{\LWR@mynexttoken}{\cline}%
8516 {\global\let\LWR@mynextaction\LWR@donothing}{}%

8517 \ifdefequal{\LWR@mynexttoken}{\bottomrule}%
8518 {\global\let\LWR@mynextaction\LWR@donothing}{}%

8519 \ifdefequal{\LWR@mynexttoken}{\rowcolor}%
8520 {\global\let\LWR@mynextaction\LWR@donothing}{}%

8521 \ifdefequal{\LWR@mynexttoken}{\arrayrulecolor}%
8522 {\global\let\LWR@mynextaction\LWR@donothing}{}%

8523 \ifdefequal{\LWR@mynexttoken}{\doublerulesepcolor}%
8524 {\global\let\LWR@mynextaction\LWR@donothing}{}%

8525 \ifdefequal{\LWR@mynexttoken}{\warpprintonly}%
8526 {\global\let\LWR@mynextaction\LWR@donothing}{}%

8527 \ifdefequal{\LWR@mynexttoken}{\warppHTMLonly}%
8528 {\global\let\LWR@mynextaction\LWR@donothing}{}%
```

```
8529 \ifdefequal{\LWR@mynexttoken}{\ldelim}%
8530 {\global\let\LWR@mynextaction\LWR@donothing}{}}%
```

```
8531 \ifdefequal{\LWR@mynexttoken}{\rdelim}%
8532 {\global\let\LWR@mynextaction\LWR@donothing}{}}%
```

For `arydshln`:

```
8533 \ifdefequal{\LWR@mynexttoken}{\hdashline}%
8534 {\global\let\LWR@mynextaction\LWR@donothing}{}}%
```

```
8535 \ifdefequal{\LWR@mynexttoken}{\cdashline}%
8536 {\global\let\LWR@mynextaction\LWR@donothing}{}}%
```

```
8537 \ifdefequal{\LWR@mynexttoken}{\firsthdashline}%
8538 {\global\let\LWR@mynextaction\LWR@donothing}{}}%
```

```
8539 \ifdefequal{\LWR@mynexttoken}{\lasthdashline}%
8540 {\global\let\LWR@mynextaction\LWR@donothing}{}}%
```

Ignore an empty line between rows:

```
8541 \ifdefequal{\LWR@mynexttoken}{\par}%
8542 {\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:

```
8543 \LWR@traceinfo{\LWR@tabledatacolumnstag: about to do mynext}%
8544 \LWR@mynextaction%
8545 \LWR@traceinfo{\LWR@tabledatacolumnstag: done}%
8546 }
```

```
8547 \end{warpHTML}
```

## 72.29 `\mrowcell`

**for HTML & PRINT:** 8548 `\begin{warpall}`


 **multirow cells** `\mrowcell` The user must insert `\mrowcell` into any `\multirow` cells which must be skipped. This command has no action during print output.

```
8549 \newcommand*{\mrowcell}{}%
```

```
8550 \end{warpall}
```

## 72.30 `\mcolrowcell`

for HTML & PRINT: 8551 `\begin{warpall}`

 `\mcolrowcell` The user must insert `\mcolrowcell` into any `\multicolumnrow` cells which must be skipped. This command has no action during print output.

8552 `\newcommand*\mcolrowcell{}`

8553 `\end{warpall}`

## 72.31 HTML tabular environment

for HTML output: 8554 `\begin{warpHTML}`

These are default definitions in case `booktabs` is not loaded, and are not expected to be used, but must exist as placeholders. They are pre-deleted in case `memoir` has already loaded `booktabs`.

```
8555 \LetLtxMacro\toprule\relax
8556 \LetLtxMacro\midrule\relax
8557 \LetLtxMacro\cmidrule\cline
8558 \LetLtxMacro\bottomrule\relax
8559 \LetLtxMacro\addlinespace\relax
8560 \LetLtxMacro\morecmidrules\relax
8561 \LetLtxMacro\specialrule\relax
8562
8563 \newcommand*\toprule[1][1]{\hline}
8564 \newcommand*\midrule[1][1]{\hline}
8565 \LetLtxMacro\cmidrule\cline
8566 \newcommand*\bottomrule[1][1]{\hline}
8567 \newcommand*\addlinespace[1][1]{}
8568 \newcommand*\morecmidrules{}
8569 \newcommand*\specialrule[3]{\hline}
```

`\noalign` `{\text{}}` Redefined for use inside tabular.

```
8570 \LetLtxMacro\LWR@orignoalign\noalign
8571
8572 \newcommand*\LWR@tabularnoalign[1]{%
8573 \begingroup%
8574 \global\advance\rownum\m@ne%
8575 \renewcommand*\LWR@xcolorrowHTMLcolor{}%
8576 \multicolumn{\value{\LWR@tabletotalLaTeXcols}}{l}{#1} \\\
8577 \endgroup%
8578 % \@rowcolor%
8579 \LWR@getmynexttoken%
8580 }
```

`\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.

```

8581 \AtBeginDocument{
8582 \ifpackageloaded{lwarp-tabls}
8583 {
8584 \newcommand*{\LWR@HTMLhline}[1][{}]{%
8585 \ifbool{FormatWP}%
8586 {\LWR@docmidrule{1-\arabic{\LWR@tabletotalLaTeXcols}}}%
8587 {\addtocounter{\LWR@hlines}{1}}%
8588 \LWR@getmynexttoken}%
8589 }
8590 {
8591 \newcommand*{\LWR@HTMLhline}{%
8592 \ifbool{FormatWP}%
8593 {\LWR@docmidrule{1-\arabic{\LWR@tabletotalLaTeXcols}}}%
8594 {\addtocounter{\LWR@hlines}{1}}%
8595 \LWR@getmynexttoken}%
8596 }
8597 }% AtBeginDocument

```

`\LWR@HTMLcline` `{\langle columns \rangle}`

```

8598 \NewDocumentCommand{\LWR@HTMLcline}{m}%
8599 {\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.

```

8600 \newcommand{\LWR@tabular@warpprintonly}[1]{%
8601 \ifbool{warpingprint}{#1}{}%
8602 \LWR@getmynexttoken%
8603 }

```

`\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`.

```

8604 \AtBeginDocument{
8605 \ifundefined{frenchbsetup}%
8606 {% no babel-french
8607 \newcommand*{\LWR@nullifyNoAutoSpacing}{}
8608 }% no babel-french
8609 {% yes babel-french
8610 \newcommand*{\LWR@nullifyNoAutoSpacing}{%
8611 \NoAutoSpacing%
8612 \renewcommand*{\NoAutoSpacing}{}%
8613 \renewcommand*{\LWR@FBcancel}{}%
8614 }
8615 }% yes babel-french
8616 }% AtBeginDocument

```

Env tabular <direction> [*<verticalposition>*] {*<colspecs>*}

The <direction> is from plect for Japanese documents, and is ignored.

```
8617 \StartDefiningTabulars
8618
8619 \NewDocumentCommand{\LWR@HTML@etabular}{d<> o m}
8620 {%
8621 \LWR@traceinfo{\LWR@HTML@etabular 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.

```
8622 \ifnumcomp{\value{\LWR@spandepth}}{>}{0}{%
8623 \PackageWarning{\lwarp}{%
8624 A tabular is being used inside a span such as\MessageBreak
8625 a minipage. Some formatting may not be correct\MessageBreak
8626 in the tabular.\MessageBreak
8627 It is recommended to use \protect\warpprintonly\space or the\MessageBreak
8628 warpprint environment to isolate the span to\MessageBreak
8629 print-only,%
8630 }
8631 }{}%
8632 \addtocounter{\LWR@tabulardepth}{1}%
```

Not yet started a table row:

```
8633 \global\boolfalse{\LWR@startedrow}%
```

Not yet doing any rules:

```
8634 \setcounter{\LWR@hlines}{0}%
8635 \setcounter{\LWR@hdashedlines}{0}%
8636 \global\boolfalse{\LWR@doingtbrule}%
8637 \global\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.

```
8638 \LWR@nullifyNoAutoSpacing%
```

Have not yet found the end of tabular command. Unmute the @ and ! columns.

```
8639 \global\boolfalse{\LWR@exitingtabular}%
8640 \global\boolfalse{\LWR@tabularmutemods}%
```

Error if failed to use `\mrowcell` or `\mcolrowcell` when needed.

```
8641 \boolfalse{LWR@usedmultirow}
8642 \boolfalse{LWR@foundmrowcell}
```

Create the table tag:

```
8643 \global\booltrue{LWR@intabularmetadata}%
8644 \LWR@traceinfo{LWR@tabular: About to LWR@forecnewpage.}%
8645 \LWR@forcenewpage
8646 \LWR@htmlblocktag{table}%
```

Parse the table columns:

```
8647 \LWR@parsetablecols{#3}%
```

Table col spec is: `\LWR@tablecolspec` which is a string of `llccrr`, etc.

Do not place the table inside a paragraph:

```
8648 \LWR@stoppars%
```

Track column #:

```
8649 \setcounter{LWR@tableLaTeXcolindex}{1}%
```

Have not yet added data in this column:

```
8650 \global\boolfalse{LWR@tabularcelladded}%
```

Start looking for midrules:

```
8651 \LWR@clearmidrules%
```

`\` becomes a macro to end the table row:

```
8652 \LetLtxMacro{\}{LWR@tabularendofline}%
```

`\warpprintonly` inside a tabular must grab the next token.

```
8653 \LetLtxMacro\warpprintonly\LWR@tabular@warpprintonly%
```

The following adjust for `colortbl`.

```
8654 \LetLtxMacro\arrayrulecolor\arrayrulecolornexttoken%
8655 \LetLtxMacro\doublerulesepcolor\doublerulesepcolornexttoken%
8656 \gdef\LWR@columnHTMLcolor{}%
8657 \gdef\LWR@rowHTMLcolor{}%
8658 \gdef\LWR@cellHTMLcolor{}%
8659 \@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.

```

8660 \ifdefvoid{\LWR@ruleHTMLcolor}%
8661 {\edef\LWR@vertruleHTMLcolor{black}}%
8662 {\edef\LWR@vertruleHTMLcolor{\LWR@origpound\LWR@ruleHTMLcolor}}%

```

Tracking the depth of cell color <div>s:

```

8663 \setcounter{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.

```

8664 \LWR@traceinfo{LWR@HTML@tabular: redefining macros}%
8665 \LetLtxMacro\noalign\LWR@tabularnoalign%
8666 \LetLtxMacro\hline\LWR@HTMLhline%
8667 \LetLtxMacro\cline\LWR@HTMLcline%

8668 \DeclareDocumentCommand{\hdashline}{o}{%
8669 \ifbool{FormatWP}%
8670 {\LWR@docdashline{1-\arabic{LWR@tabletotalLaTeXcols}}}%
8671 {\addtocounter{LWR@hdashedlines}{1}}%
8672 \LWR@getmynexttoken%
8673 }%

8674 \DeclareDocumentCommand{\cdashline}{m}{%
8675 \LWR@docdashline{##1}\LWR@getmynexttoken%
8676 }%

8677 \DeclareDocumentCommand{\firsthdashline}{o}{%
8678 \ifbool{FormatWP}%
8679 {\LWR@docdashline{1-\arabic{LWR@tabletotalLaTeXcols}}}%
8680 {\addtocounter{LWR@hdashedlines}{1}}%
8681 \LWR@getmynexttoken%
8682 }%

8683 \DeclareDocumentCommand{\lasthdashline}{o}{%
8684 \ifbool{FormatWP}%
8685 {\LWR@docdashline{1-\arabic{LWR@tabletotalLaTeXcols}}}%
8686 {\addtocounter{LWR@hdashedlines}{1}}%
8687 \LWR@getmynexttoken%
8688 }%

```

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`.

```

8689 \renewcommand{\multicolumn}{\LWR@htmlmulticolumn}%
8690 \renewcommand*\mrowcell{%
8691 \LWR@maybenewtablerow%
8692 \LWR@tabularleftedge%
8693 \global\booltrue{LWR@skippingmrowcell}%
8694 \booltrue{LWR@foundmrowcell}%

```

```

8695 }%
8696 \renewcommand*{\mcolrowcell}{%
8697 \LWR@maybenewtablerow%
8698 \global\booltrue{LWR@skippingmcolrowcell}%
8699 \booltrue{LWR@foundmrowcell}%
8700 }%
8701 \LetLtxMacro\caption\LWR@longtabledatacaptiontag%

```

Reset for new processing:

```

8702 \global\boolfalse{LWR@tableparcell}%
8703 \global\boolfalse{LWR@skippingmrowcell}%
8704 \global\boolfalse{LWR@skippingmcolrowcell}%
8705 \global\boolfalse{LWR@skipatbang}%
8706 \global\boolfalse{LWR@emptyatbang}%

```

Set & for its special meaning inside the tabular:

```

8707 \StartDefiningTabulars%
8708 \protected\gdef&{\LWR@tabularampersand}%

```

Locally force any minipages to be fullwidth, until the end of the tabular:

```

8709 \booltrue{LWR@forceminipagefullwidth}

```

Nest one level deeper of tabular paragraph handling:

```

8710 \addtocounter{LWR@tabularpardepth}{1}%

```

Look ahead for a possible table data cell:

```

8711 \LWR@traceinfo{LWR@HTML@tabular: about to LWR@getmynexttoken}%
8712 \LWR@getmynexttoken%
8713 }%

```

Ending the environment:

```

8714 \newcommand*{\LWR@HTML@endtabular}
8715 {%
8716 \LWR@traceinfo{LWR@HTML@endtabular}%

```

Unnest one level of tabular paragraph handling:

```

8717 \addtocounter{LWR@tabularpardepth}{-1}%
8718 \ifboolexpr{%
8719 test {%
8720 \ifnumcomp{\value{LWR@tableLaTeXcolindex}}{<}{\value{LWR@tabletotalLaTeXcols}}
8721 } or %
8722 (%
8723 bool{LWR@intabularmetadata} and%
8724 not bool{LWR@tabularcelladded} and%
8725 test {%
8726 \ifnumcomp{\value{LWR@tableLaTeXcolindex}}{=}{\value{LWR@tabletotalLaTeXcols}}%
8727 }%

```

```

8728)%
8729 }%
8730 {%
8731 \LWR@tabularfinishrow%
8732 }%
8733 {%
8734 \LWR@closetabledatacell%
8735 }%
8736 \LWR@htmlblocktag{/tr}%

```

**xcolor row color support:**

```

8737 \@rowcolor%

8738 \LWR@htmlblocktag{/table}%
8739 \global\boolfalse\LWR@intabularmetadata%

```

**Unnest one level of tabular:**

```

8740 \addtocounter\LWR@tabulardepth{-1}%

```

**Restore & to its usual meaning:**

```

8741 \protected\gdef&\LWR@origampmacro}%
8742 \StopDefiningTabulars%

```

Error if used `\multirow` or `\multicolumnrow` without using `\mrowcell` or `\mcolrowcell`.

```

8743 \ifbool\LWR@usedmultirow{%
8744 \ifbool\LWR@foundmrowcell{%
8745 }%
8746 {%
8747 \PackageError{lwarp}%
8748 {%
8749 When using \protect\multirow, \protect\multicolumnrow, \MessageBreak
8750 or the bigdelim package, \MessageBreak
8751 place \protect\mrowcell\space or \protect\mcolrowcell\MessageBreak
8752 in empty cells which are to be skipped.\MessageBreak
8753 See the lwarp package documentation:\MessageBreak
8754 "Special cases and limitations" -> "Tabular"
8755 }%
8756 {%
8757 See the lwarp package documentation:\MessageBreak
8758 "Special cases and limitations" -> "Tabular".
8759 }%
8760 }%
8761 }{%}%

8762 \LWR@traceinfo\LWR@HTML@endtabular finished}%
8763 }
8764
8765 \csletcs\LWR@HTML@endtabular*\LWR@HTML@endtabular}
8766

```

```
8767 \StopDefiningTabulars
```

siunitx may redefine tabular, so set the following later:

```
8768 \AtBeginDocument{
8769 \LetLtxMacro\LWR@origendtabular\endtabular
8770 \csletcs{LWR@origendtabular*}{endtabular*}
8771 \LWR@formatted{@tabular}
8772 \LWR@formatted{endtabular}
8773 \LWR@formatted{endtabular*}
8774 }
```

```
8775 \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 12 shows the data structures related to cross-referencing.

for HTML output: 8776 \begin{warpHTML}

### 73.1 Setup

\@currentlabelname To remember the most recently defined section name, description, or caption, for \nameref.

```
8777 \providecommand*\@currentlabelname{}
```

\LWR@stripperperiod {<text>} [<.>]

Removes a trailing period.

```
8778 \def\LWR@stripperperiod#1.\ltx@empty#2\@nil{#1}%
```

\LWR@setlatestname {<object name>}

Removes \label, strips any final period, and remembers the result.

```
8779 \newcommand*\LWR@setlatestname[1]{%
```

Table 12: Cross-referencing data structures

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|
| <b>Original L<sup>A</sup>T<sub>E</sub>X:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | (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: <code>{\currentlabel}{\thepage}</code></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).</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 <code>{{section_name}{file_name}{depth}{number}}</code>:</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;][\arabic{&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: <code>{\cref@currentlabel}{\thepage}</code></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 87.</p> <p><b>\label inside math:</b> See section 79.7.1.</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`.

```
8780 \GetTitleStringExpand{#1}%
8781 \edef\@currentlabelname{\detokenize\expandafter{\GetTitleStringResult}}%
8782 \edef\@currentlabelname{%
8783 \expandafter\LWR@stripperperiod\@currentlabelname%
8784 \ltx@empty.\ltx@empty\@nil%
8785 }%
8786 }
```

## 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.

```
8787 \def\LWR@setref#1#2#3{%
8788 \ifx#1\relax%
8789 ??%
8790 \else%
8791 \expandafter#2#1%
8792 \fi}
```

`\LWR@nameref`  $\{\langle label\rangle\}$  Returns the section name for this label:

```
8793 \newcommand*\LWR@nameref}[1]{%
8794 \expandafter\LWR@setref\csname r@#1@lwarp\endcsname\LWR@firstoffour{#1}%
8795 }
```

`\LWR@htmlfileref`  $\{\langle label\rangle\}$  Returns the file number or name for this label:

```
8796 \newcommand*\LWR@htmlfileref}[1]{%
8797 \expandafter\LWR@setref\csname r@#1@lwarp\endcsname\LWR@secondoffour{#1}%
8798 }
```

`\LWR@lateximagedepthref`  $\{\langle label\rangle\}$  Returns the `lateximagedepth` for this label:

```

8799 \newcommand*{\LWR@lateximagedepthref}[1]{%
8800 \expandafter\LWR@setref\csname r@#1@lwarp\endcsname\LWR@thirdofffour{#1}%
8801 }

```

`\LWR@lateximagenumberref` `{\langle label \rangle}` Returns the lateximagenumber for this label:

```

8802 \newcommand*{\LWR@lateximagenumberref}[1]{%
8803 \expandafter\LWR@setref\csname r@#1@lwarp\endcsname\LWR@fourthofffour{#1}%
8804 }

```

`\LWR@lwarplabel` `{\langle label \rangle}` Sanitize the name and then creates the label:

```

8805 \newcommand*{\LWR@lwarplabel}[1]{%
8806 \LWR@traceinfo{\LWR@lwarplabel !#1!}%
8807 \LWR@setlatestname{\@currentlabelname}%
8808 \@bsphack%
8809 \protected@write\@auxout{%
8810 {\string\newlabel{#1@lwarp}{%
8811 {\@currentlabelname}%
8812 {\ifbool{FileSectionNames}{\LWR@thisfilename}{\arabic{\LWR@htmlfilenumber}}}%
8813 {\arabic{\LWR@lateximagedepth}}%
8814 {\arabic{\LWR@lateximagenumber}}}%
8815 }}%
8816 \@esphack%
8817 }

```

### 73.3 Labels

`\LWR@sublabel` `{\langle label \rangle}` Creates an HTML id tag.

`\detokenize` is used to allow underscores in the labels.

```

8818 \newcommand*{\LWR@sublabel}[1]{%
8819 \LWR@traceinfo{\LWR@sublabel !#1!}%

```

Create an HTML id tag unless are inside a lateximage, since it would appear in the image:

```

8820 \ifnumcomp{\value{\LWR@lateximagedepth}}{>}{0}%
8821 {}%
8822 {% not lateximage

```

If not doing a lateximage, create an HTML ID tag: (To be factored...)

```

8823 \LWR@sanitize{#1}%
8824 \ifbool{\LWR@doingstartpars}%
8825 {% pars allowed
8826 \ifbool{\LWR@doingapar}%
8827 {% par started
8828 \LWR@htmltag{a \LWR@print@mbbox{id="\LWR@sanitized"}}\LWR@htmltag{/a}%

```

```

8829 }% par started
8830 {% par not started
8831 \LWR@stoppars%
8832 \LWR@htmltag{a \LWR@print@mbbox{id="\LWR@sanitized"}}\LWR@htmltag{/a}%
8833 \LWR@startpars%
8834 }% par not started
8835 }% pars allowed
8836 {% pars not allowed
8837 \LWR@htmltag{a \LWR@print@mbbox{id="\LWR@sanitized"}}\LWR@htmltag{/a}%
8838 }% pars not allowed
8839 }% not lateximage
8840 }

```

`\LWR@new@label` (*<bookmark>*) {*<label>*} [*<type>*]

`\label` during HTML output when not in SVG math mode, removing extra spaces around the label, as done by a regular  $\LaTeX$  `\label`.

The is also used during a `lateximage`, including SVG math, since the special label handling is required, but `\LWR@sublabel` does not generate HTML tags inside a `lateximage`.

`cleveref` later encases this to add its own cross-referencing.

The optional *<bookmark>* is per the `memoir` class, and is ignored.

The optional *<type>* is per the `ntheorem` package, and is ignored.

```

8841 \NewDocumentCommand{\LWR@new@label}{d() m o}{%
8842 \LWR@traceinfo{\LWR@new@label: starting}%
8843 \LWR@traceinfo{\LWR@new@label: !#2!}%
8844 % \@bsphack%

```

Create a traditional  $\LaTeX$  label, as modified by `cleveref`:

```

8845 \LWR@orig@label{#2}%

```

Create a special label which holds the section number, `LWR@htmlfilenumber`, `LWR@lateximagedepth`, and `LWR@lateximagenumber`:

```

8846 \LWR@traceinfo{\LWR@new@label: filesectionnames is \ifbool{FileSectionNames}{true}{false}}%
8847 \LWR@traceinfo{\LWR@new@label: LWR@thisfilename is !\LWR@thisfilename!}%
8848 \LWR@traceinfo{\LWR@new@label: LWR@htmlfilenumber is \arabic{LWR@htmlfilenumber}}%
8849 \LWR@lwarplabel{#2}%
8850 \LWR@sublabel{#2}%
8851 % \@esphack%
8852 \LWR@traceinfo{\LWR@new@label: done}%
8853 }

```

## 73.4 References

`\LWR@startref` {*<label>*} (Common code for `\ref` and `\nameref`.)

Open an HTML tag reference to a filename, # character, and a label.

```
8854 \newcommand*{\LWR@startref}[1]
8855 {%
8856 \LWR@sanitize{#1}%
8857 \LWR@traceinfo{\LWR@startref A: !#1!}%
```

Create the filename part of the link:

```
8858 \LWR@htmltag{a href="%
8859 \LWR@traceinfo{\LWR@startref B}%
8860 \LWR@print@mbox{\LWR@htmlrefsectionfilename{#1}}%
8861 \LWR@traceinfo{\LWR@startref C}%
8862 \LWR@origpound%
```

Create the destination id:

See if `LWR@lateximagedepth` is unknown:

```
8863 \LWR@traceinfo{\LWR@startref D: !#1!}%
8864 \ifcsundef{r@#1@lwarp}%
```

“??” if `LWR@lateximagedepth` is unknown, so create a link with an unknown destination:

```
8865 {%
8866 \LWR@traceinfo{\LWR@startref D0: ??}%
8867 ??%
8868 }%
```

If `LWR@lateximagedepth` is known. Use a `lateximage` if the depth is greater than zero, or a regular link otherwise:

```
8869 {%
8870 \ifthenelse{\cnttest{\LWR@lateximagedepthref{#1}}{>}{0}}%
8871 {%
8872 \LWR@ImagesName\LWR@lateximagenumberref{#1}%
8873 }%
8874 {%
8875 \LWR@traceinfo{\LWR@startref D3}%
```

`\detokenize` is used to allow underscores in the labels:

```
8876 \LWR@print@mbox{\LWR@sanitized}%
8877 }%
8878 }%
8879 \LWR@traceinfo{\LWR@startref E}%
```

Closing quote:

```
8880 "%
8881 \LWR@traceinfo{\LWR@startref F}%
8882 }
```

`\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)”.

```
8883 \NewDocumentCommand{\LWR@subnewref}{m m}{%
8884 \LWR@traceinfo{\LWR@subnewref #1 #2}%
8885 \LWR@startref{#1}%
8886 \LWR@print@ref{#2}%
8887 \LWR@htmltag{/a}%
8888 }
```

`\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`.

```
8889 \NewDocumentCommand{\LWR@HTML@ref}{s m}{%
8890 \LWR@traceinfo{\LWR@HTML@ref !#2!}%
8891 \IfBooleanTF{#1}%
8892 {\LWR@print@ref{#2}}%
8893 {\LWR@subnewref{#2}{#2}}%
8894 }
8895
8896 \LWR@formatted{ref}
```

`\LWR@ref@ignorestar` \*  $\{\langle label \rangle\}$  For use inside `\hyperref`. Ignores the star, then uses the original `\ref`.

```
8897 \NewDocumentCommand{\LWR@ref@ignorestar}{s m}{%
8898 \LWR@print@ref{#2}%
8899 }
```

`\pagerefPageFor` Text for page references.

```
8900 \newcommand*{\pagerefPageFor}{see }
```

`\pageref` \*  $\{\langle label \rangle\}$  Create an internal document reference, or just the unlinked number if starred, per `\hyperref`.

```
8901 \NewDocumentCommand{\LWR@new@pageref}{s m}{%
8902 \IfBooleanTF{#1}%
8903 {\pagerefPageFor\LWR@print@ref{#2}}%
8904 {\cpageref{#2}}%
8905 }
```

`\nameref`  $\{\langle label \rangle\}$

```
8906 \newrobustcmd*{\nameref}[1]{%
```

```

8907 \LWR@traceinfo{nameref}%
8908 \LWR@startref{#1}%
8909 \LWR@traceinfo{nameref B}%
8910 \LWR@nameref{#1}%
8911 \LWR@traceinfo{nameref C}%
8912 \LWR@htmltag{/a}%
8913 \LWR@traceinfo{nameref: done}%
8914 }

```

`\Nameref {<label>}` In print, adds the page number. In HTML, does not.

```
8915 \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.

```

8916 % DO NOT TELL OTHER PACKAGES TO ASSUME HYPERREF, lest they attempt to patch it:
8917 % \EmulatesPackage{hyperref}[2015/08/01]% Disabled. Do not do this.

```

Emulates `hyperref`:

`\@currentHref` Added to support `backref`.

```

8918 \AtBeginDocument{
8919 \def\@currentHref{%
8920 autopage-\theLWR@currentautosec%
8921 }
8922 }

```

`\LWR@subhyperref {<URL>}`

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.

```

8923 \NewDocumentCommand{\LWR@subhyperref}{m}{%
8924 \LWR@traceinfo{\LWR@subhyperref !#1!}%
8925 \LWR@sanitize{#1}%
8926 \LWR@htmltag{%
8927 a href="\LWR@sanitized" % space
8928 target="_{}blank" % space

```

```
8929 }%
8930 }
```

`\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.

```
8931 \newcommand{\LWR@subhyperreftext}[1]{%
8932 #1%
8933 \LWR@htmltag{/a}%
8934 \LWR@ensuredoingapar%
8935 }
```

`\LWR@subhyperrefclass`  $\{\langle URL \rangle\} \{\langle text \rangle\} \{\langle htmlclass \rangle\}$

```
8936 \NewDocumentCommand{\LWR@subhyperrefclass}{m +m m}{%
8937 \LWR@htmltag{%
8938 a % space
8939 href="\begingroup\@sanitize#1\endgroup" % space
8940 class="#3" % space
8941 }\LWR@orignewline%
8942 #2\LWR@orignewline%
8943 \LWR@htmltag{/a}%
8944 \LWR@ensuredoingapar%
8945 }
```

`\href`  $[\langle options \rangle] \{\langle URL \rangle\}$

Create a link with accompanying text:

```
8946 \DeclareDocumentCommand{\LWR@hrefb}{O{} m}{%
8947 \LWR@ensuredoingapar%
8948 \LWR@subhyperref{#2}%
8949 \endgroup% restore catcodes
8950 \LWR@subhyperreftext%
8951 }
8952
8953 \newrobustcmd*{\href}{%
8954 \begingroup%
8955 \catcode'\#=12%
8956 \catcode'\%=12%
8957 \catcode'\&=12%
8958 \catcode'\~=12%
8959 \catcode'_ =12%
8960 \LWR@hrefb%
8961 }
```

`\nolinkurl`  $\{\langle URL \rangle\}$

Print the name of the link without creating the link:

```

8962 \newcommand*{\LWR@nolinkurlb}[1]{%
8963 \LWR@ensuredoingapar%
8964 \def\LWR@templink{#1}%
8965 \@onelevel@sanitize\LWR@templink%
8966 \LWR@templink%
8967 \endgroup%
8968 }
8969
8970 \newrobustcmd*{\nolinkurl}{%
8971 \begingroup%
8972 \catcode'\# =12%
8973 \catcode'\% =12%
8974 \catcode'\& =12%
8975 \catcode'\~ =12%
8976 \catcode'_ =12%
8977 \LWR@nolinkurlb%
8978 }

```

`\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@urlahere` and also redefined by `lwarp-url`.

```

8979 \DeclareDocumentCommand{\LWR@urlb}{m}{%
8980 \LWR@ensuredoingapar%
8981 \def\LWR@templink{#1}%
8982 \@onelevel@sanitize\LWR@templink%
8983 \href{\LWR@templink}{\LWR@templink}%
8984 \endgroup%
8985 }
8986
8987 \newrobustcmd*{\url}{%
8988 \begingroup%
8989 \catcode'\# =12%
8990 \catcode'\% =12%
8991 \catcode'\& =12%
8992 \catcode'\~ =12%
8993 \catcode'_ =12%
8994 \LWR@urlb%
8995 }

```

`\LWR@subinlineimage`     $[\langle alttag \rangle] \{\langle class \rangle\} \{\langle filename \rangle\} \{\langle extension \rangle\} \{\langle style \rangle\}$

```

8996 \newcommand*{\LWR@subinlineimage}[5][]{%
8997 \ifblank{#1}%
8998 {%
8999 \LWR@htmltag{img \LWR@indentHTML
9000 src="#3.#4" \LWR@indentHTML
9001 alt="#3" \LWR@indentHTML
9002 style="#5" \LWR@indentHTML
9003 class="#2" \LWR@orignewline
9004 }%

```

```
9005 }%
9006 {%
9007 \LWR@htmltag{img \LWR@indentHTML
9008 src="#3.#4" \LWR@indentHTML
9009 alt="#1" \LWR@indentHTML
9010 style="#5" \LWR@indentHTML
9011 class="#2" \LWR@orignewline
9012 }%
9013 }%
9014 }

9015 \end{warpHTML}
```

Table 13: 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 13 shows the data structure associated with each `<type>` of float.

`\@makecaption` is redefined to print the float number and caption text, separated by `\CaptionSeparator`, which works with the `babel` package to adjust the caption separator according to the language. French, for example, uses an en-dash instead of a colon: “Figure 123 – Caption text”.

### 74.1 Float environment

**for HTML output:** 9016 `\begin{warphTML}`

`\LWR@floatbegin` `{\<type>}` `[\<placement>]` Begins a `\newfloat` environment.

```

9017 \NewDocumentCommand{\LWR@floatbegin}{m o}{%
9018 \ifbool{FormatWP}{\newline}{}%
9019 \LWR@stoppars

```

There is a new float, so increment the unique float counter:

```

9020 \addtocounter{LWR@thisautoid}{1}%
9021 \booltrue{LWR@freezethisautoid}%

```

```

9022 \begingroup%

```

Settings while inside the environment:

```

9023 \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.

```

9024 \LWR@htmltag{%
9025 figure id="\LWR@print@mbox{autoid-\arabic{LWR@thisautoid}}" % space
9026 class="#1 \@nameuse{LWR@floatstyle@#1}"%
9027 }%
9028 \ifbool{FormatWP}{%
9029 \LWR@orignewline%
9030 \LWR@BlockClassWP{#1}{wp#1}%
9031 }{%

```

Update the caption type:

```

9032 \renewcommand*{\@capttype}{#1}%
9033 \caption@settype{#1}%

```

Mark the float for a word processor conversion:

```

9034 \LWR@startpars%
9035 \ifboolexpr{bool{FormatWP} and bool{WPMarkFloats}}{%
9036
9037 === begin #1 ===
9038
9039 }{%

```

Look for \centering, etc:

```

9040 \LWR@futurenonSPACElet\LWR@mynexttoken\LWR@floatalignment%
9041 }

```

For koma-script. The following does not work for tables.

```

9042 \AtBeginDocument{
9043 \@ifpackageloaded{tocbasic}{
9044 \appto\figure@atbegin{%

```

```

9045 \LWR@futurenonospacelet\LWR@mynexttoken\LWR@floatalignment%
9046 }
9047 }{}
9048 }

```

\@float Support packages which create floats directly.  
 \@dblfloat

```

9049 \let\@float\LWR@floatbegin
9050 \let\@dblfloat\LWR@floatbegin

```

\LWR@floatend Ends a \newfloat environment.

```

9051 \newcommand*{\LWR@floatend}{%

```

If saw a \centering, finish the center environment:

```

9052 \LWR@endfloatalignment%

```

Mark the float end for a word processor conversion:

```

9053 \ifboolexpr{bool{FormatWP} and bool{WPMarkFloats}}{%
9054
9055 === end ===
9056
9057 }{}%
9058 \LWR@stoppars%

```

Close an HTML figure tag:

```

9059 \ifbool{FormatWP}{\endLWR@BlockClassWP}{}%
9060 \LWR@htmllementend{figure}%
9061 \endgroup%
9062 \boolfalse{LWR@freezethisautoid}%
9063 \LWR@startpars%
9064 \ifbool{FormatWP}{\newline}{}%
9065 }

```

\end@float Support packages which create floats directly.  
 \end@dblfloat

```

9066 \let\end@float\LWR@floatend
9067 \let\end@dblfloat\LWR@floatend

```

## 74.2 Float tracking

Ctrl 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.

```

9068 \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.

```
9069 \newcounter{LWR@thisautoidWP}
```

**Bool** `LWR@freezethisautoid` Prevents multiple increments of `\LWR@thisautoid` inside a float.

```
9070 \newbool{LWR@freezethisautoid}
9071 \boolfalse{LWR@freezethisautoid}
```

`\LWR@newautoidanchor` Adds a new <autoid> anchor.

```
9072 \newcommand*{\LWR@newautoidanchor}{%
9073 \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}%
9074 }%
9075 {%
9076 \ifbool{LWR@freezethisautoid}{}{%
9077 \addtocounter{LWR@thisautoid}{1}%
9078 \LWR@htmltag{a id="\LWR@print@mbx{autoid-\arabic{LWR@thisautoid}}"}%
9079 \LWR@htmltag{/a}%
9080 }%
9081 }%
9082 }
```

`\@capyte` Remembers which float type is in use.

```
9083 \newcommand*{\@capyte}{}%
```

`\LWR@floatalignmentname` Set to center, flushleft, or flushright if saw `\centering`, `\raggedright`, or `\raggedleft`.

```
9084 \newcommand*{\LWR@floatalignmentname}{}%
```

`\LWR@floatalignment` If sees a `\centering`, `\raggedleft`, or `\raggedright`, creates a center, flushright, or flushleft environment.

```
9085 \newcommand*{\LWR@floatalignment}{%
9086 \ifdefstrequal{\LWR@mynexttoken}{\centering}{%
9087 \center%
9088 \renewcommand*{\LWR@floatalignmentname}{center}%
9089 }{%
9090 \ifdefstrequal{\LWR@mynexttoken}{\raggedright}{%
9091 \flushleft%
9092 \renewcommand*{\LWR@floatalignmentname}{flushleft}%
9093 }{%
9094 \ifdefstrequal{\LWR@mynexttoken}{\raggedleft}{%
9095 \flushright%
9096 \renewcommand*{\LWR@floatalignmentname}{flushright}%
9097 }{%
9098 }
```

`\LWR@endfloatalignment` Closes an environment from `\LWR@floatalignment`.

```

9099 \newcommand*{\LWR@endfloatalignment}{%
9100 \ifdefvoid{\LWR@floatalignmentname}{\@nameuse{end\LWR@floatalignmentname}}%
9101 \renewcommand*{\LWR@floatalignmentname}{}%
9102 }

```

### 74.3 Caption inside a float environment

`\CaptionSeparator` How to separate the float number and the caption text.

```

9103 \AtBeginDocument{\providecommand*\CaptionSeparator{::~}}

```

`\@makecaption` `{<name and num>}{<text>}`

Prints the float type and number, the caption separator, and the caption text.

```

9104 \AtBeginDocument{\renewcommand*\@makecaption}[2]{%
9105 \LWR@traceinfo{@makecaption}%
9106 \LWR@isolate{#1}\CaptionSeparator\LWR@isolate{#2}%
9107 \LWR@traceinfo{@makecaption: done}%
9108 }%
9109 }

```

### 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, 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. 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.

```

9110 \newcounter{LWR@nextautoid}
9111 \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`

```

9112 \newcommand*\LWRsetnextfloat}[2]{%

```

```

9113 \setcounter{LWR@nextautopage}{#1}%
9114 \setcounter{LWR@nextautoid}{#2}%
9115 }

```

Ctrl LWR@latestautopage Updated each time a new HTML file is begun. \LWRsetnextfloat is written with this and the autoid by the modified \addcontentsline just before each float's entry.

```

9116 \newcounter{LWR@latestautopage}
9117 \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.

```

9118 \newenvironment*{LWR@figcaption}
9119 {
9120 \ifbool{FormatWP}{%
9121 \BlockClass[font-style:italic]{figurecaption}
9122 }{\LWR@print@vspace*{\baselineskip}}
9123 }{
9124 \BlockClass{figurecaption}
9125 }%
9126 }
9127 {\endBlockClass}

```

\LWR@HTML@caption@begin {<type>}

Low-level code to create HTML tags for captions.

The print versions are from the caption package.

```

9128 \newcommand*{\LWR@HTML@caption@begin}[1]
9129 {%
9130 \LWR@traceinfo{LWR@HTML@caption@begin}%

```

Keep par and minipage changes local:

```

9131 \begingroup%

```

No need for a minipage or \parbox inside the caption:

```

9132 \RenewDocumentEnvironment{minipage}{O{t} o O{t} m}{\}{\}%
9133 \RenewDocumentCommand{\parbox}{O{t} O{} O{t} m +m}{##5}%

```

Enclose the original caption code inside an HTML tag:

```

9134 \LWR@figcaption%
9135 \LWR@traceinfo{LWR@HTML@caption@begin: about to LWR@origcaption@begin}%
9136 \LWR@print@caption@begin{#1}%
9137 \LWR@traceinfo{LWR@HTML@caption@begin: done}%
9138 }

```

`\LWR@HTML@caption@end` Low-level patches to create HTML tags for captions.

```
9139 \newcommand*{\LWR@HTML@caption@end}
9140 {%
9141 \LWR@traceinfo{\LWR@HTML@caption@end}%
9142 \LWR@print@caption@end%
```

Closing tag:

```
9143 \endLWR@figcaption%
9144 \endgroup%
9145 % \leavevmode% avoid bad space factor (0) error
9146 \LWR@traceinfo{\LWR@HTML@caption@end: done}%
9147 }
```

`\caption@begin` Low-level patches to create HTML tags for captions. These are assigned `\AtBeginDocument`  
`\caption@end` so that other packages which modify captions will have already been loaded before saving the print-mode version.

```
9148 \AtBeginDocument{
9149 \LWR@formatted{caption@begin}
9150 \LWR@formatted{caption@end}
9151 }
```

`\captionlistentry` Tracks the float number for this caption used outside a float. Patched to create an HTML anchor.

```
9152 \let\LWR@origcaptionlistentry\captionlistentry
9153
9154 \renewcommand*{\captionlistentry}{%
9155 \LWR@ensuredoingapar%
9156 \LWR@origcaptionlistentry%
9157 }
9158
9159 \def\LWR@LTcaptionlistentry{%
9160 \LWR@ensuredoingapar%
9161 \LWR@htmltag{a id="\LWR@print@mbox{autoid-\arabic{\LWR@thisautoid}}"}\LWR@htmltag{/a}%
9162 \bgroup
9163 \@ifstar{\egroup\LWR@LT@captionlistentry}% gobble *
9164 {\egroup\LWR@LT@captionlistentry}%
9165 \def\LWR@LT@captionlistentry#1{%
9166 \caption@listentry\@firstoftwo[LTcaptype]{#1}}%
```

`\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

```
9167 \let\LWR@origaddcontentsline\addcontentsline
9168
9169 \renewcommand*{\addcontentsline}[3]{%
9170 \ifstrequal{#1}{toc}{}% not TOC
```

```

9171 \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}%
9172 {}%
9173 {\LWR@newautoidanchor}%

9174 \ifcsvoid{ext@#2}{\csdef{ext@#2}{#1}}{}%

9175 \addtocontents{\@nameuse{ext@#2}}{%
9176 \protect\LWRsetnextfloat%
9177 {\arabic{LWR@latestautopage}}%
9178 {\arabic{LWR@thisautoid}}%
9179 }%
9180 }% not TOC
9181 \LWR@origaddcontentsline{#1}{#2}{#3}%
9182 }

```

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.

```

9183 \AtBeginDocument{
9184 \let\LWR@origcaptionof\captionof
9185
9186 \renewcommand*{\captionof}{%
9187 \LWR@stoppars%
9188 \LWR@origcaptionof%
9189 }
9190 }

9191 \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 “`sidetoc`” 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: 9192 `\begin{warpHTML}`

## 75.1 Reading and printing the toc

`\LWR@myshorttoc`  $\{\langle toc/lof/lot/sidetoc \rangle\}$

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 sidetoc may be referred to again in each HTML page.

```
9193 \newcommand*\LWR@myshorttoc[1]{%
9194 \LWR@traceinfo{\LWR@myshorttoc: #1}%
9195 \LWR@ensuredoingapar%
```

Only if the file exists:

```
9196 \IfFileExists{\jobname.#1}{%
9197 \LWR@traceinfo{\LWR@myshorttoc: loading}%
```



Many of the commands in the file will have @ characters in them, so @ must be made a regular letter.

```
9198 \begingroup%
9199 \makeatletter%
```

Read in the toc file:

```
9200 \@input{\jobname.#1}%
9201 \endgroup%
9202 }%
9203 {}%
9204 \LWR@traceinfo{\LWR@myshorttoc: done}%
9205 }
```

`\LWR@subtableofcontents`  $\{\langle toc/lof/lot \rangle\} \{\langle sectionstarname \rangle\}$

Places a TOC/LOF/LOT at the current position.

```
9206 \NewDocumentCommand{\LWR@subtableofcontents}{m m}{%
```

Closes previous levels:

```
9207 \@ifundefined{chapter}
9208 {\LWR@closeprevious{section}}
9209 {\LWR@closeprevious{chapter}}
```

Prints any pending footnotes so that they appear above the potentially large toc:

```
9210 \LWR@printpendingfootnotes
```

Place the list into its own chapter (if defined) or section:

```
9211 \@ifundefined{chapter}{\section*{#2}}{\chapter*{#2}}
```

Create a new HTML nav containing the TOC/LOF/LOT:

```
9212 \LWR@htmlclass{nav}{#1}
```

Create the actual list:

```
9213 \LWR@myshorttoc{#1}
```

Close the nav:

```
9214 \LWR@htmlclassend{nav}{#1}
9215 }
```

`\starttoc`    `{(ext)}`

Patch `\starttoc` to encapsulate the TOC inside HTML tags:

```
9216 \let\LWR@orig@starttoc\starttoc
9217
9218 \renewcommand{\starttoc}[1]{
9219 \LWR@htmlclass{nav}{#1}
9220 \LWR@orig@starttoc{#1}
9221 \LWR@htmlclassend{nav}{#1}
9222 }
```

**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.)

```
9223 \newbool{LWR@copiedsidetoc}
9224 \boolfalse{LWR@copiedsidetoc}
```

`\tableofcontents`    Patch `\tableofcontents`, etc. to print footnotes first. `newfloat` uses `\listoffigures` for all future float types.

```
9225 \AtBeginDocument{
9226 \let\LWR@origtableofcontents\tableofcontents
9227
9228 \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:

```
9229 \ifboolexpr{bool{FormatWP} and bool{WPMarkTOC}}{
9230
9231 === table of contents ===
9232
9233 }
9234 {
```

Copy the .toc file to .sidetoc for printing the sideroc. The original .toc file is renewed when \tableofcontents is finished.

```

9235 \ifbool{LWR@copiedsidetoc}{%
9236 \LWR@copyfile{\jobname.toc}{\jobname.sidetoc}%
9237 \booltrue{LWR@copiedsidetoc}%
9238 }%
9239 \LWR@printpendingfootnotes
9240 \LWR@origtableofcontents
9241 }
9242 }% \tableofcontents
9243 }% AtBeginDocument

```

### \listoffigures

```

9244 \let\LWR@origlistoffigures\listoffigures
9245
9246 \renewcommand*{\listoffigures}{
9247 \ifboolexpr{bool{FormatWP} and bool{WPMarkLOFT}}{
9248
9249 === list of figures ===
9250
9251 }
9252 {
9253 \LWR@printpendingfootnotes
9254 \LWR@origlistoffigures
9255 }
9256 }

```

### \listoftables

```

9257 \let\LWR@origlistoftables\listoftables
9258
9259 \renewcommand*{\listoftables}{
9260 \ifboolexpr{bool{FormatWP} and bool{WPMarkLOFT}}{
9261
9262 === list of tables ===
9263
9264 }
9265 {
9266 \LWR@printpendingfootnotes
9267 \LWR@origlistoftables
9268 }
9269 }

```

## 75.2 High-level toc commands

`\listof {<type>} {<title>}`

Emulate the `\listof` command from the `float` package (section 230). 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.

```

9270 \NewDocumentCommand{\listof}{m +m}{%
9271 \@ifundefined{l@#1}{%
9272 \csdef{l@#1}##1##2{\hypertocfloat{1}{#1}{\@nameuse{ext@#1}}{##1}{##2}}%
9273 }{%
9274 \LWR@subtableofcontents{\@nameuse{ext@#1}}{#2}
9275 \expandafter\newwrite\csname tf@#1\endcsname\endcsname
9276 \immediate\openout \csname tf@#1\endcsname\endcsname
9277 \jobname.\@nameuse{ext@#1}\relax
9278 }
```

### 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.sidetocitle:** The title.

**div.sidetoccontents:** The table of contents.

---

```

9279 \end{warpHTML}
```

**for HTML & PRINT:** 9280 \begin{warpall}

**Ctrl** 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`.

```

9281 \newcounter{SideTOCDepth}
9282 \setcounter{SideTOCDepth}{1}
```

`\sidetocname` Holds the default name for the sideroc.

```

9283 \newcommand{\sidetocname}{Contents}
```

```

9284 \end{warpall}
```

**for HTML output:** 9285 \begin{warpHTML}

`\LWR@sidetoc` Creates the actual side-TOC.

```
9286 \newcommand*{\LWR@sidetoc}{
9287 \LWR@forcenewpage
9288 \LWR@stoppars
9289 }
```

The entire sideroc is placed into a nav of class sidetoc.

```
9290 \LWR@htmlclass{div}{sidetoccontainer}
9291 \LWR@htmlclass{nav}{sidetoc}
9292
9293 \setcounter{tocdepth}{\value{SideTOCDepth}}
9294 }
```

The title is placed into a `<div>` of class sidetoc title, and may contain paragraphs.

```
9295 \begin{BlockClass}{sidetoc title}
9296 \ifcsvoid{thetitle}{}{\InlineClass{sidetoc thetitle}{\thetitle}\par}
9297 \sidetocname
9298 \end{BlockClass}
```

The table of contents is placed into a `<div>` of class sidetoc contents.

```
9299 \begin{BlockClass}{sidetoc contents}
9300 \LinkHome
9301
9302 \LWR@myshorttoc{sidetoc}
9303 \end{BlockClass}
9304 \LWR@htmlclassend{nav}{sidetoc}
9305 \LWR@htmlclassend{div}{sidetoccontainer}
9306 }
```

## 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:

```
9307 \newcommand*{\LWR@numberline}[1]{%
9308 \LWR@sectionnumber{#1}\quad%
9309 }
9310
9311 \let\txMacro\numberline\LWR@numberline
```

`\LWR@maybetocdata` Replaced by tocdata. Adds author name.

```
9312 \newcommand*{\LWR@maybetocdata}{ }
```

`\hypertoc` {<1: *depth*>} {<2: *type*>} {<3: *name*>} {<4: *page*>}

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

```
9313 \NewDocumentCommand{\hypertoc}{m m +m m}{%
9314 \LWR@traceinfo{hypertoc !#1!#2!#3!#4!}%
```

Respond to `tocdepth`:

```
9315 \ifthenelse{\cnttest{#1}{<=}{\value{tocdepth}}}%
9316 {%
9317 \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.

```
9318 \LWR@subhyperrefclass{%
9319 \LWR@htmlrefsectionfilename{\BaseJobname-autopage-#4}%
9320 \LWR@origpound\LWR@print@mbbox{autosec-#4}%
9321 }{#3}{toc#2}%

9322 \LWR@maybetocdata%

9323 \LWR@stoppars%
9324 }%
9325 }%
9326 \LWR@traceinfo{hypertoc done}%
9327 }
```

`\ctr` `\lofdepth` TOC depth for figures.

```
9328 \@ifclassloaded{memoir}{%}{
9329 \newcounter{lofdepth}
9330 \setcounter{lofdepth}{1}
9331 }
```

`\ctr` `\lotdepth` TOC depth for tables.

```
9332 \@ifclassloaded{memoir}{%}{
9333 \newcounter{lotdepth}
9334 \setcounter{lotdepth}{1}
9335 }
```

`\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

```
9336 \newcommand{\hypertocfloat}[5]{%
9337 \LWR@startpars
```

If some float-creation package has not yet defined the float type's `lofdepth` counter, etc, define it here:

```
9338 \@ifundefined{c@#3depth}{%
9339 \newcounter{#3depth}%
9340 \setcounter{#3depth}{1}%
9341 }{%
```

Respond to `lofdepth`, etc.:

```
9342 \LWR@traceinfo{\hypertocfloat depth is #1 #3depth is \arabic{#3depth}}%
9343 \ifthenelse{\cnttest{#1}{<=}}{\arabic{#3depth}}{%
9344 {%
9345 \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.

```
9346 \LWR@subhyperrefclass{%
9347 \LWR@htmlrefsectionfilename{%
9348 \BaseJobname-autopage-\arabic{\LWR@nextautopage}%
9349 }%
9350 \LWR@origpound\LWR@print@mbbox{autoid-\arabic{\LWR@nextautoid}}}%
9351 {#4}{toc#2}%

9352 \LWR@maybetocdata%

9353 \LWR@stoppars%
9354 }%
9355 }%
9356 }
```

Automatically called by `\contentsline`:

`\l@book`     $\{\langle name \rangle\} \{\langle page \rangle\}$

Uses `\DeclareDocumentCommand` in case the class does not happen to have a `\book`.

```
9357 \DeclareDocumentCommand{\l@book}{m m}{\hypertoc{-2}{book}{#1}{#2}}
```

`\l@part`     $\{\langle name \rangle\} \{\langle page \rangle\}$

Uses `\DeclareDocumentCommand` in case the class does not happen to have a `\part`.

```
9358 \DeclareDocumentCommand{\l@part}{m m}{\hypertoc{-1}{part}{#1}{#2}}
```

`\l@chapter`     $\{\langle name \rangle\} \{\langle page \rangle\}$

Uses `\DeclareDocumentCommand` in case the class does not happen to have a `\chapter`.

```
9359 \@ifundefined{chapter}
9360 {}
9361 {
9362 \DeclareDocumentCommand{\l@chapter}{m m}
9363 {\hypertoc{0}{chapter}{#1}{#2}}
9364 }
```

`\l@section`     $\{\langle name \rangle\} \{\langle page \rangle\}$

```
9365 \renewcommand{\l@section}[2]{\hypertoc{1}{section}{#1}{#2}}
```

`\l@subsection`     $\{\langle name \rangle\} \{\langle page \rangle\}$

```
9366 \renewcommand{\l@subsection}[2]{\hypertoc{2}{subsection}{#1}{#2}}
```

`\l@subsubsection`     $\{\langle name \rangle\} \{\langle page \rangle\}$

```
9367 \renewcommand{\l@subsubsection}[2]{\hypertoc{3}{subsubsection}{#1}{#2}}
```

`\l@paragraph`     $\{\langle name \rangle\} \{\langle page \rangle\}$

```
9368 \renewcommand{\l@paragraph}[2]{\hypertoc{4}{paragraph}{#1}{#2}}
```

`\l@subparagraph`     $\{\langle name \rangle\} \{\langle page \rangle\}$

```
9369 \renewcommand{\l@subparagraph}[2]{\hypertoc{5}{subparagraph}{#1}{#2}}
```

`\l@figure`     $\{\langle name \rangle\} \{\langle page \rangle\}$

```
9370 \renewcommand{\l@figure}[2]{\hypertocfloat{1}{figure}{lof}{#1}{#2}}
```

```

\l@table {\langle name\rangle} {\langle page\rangle}

9371 \renewcommand{\l@table}[2]{\hypertocfloat{1}{table}{lot}{#1}{#2}}

9372 \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: 9373 \begin{warpHTML}

9374 \newcounter{LWR@autoindex}
9375 \setcounter{LWR@autoindex}{0}
9376
9377 \newcounter{LWR@autoglossary}
9378 \setcounter{LWR@autoglossary}{0}

```

Env    theindex

```

9379 \@ifundefined{chapter}
9380 {\newcommand*\LWR@indexsection[1]{\section*{#1}}}
9381 {\newcommand*\LWR@indexsection[1]{\chapter*{#1}}}
9382
9383 \AtBeginDocument{
9384 \renewenvironment*{theindex}{%
9385 \LWR@indexsection{\indexname}%
9386 \let\item\LWR@indexitem%
9387 \let\subitem\LWR@indexsubitem%
9388 \let\subsubitem\LWR@indexsubsubitem%
9389 }{}
9390 }% AtBeginDocument

```

`\LWR@indexitem`    [*\index key*]    The optional argument is added to support repeatindex.

```

9391 \newcommand{\LWR@indexitem}[1][\@empty]{
9392
9393 \InlineClass{indexitem}{\LWR@htmlcomment{}}#1%
9394 }

```

`\LWR@indexsubitem`

```

9395 \newcommand{\LWR@indexsubitem}{
9396
9397 \InlineClass{indexsubitem}{\LWR@htmlcomment{}}
9398 }

```

\LWR@indexsubsubitem

```

9399 \newcommand{\LWR@indexsubsubitem}{
9400
9401 \InlineClass{indexsubsubitem}{\LWR@htmlcomment{}}
9402 }

```

`\@wrindex {<term>}`      Redefined to write the LWR@autoindex counter instead of page.

```

9403 \def\LWR@wrindex#1{%
9404 \addtocounter{LWR@autoindex}{1}%
9405 \LWR@new@label{LWRindex-\arabic{LWR@autoindex}}%
9406 \protected@write\@indexfile{%
9407 {\string\indexentry{#1}{\arabic{LWR@autoindex}}}%
9408 \endgroup
9409 \esphack}
9410
9411 \AtBeginDocument{
9412 \let\@wrindex\LWR@wrindex
9413 }

```

`\@wrglossary {<term>}`      Redefined to write the LWR@latestautopage counter instead of page.

```

9414 \def\@wrglossary#1{%
9415 \addtocounter{LWR@autoglossary}{1}%
9416 \LWR@new@label{LWRglossary-\theLWR@autoglossary}%
9417 \protected@write\@glossaryfile{%
9418 {\string\glossaryentry{#1}{\theLWR@autoglossary}}%
9419 \endgroup
9420 \esphack}

```

`\LWR@indexnameref {<LWR@autoindex>}`

Creates a hyperlink based on the given entry's autoindex.

```

9421 \newcommand*\LWR@indexnameref[1]{\nameref{LWRindex-#1}}

```

`\LWR@doindexentry {<LWR@autoindex, or macros.>}`


Creates a hyperlink, or handles \see, \textbf, etc.

```

9422 \newrobustcmd{\LWR@doindexentry}[1]{%
9423 \IfInteger{#1}%
9424 {\LWR@indexnameref{#1}}%
9425 {#1}%
9426 }

```

`\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{...}
```

```
9427 \newcommand{\LWR@hyperindexrefnullified}{%
9428 \renewrobustcmd{\emph}[1]{\LWR@HTML@emph{\LWR@doindexentry{##1}}}%
9429 \renewrobustcmd{\textbf}[1]{\LWR@HTML@textbf{\LWR@doindexentry{##1}}}%
9430 \renewrobustcmd{\textit}[1]{\LWR@HTML@textit{\LWR@doindexentry{##1}}}%
9431 \renewrobustcmd{\textsl}[1]{\LWR@HTML@textsl{\LWR@doindexentry{##1}}}%
9432 \renewrobustcmd{\textrm}[1]{\LWR@HTML@textrm{\LWR@doindexentry{##1}}}%
9433 \renewrobustcmd{\textsf}[1]{\LWR@HTML@textsf{\LWR@doindexentry{##1}}}%
9434 \renewrobustcmd{\texttt}[1]{\LWR@HTML@texttt{\LWR@doindexentry{##1}}}%
9435 \renewrobustcmd{\textup}[1]{\LWR@HTML@textup{\LWR@doindexentry{##1}}}%
9436 \renewrobustcmd{\textsc}[1]{\LWR@HTML@textsc{\LWR@doindexentry{##1}}}%
9437 \renewrobustcmd{\textulc}[1]{\LWR@HTML@textulc{\LWR@doindexentry{##1}}}%
9438 \renewrobustcmd{\textsi}[1]{\LWR@HTML@textsi{\LWR@doindexentry{##1}}}%
9439 \renewrobustcmd{\textit}[1]{\LWR@HTML@textit{\LWR@doindexentry{##1}}}%
9440 \renewrobustcmd{\textsl}[1]{\LWR@HTML@textsl{\LWR@doindexentry{##1}}}%
9441 }
```

`\hyperindexref` {*`LWR@autoindex`*}

`\hyperindexref{LWR@autoindex}` is inserted into `*.ind` by the `makeindex` style file `lwarp.ist` or the `xindy` style file `lwarp.xdy`.

```
9442 \newcommand{\hyperindexref}[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.

```
9443 \def\LWR@tempone{#1}%
9444 \IfBeginWith{\LWR@tempone}{ }{%
9445 \StrGobbleLeft{\LWR@tempone}{1}[\LWR@tempone]%
9446 }{%}
```

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.

```
9447 \IfInteger{\LWR@tempone}%
9448 {\LWR@indexnameref{\LWR@tempone}}%
9449 {%
9450 \begingroup%
9451 \LWR@hyperindexrefnullified
9452 #1%
9453 \endgroup%
9454 }%
9455 }
```

```
9456 \end{warpHTML}
```

**for PRINT output:** A null command for print mode, in case `hyperref` was not used:

```
9457 \begin{warpprint}
9458 \newcommand{\hyperindexref}[1]{#1}
9459 \end{warpprint}
```

**for HTML & PRINT:** For the `glossaries` package, try to prevent an error where `\glo@name` was not found:

```
9460 \begin{warppall}
9461 \providecommand{\glo@name}{}
9462 \end{warppall}
```

## 77 Bibliography presentation

**for HTML output:** 9463 \begin{warpHTML}

\bibliography {*\filenames*}

Modified to use the base jobname instead of the `_html` jobname.

```
9464 \def\bibliography#1{%
9465 \if@filesw
9466 \immediate\write\@auxout{\string\bibdata{#1}}%
9467 \fi
9468 % \input@{\jobname.bbl}% original
9469 \begingroup%
9470 \input@{\BaseJobname.bbl}% lwarp
9471 \endgroup%
9472 }
```

\@biblabel {*\text-refnumber*}

```
9473 \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>

```
9474 \AtBeginDocument{
9475 \AtBeginEnvironment{thebibliography}{
9476 \providecommand*\LWR@newem}[1]{\textit{#1}}
9477
9478 \renewrobustcmd{\em}{%
9479 \begingroup
9480 \gdef\LWR@em@after{\LWR@em@finish\LWR@newem}%
9481 \afterassignment\LWR@em@after
9482 \toks@\bgroup
```

```

9483 }
9484
9485 \def\LWR@em@finish#1{%
9486 \xdef\LWR@em@after{\noexpand#1{\the\toks@}}%
9487 \endgroup
9488 \LWR@em@after\egroup
9489 }
9490 }% \AtBeginEnvironment{thebibliography}
9491 }% \AtBeginDocument

9492 \end{warpHTML}

```

## 78 Restoring original formatting

`\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`.

**for HTML output:** 9493 `\begin{warpHTML}`

```

9494 \newcommand*{\LWR@restoreorigformatting}{%
9495 \LWR@traceinfo{\LWR@restoreorigformatting}%

```

Numerous macros change their print/HTML meaning depending on `\LWR@formatting`:

```

9496 \renewcommand*{\LWR@formatting}{print}%
9497 \linespread{1}%

```

```

9498 \let\par\LWR@origpar%

```

```

9499 \LWR@select@print@hspace%

```

```

9500 \let\hfil\LWR@origfil%
9501 \let\hss\LWR@orighss%
9502 \let\llap\LWR@origllap%
9503 \let\rlap\LWR@origrlap%
9504 \let\hfilneg\LWR@origfilneg%

```

```

9505 \let\,\LWR@origcomma% disable HTML short unbreakable space
9506 \let\thinspace\LWR@origthinspace% disable HTML short unbreakable space
9507 \let\negthinspace\LWR@orignegthinspace% disable HTML negative short unbreakable space
9508 \let\textellipsis\LWR@origtextellipsis%
9509 \let\textless\LWR@origtextless%
9510 \let\textgreater\LWR@origtextgreater%

```

```

9511 \let\&\LWR@origampersand%

9512 \LetLtxMacro\em\LWR@origem%
9513 \LetLtxMacro\normalfont\LWR@orignormalfont%
9514 \let\sp\LWR@origsp%
9515 \let\sb\LWR@origsb%
9516 \LetLtxMacro\textsuperscript\LWR@origtextsuperscript%
9517 \LetLtxMacro\@textsuperscript\LWR@orig@textsuperscript%
9518 \LetLtxMacro\textsubscript\LWR@origtextsubscript%
9519 \LetLtxMacro\@textsubscript\LWR@orig@textsubscript%
9520 \LetLtxMacro\underline\LWR@origunderline%
9521 \let~\LWR@origtilde%
9522 \let\enskip\LWR@origenskip%
9523 \let\quad\LWR@origquad%
9524 \let\qqquad\LWR@origqqquad%

```

`\endtabular` must be restored to its original, instead of relying on `lwarp`'s `\LWR@formatted` mechanism:

```

9525 \LetLtxMacro\endtabular\LWR@origendtabular%
9526 \csletcs{endtabular*}{\LWR@origendtabular*}%

9527 \LetLtxMacro\noalign\LWR@orignoalign%
9528 \LetLtxMacro\hline\LWR@orighline%

9529 \let\newline\LWR@orignewline%
9530 \LetLtxMacro\includegraphics\LWR@origincludegraphics%

9531 \LetLtxMacro\@ensuredmath\LWR@origensuredmath%
9532 %
9533 \LWR@restoreorigaccents%
9534 \LWR@restoreoriglists%
9535 %
9536 \LWR@FBCancel%
9537 }


9538 \end{warpHTML}

```

## 79 Math

### 79.1 Limitations

#### 79.1.1 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`:

```

\section{A name with math
\texorpdfstring{$1+2=3$}{text description}}

```

### 79.1.2 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<sup>A</sup>T<sub>E</sub>X-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.

### 79.1.3 SVG option

**SVG math option** For SVG math, math is rendered as usual by L<sup>A</sup>T<sub>E</sub>X into the initial PDF file using the current font<sup>18</sup>, 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<sup>A</sup>T<sub>E</sub>X 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<sup>A</sup>T<sub>E</sub>X code which generated the math, allowing copy/paste of the L<sup>A</sup>T<sub>E</sub>X 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<sup>A</sup>T<sub>E</sub>X code for the math expression. For  $\mathcal{AMS}$  environments with multiple numbers in the same environment, only the first and

<sup>18</sup>See section 519 regarding fonts and fractions.

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  $\LaTeX$  math expression.

 **SVG math in  $\TeX$  boxes** SVG math does not work inside  $\TeX$  boxes, since a `\newpage` is required before and after each image.

#### 79.1.4 MATHJAX option

**MATHJAX math option** The popular MATHJAX alternative ([mathjax.org](http://mathjax.org)) may be used to display math.

Prog MathJax

When MATHJAX is enabled, math is rendered twice:

1. As regular  $\LaTeX$  PDF output placed inside an HTML comment, allowing equation numbering and cross referencing to be almost entirely under the control of  $\LaTeX$ , and
2. As detokenized printed  $\LaTeX$  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  $\LaTeX$  values, and the MATHJAX cross-referencing system is ignored in favor of the  $\LaTeX$  internal system, seamlessly integrating with the rest of the  $\LaTeX$  code.

#### 79.1.5 Customizing MATHJAX

MATHJAX does not have preexisting support every possible math function. Additional MATHJAX function definitions may be defined. These will be declared at the start of each HTML page, and thus will have a global effect.

Examples:

```
\CustomizeMathJax{
 \newcommand{\expval}[1]{\langle#1\rangle}
 \newcommand{\abs}[1]{\lvert#1\rvert}
}
\CustomizeMathJax{\newcommand{\arsinh}{\text{arsinh}}}
\CustomizeMathJax{\newcommand{\arcosh}{\text{arcosh}}}
\CustomizeMathJax{\newcommand{\NN}{\mathbb{N}}}
```

#### 79.1.6 MATHJAX limitations

**MATHJAX limitations** Limitations when using MATHJAX include:

Prog MathJax

**subequations**

- MATHJAX itself does not support subequations. This may be improved by parsing the  $\LaTeX$  math expression to manually insert tags, but this has not yet been done.

**footnotes in math**

- Footnotes inside equations are not yet supported while using MATHJAX.

**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**

- Usage of `siunitx` inside a math equation is supported via a third-party `MATHJAX` extension. While inside a math expression, do not use `\SI` or `\si` inside `\text`, where it will be rendered as normal text.

⚠ **siunitx inside an equation**

<https://github.com/burnpanck/MathJax-siunitx>

Also see section 8.7.11.

**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 supported by `MATHJAX`, including `\ensuremath` and `bigdelim`, along with occasionally-used macros such as `\relax`. `lwarp` emulates footnotes, units, and `nicefrac` for `MathJax`.

### 79.1.7 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.

### 79.1.8 Complicated inline math objects

**\inlinemathnormal**  
**\inlinemathother**

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.

**changing contents****complicated alt tag**

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 44.

### 79.1.9 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` 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.

MathJax unsupported  
complicated alt tag

## 79.2 HTML alt tag names

Redefinable names for the HTML alt tags, for translation according to the reader’s native language.

**for HTML & PRINT:** 9539 `\begin{warpall}`

`\mathimagername` The HTML alt tag for an SVG math image.  
Default: “math image”

9540 `\newcommand*{\mathimagername}{math image}`

`\packagediagramname` Appended to the `lateximage` HTML alt tag for the images generated by many packages.  
Default: “diagram”

9541 `\newcommand*{\packagediagramname}{diagram}`

9542 `\end{warpall}`

## 79.3 Inline and display math

**for HTML output:** 9543 `\begin{warphTML}`

Ctrl LWR@externalfilecnt Counter for the external files which are generated and then referenced from the HTML:

9544 `\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.

9545 `\newbool{LWR@indisplaymathimage}`

Bool LWR@xfakebold True if `xfakebold \setBold` is in use.

```
9546 \newbool{LWR@xfakebold}
9547 \boolfalse{LWR@xfakebold}
```

`\LWR@orig@setBold` Redefined by `lwarp-xfakebold`.

```
9548 \newcommand*{\LWR@orig@setBold}{{}
```

`\LWR@orig@unsetBold` Redefined by `lwarp-xfakebold`.

```
9549 \newcommand*{\LWR@orig@unsetBold}{{}
```

`\LWR@applyxfakebold` Redefined by `lwarp-xfakebold`.

```
9550 \newcommand*{\LWR@applyxfakebold}{{}
```

`\$` 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.

```
9551 \let\LWR@origtextdollar\$
9552
9553 \renewcommand*{\$}{%
9554 \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}%
9555 {\LWR@origtextdollar}%
9556 {\HTMLUnicode{00024}}%
9557 }
```

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.

```
9558 \AtBeginDocument{
9559
9560 \ifpdf
```

```

9561 \newcommand*\LWR@baselinename}{lwarp_baseline_marker.png}
9562 \else
9563 \ifXeTeX
9564 \newcommand*\LWR@baselinename}{lwarp_baseline_marker.png}
9565 \else
9566 \newcommand*\LWR@baselinename}{lwarp_baseline_marker.eps}
9567 \fi
9568 \fi
9569
9570 \IfFileExists{\LWR@baselinename}%
9571 {
9572 \ifpackageloaded{graphicx}{
9573 \newcommand*\LWR@addbaselinemarker}{%
9574 \LWR@originincludegraphics{\LWR@baselinename}%
9575 }
9576 }{
9577 \ifpackageloaded{graphics}{
9578 \newcommand*\LWR@addbaselinemarker}{%
9579 \LWR@originincludegraphics{\LWR@baselinename}%
9580 }
9581 }{
9582 \PackageWarningNoLine{lwarp}{Load graphicx or graphics
9583 for improved\MessageBreak
9584 SVG math baselines%
9585 }
9586 \newcommand*\LWR@addbaselinemarker}{%
9587 }
9588 }
9589 }{% lwarp_baseline_marker.png or .eps is not present
9590 \PackageWarningNoLine{lwarp}{File \LWR@baselinename\space is not installed\MessageBreak
9591 alongside the lwarp-*.sty files,\MessageBreak
9592 so SVG math baselines may not be accurate}
9593 \newcommand*\LWR@addbaselinemarker}{%
9594 }
9595
9596 }% AtBeginDocument

```

`\LWR@subsingledollar` \* {<2: *alt text*>} {<3: *add'l hashing*>} {<4: *math expression*>}

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`.

**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.

```

9597 \newlength{\LWR@singledollarwidth}
9598 \newlength{\LWR@singledollarheight}
9599 \newlength{\LWR@singledollardepth}
9600
9601 \newsavebox{\LWR@singledollarbox}
9602
9603 \NewDocumentCommand{\LWR@subsingledollar}{s m m m}{%
9604 \LWR@traceinfo{\LWR@subsingledollar}%

9605 \ifnumcomp{\value{\LWR@lateximagedepth}}{>}{0}%
9606 {%
9607 \LWR@traceinfo{\LWR@subsingledollar: already in a lateximage}%
9608 #4% contents
9609 }%
9610 {% not in a lateximage
9611 \begingroup%
```

Support for `xfakebold`:

```

9612 \LWR@applyxfakebold%
```

MathJax cannot parse the often complicated  $\TeX$  expressions which appear in the various uses of `\ensuredmath`. `\ensuremath` forces the `alt` tag to “(math image)”, as translated according to `\mathimagenam`. 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:

```

9613 \ifboolexpr{%
9614 (
9615 bool{mathjax} or
9616 (bool{FormatWP} and bool{WPMarkMath})
9617) and
9618 (not test { \ifstrequal {#2} {(\mathimagenam)} }) and % from \ensuredmath
9619 (not bool{\LWR@dynamicmath})
9620 }%
```

For `MATHJAX`, print the math between `\(` and `\)`:

```

9621 {%
9622 \LWR@traceinfo{\LWR@subsingledollar: Mathjax}%
9623 {\textbackslash(\LWR@HTMLsanitize{#4}\textbackslash)}%
9624 }% 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.

```

9625 {% not mathjax
9626 \LWR@traceinfo{\LWR@subsingledollar: NOT mathjax, or is ensuremath, or is dynamic}%
```

Measure the depth, width, and height of the math image:

```
9627 \begingroup%
```

Temporarily disable formatting while measuring the image parameters:

```
9628 \LWR@restoreorigformatting%
9629 \RenewDocumentEnvironment{lateximage}{s o o o}{\relax}{\relax}% inside group
9630 \LWR@print@normalsize%
```

Temporarily set font for the HTML PDF output:

```
9631 \LWR@traceinfo{Using font family \LWR@f@family}%
9632 \@nameuse{LWR@orig\LWR@f@family family}%
9633 \LWR@traceinfo{Using font series \LWR@f@series}%
9634 \@nameuse{LWR@orig\LWR@f@series series}%
9635 \LWR@traceinfo{Using font shape \LWR@f@shape}%
9636 \@nameuse{LWR@orig\LWR@f@shape shape}%
9637 \LWR@traceinfo{Using font caps shape \LWR@f@shapecaps}%
9638 \@nameuse{LWR@orig\LWR@f@shapecaps shape}%
```

`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.

```
9639 \global\advance\c@LWR@lateximagedepth 1\relax%
```

Typeset and save the contents, depending on how they were generated:

**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.

**\ifmmode:** Included “just in case”.

```
9640 \ifmmode%
9641 \global\sbox{\LWR@singledollarbox}{#4}%
9642 \else%
9643 \ifbool{LWR@dynamicmath}{%
9644 \ifbool{mathjax}{%
9645 \global\sbox{\LWR@singledollarbox}{\LWR@origensuredmath{#4}}%
9646 }{%
9647 \global\sbox{\LWR@singledollarbox}{#4}%
9648 }%
}
```

```

9649 }{%
9650 \global\sbox{\LWR@singledollarbox}{#4}%
9651 }%
9652 \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.

```

9653 \global\sbox{\LWR@singledollarbox}{%
9654 \usebox{\LWR@singledollarbox}%
9655 \raisebox{-\dp\LWR@singledollarbox}{%
9656 \LWR@addbaselinemarker%
9657 }%
9658 }%

```

More low-level code to undo the counter change.

```

9659 \global\advance\c@LWR@lateximagedepth -1\relax% Due to AmS \text macro.

```

Measure the depth:

```

9660 \setlength{\LWR@singledollardepth}{%
9661 \LateximageFontScale\dp\LWR@singledollarbox%
9662 }%

```

Make the length a global change:

```

9663 \global\LWR@singledollardepth=\LWR@singledollardepth%

```

Likewise for width:

```

9664 \setlength{\LWR@singledollarwidth}{%
9665 \LateximageFontScale\wd\LWR@singledollarbox%
9666 }%
9667 \global\LWR@singledollarwidth=\LWR@singledollarwidth%

```

Likewise for total height:

```

9668 \setlength{\LWR@singledollarheight}{%
9669 \LateximageFontScale\ht\LWR@singledollarbox%
9670 }%
9671 \addtolength{\LWR@singledollarheight}{%
9672 \LateximageFontScale\dp\LWR@singledollarbox%
9673 }%
9674 \global\LWR@singledollarheight=\LWR@singledollarheight%

9675 \endgroup%

```

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:

```

9676 \ifdimgreater{\LWR@singledollarwidth}{.7\LWR@singledollarheight}{%
9677 \def\LWR@singledollarstyle{%
9678 width:\LWR@convertto{em}{\the\LWR@singledollarwidth} em%
9679 }%
9680 }{%
9681 \def\LWR@singledollarstyle{%
9682 height:\LWR@convertto{em}{\the\LWR@singledollarheight} em%
9683 }%
9684 }%

```

If a very narrow width, use the height.

```

9685 \ifdimless{\LWR@singledollarwidth}{.2em}%
9686 {%
9687 \def\LWR@singledollarstyle{%
9688 height:\LWR@convertto{em}{\the\LWR@singledollarheight} em%
9689 }%
9690 }%
9691 {}%

```

If very wide and short, use the width:

```

9692 \ifdimless{\LWR@singledollarheight}{.2em}%
9693 {%
9694 \def\LWR@singledollarstyle{%
9695 width:\LWR@convertto{em}{\the\LWR@singledollarwidth} em%
9696 }%
9697 }%
9698 {}%

```

If there is significant text depth, add the depth to the style.

```

9699 \ifdimgreater{\LWR@singledollardepth}{0.05ex}{%
9700 \def\LWR@singledollardepthstyle{%
9701 \ ; % extra space
9702 \LWR@print@mbbox{%
9703 vertical-align:-\LWR@convertto{em}{\the\LWR@singledollardepth} em%
9704 } % extra space
9705 }%
9706 }{%
9707 \def\LWR@singledollardepthstyle{%
9708 }%

```

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.

```

9709 \ifbool{LWR@dynamicmath}{%
9710 \LWR@traceinfo{subsingledollar: dynamic}%
9711 \begin{lateximage}% no hashing
9712 [(\mathimagename)]% alt tag
9713 []% no add'l hashing

```

```

9714 [\LWR@singledollarstyle \LWR@singledollardepthstyle]% CSS
9715 }{%
9716 \LWR@traceinfo{subsingledollar: static}%
9717 \IfValueTF{#1}{%
9718 \LWR@findcurrenttextcolor% sets \LWR@tempcolor

```

#### Support for xfakebold:

```

9719 \ifbool{\LWR@xfakebold}%
9720 {\def\LWR@tempone{Y}}%
9721 {\def\LWR@tempone{N}}%

9722 \begin{lateximage}*% use hashing
9723 [#2]% alt
9724 [% addl' hashing
9725 #3%
9726 FM\LWR@f@family%
9727 SR\LWR@f@series%
9728 SH\LWR@f@shape%
9729 SHC\LWR@f@shapecaps%
9730 CL\LWR@tempcolor%
9731 FB\LWR@tempone% xfakebold
9732]%
9733 [\LWR@singledollarstyle \LWR@singledollardepthstyle]% CSS
9734 }{%
9735 \begin{lateximage}% no hashing
9736 [#2]% alt
9737 [% no add'l hashing
9738 [\LWR@singledollarstyle \LWR@singledollardepthstyle]% CSS
9739]%
9740 }%

```

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.)

```

9741 \LWR@addbaselinemarker%

```

#### Support for xfakebold:

```

9742 \LWR@applyxfakebold%

```

#### Typeset the contents:

```

9743 \usebox{\LWR@singledollarbox}%

```

#### The closing baseline marker:

```

9744 \LWR@addbaselinemarker%

```

```

9745 \end{lateximage}%
9746 %
9747 }% not mathjax
9748 \endgroup%
9749 }% not in a lateximage
9750 \LWR@traceinfo{LWR@subsingledollar: done}%
9751 }

9752 \LetLtxMacro\LWR@origdollar$
9753 \LetLtxMacro\LWR@secondorigdollar$% balance for editor syntax highlighting

9754 \LetLtxMacro\LWR@origopenparen\l
9755 \LetLtxMacro\LWR@origcloseparen\r
9756 \LetLtxMacro\LWR@origopenbracket\[
9757 \LetLtxMacro\LWR@origclosebracket\]

```

**\$** Redefine the dollar sign to place math inside a lateximage, or use MATHJAX:  
**\$\$**

```

9758 \begingroup
9759 \catcode'\$=\active%
9760 \protected\gdef$\@ifnextchar$\LWR@doubledollar\LWR@singledollar}%

```

Used by chemformula to escape single-dollar math:

```

9761 \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:

```

9762 \protected\gdef\LWR@doubledollar$#1$${%

```

If MATHJAX or formatting for a word processor, print the L<sup>A</sup>T<sub>E</sub>X expression:

```

9763 \ifboolexpr{bool{mathjax} or (bool{FormatWP} and bool{WPMarkMath}) }%

```

For MATHJAX, print the math between \[ and \]:

```

9764 {
9765
9766 \textbackslash[%
9767 \LWR@HTMLsanitize{#1}%
9768 \textbackslash]
9769
9770 }% 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:

```

9771 {% not mathjax
9772 \begin{BlockClass}{displaymath}%
9773 \LWR@newautoidanchor%
9774 \booltrue{LWR@indisplaymathimage}%
9775 \begin{lateximage}%
9776 [%
9777 \textbackslash{[] % extra space

```

```

9778 \LWR@HTMLsanitize{#1} % extra space
9779 \textbackslash{]}%
9780]%

```

Support for xfakebold:

```

9781 \LWR@applyxfakebold%

9782 \LWR@origdollar\LWR@origdollar#1\LWR@origdollar\LWR@origdollar%
9783 \end{lateximage}%
9784 \end{BlockClass}%
9785 }% not mathjax
9786 }%

```

`\LWR@singledollar`  $\{\langle alt\ text\rangle\}\{\langle math\ expression\rangle\}$

```

9787 \protected\gdef\LWR@singledollar#1${%
9788 \ifbool{mathjax}{%
9789 \LWR@subsingledollar*%
9790 {% alt tag
9791 \textbackslash(%
9792 \LWR@HTMLsanitize{#1} % extra space
9793 \textbackslash)%
9794 }%
9795 {singledollar}% add'l hashing
9796 {#1}% contents
9797 }{% not mathjax
9798 \LWR@subsingledollar*%
9799 {% alt tag
9800 \textbackslash(%
9801 \LWR@HTMLsanitize{#1} % extra space
9802 \textbackslash)%
9803 }%
9804 {singledollar}% add'l hashing
9805 {\LWR@origensuredmath{#1}}% contents
9806 }% not mathjax
9807 }

```

`\(` Redefine to the above dollar macros.

```

\([
9808 \AtBeginDocument{
9809 \protected\gdef\(\#1\){$#1$}
9810 \protected\gdef\([#1\]{$$#1$$}
9811 }
9812
9813 \endgroup

9814 \AtBeginDocument{
9815 \LetLtxMacro\LWR@openbracketnormal\[
9816 \LetLtxMacro\LWR@closebracketnormal\]
9817 }

```

`\@ensuredmath`  $\{\langle expression\rangle\}$

If MathJax, a `lateximage` is used, since `\ensuremath` is often used for complex T<sub>E</sub>X 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.

```

9818 \LetLtxMacro\LWR@origensuredmath\@ensuredmath
9819
9820 \renewcommand{\@ensuredmath}[1]{%
9821 \ifbool{mathjax}{%
9822 \LWR@subsingledollar*{(\mathimagername)}{%
9823 \protect\LWR@HTMLsanitize{\detokenize\expandafter{#1}}}%
9824 }{\relax%
9825 \LWR@origensuredmath{#1}%
9826 }%
9827 }{% SVG math

```

If already inside a `lateximage` in `math` mode, continue as-is.

```

9828 \ifmmode%
9829 \LWR@origensuredmath{#1}%
9830 \else%

```

Create an inline `math lateximage` with a simple `alt` tag and additional hashing according to the contents.

```

9831 \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}%
9832 {\LWR@origensuredmath{#1}}%
9833 {%
9834 \LWR@subsingledollar*{(\mathimagername)}{%
9835 \protect\LWR@HTMLsanitize{\detokenize\expandafter{#1}}}%
9836 }{%
9837 \LWR@origensuredmath{#1}%
9838 }%
9839 }%
9840 \fi%
9841 }%
9842 }

```

Remove the old `math` and `displaymath` environments:

```

9843 \let\math\relax
9844 \let\endmath\relax
9845 \let\displaymath\relax
9846 \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`.

```

9847 \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`.

```

9848 \NewEnviron{LWR@displaymathnormal}{\expandafter\[\BODY\]\@ignoretrue}

```

Set the default displaymath to the normal version:

```
9849 \LetLtxMacro\[\LWR@openbracketnormal%
9850 \LetLtxMacro\]\LWR@closebracketnormal%
9851 \LetLtxMacro\displaymath\LWR@displaymathnormal%
9852 \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.

```
9853 \newenvironment{LWR@displaymathother}
9854 {%
9855 \begin{BlockClass}{displaymath}%
9856 \LWR@newautoidanchor%
9857 \booltrue{LWR@indisplaymathimage}%
9858 \begin{lateximage}%
9859 [(display math)]%
9860 \LWR@origdollar\LWR@origdollar%
9861 }
9862 {%
9863 \LWR@origdollar\LWR@origdollar%
9864 \end{lateximage}%
9865 \end{BlockClass}%
9866 }
```

Env LWR@equationother A version of displaymath which can handle complicated objects, but does not supply MATHJAX or HTML alt tags.

```
9867 \newenvironment{LWR@equationother}
9868 {%
9869 \begin{BlockClass}{displaymathnumbered}%
9870 \LWR@newautoidanchor%
9871 \booltrue{LWR@indisplaymathimage}%
9872 \begin{lateximage}%
9873 [(display math)]%
9874 \LWR@origequation%
9875 }
9876 {%
9877 \LWR@origendequation%
9878 \end{lateximage}%
9879 \end{BlockClass}%
9880 }
```

## 79.4 MATHJAX support

Ctr LWR@nextequation Used to add one to compute the next equation number.

```
9881 \newcounter{LWR@nextequation}
```

\LWR@syncmathjax 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.

```
9882 \newcommand*{\LWR@syncmathjax}{%
```

If using chapters, place the chapter number in front of the equation. Otherwise, use the simple equation number.

```
9883 \ifcsdef{thechapter}{
9884 \InlineClass{hidden}{
9885 \textbackslash(
9886 \textbackslash)}seteqsection \{\thechapter\}
9887 \textbackslash)
9888 }
9889 }
9890 {}% not using chapters
```

MATHJAX doesn't allow setting the equation number to 1:

```
9891 \ifthenelse{\cnttest{\value{equation}}>0}{
9892 {
```

Tell MATHJAX that the next set of equations begins with the current L<sup>A</sup>T<sub>E</sub>X equation number, plus one.

```
9893 \setcounter{LWR@nextequation}{\value{equation}}
9894 \addtocounter{LWR@nextequation}{1}
```

Place the MATHJAX command inside “\(" and “\)” characters, to be printed to HTML, not interpreted by L<sup>A</sup>T<sub>E</sub>X.

```
9895 \InlineClass{hidden}{
9896 \textbackslash(
9897 \textbackslash)}seteqnumber \{\arabic{LWR@nextequation}\}
9898 \textbackslash)
9899 }
9900 }{}% not eq > 0
9901 }
```

```
\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.

```
9902 \NewDocumentCommand{\LWR@hidelatexequation}{m +m}{%
```

Stop HTML paragraph handling and open an HTML comment:

```
9903 \LWR@stoppars
9904 \LWR@htmlopencomment
9905
```

Start the L<sup>A</sup>T<sub>E</sub>X math environment inside the HTML comment:

```
9906 \begingroup
9907 \@nameuse{LWR@orig#1}
```

While in the math environment, restore various commands to their  $\text{\LaTeX}$  meanings.

```
9908 \LWR@restoreorigformatting
```

See `\LWR@htmlmathlabel` in section 79.7.1.

Print the contents of the equation:

```
9909 #2
```

End the  $\text{\LaTeX}$  math environment inside the HTML comment:

```
9910 \@nameuse{LWR@origend#1}
9911 \endgroup
9912
```

Close the HTML comment and resume HTML paragraph handling:

```
9913 \LWR@htmlclosecomment
9914 \LWR@startpars
9915 }
```

```
\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  $\text{\LaTeX}$ .

```
9916 \NewDocumentCommand{\LWR@addmathjax}{m +m}{%
```

Enclose the MATHJAX environment inside printed “ $\langle$ ” and “ $\rangle$ ” characters.

```
9917 \LWR@origtilde\LWR@orignewline
9918 \textbackslash{}begin\{#1\}
```

Print the contents, sanitizing for HTML special characters.

```
9919 \LWR@HTMLsanitizeexpand{\detokenize\expandafter{#2}}
```

Close the MATHJAX environment:

```
9920 \textbackslash{}end\{#1\}
9921 \LWR@orignewline
9922 }
```

## 79.5 Equation environment

Remember existing equation environment, after redefined by `amsmath`, if loaded.

```

9923 \AtBeginDocument{
9924 \let\LWR@origequation\equation
9925 \let\LWR@origendequation\endequation
9926 \csletcs\LWR@origequation*{equation*}
9927 \csletcs\LWR@origendequation*{endequation*}
9928 }

```

`\LWR@doequation` { *$\langle env contents \rangle$* } { *$\langle env name \rangle$* }

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.

```

9929 \newcommand*\LWR@doequation}[2]{%
9930

```

If `mathjax` or `FormatWP`, print the  $\LaTeX$  expression:

```

9931 \ifboolexpr{bool{mathjax} or (bool{FormatWP} and bool{WPMarkMath}) }%

```

MATHJAX output:

```

9932 {

```

Print commands to synchronize MATHJAX's equation number and format to the current  $\LaTeX$  chapter/section and equation number:

```

9933 \LWR@syncmathjax

```

Print the  $\LaTeX$  math inside an HTML comment:

```

9934 \LWR@hidelatexequation{#2}{#1}
9935 }

```

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`.

```

9936 {% not mathjax

```

Begin the `lateximage` with an `<alt>` tag containing the math source:

```

9937 \ifstrequal{#2}{equation*}{%
9938 \begin{BlockClass}{displaymath}%
9939 }{%
9940 \begin{BlockClass}{displaymathnumbered}%
9941 }%
9942 \LWR@newautoidanchor%
9943 \booltrue\LWR@indisplaymathimage}%

```

```

9944 \begin{lateximage}[%
9945 \ifstrequal{#2}{equation*}{%
9946 \ifdefequal{LWR@equationtag}{\theequation}{%
9947 no tag was given
9948 }{%
9949 (\LWR@equationtag) % tag was given
9950 }%
9951 }{%
9952 (\LWR@equationtag) % automatic numbering
9953 }%
9954 \textbackslash{begin\{#2\}} % extra space
9955 \LWR@HTMLsanitizeexpand{\detokenize\expandafter{#1}} % extra space
9956 \textbackslash{end\{#2\}}%
9957 }% alt tag

```

Support for xfakebold:

```

9958 \LWR@applyxfakebold%

```

Create the actual L<sup>A</sup>T<sub>E</sub>X-formatted equation inside the lateximage using the contents of the environment.

```

9959 \@nameuse{LWR@orig#2}%
9960 #1% contents collected by \collect@body
9961 \@nameuse{LWR@origend#2}%
9962 \end{lateximage}%
9963 \end{BlockClass}%
9964 }% not mathjax
9965 }

```

After the environment, if MATHJAX, print the math to the HTML output for MATHJAX processing:

```

9966 \newcommand*{\LWR@doendequation}[1]{%
9967 \ifboolexpr{bool{mathjax} or (bool{FormatWP} and bool{WPMarkMath}) }%
9968 {%
9969 \LWR@addmathjax{#1}{\BODY}%
9970 }{%
9971
9972 }

```

Remove existing equation environment:

```

9973 \AtBeginDocument{
9974 \let\equation\relax
9975 \let\endequation\relax
9976 \csletcs{equation*}{relax}
9977 \csletcs{endequation*}{relax}
9978 }

```

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.

```

9979 \AtBeginDocument{
9980 \NewEnviron{equation}%
9981 {\LWR@doequation{\BODY}{equation}}%
9982 [\LWR@doendequation{equation}]
9983
9984 \LetLtxMacro\LWR@equationnormal\equation
9985 \LetLtxMacro\endLWR@equationnormal\endequation
9986 }

```

Env    `equation*`

```

9987 \AtBeginDocument{
9988 \NewEnviron{equation*}%
9989 {\LWR@doequation{\BODY}{equation*}}%
9990 [\LWR@doendequation{equation*}]
9991
9992 \csletcs{LWR@equationnormalstar}{equation*}
9993 \csletcs{LWR@endequationnormalstar}{endequation*}
9994 }

```

Remember the “less” version of `equation`, which uses `MATHJAX` and `alt` tags, but does not support complicated contents such as some `Tikz` expressions.

```

9995 \AtBeginDocument{
9996 \LetLtxMacro\LWR@equationless\equation
9997 \LetLtxMacro\endLWR@equationless\endequation
9998 \csletcs{LWR@equationlessstar}{equation*}
9999 \csletcs{LWR@endequationlessstar}{endequation*}
10000 }

```

## 79.6 `\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 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`  
**simple math objects** or included in `HTML alt` tags.

```
10001 \newcommand*{\displaymathnormal}{%
```

```

10002 \ifbool{LWR@origmathjax}{\booltrue{mathjax}}{\boolfalse{mathjax}}%
10003 \let\ltxMacro\[\LWR@openbracketnormal%
10004 \let\ltxMacro\]\LWR@closebracketnormal%
10005 \let\ltxMacro\displaymath\LWR@displaymathnormal%
10006 \let\ltxMacro\enddisplaymath\endLWR@displaymathnormal%
10007 \let\ltxMacro\equation\LWR@equationnormal%
10008 \let\ltxMacro\endequation\endLWR@equationnormal%
10009 \csletcs{equation*}{LWR@equationnormalstar}%
10010 \csletcs{endequation*}{LWR@endequationnormalstar}%
10011 }

```

`\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.

```

10012 \newcommand*{\displaymathother}{%
10013 \boolfalse{mathjax}%
10014 \let\ltxMacro\displaymath\LWR@displaymathother%
10015 \let\ltxMacro\enddisplaymath\endLWR@displaymathother%
10016 \let\ltxMacro\[\LWR@displaymathother%
10017 \let\ltxMacro\]\endLWR@displaymathother%
10018 \let\ltxMacro\equation\LWR@equationother%
10019 \let\ltxMacro\endequation\endLWR@equationother%
10020 \csletcs{equation*}{\displaymath}%
10021 \csletcs{endequation*}{\enddisplaymath}%
10022 }

10023 \end{warpHTML}

```

**for PRINT output:** 10024 \begin{warpprint}

Print-mode versions:

```

10025 \newcommand*{\displaymathnormal}{}
10026 \newcommand*{\displaymathother}{}

10027 \end{warpprint}

```

**for HTML output:** 10028 \begin{warpHTML}

## 79.7 AMS Math environments

### 79.7.1 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.

```
10029 \newbool{LWR@amsmultline}
10030 \boolfalse{LWR@amsmultline}
```

```
\LWR@htmlmathlabel {<label>}
```

**lwarp** points `\ltx@label` here. This is used by `\label` when inside a  $\LaTeX$  AMS math environment's math display environment.

`\LWR@origltx@label` points to the  $\LaTeX$  original, modified by **lwarp**, then by **amsmath**, then by **cleveref**.

```
10031 \newcommand*{\LWR@htmlmathlabel}[1]{%
10032 \LWR@traceinfo{LWR@htmlmathlabelb #1}%
```

If **mathjax** or **FormatWP**, print the  $\LaTeX$  expression:

```
10033 \ifboolexpr{bool{mathjax} or (bool{FormatWP} and bool{WPMarkMath}) }%
10034 {%
```

The combined  $\LaTeX$  & HTML label is printed in a `\text` field:

```
10035 \text{%
```

Shift the label over to the right side of the environment to avoid over-printing the math:

```
10036 \ifbool{LWR@amsmultline}{\hspace*{\totwidth@}}%
```

Temporarily end the HTML comment, insert the  $\LaTeX$  & HTML label, then resume the HTML comment. `\@firstofone` is required to remove extra braces introduced by the **amsmath** package.)

```
10037 \LWR@htmlclosecomment%
10038 \LWR@origltx@label{#1}%
10039 \LWR@htmlopencomment%
10040 }% text
10041 }% mathjax
10042 {%
10043 \LWR@origltx@label{#1}%
10044 }%
10045 }
```

`\LWR@beginhideamsmath` Starts hiding  $\LaTeX$  math inside an HTML comment.

```
10046 \newcommand*{\LWR@beginhideamsmath}{
10047 \LWR@stoppars
10048 \LWR@origtilde\LWR@orignewline
10049 \LWR@htmlopencomment
10050
10051 \begingroup
10052 \LWR@restoreorigformatting
10053 }
```

`\LWR@endhideamsmath` Ends hiding  $\text{\LaTeX}$  math inside an HTML comment.

```
10054 \newcommand*{\LWR@endhideamsmath}{
10055 \endgroup
10056
10057 \LWR@htmlclosecomment
10058 \LWR@orignewline
10059 \LWR@startpars
10060 }
```

### 79.7.2 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  $\text{\LaTeX}$ 's equation numbers, typeset with  $\text{\LaTeX}$  inside an HTML comment, then printed to HTML output for `MATHJAX` to process.

Env `eqnarray` This environment 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`.

```
10061 \let\LWR@origeqnarray\eqnarray
10062 \let\LWR@origendeqnarray\endeqnarray
```

To remember whether the starred environment was used, and thus whether to number the equations:

```
10063 \newbool{\LWR@numbereqnarray}
10064 \booltrue{\LWR@numbereqnarray}
```

Common code used by `eqnarray` and `Beqnarray` (from `fancybox`):

```
10065 \newcommand{\LWR@eqnarrayfactor}{%
```

If `mathjax` or `FormatWP`, print the  $\text{\LaTeX}$  expression:

```
10066 \ifboolexpr{bool{mathjax} or (bool{FormatWP} and bool{WPMarkMath}) }%
10067 {%
```

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:

```
10068 \LWR@syncmathjax
10069 \boolfalse{\LWR@amsmultline}
```

```
10070 \ifbool{LWR@numbreqnarray}
10071 {
```

If numbering the equations, execute a copy inside an HTML comment block:

```
10072 \LWR@beginhideamsmath
10073 \LWR@origeqnarray
10074 \BODY
10075 \LWR@origendeqnarray
10076 \LWR@endhideamsmath
```

Then print the (sanitized) contents to the output for MATHJAX to interpret:

```
10077 \LWR@addmathjax{eqnarray}{\BODY}
10078 }%
10079 {% not LWR@numbreqnarray
```

If not numbering equations, just create the contents for MATHJAX:

```
10080 \LWR@addmathjax{eqnarray*}{\BODY}
10081 }% LWR@numbreqnarray
10082 }% mathjax
10083 {% not mathjax
10084 \ifbool{LWR@numbreqnarray}
10085 {
```

For numbered svg equations, first create a lateximage with an alt attribute containing sanitized copy of the source code:

```
10086 \begin{BlockClass}{displaymathnumbered}%
10087 \LWR@newautoidanchor%
10088 \booltrue{LWR@indisplaymathimage}%
10089 \begin{lateximage}[(\LWR@startingequationtag--\LWR@equationtag)
10090 \LWR@addmathjax{eqnarray}{\BODY}]
```

Support for xfakebold:

```
10091 \LWR@applyxfakebold%
```

Create the image contents using an actual eqnarray:

```
10092 \LWR@origeqnarray
10093 \BODY
10094 \LWR@origendeqnarray
10095 \end{lateximage}
10096 \end{BlockClass}
10097 }%
10098 {% not LWR@numbreqnarray
```

If not numbered, do the same, but an extra \nonumber seems to be required:

```
10099 \begin{BlockClass}{displaymath}
10100 \LWR@newautoidanchor%
10101 \booltrue{LWR@indisplaymathimage}%
```

```
10102 \begin{lateximage}[\LWR@addmathjax{eqnarray*}]{\BODY}]
```

Support for xfakebold:

```
10103 \LWR@applyxfakebold%

10104 \LWR@origeqnarray
10105 \BODY
10106 \nonumber
10107 \LWR@origendeqnarray
10108 \end{lateximage}
10109 \end{BlockClass}
10110 }% \LWR@numbreqnarray
10111 }% not mathjax
```

Default to number equations in the future:

```
10112 \booltrue{\LWR@numbreqnarray}
10113 }
```

eqnarray itself is made with a blank line before and after to force it to be on its own line:

```
10114 \RenewEnviron{eqnarray}
10115 {%
10116
10117 \LWR@eqnarrayfactor
10118
10119 }
```

The starred version is patched to turn off the numbering:

```
10120 \csgpreto{eqnarray*}{\boolfalse{\LWR@numbreqnarray}}

10121 \end{warpHTML}
```

## 80 Lateximages

### 80.1 Description

Env `lateximage` A `lateximage` is a piece of the document which is typeset in  $\LaTeX$  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 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 `\mathimagename`, and the image is not reused.

This 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 `\packagediagramname`. 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 lateximages.

**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}
```

## 80.2 Support counters and macros

**for HTML output:** 10122 `\begin{warphTML}`

Ctrl LWR@lateximagenumber Sequence the images.

```
10123 \newcounter{LWR@lateximagenumber}
10124 \setcounter{LWR@lateximagenumber}{0}
```

Ctrl LWR@lateximagedepth Do not create \lateximage inside of \lateximage.

```
10125 \newcounter{LWR@lateximagedepth}
10126 \setcounter{LWR@lateximagedepth}{0}
```

A few utility macros to write special characters:

```
10127 \edef\LWR@hashmark{\string#} % for use in \write
10128 \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.


```
10129 \newcounter{LWR@LIpage}

10130 \end{warpHTML}
```

### 80.3 Font size

**for HTML & PRINT:** 10131 \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.

```
10132 \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 .75, but it may be redefined as needed depending on the HTML font.

```
10133 \newcommand*{\LateximageFontScale}{.75}

10134 \end{warpall}
```

### 80.4 Sanitizing math expressions for HTML

**for HTML output:** 10135 \begin{warpHTML}

\LWR@HTMLsanitize {<text>}

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.

Two versions follow, depending on expansion needs. There may be a better way...

```
10136 \newrobustcmd{\LWR@HTMLsanitize}[1]{%
```

Cancel French babel character handling, and fully expand the strings:

```
10137 \begingroup%
10138 \LWR@FBcancel%
10139 \fullexpandarg%
```

The &, <, and > may be interpreted by the browser:

```
10140 \protect\StrSubstitute{\detokenize{#1}}}%
10141 {\detokenize{&}}{\detokenize{&}}[\LWR@strresult]%

10142 \protect\StrSubstitute{\detokenize\expandafter{\LWR@strresult}}}%
10143 {\detokenize{<}}{\detokenize{<}}[\LWR@strresult]%

10144 \protect\StrSubstitute{\detokenize\expandafter{\LWR@strresult}}}%
10145 {\detokenize{>}}{\detokenize{>}}[\LWR@strresult]%
```

The double quote occasionally causes problems.

```
10146 \protect\StrSubstitute{\detokenize\expandafter{\LWR@strresult}}}%
10147 {\detokenize{"}}{\detokenize{"}}[\LWR@strresult]%
```

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.

```
10148 \protect\StrSubstitute{\detokenize\expandafter{\LWR@strresult}}}%
10149 {\detokenize{##}}{\LWR@origpound}[\LWR@strresult]%

10150 \LWR@strresult%
10151 \endgroup%
10152 }
```

```
\LWR@HTMLsanitizeexpand {<{text}>}
```

This version expands the argument before sanitizing it.

```
10153 \newrobustcmd{\LWR@HTMLsanitizeexpand}[1]{%
```

Cancel French babel character handling, and fully expand the strings:

```
10154 \begingroup%
10155 \LWR@FBcancel%
10156 \fullexpandarg%
```

The difference between this and `\LWR@HTMLsanitize` (without “expand”) is the following `\expandafter`:

```
10157 \protect\StrSubstitute{\detokenize\expandafter{#1}}%
10158 {\detokenize{&}}{\detokenize{&}}[\LWR@strresult]%

10159 \protect\StrSubstitute{\detokenize\expandafter{\LWR@strresult}}%
10160 {\detokenize{<}}{\detokenize{<}}[\LWR@strresult]%

10161 \protect\StrSubstitute{\detokenize\expandafter{\LWR@strresult}}%
10162 {\detokenize{>}}{\detokenize{>}}[\LWR@strresult]%

10163 \protect\StrSubstitute{\detokenize\expandafter{\LWR@strresult}}%
10164 {\detokenize{"}}{\detokenize{"}}[\LWR@strresult]%
```

`\LWR@HTMLsanitizeexpand` is not used for defining new MathJax macros, so the `##` conversion is not needed here.

```
10165 \LWR@strresult%
10166 \endgroup%
10167 }
```

## 80.5 Equation numbers

**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.

```
10168 \newcounter{LWR@startingequation}
10169
10170 \ifundefined{chapter}
10171 {
10172 \renewcommand{\theLWR@startingequation}{%
10173 \arabic{LWR@startingequation}%
10174 }
10175 }
10176 {% chapter defined
10177 \renewcommand{\theLWR@startingequation}{%
10178 \ifnumcomp{\value{chapter}}{>}{0}{\arabic{chapter}.}{}%
10179 \arabic{LWR@startingequation}%
10180 }
10181 }
```

**Bool** `LWR@isstartingequation` True for the first equation tag, false for later tags in the same environment.

```
10182 \newbool{LWR@isstartingequation}
```

`\LWR@startingequationtag` Prints the starting equation number or tag.

```
10183 \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`.

```
10184 \newcommand*\LWR@equationtag{}
```

Only if `svg math`, patch `\tag` after packages have loaded, in case someone else modified `\tag`.

```
10185 \AtBeginDocument{
10186
10187 \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.

```
10188 \NewDocumentCommand{\LWR@rememberetag}{m}{%
10189 \ifbool{LWR@isstartingequation}%
10190 {%
10191 \global\boolfalse{LWR@isstartingequation}%
10192 \xdef\LWR@startingequationtag{#1}%
10193 }{}%
10194 \xdef\LWR@equationtag{#1}%
10195 }%

10196 }% not mathjax
10197 }% AtBeginDocument
```

## 80.6 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.

```
10198 \newcommand*\LWR@amsmathbody[1]
10199 {%
10200 \textbackslash\begin\}\{#1\} % extra space
10201 \LWR@HTMLsanitizeexpand{\detokenize\expandafter{\the\envbody}}%
10202 \textbackslash\end\}\{#1\}%
10203 }
```

`\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.

```
10204 \newcommand*\LWR@amsmathbodynumbered[1]
10205 {%
10206 \ifnumcomp{\value{LWR@startingequation}}{=}{\value{equation}}%
10207 {\LWR@equationtag}%
```

```

10208 {\LWR@startingequationtag--\LWR@equationtag}} % extra space
10209 \LWR@amsmathbody{#1} % extra space
10210 }

```

## 80.7 lateximage environment

Env `lateximage` \* [`<2: <alt> tag`] [`<3: add'l hashing`] [`<4: css style`]

Typesets the contents and then renders the result as an svg file. Star causes the image to be hashed for reuse.

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.

```

10211 \catcode'\$=\active%
10212
10213 \NewDocumentEnvironment{lateximage}{s O{<image>} O{} O{}}
10214 {%
10215 \LWR@traceinfo{lateximage: starting on \jobname.pdf page \arabic{page}}%
10216 \LWR@traceinfo{lateximage: entering depth is \arabic{LWR@lateximagedepth}}%

```

Nested lateximages remain one large lateximage:

```
10217 \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.

```
10218 {%
10219 % \addtocounter{LWR@lateximagedepth}{1}%
10220 % \global\advance\c@LWR@lateximagedepth 1\relax% Due to AmS \text macro.
10221 }%
```

Otherwise, this is the outer-most lateximage:

```
10222 {% start of outer-most lateximage
```

Remember the next equation number to be allocated, in case it must be printed in a multi-equation environment:

```
10223 \LWR@traceinfo{lateximage: starting outer-most lateximage}%
10224 \setcounter{LWR@startingequation}{\value{equation}}%
10225 \addtocounter{LWR@startingequation}{1}%
10226 \booltrue{LWR@isstartingequation}%
10227 \let\LWR@startingequationtag\theLWR@startingequation%
```

The default equation tag, unless overwritten by `\tag`:

```
10228 \let\LWR@equationtag\theequation%
```

Starting a new lateximage:

```
10229 \addtocounter{LWR@lateximagenumber}{1}%
10230 \LWR@traceinfo{lateximage: LWR@lateximagenumber is \arabic{LWR@lateximagenumber}}%
```

While inside a lateximage, locally do not use mathjax:

```
10231 \boolfalse{mathjax}%
```

Be sure that are doing a paragraph:

```
10232 \LWR@ensuredoingapar%
```

Next file:

```
10233 \addtocounter{LWR@externalfilecnt}{1}%
10234 \LWR@traceinfo{lateximage: LWR@externalfilecnt is \arabic{LWR@externalfilecnt}}%
```

Figure out what the next page number will be. `\setcounterpageref` assigns `LWR@LIpage` to the page number for the reference `LWR\lateximage-BaseJobname-XXX`:

```
10235 \setcounterpageref{LWR@LIpage}{%
10236 LWR\lateximage-BaseJobname-\arabic{LWR@lateximagenumber}%
10237 }%
10238 \LWR@traceinfo{lateximage: LWR@LIpage is \arabic{LWR@LIpage}}%
```

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:

```
10239 \LWR@htmltag{span\LWR@indentHTML%
10240 id="lateximage-\BaseJobname-\arabic{LWR@lateximagenumber}"\LWR@indentHTML
10241 class="lateximagesource"\LWR@orignewline
10242 }%
```

Write instructions to the <ImagesDirectory>.txt file:

```
10243 \LWR@traceinfo{lateximage: about to write to \BaseJobname-images.txt}%
10244 \IfBooleanTF{#1}% starred
10245 {% hash
10246 \LWR@traceinfo{lateximage: hash true, adding %
10247 !\detokenize\expandafter{#2}!\detokenize\expandafter{#3}!}%
```

Compute and save the hashed file name for later use:

```
10248 \edef\LWR@hashedname{%
10249 \LWR@mdfive{\detokenize\expandafter{#2}-!-#3}%
10250 }%
10251 \LWR@traceinfo{lateximage: hash is \LWR@hashedname}%
```

Write the page, hashing, and hashed name:

```
10252 \immediate\write\LWR@lateximagesfile{%
10253 |\arabic{LWR@Lpage}|true|\LWR@hashedname|}%
10254 }%
10255 }% hash
10256 {% no hash
```

No hash, so write the page, no hashing, and the image number:

```
10257 \LWR@traceinfo{lateximage: hash false}%
10258 \immediate\write\LWR@lateximagesfile{%
10259 |\arabic{LWR@Lpage}|false|\LWR@ImagesName\arabic{LWR@externalfilecnt}|}%
10260 }%
10261 }% no hash
```

Place an open comment tag. This will hide any traces of the lateximage PDF page which were picked up by *pdftotext*.

```
10262 \LWR@traceinfo{lateximage: about to create open comment}%
10263 \LWR@htmlopencomment%
```

One level deeper. At this outer-most lateximage, it is known that this is not being used inside an  $\text{\AA MS}$  \text, since the outer-most level will never be in math mode.

```
10264 \addtocounter{LWR@lateximagedepth}{1}%
```

Start the new PDF page:

```
10265 \LWR@traceinfo{lateximage: about to create a new page}%
10266 \LWR@orignewpage%
```

Typeset the image in a “standard” width page and font size:

```
10267 \LWR@traceinfo{lateximage: about to create minipage}%
10268 \LWR@print@minipage{6in}%
10269 \@nameuse{LWR@print@LateximageFontSizeName}%
```

Temporarily restore formatting to its PDF definitions: Do not produce HTML tags for `\hspace`, etc. inside a `lateximage`.

```
10270 \LWR@traceinfo{lateximage: about to temporarily restore formatting}%
10271 \LWR@restoreorigformatting%
```

Use full-page footnotes instead of minipage footnotes. These become HTML footnotes.

```
10272 \def\@mpfn{footnote}%
10273 \def\thempfn{\thefootnote}%
10274 \LetLtxMacro\@footnotetext\LWR@footnotetext%
```

Create the `LWRlateximage<number>` label:

```
10275 \LWR@traceinfo{lateximage: about to create label}%
10276 \LWR@orig@label{LWRlateximage-\BaseJobname-\arabic{LWR@lateximagenumber}}%
10277 \LWR@traceinfo{lateximage: finished creating the label}%
```

Enable print-mode math functions:

```
10278 \LetLtxMacro$\LWR@origdollar%
10279 \catcode'\$=3% math shift
10280 \LetLtxMacro\(\LWR@origopenparen%
10281 \LetLtxMacro\)\LWR@origcloseparen%
```

Only enable print-mode display math if are not already inside display math:

```
10282 \ifbool{LWR@indisplaymathimage}{}{% not in display math
10283 \LetLtxMacro\[\LWR@origopenbracket%
10284 \LetLtxMacro\]\LWR@origclosebracket%
10285 \let\equation\LWR@origequation%
10286 \let\endequation\LWR@origendequation%
10287 \csletcs{equation*}{LWR@origequation*}%
10288 \csletcs{endequation*}{LWR@origendequation*}%
10289 }% not in display math
```

For chemformula:

```
10290 \LetLtxMacro\LWR@newsingledollar$%
10291 \LetLtxMacro\LWR@newsingledollar$% syntax highlighting

10292 }% end of outer-most lateximage
10293 \LWR@traceinfo{lateximage: finished start of environment}%
10294 }% end of \begin{lateximage}
```

`\endlateximage` When the environment closes:

```
10295 {% start of \end{lateximage}
10296 \LWR@traceinfo{lateximage: starting end of lateximage}%
```

Nested more than one deep?

```
10297 \LWR@traceinfo{lateximage: internal depth was \arabic{LWR@lateximagedepth}}%
10298 \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  $\mathcal{AMS}$  \text change of \addtocounter.

```
10299 {%
10300 \LWR@traceinfo{lateximage: unnesting}%
10301 \global\advance\c@LWR@lateximagedepth -1\relax%
10302 }%
```

If this is the outer-most lateximage:

```
10303 {% end of outer-most lateximage
```

Finish the lateximage minipage and start a new PDF page:

```
10304 \LWR@traceinfo{lateximage: ending outer-most lateximage}%
10305 \endLWR@print@minipage%
10306 \LWR@orignewpage%
```

Close the HTML comment which encapsulated any traces of the lateximage picked up by *pdftotext*:

```
10307 \LWR@print@vspace*{.5\baselineskip}%
10308 \LWR@htmlclosecomment%
10309 \LWR@traceinfo{lateximage: The page after the image is \arabic{page}}%
```

Create a link to the lateximage, allowing its natural height:

```
10310 \IfBooleanTF{#1}% starred
10311 {% hash
10312 \LWR@subinlineimage[#2]{lateximage}%
10313 {%
10314 \LWR@ImagesDirectory\OSPathSymbol%
10315 \LWR@print@mbox{\LWR@hashedname}%
10316 }{svg}{#4}%
10317 }% hash
10318 {% no hash
10319 \LWR@subinlineimage[#2]{lateximage}%
10320 {%
10321 \LWR@ImagesDirectory\OSPathSymbol%
10322 \LWR@print@mbox{\LWR@ImagesName\theLWR@externalfilecnt}%
10323 }{svg}{#4}%
10324 }% no hash
```

Be sure that are doing a paragraph:

```
10325 \LWR@ensuredoingapar%
```

Close the HTML span which has the *pdftotext* comment and also the link to the .svg image:

```
10326 \LWR@htmltag{/span}%
10327 \ifbool{HTMLDebugComments}{%
10328 \LWR@htmlcomment{End of lateximage}%
10329 }{ }%
```

Undo one lateximage level. This is not inside an  $\text{\textit{AMS}}$  \text, so regular \addtocounter may be used here.

```
10330 \addtocounter{LWR@lateximagedepth}{-1}%
10331}% end of outer-most lateximage
10332 \LWR@traceinfo{lateximage: exiting depth is \arabic{LWR@lateximagedepth}}%
10333 \LWR@traceinfo{lateximage: done}%
10334}%
10335 \catcode'\$=3% math shift
10336 \end{warpHTML}
```

**for PRINT output:** 10337 \begin{warpprint}

Env lateximage [ $\langle \text{alt} \rangle$  tag] [ $\langle \text{css style} \rangle$ ]

varwidth is used to create a box of the natural width of its contents.

```
10338 \NewDocumentEnvironment{lateximage}{s o o o}
10339 {\begin{varwidth}[b]{\linewidth}}
10340 {\end{varwidth}}

10341 \end{warpprint}
```

## 81 center, flushleft, flushright

**for HTML output:** 10342 \begin{warpHTML}

Env center Replace center functionality with css tags:

```
10343 \renewenvironment*{center}
10344 {
10345 \LWR@forcenewpage
10346 \ifbool{FormatWP}
10347 {\BlockClass[\LWR@print@mbbox{text-align:center}]{center}}
10348 {\BlockClass{center}}
10349 }
10350 {\endBlockClass}
```

Env flushright

```

10351 \renewenvironment*{flushright}
10352 {
10353 \LWR@forcenewpage
10354 \ifbool{FormatWP}
10355 {\BlockClass[\LWR@print@mbx{text-align:right}]{flushright}}
10356 {\BlockClass{flushright}}
10357 }
10358 {\endBlockClass}

```

Env flushleft

```

10359 \renewenvironment*{flushleft}
10360 {
10361 \LWR@forcenewpage
10362 \ifbool{FormatWP}
10363 {\BlockClass[\LWR@print@mbx{text-align:left}]{flushleft}}
10364 {\BlockClass{flushleft}}
10365 }
10366 {\endBlockClass}

```

`\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`

```

10367 \newcommand*{\LWR@HTML@centering}{%
10368 \ifbool{HTMLDebugComments}{%
10369 \LWR@htmlcomment{centering}%
10370 }{}%
10371 }
10372 \LWR@formatted{centering}

```

`\raggedleft`

```

10373 \newcommand*{\LWR@HTML@raggedleft}{%
10374 \ifbool{HTMLDebugComments}{%
10375 \LWR@htmlcomment{raggedleft}%
10376 }{}%
10377 }
10378 \LWR@formatted{raggedleft}

```

`\raggedright`

```

10379 \newcommand*{\LWR@HTML@raggedright}{%
10380 \ifbool{HTMLDebugComments}{%
10381 \LWR@htmlcomment{raggedright}%
10382 }{}%
10383 }
10384 \LWR@formatted{raggedright}

```

`\leftline {<text>}`

```
10385 \renewcommand{\leftline}[1]{\begin{flushleft}#1\end{flushleft}}
```

`\centerline {<text>}`

```
10386 \renewcommand{\centerline}[1]{\begin{center}#1\end{center}}
```

`\rightline {<text>}`

```
10387 \renewcommand{\rightline}[1]{\begin{flushright}#1\end{flushright}}
```

```
10388 \end{warpHTML}
```

## 82 Preloaded packages

**for HTML output:** 10389 `\begin{warpHTML}`

If the given package was loaded before or by `lwarp`, load the `lwarp` version as well.

`\LWR@PreloadedPackage {<packagename>}`

```
10390 \newcommand*\LWR@PreloadedPackage[1]{%
10391 \ifpackageloaded{#1}%
10392 {%
10393 \AtBeginDocument{
10394 \LWR@origRequirePackage{lwarp-#1}%
10395 }
10396 }%
10397 {}%
10398 }
```

If `inputtrc` was loaded before `lwarp`, as is usually done, explicitly load the `lwarp` patches now:

```
10399 \LWR@PreloadedPackage{inputtrc}
```

If `textcomp` was loaded before `lwarp`, perhaps as part of the font-related packages, explicitly load the `lwarp` patches now:

```
10400 \LWR@PreloadedPackage{textcomp}
```

If `xunicode` was loaded before `lwarp`, perhaps as part of the font-related packages, explicitly load the `lwarp` patches now:

```
10401 \LWR@PreloadedPackage{xunicode}
```

If `graphics` or `graphicx` were loaded before `lwarp`, perhaps by `xunicode`, explicitly load the `lwarp` patches now:

```
10402 \LWR@PreloadedPackage{graphics}
10403 \LWR@PreloadedPackage{graphicx}
```

`fontaxes` must be preloaded so that `lwarp` may patch it for HTML.

```
10404 \LWR@PreloadedPackage{fontaxes}
```

`nfssexst-cfr` may be preloaded by `cfm-lm` or related font packages.

```
10405 \LWR@PreloadedPackage{nfssexst-cfr}
```

`ulem` may be preloaded by `ctex`, `ctexart`, and related classes.

```
10406 \LWR@PreloadedPackage{ulem}
```

`xetexko-vertical` may be preloaded by `xetexko`.

```
10407 \LWR@PreloadedPackage{xetexko-vertical}
```

`geometry` is preloaded by `lwarp`, and perhaps by various classes.

```
10408 \LWR@PreloadedPackage{geometry}
```

`plext` is preloaded by some CJK classes.

```
10409 \LWR@PreloadedPackage{plext}
```

`stfloats` is preloaded by `ltj*` classes.

```
10410 \LWR@PreloadedPackage{stfloats}
```

`lltjtext` is preloaded by `ltj*` classes.


```
10411 \LWR@PreloadedPackage{lltjtext}
```

```
10412 \end{warpHTML}
```


## 83 siunitx

Pkg `siunitx` The `lwarp` core passes a few options to `siunitx`.

**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.

NOTE: As of this writing, the `siunitx` extension for MATHJAX is not currently hosted at any public CDN, thus `siunitx` is not usable with MATHJAX unless a local copy of this extension is created first. See `\MathJaxFilename` to select a custom MathJax script.

 **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 HTML output: 10413 `\begin{warpHTML}`

Options for `siunitx`:

```


10414 \newrobustcmd{\LWR@siunitx@textcelsius}{\HTMLentity{deg}C}
10415 \newrobustcmd{\LWR@siunitx@textdegree}{\HTMLentity{deg}}
10416 \newrobustcmd{\LWR@siunitx@textprime}{\HTMLUnicode{2032}}
10417 \newrobustcmd{\LWR@siunitx@textdblprime}{\HTMLUnicode{2033}}
10418 \newrobustcmd{\LWR@siunitx@textplanckbar}{\text{\textit{\HTMLUnicode{0127}}}}
10419
10420 \appto\LWR@restoreorigformatting{%
10421 \renewrobustcmd{\LWR@siunitx@textcelsius}{\text{\ensuremath{^\circ}C}}%
10422 \renewrobustcmd{\LWR@siunitx@textdegree}{\text{\ensuremath{^\circ}}}%
10423 \renewrobustcmd{\LWR@siunitx@textprime}{\text{\ensuremath{^\prime}}}%
10424 \renewrobustcmd{\LWR@siunitx@textdblprime}{\text{\ensuremath{^\prime\prime}}}%
10425 \renewrobustcmd{\LWR@siunitx@textplanckbar}{\text{\ensuremath{\hbar}}}%
10426 }
10427
10428 \PassOptionsToPackage{
10429 detect-mode=true,
10430 per-mode=symbol,% fraction is not seen by pdftotext
10431 text-celsius = {\LWR@siunitx@textcelsius},
10432 text-degree = {\LWR@siunitx@textdegree},
10433 text-arcminute = {\LWR@siunitx@textprime} ,
10434 text-arcsecond = {\LWR@siunitx@textdblprime} ,
10435 }{siunitx}

10436 \end{warpHTML}

```

## 84 Graphics print-mode modifications

### 84.1 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 of “(image)”.
- `\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<sup>A</sup>T<sub>E</sub>X, so expect some ugly results for scaling and rotating.

## 84.2 Print-mode modifications

**for PRINT output:** For print output, accept and then discard the new class key:

```
10437 \begin{warpprint}
10438 \define@key{Gin}{class}{}
10439 \define@key{Gin}{alt}{}

```

Print-mode additions for the `overpic` package. See section 360 for the HTML version.

```
10440 \AtBeginDocument{
10441 \ifpackageloaded{overpic}{
10442 \newcommand*{\overpicfontsize}{12}
10443 \newcommand*{\overpicfontskip}{14}
10444 }{}
10445 }
10446 \end{warpprint}

```

## 85 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 `warppall` 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:** 10447 `\begin{warppall}`

After xparse may have been loaded ...

```
10448 \AtBeginDocument{
```

... and *only* if xcolor was loaded:

```
10449 \@ifpackageloaded{xcolor}{
10450 \LWR@traceinfo{patching xcolor}
```

The print version:

`\colorboxBlock` `\colorboxBlock` is the same as `\colorbox`:

```
10451 \LetLtxMacro\colorboxBlock\colorbox
```

The original definition is reused by the new versions:

```
10452 \LetLtxMacro\LWR@orig@print@fcolorbox\fcolorbox
```

```
\fcolorbox [\langle framemodel \rangle] {\langle framecolor \rangle} [\langle boxmodel \rangle] {\langle boxcolor \rangle} {\langle text \rangle}
```

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`.)

```
10453 \newsavebox{\LWR@colorminipagebox}
10454
10455 \NewDocumentCommand{\LWR@print@fcolorbox}{o m o m +m}{%
10456 \LWR@traceinfo{\LWR@print@fcolorbox #2 #4}%
```

Pre-load the contents into an LR box so that they can be used inside a `\fcolorbox`:

```
10457 \begin{lrbox}{\LWR@colorminipagebox}%
10458 #5%
10459 \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.

```
10460 \ifstrequal{#4}{none}%
10461 {% #4 none
10462 \LWR@traceinfo{background is none}%
10463 {% scope the \colorlet
10464 \colorlet{\LWR@currentcolor}{.}%
10465 \color{#2}%
10466 \fbox{%
10467 \color{\LWR@currentcolor}%
10468 \usebox{\LWR@colorminipagebox}%
```

```

10469 }% fbox
10470 }% colorlet
10471 }% #4 none
10472 {% #4 not none
10473 \LWR@traceinfo{background not none}%
10474 \IfValueTF{#1}%
10475 {%
10476 \IfValueTF{#3}%
10477 {\LWR@orig@print@fcolorbox[#1][#2][#3][#4]{\usebox{\LWR@colorminipagebox}}}%
10478 {\LWR@orig@print@fcolorbox[#1][#2][#4]{\usebox{\LWR@colorminipagebox}}}%
10479 }%
10480 {% no value #1
10481 \IfValueTF{#3}%
10482 {\LWR@orig@print@fcolorbox{#2}[#3][#4]{\usebox{\LWR@colorminipagebox}}}%
10483 {\LWR@orig@print@fcolorbox{#2}[#4]{\usebox{\LWR@colorminipagebox}}}%
10484 }% no value #1
10485 }% #4 not none
10486 \LWR@traceinfo{\LWR@print@fcolorbox done}%
10487 }
10488
10489 \renewcommand*{\fcolorbox}{\LWR@print@fcolorbox}

```

`\fcolorboxBlock` [*<framemodel>*] [*<framecolor>*] [*<boxmodel>*] [*<boxcolor>*] [*<text>*]

In print mode, `\fcolorboxBlock` is the same as `\fcolorbox`.

```

10490 \newcommand*{\LWR@print@fcolorboxBlock}{\LWR@print@fcolorbox}
10491 \newcommand*{\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:

```

10492 \NewDocumentEnvironment{LWR@print@fcolorminipage}{o m o m O{c} O{ } o m}
10493 {%
10494 \LWR@traceinfo{*** fcolorminipage: #2 #4 #8}%

```

Pre-load the contents into an LR box so that they can be used inside a `\fcolorbox`:

```

10495 \begin{lrbox}{\LWR@colorminipagebox}%

```

If inner alignment is not given, use the outer alignment instead:

```

10496 \IfValueTF{#7}%
10497 {\begin{minipage}[#5][#6][#7][#8]}%
10498 {\begin{minipage}[#5][#6][#5][#8]}%
10499 }%
10500 {%
10501 \end{minipage}%
10502 \end{lrbox}%
10503 \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.

```

10504 \ifstrequal{#4}{none}%
10505 {% #4 none
10506 {% scope the \colorlet
10507 \colorlet{LWR@currentcolor}{.}%
10508 \color{#2}%
10509 \fbox{%
10510 \color{LWR@currentcolor}%
10511 \usebox{LWR@colorminipagebox}%
10512 }% fbox
10513 }% colorlet
10514 }% #4 none
10515 {% #4 not none
10516 \IfValueTF{#1}%
10517 {%
10518 \IfValueTF{#3}%
10519 {\LWR@orig@print@fcolorbox[#1][#2][#3]{#4}{\usebox{LWR@colorminipagebox}}}%
10520 {\LWR@orig@print@fcolorbox[#1][#2]{#4}{\usebox{LWR@colorminipagebox}}}%
10521 }%
10522 {% no value #1
10523 \IfValueTF{#3}%
10524 {\LWR@orig@print@fcolorbox{#2}[#3]{#4}{\usebox{LWR@colorminipagebox}}}%
10525 {\LWR@orig@print@fcolorbox{#2}{#4}{\usebox{LWR@colorminipagebox}}}%
10526 }% no value #1
10527 }% #4 not none
10528 \LWR@traceinfo{*** finished end fcolorminipage}%
10529 }
10530
10531 \newenvironment*{fcolorminipage}
10532 {\LWR@print@fcolorminipage}
10533 {\endLWR@print@fcolorminipage}

10534 \LWR@traceinfo{xcolor patches done}
10535 }{}% xcolor loaded
10536 }% AtBeginDocument

10537 \end{warppall}

```

## 86 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:** 10538 `\begin{warpprint}`

```
10539 \AtBeginDocument{
10540 \ifpackageloaded{chemmacros}{
```

Env polymerdelims

```
10541 \DeclareDocumentEnvironment{polymerdelims}{}
10542 {}{}
```

Env redoxreaction  $\{\langle space above \rangle\} \{\langle space below \rangle\}$

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 168.4.


```
10543 \DeclareDocumentEnvironment{redoxreaction}{m m}
10544 {\rule{0pt}{#1}}{\rule[-#2]{0pt}{#2}}

10545 }{}% chemmacros
10546 }% AtBeginDocument

10547 \end{warpprint}
```

## 87 cleveref

Pkg cleveref cleveref package is used as-is with minor patches.

 **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 535 to redefine the message which is printed for page number references.

**loading order** cleveref and the following 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.

Table 12 on page 456 shows the data structure of the label/reference system as revised by lwarp and cleveref.

A few patches allow `cleveref` to work as-is:

**for HTML output:** 10548 `\begin{warHTML}`

`\AtEndPreamble` forces `cleveref` to be loaded last:

```
10549 \AtEndPreamble{
10550 \RequirePackage{cleveref}
10551 }
```

The following patches are applied after `cleveref` has loaded, and after `\AtBeginDocument`. Print-mode versions are not required since they all come down to `\ref` eventually, and `\ref` has a print-mode version.

```
10552 \AfterEndPreamble{
10553 \LWR@traceinfo{Patching cleveref.}
```

`\@@@setcref` `{\<kindofref>}{\<label>}`

`\@templabel` becomes the section number.

```
10554 \def\LWR@orig@@@setcref#1#2{\cref@getlabel{#2}{\@templabel}#1{\@templabel}{}}%
10555
10556 \ifdefequal{\@@@setcref}{\LWR@orig@@@setcref}{% before v0.21
10557 \renewcommand*{\@@@setcref}[2]{#1{\ref{#2}}{}}
10558 }{
10559 \ifdefequal{\@@@setcref}{\LWR@orig@@@setcref}{% as of v0.21
10560 \renewcommand*{\@@@setcref}[2]{#1{\ref{#2}}{}}
10561 }{
10562 \PackageWarning{lwarp-cleveref}{
10563 Unknown version of cleveref.
10564 \protect\cref\space will fail.
10565 }%
10566 }
10567 }
```

`\@@@setcrefrange` `{\<text>}{\<label>}{\<label>}`

```
10568 \def\LWR@orig@@@setcrefrange#1#2#3{%
10569 \cref@getlabel{#2}{\@labela}%
10570 \cref@getlabel{#3}{\@labelb}%
10571 #1{\@labela}{\@labelb}{}}%
10572
10573 \ifdefequal{\@@@setcrefrange}{\LWR@orig@@@setcrefrange}{
10574 \renewcommand{\@@@setcrefrange}[3]{%
10575 #1{\ref{#2}}{\ref{#3}}{}}%
10576 }{
10577 }{
10578 \ifdefequal{\@@@setcrefrange}{\LWR@orig@@@setcrefrange}{
10579 \renewcommand{\@@@setcrefrange}[3]{%
10580 #1{\ref{#2}}{\ref{#3}}{}}%
10581 }
```

```

10582 }{
10583 \PackageWarning{lwarp-cleveref}{
10584 Unknown version of cleveref.
10585 \protect\crefrange\space will fail.
10586 }
10587 }
10588 }
10589

```

`\cpagerefFor` Redefinable word between “page(s)” and the page numbers.

```

10590 \newcommand*{\cpagerefFor}{for}

```

`\@@@setcpageref`  $\{\langle typeofref \rangle\} \{\langle label \rangle\}$ , where `typeofref` is “page” or “pages”

```

10591 \def\LWR@orig@@setcpageref#1#2{% before v0.21
10592 \cref@getpageref{#2}{\@temppage}#1{\@temppage}{\}}}%
10593
10594 \def\LWR@orig@@@setcpageref#1#2{% as of v0.21
10595 \cpageref@getlabel{#2}{\@temppage}#1{\@temppage}{\}}}%
10596
10597 \ifdefequal{\@@setcpageref}{\LWR@orig@@setcpageref}{
10598 \renewcommand*{\@@setcpageref}[2]{%
10599 #1{\cpagerefFor\ \cref{#2}}{\}}}%
10600 }
10601 }{
10602 \ifdefequal{\@@@setcpageref}{\LWR@orig@@@setcpageref}{
10603 \renewcommand*{\@@@setcpageref}[2]{%
10604 #1{\cpagerefFor\ \cref{#2}}{\}}}%
10605 }
10606 }
10607 {
10608 \PackageWarning{lwarp-cleveref}{
10609 Unknown version of cleveref.
10610 \protect\cpageref\space will fail.
10611 }
10612 }
10613 }

10614 \def\LWR@orig@@setcpagerefrange#1#2#3{% before v0.21
10615 \cref@getpageref{#2}{\@pagea}%
10616 \cref@getpageref{#3}{\@pageb}%
10617 #1{\@pagea}{\@pageb}{\}}{\}}}%
10618
10619 \def\LWR@orig@@@setcpagerefrange#1#2#3{% as of v0.21
10620 \cpageref@getlabel{#2}{\@pagea}%
10621 \cpageref@getlabel{#3}{\@pageb}%
10622 #1{\@pagea}{\@pageb}{\}}{\}}}%
10623
10624 \ifdefequal{\@@setcpagerefrange}{\LWR@orig@@setcpagerefrange}{
10625 \renewcommand*{\@@setcpagerefrange}[3]{%
10626 #1{\cpagerefFor\ \cref{#2}}{\cref{#3}}{\}}{\}}}%
10627 }

```

```

10628 }{
10629 \ifdefequal{\@@@setcpagerefrange}{\LWR@orig@@@setcpagerefrange}{
10630 \renewcommand*{\@@@setcpagerefrange}[3]{%
10631 #1{\cpagerefFor\ \cref{#2}}{\cref{#3}}{}{}{}{}%
10632 }
10633 }
10634 {
10635 \PackageWarning{lwarp-cleveref}{
10636 Unknown version of cleveref.
10637 \protect\cpagerefrange\space will fail.
10638 }
10639 }
10640 }
10641
10642 }% AfterEndPreamble

```

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.

```

10643 \LetLtxMacro\LWR@orig@label\label
10644 \RenewDocumentCommand{\label}{}{\LWR@new@label}
10645
10646 \LetLtxMacro\LWR@orig@pageref\pageref
10647 \RenewDocumentCommand{\pageref}{}{\LWR@new@pageref}
10648 \end{warpHTML}

```

## 88 picture environment

Env `picture` The picture environment is enclosed inside a `\lateximage`.

for HTML output: 10649 `\begin{warpHTML}`

Env `picture`

```

10650 \BeforeBeginEnvironment{picture}{\begin{lateximage}[(picture)]}
10651
10652 \AfterEndEnvironment{picture}{\end{lateximage}}
10653 \end{warpHTML}

```

## 89 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 `\linewidth`, `\textwidth`, and `\textheight`, widths and heights in HTML are scaled proportionally to a 6×9 inch text area, and inside a `\multicols` `\linewidth` is divided by the specified number of columns.
- 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.
- ⚠ **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:** 10654 `\begin{warphTML}`

## 89.1 Counters and lengths

**Ctrl** `LWR@minipagedepth` Used to only reset the line width at the outermost minipage.

```
10655 \newcounter{LWR@minipagedepth}
10656 \setcounter{LWR@minipagedepth}{0}
```

**Len** `\LWR@minipagewidth` Used to convert the width into printable units.

```
10657 \newlength{\LWR@minipagewidth}
```

Len \LWR@minipageheight Used to convert the height into printable units.

```
10658 \newlength{\LWR@minipageheight}
```

## 89.2 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 89.3.

## 89.3 Minipage handling

Bool LWR@minipagefullwidth Should the next minipage have no HTML width?

```
10659 \newbool{LWR@minipagefullwidth}
10660 \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.

```
10661 \newbool{LWR@forceminipagefullwidth}
10662 \boolfalse{LWR@forceminipagefullwidth}
```

\minipagefullwidth Requests that the next minipage have no width tag in HTML:

**for HTML output:** 10663 \newcommand\*{\minipagefullwidth}{\global\booltrue{LWR@minipagefullwidth}}

\UseMinipageWidths Locally requests that minipage widths be honored.

```
10664 \newcommand*{\UseMinipageWidths}{\boolfalse{LWR@forceminipagefullwidth}}
```

\IgnoreMinipageWidths Locally requests that minipage widths be ignored.

```
10665 \newcommand*{\IgnoreMinipageWidths}{\booltrue{LWR@forceminipagefullwidth}}
10666 \end{warpHTML}
```

**for PRINT output:** 10667 \begin{warpprint}  
10668 \newcommand\*{\minipagefullwidth}{}  
10669 \newcommand\*{\UseMinipageWidths}{}  
10670 \newcommand\*{\IgnoreMinipageWidths}{}  
10671 \end{warpprint}

**for HTML output:** 10672 \begin{warpHTML}

Bool LWR@minipagethispar Has a minipage been seen this paragraph? If true, prevents paragraph tags around horizontal space between minipages.

```
10673 \newbool{LWR@minipagethispar}
10674 \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.

```
10675 \NewDocumentEnvironment{LWR@HTML@sub@minipage}{m m m m}
10676 {%
10677 \LWR@traceinfo{minipage}%
```

Temporarily open a group, 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.

The following used to be an actual L<sup>A</sup>T<sub>E</sub>X minipage.

```
10678 \begingroup
```

Compute width, adjusted for frames:

```
10679 \setlength{\LWR@minipagewidth}{#4}%
10680 \ifthenelse{\cnttest{\value{LWR@minipagedepth}}{=}{0}}{%
```

Only create a new page if not yet nested:

```
10681 \LWR@orignewpage%
```

Adjust virtual page size:

```
10682 \addtolength{\LWR@minipagewidth}{3em}% room for frames
10683 \setlength{\linewidth}{6in}%
10684 \setlength{\textwidth}{6in}%
10685 \setlength{\textheight}{9in}%
10686 }{}%
10687 \LWR@traceinfo{computed width is \LWR@printlength{\LWR@minipagewidth}}%
```

Compute height:

```
10688 \setlength{\LWR@minipageheight}{\textheight}% default unless specified
10689 \ifblank{#2}{}{\setlength{\LWR@minipageheight}{#2}}%
```

Track nesting depth:

```
10690 \addtocounter{LWR@minipagedepth}{1}%
```

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.

```
10691 \ifbool{FormatWP}{\newline}{}%
10692 \LWR@stoppars%
```

If FormatWP, add a text frame:

```
10693 \ifbool{FormatWP}{%
10694
10695 \addtocounter{LWR@thisautoidWP}{1}%
10696 \LWR@htmltag{%
10697 div id="\LWR@print@mbox{autoidWP-\arabic{LWR@thisautoidWP}}" %
10698 class="wpminipage"%
10699 }%
10700
10701 }{ }%
```

Create the <div> tag with optional alignment style:

```
10702 \LWR@traceinfo{minipage: creating div class}%
10703 \LWR@htmltag{div class="minipage" style="%
10704 \ifthenelse{\equal{#1}{t}}{\LWR@print@mbox{vertical-align:bottom}} ; }{ }%
10705 \ifthenelse{\equal{#1}{c}}{\LWR@print@mbox{vertical-align:middle}} ; }{ }%
10706 \ifthenelse{\equal{#1}{b}}{\LWR@print@mbox{vertical-align:top}} ; }{ }%
10707 \ifthenelse{\equal{#3}{t}}{\LWR@print@mbox{justify-content:flex-start}} ; }{ }%
10708 \ifthenelse{\equal{#3}{c}}{\LWR@print@mbox{justify-content:center}} ; }{ }%
10709 \ifthenelse{\equal{#3}{b}}{\LWR@print@mbox{justify-content:flex-end}} ; }{ }%
10710 \ifthenelse{\equal{#3}{s}}{\LWR@print@mbox{justify-content:space-between}} ; }{ }%
```

Print the width and optional height styles:

```
10711 \LWR@traceinfo{minipage: about to print the width of \LWR@printlength{\LWR@minipagewidth}}%
10712 \ifbool{LWR@minipagefullwidth}%
10713 {\global\boolfalse{LWR@minipagefullwidth}}%
10714 {%
10715 \ifbool{LWR@forceminipagefullwidth}%
10716 {%
10717 {%
10718 \ifdimequal{#4}{\linewidth}%
10719 {%
10720 {width:\LWR@printlength{\LWR@minipagewidth}} ; }%
10721 }%
10722 }%
10723 \LWR@traceinfo{minipage: about to print the height}%
10724 \ifblank{#2}{ }{height:\LWR@printlength{\LWR@minipageheight}} ; }%
10725 "%}
```

Finish with an empty line to start the contents on a new line.

```
10726
10727 % 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.

```
10728 \setlength{\linewidth}{#4}% the original width
10729 \setlength{\textwidth}{6in}%
10730 \setlength{\textheight}{9in}%
```

`\raggedright` cancels hyphenation, which will be done by HTML instead.

```
10731 \LWR@print@raggedright%
```

Set minipage footnotes:

```
10732 \def\@mpfn{mpfootnote}%
10733 \def\thempfn{\thempfootnote}\c@mpfootnote\z@%
10734 \let\@footnotetext\@mpfootnotetext%
```

Resume paragraph tag handling for the contents of the minipage:

```
10735 \LWR@startpars%
10736 \ifboolexpr{bool{FormatWP} and bool{WPMarkMinipages}}{%
10737
10738 === begin minipage ===
10739
10740 }{%
10741 \LWR@traceinfo{minipage: finished starting the minipage}%
10742 }% finished \minipage
10743 {% \endminipage
```

Print pending minipage footnotes:

```
10744 \LWR@printpendingmpfootnotes%
```

End the environment with closing tag:

```
10745 \ifboolexpr{bool{FormatWP} and bool{WPMarkMinipages}}{%
10746
10747 === end minipage ===
10748
10749 }{%
10750 \LWR@stoppars%
```

The following used to be an actual L<sup>A</sup>T<sub>E</sub>X minipage.

```
10751 \endgroup%
10752
10753 \ifbool{FormatWP}{%
10754
10755 \LWR@html@elementend{div}%
10756
10757 }{%
10758 \LWR@html@divclassend{minipage}%
10759
```

```

10760 \addtocounter{LWR@minipagedepth}{-1}%
10761 \LWR@startpars%
10762 \ifbool{FormatWP}{\newline}{}%

```

Prevent paragraph tags around horizontal white space until the start of the next paragraph:

```

10763 \global\booltrue{LWR@minipagethispar}%
10764 \LWR@traceinfo{LWR@minipage: done}%
10765 }
10766
10767 \NewDocumentEnvironment{LWR@HTML@minipage}{O{t} O{ } O{t} m}
10768 {\LWR@HTML@sub@minipage{#1}{#2}{#3}{#4}}
10769 {\endLWR@HTML@sub@minipage}
10770
10771 \LWR@formattedenv{minipage}

```

## 89.4 \parbox, \mbox, \makebox, \framebox, \fbox, \raisebox

for HTML output:

`\parbox` [*pos*] [*height*] [*inner-pos*] {*width*} {*text*}

A parbox uses the minipage code:

```

10772 \NewDocumentCommand{\LWR@HTML@parbox}{O{t} O{ } O{t} m +m}
10773 {
10774 \LWR@traceinfo{parbox of width #4}%
10775 \begin{minipage}[#1][#2][#3]{#4}%
10776 #5
10777 \end{minipage}%
10778 }
10779
10780 \LWR@formatted{parbox}

```

`\mbox` {*text*} Nullified for HTML.

```

10781 \newcommand*{\LWR@HTML@mbox}[1]{#1}
10782
10783 \LWR@formatted{mbox}

```

`\LWR@makebox@paren` {*width*} , {*height*}

Adds to the style in \LWR@temptwo.

```

10784 \NewDocumentCommand{\LWR@makebox@paren}{m m}{%
10785 \IfValueTF{#2}{%
10786 \setlength{\LWR@tempwidth}{#1\unitlength}%
10787 \setlength{\LWR@tempheight}{#2\unitlength}%
10788 \appto{\LWR@temptwo}{%
10789 \LWR@print@mbox{width:\LWR@printlength{\LWR@tempwidth}} ; % space

```

```

10790 \LWR@print@mbox{height:\LWR@printlength{\LWR@tempheight}} ; % space
10791 }%
10792 }{%
10793 \PackageError{lwarp}%
10794 {(width,height) is missing a comma ',' character}%
10795 {\protect\makebox\space and \protect\framebox\space accept
10796 a size in the format (width,height).}%
10797 }%
10798 }

```

`\LWR@makebox@align` {*alignment character*}

Adds to the style in `\LWR@temptwo`.

```

10799 \newcommand*{\LWR@makebox@align}[1]{%
10800 \def\LWR@align{center}%
10801 \ifstrequal{#1}{l}{\def\LWR@align{left}}{}%
10802 \ifstrequal{#1}{r}{\def\LWR@align{right}}{}%
10803 \ifstrequal{#1}{s}{\def\LWR@align{justify}}{}%
10804 \appto{\LWR@temptwo}{%
10805 \LWR@print@mbox{text-align:\LWR@align} ; %
10806 }%
10807 }

```

`\makebox` (*(width,height)*) [*(width)*] [*(pos)*] {*(text)*}

```

10808 \NewDocumentCommand{\LWR@HTML@makebox}{>{\SplitArgument{1}{,}}d() o o +m}{%

```

Build the style depending on arguments:

```

10809 {% scope
10810 \def\LWR@temptwo{%
10811 \IfValueTF{#1}%
10812 {% (width,height) ..
10813 \LWR@makebox@paren #1%
10814 \IfValueT{#2}%
10815 {% (width,height) [posn]
10816 \LWR@makebox@align{#2}%
10817 }%
10818 }%
10819 {% [width]
10820 \IfValueT{#2}% [width]
10821 {%
10822 \setlength{\LWR@tempwidth}{#2}%
10823 \ifdimgreater{\LWR@tempwidth}{0pt}{%
10824 \appto{\LWR@temptwo}{%
10825 width:\LWR@printlength{\LWR@tempwidth} ; % space
10826 }%
10827 }{}%
10828 }%
10829 }%
10830 \IfValueT{#3}%
10831 {% [width] [posn]
10832 \LWR@makebox@align{#3}%

```

```

10833 }%
10834 \InlineClass[%
10835 \LWR@print@mbox{display:inline-block} ; %
10836 \LWR@temptwo%
10837]%
10838 {makebox}%
10839 {#4}%
10840 }% scope
10841 }
10842 \LWR@formatted{makebox}

```

`\framebox` (*(width,height)*) [*(width)*] [*(pos)*] {*(text)*}

```

10843 \NewDocumentCommand{\LWR@HTML@framebox}{d() o o +m}{%
10844 \fbox{\makebox(#1)[#2][#3]{#4}}%
10845 }
10846
10847 \LWR@formatted{framebox}

```

`\LWR@forceminwidth` {*(length)*}

Sets `\LWR@atleastonept` to be at least 1pt.

```

10848 \newlength{\LWR@atleastonept}
10849
10850 \newcommand*{\LWR@forceminwidth}[1]{%
10851 \setlength{\LWR@atleastonept}{#1}%
10852 \ifthenelse{%
10853 \lengthtest{\LWR@atleastonept>0pt}\AND%
10854 \lengthtest{\LWR@atleastonept<1pt}%
10855 }{%
10856 {\setlength{\LWR@atleastonept}{1pt}}%
10857 }%
10858 }

```

`\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.

```

10859 \newcommand*{\LWR@fboxstyle}{%
10860 \LWR@findcurrenttextcolor%
10861 border:\LWR@printlength{\LWR@atleastonept} solid \LWR@origpound\LWR@tempcolor ; %
10862 padding:\LWR@printlength{\fboxsep} ; %
10863 color:\LWR@origpound\LWR@tempcolor%
10864 }

```

`\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:

```

10865 \newcommand{\LWR@HTML@fbox}[1]{%
10866 \LWR@traceinfo{HTML fbox}%
10867 \LWR@forceminwidth{\fboxrule}%
10868 \InlineClass[%
10869 \LWR@print@mbbox{display:inline-block} ; %
10870 \LWR@fboxstyle%
10871]{fbox}{#1}%
10872 }

```

`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`:

```

10873 \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:**

```

10874 \end{warpHTML}
10875 \begin{warpall}
10876 \let\fboxBlock\fbox
10877 \end{warpall}
10878
10879 \begin{warpHTML}

```

**for HTML output:** Next, an HTML version:

```

10880 \newcommand{\LWR@HTML@fboxBlock}[1]{%
10881 \LWR@forceminwidth{\fboxrule}%
10882 \LWR@stoppars%
10883 \begin{BlockClass}[%
10884 \LWR@fboxstyle%
10885]{fboxBlock}
10886 #1
10887 \end{BlockClass}
10888 \LWR@startpars%
10889 }
10890
10891 \LWR@formatted{fboxBlock}
10892
10893 \end{warpHTML}

```

Env `fminipage` [`<align>`] [`<height>`] [`<align>`] [`<width>`]

Creates a framed HTML `<div>` around its contents.

**for HTML & PRINT:** Print version:

```

10894 \begin{warpall}
10895
10896 \newsavebox{\LWR@fminipagebox}
10897
10898 \NewDocumentEnvironment{\LWR@print@fminipage}{0{t} o 0{t} m}
10899 {%

```

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:

```
10900 \IfValueTF{#3}%
10901 {\def\LWR@thisalign{#3}}
10902 {\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.

```
10903 \IfValueTF{#2}%
10904 {\minipage[#1][#2+2\fboxsep+2\fboxrule][\LWR@thisalign]{#4+2\fboxsep+2\fboxrule}}%
10905 {\minipage[#1]{#4+2\fboxsep+2\fboxrule}}%
```

Capture the contents of the environment:

```
10906 \begin{lrbox}{\LWR@fminipagebox}%
```

Nest the contents inside an inner minipage of the desired size:

```
10907 \IfValueTF{#2}%
10908 {\minipage[#1][#2][\LWR@thisalign]{#4}}%
10909 {\minipage[#1]{#4}}%
10910 }
10911 {%
```

Close the inner minipage and the LR box with the contents:

```
10912 \endminipage%
10913 \end{lrbox}%
```

Create a frame around the contents of the environment:

```
10914 \fbox{\usebox{\LWR@fminipagebox}}%
```

The entire thing is placed inside the outer minipage:

```
10915 \endminipage%
10916 }
10917
10918 \LetLtxMacro\fminipage\LWR@print@fminipage
10919 \LetLtxMacro\endfminipage\endLWR@print@fminipage
10920 % \newenvironment{fminipage}{\LWR@print@fminipage}{\endLWR@print@fminipage}
10921
10922 \end{warpall}
```

HTML version:

**for HTML output:**

```
10923 \begin{warpHTML}
10924
10925 \NewDocumentEnvironment{LWR@HTML@fminipage}{O{t} o O{t} m}
10926 {%
```

```

10927 \LWR@traceinfo{fminipage #1 #2 #3 #4}%
10928 \LWR@forceminwidth{\fboxrule}%
10929 \setlength{\LWR@tempwidth}{#4}%
10930 \IfValueT{#2}{\setlength{\LWR@tempheight}{#2}}%

10931 \LWR@stoppars%

10932 \begin{BlockClass}[%
10933 \LWR@fboxstyle ; %
10934 \IfValueT{#2}{height:\LWR@printlength{\LWR@tempheight} ; }%
10935 \ifbool{\LWR@minipagefullwidth}%
10936 {\global\boolfalse{\LWR@minipagefullwidth}}%
10937 {%
10938 \ifbool{\LWR@forceminipagefullwidth}%
10939 {}%
10940 {%
10941 \ifdimequal{\LWR@tempwidth}{\linewidth}%
10942 {}%
10943 {width:\LWR@printlength{\LWR@tempwidth} ; }%
10944 }%
10945 }%
10946]{fminipage}%
10947 }
10948 {%
10949 \end{BlockClass}%

```

Prevent paragraph tags around horizontal white space until the start of the next paragraph:

```

10950 \global\booltrue{\LWR@minipagethispar}%
10951 \LWR@traceinfo{fminipage done}%
10952 }
10953
10954 \LWR@formattedenv{fminipage}

```

`\raisebox` {<raiselen>} [<height>] [<depth>] {<text>}

```

10955 \NewDocumentCommand{\LWR@HTML@raisebox}{m o o m}{%
10956 #4%
10957 }
10958
10959 \LWR@formatted{raisebox}

10960 \end{warpHTML}

```

## 90 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 output:** 10961 `\begin{warpHTML}`

`\emph {<text>}`

```
10962 \DeclareRobustCommand{\LWR@HTML@emph}[1]{%
10963 {%
10964 \itshape%
10965 \LWR@htmlspan{em}{#1}%
10966 }%
10967 }
10968
10969 \LWR@formatted{emph}
10970
10971 \newcommand{\LWR@null@emph}[1]{#1}
```

`\textmd {<text>}`

```
10972 \DeclareRobustCommand{\LWR@HTML@textmd}[1]{%
10973 {%
10974 \mdseries%
10975 \InlineClass(font-weight:normal){textmd}{#1}%
10976 }%
10977 }
10978
10979 \LWR@formatted{textmd}
10980
10981 \newcommand{\LWR@null@textmd}[1]{#1}
```

`\textbf {<text>}`

```
10982 \DeclareRobustCommand{\LWR@HTML@textbf}[1]{%
10983 {%
10984 \bfseries%
10985 \LWR@htmlspan{b}{#1}%
10986 }%
10987 }
10988
10989 \LWR@formatted{textbf}
10990
10991 \newcommand{\LWR@null@textbf}[1]{#1}
```

`\texteb`  $\{\langle text \rangle\}$  From `nfssect-cfr`.

```

10992 \DeclareRobustCommand{\LWR@HTML@texteb}[1]{%
10993 {%
10994 \ebweight%
10995 \InlineClass{texteb}{#1}%
10996 }%
10997 }
10998
10999 \LWR@formatted{texteb}
11000
11001 \newcommand{\LWR@null@texteb}[1]{#1}

```

`\textlg`  $\{\langle text \rangle\}$  From `nfssect-cfr`.

```

11002 \DeclareRobustCommand{\LWR@HTML@textlg}[1]{%
11003 {%
11004 \lgweight%
11005 \InlineClass{textlg}{#1}%
11006 }%
11007 }
11008
11009 \LWR@formatted{textlg}
11010
11011 \newcommand{\LWR@null@textlg}[1]{#1}

```

`\textrm`  $\{\langle text \rangle\}$

```

11012 \DeclareRobustCommand{\LWR@HTML@textrm}[1]{%
11013 {%
11014 \rmfamily%
11015 \InlineClass(font-family:serif){textrm}{#1}%
11016 }%
11017 }
11018
11019 \LWR@formatted{textrm}
11020
11021 \newcommand{\LWR@null@textrm}[1]{#1}

```

`\textsf`  $\{\langle text \rangle\}$

```

11022 \DeclareRobustCommand{\LWR@HTML@textsf}[1]{%
11023 {%
11024 \sffamily%
11025 \InlineClass(font-family:sans){textsf}{#1}%
11026 }%
11027 }
11028
11029 \LWR@formatted{textsf}
11030
11031 \newcommand{\LWR@null@textsf}[1]{#1}

```

`\texttt {⟨text⟩}`

```
11032 \DeclareRobustCommand{\LWR@HTML@texttt}[1]{%
11033 {%
11034 \ttfamily%
11035 \LWR@htmlspan{kbd}{#1}%
11036 }%
11037 }
11038
11039 \LWR@formatted{texttt}
11040
11041 \newcommand{\LWR@null@texttt}[1]{#1}
```

`\textup {⟨text⟩}`

```
11042 \DeclareRobustCommand{\LWR@HTML@textup}[1]{%
11043 {%
11044 \upshape%
11045 \InlineClass(font-style:normal){textup}{#1}%
11046 }%
11047 }
11048
11049 \LWR@formatted{textup}
11050
11051 \newcommand{\LWR@null@textup}[1]{#1}
```

`\textit {⟨text⟩}`

```
11052 \DeclareRobustCommand{\LWR@HTML@textit}[1]{%
11053 {%
11054 \itshape%
11055 \LWR@htmlspan{i}{#1}%
11056 }%
11057 }
11058
11059 \LWR@formatted{textit}
11060
11061 \newcommand{\LWR@null@textit}[1]{#1}
```

`\textsc {⟨text⟩}`

```
11062 \DeclareRobustCommand{\LWR@HTML@textsc}[1]{%
11063 {%
11064 \scshape%
11065 \InlineClass{textsc}{#1}%
11066 }%
11067 }
11068
11069 \LWR@formatted{textsc}
11070
11071 \newcommand{\LWR@null@textsc}[1]{#1}
```

`\textulc`  $\{\langle text \rangle\}$  From fontaxes.

```

11072 \DeclareRobustCommand{\LWR@HTML@textulc}[1]{%
11073 {%
11074 \ulcshape%
11075 \InlineClass{textulc}{#1}%
11076 }%
11077 }
11078
11079 \LWR@formatted{textulc}
11080
11081 \newcommand{\LWR@null@textulc}[1]{#1}

```

`\textsi`  $\{\langle text \rangle\}$

```

11082 \ifundefined{textsi}{
11083 \LetLtxMacro\LWR@print@textsi\LWR@print@textsc
11084 }{}
11085
11086 \DeclareRobustCommand{\LWR@HTML@textsi}[1]{%
11087 {%
11088 \sishape%
11089 \textsc{\textit{#1}}%
11090 \InlineClass(
11091 font-style: italic;
11092 font-variant: small-caps ;
11093 font-variant-numeric: oldstyle-nums ;
11094){textsi}{#1}%
11095 }%
11096 }
11097
11098 \LWR@formatted{textsi}
11099
11100 \newcommand{\LWR@null@textsi}[1]{#1}

```

`\textsl`  $\{\langle text \rangle\}$

```

11101 \DeclareRobustCommand{\LWR@HTML@textsl}[1]{%
11102 {%
11103 \slshape%
11104 \InlineClass(font-style:oblique){textsl}{#1}%
11105 }%
11106 }
11107
11108 \LWR@formatted{textsl}
11109
11110 \newcommand{\LWR@null@textsl}[1]{#1}

```

`\textnormal`  $\{\langle text \rangle\}$

```

11111 \DeclareRobustCommand{\LWR@HTML@textnormal}[1]{\textmd{\textrm{\textup{#1}}}}
11112
11113 \LWR@formatted{textnormal}

```

```
11114
11115 \newcommand{\LWR@null@textnormal}[1]{#1}
```

```
11116 \newcommand{\LWR@null@rmfamily}{}
11117 \newcommand{\LWR@null@sffamily}{}
11118 \newcommand{\LWR@null@ttfamily}{}
11119 \newcommand{\LWR@null@bfseries}{}
11120 \newcommand{\LWR@null@ebweight}{}
11121 \newcommand{\LWR@null@lgweight}{}
11122 \newcommand{\LWR@null@mdseries}{}
11123 \newcommand{\LWR@null@upshape}{}
11124 \newcommand{\LWR@null@slshape}{}
11125 \newcommand{\LWR@null@scshape}{}
11126 \newcommand{\LWR@null@itshape}{}
11127 \newcommand{\LWR@null@normalfont}{}

```

```
11128 \newcommand{\LWR@null@em}{}

```

`\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.

```
11129 \catcode'\$=\active% redefining $ below
11130 \catcode'_ =12% redefining _ below
11131 \newcommand*\{\LWR@nullfonts}{}
11132 \LetLtxMacro\emph\LWR@null@emph%
11133 \LetLtxMacro\textmd\LWR@null@textmd%
11134 \LetLtxMacro\textbf\LWR@null@textbf%
11135 \LetLtxMacro\textrm\LWR@null@textrm%
11136 \LetLtxMacro\textsf\LWR@null@textsf%
11137 \LetLtxMacro\texttt\LWR@null@texttt%
11138 \LetLtxMacro\textup\LWR@null@textup%
11139 \LetLtxMacro\textit\LWR@null@textit%
11140 \LetLtxMacro\textsc\LWR@null@textsc%
11141 \LetLtxMacro\textulc\LWR@null@textulc%
11142 \LetLtxMacro\textsi\LWR@null@textsi%
11143 \LetLtxMacro\textsl\LWR@null@textsl%
11144 \LetLtxMacro\textnormal\LWR@null@textnormal%
11145 \LetLtxMacro\rmfamily\LWR@null@rmfamily%
11146 \LetLtxMacro\sffamily\LWR@null@sffamily%
11147 \LetLtxMacro\ttfamily\LWR@null@ttfamily%
11148 \LetLtxMacro\bfseries\LWR@null@bfseries%
11149 \LetLtxMacro\mdseries\LWR@null@mdseries%
11150 \LetLtxMacro\upshape\LWR@null@upshape%
11151 \LetLtxMacro\slshape\LWR@null@slshape%
11152 \LetLtxMacro\scshape\LWR@null@scshape%
11153 \LetLtxMacro\ulcshape\LWR@null@ulcshape%

11154 \LetLtxMacro\sisshape\LWR@null@sisshape%

```

```

11155 \LetLtxMacro\itshape\LWR@null@itshape%
11156 \LetLtxMacro\normalfont\LWR@null@normalfont%
11157 \LetLtxMacro\em\LWR@null@em%

```

#### Various built-in symbols.

```

11158 \renewcommand*{\$}{-}%
11159 \renewcommand*{\%}{-}%
11160 \renewcommand*{_}{-}%
11161 \renewcommand*{\}{-}%
11162 \renewcommand*{\{ }{-}%
11163 \renewcommand*{\&}{and}%
11164 \renewcommand*{\#}{-}%
11165 \renewcommand*{\,}{-}%
11166 \renewcommand*{\~}{-}%
11167 \renewcommand*{\^}[1]{-}%
11168 \renewcommand*{\~}[1]{-}%
11169 \renewcommand*{\newline}{-}%
11170 \renewcommand*{\textasciicircum}{-}%
11171 \renewcommand*{\textasciitilde}{-}%
11172 \renewcommand*{\textasteriskcentered}{-}%
11173 \renewcommand*{\textbackslash}{-}%
11174 \renewcommand*{\textbar}{-}%
11175 \renewcommand*{\textbardbl}{-}%
11176 \renewcommand*{\textbigcircle}{-}%
11177 \renewcommand*{\textbraceleft}{-}%
11178 \renewcommand*{\textbraceright}{-}%
11179 \renewcommand*{\textbullet}{-}%
11180 \renewcommand*{\textcopyright}{-}%
11181 \renewcommand*{\textdagger}{-}%
11182 \renewcommand*{\textdaggerdbl}{-}%
11183 \renewcommand*{\textdollar}{-}%
11184 \renewcommand*{\textellipsis}{-}%
11185 \renewcommand*{\textemdash}{-}%
11186 \renewcommand*{\textendash}{-}%
11187 \renewcommand*{\textexclamdown}{-}%
11188 \renewcommand*{\textgreater}{-}%
11189 \renewcommand*{\textless}{-}%
11190 \renewcommand*{\textordfeminine}{-}%
11191 \renewcommand*{\textordmasculine}{-}%
11192 \renewcommand*{\textparagraph}{-}%
11193 \renewcommand*{\textperiodcentered}{-}%
11194 \renewcommand*{\textpertenthousand}{-}%
11195 \renewcommand*{\textperthousand}{-}%
11196 \renewcommand*{\textquestiondown}{-}%
11197 \renewcommand*{\textquotedblleft}{-}%
11198 \renewcommand*{\textquotedblright}{-}%
11199 \renewcommand*{\textquoteleft}{-}%
11200 \renewcommand*{\textquoteright}{-}%
11201 \renewcommand*{\textregistered}{-}%
11202 \renewcommand*{\textsection}{-}%
11203 \renewcommand*{\textsterling}{-}%
11204 \renewcommand*{\texttrademark}{-}%
11205 \renewcommand*{\textunderscore}{-}%
11206 \renewcommand*{\textvisiblespace}{-}%

```

```

11207 \renewcommand*{\copyright}{-}%
11208 \renewcommand*{\dag}{-}%
11209 \renewcommand*{\ddag}{-}%
11210 \renewcommand*{\dots}{-}%
11211 \renewcommand*{\P}{-}%
11212 \renewcommand*{\pounds}{-}%
11213 \renewcommand*{\S}{-}%
11214 \renewcommand*{\aa}{a}%
11215 \renewcommand*{\AA}{A}%
11216 \renewcommand*{\AE}{AE}%
11217 \renewcommand*{\ae}{ae}%
11218 \renewcommand*{\dh}{d}%
11219 \renewcommand*{\DH}{D}%
11220 \renewcommand*{\DJ}{D}%
11221 \renewcommand*{\dj}{d}%
11222 \renewcommand*{\IJ}{IJ}%
11223 \renewcommand*{\ij}{ij}%
11224 \renewcommand*{\L}{L}%
11225 \renewcommand*{\l}{l}%
11226 \renewcommand*{\NG}{NG}%
11227 \renewcommand*{\ng}{ng}%
11228 \renewcommand*{\O}{O}%
11229 \renewcommand*{\o}{o}%
11230 \renewcommand*{\oe}{oe}%
11231 \renewcommand*{\OE}{OE}%
11232 \renewcommand*{\ss}{ss}%
11233 \renewcommand*{\SS}{SS}%
11234 \renewcommand*{\th}{th}%
11235 \renewcommand*{\TH}{TH}%
11236 \renewcommand*{\guillemotleft}{}%
11237 \renewcommand*{\guilsinglleft}{}%
11238 \renewcommand*{\quotedblbase}{}%
11239 \renewcommand*{\textquotedbl}{}%
11240 \renewcommand*{\guillemotright}{}%
11241 \renewcommand*{\guilsinglright}{}%
11242 \renewcommand*{\quotesinglbase}{}%

11243 \renewcommand*{\HTMLunicode}[1]{}%
11244 \renewcommand*{\HTMLentity}[1]{}%

11245 \renewcommand{\textsuperscript}[1]{##1}%
11246 \renewcommand{\textsubscript}[1]{##1}%

11247 \renewcommand{\underline}[1]{##1}%

11248 \RenewDocumentCommand{\hspace}{s m}{}

11249 \RenewDocumentCommand{\LWR@htmlspanclass}{o m +m}{##3}%
11250 \DeclareExpandableDocumentCommand{\InlineClass}{D{({})}{ } o m +m}{##4}%

```

Nullify math macros.

```

11251 \def\(<##1\>){}%

```

```

11252 \def\[[##1\]\]{}%
11253 \RenewDocumentCommand{\LWR@subsingledollar}{s m m m}{}%
11254 \protected\def$##1${}%

```

Nullify logos:

```

11255 \renewcommand*{\TeX}{TeX}%
11256 \renewcommand*{\LaTeX}{LaTeX}%
11257 \renewcommand*{\LaTeXe}{LaTeX2e}%
11258 \renewcommand*{\LuaTeX}{LuaTeX}%
11259 \renewcommand*{\LuaLaTeX}{LuaLaTeX}%
11260 \renewcommand*{\XeTeX}{XeTeX}%
11261 \renewcommand*{\XeLaTeX}{XeLaTeX}%
11262 \renewcommand*{\ConTeXt}{ConTeXt}%
11263 \renewcommand*{\BibTeX}{BibTeX}%
11264 \renewcommand*{\MakeIndex}{MakeIndex}%
11265 \renewcommand*{\AmS}{AmS}%
11266 \renewcommand*{\MiKTeX}{MiKTeX}%
11267 \renewcommand*{\LyX}{LyX}%

```

Use the simpler form with `\texorpdfstring`:

```

11268 \let\texorpdfstring\relax%
11269 \newcommand{\texorpdfstring}[2]{##2}%
11270 }
11271 \catcode'\$=3%
11272 \catcode'_ =8%

```

`\FilenameNullify` {*(redefinitions)*}

Adds more nullifying definitions for filename generation.

```

11273 \newcommand*\FilenameNullify}[1]{%
11274 \appto{\LWR@nullfonts}{#1}%
11275 }

```

Remembers the current font family, series, and shape. `fontaxes` support is integrated [here](#).

```

11276 \newcommand*\LWR@f@family}{rm}
11277 \newcommand*\LWR@f@series}{md}
11278 \newcommand*\LWR@f@shape}{up}
11279 \newcommand*\LWR@f@shapecaps}{ulc}

```

`\LWR@textcurrentfont` {*(text)*}

Prints the text with the current font choices. Avoids nesting repeated font selections.

```

11280 \newcounter{LWR@textcurrentfontdepth}
11281 \setcounter{LWR@textcurrentfontdepth}{0}
11282
11283 \newcommand*\LWR@textcurrentfont}[1]{%

```

```

11284 \ifnumcomp{\value{LWR@textcurrentfontdepth}}{>}{0}%
11285 {%
11286 \addtocounter{LWR@textcurrentfontdepth}{1}%
11287 #1%
11288 \addtocounter{LWR@textcurrentfontdepth}{-1}%
11289 }%
11290 {%
11291 \addtocounter{LWR@textcurrentfontdepth}{1}%
11292 \InlineClass{%
11293 text\LWR@family\LWR@origtilde{%
11294 text\LWR@series\LWR@origtilde{%
11295 text\LWR@shape\LWR@origtilde{%
11296 text\LWR@shapecaps%
11297 }%
11298 {#1}%
11299 \addtocounter{LWR@textcurrentfontdepth}{-1}%
11300 }%
11301 }

```

Env LWR@blocktextcurrentfont Prints the contents with the current font choices.

```

11302 \newenvironment*{LWR@blocktextcurrentfont}{%
11303 \LWR@stoppars%
11304 \BlockClass{%
11305 text\LWR@family\LWR@origtilde{%
11306 text\LWR@series\LWR@origtilde{%
11307 text\LWR@shape\LWR@origtilde{%
11308 text\LWR@shapecaps%
11309 }%
11310 }\endBlockClass\LWR@startpars}

```

\mdseries

```

11311 \newrobustcmd*{\LWR@HTML@mdseries}{\renewcommand*{\LWR@f@series}{md}}
11312 \LWR@formatted{mdseries}

```

\bfseries

```

11313 \newrobustcmd*{\LWR@HTML@bfseries}{\renewcommand*{\LWR@f@series}{bf}}
11314 \LWR@formatted{bfseries}

```

\ebweight From nfssect-cfr.

```

11315 \newrobustcmd*{\LWR@HTML@ebweight}{\renewcommand*{\LWR@f@series}{eb}}
11316 \LWR@formatted{ebweight}

```

\lgweight From nfssect-cfr.

```

11317 \newrobustcmd*{\LWR@HTML@lgweight}{\renewcommand*{\LWR@f@series}{lg}}
11318 \LWR@formatted{lgweight}

```

`\rmfamily`

```
11319 \newrobustcmd*{\LWR@HTML@rmfamily}{\renewcommand*{\LWR@f@family}{rm}}
11320 \LWR@formatted{rmfamily}
```

`\sffamily`

```
11321 \newrobustcmd*{\LWR@HTML@sffamily}{\renewcommand*{\LWR@f@family}{sf}}
11322 \LWR@formatted{sffamily}
```

`\ttfamily`

```
11323 \newrobustcmd*{\LWR@HTML@ttfamily}{\renewcommand*{\LWR@f@family}{tt}}
11324 \LWR@formatted{ttfamily}
```

`\upshape`

```
11325 \newrobustcmd*{\LWR@HTML@upshape}{\renewcommand*{\LWR@f@shape}{up}}
11326 \LWR@formatted{upshape}
```

`\itshape`

```
11327 \newrobustcmd*{\LWR@HTML@itshape}{\renewcommand*{\LWR@f@shape}{it}}
11328 \LWR@formatted{itshape}
```

`\scshape`

```
11329 \newrobustcmd*{\LWR@HTML@scshape}{\renewcommand*{\LWR@f@shapecaps}{sc}}
11330 \LWR@formatted{scshape}
```

`\ulcshape` From fontaxes.

```
11331 \@ifundefined{ulcshape}{
11332 \LetLtxMacro\ulcshape\upshape
11333 }{}
11334 \newrobustcmd*{\LWR@HTML@ulcshape}{\renewcommand*{\LWR@f@shapecaps}{ulc}}
11335 \LWR@formatted{ulcshape}
```

`\sishape`

```
11336 \@ifundefined{sishape}{
11337 \LetLtxMacro\sishape\scshape
11338 }{}
11339 \newrobustcmd*{\LWR@HTML@sishape}{%
11340 \renewcommand*{\LWR@f@shape}{it}
11341 \renewcommand*{\LWR@f@shapecaps}{sc}%
11342 }
11343 \LWR@formatted{sishape}
```

`\slshape`

```
11344 \newrobustcmd*{\LWR@HTML@slshape}{\renewcommand*{\LWR@f@shape}{sl}}
11345 \LWR@formatted{slshape}
```

`\normalfont`

```
11346 \renewrobustcmd*{\normalfont}{\rmfamily\mdseries\upshape\ulcshape}
```

`\sp {<text>}`

For siunitx. Must work in math mode.

```
11347 \renewcommand{\sp}[1]{\text{^{#1}{}}}
```

`\sb {<text>}`

For siunitx. Must work in math mode.

```
11348 \renewcommand{\sb}[1]{\text{_{#1}{}}}
```

`\textsuperscript {<text>}`

```
11349 \newrobustcmd{\textsuperscript}[1]{\LWR@htmlspan{sup}{#1}}
```

`\@textsuperscript {<text>}`

```
11350 \renewcommand{\@textsuperscript}[1]{\LWR@htmlspan{sup}{#1}}
```

`\textsubscript {<text>}`

```
11351 \AtBeginDocument{
11352 \newrobustcmd{\textsubscript}[1]{\LWR@htmlspan{sub}{#1}}
11353 }
```

`\@textsubscript {<text>}`

```
11354 \AtBeginDocument{
11355 \renewcommand{\@textsubscript}[1]{\LWR@htmlspan{sub}{#1}}
11356 }
```

`\up {<text>}` Prints superscript.

This is `\let` at the beginning of the document in case some other package has changed the definition.

```
11357 \AtBeginDocument{\let\up\textsuperscript}
```

`\fup`  $\{\langle text \rangle\}$  Prints superscript.

Supports `fntcount` package.

This is `\let` at the beginning of the document in case some other package has changed the definition.

```
11358 \AtBeginDocument{\let\fup\textsuperscript}
```

`\underline`  $\{\langle text \rangle\}$

```
11359 \renewcommand{\underline}[1]{%
11360 \InlineClass%
11361 (text-decoration:underline; text-decoration-skip: auto)%
11362 {\underline}{#1}%
11363 }
```

`\LWR@overline`  $\{\langle text \rangle\}$

```
11364 \newcommand{\LWR@overline}[1]{%
11365 \InlineClass%
11366 (text-decoration:overline; text-decoration-skip: auto)%
11367 {\overline}{#1}%
11368 }
```

`\LWR@currenttextcolor` The color to use for text and `\rule`, defaulting to black:

```
11369 \newcommand*\LWR@currenttextcolor{\black}
```

`\LWR@tempcolor` The color converted to HTML colorspace.

`\LWR@tempcolortwo`

```
11370 \newcommand*\LWR@tempcolor{}
11371 \newcommand*\LWR@tempcolortwo{}
```

`\LWR@findcurrenttextcolor` Sets `\LWR@tempcolor` to the current color.

```
11372 \newcommand*\LWR@findcurrenttextcolor{%
11373 \renewcommand{\LWR@tempcolor}{000000}%
11374 }
```

`\LWR@textcurrentcolor`  $\{\langle text \rangle\}$  Like `\textcolor` but uses the current `\color` instead.

```
11375 \NewDocumentCommand{\LWR@textcurrentcolor}{m}{%
11376 \renewcommand*\LWR@currenttextcolor{\black}%
11377 #1%
11378 }
```

```
11379 \end{warpHTML}
```

**for PRINT output:** 11380 `\begin{warpprint}`

`\LWR@textcurrentfont`  $\{\langle text \rangle\}$

Prints the text with the current font choices.

```
11381 \newcommand*\LWR@textcurrentfont}[1]{#1}
```

Env `LWR@blocktextcurrentfont` Prints the contents with the current font choices.

```
11382 \newenvironment*LWR@blocktextcurrentfont\{\}
```

`\FilenameNullify`  $\{\langle macros to nullify \rangle\}$

```
11383 \newcommand*\FilenameNullify[1]{}
```

```
11384 \end{warpprint}
```

## 91 Skips, spaces, font sizes

**for HTML output:** 11385 `\begin{warppHTML}`

`\`, and `\thinspace` may be redefined by other packages, so are redefined `\AtBeginDocument` here.

Direct-formatting space commands become HTML entities:

```
11386 \AtBeginDocument{
11387 \renewrobustcmd*\,\{\HTMLUnicode{202f}\} % HTML thin non-breakable space
11388 \renewrobustcmd*\thinspace\{\HTMLUnicode{202f}\} % HTML thin non-breakable space
11389 \renewrobustcmd*\negthinspace\{\HTMLUnicode{202f}\} % HTML thin non-breakable space
11390 \renewrobustcmd*\~\{\HTMLentity{nbsp}\}
11391 \renewrobustcmd*\textellipsis\{\HTMLUnicode{2026}\}
11392 }
```

Direct-formatting font sizes are ignored:

```
11393 \newrobustcmd*\LWR@HTML@normalsize\{\}
11394 \LWR@formatted{normalsize}
11395
11396 \newrobustcmd*\LWR@HTML@small\{\}
11397 \LWR@formatted{small}
11398
11399 \newrobustcmd*\LWR@HTML@footnotesize\{\}
11400 \LWR@formatted{footnotesize}
11401
11402 \newrobustcmd*\LWR@HTML@scriptsize\{\}
11403 \LWR@formatted{scriptsize}
11404
11405 \newrobustcmd*\LWR@HTML@tiny\{\}
11406 \LWR@formatted{tiny}
```

```

11407
11408 \newrobustcmd*{\LWR@HTML@large}{}
11409 \LWR@formatted{large}
11410
11411 \newrobustcmd*{\LWR@HTML@Large}{}
11412 \LWR@formatted{Large}
11413
11414 \newrobustcmd*{\LWR@HTML@LARGE}{}
11415 \LWR@formatted{LARGE}
11416
11417 \newrobustcmd*{\LWR@HTML@huge}{}
11418 \LWR@formatted{huge}
11419
11420 \newrobustcmd*{\LWR@HTML@Huge}{}
11421 \LWR@formatted{Huge}

11422 \DeclareDocumentCommand{\onecolumn}{}{}
11423
11424 \DeclareDocumentCommand{\twocolumn}{0{}}{
11425
11426 #1
11427
11428 }

```

#### \hfill

```

11429 \newcommand*{\LWR@HTML@hfill}{\quad}
11430 \LWR@formatted{hfill}

```

#### \hrulefill

```

11431 \newcommand*{\LWR@HTML@hrulefill}{\rule{1in}{1pt}}
11432 \LWR@formatted{hrulefill}

```

#### \dotfill

```

11433 \newcommand*{\LWR@HTML@dotfill}{\dots}
11434 \LWR@formatted{dotfill}

```

#### \newpage

```

11435 \renewcommand*{\newpage}{
11436
11437 }

```

#### \newline Uses the HTML <br /> element.

```

11438 \newrobustcmd*{\LWR@newlinebr}{\unskip\LWR@htmltag{br /}\LWR@orignewLine}%
11439 \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`.

```
11440 \LetLtxMacro\LWR@origendofline\
11441 \NewDocumentCommand{\LWR@endofline}{s O{0pt}}
11442 {%
11443 \newline%

11444 \setlength{\LWR@templengthone}{#2}%
11445 \ifdimgreater{\LWR@templengthone}{0pt}{\newline}{}%
11446 }
```

`\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.

```
11447 \newcommand*{\LWR@minipagestartpars}{%
11448 \ifbool{LWR@minipagethispar}{\LWR@startpars}{}%
11449 }
```

`\LWR@minipagestoppars` Placed just after `\hspace`, `\quad`, or `\qquad`'s HTML output.

```
11450 \newcommand*{\LWR@minipagestoppars}{%
11451 \ifbool{LWR@minipagethispar}{\LWR@stoppars}{}%
11452 }
```

`\quad` Handles special minipage & horizontal space interactions. Uses `2003 EM SPACE` to pass validation.

```
11453 \renewrobustcmd*{\quad}{%
11454 \LWR@minipagestoppars%
11455 \HTMLUnicode{2003}%
11456 \LWR@minipagestartpars%
11457 }
```

`\quad` Handles special minipage & horizontal space interactions.

```
11458 \renewrobustcmd*{\quad}{\quad\quad}
```

`\enskip` Handles special minipage & horizontal space interactions.

```
11459 \renewrobustcmd*{\enskip}{%
11460 \LWR@minipagestoppars%
11461 \HTMLUnicode{2002}%
11462 \LWR@minipagestartpars%
11463 }
```

Len `\LWR@tempwidth` Used to compute span width, height, raise for `\hspace` and `\rule`:

Len `\LWR@tempheight`

Len `\LWR@tempraise`

```
11464 \newlength{\LWR@tempwidth}
11465 \newlength{\LWR@tempheight}
11466 \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 `\quad`.

```
11467 \newcommand{\LWR@select@html@hspace}{%
11468 \RenewDocumentCommand{\hspace}{s m}{%
11469 \setlength{\LWR@tempwidth}{##2}%
```

If `\fill`, change to `\quad`:

```
11470 \ifnum\gluestretchorder\LWR@tempwidth>0%
11471 \setlength{\LWR@tempwidth}{2em}%
11472 \fi%
```

Only if the width is not zero:

```
11473 \ifdimcomp{\LWR@tempwidth}{=}{0pt}{\}{\}{%
```

If had a minipage this paragraph, try to inline the white space without generating paragraph tags:

```
11474 \LWR@minipagestoppars%
```

Support the HTML thin wrappable space:

```
11475 \ifdimcomp{\LWR@tempwidth}{=}{.16667em}%
11476 {%
11477 \HTMLUnicode{2009}% thin breakable space
11478 }%
```

Print the span with the converted width. Not rounded.

```
11479 {%
11480 \LWR@htmltagc{%
11481 span style="width:\LWR@printlength{\LWR@tempwidth}; % extra space
11482 display:inline-block"%
11483 }%
```

If formatting for a word processor, approximate with a number of \quads, in case a span of a given width is not supported:

```
11484 \ifbool{FormatWP}{%
11485 \setlength{\LWR@templengthone}{\LWR@tempwidth}%
11486 \whiledo{\lengthtest{\LWR@templengthone>1em}}{%
11487 \quad%
11488 \addtolength{\LWR@templengthone}{-1em}%
11489 }%
11490 }%
```

If NOT formatting for a word processor, include an empty comment to avoid an empty span:

```
11491 {\LWR@htmlcomment{}}%
```

Close the span:

```
11492 \LWR@htmltagc{/span}%
11493 }%
```

If had a minipage this paragraph, try to inline the white space without generating paragraph tags:

```
11494 \LWR@minipagestartpars%
11495}% width not 0
11496}%
11497 }
```

```
\LWR@select@html@nohspace *{\length}
\hspace
```

Used to disable \hspace while creating description \items.

```
11498 \newcommand{\LWR@select@html@nohspace}{%
11499 \RenewDocumentCommand{\hspace}{s m}{}%
11500 }
```

```
\LWR@select@print@hspace
```

```
11501 \newcommand*{\LWR@select@print@hspace}{%
11502 \renewrobustcmd\hspace{\@ifstar\@hspace\@hspace}%
11503 }
```

```
\hspace *{\length}
```

Handles special minipage & horizontal space interactions.

```
11504 \LWR@select@html@hspace
```

`\LWR@vspace` \*  $\langle length \rangle$  Nullified vspace.

```
11505 \NewDocumentCommand{\LWR@HTML@vspace}{s m}{}
11506
11507 \LWR@formatted{vspace}
```

`\linebreak` [ $\langle num \rangle$ ] Inserts an HTML br tag.

```
11508 \renewcommand*{\linebreak}[1][\newline]
```

`\nolinebreak` [ $\langle num \rangle$ ]

```
11509 \renewcommand*{\nolinebreak}[1][{}]
```

`\pagebreak` [ $\langle num \rangle$ ] Starts a new paragraph.

```
11510 \renewcommand*{\pagebreak}[1][{}
11511
11512 }
```

`\nopagebreak` [ $\langle num \rangle$ ]

```
11513 \renewcommand*{\nopagebreak}[1][{}]
```

`\enlargethispage` \*  $\langle len \rangle$

```
11514 \RenewDocumentCommand{\enlargethispage}{s m}{}%
```

`\clearpage`

`\cleardoublepage`

```
11515 \renewcommand*{\clearpage}{}
11516 \renewcommand*{\cleardoublepage}{}%
```

`\rule` [ $\langle raise \rangle$ ] [ $\langle width \rangle$ ] [ $\langle height \rangle$ ]

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.

```
11517 \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:

```
11518 \setlength{\LWR@tempwidth}{#2}%
```

If it's zero-width then skip the entire rule:

```
11519 \ifthenelse{\lengthtest{\LWR@tempwidth=0pt}}%
11520 {}% zero- width
11521 {% non-zero width
```

If it's non-zero width, set a minimal thickness so that it more reliably shows in the browser:

```
11522 \ifthenelse{%
11523 \lengthtest{\LWR@tempwidth>0pt}\AND%
11524 \lengthtest{\LWR@tempwidth<1pt}}%
11525 }%
11526 {\setlength{\LWR@tempwidth}{1pt}}%
11527 {}%
```

Likewise with height:

```
11528 \setlength{\LWR@tempheight}{#3}%
11529 \ifthenelse{%
11530 \lengthtest{\LWR@tempheight>0pt}\AND%
11531 \lengthtest{\LWR@tempheight<1pt}}%
11532 }%
11533 {\setlength{\LWR@tempheight}{1pt}}%
11534 {}%
```

If had a minipage this paragraph, try to inline the rule without generating paragraph tags:

```
11535 \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.

```
11536 \LWR@findcurrenttextcolor%
11537 \LWR@htmltagc{%
11538 span\LWR@indentHTML%
11539 style="%
```

The HTML background color is used to draw the filled rule according to the L<sup>A</sup>T<sub>E</sub>X foreground color set by `\textcolor`.

```
11540 \ifbool{FormatWP}{\background:\LWR@currenttextcolor ; }%
```

The width and height are printed, converted to PT:

```
11541 width:\LWR@printlength{\LWR@tempwidth} ; %
11542 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 L<sup>A</sup>T<sub>E</sub>X length allows a typical L<sup>A</sup>T<sub>E</sub>X expression to be used as an argument for the raise, whereas printing the raise argument directly to HTML output without conversion to a L<sup>A</sup>T<sub>E</sub>X length limits the

allowable syntax. To do: A superior method would compute a ratio of  $\text{\LaTeX}$  ex height, then print that to HTML with an ex unit.

```

11543 \ifblank{#1}%
11544 {}%
11545 {%
11546 \setlength{\LWR@tempraise}{0pt-#1}%
11547 \setlength{\LWR@tempraise}{\LWR@tempraise*2}%
11548 \LWR@indentHTML%
11549 -ms-transform: translate(0pt,\LWR@printlength{\LWR@tempraise}); %
11550 \LWR@indentHTML%
11551 -webkit-transform: translate(0pt,\LWR@printlength{\LWR@tempraise}); %
11552 \LWR@indentHTML%
11553 transform: translate(0pt,\LWR@printlength{\LWR@tempraise}); %
11554 \LWR@indentHTML%
11555 }%

```

Display inline-block to place the span inline with the text:

```

11556 display:inline-block;"\LWR@orignewline%
11557 }%

```

If formatting for a word processor, approximate with a number of underscores, in case a span of a given width is not supported:

```

11558 \ifbool{FormatWP}{%
11559 \setlength{\LWR@templengthone}{\LWR@tempwidth}%
11560 \whiledo{\lengthtest{\LWR@templengthone>1em}}{%
11561 _{}%
11562 \addtolength{\LWR@templengthone}{-1em}%
11563 }%
11564 }%

```

If NOT formatting for a word processor, add a comment to avoid an empty <span>:

```

11565 {\LWR@htmlcomment{}}%

```

Close the span:

```

11566 \LWR@htmltagc{/span}%

```

If had a minipage this paragraph, try to inline the white space without generating paragraph tags:

```

11567 \LWR@minipagestartpars%
11568 }% non-zero width
11569 }
11570
11571 \LWR@formatted{rule}

11572 \end{warpHTML}

```

## 92 \phantomsection

**for HTML output:** 11573 \begin{warpHTML}

\phantomsection Emulate the `hyperref` \phantomsection command, often used to insert the bibliography into the table of contents. Ignores \ForceHTMLTOC.

```
11574 \DeclareDocumentCommand{\phantomsection}{\}%
11575 \begingroup%
11576 \boolfalse{LWR@forcinghtmltoc}%
11577 \section*{\}%
11578 \endgroup%
11579 }

11580 \end{warpHTML}
```

## 93 \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:** 11581 \begin{warpall}  
11582 \newrobustcmd\*{\Xe}  
11583 {X\hspace{-.1667em}\raisebox{-.5ex}{E}}  
11584  
11585 \AtBeginDocument{  
11586 \ifpackageloaded{graphics}{  
11587 \ifpackageloaded{metalogo}{\}  
11588 \renewrobustcmd\*{\Xe}  
11589 {X\hspace{-.1667em}\raisebox{-.5ex}{\reflectbox{E}}}  
11590 }  
11591 }{  
11592 \PackageWarningNoLine{lwarp}{Load graphicx or graphics  
11593 for improved XeTeX logo}  
11594 }  
11595 }  
11596  
11597 \providerobustcmd\*{\XeTeX}{\mbox{\Xe\hspace{-.125em}\TeX}}  
11598 \providerobustcmd\*{\XeLaTeX}{\mbox{\Xe\hspace{-.125em}\LaTeX}}  
11599 \providerobustcmd\*{\AmS}{\%  
11600 \leavevmode\hbox{\$\mathcal A\$}\kern-.2em\lower.376ex%  
11601 \hbox{\$\mathcal M\$}\kern-.2em\mathcal S\$}%

```

11602 }
11603 \newrobustcmd*{\LyX}{\textsf{LyX}}
11604 \providerobustcmd*{\LuaTeX}{\mbox{Lua\TeX}}
11605 \providerobustcmd*{\LuaLaTeX}{\mbox{Lua\LaTeX}}
11606 \providerobustcmd*{\BibTeX}{\mbox{B\textsc{ib}\TeX}}
11607 \providerobustcmd*{\MakeIndex}{\mbox{\textit{MakeIndex}}}
11608 \providerobustcmd*{\ConTeXt}{\mbox{Con\TeX{t}}}
11609 \providerobustcmd*{\MiKTeX}{\mbox{MiK\TeX}}
11610 \end{warpall}

```

for HTML output: 11611 \begin{warpHTML}

The print-mode versions of the following may be changed by metalogo, so their print formatting is recorded \AtBeginDocument.

\TeX     $\mathrm{T}\mathrm{E}\mathrm{X}$

latexlogo is a css class used to properly typeset the E and A in  $\mathrm{L}\mathrm{A}\mathrm{T}\mathrm{E}\mathrm{X}$  and friends.

latexlogofont is a css class used to select the font for the rest of the logo in  $\mathrm{L}\mathrm{A}\mathrm{T}\mathrm{E}\mathrm{X}$ , Lua $\mathrm{T}\mathrm{E}\mathrm{X}$ , Con $\mathrm{T}\mathrm{E}\mathrm{X}$ t, etc.

```

11612 \newrobustcmd*{\LWR@HTML@TeX}
11613 {%
11614 \InlineClass{latexlogofont}%
11615 {%
11616 \InlineClass{latexlogo}%
11617 {%
11618 T%
11619 \InlineClass{latexlogosub}{e}%
11620 X%
11621 }%
11622 }%
11623 }
11624 \AtBeginDocument{\LWR@formatted{TeX}}% may have been patched by metalogo

```

\LaTeX     $\mathrm{L}\mathrm{A}\mathrm{T}\mathrm{E}\mathrm{X}$ ,  $\mathrm{L}\mathrm{A}\mathrm{T}\mathrm{E}\mathrm{X}2_{\epsilon}$

\LaTeXe

```

11625 \newrobustcmd*{\LWR@HTML@LaTeX}
11626 {%
11627 \InlineClass{latexlogofont}%
11628 {%
11629 \InlineClass{latexlogo}%
11630 {%
11631 L%
11632 \InlineClass{latexlogosup}{a}%
11633 T%
11634 \InlineClass{latexlogosub}{e}%
11635 X%
11636 }%
11637 }%
11638 }
11639
11640 \AtBeginDocument{\LWR@formatted{LaTeX}}% may have been patched by metalogo

```

```

11641
11642
11643 \newrobustcmd*{\LWR@HTML@LaTeXe}
11644 {%
11645 \LaTeX%
11646 \InlineClass{latexlogofont}{%
11647 \InlineClass{latexlogotwoe}{%
11648 2%
11649 \InlineClass{latexlogotwoesub}{\HTMLUnicode{03B5}}%
11650 }%
11651 }%
11652 }
11653 \AtBeginDocument{\LWR@formatted{LaTeXe}}% may have been patched by metalogo

```

`\LuaTeX`   `LuaTeX`, `LuaATeX`

```

\LuaLaTeX
11654 \newrobustcmd*{\LWR@HTML@LuaTeX}{\InlineClass{latexlogofont}{Lua}\TeX}
11655 \AtBeginDocument{\LWR@formatted{LuaTeX}}% may have been patched by metalogo
11656
11657 \newrobustcmd*{\LWR@HTML@LuaLaTeX}{\InlineClass{latexlogofont}{Lua}\LaTeX}
11658 \AtBeginDocument{\LWR@formatted{LuaLaTeX}}% may have been patched by metalogo

```

`\XeTeX`   `XETeX`, `XELTeX`

`\XeLaTeX`

`xetexlogo` is a css class which aligns the backwards E in `XETeX` and spaces `TeX` appropriately.

`xelatexlogo` is a css class which aligns the backwards E in `XELTeX` and spaces `LATeX` appropriately.

```

11659 \newrobustcmd*{\LWR@HTML@Xe}
11660 {%
11661 X%
11662 \InlineClass{xelatexlogosub}{\HTMLUnicode{18e}}%
11663 }
11664 \AtBeginDocument{\LWR@formatted{Xe}}% may have been patched by metalogo
11665
11666 \newrobustcmd*{\LWR@HTML@XeTeX}{\InlineClass{xelatexlogo}{\Xe}\TeX}
11667 \AtBeginDocument{\LWR@formatted{XeTeX}}% may have been patched by metalogo
11668
11669 \newrobustcmd*{\LWR@HTML@XeLaTeX}{\InlineClass{xelatexlogo}{\Xe}\LaTeX}
11670 \AtBeginDocument{\LWR@formatted{XeLaTeX}}% may have been patched by metalogo

```

`\ConTeXt`   `ConTeXt`

```

11671 \newrobustcmd*{\LWR@HTML@ConTeXt}{%
11672 \InlineClass{latexlogofont}{Con}\TeX{}}%
11673 \InlineClass{latexlogofont}{t}%
11674 }
11675 \LWR@formatted{ConTeXt}

```

`\BibTeX`   `BibTeX`, *MakeIndex*  
`\MakeIndex`

```

11676 \newrobustcmd*{\LWR@HTML@BibTeX}
11677 {\InlineClass{latexlogofont}{B\textsc{ib}}\TeX}
11678 \LWR@formatted{BibTeX}
11679
11680 \newrobustcmd*{\LWR@HTML@MakeIndex}
11681 {\InlineClass{latexlogofont}{\textit{MakeIndex}}}
11682 \LWR@formatted{MakeIndex}

```

\AmS *AMS*

amslogo is a css class used for the *AMS* logo.

```

11683 \AtBeginDocument{%
11684 \newrobustcmd*{\LWR@HTML@AmS}
11685 {%
11686 \InlineClass{amslogo}{%
11687 \textit{%
11688 A%
11689 \InlineClass{latexlogosub}{M}%
11690 S%
11691 }%
11692 }%
11693 }%
11694 \LWR@formatted{AmS}
11695 }

```

\MiKTeX *MiKTeX*

```

11696 \newrobustcmd*{\LWR@HTML@MiKTeX}{\InlineClass{latexlogofont}{MiK}\TeX}
11697 \LWR@formatted{MiKTeX}

```

\LyX *LyX*

lyxlogo is a css class used for the *LyX* logo.

```

11698 \newrobustcmd*{\LWR@HTML@LyX}{\InlineClass{lyxlogo}{LyX}}
11699 \LWR@formatted{LyX}

11700 \end{warpHTML}

```

## 94 \AtBeginDocument, \AtEndDocument

**for HTML output:** 11701 \begin{warpHTML}

\LWR@LwarpStart Automatically sets up the HTML-related actions for the start and end of the document.

```

\LWR@LwarpEnd
11702 \AfterEndPreamble{\LWR@LwarpStart}
11703 \AtEndDocument{\LWR@LwarpEnd}

11704 \end{warpHTML}

```

## 95 Loading KOMA-SCRIPT class patches

Load patches to koma-script.

```
for HTML output: 11705 \begin{warpHTML}

11706 \@ifclassloaded{scrbook}{\RequirePackage{lwarp-patch-komascript}}{}
11707 \@ifclassloaded{scrartcl}{\RequirePackage{lwarp-patch-komascript}}{}
11708 \@ifclassloaded{scrreprt}{\RequirePackage{lwarp-patch-komascript}}{}

11709 \end{warpHTML}
```

## 96 Loading MEMOIR class patches

Load patches to memoir.

```
for HTML output: 11710 \begin{warpHTML}

11711 \@ifclassloaded{memoir}{\RequirePackage{lwarp-patch-memoir}}{}

11712 \end{warpHTML}
```

## 97 ut\* class patches

Load patches to uj\* and ut\* classes, as well as ltj\* classes.

```
for HTML output: 11713 \begin{warpHTML}

11714 \newcommand*{\LWR@patchujtclasses}{

 uj/t does not use \partname

11715 \def\@partnameformat{}

11716 \def\@partcntformat##1{%
11717 \prepartname%
11718 \csname the##1\endcsname%
11719 \postpartname%
11720 \quad%
11721 }
11722 \@ifundefined{chapter}{}{
11723 \def\@chapcntformat##1{%
11724 \prechaptername%
11725 \csname the##1\endcsname%
11726 \postchaptername%
11727 \quad%
```

```

11728 }
11729 }

```

Use decimal points instead of centered dots:

```

11730 \renewcommand{\thepart}{\@Roman\c@part}
11731 \ifundefined{chapter}{
11732 \renewcommand{\thesection}{\@arabic\c@section}
11733 }{
11734 \renewcommand{\thechapter}{\@arabic\c@chapter}
11735 \renewcommand{\thesection}{\thechapter.\@arabic\c@section}
11736 }
11737 \renewcommand{\thesubsection}{\thesection.\@arabic\c@subsection}
11738 \renewcommand{\thesubsubsection}{%
11739 \thesubsection.\@arabic\c@subsubsection}
11740 \renewcommand{\theparagraph}{%
11741 \thesubsubsection.\@arabic\c@paragraph}
11742 \renewcommand{\thesubparagraph}{%
11743 \theparagraph.\@arabic\c@subparagraph}
11744 \ifundefined{chapter}{
11745 \renewcommand{\thefigure}{\@arabic\c@figure}
11746 \renewcommand{\thetable}{\@arabic\c@table}
11747 }{
11748 \renewcommand{\thefigure}{%
11749 \ifnum\c@chapter>\z@\thechapter.\fi\@arabic\c@figure}
11750 \renewcommand{\thetable}{%
11751 \ifnum\c@chapter>\z@\thechapter.\fi\@arabic\c@table}
11752 }
11753 }
11754
11755 \@ifclassloaded{ujarticle}{\LWR@patchujtclasses}{}
11756 \@ifclassloaded{ujbook}{\LWR@patchujtclasses}{}
11757 \@ifclassloaded{ujreport}{\LWR@patchujtclasses}{}
11758 \@ifclassloaded{utarticle}{\LWR@patchujtclasses}{}
11759 \@ifclassloaded{utbook}{\LWR@patchujtclasses}{}
11760 \@ifclassloaded{utreport}{\LWR@patchujtclasses}{}
11761 \@ifclassloaded{ltjarticle}{\LWR@patchujtclasses}{}
11762 \@ifclassloaded{ltjbook}{\LWR@patchujtclasses}{}
11763 \@ifclassloaded{ltjreport}{\LWR@patchujtclasses}{}
11764 \@ifclassloaded{ltjsarticle}{\LWR@patchujtclasses}{}
11765 \@ifclassloaded{ltjsbook}{\LWR@patchujtclasses}{}
11766 \@ifclassloaded{ltjsreport}{\LWR@patchujtclasses}{}
11767 \@ifclassloaded{ltjskiyou}{\LWR@patchujtclasses}{}
11768 \@ifclassloaded{ltjspf}{\LWR@patchujtclasses}{}
11769 \@ifclassloaded{ltjtarticle}{\LWR@patchujtclasses}{}
11770 \@ifclassloaded{ltjtbook}{\LWR@patchujtclasses}{}
11771 \@ifclassloaded{ltjtreport}{\LWR@patchujtclasses}{}
11772 \end{warpHTML}

```

## 98 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: 11773 `\begin{warphTML}`

`\AtBeginDocument` in case the user set `FileSectionNames` in the preamble.

```

11774 \AtBeginDocument{
11775 \ifpackageloaded{ctexpatch}{%
11776 \def\@partcntformat#1{%
11777 \LWR@isolate{\CTEX@partname}~%
11778 \CTEX@part@aftername%
11779 }%
11780
11781 \def\@partnameformat{}
11782
11783 \def\@chapcntformat#1{%
11784 \LWR@isolate{\CTEX@chaptername}~%
11785 \CTEX@chapter@aftername%
11786 }%
11787 }{}
11788 }

11789 \end{warphTML}

```

## 99 kotexutf patches

Patch for `kotexutf`, which is loaded before `lwarp`.

`kotexutf`'s `\@setref` was conflicting with `lwarp`'s cross references.

for HTML output: 11790 `\begin{warphTML}`

If `kotexutf`'s version of `\@setref` is detected, it is reverted to the original.

```

11791 \AtBeginDocument{
11792 \ifpackageloaded{kotexutf}{%
11793 \def\LWR@kotexutf@setref#1#2#3{%
11794 \@setref@dhuks@orig{#1}{#2}{#3}%
11795 \ifx#1\relax\else
11796 \bgroup
11797 \dhuks@make@ckjchar@null
11798 \edef\@temp{\expandafter#2#1}\global\josatoks\expandafter{\@temp}%
11799 \egroup
11800 \fi%
11801 }%

```

```
11802
11803 \ifdefequal{\@setref}{\LWR@kotexutf@setref}{
11804 \let\@setref\@setref@dhucs@orig
11805 }{}
11806 }{}
11807 }

11808 \end{warpHTML}
```

---

File 2 **lwarp-2in1.sty**

§ 100     Package **2in1**

Pkg    2in1    2in1 is ignored.

**for HTML output:**    1 \LWR@ProvidesPackageDrop{2in1}

---

File 3 **lwarp-2up.sty**

§ 101     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**

§ 102     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**

§ 103      Package **a4wide**

Pkg    a4wide    a4wide is ignored.

**for HTML output:**    1 \LWR@ProvidesPackageDrop{a4wide}[1994/08/30]

---

File 6 **lwarp-a5comb.sty**

§ 104      Package **a5comb**

Pkg    a5comb    a5comb is ignored.

**for HTML output:**    1 \LWR@ProvidesPackageDrop{a5comb}


---

File 7 **lwarp-abstract.sty**

§ 105      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
18 \@ifclassloaded{memoir}
19 {
20 \renewenvironment{abstract}{%
21 % \titlepage
22 \null\vfil
23 \@beginparpenalty\@lowpenalty
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{@bstr@ctlist}\if@bsrunin\@bsrunintitle\fi\abstracttextfont}%
43 {\par\end{@bstr@ctlist}\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**

### § 106 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-accsupp.sty**

#### § 107 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]{}

```

---

### File 10 **lwarp-acro.sty**

#### § 108 Package **acro**

*(Emulates or patches code by CLEMENS NIEDERBERGER.)*

Pkg acro acro is patched for use by lwarp.

**for HTML output:** 1 \LWR@ProvidesPackagePass{acro}[2017/01/30]

\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}{\l}{
11 \catcode'\$=\active% lwarp
12 \LWR@DeclareAcronym
13 }

```

Modified to activate the current font:

```

14 \ExplSyntaxOn
15 \cs_gset_protected:Npn \acro_write_short:nn #1#2
16 {
17 \mode_if_horizontal:F { \leavevmode }
18 \group_begin:
19 \bool_if:NTF \l__acro_custom_format_bool
20 { \l__acro_custom_format_tl }
21 { \l__acro_short_format_tl }
22 {\LWR@textcurrentfont{#2}}% lwarp
23 \group_end:
24 }
25
26 \cs_gset_protected:Npn \acro_write_alt:nn #1#2
27 {
28 \mode_if_horizontal:F { \leavevmode }
29 \group_begin:
30 \bool_if:NTF \l__acro_custom_format_bool
31 { \l__acro_custom_format_tl }
32 { \l__acro_alt_format_tl }
33 {\LWR@textcurrentfont{#2}}% lwarp
34 \group_end:
35 }
36
37 \cs_gset_protected:Npn \acro_write_long:nn #1#2
38 {
39 \mode_if_horizontal:F { \leavevmode }
40 \group_begin:
41 \bool_if:NTF \l__acro_custom_long_format_bool
42 { \l__acro_custom_long_format_tl }
43 { \use:n }
44 {
45 \use:x
46 {
47 \exp_not:n {#1}
48 {
49 \bool_if:NTF \l__acro_first_upper_bool
50 { \exp_not:N \l__acro_first_upper_case:n { \exp_not:n {
51 \LWR@textcurrentfont{#2}}% lwarp
52 } } }
53 { \exp_not:n {\LWR@textcurrentfont{#2}} }% lwarp
54 }
55 }
56 }
57 \group_end:
58 }
59 \ExplSyntaxOff

```

File 11 **lwarp-acronym.sty**§ 109 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 \LetLtxMacro\@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 12 **lwarp-adjmulticol.sty**§ 110 Package **adjmulticol**

*(Emulates or patches code by BORIS VEYTSMAN.)*

Pkg adjmulticol adjmulticol is emulated.

Emulation similar to multicols 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 \* {\langle numcols \rangle} {\langle left margi \rangle} {\langle right margin \rangle}

3 \NewDocumentEnvironment{adjmulticols}{s m 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@mccolstype}{multicols}%

10 \ifnumcomp{#2}{=}{1}{\renewcommand\*{\LWR@mccolstype}{singlecolumn}}{%

Help avoid page overflow:

11 \LWR@forcenewpage%

Create the <div> with the given margin and class:

12 \BlockClass[%

13 \LWR@print@mbbox{margin-left:\LWR@printlength{\LWR@templengthone}} ; %

14 \LWR@print@mbbox{margin-right:\LWR@printlength{\LWR@templengthtwo}}%

15 ]{\LWR@mccolstype}%

16 }

17 {\endBlockClass}

File 13 **lwarp-addlines.sty**§ 111 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 14 **lwarp-afterpage.sty**§ 112 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 15 **lwarp-algorithm2e.sty**§ 113 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\]=\@mathdisplay%
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 16 **lwarp-algorithmicx.sty**

### § 114 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 488.1.

**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 17 **lwarp-alltt.sty**

## § 115 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 \LWR@forcenewpage
6 \LWR@atbeginverbatim{3}{alltt}%
7 }
8 \AfterEndEnvironment{alltt}{%
9 \LWR@afterendverbatim{2}%
10 }
11 }

```

---

### File 18 **lwarp-amsmath.sty**

## § 116 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]

```

Patches to allow \eqref inside a caption:

```

2 \def\maketag@@@#1{\text{#1}}
3 \def\tagform@#1{\maketag@@@(\ignorespaces#1\unskip)}}

```

Patches for  $\mathcal{AMS}$  math `\tag` macro to remember the first tag:

```

4 \ifbool{mathjax}{}% not mathjax
5
6 \LetLtxMacro\LWR@origmake@df@tag@@\make@df@tag@@
7 \LetLtxMacro\LWR@origmake@df@tag@@@\make@df@tag@@@
8
9 \renewcommand*\make@df@tag@@[1]{%
10 \LWR@remembertag{#1}%
11 \LWR@origmake@df@tag@@{#1}%
12 }
13
14 \renewcommand*\make@df@tag@@@[1]{%
15 \LWR@remembertag{#1}%
16 \LWR@origmake@df@tag@@@{#1}%
17 }
18
19 }% not mathjax

```

The following  $\mathcal{AMS}$  environments are patched in-place:

`\LWR@amsmathenv@before`     $\{ \langle environment\ name \rangle \}$

Embeds the environment inside a `lateximage`.

```

20 \newcommand*\LWR@amsmathenv@before[1]{%
21 \begin{BlockClass}{displaymathnumbered}
22 \LWR@newautoidanchor%
23 \booltrue{LWR@indisplaymathimage}%
24 \begin{lateximage}[\LWR@amsmathbodynumbered{#1}]
25 \LWR@applyxfakebold%
26 }

```

`\LWR@amsmathenv@before`     $\{ \langle environment\ name \rangle \}$

Embeds the environment with `MATHJAX` or a `lateximage`.

```

27 \newcommand*\LWR@amsmathenv@before[1]{%
28 \LWR@stoppars%
29 \ifboolexpr{bool{mathjax} or (bool{FormatWP} and bool{WPMarkMath}) }%
30 {
31 \LWR@syncmathjax
32 \boolfalse{LWR@amsmultline}
33 \ifstrequal{#1}{multline}{\booltrue{LWR@amsmultline}}{}
34 \ifstrequal{#1}{multline*}{\booltrue{LWR@amsmultline}}{}

```



`autonum`'s "+" environments are not supported by `MATHJAX`.

```

35 \LWR@beginhideamsmath
36 }
37 {
38 \LWR@amsmathenv@before{#1}
39 }
40 }

```

`\LWR@amsmathenv@after`

Embeds the environment inside a `lateximage`.

```
41 \newcommand*\LWR@amsmathenv@after{%
42 \end{lateximage}\end{BlockClass}\LWR@startpars%
43 }
```

`\LWR@amsmathenv@after`    `{\langle environment name \rangle}`

Embeds the environment with MATHJAX or a `lateximage`.

```
44 \newcommand*\LWR@amsmathenv@after[1]{%
45 \ifboolexpr{bool{mathjax} or (bool{FormatWP} and bool{WPMarkMath}) }%
46 {
47 \LWR@endhideamsmath
48 \boolfalse\LWR@amsmultline}
49 \LWR@addmathjax{#1}{\the\@envbody}
50 }
51 {\LWR@amsmathenv@after}
52 }
```

Env    `multline`

```
53 \BeforeBeginEnvironment{multline}{\LWR@amsmathenv@before{multline}}
54
55 \AfterEndEnvironment{multline}{\LWR@amsmathenv@after{multline}}
```

Env    `multline*`

```
56 \BeforeBeginEnvironment{multline*}{\LWR@amsmathenv@before{multline*}}
57
58 \AfterEndEnvironment{multline*}{\LWR@amsmathenv@after{multline*}}
59
```

Env    `gather`

```
60 \BeforeBeginEnvironment{gather}{\LWR@amsmathenv@before{gather}}
61
62 \AfterEndEnvironment{gather}{\LWR@amsmathenv@after{gather}}
```

Env    `gather*`

```
63 \BeforeBeginEnvironment{gather*}{\LWR@amsmathenv@before{gather*}}
64
65 \AfterEndEnvironment{gather*}{\LWR@amsmathenv@after{gather*}}
```

Env    `align`

```
66 \BeforeBeginEnvironment{align}{\LWR@amsmathenv@before{align}}
67
68 \AfterEndEnvironment{align}{\LWR@amsmathenv@after{align}}
```

Env align\*

```
69 \BeforeBeginEnvironment{align*}{\LWR@amsmathenv@before{align*}}
70
71 \AfterEndEnvironment{align*}{\LWR@amsmathenv@after{align*}}
```

Env flalign

```
72 \BeforeBeginEnvironment{flalign}{\LWR@amsmathenv@before{flalign}}
73
74 \AfterEndEnvironment{flalign}{\LWR@amsmathenv@after{flalign}}
```

Env flalign\*

```
75 \BeforeBeginEnvironment{flalign*}{\LWR@amsmathenv@before{flalign*}}
76
77 \AfterEndEnvironment{flalign*}{\LWR@amsmathenv@after{flalign*}}
```

Env alignat

```
78 \BeforeBeginEnvironment{alignat}{\LWR@amsmathenv@before{alignat}}
79
80 \AfterEndEnvironment{alignat}{\LWR@amsmathenv@after{alignat}}
```

Env alignat\*

```
81 \BeforeBeginEnvironment{alignat*}{\LWR@amsmathenv@before{alignat*}}
82
83 \AfterEndEnvironment{alignat*}{\LWR@amsmathenv@after{alignat*}}
```

---

File 19 **lwarp-amsthm.sty**

## § 117 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.

**for HTML output:** amsthm must be loaded before mdframed:

```
1 \@ifpackageloaded{mdframed}{
2 \PackageError{lwarp}
3 {Package mdframed must be loaded after package amsthm}
4 {%
5 Move \detokenize{\usepackage}{amsthm} before
6 \detokenize{\usepackage}{mdframed}.\MessageBreak
7 Package amsthm may be loaded by something else,\MessageBreak
8 which must also be moved before mdframed.%
```

Table 14: amsthm package — css styling of theorems and proofs

**Theorem:** <div> of class amsthmbody<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.

```
9 }
10 }
11 {}
```

```
12 \LWR@ProvidesPackagePass{amsthm}[2017/10/31]
```

Storage for the style being used for new theorems:

```
13 \newcommand{\LWR@newtheoremstyle}{plain}
```

Patched to remember the style being used for new theorems:

```
14 \renewcommand{\theoremstyle}[1]{%
15 \ifundefined{th#1}{%
16 \PackageWarning{amsthm}{Unknown theoremstyle ‘#1’}%
17 \thm@style{plain}%
18 \renewcommand{\LWR@newtheoremstyle}{plain}% lwarp
19 }{%
20 \thm@style{#1}%
21 \renewcommand{\LWR@newtheoremstyle}{#1}% lwarp
22 }%
23 }
```

Patched to remember the style for this theorem type:

```
24 \def\@xnthm#1#2{%
25 \csedef{\LWR@thmstyle#2}{\LWR@newtheoremstyle}% lwarp
26 \let\@tempa\relax
27 \@xp\@ifdefinable\csname #2\endcsname{%
28 \global\@xp\let\csname end#2\endcsname\@endtheorem
29 \ifx *#1% unnumbered, need to get one more mandatory arg
30 \edef\@tempa##1{%
31 \gdef\@xp\@nx\csname#2\endcsname{%
32 \@nx\@thm{\@xp\@nx\csname th@the\thm@style\endcsname}%
33 {}{##1}}}%
34 \else % numbered theorem, need to check for optional arg
35 \def\@tempa{\@oparg{\@ynthm{#2}}{}}%
```

```

36 \fi
37 \AtBeginEnvironment{#2}{\edef\LWR@thisthmstyle{\@nameuse{LWR@thmstyle#2}}}% lwarp
38 }%
39 \@tempa
40 }

```

Patched to enclose with css:

```

41 \newcommand{\LWR@haveamsthmname}{
42 \renewcommand{\thmname}[1]{\InlineClass{amsthmname\LWR@thisthmstyle}{##1}}
43 }
44
45 \newcommand{\LWR@haveamsthmnumber}{
46 \renewcommand{\thmnumber}[1]{\InlineClass{amsthmnumber\LWR@thisthmstyle}{##1}}
47 }
48
49 \newcommand{\LWR@haveamsthmnote}{
50 \renewcommand{\thmnote}[1]{\InlineClass{amsthmnote\LWR@thisthmstyle}{##1}}
51 }
52
53 \LWR@haveamsthmname
54 \LWR@haveamsthmnumber
55 \LWR@haveamsthmnote

```

Patches for css:

```

56 \def\@begintheorem#1#2[#3]{%
57 \item[
58 % \deferred@thm@head{
59 % \the\thm@headfont \thm@indent
60 \@ifempty{#1}{\let\thmname\@gobble}{\LWR@haveamsthmname}% lwarp
61 \@ifempty{#2}{\let\thmnumber\@gobble}{\LWR@haveamsthmnumber}% lwarp
62 \@ifempty{#3}{\let\thmnote\@gobble}{\LWR@haveamsthmnote}% lwarp
63 \thm@swap\swappedhead\thmhead{#1}{#2}{#3}%
64 \the\thm@headpunct~
65 \thmheadnl % possibly a newline.
66 \hskip\thm@headsep
67 % }%
68]
69 \ignorespaces}

```

Patched for css:

```

70 \def\@thm#1#2#3{%
71 \ifhmode\unskip\unskip\par\fi
72 \normalfont
73 \LWR@forcenewpage% lwarp
74 \BlockClass{amsthmbody\LWR@thisthmstyle}% lwarp
75 \trivlist
76 \let\thmheadnl\relax
77 \let\thm@swap\@gobble
78 \thm@notefont{\fontseries\mddefault\upshape}%
79 \thm@headpunct{.}% add period after heading
80 \thm@headsep 5\p@ plus\p@ minus\p@\relax
81 \thm@space@setup

```

```

82 #1% style overrides
83 \@topsep \thm@preskip % used by thm head
84 \@topsepadd \thm@postskip % used by \@endparenv
85 \def\@tempa{#2}\ifx\@empty\@tempa
86 \def\@tempa{\@oparg{\@begintheorem{#3}}{}}[]}%
87 \else
88 \refstepcounter{#2}%
89 \def\@tempa{\@oparg{\@begintheorem{#3}{\csname the#2\endcsname}}[]}%
90 \fi
91 \@tempa
92 }

```

cleveref patches \@thm to do \cref@thmoptarg if an optional argument is given. lwarp then patches \cref@thmoptarg \AtBeginDocument.

```

93 \AtBeginDocument{%
94 \def\cref@thmoptarg[#1]#2#3#4{%
95 \ifhmode\unskip\unskip\par\fi%
96 \normalfont%
97 \LWR@forcenewpage% lwarp
98 \BlockClass{amsthmbody\LWR@thisthmstyle}% lwarp
99 \trivlist%
100 \let\thmheadnl\relax%
101 \let\thm@swap\@gobble%
102 \thm@notefont{\fontseries\mddefault\upshape}%
103 \thm@headpunct{.}% add period after heading
104 \thm@headsep 5\p@ plus\p@ minus\p@\relax%
105 \thm@space@setup%
106 #2% style overrides
107 \@topsep \thm@preskip % used by thm head
108 \@topsepadd \thm@postskip % used by \@endparenv
109 \def\@tempa{#3}\ifx\@empty\@tempa%
110 \def\@tempa{\@oparg{\@begintheorem{#4}}{}}[]}%
111 \else%
112 \refstepcounter[#1]{#3}% <<< cleveref modification
113 \def\@tempa{\@oparg{\@begintheorem{#4}{\csname the#3\endcsname}}[]}%
114 \fi%
115 \@tempa
116 }%
117 }% \AtBeginDocument
118
119 \def\@endtheorem{\endtrivlist\endBlockClass\@endpfalse }

```

Proof QED symbol:

```

120 \AtBeginDocument{
121 \ifundefined{LWR@orig@openbox}{
122 \let\LTxMacro\LWR@orig@openbox\openbox
123 \let\LTxMacro\LWR@orig@blacksquare\blacksquare
124 \let\LTxMacro\LWR@orig@Box\Box
125
126 \def\openbox{\text{\HTMLUnicode{25A1}}}% UTF-8 white box
127 \def\blacksquare{\text{\HTMLUnicode{220E}}}% UTF-8 end-of-proof
128 \def\Box{\text{\HTMLUnicode{25A1}}}% UTF-8 white box
129

```

```

130 \appto\LWR@restoreorigformatting{%
131 \LetLtxMacro\openbox\LWR@orig@openbox%
132 \LetLtxMacro\blacksquare\LWR@orig@blacksquare%
133 \LetLtxMacro\Box\LWR@orig@Box%
134 }% appto
135 }{}% @ifundefined
136 }% AtBeginDocument

```

Patched for css:

```

137 \renewenvironment{proof}[1][\proofname]{\par
138 \LWR@forcenewpage% lwarp
139 \BlockClass{amsthmproof}% lwarp
140 \pushQED{\qed}%
141 \normalfont \topsep6\p@\@plus6\p@\relax
142 \trivlist
143 \item[
144 \InlineClass{amsthmproofname}{#1\@addpunct{.}}\ignorespaces% changes
145]{%
146 \InlineClass{theoremendmark}{\popQED}\endtrivlist%
147 \endBlockClass% lwarp
148 \@endpefalse
149 }

```

---

File 20 **lwarp-anonchap.sty**

## § 118 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 21 **lwarp-anysize.sty**§ 119 Package **anysize**

(Emulates or patches code by MICHAEL SALZENBERG, THOMAS ESSER.)

Pkg anysized **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 22 **lwarp-appendix.sty**§ 120 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 23 **lwarp-ar.sty**§ 121 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}

```

---

#### File 24 **lwarp-arabicfront.sty**

### § 122 Package **arabicfront**

Pkg arabicfront arabicfront is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{arabicfront}[2006/09/03]

---

#### File 25 **lwarp-array.sty**

### § 123 Package **array**

Pkg array array is used as-is for print output, and emulated for HTML.

plarray and plexarray do not affect \firstline or \lasthline, and so are not affected by the following.

**for HTML output:** Remove the default nullfied macros:

```

1 \let\firstline\relax
2 \let\lasthline\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@lasthline}{\LWR@HTMLhline}%
9 \LWR@expandableformatted{lasthline}

10 \providecommand*{\LWR@HTML@tabularnewline}{\LWR@tabularendofline}
11 \LWR@formatted{tabularnewline}

```

File 26 **lwarp-arydshln.sty**

§ 124      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 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}}

```

---

File 27 **lwarp-asymptote.sty**

§ 125     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}{\begin{lateximage}[(-asymptote-~\packagediagramname)]}
3 \AfterEndEnvironment{asy}{\end{lateximage}}
4
5 \xpatchcmd{\asyinclude}
6 {\begingroup}
7 {\begin{lateximage}[(-asymptote-~\packagediagramname)]}
8 {}
9 {\LWR@patcherror{asymptote}{asyinclude-begingroup}}
10
11 \xpatchcmd{\asyinclude}
12 {\endgroup}
13 {\end{lateximage}}
14 {}
15 {\LWR@patcherror{asymptote}{asyinclude-endgroup}}
```

---

File 28 **lwarp-atbegshi.sty**

§ 126     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 29 **lwarp-attachfile.sty**

§ 127 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 \href{#1}{\LWR@attachfile@appearance}%
33 }

```

---

File 30 **lwarp-attachfile2.sty**

§ 128      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 \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 31 **lwarp-authblk.sty**

§ 129     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 {Titling appends authblk's author macro, so authblk must be loaded first.}
5 }
6 {}

```

Load authblk:

```

7 \LWR@ProvidesPackagePass{authblk}[2001/02/27]

```

Patch to add a class for the affiliation:

```

8 \LetLtxMacro\LWRAB@affil\affil
9
10 \renewcommand{\affil}[2][{}]{%
11 \LWRAB@affil[#1]{\protect\InlineClass{affiliation}{#2}}
12 }

```

Create an HTML break for an \authorcr:

```

13 \renewcommand*{\authorcr}{\protect\LWR@newlinebr}


```

---

## File 32 **lwarp-autonum.sty**

### § 130 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{flaline+}}
25
26 \AfterEndEnvironment{flalign+}{\LWR@amsmathenv@@after}
27
28
29 \newenvironment{align+}{\align}{\endalign}
30
31 \BeforeBeginEnvironment{align+}{\LWR@amsmathenv@@before{aline+}}
32
33 \AfterEndEnvironment{align+}{\LWR@amsmathenv@@after}
34
35
36 \newenvironment{alignat+}{\alignat}{\endalignat}
37
38 \BeforeBeginEnvironment{alignat+}{\LWR@amsmathenv@@before{alineat+}}
39
40 \AfterEndEnvironment{alignat+}{\LWR@amsmathenv@@after}
41
42
43 \newenvironment{split+}{\split}{\endsplit}

```

---

### File 33 **lwarp-axessibility.sty**

§ 131     Package **axessibility**

Pkg   axessibility   axessibility is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{axessibility}

2 \newcommand{\wrap}[1]{ }

```

---

### File 34 **lwarp-axodraw2.sty**

§ 132     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}{\begin{lateximage}[(-axopicture~\packagediagramname)]}
3
4 \AfterEndEnvironment{axopicture}{\end{lateximage}}

```

---

File 35 **lwarp-backnaur.sty**

§ 133      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 36 **lwarp-backref.sty**

§ 134      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{}\let\backrefxxx\hyper@section@backref
```

---

File 37 **lwarp-balance.sty**

§ 135      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 38 **lwarp-bbding.sty**

§ 136 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 39 **lwarp-biblatex.sty**

§ 137 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 }{}

4 \LWR@ProvidesPackagePass{biblatex}[2018/03/04]
```

---

File 40 **lwarp-bibunits.sty**

§ 138 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 41 **lwarp-bigdelim.sty**

§ 139 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 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]
\rdelim

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}

```

---

File 42 **lwarp-bigfoot.sty**

§ 140

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 43 **lwarp-bigstrut.sty**

### § 141 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 }

```

---

#### File 44 **lwarp-bitpattern.sty**

### § 142 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~\packagediagramname)]}
5 {}
6 {\LWR@patcherror{bitpattern}{bitpattern}}
7
8 \xpatchcmd{\bp@Done}

```

---

```

9 {\endgroup}
10 {\end{lateximage}}
11 {}
12 {\LWR@patcherror{bitpattern}{bp@Done}}

```

---

File 45 **lwarp-blowup.sty**

§ 143     Package **blowup**

Pkg   blowup   **blowup** is ignored.

**for HTML output:**    1 \LWR@ProvidesPackageDrop{blowup}[2018/01/02]

                          2 \newcommand\*\blowUp[1]{}

---

File 46 **lwarp-booklet.sty**

§ 144     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        \sidebysidetrue

                          6 \newif\ifuselandscape       \uselandscapefalse

                          7 \newif\ifprintoption       \printoptionfalse

                          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 47 **lwarp-bookmark.sty**

§ 145     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][]{}
5 \newcommand*{\bookmarkdefinestyle}[2]{}
6 \newcommand*{\bookmarkget}[1]{}
7 \newcommand{\BookmarkAtEnd}[1]{}

```

---

File 48 **lwarp-booktabs.sty**

§ 146 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.

for HTML output: First, forget the placeholder macros:

```
1 \LetLtxMacro\toprule\relax
2 \LetLtxMacro\midrule\relax
3 \LetLtxMacro\cmidrule\cline
4 \LetLtxMacro\bottomrule\relax
5 \LetLtxMacro\addlinespace\relax
6 \LetLtxMacro\morecmidrules\relax
7 \LetLtxMacro\specialrule\relax
8
9 \LWR@ProvidesPackagePass{booktabs}[2016/04/27]

10 \DeclareDocumentCommand{\LWR@HTML@toprule}{o d()}%
11 {%
12 \IfValueTF{#1}%
13 {\LWR@docmidrule[#1]}{1-\arabic{LWR@tabletotalLaTeXcols}}}%
14 {%
15 \ifbool{FormatWP}%
16 {\LWR@docmidrule[#1]}{1-\arabic{LWR@tabletotalLaTeXcols}}}%
17 {\global\booltrue{LWR@doingtbrule}}}%
18 }%
19 \LWR@getmynexttoken}
20
21 \LWR@expandableformatted{toprule}
22
23 \DeclareDocumentCommand{\LWR@HTML@midrule}{o d()}%
24 {%
25 \IfValueTF{#1}%
26 {\LWR@docmidrule[#1]}{1-\arabic{LWR@tabletotalLaTeXcols}}}%
27 {%
28 \ifbool{FormatWP}%

```

```

29 {\LWR@docmidrule[#1]}{1-\arabic{LWR@tabletotalLaTeXcols}}}%
30 {\addtocounter{LWR@hlines}{1}}}%
31 }%
32 \LWR@getmynexttoken}
33
34 \LWR@expandableformatted{midrule}
35
36 \DeclareDocumentCommand{\LWR@HTML@cmidrule}{O{\LWR@cmidrulewidth} d() m}{%
37 \LWR@docmidrule[#1](#2){#3}%
38 \LWR@getmynexttoken%
39 }%
40
41 \LWR@expandableformatted{cmidrule}
42
43 \DeclareDocumentCommand{\LWR@HTML@bottomrule}{o d()}{%
44 \IfValueTF{#1}%
45 {\LWR@docmidrule[#1]}{1-\arabic{LWR@tabletotalLaTeXcols}}}%
46 {%
47 \ifbool{FormatWP}%
48 {\LWR@docmidrule[#1]}{1-\arabic{LWR@tabletotalLaTeXcols}}}%
49 {\global\booltrue{LWR@doingtbrule}}}%
50 }%
51 \LWR@getmynexttoken%
52 }%
53
54 \LWR@expandableformatted{bottomrule}
55
56 \DeclareDocumentCommand{\LWR@HTML@addlinespace}{o}{}%
57
58 \LWR@expandableformatted{addlinespace}
59
60 \DeclareDocumentCommand{\LWR@HTML@morecmidrules}{o}{}%
61
62 \LWR@expandableformatted{morecmidrules}
63
64 \DeclareDocumentCommand{\LWR@HTML@specialrule}{m m m d()}{%
65 {\LWR@docmidrule[#1]}{1-\arabic{LWR@tabletotalLaTeXcols}}\LWR@getmynexttoken}%
66
67 \LWR@expandableformatted{specialrule}

```

File 49 **lwarp-bophook.sty**§ 147 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 50 **lwarp-bounddvi.sty**

§ 148      Package **bounddvi**

Pkg    bounddvi    bounddvi is ignored.

**for HTML output:**    1 \LWR@ProvidesPackageDrop{bounddvi}[2016/12/28]

---

File 51 **lwarp-boxedminipage2e.sty**

§ 149      Package **boxedminipage2e**

*(Emulates or patches code by SCOTT PAKIN.)*

Pkg    boxedminipage2e    boxedminipage2e is emulated for HTML, and used as-is for lateximages.

**for HTML output:**    Discard all options for lwarp-boxedminipage2e:

```
1 \LWR@ProvidesPackagePass{boxedminipage2e}[2015/03/09]

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 52 **lwarp-breakurl.sty**

§ 150      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\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 \catcode'\#=12%
14 \catcode'\%=12%
15 \catcode'\&=12%
16 \catcode'\~=12%
17 \catcode'_ =12%
18 \LWR@burlaltb%
19 }
20
21 \LetLtxMacro\burlalt\burlalt

```


---


### File 53 **lwarp-breqn.sty**

## § 151 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.

 MATHJAX MathJax does not support breqn.

**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- \mathimagename]
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*- \mathimagename]

```

```
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- \mathimagename]
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*- \mathimagename]
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- \mathimagename]
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*- \mathimagename]
67 }
68
69 \AfterEndEnvironment{dgroup*}{
70 \end{lateximage}\end{BlockClass}
71 }
```

---

File 54 **lwarp-bsheaders.sty**

§ 152     Package **bsheaders**

Pkg   bsheaders   bsheaders is ignored.

**for HTML output:**     1 \LWR@ProvidesPackageDrop{bsheaders}[1997/10/06]

---

File 55 **lwarp-bxpapersize.sty**

§ 153     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 56 **lwarp-bytefield.sty**

§ 154     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}{\begin{lateximage}[(-bytefield-~\packagediagramname)]}

3

4 \AfterEndEnvironment{bytefield}{\end{lateximage}}

---

File 57 **lwarp-cancel.sty**

§ 155     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`    `{\langle text \rangle}`

```

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

```

---

File 58    **lwarp-canonlayout.sty**

§ 156    Package    **canonlayout**

Pkg    canonlayout    canonlayout is ignored.

**for HTML output:**    s1 \LWR@ProvidesPackageDrop{canonlayout}[2011/11/05]

```

2 \newcommand*{\currentfontletters}{}
3 \newcommand*{\charactersperpage}{}

```

File 59 **lwarp-caption.sty**§ 157 Package **caption***(Emulates or patches code by AXEL SOMMERFELDT.)*Pkg caption **caption** is patched for use by **lwarp**.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{caption}[2018/10/05]

2 \renewcommand\caption@ibox[3]{%
3 \@testopt{\caption@iibox{#1}{#2}{#3}}{%
4 \wd\@tempboxa%
5 \linewidth% lwarp
6 }%
7 \LWR@traceinfo{caption@ibox: done}%
8 }

9 \long\def\caption@iibox#1#2#3[#4]{%
10 \@testopt{\caption@iiibox{#1}{#2}{#3}{#4}}\captionbox@hj@default
11 }

12 \long\def\caption@iiibox#1#2#3#4[#5]#6{%
13 % \setbox\@tempboxa\hbox{#6}%
14 \begingroup
15 #1*% set \caption@position
16 \caption@iftop{%
17 \LWR@traceinfo{caption@iiibox top}%
18 \endgroup
19 \parbox[t]{#4}{%
20 #1\relax
21 \caption@setposition t%
22 % \vbox{\caption#2{#3}}%
23 {\caption#2{#3}}% lwarp
24 % \captionbox@hrule
25 % \csname caption@hj@#5\endcsname
26 % \unhbox\@tempboxa
27 #6% lwarp
28 }%
29 }{%
30 \LWR@traceinfo{caption@iiibox bottom}%
31 \endgroup
32 \parbox[b]{#4}{%
33 #1\relax
34 \caption@setposition b%
35 % \csname caption@hj@#5\endcsname
36 % \unhbox\@tempboxa
37 #6% lwarp
38 % \captionbox@hrule
39 % \vtop{\caption#2{#3}}%
40 {\caption#2{#3}}% lwarp

```

```

41 }%
42 }%
43 \LWR@traceinfo{caption@iiibox: done}%
44 }
45
46 % \def\caption@caption{%
47 % \caption@iftype
48 % {%
49 % \caption@checkgrouplevel\@empty\caption
50 % \caption@star
51 % {\caption@refstepcounter\@capttype}%
52 % {\caption@dblarg{\@caption\@capttype}}}%
53 % {\caption@Error{\noexpand\caption outside float}%
54 % \caption@gobble}%
55 % }
56
57 \long\def\caption@@caption#1[#2]#3{%

58 \ifcaption@star
59 \else
60 \caption@prepareanchor{#1}{#2}%
61 \memcaptioninfo{#1}{\csname the#1\endcsname}{#2}{#3}%
62 \@nameuse{nag@hascaptiontrue}%
63 \fi

64 \par
65 \caption@beginex{#1}{#2}{#3}%
66 \caption@setfloatcapt{%
67 \caption@boxrestore
68 \if@minipage
69 \@setminipage
70 \fi
71 \caption@normalsize

72 \ifcaption@star
73 \let\caption@makeanchor\@firstofone
74 #3% lwarp
75 \else% lwarp
76 \@makecaption{\csname fnum@#1\endcsname}%
77 {\ignorespaces\caption@makeanchor{#3}}%
78 \fi% lwarp

79 % \par
80 % \caption@if@minipage\@minipagetrue\@minipagefalse}%
81 % \caption@end%
82 }

\caption@@@make {\langle caption label\rangle} {\langle caption text\rangle}

83 \renewcommand\caption@@@make[2]{%
84 \LWR@traceinfo{caption@@@make}%
85 % \sbox\@tempboxa{#1}%
86 % \ifdim\wd\@tempboxa=\z@

```

```

87 % \let\caption@lsep\relax
88 % \fi
89 \caption@ifempty{#2}{%
90 \let\caption@lsep\@empty
91 \let\caption@tfmt\@firstofone
92 }%
93 \caption@applyfont

```

\caption@fmt with plain format is defined as {#1#2#3\par}:

```

94 % \caption@fmt
95 {\ifcaption@star\else
96 \begingroup
97 \captionlabelfont
98 #1%
99 \endgroup
100 \fi}%
101 {\ifcaption@star\else
102 \begingroup
103 \caption@iflf\captionlabelfont
104 \relax
105 \caption@lsep
106 \endgroup
107 \fi}%
108 {{%
109 \captiontextfont
110 % \caption@ifstrut
111 % {\vrule\@height\ht\strutbox\@width\z@}%
112 % {}}%
113 % \nobreak\hskip\z@skip % enable hyphenation
114 \caption@tfmt{#2}%
115 \caption@ifstrut
116 {\ifhmode\@finalstrut\strutbox\fi}%
117 {}}%
118 }}%
119 \LWR@traceinfo{caption@@@make done}%
120 }

```

\caption@@make@    {<>} {<>}

```

121 \renewcommand{\caption@@make@}[2]{%
122 \caption@stepthecounter
123 \caption@beginhook
124 \caption@@@make{#1}{#2}%
125 \caption@endhook
126 }

```

\caption@makecaption

```

127 \long\def\caption@makecaption#1#2{%
128 % \caption@iftop
129 % {\vskip\belowcaptionskip}%
130 % {\caption@rule\vskip\abovecaptionskip}%
131 \caption@@make{#1}{#2}%
132 % \caption@iftop
133 % {\vskip\abovecaptionskip\caption@rule}%

```

---

```

134 % {\vskip\belowcaptionskip}%
135 }

136 % \DeclareCaptionBox{none}{#2}
137 \DeclareCaptionBox{parbox}{%
138 #2%
139 }
140 \DeclareCaptionBox{colorbox}{%
141 #2%
142 }

```


---

## File 60 **lwarp-cases.sty**

### § 158 Package **cases**

*(Emulates or patches code by DONALD ARSENEAU.)*

Pkg cases **cases** is patched for use by lwarp.

 **MATHJAX** MathJax does not support **cases**.

**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- \mathimagename]
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- \mathimagename]
18 }
19
20 \AfterEndEnvironment{subnumcases}{
21 \end{lateximage}\end{BlockClass}
22 }

```

---

## File 61 **lwarp-changebar.sty**

### § 159 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 62 **lwarp-changelayout.sty**

§ 160 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@backtodefautls{}
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 63 **lwarp-changepage.sty**§ 161 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{\changeage}[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 64 **lwarp-changes.sty**§ 162 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 \quad
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 }% lwarp
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 65 **lwarp-chappg.sty**§ 163 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 66 **lwarp-chapterbib.sty**§ 164 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 67 **lwarp-chemfig.sty**§ 165 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~\packagediagramname)]
\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}
```

```

2
3 \catcode'_ =11
4
5 \@ifpackagelater{chemfig}{2019/04/18}%
6 {% 2019/04/18 or newer
7
8 \LetLtxMacro\LWR@chemfig@origchemfig\chemfig
9
10 \renewcommand*{\chemfig}[2][\%
11 \begin{lateximage}[(-chemfig-~\packagediagramname)]%
12 \LWR@chemfig@origchemfig[#1]{#2}%
13 \end{lateximage}%
14 }
15
16 \GlobalLetLtxMacro\LWR@chemfig@origCF_lewisc\CF_lewisc
17 \gdef\CF_lewisc#1,#2_nil{%
18 \begin{lateximage}[(-chemfig-~\packagediagramname)]%
19 \LWR@chemfig@origCF_lewisc#1,#2_nil
20 \end{lateximage}
21 }
22
23 \gpreto{\schemestart}{\begin{lateximage}[(-chemfig-~\packagediagramname)]}
24 \gappto{\CF_schemestop}{\end{lateximage}}
25
26 }% 2019/04/18 or newer
27 {% older than 2019/04/18
28
29 \LetLtxMacro\LWR@chemfig@origchemfig\chemfig
30
31 \DeclareDocumentCommand\chemfig{s O{} O{} m}{%
32 \begin{lateximage}[(-chemfig-~\packagediagramname)]%
33 \IfBooleanTF{#1}{%
34 \LWR@chemfig@origchemfig*[#2][#3]{#4}%
35 }{%
36 \LWR@chemfig@origchemfig[#2][#3]{#4}%
37 }
38 \end{lateximage}%
39 }
40
41 \LetLtxMacro\LWR@chemfig@origCF@Lewis@b\CF@Lewis@b
42
43 \def\CF@Lewis@b#1#2{%
44 \begin{lateximage}[(-chemfig-~\packagediagramname)]%
45 \LWR@chemfig@origCF@Lewis@b{#1}{#2}%
46 \end{lateximage}%
47 }
48
49 \preto{\schemestart}{\begin{lateximage}[(-chemfig-~\packagediagramname)]}
50 \appto{\CF@schemestop}{\end{lateximage}}
51
52 }% older than 2019/04/18
53
54 \catcode'_ =8%
55
56

```

---

```

57
58 \LetLtxMacro\LWR@chemfig@origchemleft\chemleft
59
60 \def\chemleft#1#2\chemright#3{%
61 \begin{lateximage}[(-chemfig-~\packagediagramname)]%
62 \LWR@chemfig@origchemleft#1#2\chemright#3%
63 \end{lateximage}%
64 }
65
66 \LetLtxMacro\LWR@chemfig@origchemup\chemup
67
68 \def\chemup#1#2\chemdown#3{%
69 \begin{lateximage}[(-chemfig-~\packagediagramname)]%
70 \LWR@chemfig@origchemup#1#2\chemdown#3%
71 \end{lateximage}%
72 }

```

---


## File 68 **lwarp-chemformula.sty**

### § 166 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}[2017/03/23]

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 \cs_gset_protected:Npn \chemformula_chcpd:nn #1#2
24 {
25 \begingroup%
26 \boolfalse{mathjax}%
27 \LWR@subsingledollar*{% lwarp
28 \textbackslash{}chcpd{\LWR@HTMLsanitize{#2}\}%
29 }{%
30 \protect\LWR@HTMLsanitize{\detokenize\expandafter{#1}}}%
31 }{% original
32 \group_begin:
33 \tl_if_blank:nF {#2}
34 {
35 \keys_set:nn {chemformula} {#1}
36 __chemformula_save_catcodes:
37 __chemformula_sanitize:Nn
38 \l__chemformula_chemformula_tmpa_tl
39 {#2}
40 __chemformula_input_compound_no_check:Nv
41 \l__chemformula_compound_tl
42 \l__chemformula_chemformula_tmpa_tl
43 __chemformula_prepare_output:N \l__chemformula_compound_tl
44 \chemformula_write:V \l__chemformula_compound_tl
45 }
46 \group_end:
47 }
48 \endgroup
49 }

```

`\charrow`    If standalone, appears in a regular latex image.

```

50 \RenewDocumentCommand \charrow { mO{}O{} }
51 {

```

```

52 \begin{lateximage}[(-chemformula- charrow)]
53 \group_begin:
54 __chemformula_draw_arrow:nnn {#1} {#2} {#3}
55 \group_end:
56 \end{lateximage}
57 }

```

`\chname` If standalone, appears in a regular `lateximage`, hashed according to contents.

```

58 \RenewDocumentCommand \chname { R(){}R(){} }
59 {
60 \begin{lateximage}*[%
61 \textbackslash{}chname(\LWR@HTMLsanitize{#1})(\LWR@HTMLsanitize{#2})
62]%
63 \chemformula_chwritebelow:nn {#1} {#2}
64 \end{lateximage}
65 }

```

`\chlewis` Placed inline, hashed according to contents and options.

```

66 \RenewDocumentCommand \chlewis { O{}mm }
67 {
68 \begingroup%
69 \boolfalse{mathjax}%
70 \LWR@subsingledollar*\textbackslash{}chlewis\{#2\}\{#3\}%
71 {
72 \protect\LWR@HTMLsanitize{\detokenize\expandafter{#1}}%
73 }{
74 \chemformula_lewis:nnn {#1} {#2} {#3}
75 }
76 \endgroup%
77 }

```

**lwarp** redefines the `$` character, so special handling is required to escape math expressions inside `\ch`.

This boolean tracks a new kind of escaped math:

```

78 \bool_new:N \l__chemformula_first_last_LWRdollar_bool

```

`\chemformula_input_escape_math`

Adds additional escaping for the new dollar definition:

```

79 \cs_gset_protected:Npn __chemformula_input_escape_math:n #1
80 {
81 __chemformula_first_last_math:n {#1}
82 \bool_if:NT \l__chemformula_first_last_dollar_bool
83 {
84 \bool_set_true:N \l__chemformula_first_last_math_bool
85 __chemformula_read_escape_dollar:w #1 \q_nil
86 }
87 \bool_if:NT \l__chemformula_first_last_mathbraces_bool
88 {

```

```

89 \bool_set_true:N \l__chemformula_first_last_math_bool
90 __chemformula_read_escape_mathbraces:w #1 \q_nil
91 }

```

Added by lwarp:

```

92 \bool_if:NT \l__chemformula_first_last_LWRdollar_bool% lwarp
93 {
94 \bool_set_true:N \l__chemformula_first_last_math_bool% lwarp
95 __chemformula_read_escape_LWRdollar:w #1 \q_nil% lwarp
96 }
97 }

```

\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.

```

98 \begingroup
99 \catcode'\$=\active
100
101 \cs_new_protected:Npn __chemformula_read_escape_LWRdollar:w $#1$ \q_nil
102 {
103 __chemformula_read_escape_math:n {#1}
104 }
105
106 \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 \$.

```

107 \cs_new_protected:Npn __chemformula_bool_cs_set_if_first_last:NnNN #1#2#3#4
108 {
109 \int_zero:N \l__chemformula_tmpa_int
110 \int_zero:N \l__chemformula_tmpb_int
111 \int_set:Nn \l__chemformula_tmpa_int { \tl_count:n {#2} }
112 \tl_map_inline:nn {#2}
113 {
114 \int_incr:N \l__chemformula_tmpb_int
115 \int_compare:nT { \l__chemformula_tmpb_int = 1 }
116 {

```

At the start, the cs\_ version compares control sequences:

```

117 \ifdefstrequal{##1}{#3}% lwarp
118 {
119 \bool_set_true:N #1
120 }% lwarp
121 {}
122 }

```

At the end, compare more control sequences:

```

123 \int_compare:nT { \l__chemformula_tmpb_int = \l__chemformula_tmpa_int }
124 {
125 \ifdefstrequal{##1}{#4}
126 {}
127 {
128 \bool_set_false:N #1
129 }
130 }
131 }
132 }

```

\chemformula\_first\_last\_math

Modified to check for the new meaning of \$ at first/last:

```

133 \cs_gset_protected:Npn __chemformula_first_last_math:n #1
134 {
135 \bool_set_false:N \l__chemformula_first_last_math_bool
136 \bool_set_false:N \l__chemformula_first_last_dollar_bool
137 \bool_set_false:N \l__chemformula_first_last_LWRdollar_bool% lwarp
138 \bool_set_false:N \l__chemformula_first_last_mathbraces_bool
139 __chemformula_bool_set_if_first_last:Nnnn
140 \l__chemformula_first_last_dollar_bool
141 {#1}
142 { $ } { $ }
143 \bool_if:NF \l__chemformula_first_last_dollar_bool
144 {
145 __chemformula_bool_set_if_first_last:Nnnn
146 \l__chemformula_first_last_mathbraces_bool
147 {#1}
148 { \ (} { \) }

```

Added by lwarp:

```

149 \bool_if:NF \l__chemformula_first_last_mathbraces_bool% lwarp
150 {
151 __chemformula_bool_cs_set_if_first_last:NnNN
152 \l__chemformula_first_last_LWRdollar_bool
153 {#1}
154 { \LWR@newsingledollar } { \LWR@newsingledollar }
155 }% lwarp
156 }
157 }

```

```

158 \ExplSyntaxOff

```


---


File 69 **lwarp-chemgreek.sty**

§ 167 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>L<sup>A</sup>T<sub>E</sub>X, Lua<sup>A</sup>T<sub>E</sub>X** If using X<sub>Y</sub>L<sup>A</sup>T<sub>E</sub>X or Lua<sup>A</sup>T<sub>E</sub>X, select the fontspec mapping:

```
\selectchemgreekmapping{fontspec}
```

**for HTML output:**

```
1 \LWR@ProvidesPackagePass{chemgreek}[2016/02/10]

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 70 **lwarp-chemmacros.sty**

§ 168 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.

§ 168.1 **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}
```

## § 168.2 Code

### § 168.3 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
```

### § 168.4 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 86.

```
12 \DeclareDocumentEnvironment{redoxreaction}{m m}
13 {\begin{lateximage}[(-chemmacros- redoxreaction)]}
14 {\end{lateximage}}
```

```
15 \ExplSyntaxOn
```

§ 168.5 **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

```

## § 168.6 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

```

## § 168.7 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 \ChemCompatibilityFrom{5.8}
165 \cs_gset_protected:Npn __chemmacros_cip:n #1
166 {
167 \tl_set:Nn \l__chemmacros_tmpa_tl {#1}
168 \int_step_inline:nnnn {0} {1} {9}
169 {
170 \tl_replace_all:Nnn \l__chemmacros_tmpa_tl
171 {##1}
172 { { \l__chemmacros_cip_number_tl ##1} }

```

```

173 }
174 {
175 \l__chemmacros_cip_inner_tl
176 \LWR@textcurrentcolor{\LWR@textcurrentfont{% lwarp
177 \l__chemmacros_tmpa_tl
178 }}% lwarp
179 }
180 }
181 \EndChemCompatibility

182 \RenewDocumentCommand \Sconf { O{S} } {
183 \begin{lateximage}[\textbackslash{}Sconf{[]#1{}}]
184 \chemmacros_sconf:n {#1}
185 \end{lateximage}
186 }
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

```

## § 168.8 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

```

§ 168.9 **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 \chemmacros_leave_vmode:
286 \bool_if:NTF \l__chemmacros_phases_sub_bool
287 {
288 \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

```

§ 168.10 **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

```

## § 168.11 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

```

## § 168.12 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

```

## § 168.13 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}% lwarp
476 \chemmacros_add_reaction_description:n {##1}
477 __chemmacros_begin_reaction:
478 \chemmacros_reaction_read:nnw {#2} {#4}
479 }
480 {
481 __chemmacros_end_reaction:

```

```

482 }
483 }
484 \cs_generate_variant:Nn \chemmacros_declare_reaction_env:nnnn {nnnV}
485
486 \RenewChemReaction {reaction} {equation}
487 \RenewChemReaction {reaction*} {equation*}
488 \RenewChemReaction {reactions} {align}
489 \RenewChemReaction {reactions*} {align*}
490
491 }{}% \@ifchemmacrosmoduleloaded
492 }% AtBeginDocument

```

## § 168.14 Redox

```

493 \AtBeginDocument{
494 \@ifchemmacrosmoduleloaded{redox}{
495 \PackageInfo{lwarp}{Patching~chemmacros~module~redox}
496
497 \NewDocumentCommand \LWR@chemmacros@ox { s m >{\SplitArgument{1}{,}}m }
498 {
499 \IfBooleanTF {#1}
500 { \chemmacros_ox:nnnn {#1} {#2} #3 }
501 { \chemmacros_ox:nnnn { } {#2} #3 }
502 }
503
504 \RenewDocumentCommand \ox { s O{} m }
505 {
506 \begingroup
507 \boolfalse{mathjax}
508 \IfBooleanTF {#1}
509 {
510 \LWR@subsingledollar*{% yes hash
511 \textbackslash{}ox*\{\LWR@HTMLsanitize{#3}\}% alt
512 }{%
513 star \protect\LWR@HTMLsanitize{\detokenize\expandafter{#2}}}%
514 }{%
515 \LWR@chemmacros@ox* {#2} {#3}% contents
516 }%
517 }
518 {
519 \LWR@subsingledollar*{% yes hash
520 \textbackslash{}ox*\{\LWR@HTMLsanitize{#3}\}% alt
521 }{%
522 \protect\LWR@HTMLsanitize{\detokenize\expandafter{#2}}}%
523 }{%
524 \LWR@chemmacros@ox {#2} {#3}% contents
525 }%
526 }
527 \endgroup
528 }
529
530 }{}% \@ifchemmacrosmoduleloaded
531 }% AtBeginDocument

```

### § 168.15 Scheme

Fix for chemmacros as of v5.8b, when using newfloat and babel:

```

532 \AtBeginDocument{
533 \ifchemmacrosmoduleloaded{scheme}{
534 \PackageInfo{lwarp}{Patching~chemmacros~module~scheme}
535
536 \ifdefstring{\schemename}{los}{
537 \SetupFloatingEnvironment{scheme}{
538 name = \chemmacros_translate:n {scheme-name}
539 }
540 }{}
541
542 }{}% \ifchemmacrosmoduleloaded
543 }% AtBeginDocument

```

### § 168.16 Spectroscopy

```

544 \AtBeginDocument{
545 \ifchemmacrosmoduleloaded{spectroscopy}{
546 \PackageInfo{lwarp}{Patching~chemmacros~module~spectroscopy}
547
548 \ChemCompatibilityTo{5.8}
549 \cs_gset_protected:Npn __chemmacros_nmr_base:nn #1#2
550 {
551 \tl_if_blank:VF \g__chemmacros_nmr_element_coupled_tl
552 {
553 \tl_put_left:Nn \g__chemmacros_nmr_element_coupled_tl { \{ }
554 \tl_put_right:Nn \g__chemmacros_nmr_element_coupled_tl { \} }
555 }
556 \tl_put_left:Nn \g__chemmacros_nmr_element_coupled_tl {#2}
557 % \chemmacros_chemformula:n { ^{#1} }
558 #1
559 \bool_if:NTF \l__chemmacros_nmr_parse_bool
560 { \chemformula_ch:nV {} } \g__chemmacros_nmr_element_coupled_tl }
561 { \chemmacros_chemformula:V \g__chemmacros_nmr_element_coupled_tl }
562 \tl_use:N \l__chemmacros_nmr_element_method_connector_tl
563 \tl_use:N \l__chemmacros_nmr_method_tl
564 }
565 \EndChemCompatibility
566 \ChemCompatibilityFrom{5.8}
567 \cs_gset_protected:Npn __chemmacros_nmr_base:nn #1#2
568 {
569 \group_begin:
570 \tl_use:N \l__chemmacros_nmr_base_format_tl
571 \tl_if_blank:VF \g__chemmacros_nmr_element_coupled_tl
572 {
573 \tl_put_left:Nn \g__chemmacros_nmr_element_coupled_tl { \{ }
574 \tl_put_right:Nn \g__chemmacros_nmr_element_coupled_tl { \} }
575 }
576 \tl_put_left:Nn \g__chemmacros_nmr_element_coupled_tl {#2}
577 % \chemmacros_chemformula:n { ^{#1} }
578 #1
579 \tl_if_blank:VF \g__chemmacros_nmr_element_coupled_tl

```

```

580 {
581 \bool_if:NTF \l__chemmacros_nmr_parse_bool
582 { \chemformula_ch:nV {} \g__chemmacros_nmr_element_coupled_tl }
583 { \chemmacros_chemformula:V \g__chemmacros_nmr_element_coupled_tl }
584 }
585 \tl_use:N \l__chemmacros_nmr_element_method_connector_tl
586 \tl_use:N \l__chemmacros_nmr_method_tl
587 \group_end:
588 }
589 \EndChemCompatibility
590
591
592 \cs_gset_protected:Npn \chemmacros_nmr_position:n #1
593 {
594 \chemmacros_chemformula:x
595 {
596 \exp_not:V \g__chemmacros_nmr_element_tl
597 \bool_if:NF \l__chemmacros_nmr_position_side_bool
598 {
599 \tl_if_eq:NnTF \l__chemmacros_nmr_position_tl {^}% lwarp
600 { \textsuperscript{\exp_not:n { {#1} }} }% lwarp
601 { \textsubscript{\exp_not:n { {#1} }} }% lwarp
602 % \exp_not:V \l__chemmacros_nmr_position_tl
603 % \exp_not:n { {#1} }
604 }
605 }
606 \bool_if:NT \l__chemmacros_nmr_position_side_bool
607 {
608 \tl_use:N \l__chemmacros_nmr_position_tl
609 __chemmacros_nmr_position:n {#1}
610 }
611 }
612
613 \cs_gset_protected:Npn __chemmacros_nmr_coupling:w (#1;#2)
614 {
615 \tl_set:Nn \l__chemmacros_nmr_coupling_bonds_tl
616 {
617 \l__chemmacros_nmr_coupling_bonds_pre_tl
618 #1
619 \l__chemmacros_nmr_coupling_bonds_post_tl
620 }
621 \bool_if:NTF \l__chemmacros_nmr_coupling_nuclei_sub_bool
622 {
623 \tl_set:Nn \l__chemmacros_nmr_coupling_nuclei_tl
624 {
625 % \c_math_subscript_token
626 % \textsubscript% lwarp
627 {
628 \l__chemmacros_nmr_coupling_nuclei_pre_tl
629 \chemmacros_chemformula:n {#2}
630 \l__chemmacros_nmr_coupling_nuclei_post_tl
631 }
632 }
633 }
634 {

```

```

635 \tl_set:Nn \l__chemmacros_nmr_coupling_nuclei_tl
636 {
637 \l__chemmacros_nmr_coupling_nuclei_pre_tl
638 \chemmacros_chemformula:n {#2}
639 \l__chemmacros_nmr_coupling_nuclei_post_tl
640 }
641 }
642 __chemmacros_nmr_coupling_aux_i:w
643 }
644
645 \AfterEndPreamble{% After \AtBeginDocument
646 % \NMR{<num>,<elem>}<num>,<unit>}<solvent>] ALL arguments are optional
647 % \NMR* same but without ": δ" at end
648 \cs_gset_protected:Npn \chemmacros_nmr:nnnn #1#2#3#4
649 {
650 \bool_if:NT \l__chemmacros_nmr_list_bool { \item \scan_stop: }
651 \group_begin:
652 \chemmacros_leave_vmode:
653 \bool_set_false:N \l__chemmacros_nmr_frequency_bool
654 \bool_set_false:N \l__chemmacros_nmr_solvent_bool
655 \tl_if_empty:nF {#3}
656 { \bool_set_true:N \l__chemmacros_nmr_frequency_bool }
657 \tl_if_empty:nF {#4}
658 { \bool_set_true:N \l__chemmacros_nmr_solvent_bool }
659 \bool_if:nT
660 {
661 \l__chemmacros_nmr_frequency_bool
662 ||
663 \l__chemmacros_nmr_solvent_bool
664 }
665 { \bool_set_true:N \l__chemmacros_nmr_delimiters_bool }
666 \bool_if:nT
667 {
668 \l__chemmacros_nmr_frequency_bool
669 &&
670 \l__chemmacros_nmr_solvent_bool
671 }
672 { \bool_set_true:N \l__chemmacros_nmr_comma_bool }
673 \tl_if_empty:nTF {#2}
674 {
675 __chemmacros_nmr_nucleus:VV
676 \l__chemmacros_nmr_isotope_default_tl
677 \l__chemmacros_nmr_element_default_tl
678 }
679 { __chemmacros_nmr_nucleus:w #2 \q_stop }
680 \mode_if_math:TF
681 {
682 \text
683 {
684 \group_begin:
685 \tl_use:N \l__chemmacros_nmr_format_tl
686 \LWR@textcurrentcolor{\LWR@textcurrentfont{% lwarp
687 __chemmacros_nmr_base:VV
688 \g__chemmacros_nmr_isotope_tl
689 \g__chemmacros_nmr_element_tl

```

```

690 \bool_if:NT \l__chemmacros_nmr_delimiters_bool
691 { ~ (}
692 \bool_if:NT \l__chemmacros_nmr_frequency_bool
693 { __chemmacros_nmr_frequency:n {#3} }
694 \bool_if:NT \l__chemmacros_nmr_comma_bool
695 { , ~ }
696 \bool_if:NT \l__chemmacros_nmr_solvent_bool
697 { \chemmacros_chemformula:n {#4} }
698 \bool_if:NT \l__chemmacros_nmr_delimiters_bool
699 {) }
700 \tl_if_blank:nT {#1} {::~}
701 }}% lwarp
702 \group_end:
703 }
704 \tl_if_blank:nT {#1}
705 {
706 \delta
707 \text { \l__chemmacros_nmr_delta_tl }
708 \bool_if:NT \l__chemmacros_nmr_use_equal_bool {=}
709 }
710 }
711 {
712 \group_begin:
713 \tl_use:N \l__chemmacros_nmr_format_tl
714 \LWR@textcurrentcolor{\LWR@textcurrentfont{% lwarp
715 __chemmacros_nmr_base:VV
716 \g__chemmacros_nmr_isotope_tl
717 \g__chemmacros_nmr_element_tl
718 \bool_if:NT \l__chemmacros_nmr_delimiters_bool
719 {~(}
720 \bool_if:NT \l__chemmacros_nmr_frequency_bool
721 { __chemmacros_nmr_frequency:n {#3} }
722 \bool_if:NT \l__chemmacros_nmr_comma_bool
723 {,~}
724 \bool_if:NT \l__chemmacros_nmr_solvent_bool
725 {
726 \bool_if:NTF \l__chemmacros_nmr_parse_bool

727 % { \chemformula_ch:nn { } {#4} }% original
728 {\ch{#4}}% lwarp
729 {#4}
730 }
731 \bool_if:NT \l__chemmacros_nmr_delimiters_bool
732 {)}}
733 }}% lwarp
734 \tl_if_blank:nT {#1} {::}
735 \group_end:
736 \tl_if_blank:nT {#1}
737 {
738 \tl_use:N \c_space_tl
739 \c_math_toggle_token
740 \delta
741 \c_math_toggle_token
742 \l__chemmacros_nmr_delta_tl
743 \bool_if:NT \l__chemmacros_nmr_use_equal_bool {::~}

```

```

744 }
745 }
746 \group_end:
747 }
748}% AfterEndPreamble
749
750
751 \RenewDocumentCommand \chemmacros_data:w { smo }
752 {
753 \bool_if:NT \l__chemmacros_nmr_list_bool { \item }
754 {
755 \tl_use:N \l__chemmacros_nmr_format_tl #2
756 \tl_use:N \l__chemmacros_nmr_format_tl
757 \LWR@textcurrentcolor{\LWR@textcurrentfont{% lwarp
758 #2
759 \IfNoValueF {#3} { ~ (#3) }
760 \IfBooleanT {#1} { \bool_if:NT \l__chemmacros_nmr_use_equal_bool { : } }
761 }}% lwarp
762 }
763 \IfBooleanF {#1} { \bool_if:NT \l__chemmacros_nmr_use_equal_bool { ~ = } }
764 }
765
766 }{}% \@ifchemmacrosmoduleloaded
767}% AtBeginDocument

```

## § 168.17 Thermodynamics

```

768 \AtBeginDocument{
769 \@ifchemmacrosmoduleloaded{thermodynamics}{
770 \PackageInfo{lwarp}{Patching~chemmacros~module~thermodynamics}
771
772 \cs_gset_protected:Npn \chemmacros_state:nn #1#2
773 {
774 \group_begin:
775 \boolfalse{mathjax}
776 \chemmacros_set_keys:nn {thermodynamics} {#1}
777 \LWR@subsingledollar*{% yes hashing
778 \textbackslash{}state{\LWR@HTMLsanitize{#2}\}% alt
779 }{%
780 chemmacros_state% add'l hashing
781 #1% options
782 LSP \tl_use:N \l__chemmacros_state_sp_left_tl% super/subscripts
783 LSB \tl_use:N \l__chemmacros_state_sb_left_tl
784 RSP \tl_use:N \l__chemmacros_state_sp_right_tl
785 RSB \tl_use:N \l__chemmacros_state_sb_right_tl
786 }
787 {
788 \LWR@origensuredmath{
789 \chemmacros_text:V \l__chemmacros_state_pre_tl
790 \c_math_superscript_token
791 { \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*.

```

792 \tl_if_empty:NTF \l__chemmacros_state_sb_left_tl
793 {}
794 {
795 \c_math_subscript_token
796 { \chemmacros_text:V \l__chemmacros_state_sb_left_tl }
797 }
798 #2
799 \c_math_superscript_token
800 { \chemmacros_text:V \l__chemmacros_state_sp_right_tl }
801 \tl_if_empty:NTF \l__chemmacros_state_sb_right_tl
802 {}
803 {
804 \c_math_subscript_token
805 { \chemmacros_text:V \l__chemmacros_state_sb_right_tl }
806 }
807 \chemmacros_text:V \l__chemmacros_state_post_tl
808 }
809 }
810 \group_end:
811 }
812 \cs_generate_variant:Nn \chemmacros_state:nn { nV }
813
814 \cs_gset_protected:Npn \chemmacros_declare_state:Nn #1#2
815 {
816 \chemmacros_define_keys:xn
817 {thermodynamics/\chemmacros_remove_backslash:N #1}
818 {
819 pre .meta:nn = {chemmacros/thermodynamics} { pre = ##1 } ,
820 post .meta:nn = {chemmacros/thermodynamics} { post = ##1 } ,
821 superscript-left .meta:nn = {chemmacros/thermodynamics} { superscript-left = ##1 } ,
822 superscript-right .meta:nn = {chemmacros/thermodynamics} { superscript-right = ##1 } ,
823 superscript .meta:n = { superscript-right = ##1 } ,
824 subscript-left .meta:nn = {chemmacros/thermodynamics} { subscript-left = ##1 } ,
825 subscript-right .meta:nn = {chemmacros/thermodynamics} { subscript-right = ##1 } ,
826 subscript .meta:n = { subscript-left = ##1 } ,
827 subscript-pos .choices:nn =
828 { left , right }
829 { \tl_set_eq:NN \l__chemmacros_state_sb_pos_tl \l_keys_choice_tl } ,
830 symbol .tl_set:N = \l__chemmacros_state_symbol_tl ,
831 unit .tl_set:N = \l__chemmacros_state_unit_tl
832 }
833 \DeclareDocumentCommand #1 { sO{}D(){}m }
834 {
835 \group_begin:
836 \chemmacros_set_keys:xn
837 {thermodynamics/\chemmacros_remove_backslash:N #1}
838 {#2}
839 \tl_if_blank:nF {##3}
840 {
841 \chemmacros_set_keys:nx {thermodynamics}
842 { subscript-\l__chemmacros_state_sb_pos_tl = \exp_not:n {##3} }
843 }
844 \chemmacros_state:nV {##2} \l__chemmacros_state_symbol_tl
845 \chemmacros_set_keys_groups:nnn {thermodynamics} {variables} {##2}
846 \IfBooleanF {##1} { = ~ \SI {##4} { \l__chemmacros_state_unit_tl } }

```

```

847 \group_end:
848 }
849 }

```

The pre-existing macros are redefined with the new definition:

```

850 \RenewChemState \enthalpy { symbol = H , unit = \kilo\joule\per\mole }
851 \RenewChemState \entropy { symbol = S , unit = \joule\per\kelvin\per\mole , pre = }
852 \RenewChemState \gibbs { symbol = G , unit = \kilo\joule\per\mole }
853
854 }{}% \@ifchemmacrosmoduleloaded
855 }% AtBeginDocument

856 \ExplSyntaxOff

```

---

## File 71 **lwarp-chemnum.sty**

### § 169 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 72 **lwarp-chkfloat.sty**

### § 170 Package **chkfloat**

Pkg chkfloat chkfloat is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{chkfloat}[2012/08/19]

---

## File 73 **lwarp-chngpage.sty**

### § 171 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 74 **lwarp-cite.sty**

### § 172 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 75 **lwarp-CJK.sty**

### § 173 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 76 **lwarp-CJKutf8.sty**

### § 174 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 77 **lwarp-clrdblpg.sty**

### § 175 Package **clrdblpg**

Pkg clrdblpg clrdblpg is ignored.

**for HTML output:**

```
1 \LWR@ProvidesPackageDrop{clrdblpg}[2018/04/21]
```

---

#### File 78 **lwarp-cmdtrack.sty**

### § 176 Package **cmdtrack**

Pkg cmdtrack cmdtrack is ignored.

**for HTML output:**

```
1 \LWR@ProvidesPackageDrop{cmdtrack}[2012/12/18]
```

---

```
2 \newcommand{\untrack}[1]{}
```

---

## File 79 **lwarp-color.sty**

### § 177 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 80 **lwarp-colortbl.sty**

### § 178 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}{0{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 81 **lwarp-continue.sty**

§ 179      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 82 **lwarp-copyrightbox.sty**

§ 180      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 83 **lwarp-crop.sty**§ 181 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 84 **lwarp-ctable.sty**§ 182 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 \@dfLTstarred
13 \let\@CTsuper \@dfLTsuper
14 \let\@CTnotespar \@dfLTnotespar
15 \let\@CTdoinside \@dfLTdoinside
16 \let\@CTbgopacity \@dfLTbgopacity
17 \@CTframerule \@dfLTframerule
18 \@CTcaptionskip \@dfLTcaptionskip
19 \@CTframesep \@dfLTframesep

```

```

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 \fi
44 \fi
45 \ifdim\CTwidth=0pt\else
46 \ifdim\CTmaxwidth=0pt\else
47 \PackageError{lwarp-ctable}{\MessageBreak
48 You may not use the width and maxwidth options together\MessageBreak
49 Use either width or maxwidth}
50 \fi
51 \fi
52 \ifx\CTpos\empty
53 \ifx\CTsideways\empty\else
54 \PackageError{lwarp-ctable}{\MessageBreak
55 You may not use the pos and sideways options together\MessageBreak
56 Rotated tables and figures are always typeset on a separate page}
57 \fi
58 \fi
59 \ifx\CTcaption\empty
60 \ifx\CTlabel\empty\else
61 \PackageError{lwarp-ctable}{\MessageBreak
62 You may not label a captionless table\MessageBreak
63 Such a label can't be referenced}
64 \fi
65 \fi

```

Some of the original, regarding computing the width of \CT@t, is removed here.

```

66 \CTbegin
67 \ifx\CTcontinued\empty\else\addtocounter{\CTtaborfig}{-1}\fi
68 \CTalign

```

lwarp's patches begin here:

```

69 \begin{center}
70 \setlength{\fboxrule}{\@CTframerule}
71 \setlength{\fboxsep}{\@CTframesep}
72 \LWR@forceminwidth{\fboxrule}% lwarp
73 \convertcolorspec{named}{\@CTbgactual}{HTML}\LWR@tempcolor% lwarp
74 \begin{BlockClass}% lwarp
75 border:
76 \LWR@printlength{\LWR@atleastonept}
77 solid
78 \LWR@colorstyle{named}{\@CTfgactual} ; %
79 padding:\LWR@printlength{\fboxsep} ; %
80 \ifdefstring{\LWR@tempcolor}{FFFFFF}{%
81 background: \LWR@colorstyle{named}{\@CTbgactual} ; %
82 }%
83]{fminipage}% lwarp
84 \ifx\@CTbotcap\@CTfalse\@CTCaption\vskip\@CTcaptionskip\fi
85 \ifx\@CTbotcap\undefined%
86 \begin{sidecaption}\@CTcap{\@CTcaption}\@CTlabel]
87 \fi
88 \@CTdoinside
89 \begin{tabularx}{\linewidth}{#2}% lwarp
90 #4%
91 \end{tabularx}% lwarp
92 \def\@CTfootnotes{#3}%
93 \ifx#3\empty\else{% append footnotes, if any
94 \begin{BlockClass}{tnotes}% lwarp
95 #3
96 \end{BlockClass}% lwarp
97 }
98 \fi
99 \ifx\@CTbotcap\undefined\end{sidecaption}\fi
100 \ifx\@CTbotcap\@CTtrue\vskip\@CTcaptionskip\@CTCaption\fi
101 \end{BlockClass}
102 \end{center}
103 \@CTend
104 }
105 \LWR@formatted{ctable}

```

Required to properly detect the toprule:

```
106 \LetLtxMacro\FL\toprule
```

Table notes are redefined for HTML:

```

107 \newcommand{\LWR@HTML@tmark}[1][a]{%
108 \textsuperscript{\textrm{\textit{#1}}}}
109 }
110 \LWR@formatted{tmark}
111
112 \newcommand{\LWR@HTML@tnote}[2][a]{%
113 \tmark[#1]\,,#2\par
114 }
115 \LWR@formatted{tnote}

```

File 85 **lwarp-cuted.sty**§ 183 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 86 **lwarp-cutwin.sty**§ 184 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 87 **lwarp-dblfloatfix.sty**

§ 185      Package **dblfloatfix**

Pkg    dblfloatfix    dblfloatfix is ignored.

**for HTML output:**    1 \LWR@ProvidesPackageDrop{dblfloatfix}[2012/12/31]

---

File 88 **lwarp-dblfnote.sty**

§ 186      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 89 **lwarp-dcolumn.sty**

§ 187      Package **dcolumn**

Pkg    dcolumn    dcolumn is emulated by the lwarp core.

1 \LWR@ProvidesPackageDrop{dcolumn}[2014/10/28]

File 90 **lwarp-diagbox.sty**

§ 188 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 {\<title>} {\<A>} {\}

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 {\<keys>} {\<A>} {\<T>} {\}

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 91 **lwarp-dingbat.sty**

§ 189      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 92 **lwarp-dprogress.sty**

§ 190      Package **dprogress**

Pkg    dprogress    dprogress is ignored.

for HTML output:    1 \LWR@ProvidesPackageDrop{dprogress}[2008/02/21]

---

## File 93 **lwarp-draftcopy.sty**

§ 191      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 94 **lwarp-draftfigure.sty**

§ 192      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 95 **lwarp-draftwatermark.sty**

§ 193      Package **draftwatermark**

*(Emulates or patches code by SERGIO CALLEGARI.)*

Pkg   draftwatermark   **draftwatermark** is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{draftwatermark}[2015/02/19]

2 \newcommand{\SetWatermarkAngle}[1]{}
3 \newcommand{\SetWatermarkColor}[1]{}
4 \newcommand{\SetWatermarkLightness}[1]{}
5 \newcommand{\SetWatermarkFontSize}[1]{}
6 \newcommand{\SetWatermarkScale}[1]{}
7 \newcommand{\SetWatermarkHorCenter}[1]{}
8 \newcommand{\SetWatermarkVertCenter}[1]{}
9 \newcommand{\SetWatermarkText}[1]{}

```

File 96 **lwarp-easy-todo.sty**§ 194 Package **easy-todo***(Emulates or patches code by JUAN RADA-VILELA.)*Pkg easy-todo **easy-todo** is patched for use by **lwarp**.**for HTML output:** 1 \LWR@ProvidesPackagePass{easy-todo}[2014/01/01]

\listoftodos Modified to correct buggy use of \flushright.

```

2 \let\LWR@origlistoftodos\listoftodos
3
4 \renewcommand{\listoftodos}{%
5 \begin{group}
6 \renewcommand{\flushright}{}
7 \LWR@origlistoftodos
8 \end{group}
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 97 **lwarp-ebook.sty**§ 195 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 98 **lwarp-ed.sty**

§ 196 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\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 99 **lwarp-ellipsis.sty**§ 197 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 100 **lwarp-embrac.sty**§ 198 Package **embrac***(Emulates or patches code by CLEMENS NIEDERBERGER.)*

Pkg embrac embrac is nullfied for HTML and used as-is for print.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{embrac}[2017/07/04]
2
3 \LetLtxMacro\LWR@orig@HTML@emph\LWR@HTML@emph
4 \RenewDocumentCommand{\LWR@HTML@emph}{s m}{\LWR@orig@HTML@emph{#2}}
5
6 \LetLtxMacro\LWR@orig@HTML@textit\LWR@HTML@textit
7 \RenewDocumentCommand{\LWR@HTML@textit}{s m}{\LWR@orig@HTML@textit{#2}}
8
9 \LetLtxMacro\LWR@orig@HTML@textsl\LWR@HTML@textsl
10 \RenewDocumentCommand{\LWR@HTML@textsl}{s m}{\LWR@orig@HTML@textsl{#2}}
11
12 \ifxetexorluatex
13 \LetLtxMacro\LWR@orig@HTML@textsi\LWR@HTML@textsi
14 \RenewDocumentCommand{\LWR@HTML@textsi}{s m}{%
15 \LWR@orig@HTML@textsi{#2}}
16 \fi
17
18 \AtBeginDocument{
19 \LWR@formatted{emph}
20 \LWR@formatted{textit}
21 \LWR@formatted{textsl}
22 \ifxetexorluatex
23 \LWR@formatted{textsi}
24 \fi
25 }

```

---

```

26 \newcommand{\LWR@HTML@EmbracOff}{}
27 \LWR@formatted{EmbracOff}
28
29 \newcommand{\LWR@HTML@EmbracOn}{}
30 \LWR@formatted{EmbracOn}

```

---

File 101 **lwarp-emptypage.sty**

§ 199 Package **emptypage**

Pkg emptypage emptypage is ignored.

**for HTML output:** Discard all options for lwarp-emptypage:

```
1 \LWR@ProvidesPackageDrop{emptypage}[2010/05/30]
```

---

File 102 **lwarp-endfloat.sty**

§ 200 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 103 **lwarp-endheads.sty**

§ 201      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 104 **lwarp-endnotes.sty**

§ 202      Package **endnotes**

*(Emulates or patches code by JOHN LAVAGNINO.)*

Pkg    endnotes    Used as-is.

[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
```

**for HTML output:**

```
1 \LWR@ProvidesPackagePass{endnotes}

2 \def\enoteformat{%
3 % \rightskip\z@ \leftskip\z@ \parindent=1.8em
4 \leavevmode
5 % \llap{
6 \makeenmark
7 % }
8 }
9
10 \def\@makeenmark{\hbox{\LWR@htmlspan{sup}}{\normalfont\theenmark}}
11 \def\makeenmark{\@makeenmark}
```

---

File 105 **lwarp-enumerate.sty**

§ 203     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 106 **lwarp-enumitem.sty**

§ 204     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 107 **lwarp-epigraph.sty**

§ 205      Package **epigraph**

*(Emulates or patches code by PETER WILSON.)*

Pkg    epigraph    epigraph is emulated.

**for HTML output:**    1 \LWR@ProvidesPackageDrop{epigraph}[2009/09/02]

```

2 \DeclareDocumentCommand{\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 \DeclareDocumentCommand{\epigraph}{m m}
15 {
16 \begin{LWR@BlockClassWP}{\LWR@print@mbbox{text-align:right}}{\epigraph}
17 \qitem{#1}{#2}
18 \end{LWR@BlockClassWP}
19 }
20
21 \DeclareDocumentEnvironment{epigraphs}{}
22 {\LWR@BlockClassWP{\LWR@print@mbbox{text-align:right}}{\epigraph}}
23 {\endLWR@BlockClassWP}

```

Use css to format epigraphs.

The following are null commands for source compatibility:

```

24 \newenvironment*{flushepinormal}{}{}

```

---

```

25 \ifclassloaded{memoir}{
26 \setlength{\epigraphwidth}{.5\linewidth}
27 \renewcommand{\textflush}{flushleft}
28 \renewcommand{\epigraphhead}[2][0]{#2}
29 \renewcommand{\dropchapter}[1]{}
30 \renewcommand*{\undodrop}{}
31 }{% not memoir
32 \newlength{\epigraphwidth}
33 \setlength{\epigraphwidth}{.5\linewidth}
34 \newcommand{\textflush}{flushleft}
35 \newcommand{\epigraphflush}{flushright}
36 \newcommand{\sourceflush}{flushright}
37 \newcommand*{\epigraphsize}{\small}
38 \newlength{\epigraphrule}
39 \newlength{\beforeepigraphskip}
40 \newlength{\afterepigraphskip}
41 \newcommand{\epigraphhead}[2][0]{#2}
42 \newcommand{\dropchapter}[1]{}
43 \newcommand*{\undodrop}{}
44 }% not memoir
45
46 \let\cleartoevenpage\relax% also in nextpage
47 \newcommand{\cleartoevenpage}[1][]{}
```

---

File 108 **lwarp-epsfig.sty**

§ 206      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 109 **lwarp-epstopdf.sty**

§ 207      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 110 **lwarp-epstopdf-base.sty**

§ 208      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 111 **lwarp-eqlist.sty**

§ 209      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 112 **lwarp-eqparbox.sty**

§ 210      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}{0{t} 0{ } 0{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 113 **lwarp-errata.sty**

§ 211 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@orignewpage}
```

No longer defining math macros with the HTML \$:

```
45 \StopDefiningMath
```

File 114 **lwarp-eso-pic.sty**§ 212 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][{}]
```

File 115 **lwarp-eurosym.sty**§ 213 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\officialeuro{\HTMLentity{euro}}
3 \let\geneuro\officialeuro
4 \let\geneuronarrow\officialeuro
5 \let\geneurowide\officialeuro
6 \let\euro\officialeuro
7 \renewrobustcmd\eurobars{}
8 \renewrobustcmd\eurobarsnarrow{}
9 \renewrobustcmd\eurobarswide{}
```

---

File 116 **lwarp-everypage.sty**

§ 214      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]{}  
 4

---

File 117 **lwarp-everyshi.sty**

§ 215      Package **everyshi**

*(Emulates or patches code by MARTIN SCHRÖDER.)*

Pkg    everyshi    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]{}  
 4

---

File 118 **lwarp-extramarks.sty**

§ 216      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

```

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 119 **lwarp-fancybox.sty**

§ 217 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 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 loses 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 *pdfTeX* detects. Some lines may be off slightly in their left edge.

**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 \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 \@makefnmark{}%

```

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}

```

Beqnarray is adapted for MATHJAX or enclosed inside a lateximage:

```

57 \RenewEnviron{Beqnarray}
58 {\LWR@eqnarrayfactor}
59
60 \csgpreto{Beqnarray*}{\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 {\llcr}\ [\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 120 **lwarp-fancyhdr.sty**

§ 218 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 121 **lwarp-fancyref.sty**

§ 219      Package **fancyref**

Pkg   fancyref   fancyref is emulated.

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 }
```

Modified to ignore the page number and `varioref`.

```

8 \renewcommand*\@f@ref}[4]{%
9 \@ifundefined{#1r@#2@#3}{%
10 \PackageError{lwarp-fancyref}{%
11 \backslashchar#1ref\space format ‘‘#2’’
12 undefined\MessageBreak
13 for label type ‘‘#3’’}%
14 }{%
15 The format ‘‘#2’’ was not defined for the label type
16 ‘‘#3’’\MessageBreak
17 and the \backslashchar#1ref\space command. Perhaps
18 you have only misspelled its name.\MessageBreak
19 Otherwise you will have to define it with
20 \protect\new#1refformat\MessageBreak
21 prior to using it.%
22 }%
23 }{%
24 \fancyrefhook{%
25 \@nameuse{#1r@#2@#3}%
26 {\ref{#3\fancyrefargdelim#4}}%
27 {\pageref{#3\fancyrefargdelim#4}}% original
28 {\@fancyref@page@ref{#3\fancyrefargdelim#4}}% original
29 }% lwarp
30 }% lwarp
31 }%
32 }%
33 }%
```

File 122 **lwarp-fancytabs.sty**

§ 220 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 123 **lwarp-fancyvrb.sty**

§ 221 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+verbtim+.}
```

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 \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@templengthone}{\baselineskip}%
112 \FV@BeginListFrame@Lines%
113 % \setlength{\baselineskip}{\LWR@templengthone}%
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 \ifcsvoid{FV@LeftListNumber}{}{\kern 2.5em}%
237 \FV@LeftListNumber%
238 }%
239 \FancyVerbFormatLine{#1}%
240 \hss%
241 }%
242 \FV@RightListFrame
243 \FV@RightListNumber%
244 }%
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 124 **lwarp-figcaps.sty**

§ 222 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 125 **lwarp-figsize.sty**

§ 223      Package **figsize**

*(Emulates or patches code by ANTHONY A. TANBAKUHL.)*

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 126 **lwarp-fitbox.sty**

§ 224      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 127 **lwarp-fix2col.sty**

§ 225 Package **fix2col**

Pkg fix2col fix2col is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{fix2col}[2015/11/13]


---

File 128 **lwarp-fixme.sty**

§ 226 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]{\hypertocfloat{1}{fixme}{lox}{#1}{#2}}

```

Other modifications:

```
6 \def\FXFaceInlineHTMLStyle{font-weight:bold}
```

```

7
8 \renewcommand*\FXLayoutInline[3]{ %
9 \InlineClass[\FXFaceInlineHTMLStyle]{fixmeinline}%
10 {\@fxtextstd{#1}{#2}{#3}}%
11 }
12
13 \def\FXFaceEnvHTMLStyle{font-weight:bold}
14
15 \renewcommand*\FXEnvLayoutPlainBegin[2]{%
16 \BlockClass[\FXFaceEnvHTMLStyle]{fixmebold}
17 \ignorespaces#2 \fxnotename{#1}: \ignorespaces}
18
19 \renewcommand*\FXEnvLayoutPlainEnd[2]{\endBlockClass}
20
21 \renewcommand*\FXEnvLayoutSignatureBegin[2]{%
22 \BlockClass[\FXFaceEnvHTMLStyle]{fixmebold}
23 \fxnotename{#1}: \ignorespaces}
24
25 \renewcommand*\FXEnvLayoutSignatureEnd[2]{\@fxsignature{#2}\endBlockClass}
26
27 \def\FXFaceSignatureHTMLStyle{font-style:italic}
28
29 \DeclareRobustCommand*\@fxsignature[1]{%
30 \ifthenelse{\equal{#1}{}}%
31 {}%
32 { -- {\InlineClass[\FXFaceSignatureHTMLStyle]{fixmesignature}{#1}}}%
33 }
34
35
36 \def\FXFaceTargetHTMLStyle{font-style:italic}
37
38 \renewcommand\FXTargetLayoutPlain[2]{%
39 \InlineClass[\FXFaceTargetHTMLStyle]{fixmetarget}{#2}%
40 }

```

---

File 129 **lwarp-fixmetodonotes.sty**

§ 227      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 130 **lwarp-flafter.sty**

§ 228    Package **flafter**

Pkg flafter flafter is ignored.

**for HTML output:**    1 \LWR@ProvidesPackageDrop{flafter}[2018/01/08]  
                          2 \providecommand\fl@trace[1]{}

---

File 131 **lwarp-flippdf.sty**

§ 229    Package **flippdf**

Pkg flippdf flippdf is ignored.

**for HTML output:**    1 \LWR@ProvidesPackageDrop{flippdf}[2006/06/30]  
                          2 \newcommand\FlipPDF{}  
                          3 \newcommand\UnFlipPDF{}

---

File 132 **lwarp-float.sty**

§ 230    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}}%
```

Remember the float style:

```
7 \csdef{\LWR@floatstyle@#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.

```
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”.

```
12 \NewDocumentCommand{\floatname}{m +m}{%
13 \SetupFloatingEnvironment{#1}{name=#2}%
14 }
```

`\floatplacement`     $\{\langle type \rangle\} \{\langle placement \rangle\}$

Float placement is ignored.

```
15 \newcommand*\floatplacement[2]{%
16 \SetupFloatingEnvironment{#1}{placement=#2}%
17 }
```

`\floatstyle`     $\{\langle style \rangle\}$

Remember the style for future floats:

```
18 \newcommand{\floatstyle}[1]{%
19 \def\LWR@floatstyle{#1}%
20 }
```

```

\restylefloat *{\type}
Remember the style for this float:
21 \NewDocumentCommand{\restylefloat}{s m}{%
22 \csedef{LWR@floatstyle@#2}{\LWR@floatstyle}%
23 }

```

---

File 133 **lwarp-floatflt.sty**

§ 231 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 [⟨⟩] offset {⟨type⟩} {⟨width⟩} Borrowed from the lwarp version of keyfloat:

```

2 \NewDocumentEnvironment{KFLTfloatflt@marginfloat}{0{-1.2ex} m m}
3 {%
4 \setlength{\LWR@templengthone}{#3}%
5 \LWR@BlockClassWP{%
6 float:right; %
7 width:\LWR@printlength{\LWR@templengthone}; % extra space
8 margin:10pt%
9 }{%
10 width:\LWR@printlength{\LWR@templengthone}%
11 }%
12 {marginblock}%
13 \captionsetup{type=#2}%
14 }
15 {%
16 \endLWR@BlockClassWP%
17 }

```

Env floatingfigure [⟨placement⟩] {⟨width⟩}

```

18 \DeclareDocumentEnvironment{floatingfigure}{o m}
19 {\begin{KFLTfloatflt@marginfloat}{figure}{#2}}
20 {\end{KFLTfloatflt@marginfloat}}

```

Env floatingtable [⟨placement⟩]

```

21 \DeclareDocumentEnvironment{floatingtable}{o}
22 {\begin{KFLTfloatflt@marginfloat}{table}{1.5in}}
23 {\end{KFLTfloatflt@marginfloat}}

```

---

File 134 **lwarp-floatpag.sty**

§ 232      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 135 **lwarp-floatrow.sty**

§ 233      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`     $\langle 1 \text{ command} \rangle \langle 2 \text{ captype} \rangle [\langle 3 \text{ preamble} \rangle] [\langle 4 \text{ default width} \rangle]$

Preamble and default width are ignored.

```

57 \NewDocumentCommand{\newfloatcommand}{m m o o}{%
58 \@namedef{#1}{
59 \floatbox{#2}
60 }
61 }

```

`\renewfloatcommand`     $\langle 1 \text{ command} \rangle \langle 2 \text{ captype} \rangle [\langle 3 \text{ preamble} \rangle] [\langle 4 \text{ default width} \rangle]$

Preamble and default width are ignored.

```

62 \NewDocumentCommand{\renewfloatcommand}{m m o o}{%
63 \@namedef{#1}{%
64 \floatbox{#2}
65 }
66 }

```

`\ffigbox`     $[\langle width \rangle] [\langle height \rangle] [\langle vposn \rangle] \{ \langle caption \text{ commands} \rangle \} \{ \langle contents \rangle \}$

```
67 \newfloatcommand{ffigbox}{figure}[\nocapbeside][[]]
```

```
\ttabbox [⟨width⟩] [⟨height⟩] [⟨vposn⟩] {⟨caption commands⟩} {⟨contents⟩}
```

```
68 \newfloatcommand{ttabbox}{table}[\capttop][\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 \LWR@forcenewpage
```

```
73 \BlockClass{floatrow}
```

While inside the floatrow, divide the \linewidth by the number of floats.

```
74 \booltrue{LWR@infloatrow}
```

```
75 \setlength{\linewidth}{6in/#1}
```

```
76 }
```

```
77 {
```

```
78 \boolfalse{LWR@infloatrow}
```

```
79 \endBlockClass
```

```
80 }
```

Keys for \DeclareNewFloatType:

```
81 \newcommand*{\LWR@frowkeyplacement}{}%
```

```
82 \newcommand*{\LWR@frowkeyname}{}%
```

```
83 \newcommand*{\LWR@frowkeyfileext}{}%
```

```
84 \newcommand*{\LWR@frowkeywithin}{}%
```

```
85 \newcommand*{\LWR@frowkeycapstyle}{}%
```

```
86
```

```
87 \define@key{frowkeys}{placement}{}%
```

```
88 \define@key{frowkeys}{name}{\renewcommand{\LWR@frowkeyname}{#1}}%
```

```
89 \define@key{frowkeys}{fileext}{\renewcommand{\LWR@frowkeyfileext}{#1}}%
```

```
90 \define@key{frowkeys}{within}{\renewcommand{\LWR@frowkeywithin}{#1}}%
```

```
91 \define@key{frowkeys}{relatedcapstyle}{}%
```

```
\DeclareNewFloatType {⟨type⟩} {⟨options⟩}
```

Use \listof{type}{Title} to print a list of the floats.

```
92 \newcommand*{\DeclareNewFloatType}[2]{%
```

Reset key values:

```
93 \renewcommand*{\LWR@frowkeyplacement}{}%
```

```
94 \renewcommand*{\LWR@frowkeyname}{}%
```

```
95 \renewcommand*{\LWR@frowkeyfileext}{}%
```

```
96 \renewcommand*{\LWR@frowkeywithin}{}%
```

```
97 \renewcommand*{\LWR@frowkeycapstyle}{}%
```

Read new key values:

```
98 \LWR@traceinfo{about to setkeys frowkeys}%
99 \setkeys{frowkeys}{#2}%
100 \LWR@traceinfo{finished setkeys frowkeys}%
```

Create a new float with optional [within]:

```
101 \ifthenelse{\equal{\LWR@frowkeywithin}{}}{%
102 {%
103 \LWR@traceinfo{about to newfloat #1 \LWR@frowkeyplacement\ %
104 \LWR@frowkeyfileext}%
105 \newfloat{#1}{\LWR@frowkeyplacement}{\LWR@frowkeyfileext}%
106 }%
107 {%
108 \LWR@traceinfo{about to newfloat #1\ \LWR@frowkeyplacement\ %
109 \LWR@frowkeyfileext\ \LWR@frowkeywithin}%
110 \newfloat{#1}{\LWR@frowkeyplacement}%
111 {\LWR@frowkeyfileext}[\LWR@frowkeywithin]%
112 \LWR@traceinfo{finished newfloat #1}%
113 }%}
```

Rename the float if a name was given:

```
114 \ifthenelse{\equal{\LWR@frowkeyname}{}}{%
115 {}%
116 {\floatname{#1}{\LWR@frowkeyname}}%
117 }
```

Not used:

```
118 \newcommand{\buildFBBBOX}[2]{%
119 \newcommand*{\CenterFloatBoxes}{%
120 \newcommand*{\TopFloatBoxes}{%
121 \newcommand*{\BottomFloatBoxes}{%
122 \newcommand*{\PlainFloatBoxes}{%
123
124 \newcommand{\capsubrowsettings}{%
125
126 \NewDocumentCommand{\RawFloats}{o o}{%}
```

`\RawCaption`     $\{\langle text \rangle\}$

To be used inside a minipage or parbox.

```
127 \newcommand{\RawCaption}[1]{#1}
```

`\floatfoot`     $\{\langle text \rangle\}$

Places additional text inside a float, inside a css <div> of class floatfoot.

```
128 \NewDocumentCommand{\floatfoot}{s +m}{%
129 \begin{BlockClass}{floatfoot}
130 #2
131 \end{BlockClass}
132 }
```

Used to compute `\linewidth`.

```
133 \newbool{LWR@insubfloatrow}
134 \boolfalse{LWR@insubfloatrow}
```

Env subfloatrow [`<num_floats>`]

```
135 \newenvironment*{subfloatrow}[1][2]
136 {
```

The row of floats is placed into a `<div>` of class `floatrow`:

```
137 \LWR@forcenewpage
138 \BlockClass{floatrow}
```

While inside the `floatrow`, `LWR@insubfloatrow` is set true, which tells `\floatbox` to use `\subfigure` or `\subtable`.

```
139 \begingroup
140 \booltrue{LWR@insubfloatrow}
141 }
142 {
143 \endgroup
144 \endBlockClass
145 \boolfalse{LWR@insubfloatrow}
146 }
```

---

File 136 **lwarp-fltrace.sty**

§ 234 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 137 **lwarp-flushend.sty**

§ 235 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 138 **lwarp-fnbreak.sty**

§ 236 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 139 **lwarp-fncychap.sty**

§ 237 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 140 **lwarp-fnlineno.sty**

§ 238 Package **fnlineno**

Pkg fnlineno fnlineno is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{fnlineno}[2011/01/07]

---

File 141 **lwarp-fnpara.sty**

§ 239 Package **fnpara**

Pkg fnpara fnpara is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{fnpara}

---

File 142 **lwarp-fnpos.sty**

§ 240 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 143 **lwarp-fontawesome.sty**

§ 241 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 \begin{lateximage}*[(icon)][fontawesomexetex#1]%
10 \begingroup%
11 \LWR@orig@FA%
12 \LWR@orig@symbol{#1}%
13 \endgroup%
14 \end{lateximage}%
15 }
16
17 \RenewDocumentCommand{\FA}{}{%
18 \LetLtxMacro\symbol\LWR@fontawesome@xelatex@symbol%
19 }
20
21 \else
22
23 \newcommand*{\LWR@fontawesome@symbolone}[1]{%
24 \begin{lateximage}*[(icon #1)][fontawesomeone#1]%
25 \begingroup%
26 \fontencoding{U}\fontfamily{fontawesomeone}\selectfont%
27 \LWR@orig@symbol{#1}%
28 \endgroup%
29 \end{lateximage}%
30 }
31
32 \newcommand*{\LWR@fontawesome@symboltwo}[1]{%
33 \begin{lateximage}*[(icon #1)][fontawesometwo#1]%
34 \begingroup%
35 \fontencoding{U}\fontfamily{fontawesometwo}\selectfont%
36 \LWR@orig@symbol{#1}%
37 \endgroup%
38 \end{lateximage}%
39 }
40
41 \newcommand*{\LWR@fontawesome@symbolthree}[1]{%
```

---

```

42 \begin{lateximage}*[(icon #1)][fontawesomethree#1]%
43 \begin{group}%
44 \fontencoding{U}\fontfamily{fontawesomeonethree}\selectfont%
45 \LWR@orig@symbol{#1}%
46 \end{group}%
47 \end{lateximage}%
48 }
49
50 \renewrobustcmd\FAone{%
51 \LetLtxMacro\symbol\LWR@fontawesome@symbolone%
52 }
53
54 \renewrobustcmd\FAtwo{%
55 \LetLtxMacro\symbol\LWR@fontawesome@symboltwo%
56 }
57
58 \renewrobustcmd\FAthree{%
59 \LetLtxMacro\symbol\LWR@fontawesome@symbolthree%
60 }
61 \fi

```

---

File 144 **lwarp-fontawesome5.sty**

§ 242      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 \cs_if_exist:cTF{c__fontawesome_slot_#2_tl}{
5 \begin{lateximage}*[(#2)][#1]
6 \exp_last_unbraced:Nv
7 __fontawesome_icon_at:nnnn
8 {c__fontawesome_slot_#2_tl}
9 {#1}{#2}
10 \end{lateximage}
11 }{
12 \msg_error:nnxx{fontawesome5}{icon-not-found}{#2}{#1}
13 }
14 }
15 \ExplSyntaxOff

```

---

File 145 **lwarp-fontaxes.sty**

§ 243      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 \newrobustcmd{\LWR@HTML@sscshape}{\LWR@HTML@sscshape}
3 \LWR@formatted{sscshape}
4 \newcommand*\LWR@null@sscshape{}
5
6 \newrobustcmd{\LWR@HTML@textssc}[1]{\textsc{#1}}
7 \LWR@formatted{textssc}
8 \newcommand*\LWR@null@textssc[1]{#1}
9
10 \ifdef{\LWR@HTML@swshape}{\}% duplicated by nfssect-cfr
11 \newcommand{\LWR@HTML@swshape}{}
12 \LWR@formatted{swshape}
13 \newcommand*\LWR@null@swshape{}
14
15 \newcommand{\LWR@HTML@textsw}[1]{#1}
16 \LWR@formatted{textsw}
17 \newcommand*\LWR@null@textsw[1]{#1}
18 }
19
20 \appto{\LWR@null@fontaxes}{%
21 \LetLtxMacro\sscshape\LWR@null@sscshape%
22 \LetLtxMacro\textssc\LWR@null@textssc%
23 \LetLtxMacro\swshape\LWR@null@swshape%
24 \LetLtxMacro\textsw\LWR@null@textsw%
25 }
```

---

File 146 **lwarp-fontenc.sty**

§ 244      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 147 **lwarp-footmisc.sty**

§ 245     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**:

```
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 148 **lwarp-footnote.sty**

§ 246 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 149 **lwarp-footnotebackref.sty**

§ 247      Package **footnotebackref**

Pkg   footnotebackref   footnotebackref is ignored.

**for HTML output:**      1 \LWR@ProvidesPackageDrop{footnotebackref}[2012/07/01]

---

File 150 **lwarp-footnotehyper.sty**

§ 248      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 151 **lwarp-footnoterange.sty**

§ 249      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 152 **lwarp-footnpag.sty**

§ 250      Package **footnpag**

Pkg   footnpag   footnpag is ignored.

**for HTML output:**      1 \LWR@ProvidesPackageDrop{footnpag}

---

File 153 **lwarp-foreign.sty**

§ 251 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 154 **lwarp-forest.sty**

§ 252 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}{\begin{lateximage}[forest]}
3
4 \AfterEndEnvironment{forest}{\end{lateximage}}
5
6 \RenewDocumentCommand{\Forest}{s D(){} m}{%
7 \forest@config{#2}%
8 \IfBooleanTF{#1}{%
9 \PackageError{lwarp-forest}%
10 {Starred \Forest is not supported}%
11 {Lwarp uses an environment for images, but \Forest* cannot work in an environment.}%
12 \let\forest@next\forest@env%
13 }{\let\forest@next\forest@group@env}%
14 \begin{lateximage}[forest]% lwarp
15 \forest@next{#3}%
16 \end{lateximage}% lwarp
17 }
```

File 155 **lwarp-framed.sty**

§ 253 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 \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 156 **lwarp-ftcap.sty**

§ 254    Package **ftcap**

Pkg    ftcap    ftcap is ignored.

**for HTML output:**    1 \LWR@ProvidesPackageDrop{ftcap}

---

File 157 **lwarp-ftnright.sty**

§ 255    Package **ftnright**

Pkg    ftnright    ftnright is ignored.

**for HTML output:**    Discard all options for lwarp-ftnright:

1 \LWR@ProvidesPackageDrop{ftnright}[2014/10/28]

---

File 158 **lwarp-fullminipage.sty**

§ 256    Package **fullminipage**

Pkg    fullminipage    fullminipage is ignored.

**for HTML output:**    1 \LWR@ProvidesPackageDrop{fullminipage}[2014/07/06]

2 \newenvironment{fullminipage}[1][{}]{}

---

File 159 **lwarp-fullpage.sty**

§ 257 Package **fullpage**

Pkg fullpage fullpage is ignored.

**for HTML output:** Discard all options for lwarp-fullpage:

```
1 \LWR@ProvidesPackageDrop{fullpage}[1994/06/01]
```

---

File 160 **lwarp-fullwidth.sty**

§ 258 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 161 **lwarp-fwlw.sty**

§ 259 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 162 **lwarp-gentombow.sty**§ 260 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 163 **lwarp-geometry.sty**§ 261 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@ProvidesPackageDrop{geometry}[2018/04/16]

2 \renewcommand*{\geometry}[1]{}
3 \renewcommand*{\newgeometry}[1]{}
4 \renewcommand*{\restoregeometry}{}
5 \renewcommand*{\savegeometry}[1]{}
6 \renewcommand*{\loadgeometry}[1]{}

```

File 164 **lwarp-gloss.sty**§ 262 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 165 **lwarp-glossaries.sty**

§ 263 Package **glossaries**

(Emulates or patches code by NICOLA L.C. TALBOT.)

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.

**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 \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 \@gls@toc{#1}{\@@glossarysec}% Moved after the previous line.
17 }%
18 \@@glossaryseclabel
19 }
```

`lwarp`'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@glnumbersgroupname}{\translate{Numbers (glossaries)}}
42
43 \ifdefstrequal{\glnumbersgroupname}{\LWR@comp@glnumbersgroupname}{
44 \translatelet\LWR@translatetemp{Numbers (glossaries)}
45 \edef\glnumbersgroupname{\LWR@translatetemp}
46 }{}

```

---

File 166 **lwarp-gmeometric.sty**

§ 264      Package **gmeometric**

Pkg   gmeometric   gmeometric is ignored.

**for HTML output:**    1 \LWR@ProvidesPackageDrop{gmeometric}[2008/11/22]

---

File 167 **lwarp-graphics.sty**

§ 265      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]

## § 265.1 Graphics extensions

`\DeclareGraphicsExtensions`  $\{\langle list \rangle\}$

`\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
```

## § 265.2 Length conversions and graphics options



**whitespace**

A scaled image in  $\text{\LaTeX}$  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}{(image)}
```

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\MessageBreak
82 [width=xx\protect\linewidth]\MessageBreak
83 instead of [scale=yy],%
84 }%
85 }%
86 \renewcommand*\LWR@igxscale}{#1}%
87 \renewcommand*\LWR@igyscale}{#1}%
88 }

```

Numerous ignored keys:

```

89 \define@key{igraph}{bb}{}
90 \define@key{igraph}{bblx}{}
91 \define@key{igraph}{bblly}{}
92 \define@key{igraph}{bburx}{}
93 \define@key{igraph}{bbury}{}
94 \define@key{igraph}{natwidth}{}
95 \define@key{igraph}{natheight}{}
96 \define@key{igraph}{hiresbb}[true]{}
97 \define@key{igraph}{viewport}{}
98 \define@key{igraph}{trim}{}
99 \define@key{igraph}{totalheight}{}
100 \define@key{igraph}{keepaspectratio}[true]{}
101 \define@key{igraph}{clip}[true]{}
102 \define@key{igraph}{draft}[true]{}
103 \define@key{igraph}{type}{}

```

```

104 \define@key{igraph}{ext}{}
105 \define@key{igraph}{read}{}
106 \define@key{igraph}{command}{}

```

New in v1.1a:

```

107 \define@key{igraph}{quite}{}
108 \define@key{igraph}{page}{}
109 \define@key{igraph}{pagebox}{}
110 \define@key{igraph}{interpolate}[true]{}

```

New in v1.1b:

```

111 \define@key{igraph}{decodearray}{}

```

### § 265.3 **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.

```

112 \newcommand*{\LWR@rotstyle}[2]{%
113 #1transform:rotate(-#2deg);
114 }

```

`\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.

```

115 \newcommand*{\LWR@scalestyle}[3]{%
116 #1transform:scale(#2,#3);
117 }

```

### § 265.4 **\includegraphics**

Bool `LWR@infloatrow` Used to compute `\linewidth`.

```

118 \newbool{LWR@infloatrow}
119 \boolfalse{LWR@infloatrow}

```

`\LWR@opacity` For HTML, used only for `\includegraphics`.

`\LWR@opacity` may be set by the transparent package.

```

120 \def\LWR@opacity{1}

```

`\LWR@imagesizebox` Used to determine the actual image size if needed.

```
121 \newsavebox{\LWR@imagesizebox}
```

`\LWR@HTML@Gin@setfile`  $\{\langle w \rangle\} \{\langle h \rangle\} \{\langle filename \rangle\}$  Sets the parsed filename for HTML output.

```
122 \newcommand*\LWR@HTML@Gin@setfile}[3]{%
123 \xdef\LWR@parsedfilename{#3}%
124 }
```

`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`.

```
125 \AtBeginDocument{
126 \define@key{Gin}{class}{}
127 \define@key{Gin}{alt}{}
128 }
```

`\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.

```
129 \AtBeginDocument{
130 \ifpackageloaded{epstopdf}
131 {
132 \newcommand*\LWR@replaceEPSSVG{}
133 }{%
134 \newcommand*\LWR@replaceEPSSVG{%
135 \StrSubstitute{\LWR@tempone}{.eps}{.svg}[\LWR@tempone]%
136 \StrSubstitute{\LWR@tempone}{.EPS}{.SVG}[\LWR@tempone]%
137 }
138 }%
139 }
```

`\LWR@includegraphicsb`  $* [\langle 2: options \rangle] [\langle 3: options \rangle] \{\langle 4: filename \rangle\}$

graphics syntax is `\includegraphics`  $* [\langle llx, lly \rangle] [\langle urx, ury \rangle] \{\langle file \rangle\}$

graphicx syntax is `\includegraphics`  $[\langle key values \rangle] \{\langle file \rangle\}$

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.

```
140 \NewDocumentCommand{\LWR@includegraphicsb}{s o o m}
141 {%
```

Start the image tag on a new line, allow PDF output word wrap:

```
142 \LWR@origtilde \LWR@orignewline%
```

Temporarily compute `\linewidth`, `\textwidth`, `\textheight` arguments with a 6x9 inch size until the next `\endgroup`.

```

143 \begingroup%
144 \ifthenelse{\cnttest{\value{LWR@minipagedepth}}{=}{0}}{%
145 {%
146 \ifbool{LWR@infloatrow}%
147 {}
148 {% not in a minipage or a floatrow:
149 \setlength{\linewidth}{6in}%
150 \setlength{\textwidth}{6in}%
151 \setlength{\textheight}{9in}%
152 }%
153 }{}%

```

For correct em sizing during the width and height conversions:

```

154 \large%

```

Reset some defaults, possibly will be changed below if options were given:

```

155 \setlength{LWR@igwidth}{0pt}%
156 \setlength{LWR@igheight}{0pt}%
157 \renewcommand*{LWR@igwidthstyle}{}%
158 \renewcommand*{LWR@igheightstyle}{}%
159 \renewcommand*{LWR@igorigin}{}%
160 \renewcommand*{LWR@igangle}{}%
161 \renewcommand*{LWR@igxscale}{1}%
162 \renewcommand*{LWR@igyscale}{1}%
163 \renewcommand*{LWR@igclass}{inlineimage}%

164 \renewcommand*{LWR@igalt}{(image)}%

```

If #3 is empty, only one optional argument was given, thus `graphicx` syntax:

```

165 \IfValueF{#3}{%
166 \IfValueTF{#2}%
167 {\setkeys{igraph}{#2}}%
168 {\setkeys{igraph}{}}%
169 }%

```

Fully expand and detokenize the filename, changing the file extension to `.svg` if necessary.

```

170 \begingroup%
171 \let\ltxMacro\Gin@setfile\LWR@HTML@Gin@setfile%
172 \edef\LWR@tempone{#4}%
173 \StrSubstitute{\LWR@tempone}{.pdf}{.svg}[\LWR@tempone]%
174 \StrSubstitute{\LWR@tempone}{.PDF}{.SVG}[\LWR@tempone]%
175 \LWR@replaceEPSVG%
176 \xdef\LWR@parsedfilename{\LWR@tempone}%
177 \Gin@include@graphics{\detokenize\expandafter{\LWR@tempone}}%
178 \endgroup%
179 \filename@parse{\LWR@parsedfilename}%

```

```

180 \LWR@traceinfo{LWR@parsedfilename is \LWR@parsedfilename}%
181 % \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:

```

182 \ifbool{FormatWP}{%
183 \begingroup%
184 \LWR@restoreorigformatting%
185 \ifpdf%
186 \appto\LWR@restoreorigformatting{%
187 \DeclareGraphicsExtensions{.pdf,.PDF,.gif,.GIF,.png,.PNG,.jpg,.JPG,.jpeg,.JPEG}%
188 }%
189 \else% \ifpdf
190 \ifXeTeX%
191 \appto\LWR@restoreorigformatting{%
192 \DeclareGraphicsExtensions{.pdf,.PDF,.gif,.GIF,.png,.PNG,.jpg,.JPG,.jpeg,.JPEG}%
193 }%
194 \else%
195 \appto\LWR@restoreorigformatting{%
196 \DeclareGraphicsExtensions{.eps,.EPS,.gif,.GIF,.png,.PNG,.jpg,.JPG,.jpeg,.JPEG}%
197 }%
198 \fi%
199 \fi% \ifpdf
200 \define@key{Gin}{angle}{}%
201 \IfBooleanTF{#1}%
202 {% starred
203 \IfValueTF{#3}%
204 {%
205 \global\abox{\LWR@imagesizebox}{\LWR@originincludegraphics*[#2][#3]{#4}}%
206 }%
207 {%
208 \IfValueTF{#2}%
209 {%
210 \global\abox{\LWR@imagesizebox}{\LWR@originincludegraphics*[#2]{#4}}%
211 }{%
212 \global\abox{\LWR@imagesizebox}{\LWR@originincludegraphics*{#4}}%
213 }%
214 }%
215 }% starred
216 {% not starred
217 \IfValueTF{#3}%
218 {%
219 \global\abox{\LWR@imagesizebox}{\LWR@originincludegraphics[#2][#3]{#4}}%
220 }%
221 {%
222 \IfValueTF{#2}%
223 {%
224 \global\abox{\LWR@imagesizebox}{\LWR@originincludegraphics[#2]{#4}}%
225 }{%
226 \global\abox{\LWR@imagesizebox}{\LWR@originincludegraphics{#4}}%
227 }%
228 }%
229 }% not starred
230 \endgroup%

```

```

231 \settoheight{\LWR@igheight}{\usebox{\LWR@imagesizebox}}%
232 \global\renewcommand*{\LWR@igwidthstyle}{width:\LWR@printlength{\LWR@igwidth}}%
233 \settoheight{\LWR@igheight}{\usebox{\LWR@imagesizebox}}%
234 \global\renewcommand*{\LWR@igheightstyle}{height:\LWR@printlength{\LWR@igheight}}%
235 }{}% FormatWP

```

Create the HTML reference with the graphicspath, filename, extension, alt tag, style, and class.

The \LWR@origtilde adds space between tags in case this is being done inside a \savebox where \newline has no effect.

```

236 \LWR@traceinfo{\LWR@includegraphicsb: about to create href}%
237 \href{\LWR@parsedfilename}%
238 {% start of href
239 \LWR@traceinfo{\LWR@includegraphicsb: about to LWR@htmltag}%
240 \LWR@htmltag{% start of image tags
241 img\LWR@indentHTML%
242 src="%
243 \detokenize\expandafter{\LWR@parsedfilename}%
244 "\LWR@indentHTML%

```

Only include a style tag if a width, height, angle, or scale was given:

```

245 \ifthenelse{
246 \NOT\equal{\LWR@igwidthstyle}{ } \OR
247 \NOT\equal{\LWR@igheightstyle}{ } \OR
248 \NOT\equal{\LWR@igorigin}{ } \OR
249 \NOT\equal{\LWR@igangle}{ } \OR
250 \NOT\equal{\LWR@igxscale}{1} \OR
251 \NOT\equal{\LWR@igyscale}{1}
252 }%
253 {%
254 style="\LWR@indentHTML
255 \ifthenelse{\NOT\equal{\LWR@igwidthstyle}{ }}%
256 {\LWR@igwidthstyle;\LWR@indentHTML}{ }%
257 \ifthenelse{\NOT\equal{\LWR@igheightstyle}{ }}%
258 {\LWR@igheightstyle;\LWR@indentHTML}{ }%
259 \ifthenelse{\NOT\equal{\LWR@igorigin}{ }}%
260 {
261 transform-origin: \LWR@originnames{\LWR@igorigin};\LWR@indentHTML%
262 }{}%
263 \ifthenelse{\NOT\equal{\LWR@igangle}{ }}%
264 {%
265 \LWR@rotstyle{-ms-}{\LWR@igangle}\LWR@indentHTML
266 \LWR@rotstyle{-webkit-}{\LWR@igangle}\LWR@indentHTML
267 \LWR@rotstyle{}{\LWR@igangle }\LWR@indentHTML
268 }{}%
269 \ifthenelse{%
270 \NOT\equal{\LWR@igxscale}{1}\OR%
271 \NOT\equal{\LWR@igyscale}{1}%
272 }%

```

```

273 {%
274 \LWR@scalestyle{-ms-}{\LWR@igxscale}{\LWR@igyscale}\LWR@indentHTML
275 \LWR@scalestyle{-webkit-}{\LWR@igxscale}{\LWR@igyscale}\LWR@indentHTML
276 \LWR@scalestyle{}{\LWR@igxscale}{\LWR@igyscale}\LWR@indentHTML
277 }{}%
278 %
279 \ifthenelse{\NOT\equal{\LWR@opacity}{1}}{%
280 {opacity:\LWR@opacity;\LWR@indentHTML}}{}%
281 %
282 "\LWR@indentHTML%
283 }{}%

```

Set the class and alt tag:

```

284 class="\LWR@igclass"\LWR@indentHTML%
285 alt="\LWR@igalt" \LWR@orignewline%
286}% end of image tags
287}% end of href

```

Return to original page size and font size:

```

288 \endgroup
289 \LWR@traceinfo{\LWR@includegraphicsb done}%
290 }

```

`\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.

```

291 \AtBeginDocument{
292
293 \LWR@traceinfo{Patching includegraphics.}
294
295 \LetLtxMacro\LWR@originincludegraphics\includegraphics
296
297 \renewcommand*{\includegraphics}
298 {%

```

This graphic should trigger an HTML paragraph even if alone, so ensure that are doing paragraph handling:

```

299 \LWR@traceinfo{includegraphics}%
300 \LWR@ensuredoingapar%
301 \LWR@includegraphicsb%
302}% includegraphics
303}% AtBeginDocument

```

## § 265.5 Boxes

`\LWR@rotboxorigin` Holds the origin key letters.

```
304 \newcommand*\LWR@rotboxorigin{}
```

`\LWR@originname`  $\{\langle letter \rangle\}$

Given one L<sup>A</sup>T<sub>E</sub>X origin key value, translate into an HTML origin word:

```
305 \newcommand*\LWR@originname[1]{%
306 \ifthenelse{equal{#1}{t}}{top}{}%
307 \ifthenelse{equal{#1}{b}}{bottom}{}%
308 \ifthenelse{equal{#1}{c}}{center}{}%
309 \ifthenelse{equal{#1}{l}}{left}{}%
310 \ifthenelse{equal{#1}{r}}{right}{}%
311 }
```

`\LWR@originnames`  $\{\langle letters \rangle\}$

Given one- or two-letter L<sup>A</sup>T<sub>E</sub>X origin key values, translate into HTML origin words:

```
312 \newcommand*\LWR@originnames[1]{%
313 \StrChar{#1}{1}[\LWR@strresult]%
314 \LWR@originname{\LWR@strresult}
315 \StrChar{#1}{2}[\LWR@strresult]%
316 \LWR@originname{\LWR@strresult}
317 }
```

Handle the origin key for `\rotatebox`:

```
318 \define@key{krotbox}{origin}{%
319 \renewcommand*\LWR@rotboxorigin{#1}%
320 }
```

These keys are ignored:

```
321 \define@key{krotbox}{x}{}
322 \define@key{krotbox}{y}{}
323 \define@key{krotbox}{units}{}

```

`\rotatebox`  $[\langle keyval list \rangle] \{\langle angle \rangle\} \{\langle text \rangle\}$

```
324 \AtBeginDocument{
```

The HTML version:

```
325 \NewDocumentCommand{\LWR@HTML@rotatebox}{0{} m +m}{%
```

Reset the origin to “none-given”:

```
326 \renewcommand*\LWR@rotboxorigin{}
```

Process the optional keys, which may set \LWR@rotateboxorigin:

```
327 \setkeys{krotbox}{#1}%
```

Select inline-block so that HTML will transform this span:

```
328 \LWR@htmltagc{%
329 span\LWR@indentHTML
330 style="\LWR@indentHTML
331 display: inline-block;\LWR@indentHTML
```

If an origin was given, translate and print the origin information:

```
332 \ifthenelse{\NOT\equal{\LWR@rotboxorigin}{}}{%
333 {transform-origin: \LWR@originnames{\LWR@rotboxorigin};\LWR@indentHTML}%
334 {}}%
```

Print the rotation information:

```
335 \LWR@rotstyle{-ms-}{#2}\LWR@indentHTML
336 \LWR@rotstyle{-webkit-}{#2}\LWR@indentHTML
337 \LWR@rotstyle{}{#2}"\LWR@orignewline%
338 }\LWR@orignewline%
```

Print the text to be rotated:

```
339 \begin{LWR@nestspan}%
340 #3%
```

Close the span:

```
341 \LWR@htmltagc{/span}%
342 \end{LWR@nestspan}%
343 }
```

The high-level interface:

```
344 \LWR@formatted{rotatebox}
345
346 }% AtBeginDocument
```

`\scalebox`  $\{\langle h-scale \rangle\} [\langle v-scale \rangle] \{\langle text \rangle\}$

```
347 \AtBeginDocument{
```

The HTML version:

```
348 \NewDocumentCommand{\LWR@HTML@scalebox}{m o m}{%
```

Select inline-block so that HTML will transform this span:

```
349 \LWR@htmltagc{%
```

```

350 span\LWR@indentHTML
351 style="\LWR@indentHTML
352 display: inline-block;\LWR@indentHTML

```

Print the scaling information:

```

353 \LWR@scalestyle{-ms-}{#1}{\IfNoValueTF{#2}{#1}{#2}}\LWR@indentHTML
354 \LWR@scalestyle{-webkit-}{#1}{\IfNoValueTF{#2}{#1}{#2}}\LWR@indentHTML
355 \LWR@scalestyle{}{#1}{\IfNoValueTF{#2}{#1}{#2}}
356 "\LWR@orignewline
357 }\LWR@orignewline%

```

Print the text to be scaled:

```

358 \begin{LWR@nestspan}%
359 #3%

```

Close the span:

```

360 \LWR@htmltagc{/span}%
361 \end{LWR@nestspan}%
362 }

```

The high-level interface:

```

363 \LWR@formatted{scalebox}
364
365 }% AtBeginDocument

```

`\reflectbox`  $\{\langle text \rangle\}$

```

366 \AtBeginDocument{
367
368 \newcommand{\LWR@HTML@reflectbox}[1]{%
369 \scalebox{-1}[1]{#1}%
370 }% \reflectbox
371
372 \LWR@formatted{reflectbox}
373
374 }% AtBeginDocument

```

`\resizebox`  $\{\langle h-length \rangle\} \{\langle v-length \rangle\} \{\langle text \rangle\}$

Simply prints its text argument.

```

375 \AtBeginDocument{
376
377 \NewDocumentCommand{\LWR@HTML@resizebox}{s m m}{%
378 #4%
379 }
380
381 \LWR@formatted{resizebox}
382
383 }% AtBeginDocument

```

---

File 168 **lwarp-graphics.sty**

§ 266 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 169 **lwarp-grffile.sty**

§ 267 Package **grffile**

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.



**matching PDF and SVG**

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 170 **lwarp-grid.sty**

§ 268 Package **grid**

Pkg grid grid is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{grid}[2009/06/16]

2 \newenvironment\*{gridenv}{}{}

---

File 171 **lwarp-grid-system.sty**

§ 269 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 172 **lwarp-gridset.sty**

### § 270 Package **gridset**

Pkg gridset **gridset** is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{gridset}

```
2 \newcommand*{\gridbase}{}
3 \newcommand*{\gridinterval}{}
4 \newcommand*{\savepos}[1]{}
5 \newcounter{gridcnt}
6 \newcommand*{\vskipnextgrid}{}
7 \newcommand*{\thegridinfo}[1]{}
8 \newcommand*{\theposinfo}[1]{}
9 \newcommand*{\theypos}[1]{}

```

---

## File 173 **lwarp-hang.sty**

### § 271 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@mbox{margin-left:\LWR@printlength{\LWR@templengthone}} ; %
17 \LWR@print@mbox{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@mbox{list-style-type:none;} % extra space
30 \LWR@print@mbox{%
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 174 **lwarp-hanging.sty**

§ 272    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 175 **lwarp-hypbmsec.sty**

§ 273      Package **hypbmsec**

Pkg    hypbmsec    hypbmsec is emulated by the lwarp core.

**for HTML output:**    1 \LWR@ProvidesPackageDrop{hypbmsec}[2016/05/16]

---

File 176 **lwarp-hypcap.sty**

§ 274      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 177 **lwarp-hypdestopt.sty**

§ 275      Package **hypdestopt**

Pkg    hypdestopt    hypdestopt is ignored.

**for HTML output:**    1 \LWR@ProvidesPackageDrop{hypdestopt}[2016/05/21]

---

File 178 **lwarp-hypernat.sty**

§ 276      Package **hypernat**

Pkg    hypernat    hypernat is ignored.

**for HTML output:**    1 \LWR@ProvidesPackageDrop{hypernat}[2001/07/09]

File 179 **lwarp-hyperref.sty**

§ 277 Package **hyperref**

*(Emulates or patches code by SEBASTIAN RAHTZ, HEIKO OBERDIEK.)*

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 \newcommand*{\hypersetup}[1]{}
15 \newcommand*{\hyperbaseurl}[1]{}

```

`\hyperimage`    `{\langle URL \rangle}{\langle alt text \rangle}`

Insert an image with alt text:

```

16 \NewDocumentCommand{\LWR@hyperimageb}{m +m}{%
17 \LWR@ensuredoingapar%
18 \def\LWR@templink{#1}%
19 \@onelevel@sanitize\LWR@templink%
20 \LWR@htmltag{img src="\LWR@templink" alt="#2" class="hyperimage"}%
21 \LWR@ensuredoingapar%
22 \endgroup%
23 }
24
25 \newrobustcmd*{\hyperimage}{%
26 \begingroup%
27 \catcode'\# =12%
28 \catcode'\% =12%
29 \catcode'\& =12%
30 \catcode'\~ =12%
31 \catcode'_ =12%
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@sublabel{\#1.\#2}%
38 \#3%
39 \endgroup%
40 }
41
42 \newcommand*\hyperdef{\%
43 \begingroup%
44 \catcode'\#=12%
45 \catcode'\%=12%
46 \catcode'\&=12%
47 \catcode'\~=12%
48 \catcode'_ =12%
49 \LWR@hyperdefb%
50 }
51
```

`\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.

```

52 \newcommand{\LWR@hyperreffinish}[1]{%
53 \begingroup%
54 \RenewDocumentCommand{\ref}{\LWR@ref@ignorestar}%
55 \#1%
56 \endgroup%
57 \LWR@htmltag{/a}%
58 }
59
60 \newcommand*\LWR@hyperrefbb[3]{%
61 \LWR@htmltag{%
62 a href="%
63 \detokenize\expandafter{\#1}\LWR@hashmark%
64 \detokenize\expandafter{\#2}.\detokenize\expandafter{\#3}%
65 "%
66 }%
67 \endgroup%
68 \LWR@hyperreffinish%
69 }
70
71 \newrobustcmd*\LWR@hyperrefb{\%
72 \begingroup%
73 \catcode'\#=12%
74 \catcode'\%=12%
75 \catcode'\&=12%
76 \catcode'\~=12%
77 \catcode'_ =12%
78 \LWR@hyperrefbb%
79 }
```

`\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.

```

80
81 \NewDocumentCommand{\LWR@hyperrefcb}{0{label}}{%
82 \LWR@startref{#1}%
83 \endgroup%
84 \LWR@hyperreffinish%
85 }
86
87 \newcommand*{\LWR@hyperrefc}{%
88 \begingroup%
89 \catcode'\#=12%
90 \catcode'\%=12%
91 \catcode'\&=12%
92 \catcode'\~=12%
93 \catcode'_ =12%
94 \LWR@hyperrefcb%
95 }

```

`\hyperref`     $\{\langle 1: URL \rangle\} \{\langle 2: category \rangle\} \{\langle 3: name \rangle\} \{\langle 4: text \rangle\}$     — or —  
 $[\langle 1: label \rangle] \{\langle 2: text \rangle\}$

```

96 \DeclareRobustCommand*\hyperref{%
97 \LWR@ensuredoingapar%
98 \@ifnextchar[\LWR@hyperrefc\LWR@hyperrefb%
99 }

```

`\hypertarget`     $\{\langle name \rangle\} \{\langle text \rangle\}$

Creates an anchor to name with the given text.

```

100 \NewDocumentCommand{\LWR@hypertargetb}{m +m}{%
101 \label{\LWR-ht-#1}%
102 #2%
103 \endgroup%
104 }
105
106 \newcommand*{\hypertarget}{%
107 \begingroup%
108 \catcode'\#=12%
109 \catcode'\%=12%
110 \catcode'\&=12%
111 \catcode'\~=12%
112 \catcode'_ =12%
113 \LWR@hypertargetb%
114 }

```

`\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`.

```

115 \DeclareDocumentCommand{\LWR@hyperlinkb}{m}{%
116 \LWR@hyperrefcb[\LWR-ht-#1]%
117 }
118

```

```

119 \DeclareDocumentCommand{\hyperlink}{}{}%
120 \LWR@ensuredoingapar%
121 \begingroup%
122 \catcode'\#=12%
123 \catcode'\%=12%
124 \catcode'\&=12%
125 \catcode'\~=12%
126 \catcode'_ =12%
127 \LWR@hyperlinkb%
128 }

```

`\autoref`     \*  $\langle label \rangle$

For HTML, `\cleveref` is used instead.

```

129 \NewDocumentCommand{\autoref}{s m}{%
130 \IfBooleanTF{#1}{\ref{#2}}{\cref{#2}}%
131 }

```

`\autopageref`      $\langle label \rangle$

For HTML, `\cleveref` is used instead.

```

132 \NewDocumentCommand{\autopageref}{s m}{%
133 \IfBooleanTF{#1}{\cpageref{#2}}{\cref{#2}}%
134 }

```

`\pdfstringdef`      $\langle macroname \rangle$   $\langle \TeX string \rangle$

```

135 \newcommand{\pdfstringdef}[2]{}

```

`\pdfbookmark`     [ $\langle level \rangle$ ]  $\langle text \rangle$   $\langle name \rangle$

```

136 \newcommand{\pdfbookmark}[3]{}

```

`\currentpdfbookmark`      $\langle text \rangle$   $\langle name \rangle$

```

137 \newcommand{\currentpdfbookmark}[2]{}

```

`\subpdfbookmark`      $\langle text \rangle$   $\langle name \rangle$

```

138 \newcommand{\subpdfbookmark}[2]{}

```

`\belowpdfbookmark`      $\langle text \rangle$   $\langle name \rangle$

```

139 \newcommand{\belowpdfbookmark}[2]{}

```

`\texorpdfstring`      $\langle \TeX string \rangle$   $\langle PDF string \rangle$

```

140 \newcommand{\texorpdfstring}[2]{#1}

```

`\hypercalcbp`      $\langle dimen \rangle$      From `hyperref`.

```

141 \def\hypercalcbp#1{%
142 \strip@pt\dimexpr 0.99626401\dimexpr(#1)\relax\relax
143 }%

```

\Acrobatmenu     $\{\langle menuoption \rangle\} \{\langle text \rangle\}$

```
144 \newcommand{\Acrobatmenu}[2]{}
```

\TextField     $[\langle parameters \rangle] \{\langle label \rangle\}$

```
145 \DeclareRobustCommand{\TextField}[2][]{}
```

\CheckBox     $[\langle parameters \rangle] \{\langle label \rangle\}$

```
146 \DeclareRobustCommand{\CheckBox}[2][]{}
```

\ChoiceMenu     $[\langle parameters \rangle] \{\langle label \rangle\} \{\langle choices \rangle\}$

```
147 \DeclareRobustCommand{\ChoiceMenu}[3][]{}
```

\PushButton     $[\langle parameters \rangle] \{\langle label \rangle\}$

```
148 \DeclareRobustCommand{\PushButton}[2][]{}
```

\Submit     $[\langle parameters \rangle] \{\langle label \rangle\}$

```
149 \DeclareRobustCommand{\Submit}[2][]{}
```

\Reset     $[\langle parameters \rangle] \{\langle label \rangle\}$

```
150 \DeclareRobustCommand{\Reset}[2][]{}
```

\Gauge     $[\langle parameters \rangle] \{\langle label \rangle\}$

```
151 \DeclareRobustCommand{\Gauge}[2][]{}
```

\LayoutTextField     $\{\langle label \rangle\} \{\langle field \rangle\}$

```
152 \newcommand*\LayoutTextField[2]{}
```

\LayoutChoiceField     $\{\langle label \rangle\} \{\langle field \rangle\}$

```
153 \newcommand*\LayoutChoiceField[2]{}
```

\LayoutCheckField     $\{\langle label \rangle\} \{\langle field \rangle\}$

```
154 \newcommand*\LayoutCheckField[2]{}
```

\MakeRadioField     $\{\langle width \rangle\} \{\langle height \rangle\}$

```
155 \newcommand*\MakeRadioField[2]{}
```

```

\MakeCheckField {\langle width\rangle}\langle height\rangle
156 \newcommand*{\MakeCheckField}[2]{\}

\MakeTextField {\langle width\rangle}\langle height\rangle
157 \newcommand*{\MakeTextField}[2]{\}

\MakeChoiceField {\langle width\rangle}\langle height\rangle
158 \newcommand*{\MakeChoiceField}[2]{\}

\MakeFieldButton {\langle text\rangle}
159 \newcommand{\MakeFieldButton}[1]{\}

```

---

File 180 **lwarp-hyperxmp.sty**

§ 278     Package **hyperxmp**

Pkg    hyperxmp    hyperxmp is ignored.

**for HTML output:**    Discard all options for lwarp-hyperxmp:

```
1 \LWR@ProvidesPackageDrop{hyperxmp}[2018/11/27]
```

---

File 181 **lwarp-hyphenat.sty**

§ 279     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@orignhttfamily\nhttfamily
4 \LetLtxMacro\LWRHYNAT@orignohyphens\nohyphens
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{\nohyphens}[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 182 **lwarp-idxlayout.sty**

§ 280      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}{}
3
4 \preto\printindex{
5
6 \LWR@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 183 **lwarp-ifoddpagel.sty**

§ 281 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\ifoddpagel or oneside
5
6 \DeclareRobustCommand{\checkoddpagel}{\oddpageltrue\oddpagel or onesideltrue}
7
8 \def\oddpagel@pagel{1}
9
10 \def\@ifoddpagel{%
11 \expandafter\@firstoftwo
12 }
13
14 \def\@ifoddpagel or onesidel{%
15 \expandafter\@firstoftwo
16 }
```

---

File 184 **lwarp-imakeidx.sty**

§ 282 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 8.6.17 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@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 \LWR@new@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 \LWR@new@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    {<user options>}

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@maybeaddtoc
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 185 **lwarp-index.sty**

## § 283 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. \@tempwattrue 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 \LWR@new@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 186 **lwarp-inputtrc.sty**

§ 284      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 187 **lwarp-intopdf.sty**

§ 285      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 \href{#2}{#5}%
4 }

```

File 188 **lwarp-karnaugh-map.sty**

§ 286 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]

(It is hard to patch this macro, 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 \beginpgroup
4 % store map size {[START]
5 \renewcommand{\@karnaughmap@var@mapsize@}{#2}%
6 \renewcommand{\@karnaughmap@var@mapsizey@}{#3}%
7 \renewcommand{\@karnaughmap@var@mapsizez@}{#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
20 \newcommand{\@karnaughmap@local@maprealignmentx@}{0}%
21 \newcommand{\@karnaughmap@local@maprealignmenty@}{0}%
22 \ifnum\@karnaughmap@var@mapsize@=\@karnaughmap@var@mapsizey@=\@karnaughmap@var@mapsizez@=221
23 \renewcommand{\@karnaughmap@local@matrixtemplate@}{%
24 \& 0 \& 1 \& \& \\
25 0 \& |(000000)| \& |(000001)| \& \\
26 1 \& |(000010)| \& |(000011)| \& \\
27 \& \& \& \& \\
28 }%
29 \fi
30 \ifnum\@karnaughmap@var@mapsize@=\@karnaughmap@var@mapsizey@=\@karnaughmap@var@mapsizez@=241
31 \renewcommand{\@karnaughmap@local@matrixtemplate@}{%
32 \& 0 \& 1 \& \& \\
33 00 \& |(000000)| \& |(000001)| \& \\
34 01 \& |(000010)| \& |(000011)| \& \\
35 11 \& |(000110)| \& |(000111)| \& \\
36 10 \& |(000100)| \& |(000101)| \& \\
37 \& \& \& \& \\
38 }%
39 \fi

```

[illegible]

```

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@mapsizex@,\@karnaughmap@var@mapsizex@);
102 % when there are 2 sub maps
103 \ifnum\@karnaughmap@var@mapsizex@=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@mapsizex@=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@mapsizex@*0.5,\@karnaughmap@var@mapsizex@+0.9) {\small{#5}};
115 \node[left] at (-0.9,\@karnaughmap@var@mapsizex@*0.5) {\small{#6}};
116 % when there are 2 sub maps
117 \ifnum\@karnaughmap@var@mapsizex@=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@mapsizex@=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@mapsizex@*0.5+\@karnaughmap@local@maprealignmentx@,\@karnaughmap@var@mapsizex@)
140 \@karnaughmap@local@matrixtemplate@
141 };
142 }{
143 \end{tikzpicture}
144 \endgroup
145 }


```

File 189 **lwarp-keyfloat.sty**

§ 287 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}[2019/03/21]
2
3 \@ifpackagelater{keyfloat}{2019/03/21}{}{
4 \PackageError{lwarp-keyfloat}
5 {%
6 The keyfloat package is out of date.\MessageBreak
7 Update to keyfloat v2.00 2019/03/21 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 \ifnumequal{\value{KFLT@keyfloatdepth}}{0}{}%
18 \setlength{\linewidth}{6in}%
19 \setlength{\textwidth}{6in}%
20 \setlength{\textheight}{9in}%
21 }{}%
22 }%
23 }
24
25 \let\KFLT@LWR@hook@boxouter@minipage\relax
26 \let\endKFLT@LWR@hook@boxouter@minipage\relax
27 \newenvironment{KFLT@LWR@hook@boxouter@minipage}[2][{}]{
28
29 \providecommand*\KFLT@LWR@hook@keysubfloats{}{}
30 \renewcommand*\KFLT@LWR@hook@keysubfloats{%
31 \ifbool{KFLT@keywrap}{}{%
32 \ifnumequal{\value{KFLT@keyfloatdepth}}{0}{}%
33 \setlength{\linewidth}{6in}%
34 \setlength{\textwidth}{6in}%
```

```

35 \setlength{\textheight}{9in}%
36 }{}%
37 }%
38 }
39
40 \let\KFLT@LWR@hook@keyfloatsminipage\relax
41 \let\endKFLT@LWR@hook@keyfloatsminipage\relax
42 \newenvironment*{KFLT@LWR@hook@keyfloatsminipage}[1]{}{}
43
44 \providecommand*{\KFLT@LWR@hook@keyfloats}{}
45 \renewcommand*{\KFLT@LWR@hook@keyfloats}{%
46 \ifbool{KFLT@keywrap}{}{%
47 \ifnumequal{\value{KFLT@keyfloatdepth}}{0}{%
48 \setlength{\linewidth}{6in}%
49 \setlength{\textwidth}{6in}%
50 \setlength{\textheight}{9in}%
51 }{}%
52 }%
53 }
54
55 \renewcommand*{\KFLT@maybeendfloatrow}{%
56 \ifnumless{\value{KFLT@thiscol}}{\value{KFLT@numcols}}%
57 {% thiscol < numcols
58 {% >=
59 \defcounter{KFLT@thiscol}{0}%
60 }%
61 }%
62
63 \renewcommand{\KFLT@trackrows}%
64 {%

```

If are nested inside a keyfloats or a subfloat:

```

65 \ifboolexpr{%
66 test {\ifnumgreater{\value{KFLT@keyfloatdepth}}{0}} or%
67 bool{KFLT@inkeysubfloats}%
68 }%
69 {% nested

```

Tracks row start and end:

```

70 \KFLT@maybestartfloatrow%

```

Possibly fill space between columns:

```

71 \ifnumgreater{\value{KFLT@thiscol}}{1}%
72 {%
73 \hfill%
74 }%
75 }{}%
76 }% nested
77 }{}% not nested
78 }

```

```

79 \RenewDocumentCommand{\KFLT@onefigureimage}{m}
80 {%
81 \LWR@traceinfo{KFLT@onefigureimage}%
82 % \begin{lrbox}{\KFLT@envbox}%
83 \ifthenelse{\NOT\equal{\KFLT@lw}{}}{%
84 {%
85 \KFLT@frame{\includegraphics%
86 [scale=\KFLT@es,width=\KFLT@imagewidth]{#1}}%
87 }%
88 {% not linewidth
89 \ifthenelse{\dimtest{\KFLT@w}{>}{0pt}}{%
90 {% width is given
91 \ifthenelse{\dimtest{\KFLT@h}{>}{0pt}}{%
92 {% w and h
93 \KFLT@frame{\includegraphics%
94 [scale=\KFLT@es,%
95 width=\KFLT@imagewidth,height=\KFLT@h]{#1}}%
96 }% w and h
97 }% only w
98 \KFLT@frame{\includegraphics%
99 [scale=\KFLT@es,width=\KFLT@imagewidth]{#1}}%
100 }% only w
101 }% width is given
102 {% width is not given
103 \ifthenelse{\dimtest{\KFLT@h}{>}{0pt}}{%
104 {%
105 \KFLT@frame{\includegraphics%
106 [scale=\KFLT@es,height=\KFLT@h]{#1}}%
107 }%
108 {%
109 \KFLT@frame{\includegraphics%
110 [scale=\KFLT@es]{#1}}%
111 }%
112 }% width is not given
113 }% not linewidth
114 % \end{lrbox}%
115 % \unskip%
116 % \KFLT@findenvboxwidth%
117 % \begin{turn}{\KFLT@r}%
118 % \KFLT@frame{\usebox{\KFLT@envbox}}%
119 % \unskip%
120 % \end{turn}%
121 \LWR@traceinfo{KFLT@onefigureimage: done}%
122 }

123 \RenewDocumentEnvironment{KFLT@boxinner}{ }
124 {%
125 \LWR@traceinfo{KFLT@boxinner}%
126 \LWR@stoppars%
127 \minipagefullwidth%
128 \ifboolexpr{bool{KFLT@ft} or bool{KFLT@f}}{
129 \fminipage{\KFLT@imagewidth}%
130 }{%
131 \minipage{\KFLT@imagewidth}%
132 }%

```

```

133 }
134 {%
135 \ifboolexpr{bool{KFLT@ft} or bool{KFLT@f}}{
136 \endfminipage%
137 }{%
138 \endminipage%
139 }%
140 \LWR@startpars%
141 \LWR@traceinfo{KFLT@boxinner: done}%
142 }

143 \newcommand*{\LWR@KFLT@settextalign}[1]{%
144 \def\LWR@KFLT@textalign{justify}%
145 \ifcsstring{KFLT@#1textalign}{\centering}%
146 {\def\LWR@KFLT@textalign{center}}%
147 {}%
148 \ifcsstring{KFLT@#1textalign}{\raggedleft}%
149 {\def\LWR@KFLT@textalign{right}}%
150 {}%
151 \ifcsstring{KFLT@#1textalign}{\raggedright}%
152 {\def\LWR@KFLT@textalign{left}}%
153 {}%
154 }
155
156 \renewcommand{\KFLT@addtext}[1]
157 {%

```

Is there text to add?

```

158 \ifcsempy{KFLT@#1t}%
159 {}% no text
160 {% text to add
161 {% local

```

Add some space, then create a full-width minipage to contain the text:

```

162 \addvspace{\smallskipamount}%
163 \LWR@KFLT@settextalign{#1}%
164 \begin{BlockClass}[text-align:\LWR@KFLT@textalign]{floatnotes}%

```

Set the alignment and some text parameters:

```

165 % \csuse{KFLT@#1textalign}%
166 % \footnotesize%
167 \setlength{\parskip}{1.5ex}%
168 \setlength{\parindent}{0em}%

```

Typeset the actual text:

```

169 \csuse{KFLT@#1t}%

```

Close it all out with a little more space:

```

170 \end{BlockClass}%

```

```

171 % \par\addvspace{2ex}%
172 }% local
173 }% text to add
174 }
175
176 \@ifpackageloaded{tocdata}
177 {}
178 {% tocdata not loaded
179
180 \newcommand*{\LWR@KFLT@setnamealign}[1]{%
181 \def\LWR@KFLT@textalign{justify}%
182 \ifstrequal{#1}{\centering}%
183 {\def\LWR@KFLT@textalign{center}}%
184 }%
185 \ifstrequal{#1}{\raggedleft}%
186 {\def\LWR@KFLT@textalign{right}}%
187 }%
188 \ifstrequal{#1}{\raggedright}%
189 {\def\LWR@KFLT@textalign{left}}%
190 }%
191 }
192
193 \renewcommand*{\KFLT@@addartisttext}[3]{%
194

```

Add space and create the name inside a full-width minipage:

```

195 % \addvspace{\medskipamount}%
196 % \begin{minipage}{\linewidth}%
197 % \LWR@KFLT@setnamealign{#3}%
198 % \begin{BlockClass}[text-align:\LWR@KFLT@textalign]{floatnotes}%
199

```

Text alignment is #3, and depends on artist or author:

```

200 % #3%
201

```

#1 is empty or 'subgrp'  
 #2 is empty for artist, 'u' for author:

```

202 \footnotesize\textsc{%
203 \KFLT@optionalname{\csuse{KFLT@#1a#2p}}%
204 \KFLT@optionalname{\csuse{KFLT@#1a#2f}}%
205 \csuse{KFLT@#1a#2l}%
206 \csuse{KFLT@#1a#2s}%
207 }%
208 % \end{minipage}%
209 % \end{BlockClass}
210 % \par\addvspace{2ex}%
211 % }
212
213 }% tocdata not loaded

```

```

214 \DeclareDocumentEnvironment{KFLT@marginfloat}{0{-1.2ex} m}
215 {%
216 \LWR@BlockClassWP{float:right; width:2in; margin:10pt}{}{marginblock}%
217 \captionsetup{type=#2}%
218 \minipage{2in}%
219 }
220 {%
221 \endminipage%
222 \endLWR@BlockClassWP%
223 }

224 \DeclareDocumentEnvironment{marginfigure}{o}
225 {\begin{KFLT@marginfloat}{figure}}
226 {\end{KFLT@marginfloat}}
227
228 \DeclareDocumentEnvironment{margintable}{o}
229 {\begin{KFLT@marginfloat}{table}}
230 {\end{KFLT@marginfloat}}

231 \DeclareDocumentEnvironment{keywrap}{m +m}
232 {%
233 \LWR@ensuredoingapar%
234 \setlength{\linewidth}{6in}%
235 \setlength{\LWR@templengthone}{#1}%
236 \begin{LWR@BlockClassWP}%
237 {%
238 float:right; width:\LWR@printlength{\LWR@templengthone}; % extra space
239 margin:10pt%
240 }%
241 {%
242 width:\LWR@printlength{\LWR@templengthone}%
243 }%
244 {marginblock}%
245 \setlength{\linewidth}{.95\LWR@templengthone}%
246 \booltrue{KFLT@keywrap}%
247 #2%
248 \end{LWR@BlockClassWP}%
249 }
250 {}

251 }% AtBeginDocument

```

---

File 190 **lwarp-layaureo.sty**

§ 288 Package **layaureo**

Pkg layaureo layaureo is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop[layaureo][2004/09/16]

---

File 191 **lwarp-layout.sty**

§ 289      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 192 **lwarp-layouts.sty**

§ 290      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{\setvaluetextsize}[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 193 **lwarp-leading.sty**

§ 291 Package **leading**

Pkg leading leading is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{leading}[2008/12/11]

2 \newcommand\leading[1]{}  


---

File 194 **lwarp-letterspace.sty**

§ 292 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][1]{}  
 4 \def\textls#1#{}  
 5 \newcommand\*\slig[1]{#1}  


---

File 195 **lwarp-lettrine.sty**

§ 293 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 196 **lwarp-lineno.sty**

§ 294      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
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\quotelinumbersep
76
77 \quotelinumbersep=\linenumbersep
78 \let\quotelinumberfont\linenumberfont
79
80 \def\linenumberfont{\normalfont\tiny\sffamily}
81
82
83 \linenumberwidth=10pt
84 \linenumbersep=10pt
85
86 \def\thelinumber{}
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=\fboxrule
104
105 \newdimen\bframesep
106 \bframesep=\fboxsep
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 197 **lwarp-lips.sty**

§ 295    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 198 **lwarp-listings.sty**

§ 296 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{warHTML}

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 {<options>}

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`    *{(backslash-processing)}*    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@framaround ffff\relax%
34 \lst@multicols\@empty%
35 \LWR@origlst@Init{#1}\relax%

```

Avoids extra horizontal space:

```

36 \def\lst@frame{r}%
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{2}{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 reenale 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{}}{ }%
57 \fi%
```

Final listings deinit:

```
58 \LWR@origlst@DeInit%
59 }
```

`\lst@MakeCaption`    `{</t>}`

This is called BOTH at the top and at the bottom of each listing.

Patched for `lwarp`.

```
60 \def\lst@MakeCaption#1{%
61 \LWR@traceinfo{MAKING CAPTION at #1}%
62 \lst@ifdisplaystyle
63 \LWR@traceinfo{making a listings display caption}%
64 \ifx #1t%
65 \ifx\lst@caption\@empty\expandafter\lst@HRefStepCounter \else
66 \expandafter\refstepcounter
67 \fi {lstlisting}%
68 \LWR@traceinfo{About to assign label: !\lst@label!}%
69 % \ifx\lst@label\@empty\else
70 % \label{\lst@label}\fi
71 \LWR@traceinfo{Finished assigning the label.}%
72 \let\lst@arg\lst@intname \lst@ReplaceIn\lst@arg\lst@filenamerpl
73 \global\let\lst@name\lst@arg \global\let\lstname\lst@name
74 \lst@ifnolol\else
75 \ifx\lst@caption\@empty
76 \ifx\lst@caption\@empty
77 \ifx\lst@intname\@empty \else \def\lst@temp{ }%
78 \ifx\lst@intname\lst@temp \else
```

This code places a contents entry for a non-float. This would have to be modified for `lwarp`:

```
79 \LWR@traceinfo{addcontents lst@name: -\lst@name-}%
80 % \addcontentsline{lol}{lstlisting}{\lst@name}
81 \fi\fi
82 \fi
83 \else
```

This would have to be modified for `lwarp`:

```
84 \LWR@traceinfo{addcontents lst@caption: -\lst@caption-}%
85 \addcontentsline{lol}{lstlisting}%
86 {\protect\numberline{\thelstlisting}%
87 {\protect\ignorespaces \LWR@isolate{\lst@caption} \protect\relax}}%
88 \fi
```

```

89 \fi
90 \fi
91 \ifx\lst@caption\@empty\else
92 \LWR@traceinfo{lst@caption not empty}%
93 \lst@ifsubstring #1\lst@captionpos
94 {\begingroup
95 \LWR@traceinfo{at the selected position}%

```

These space and box commands are not needed for HTML output:

```

96 % \let\@vskip\vskip
97 % \def\vskip{\afterassignment\lst@vskip \@tempskipa}%
98 % \def\lst@vskip{\nobreak\@vskip\@tempskipa\nobreak}%
99 % \par\@parboxrestore\normalsize\normalfont % \noindent (AS)
100 % \ifx #1t\allowbreak \fi
101 \ifx\lst@title\@empty

```

New lwarp code to create a caption:

```

102 \LWR@stoppar%
103 \lst@makecaption\fnum\lstlisting{\ignorespaces \lst@caption}
104 \else

```

New lwarp code to create a title:

```

105 % \lst@maketitle\lst@title % (AS)
106 \LWR@traceinfo{Making title: \lst@title}%
107 \begin{BlockClass}{\lstlistingtitle}% lwarp
108 \lst@maketitle\lst@title% lwarp
109 \end{BlockClass}% lwarp
110 \fi
111 \LWR@traceinfo{About to assign label: !\lst@label!}%
112 \ifx\lst@label\@empty\else
113 \leavevmode% gets rid of bad space factor error
114 \GetTitleStringExpand{\lst@caption}%
115 \edef\LWR@lntemp{\GetTitleStringResult}%
116 \edef\@currentlabelname{\detokenize\expandafter{\LWR@lntemp}}%
117 \label{\lst@label}\fi
118 \LWR@traceinfo{Finished assigning the label.}%

```

Not needed for lwarp:

```

119 % \ifx #1b\allowbreak \fi
120 \endgroup}{}%
121 \fi
122 \LWR@traceinfo{end of making a listings display caption}%
123 \else
124 \LWR@traceinfo{INLINE}%
125 \fi
126 \LWR@traceinfo{DONE WITH CAPTION at #1}%
127 }

```

[line numbers](#) Patched to keep left line numbers outside of the left margin, and place right line numbers in a field \VerbatimHTMLWidth wide.

```

128 \lst@Key{numbers}{none}{%
129 \let\lst@PlaceNumber\@empty
130 \lstKV@SwitchCases{#1}%
131 {none:}%

```

```
132 \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.

```
133 % \LWR@origllap{
134 \LWR@orignormalfont%
135 \lst@numberstyle{\thelstnumber}\kern\lst@numbersep%
136 % }
137 }\\%
138 \right:\def\lst@PlaceNumber{\LWR@origrlap{\LWR@orignormalfont
139 \kern 6in \kern\lst@numbersep
140 \lst@numberstyle{\thelstnumber}}}%
141 }\PackageError{lwarp-listings}{Numbers #1 unknown}\@ehc}}

142 \end{warpHTML}
```

---

## File 199 **lwarp-listliketab.sty**

### § 297 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 200 **lwarp-lltjext.sty**

### § 298 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{\rensujii}{s o m}{#3}
14
15 \DeclareDocumentCommand{\layoutfloat}{d() o m}{}
16
17 \DeclareDocumentCommand{\DeclareLayoutCaption}{m d<> d() o}{}
18
19 \LetLtxMacro\pccaption\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 201 **lwarp-longtable.sty**

§ 299      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` \* [*<horizontalignment>*] [*<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 \setcaptiontype{LTcaption}%
7 \caption@setoptions{longtable}%
8 \caption@setoptions{@longtable}%
9 \caption@LT@setup%
10 \booltrue{LWR@starredlongtable}%
11 \boolfalse{LWR@longtable@havehead}%
12 \let\captionlistentry\LWR@LTcaptionlistentry%
13 \tabular{#2}
14 }
15 {\endtabular\LWR@floatend}
16

```

```

17 \newenvironment{longtable}[2][\%
18 \LWR@floatbegin{table}%
19 \setcaptiontype{LTcaption}%
20 \caption@setoptions{longtable}%
21 \caption@setoptions{@longtable}%
22 \caption@LT@setup%
23 \refstepcounter{LTcaption}%
24 \boolfalse{LWR@longtable@havehead}%
25 \let\captionlistentry\LWR@LTcaptionlistentry%
26 \tabular{#2}
27 }
28 {\endtabular\LWR@floatend}

```

Provided for compatibility, but ignored:

```

29 \newcounter{LTchunksize}

```

Error for heads which should have been in \warpprintonly:

```

30 \newcommand*{\LWR@longtable@headerror}{%
31 \PackageError{lwarp}
32 {For longtable:\MessageBreak
33 1: Keep either one of an \protect\endhead\space or
34 \protect\endfirsthead\space\MessageBreak
35 \space phrase as-is, to be used by both print and HTML.\MessageBreak
36 2: Place any other \protect\end... phrases inside a\MessageBreak
37 \space\protect\warpprintonly\space macro,
38 to be ignored by HTML.\MessageBreak
39 3: Add a final footer for HTML at the end of the table\MessageBreak
40 \space inside a \protect\warpprintonly\space macro.
41 This can be\MessageBreak
42 \space a copy of an \protect\endfoot\space or
43 \protect\endfirstfoot\space phrase,\MessageBreak
44 \space but without the actual \protect\endfoot\space
45 or \protect\endfirstfoot\MessageBreak
46 \space macros. If using threeparttablex, add\MessageBreak
47 \space \protect\insertTableNotes\space here,
48 optionally with\MessageBreak
49 \space \protect\UseMinipageWidths\space in front.\MessageBreak
50 See the lwarp documentation regarding longtables\MessageBreak
51 and threeparttablex}
52 {See the lwarp documentation regarding longtables and threeparttablex.}
53 }

```

Error if more than one of \endhead or \endfirsthead is outside of warpprintonly.

```

54 \newcommand*{\LWR@longtable@maybeheaderror}{%
55 \ifbool{LWR@longtable@havehead}%
56 {\LWR@longtable@headerror}%
57 {%
58 \booltrue{LWR@longtable@havehead}
59 \LWR@tabularendoffline% throws away options //[dim] and //*
60 }%
61 }

```

Error if more than one of these is outside of warpprint.

```
62 \def\endhead{\LWR@longtable@maybeheaderror}
63 \def\endfirsthead{\LWR@longtable@maybeheaderror}
```

Error if ANY of these is outside of warpprint.

```
64 \def\endfoot{\LWR@longtable@headerror}
65 \def\endlastfoot{\LWR@longtable@headerror}

66 \providecommand*\LWR@HTML@tabularnewline{\LWR@tabularendofline}
67 \LWR@formatted{tabularnewline}

68 \newcommand{\setlongtables}{}% Obsolete command, does nothing.
69 \newlength{\LTleft}
70 \newlength{\LTRight}
71 \newlength{\LTpre}
72 \newlength{\LTpost}
73 \newlength{\LTcapwidth}

74 \LetLtxMacro\LWR@origkill\kill
75 \renewcommand*\kill{\LWR@tabularendofline}
76 \appto\LWR@restoreorigformatting{%
77 \LetLtxMacro\kill\LWR@origkill%
78 }
```

---

File 202 **lwarp-lscape.sty**

§ 300      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 203 **lwarp-ltablex.sty**

§ 301      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{tabularx}
2
3 \LWR@ProvidesPackageDrop{ltablex}[2014/08/13]
4
5 \DeclareDocumentEnvironment{tabularx}{m o m}
6 {\longtable{#3}}
7 {\endlongtable}
8
9 \DeclareDocumentEnvironment{tabularx*}{m o m}
10 {\longtable{#3}}
11 {\endlongtable}
12
13 \newcommand*{\keepXColumns}{}
14 \newcommand*{\convertXColumns}{}

```

---

File 204 **lwarp-ltcaption.sty**

§ 302      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*{\LTcapmarginsfalse}{}

```

---

File 205 **lwarp-ltxgrid.sty**

§ 303      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 206 **lwarp-ltxtable.sty**

§ 304     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 \LWR@ProvidesPackageDrop{ltxtable}[1995/12/11]

```
\LTxtable {\width}\{file}
 2 \newcommand*\LTxtable[2]{%
 3 \input{#2}%
 4 }
```

---

File 207 **lwarp-lua-check-hyphen.sty**

§ 305     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 208 **lwarp-lua-visual-debug.sty**

§ 306     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 209 **lwarp-luacolor.sty**

§ 307     Package **luacolor**

Pkg    luacolor    luacolor is ignored.

**for HTML output:**    1 \LWR@ProvidesPackageDrop{luacolor}[2016/05/16]

---

```
2 \newcommand{\luacolorProcessBox}[1]{}

```

---

File 210 **lwarp-luatodonotes.sty**

§ 308 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 \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 211 **lwarp-lyluatex.sty**

§ 309      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>
```

Avoid using the `insert=fullpage` option, or use it inside `\warpprintonly` or the `warpprint` environment.

for HTML output:    1 \LWR@ProvidesPackagePass[lyluatex][2019/05/27]

User-redefinable ALT tag:

```
2 \newcommand*{\lyluateximagenam}{(-lilypond--\packagediagramname)}

3 \LetLtxMacro\LWR@orig@ly@compilescore\ly@compilescore
4
5 \renewcommand*{\ly@compilescore}[1]{%
6 \begin{lateximage}[\lyluateximagenam]%
7 \LWR@orig@ly@compilescore{#1}%
8 \end{lateximage}%
9 }
10
11 \AtBeginDocument{
12 \lysetoption{paperwidth}{6in}
13 \lysetoption{paperheight}{9in}
14 \lysetoption{line-width}{5.5in}
15 \lysetoption{twoside}{false}
16 \lysetoption{fullpagestyle}{empty}
17 \lysetoption{fullpagealign}{crop}
18 \lysetoption{print-page-number}{false}
19 \lysetoption{insert}{systems}
20 \lysetoption{extra-top-margin}{0}
21 \lysetoption{extra-bottom-margin}{0}
22 \lysetoption{valign}{center}
23 \lysetoption{staffsize}{20}
24 \lysetoption{inline-staffsize}{14}
25 }
```

---

File 212 **lwarp-magaz.sty**

§ 310     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 213 **lwarp-makeidx.sty**

§ 311     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@orignewpage%
4 \LWR@startpars%
5 }
```

File 214 **lwarp-manyfoot.sty**

§ 312 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{nccfoots}
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 215 **lwarp-marginal.sty**

§ 313      Package **marginal**

Pkg    marginal    marginal is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{marginal}

2 \newcommand*{\showlostmarginals}{}
3 \newcommand*{\enlargefreelist}{}
4 \newcommand*{\onesidemarginals}{}

```

---

File 216 **lwarp-marginfit.sty**

§ 314      Package **marginfit**

Pkg    marginfit    marginfit is ignored.

**for HTML output:** Discard all options for lwarp-marginfit:

```

1 \LWR@ProvidesPackageDrop{marginfit}[2018/06/08]

```

---

File 217 **lwarp-marginfix.sty**

§ 315      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*{\marginskip}[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][1]{}
10 \newcommand*{\unblockmargin}[1][1]{}
11 \newcommand*{\marginphantom}[2][1]{}

```

---

File 218 **lwarp-marginnote.sty**

§ 316     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}{}

```

---

File 219 **lwarp-marvosym.sty**

§ 317     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 220 **lwarp-mathtools.sty**§ 318 Package **mathtools**

(Emulates or patches code by MORTEN HØGHOLM, LARS MADSEN.)

Pkg mathtools mathtools is patched for use by lwarp.

 **numbering, italics** showonlyrefs and mathic are disabled.

**for HTML output:** 1 \LWR@ProvidesPackagePass{mathtools}[2018/01/08]

2 \RequirePackage{graphicx}

3 \MHInternalSyntaxOn

Forces showonlyrefs off because lwarp uses cleveref, which is not compatible with showonlyrefs.

4 \renewcommand\*{\MT\_showonlyrefs\_true:}{\MT\_showonlyrefs\_false:}

5 \mathtoolsset{showonlyrefs=false}

Forces math italic correction off. Not patched for lwarp.

6 \renewcommand\*{\MT\_mathic\_true:}{\MT\_mathic\_false:}

7 \mathtoolsset{mathic=false}

8 \MHInternalSyntaxOff

File 221 **lwarp-mcaption.sty**§ 319 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 222 **lwarp-mdframed.sty**

§ 320 Package **mdframed**

*(Emulates or patches code by MARCO DANIEL, ELKE SCHUBERT.)*

Pkg mdframed mdframed is loaded with options forced to framemethod=none.

### § 320.1 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.

## § 320.2 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}
```

## § 320.3 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 % \@nmbrrlistfalse%
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
```

## § 320.4 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 }
```

### § 320.5 Color and length HTML conversion

\LWR@mdfprintcolor     $\{\langle mdcolorkey \rangle\}$

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     $\{\langle mdflengthkey \rangle\}$

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 }
```

### § 320.6 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}%
```

Turn off paragraph handling during the generation of the encapsulating tags:

```
48 \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 encode settings, which do not properly nest the <div> inside the mdframed environment.

```
49 \LWR@htmltagc{div class="%
50 mdframed%
51 \ifdefstring{\LWR@mdthisenv}{mdframed}}{\LWR@mdthisenv}%
52 " \LWR@orignewline
53 style=" \LWR@orignewline
```

Convert and print the background color:

```
54 background: \LWR@mdfprintcolor{backgroundcolor} ; \LWR@orignewline
```

Convert and print the border color and width:

```
55 border: \LWR@mdfprintlength{linewidth} solid
56 \LWR@mdfprintcolor{linecolor} ; \LWR@orignewline
```

Convert and print the border radius:

```
57 border-radius: \LWR@mdfprintlength{roundcorner} ; \LWR@orignewline
```

Convert and print the shadow:

```
58 \ifbool{mdf@shadow}{%
59 box-shadow:
60 \LWR@mdfprintlength{shadowsize}
61 \LWR@mdfprintlength{shadowsize}
62 \LWR@mdfprintlength{shadowsize}
```

```

63 \LWR@mdfprintcolor{shadowcolor} ;
64 }
65 {box-shadow: none ;}
66 \LWR@orignewline

67 "}"
68 % \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:

```

69 \LWR@select@print@hspace%
70 \renewcommand*{\rule}{\LWR@print@rule}
71 \let\LTxMacro\makebox\LWR@print@makebox%

72 \LWR@startpars%
73 \LWR@traceinfo{\LWR@mdframedstart done}%
74 }

```

\LWR@mdframedend      Actions after an mdframe ends.

After closing the <div>, globally restore to the default environment type:

```

75 \newcommand*{\LWR@mdframedend}{
76 \LWR@traceinfo{\LWR@mdframedend start}%

```

Close the custom <div>:

```

77 \LWR@htmldivclassend{\LWR@mdthisenv}

```

Reset future custom class to the default:

```

78 \gdef\LWR@mdthisenv{mdframed}

```

Resume paragraph handling:

```

79 \LWR@startpars%
80 \LWR@traceinfo{\LWR@mdframedend done}%
81 }

```

## § 320.7 Mdfamed environment

```

82 \renewenvironment{mdframed}[1][\color@begingroup%
83 \mdfsetup{userdefinedwidth=\linewidth,#1}%
84 \mdf@startcode%
85 \mdf@preenvsetting%
86 \ifdefempty{\mdf@firstframetitle}{\}%
87 {\let\mdf@frametitlesave\mdf@frametitle%
88 \let\mdf@frametitle\mdf@firstframetitle%
89 }%
90 \ifvmode\nointerlineskip\fi%
91 \ifdefempty{\mdf@frametitle}{\}%
92 {\mdfframedtitleenv{\mdf@frametitle}%
93 \mdf@@frametitle@use%
94 }%
95 \mdf@trivlist{\mdf@skipabove@length}%
96 \mdf@settings%
97 \mdf@lrbbox{\mdf@splitbox@one}%
98 \mdf@startinnercode%
99 %

```

```

100 }%
101 {%
102 % \mdf@@ignorelastdescenders%
103 \par%
104 % \unskip\ifvmode\nointerlineskip\hrule \@height\z@ \@width\hsize\fi%
105 \ifmdf@footnoteinside%
106 \def\mdf@reserveda{%
107 \mdf@footnoteoutput%
108 % \mdf@endinnercode%
109 % \endmdf@lrbox%
110 % \ifdefempty{\mdf@frametitle}}}%
111 % {\mdfframedtitleenv{\mdf@frametitle}\mdf@@frametitle@use}%
112 % \detected@mdf@put@frame
113 }%
114 \else%
115 \def\mdf@reserveda{%
116 % \mdf@endinnercode%
117 % \endmdf@lrbox%
118 % \ifdefempty{\mdf@frametitle}}}%
119 % {\mdfframedtitleenv{\mdf@frametitle}\mdf@@frametitle@use}%
120 % \detected@mdf@put@frame%
121 \mdf@footnoteoutput%
122 }%
123 \fi%
124 \mdf@reserveda%
125 \aftergroup\endmdf@trivlist%
126 \color@endgroup%
127 \mdf@endcode%
128 }

```

\mdf@footnoteoutput

```

129 \renewrobustcmd*\mdf@footnoteoutput{%
130 \LWR@printpendingmpfootnotes%
131 }

```

## § 320.8 Titles and subtitles

\mdfframedtitleenv {<title>}

Place the title inside a <div> of class mdfframedtitle:

```

132 \newlength{\LWR@titleroundcorner}
133
134 \renewrobustcmd\mdfframedtitleenv[1]{%
135 \LWR@traceinfo{\LWR@mdfframedtitleenv start}%

```

Open a <div> with a custom class and custom style:

```

136 \begin{BlockClass}[%

```

Convert and print the title background color:

```

137 background:
138 \LWR@mdfprintcolor{frametitlebackgroundcolor}
139 ; \LWR@orignewline

```

Convert and print the title rule:

```

140 \ifbool{mdf@frametitulerule}{%
141 border-bottom:
142 \LWR@mdfprintlength{frametitulerulewidth}
143 solid
144 \LWR@mdfprintcolor{frametitulerulecolor}
145 ; \LWR@orignewline
146 }{}%

```

Finish the custom style and the opening <div> tag:

```
147]{mdframedtitle}%
```

Print the title inside the <div>:

```
148 \mdf@frametitlefont{\LWR@textcurrentfont{#1}}%
```

Close the <div>:

```

149 \end{BlockClass}%
150 \LWR@traceinfo{\LWR@mdframedtitleenv end}%
151 }

```

```
\LWR@mdfsubtitlecommon {<sub -or- subsub>} [<options>] {<title>}
```

Common code for \LWR@mdfsubtitle and \LWR@mdfsubsubtitle.

Encapsulate the subtitle inside a <div> of class mdframedsubtitle:

```

152 \NewDocumentCommand{\LWR@mdfsubtitlecommon}{m o m}
153 {% the following empty line is required
154
155 \LWR@traceinfo{\LWR@mdframedsubtitlecommon start}%

```

Open a <div> with a custom class and custom style:

```
156 \begin{BlockClass}[%
```

Convert and print the background color:

```

157 background:
158 \LWR@mdfprintcolor{#1titlebackgroundcolor}
159 ; \LWR@orignewline

```

Convert and print the above line:

```

160 \ifbool{mdf@#1titleaboveline}{%
161 border-top:
162 \LWR@mdfprintlength{#1titleabovelinewidth}
163 solid
164 \LWR@mdfprintcolor{#1titleabovelinecolor}
165 ; \LWR@orignewline
166 }{}%

```

Convert and print the below line:

```

167 \ifbool{mdf@#1titlebelowline}{%
168 border-bottom:
169 \LWR@mdfprintlength{#1titlebelowlinewidth}
170 solid
171 \LWR@mdfprintcolor{#1titlebelowlinecolor}
172 ; \LWR@orignewline
173 }{}%

```

Finish the custom style and the opening <div> tag:

```
174]{mdframed#1title}%
```

Perform the original subtitle action:

```
175 \IfNoValueTF{#2}
176 {\@nameuse{LWR@origmdf#1title}}{\csuse{mdf@#1titlefont}}{\LWR@textcurrentfont{#3}}}%
177 {\@nameuse{LWR@origmdf#1title}[#2]}{\csuse{mdf@#1titlefont}}{\LWR@textcurrentfont{#3}}}%
```

Close the <div>:

```
178 \end{BlockClass}%
179 \LWR@traceinfo{LWR@mdframedsubtitlecommon end}%
180 }
```

`\LWR@mdfsubtitle` [*<options>*] {*<title>*}

```
181 \newcommand*{\LWR@mdfsubtitle}{%
182 \LWR@mdfsubtitlecommon{sub}%
183 }
184 \let\mdfsubtitle\LWR@mdfsubtitle
```

`\LWR@mdfsubsubtitle` [*<options>*] {*<title>*}

```
185 \newcommand*{\LWR@mdfsubsubtitle}{%
186 \LWR@mdfsubtitlecommon{subsub}%
187 }
188 \let\mdfsubsubtitle\LWR@mdfsubsubtitle
```

## § 320.9 New environments

`\LWR@mdthisenv` Stores the environment of the frame about to be created:

```
189 \newcommand*{\LWR@mdthisenv}{mdframed}
```

`\newmdenv` [*<options>*] {*<env-name>*}

Modified from the original to remember the environment.

```
190 \renewrobustcmd*\newmdenv[2][[]]{%
191 \newenvironment{#2}%
192 {%
193 \mdfsetup{#1}%
194 \renewcommand*{\LWR@mdthisenv}{md#2}%
195 \begin{mdframed}%
196 }
197 {\end{mdframed}}%
198 }
```

`\surroundwithmdframed` [*<options>*] {*<environment>*}

Modified from the original to remember the environment.

```
199 \renewrobustcmd*{\surroundwithmdframed}[2][[]]{%
200 \BeforeBeginEnvironment{#2}{%
201 \renewcommand*{\LWR@mdthisenv}{md#2}%
202 \begin{mdframed}[#1]}%
203 \AfterEndEnvironment{#2}{\end{mdframed}}%
```

204 }

\mdtheorem [*<mdframed-options>*] [*<envname>*] [*<numberedlike>*] [*<caption>*] [*<within>*]

Modified from the original to remember the environment.

```

205 \DeclareDocumentCommand{\mdtheorem}{ O{} m o m o }%
206 {\ifcsdef{#2}%
207 {\mdf@PackageWarning{Environment #2 already exists\MessageBreak}}%
208 {%
209 \IfNoValueTF {#3}%
210 {%#3 not given -- number relationship
211 \IfNoValueTF {#5}%
212 {%#3+#5 not given
213 \@definecounter{#2}%
214 \expandafter\xdef\csname the#2\endcsname{\@thmcounter{#2}}%
215 \newenvironment{#2}[1][{}]{%
216 \refstepcounter{#2}%
217 \ifstrempy{##1}%
218 {\let\@temptitle\relax}%
219 {%
220 \def\@temptitle{\mdf@theoremseparator%
221 \mdf@theoremspace%
222 \mdf@theoremtitlefont%
223 \LWR@textcurrentfont{##1}}% lwarp
224 \mdf@thm@caption{#2}{\csname the#2\endcsname}{##1}}%
225 }%
226 \begin{mdframed}[#1,frametitle={\strut#4\ \csname the#2\endcsname%
227 \@temptitle}]]%
228 {\end{mdframed}}%
229 \newenvironment{#2*}[1][{}]{%
230 \ifstrempy{##1}{\let\@temptitle\relax}{\def\@temptitle{: \ ##1}}%
231 \begin{mdframed}[#1,frametitle={\strut#4\@temptitle}]]%
232 {\end{mdframed}}%
233 }%
234 {%#5 given -- reset counter
235 \@definecounter{#2}\newctr{#2}[#5]%
236 \expandafter\xdef\csname the#2\endcsname{\@thmcounter{#2}}%
237 \expandafter\xdef\csname the#2\endcsname{%
238 \expandafter\noexpand\csname the#5\endcsname \@thmcountersep%
239 \@thmcounter{#2}}%
240 \newenvironment{#2}[1][{}]{%
241 \refstepcounter{#2}%
242 \ifstrempy{##1}%
243 {\let\@temptitle\relax}%
244 {%
245 \def\@temptitle{\mdf@theoremseparator%
246 \mdf@theoremspace%
247 \mdf@theoremtitlefont%
248 \LWR@textcurrentfont{##1}}% lwarp
249 \mdf@thm@caption{#2}{\csname the#2\endcsname}{##1}}%
250 }%
251 \begin{mdframed}[#1,frametitle={\strut#4\ \csname the#2\endcsname%
252 \@temptitle}]]%
253 {\end{mdframed}}%
254 \newenvironment{#2*}[1][{}]{%

```

```

255 \ifstrempy{##1}%
256 {\let\@temptitle\relax}%
257 {%
258 \def\@temptitle{\mdf@theoremseparator%
259 \mdf@theoremspace%
260 \mdf@theoremtitlefont%
261 \LWR@textcurrentfont{##1}}% lwarp
262 \mdf@thm@caption{#2}{#4}{\csname the#2\endcsname}{##1}}%
263 }%
264 \begin{mdframed}[#1,frametitle={\strut#4\@temptitle}]]%
265 {\end{mdframed}}%
266 }%
267 }%
268 {%#3 given -- number relationship
269 \global\@namedef{the#2}{\@nameuse{the#3}}%
270 \newenvironment{#2}[1][{%
271 \refstepcounter{#3}%
272 \ifstrempy{##1}%
273 {\let\@temptitle\relax}%
274 {%
275 \def\@temptitle{\mdf@theoremseparator%
276 \mdf@theoremspace%
277 \mdf@theoremtitlefont%
278 \LWR@textcurrentfont{##1}}% lwarp
279 \mdf@thm@caption{#2}{#4}{\csname the#2\endcsname}{##1}}%
280 }
281 \begin{mdframed}[#1,frametitle={\strut#4\ \csname the#2\endcsname%
282 \@temptitle}]]%
283 {\end{mdframed}}%
284 \newenvironment{#2*}[1][{%
285 \ifstrempy{##1}{\let\@temptitle\relax}{\def\@temptitle{: \ ##1}}%
286 \begin{mdframed}[#1,frametitle={\strut#4\@temptitle}]]%
287 {\end{mdframed}}%
288 }%
289 \BeforeBeginEnvironment{#2}{\renewcommand*\LWR@mdthisenv}{md#2}}% lwarp
290 \BeforeBeginEnvironment{#2*}{\renewcommand*\LWR@mdthisenv}{md#2}}% lwarp
291 }%
292 }

```

`\newmdtheoremenv` [*<1: mdframed-options>*] [*<2: envname>*] [*<3: numberedlike>*] [*<4: caption>*] [*<5: within>*]

Modified from the original to remember the environment.

```

293 \DeclareDocumentCommand\newmdtheoremenv{O{} m o m o }{%
294 \ifboolexpr{ test {\IfNoValueTF {#3}} and test {\IfNoValueTF {#5}} }%
295 {\newtheorem{#2}{#4}}%
296 {%
297 \IfValueT{#3}{\newtheorem{#2}[#3]{#4}}%
298 \IfValueT{#5}{\newtheorem{#2}{#4}[#5]}%
299 }%
300 \BeforeBeginEnvironment{#2}{%
301 \renewcommand*\LWR@mdthisenv}{md#2}%
302 \begin{mdframed}[#1]}%
303 \AfterEndEnvironment{#2}{%
304 \end{mdframed}}%

```

305 }

File 223 **lwarp-media9.sty**

§ 321 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 \catcode'\#=12%
53 \catcode'\%=12%
54 % \catcode'\&=12% left alone for splitting flash variables
55 \catcode'\~=12%
56 \catcode'_ =12%
57 \LWR@includemediab%
58 }

```

\mediabutton [*<options>*] {*<text>*}

Ignored.

```
59 \newcommand*{\mediabutton}[2][{}]
```

---

File 224 **lwarp-memhfixc.sty**

§ 322 Package **memhfixc**

Pkg memhfixc memhfixc is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{memhfixc}[2013/05/30]

---

File 225 **lwarp-metalogo.sty**

§ 323 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 226 **lwarp-metalogox.sty**

### § 324 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 227 **lwarp-mhchem.sty**

### § 325 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:

$$\text{\textbackslash ce{C6H5-CHO}}\text{\textbackslash}$$

**not inside math** If *not* used inside a math expression, lwarp converts standalone mhchem expressions into svg math images.

**MATHJAX without mhchem extension** If the MATHJAX mhchem extension is not used, expressions inside math must be placed between \displaymathother and \displaymathnormal:

```

\displaymathother
\[\ce{ . . . } \] . . . $ \ce { . . . } $
\displaymathnormal

```

### ⚠ 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 |
| $\text{\ce{\textit{cis} [PtCl2(NH3)2]}}$ | % old |
| $\text{\ce{\textit{cis} [PtCl2(NH3)2]}}$ | % 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 \begin{lateximage}*[\textbackslash{ } ce{\LWR@HTMLsanitize{#1}}]{%
5 \LWR@mhchem@origce{#1}%
6 \end{lateximage}%
7 \endgroup%
8 \addtocounter{LWR@mhchem@cedepth}{-1}%
9 }

```

Only set math shift if outer depth:

```

10 \newcounter{LWR@mhchem@cedepth}
11 \setcounter{LWR@mhchem@cedepth}{0}

```

The new \ce. Sets math shift then continues.

```

12 \renewcommand{\ce}{%
13 \begingroup%
14 \ifnumequal{\value{LWR@mhchem@cedepth}}{0}{%

```

```

15 \catcode'\$=3% math shift
16 }{}%
17 \addtocounter{LWR@mhchem@cedepth}{1}%
18 \LWR@mhchem@HTML@ce%
19 }

```

The original definition of `\cesplit`:

```
20 \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.

```

21 \newcommand*{\LWR@mhchem@HTML@cesplit}[2]
22 {%
23 \begin{lateximage}*[\textbackslash{}cesplit\{\LWR@HTMLsanitize{#2}\}]%
24 \LWR@mhchem@origcesplit{#1}{#2}%
25 \end{lateximage}%
26 \endgroup%
27 }

```

Only set math shift if outer depth:

```

28 \newcounter{LWR@mhchem@cesplitdepth}
29 \setcounter{LWR@mhchem@cesplitdepth}{0}

```

The new `\cesplit`. Sets math shift then continues.

```

30 \renewcommand{\cesplit}{%
31 \begingroup%
32 \ifnumequal{\value{LWR@mhchem@cesplitdepth}}{0}{%
33 \catcode'\$=3% math shift
34 }{}%
35 \addtocounter{LWR@mhchem@cesplitdepth}{1}%
36 \LWR@mhchem@HTML@cesplit%
37 }

```

Resore originals inside a `lateximage`:

```

38 \appto\LWR@restoreorigformatting{%
39 \LetLtxMacro\ce\LWR@mhchem@origce%
40 \LetLtxMacro\cesplit\LWR@mhchem@origcesplit%
41 }

```

---

File 228 **lwarp-microtype.sty**

§ 326 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 dis-

abled.

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 229 **lwarp-midfloat.sty**

§ 327

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 230 **lwarp-midpage.sty**

§ 328      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 231 **lwarp-minibox.sty**

§ 329      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 232 **lwarp-minitoc.sty**

§ 330 Package **minitoc**

Pkg minitoc minitoc is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{minitoc}[2018/07/12]

mtcoff disables minitoc.

2 \usepackage{mtcoff}

---

File 233 **lwarp-morefloats.sty**

§ 331 Package **morefloats**

Pkg morefloats morefloats is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{morefloats}[2015/07/22]

---

File 234 **lwarp-moreverb.sty**

§ 332 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][]{%
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 235 **lwarp-movie15.sty**

§ 333      Package **movie15**

Pkg   movie15   movie15 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 `addresource=`, 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 \catcode'\#=12%
19 \catcode'\%=12%
20 \catcode'\&=12%
21 \catcode'\~=12%
22 \catcode'_ =12%
23 \LWR@includemovieb%
24 }
25
26
27 \newcommand*{\movieref}[3][[]]{
28
29 \LetLtxMacro\movie\LWR@multimedia
30 % \LetLtxMacro\sound\LWR@multimedia% not in media15
31
32 \newcommand{\hyperlinkmovie}[3][[]]{

```

---

File 236 **lwarp-mparhack.sty**

§ 334     Package **mparhack**

Pkg    mparhack    mparhack is ignored.

for HTML output:    Discard all options for lwarp-mparhack:

```
1 \LWR@ProvidesPackageDrop{mparhack}[2005/04/17]
```

---

File 237 **lwarp-multicap.sty**

§ 335     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 238 **lwarp-multicol.sty**

§ 336     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 m}{%
30 \IfValueTF{#2}{#2}{#3}%
31 }

32 \end{warpHTML}

```

---

File 239 **lwarp-multicolrule.sty**

§ 337     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 240 **lwarp-multimedia.sty**

§ 338     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 addresource=, 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 241 **lwarp-multirow.sty**

§ 339 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 neg-

ative 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 339.2 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 & ...
```

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}{}%
```

### § 339.1 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" %
```

The vertical alignment, if given:

```
11 \IfValueT{#1}{%
12 \ifstrequal{#1}{b}{style="\LWR@print@mbbox{vertical-align:bottom}" }{%
13 \ifstrequal{#1}{t}{style="\LWR@print@mbbox{vertical-align:top}" }{%
14 }%
```

The left/right border, if given:

```
15 \ifdefvoid{\LWR@multirowborder}{}%
16 style="\LWR@print@mbbox{border-\LWR@multirowborder:} 2px dotted black ; %
17 \LWR@print@mbbox{padding-\LWR@multirowborder:} 2px" %
18 }%
```

A class adds the column spec and the rule:

```
19 class="td%
```

Append this column's spec:

```
20 \LWR@getexparray{\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.

```
21 \LWR@addcmidruletrim%
22 \LWR@addleftmostbartag%
23 \LWR@printbartag{\arabic{\LWR@tableLaTeXcolindex}}%
24 "%
```

```
25 \LWR@tdstartstyles%
26 \LWR@addcmidrulewidth%
27 \LWR@addcdashline%
28 \LWR@addtabularrulecolors%
29 \LWR@tdendstyles%
30 }%
```

The column's < spec:

```
31 \LWR@getexparray{\LWR@colbeforespec}{\arabic{\LWR@tableLaTeXcolindex}}%
```

While printing the text, redefine \ to generate a new line

```
32 \begingroup\LetLtxMacro{\}{\LWR@endofline}\#6\endgroup%
33 \LWR@stoppars%
34 \global\boolfalse{\LWR@intabularmetadata}%
35 \renewcommand{\LWR@multirowborder}{}%
36 \LWR@traceinfo{*** LWR@HTML@multirow done}%
37 }%
38
39 \LWR@formatted{multirow}
```

### § 339.2 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:

```
45 \begingroup%
46 \LetLtxMacro{\}\{\LWR@endoffline}%
47 \LWR@domulticolumn[#3][#4]{#1}{\arabic{\LWR@tabhtmlcoltotal}}{\#2}{\#8}%
48 \endgroup%
```

Move to the next L<sup>A</sup>T<sub>E</sub>X column:

```
49 \addtocounter{\LWR@tableLaTeXcolindex}{\#1}%
50 \addtocounter{\LWR@tableLaTeXcolindex}{-1}%
```

Skip any trailing @ or ! columns for this cell:

```
51 \global\booltrue{\LWR@skipatbang}%
52 }
53
54 \LWR@expandableformatted{multicolumnrow}
55
56 }% \AtBeginDocument
```

---

File 242 **lwarp-multitoc.sty**

§ 340     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 243 **lwarp-musicography.sty**

### § 341 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][{}]{%
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 244 **lwarp-nameauth.sty**

§ 342 Package **nameauth**

*(Emulates or patches code by CHARLES P. SCHAUUM.)*

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\@nameauth@TestDot\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 245 **lwarp-nameref.sty**

## § 343 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 246 **lwarp-natbib.sty**

§ 344      Package **natbib**

*(Emulates or patches code by PATRICK W. DALY.)*

Pkg natbib natbib is patched for use by lwarp.

for HTML output: 1 \LWR@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 247 **lwarp-nccfancyhdr.sty**

§ 345      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 248 **lwarp-needspace.sty**

§ 346      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 249 **lwarp-nextpage.sty**§ 347 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 250 **lwarp-nfssext-cfr.sty**§ 348 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}{}
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}{}
21 \newrobustcmd{\LWR@HTML@tvstyle}{\renewcommand*{\LWR@f@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@sisshape}{}
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@nwwidth}{}
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}{bf}}
45 \newrobustcmd{\LWR@HTML@sbweight}{\renewcommand*{\LWR@f@series}{bf}}
46 % \newrobustcmd{\LWR@HTML@ebweight}{\renewcommand*{\LWR@f@series}{eb}}
47 \newrobustcmd{\LWR@HTML@ubweight}{\renewcommand*{\LWR@f@series}{eb}}
48 % \newrobustcmd{\LWR@HTML@lgweight}{\renewcommand*{\LWR@f@series}{lg}}
49 \newrobustcmd{\LWR@HTML@elweight}{\renewcommand*{\LWR@f@series}{lg}}
50 \newrobustcmd{\LWR@HTML@ulweight}{\renewcommand*{\LWR@f@series}{lg}}
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}
112 % \LWR@formatted{scshape}
113 % \LWR@formatted{upshape}
114 \LWR@formatted{dfshape}
115
116 \ifdef{\LWR@HTML@swshape}{\}% duplicated by fontaxes
117 \LWR@formatted{swshape}
118 }
119
120 \LWR@formatted{ornament}
121
122
123 \newcommand{\LWR@null@lstyle}{}
124 \newcommand{\LWR@null@osstyle}{}
125 \newcommand{\LWR@null@instyle}{}
126 \newcommand{\LWR@null@sustyle}{}
127 \newcommand{\LWR@null@swstyle}{}
128 \newcommand{\LWR@null@pstyle}{}

```

```

129 \newcommand{\LWR@null@tistyle}{}
130 \newcommand{\LWR@null@ostyle}{}
131 \newcommand{\LWR@null@postyle}{}
132 \newcommand{\LWR@null@ltstyle}{}
133 \newcommand{\LWR@null@ofstyle}{}
134 \newcommand{\LWR@null@altstyle}{}
135 \newcommand{\LWR@null@regstyle}{}
136 \newcommand{\LWR@null@embossstyle}{}
137 \newcommand{\LWR@null@ornamentalstyle}{}
138 \newcommand{\LWR@null@qtstyle}{}
139 \newcommand{\LWR@null@shstyle}{}
140 \newcommand{\LWR@null@swashstyle}{}
141 \newcommand{\LWR@null@tmstyle}{}
142 \newcommand{\LWR@null@tvstyle}{}
143 \newcommand{\LWR@null@tstyle}{}
144 \newcommand{\LWR@null@lstyle}{}
145 \newcommand{\LWR@null@tlstyle}{}
146 \newcommand{\LWR@null@plstyle}{}
147 \newcommand{\LWR@null@tostyle}{}
148 % \newcommand{\LWR@null@sishape}{}
149 \newcommand{\LWR@null@olshape}{}
150 \newcommand{\LWR@null@scolshape}{}
151 \newcommand{\LWR@null@ushape}{}
152 \newcommand{\LWR@null@scushape}{}
153 \newcommand{\LWR@null@uishape}{}
154 \newcommand{\LWR@null@rishape}{}
155 \newcommand{\LWR@null@regwidth}{}
156 \newcommand{\LWR@null@nwwidth}{}
157 \newcommand{\LWR@null@cdwidth}{}
158 \newcommand{\LWR@null@ecwidth}{}
159 \newcommand{\LWR@null@ucwidth}{}
160 \newcommand{\LWR@null@etwidth}{}
161 \newcommand{\LWR@null@epwidth}{}
162 \newcommand{\LWR@null@exwidth}{}
163 \newcommand{\LWR@null@uxwidth}{}
164 \newcommand{\LWR@null@mbweight}{}
165 \newcommand{\LWR@null@dbweight}{}
166 \newcommand{\LWR@null@sbweight}{}
167 % \newcommand{\LWR@null@ebweight}{}
168 \newcommand{\LWR@null@ubweight}{}
169 % \newcommand{\LWR@null@lgweight}{}
170 \newcommand{\LWR@null@elweight}{}
171 \newcommand{\LWR@null@ulweight}{}
172 % \newcommand{\LWR@null@itshape}{}
173 % \newcommand{\LWR@null@scshape}{}
174 % \newcommand{\LWR@null@upshape}{}
175 \newcommand{\LWR@null@dfshape}{}
176
177 \ifdef{\LWR@HTML@swshape}{}{% duplicated by fontaxes
178 \newcommand{\LWR@null@swshape}{}
179 }
180
181 \newcommand{\LWR@null@ornament}[1]{}
182
183 \appto{\LWR@nullfonts}{%

```

```
184 \LetLtxMacro\lnstyle\LWR@null@lnstyle%
185 \LetLtxMacro\osstyle\LWR@null@osstyle%
186 \LetLtxMacro\instyle\LWR@null@instyle%
187 \LetLtxMacro\sustyle\LWR@null@sustyle%
188 \LetLtxMacro\swstyle\LWR@null@swstyle%
189 \LetLtxMacro\pstyle\LWR@null@pstyle%
190 \LetLtxMacro\tistyle\LWR@null@tistyle%
191 \LetLtxMacro\ostyle\LWR@null@ostyle%
192 \LetLtxMacro\postyle\LWR@null@postyle%
193 \LetLtxMacro\ltstyle\LWR@null@ltstyle%
194 \LetLtxMacro\ofstyle\LWR@null@ofstyle%
195 \LetLtxMacro\altstyle\LWR@null@altstyle%
196 \LetLtxMacro\regstyle\LWR@null@regstyle%
197 \LetLtxMacro\embosstyle\LWR@null@embosstyle%
198 \LetLtxMacro\ornamentalstyle\LWR@null@ornamentalstyle%
199 \LetLtxMacro\qtstyle\LWR@null@qtstyle%
200 \LetLtxMacro\shstyle\LWR@null@shstyle%
201 \LetLtxMacro\swashstyle\LWR@null@swashstyle%
202 \LetLtxMacro\tmlstyle\LWR@null@tmlstyle%
203 \LetLtxMacro\tmlstyle\LWR@null@tmlstyle%
204 \LetLtxMacro\tmlstyle\LWR@null@tmlstyle%
205 \LetLtxMacro\lstyle\LWR@null@lstyle%
206 \LetLtxMacro\lstyle\LWR@null@lstyle%
207 \LetLtxMacro\plstyle\LWR@null@plstyle%
208 \LetLtxMacro\lstyle\LWR@null@lstyle%
209 % \LetLtxMacro\lstyle\LWR@null@lstyle%
210 \LetLtxMacro\olshape\LWR@null@olshape%
211 \LetLtxMacro\lstyle\LWR@null@lstyle%
212 \LetLtxMacro\lstyle\LWR@null@lstyle%
213 \LetLtxMacro\lstyle\LWR@null@lstyle%
214 \LetLtxMacro\lstyle\LWR@null@lstyle%
215 \LetLtxMacro\lstyle\LWR@null@lstyle%
216 \LetLtxMacro\lstyle\LWR@null@lstyle%
217 \LetLtxMacro\lstyle\LWR@null@lstyle%
218 \LetLtxMacro\lstyle\LWR@null@lstyle%
219 \LetLtxMacro\lstyle\LWR@null@lstyle%
220 \LetLtxMacro\lstyle\LWR@null@lstyle%
221 \LetLtxMacro\lstyle\LWR@null@lstyle%
222 \LetLtxMacro\lstyle\LWR@null@lstyle%
223 \LetLtxMacro\lstyle\LWR@null@lstyle%
224 \LetLtxMacro\lstyle\LWR@null@lstyle%
225 \LetLtxMacro\lstyle\LWR@null@lstyle%
226 \LetLtxMacro\lstyle\LWR@null@lstyle%
227 \LetLtxMacro\lstyle\LWR@null@lstyle%
228 % \LetLtxMacro\lstyle\LWR@null@lstyle%
229 \LetLtxMacro\lstyle\LWR@null@lstyle%
230 % \LetLtxMacro\lstyle\LWR@null@lstyle%
231 \LetLtxMacro\lstyle\LWR@null@lstyle%
232 \LetLtxMacro\lstyle\LWR@null@lstyle%
233 % \LetLtxMacro\lstyle\LWR@null@lstyle%
234 % \LetLtxMacro\lstyle\LWR@null@lstyle%
235 % \LetLtxMacro\lstyle\LWR@null@lstyle%
236 \LetLtxMacro\lstyle\LWR@null@lstyle%
237 \LetLtxMacro\lstyle\LWR@null@lstyle%
238 \LetLtxMacro\lstyle\LWR@null@lstyle%
```

```
239 }
240
241 \newrobustcmd{\LWR@HTML@textln}[1]{#1}
242 \newrobustcmd{\LWR@HTML@textos}[1]{\textsc{#1}}
243 \newrobustcmd{\LWR@HTML@textin}[1]{#1}
244 \newrobustcmd{\LWR@HTML@textsu}[1]{#1}
245 % \newrobustcmd{\LWR@HTML@textsi}[1]{#1}
246 \newrobustcmd{\LWR@HTML@textdf}[1]{#1}
247
248 \ifdef{\LWR@HTML@swshape}{\% duplicated by fontaxes
249 \newrobustcmd{\LWR@HTML@textsw}[1]{#1}
250 }
251
252 \newrobustcmd{\LWR@HTML@textti}[1]{#1}
253 \newrobustcmd{\LWR@HTML@textlt}[1]{#1}
254 \newrobustcmd{\LWR@HTML@textof}[1]{#1}
255 \newrobustcmd{\LWR@HTML@textalt}[1]{#1}
256 \newrobustcmd{\LWR@HTML@textreg}[1]{#1}
257 \newrobustcmd{\LWR@HTML@emboss}[1]{#1}
258 \newrobustcmd{\LWR@HTML@textorn}[1]{#1}
259 \newrobustcmd{\LWR@HTML@textqt}[1]{#1}
260 \newrobustcmd{\LWR@HTML@textsh}[1]{#1}
261 \newrobustcmd{\LWR@HTML@texttm}[1]{#1}
262 \newrobustcmd{\LWR@HTML@texttv}[1]{\texttt{#1}}
263 \newrobustcmd{\LWR@HTML@textl}[1]{#1}
264 \newrobustcmd{\LWR@HTML@texto}[1]{#1}
265 \newrobustcmd{\LWR@HTML@textp}[1]{#1}
266 \newrobustcmd{\LWR@HTML@textt}[1]{#1}
267 \newrobustcmd{\LWR@HTML@textpl}[1]{#1}
268 \newrobustcmd{\LWR@HTML@textpo}[1]{\textsc{#1}}
269 \newrobustcmd{\LWR@HTML@texttl}[1]{#1}
270 \newrobustcmd{\LWR@HTML@textto}[1]{\textsc{#1}}
271 \newrobustcmd{\LWR@HTML@textol}[1]{#1}
272 \newrobustcmd{\LWR@HTML@textswash}[1]{#1}
273 \newrobustcmd{\LWR@HTML@textu}[1]{#1}
274 \newrobustcmd{\LWR@HTML@textscu}[1]{#1}
275 \newrobustcmd{\LWR@HTML@textui}[1]{\LWR@HTML@textit{#1}}
276 \newrobustcmd{\LWR@HTML@textri}[1]{#1}
277 \newrobustcmd{\LWR@HTML@textnw}[1]{#1}
278 \newrobustcmd{\LWR@HTML@textcd}[1]{#1}
279 \newrobustcmd{\LWR@HTML@textec}[1]{#1}
280 \newrobustcmd{\LWR@HTML@textuc}[1]{#1}
281 \newrobustcmd{\LWR@HTML@textet}[1]{#1}
282 \newrobustcmd{\LWR@HTML@textep}[1]{#1}
283 \newrobustcmd{\LWR@HTML@textex}[1]{#1}
284 \newrobustcmd{\LWR@HTML@textux}[1]{#1}
285 \newrobustcmd{\LWR@HTML@textrw}[1]{#1}
286 \newrobustcmd{\LWR@HTML@textmb}[1]{\textmd{#1}}
287 \newrobustcmd{\LWR@HTML@textdb}[1]{\textbf{#1}}
288 \newrobustcmd{\LWR@HTML@textsb}[1]{\textbf{#1}}
289 % \newrobustcmd{\LWR@HTML@texteb}[1]{#1}
290 \newrobustcmd{\LWR@HTML@textub}[1]{\texteb{#1}}
291 % \newrobustcmd{\LWR@HTML@textlg}[1]{#1}
292 \newrobustcmd{\LWR@HTML@textel}[1]{\textlg{#1}}
293 \newrobustcmd{\LWR@HTML@textul}[1]{\textlg{#1}}
```

```
294
295 \LWR@formatted{textln}
296 \LWR@formatted{textos}
297 \LWR@formatted{textin}
298 \LWR@formatted{textsu}
299 % \LWR@formatted{textsi}
300 \LWR@formatted{textdf}
301 \LWR@formatted{textsw}
302 \LWR@formatted{textti}
303 \LWR@formatted{textlt}
304 \LWR@formatted{textof}
305 \LWR@formatted{textalt}
306 \LWR@formatted{textreg}
307 \LWR@formatted{emboss}
308 \LWR@formatted{textorn}
309 \LWR@formatted{textqt}
310 \LWR@formatted{textsh}
311 \LWR@formatted{texttm}
312 \LWR@formatted{texttv}
313 \LWR@formatted{textl}
314 \LWR@formatted{texto}
315 \LWR@formatted{textp}
316 \LWR@formatted{textt}
317 \LWR@formatted{textpl}
318 \LWR@formatted{textpo}
319 \LWR@formatted{texttl}
320 \LWR@formatted{textto}
321 \LWR@formatted{textol}
322 \LWR@formatted{textswash}
323 \LWR@formatted{textu}
324 \LWR@formatted{textscu}
325 \LWR@formatted{textui}
326 \LWR@formatted{textri}
327 \LWR@formatted{textnw}
328 \LWR@formatted{textcd}
329 \LWR@formatted{textec}
330 \LWR@formatted{textuc}
331 \LWR@formatted{textet}
332 \LWR@formatted{textep}
333 \LWR@formatted{textex}
334 \LWR@formatted{textux}
335 \LWR@formatted{textrw}
336 \LWR@formatted{textmb}
337 \LWR@formatted{textdb}
338 \LWR@formatted{textsb}
339 % \LWR@formatted{texteb}
340 \LWR@formatted{textub}
341 % \LWR@formatted{textlg}
342 \LWR@formatted{textel}
343 \LWR@formatted{textul}
344
345 \newrobustcmd{\LWR@null@textln}[1]{#1}
346 \newrobustcmd{\LWR@null@textos}[1]{#1}
347 \newrobustcmd{\LWR@null@textin}[1]{#1}
348 \newrobustcmd{\LWR@null@textsu}[1]{#1}
```

```

349 % \newrobustcmd{\LWR@null@textsi}[1]{#1}
350 \newrobustcmd{\LWR@null@textdf}[1]{#1}
351
352 \ifdef{\LWR@HTML@swshape}{% duplicated by fontaxes
353 \newrobustcmd{\LWR@null@textsw}[1]{#1}
354 }
355
356 \newrobustcmd{\LWR@null@textti}[1]{#1}
357 \newrobustcmd{\LWR@null@textlt}[1]{#1}
358 \newrobustcmd{\LWR@null@textof}[1]{#1}
359 \newrobustcmd{\LWR@null@textalt}[1]{#1}
360 \newrobustcmd{\LWR@null@textreg}[1]{#1}
361 \newrobustcmd{\LWR@null@emboss}[1]{#1}
362 \newrobustcmd{\LWR@null@textorn}[1]{#1}
363 \newrobustcmd{\LWR@null@textqt}[1]{#1}
364 \newrobustcmd{\LWR@null@textsh}[1]{#1}
365 \newrobustcmd{\LWR@null@texttm}[1]{#1}
366 \newrobustcmd{\LWR@null@texttv}[1]{#1}
367 \newrobustcmd{\LWR@null@textl}[1]{#1}
368 \newrobustcmd{\LWR@null@texto}[1]{#1}
369 \newrobustcmd{\LWR@null@textp}[1]{#1}
370 \newrobustcmd{\LWR@null@textt}[1]{#1}
371 \newrobustcmd{\LWR@null@textpl}[1]{#1}
372 \newrobustcmd{\LWR@null@textpo}[1]{#1}
373 \newrobustcmd{\LWR@null@texttl}[1]{#1}
374 \newrobustcmd{\LWR@null@textto}[1]{#1}
375 \newrobustcmd{\LWR@null@textol}[1]{#1}
376 \newrobustcmd{\LWR@null@textswash}[1]{#1}
377 \newrobustcmd{\LWR@null@textu}[1]{#1}
378 \newrobustcmd{\LWR@null@textscu}[1]{#1}
379 \newrobustcmd{\LWR@null@textui}[1]{#1}
380 \newrobustcmd{\LWR@null@textri}[1]{#1}
381 \newrobustcmd{\LWR@null@textnw}[1]{#1}
382 \newrobustcmd{\LWR@null@textcd}[1]{#1}
383 \newrobustcmd{\LWR@null@textec}[1]{#1}
384 \newrobustcmd{\LWR@null@textuc}[1]{#1}
385 \newrobustcmd{\LWR@null@textet}[1]{#1}
386 \newrobustcmd{\LWR@null@textep}[1]{#1}
387 \newrobustcmd{\LWR@null@textex}[1]{#1}
388 \newrobustcmd{\LWR@null@textux}[1]{#1}
389 \newrobustcmd{\LWR@null@textrw}[1]{#1}
390 \newrobustcmd{\LWR@null@textmb}[1]{#1}
391 \newrobustcmd{\LWR@null@textdb}[1]{#1}
392 \newrobustcmd{\LWR@null@textsb}[1]{#1}
393 % \newrobustcmd{\LWR@null@texteb}[1]{#1}
394 \newrobustcmd{\LWR@null@textub}[1]{#1}
395 % \newrobustcmd{\LWR@null@textlg}[1]{#1}
396 \newrobustcmd{\LWR@null@textel}[1]{#1}
397 \newrobustcmd{\LWR@null@textul}[1]{#1}
398
399 \appto{\LWR@nullfont}{%
400 \LetLtxMacro\textln\LWR@null@textln%
401 \LetLtxMacro\textos\LWR@null@textos%
402 \LetLtxMacro\textin\LWR@null@textin%
403 \LetLtxMacro\textsu\LWR@null@textsu%

```

```
404 % \LetLtxMacro\textsi\LWR@null@textsi%
405 \LetLtxMacro\textdf\LWR@null@textdf%
406 \LetLtxMacro\textsw\LWR@null@textsw%
407 \LetLtxMacro\textti\LWR@null@textti%
408 \LetLtxMacro\textlt\LWR@null@textlt%
409 \LetLtxMacro\textof\LWR@null@textof%
410 \LetLtxMacro\textalt\LWR@null@textalt%
411 \LetLtxMacro\textreg\LWR@null@textreg%
412 \LetLtxMacro\emboss\LWR@null@emboss%
413 \LetLtxMacro\textorn\LWR@null@textorn%
414 \LetLtxMacro\textqt\LWR@null@textqt%
415 \LetLtxMacro\textsh\LWR@null@textsh%
416 \LetLtxMacro\texttm\LWR@null@texttm%
417 \LetLtxMacro\texttv\LWR@null@texttv%
418 \LetLtxMacro\textl\LWR@null@textl%
419 \LetLtxMacro\texto\LWR@null@texto%
420 \LetLtxMacro\textp\LWR@null@textp%
421 \LetLtxMacro\textt\LWR@null@textt%
422 \LetLtxMacro\textpl\LWR@null@textpl%
423 \LetLtxMacro\textpo\LWR@null@textpo%
424 \LetLtxMacro\texttl\LWR@null@texttl%
425 \LetLtxMacro\textto\LWR@null@textto%
426 \LetLtxMacro\textol\LWR@null@textol%
427 \LetLtxMacro\textswash\LWR@null@textswash%
428 \LetLtxMacro\textu\LWR@null@textu%
429 \LetLtxMacro\textscu\LWR@null@textscu%
430 \LetLtxMacro\textui\LWR@null@textui%
431 \LetLtxMacro\textri\LWR@null@textri%
432 \LetLtxMacro\textnw\LWR@null@textnw%
433 \LetLtxMacro\textcd\LWR@null@textcd%
434 \LetLtxMacro\textec\LWR@null@textec%
435 \LetLtxMacro\textuc\LWR@null@textuc%
436 \LetLtxMacro\textet\LWR@null@textet%
437 \LetLtxMacro\textep\LWR@null@textep%
438 \LetLtxMacro\textex\LWR@null@textex%
439 \LetLtxMacro\textux\LWR@null@textux%
440 \LetLtxMacro\textrw\LWR@null@textrw%
441 \LetLtxMacro\textmb\LWR@null@textmb%
442 \LetLtxMacro\textdb\LWR@null@textdb%
443 \LetLtxMacro\textsb\LWR@null@textsb%
444 % \LetLtxMacro\texteb\LWR@null@texteb%
445 \LetLtxMacro\textub\LWR@null@textub%
446 % \LetLtxMacro\textlg\LWR@null@textlg%
447 \LetLtxMacro\textel\LWR@null@textel%
448 \LetLtxMacro\textul\LWR@null@textul%
449 }
450
451 \providecommand*{\zeroslash}{0}
452 \newrobustcmd*{\LWR@HTML@zeroslash}{0}
453 \LWR@formatted{zeroslash}
```

---

File 251 **lwarp-nicefrac.sty**

§ 349      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 \CustomizeMathJax{\newcommand{\nicefrac}[3][[]]{#2/#3}}

```

---

File 252 **lwarp-niceframe.sty**

§ 350      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 \setlength{\LWR@templengthone}{#1}
4 \begin{BlockClass}[max-width:\LWR@printlength{\LWR@templengthone}]{#3}
5 #2

```

---

```

6 \end{BlockClass}
7 }
8
9 \newcommand{\niceframe}[2][\textwidth]{\LWR@niceframe{#1}{#2}{niceframe}}
10 \newcommand{\curlyframe}[2][\textwidth]{\LWR@niceframe{#1}{#2}{curlyframe}}
11 \newcommand{\artdecoframe}[2][\textwidth]{\LWR@niceframe{#1}{#2}{artdecoframe}}
12
13 \newcommand{\generalframe}[9]{\LWR@niceframe{\textwidth}{#9}{generalframe}}

```

---

## File 253 **lwarp-nomencl.sty**

### § 351 Package **nomenc**

(Emulates or patches code by BORIS VEYTSMAN, BERND SCHANDL, LEE NETHERTON, CV RADHAKRISHNAN.)

Pkg nomenc **nomenc** is patched for use by **lwarp**.

To process the HTML nomenclature:

```
makeindex <project>_html.nlo -s nomencl.ist -o <project>_html.nls
```

for HTML output: 1 \LWR@ProvidesPackagePass{nomenc}[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 \begin@group\@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 254 **lwarp-nonfloat.sty**

### § 352 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\@capytype{figure}\caption}
4 \newcommand{\tabcaption}{\def\@capytype{table}\topcaption}
5 \newenvironment{narrow}[2]{}{}

```

---

File 255 **lwarp-nonumonpart.sty**

§ 353     Package **nonumonpart**

Pkg   nonumonpart   nonumonpart is ignored.

**for HTML output:**     1 \LWR@ProvidesPackageDrop{nonumonpart}[2011/04/15]

---

File 256 **lwarp-nopageno.sty**

§ 354     Package **nopageno**

Pkg   nopageno   nopageno is ignored.

**for HTML output:**     1 \LWR@ProvidesPackageDrop{nopageno}[1989/01/01]

---

File 257 **lwarp-notes.sty**

§ 355     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 258 **lwarp-notespages.sty**

§ 356      Package **notespages**

Pkg    notespages    notespages is ignored.

**for HTML output:**    1 \LWR@ProvidesPackageDrop{notespages}[2016/08/21]

```

2 \newcommand*{\npnotesname}{}
3 \newcommand*{\npnotestext}{}
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{\nppatchchapter}[1]{
18 \newcommand{\npunpatchchapter}{}

```

---

File 259 **lwarp-nowidow.sty**

§ 357      Package **nowidow**

*(Emulates or patches code by RAPHAËL PINSON.)*

Pkg    nowidow    nowidow is ignored.

Discard all options for lwarp-nowidow:

**for HTML output:**    1 \LWR@ProvidesPackageDrop{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 260 **lwarp-ntheorem.sty**

§ 358      Package **ntheorem**

(Emulates or patches code by WOLFGANG MAY, ANDREAS SCHEDLER.)

Pkg    ntheorem    ntheorem is patched for use by lwarp.


Table 15: 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.


§ 358.1    **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.

 **Equation numbering**    ntheorem has a bug with equation numbering in  $\mathcal{AMS}$  environmentswhen 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.

§ 358.2    **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
3
4 \newbool{LWR@ntheoremmarks}
5 \boolfalse{LWR@ntheoremmarks}
6
7 \DeclareOption{thmmarks}{
8 \booltrue{LWR@ntheoremmarks}
```

```

9 \newif\ifsetendmark\setendmarktrue
10 }
11
12
13 \newbool{LWR@theoremamsthm}
14 \boolfalse{LWR@theoremamsthm}
15
16 \DeclareOption{amsthm}{\booltrue{LWR@theoremamsthm}}
17
18
19 \DeclareOption{amsmath}{}
20 \DeclareOption{hyperref}{}
21
22 \LWR@ProvidesPackagePass{ntheorem}[2011/08/15]

```

### § 358.3 Remembering the theorem style

Storage for the style being used for new theorems.

```

23 \newcommand{\LWR@newtheoremstyle}{plain}

24 \AtBeginDocument{
25 \ifpackageloaded{cleveref}{
26 \gdef\@thm#1#2#3{%
27 \if@thmmarks
28 \stepcounter{end\InTheoType ctr}%
29 \fi
30 \renewcommand{\InTheoType}{#1}%
31 \if@thmmarks
32 \stepcounter{curr#1ctr}%
33 \setcounter{end#1ctr}{0}%
34 \fi
35 \refstepcounter[#1]{#2}% <<< cleveref modification
36 \theorem@prework
37 \LWR@forcenewpage% lwarp
38 \BlockClass{theorembody#1}%\LWR@thisthmstyle% lwarp
39 \trivlist % latex's \trivlist, calling latex's \@trivlist unchanged
40 \ifuse@newframeskips % cf. latex.ltx for topsepadd: \@trivlist
41 \ifthm@inframe
42 \thm@topsep\theoreminframepreskipamount
43 \thm@topsepadd\theoreminframepostskipamount
44 \else
45 \thm@topsep\theorempreskipamount
46 \thm@topsepadd\theorempostskipamount
47 \fi
48 \else% oldframeskips
49 \thm@topsep\theorempreskipamount
50 \thm@topsepadd \theorempostskipamount
51 \ifvmode\advance\thm@topsepadd\partopsep\fi
52 \fi
53 \@topsep\thm@topsep
54 \@topsepadd\thm@topsepadd
55 \advance\linewidth -\theorem@indent
56 \advance\linewidth -\theorem@rightindent
57 \advance\@totalleftmargin \theorem@indent

```

```

58 \parshape \@ne \@totalleftmargin \linewidth
59 \@ifnextchar[{\@ythm{#1}{#2}{#3}}{\@xthm{#1}{#2}{#3}}
60 }
61 }{% not @ifpackageloaded{cleveref}
62 \gdef\@thm#1#2#3{%
63 \if@thmmarks
64 \stepcounter{end\InTheoType ctr}%
65 \fi
66 \renewcommand{\InTheoType}{#1}%
67 \if@thmmarks
68 \stepcounter{curr#1ctr}%
69 \setcounter{end#1ctr}{0}%
70 \fi
71 \refstepcounter{#2}%
72 \theorem@prework
73 \LWR@forcenewpage% lwarp
74 \BlockClass{theorembody#1}%\LWR@thisthmstyle% lwarp
75 \trivlist % latex's \trivlist, calling latex's \@trivlist unchanged
76 \ifuse@newframeskips % cf. latex.ltx for topsepadd: \@trivlist
77 \ifthm@inframe
78 \thm@topsep\theoreminframepreskipamount
79 \thm@topsepadd\theoreminframepostskipamount
80 \else
81 \thm@topsep\theorempreskipamount
82 \thm@topsepadd\theorempostskipamount
83 \fi
84 \else% oldframeskips
85 \thm@topsep\theorempreskipamount
86 \thm@topsepadd \theorempostskipamount
87 \ifvmode\advance\thm@topsepadd\partopsep\fi
88 \fi
89 \@topsep\thm@topsep
90 \@topsepadd\thm@topsepadd
91 \advance\linewidth -\theorem@indent
92 \advance\linewidth -\theorem@rightindent
93 \advance\@totalleftmargin \theorem@indent
94 \parshape \@ne \@totalleftmargin \linewidth
95 \@ifnextchar[{\@ythm{#1}{#2}{#3}}{\@xthm{#1}{#2}{#3}}
96 }
97 }
98 }% AtBeginDocument

```

Patched to remember the style being used for new theorems:

```

99 \gdef\theoremstyle#1{%
100 \ifundefined{th@#1}{\@warning
101 {Unknown theoremstyle '#1'. Using 'plain'}}%
102 \theorem@style{plain}
103 \renewcommand{\LWR@newtheoremstyle}{plain}% lwarp
104 }%
105 {
106 \theorem@style{#1}
107 \renewcommand{\LWR@newtheoremstyle}{#1}% lwarp
108 }
109 }

```

Patched to remember the style for this theorem type, and set it later when the environment is started.

```

110
111 \gdef\xnthm#1#2[#3]{%
112 \ifthm@tempif
113 \csedef{LWR@thmstyle#1}{\LWR@newtheoremstyle}% lwarp
114 \expandafter\ifundefined{c@#1}%
115 {\@definecounter{#1}}{}%
116 \@newctr{#1}[#3]%
117 \expandafter\xdef\csname the#1\endcsname{%
118 \expandafter\noexpand\csname the#3\endcsname \@thmcountersep
119 {\noexpand\csname\the\theoremnumbering\endcsname{#1}}}%
120 \expandafter\gdef\csname mkheader@#1\endcsname
121 {\csname setparms@#1\endcsname
122 \@thm{#1}{#1}{#2}
123 }%
124 \global\@namedef{end#1}{\@endtheorem}
125 \AtBeginEnvironment{#1}{\edef\LWR@thisthmstyle{\@nameuse{LWR@thmstyle#1}}}% lwarp
126 \fi
127 }
128
129 \gdef\ynthm#1#2{%
130 \ifthm@tempif
131 \csedef{LWR@thmstyle#1}{\LWR@newtheoremstyle}% lwarp
132 \expandafter\ifundefined{c@#1}%
133 {\@definecounter{#1}}{}%
134 \expandafter\xdef\csname the#1\endcsname
135 {\noexpand\csname\the\theoremnumbering\endcsname{#1}}%
136 \expandafter\gdef\csname mkheader@#1\endcsname
137 {\csname setparms@#1\endcsname
138 \@thm{#1}{#1}{#2}
139 }%
140 \global\@namedef{end#1}{\@endtheorem}
141 \AtBeginEnvironment{#1}{\edef\LWR@thisthmstyle{\@nameuse{LWR@thmstyle#1}}}% lwarp
142 \fi
143 }
144
145 \gdef\othm#1[#2]#3{%
146 \@ifundefined{c@#2}{\@nocounterr{#2}}%
147 {\ifthm@tempif
148 \csedef{LWR@thmstyle#1}{\LWR@newtheoremstyle}% lwarp
149 \global\@namedef{the#1}{\@nameuse{the#2}}%
150 \expandafter\protected@xdef\csname num@addtheoremline#1\endcsname{%
151 \noexpand\@num@addtheoremline{#1}{#3}}%
152 \expandafter\protected@xdef\csname nonum@addtheoremline#1\endcsname{%
153 \noexpand\@nonum@addtheoremline{#1}{#3}}%
154 \theoremkeyword{#3}%
155 \expandafter\protected@xdef\csname #1Keyword\endcsname
156 {\the\theoremkeyword}%
157 \expandafter\gdef\csname mkheader@#1\endcsname
158 {\csname setparms@#1\endcsname
159 \@thm{#1}{#2}{#3}
160 }%
161 \global\@namedef{end#1}{\@endtheorem}

```

```

162 \AtBeginEnvironment{#1}{\edef\LWR@thishmstyle{\@nameuse{LWR@thmstyle#1}}}% lwarp
163 \fi}
164 }

```

#### § 358.4 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.

```

165 \newcommand{\LWR@inctheorem}{%
166 \addtocounter{LWR@thisautoid}{1}%
167 \LWR@stoppars%
168 \LWR@htmltag{a id="\LWR@print@mbox{autoid-\arabic{LWR@thisautoid}}"}\LWR@htmltag{/a}%
169 \LWR@startpars%
170 }

```

#### § 358.5 \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>.

```

171 \gdef\newtheoremstyle#1#2#3{%
172 \expandafter\@ifundefined{th@#1}%
173 {\expandafter\gdef\csname th@#1\endcsname{%
174 \def\@begintheorem###1###2{%
175 \LWR@inctheorem% lwarp
176 #2}%
177 \def\@opargbegintheorem###1###2###3{%
178 \LWR@inctheorem% lwarp
179 #3}%
180 }%
181 }%
182 {\PackageError{basename}{Theorem style #1 already defined}\@eha}
183 }

```

#### § 358.6 Standard styles

```

184 \renewtheoremstyle{plain}%
185 {\item[
186 \InlineClass{theoremheaderplain}{##1\ ##2\theorem@separator}]]}%
187 {\item[
188 \InlineClass{theoremheaderplain}{##1\ ##2\ (##3)\theorem@separator}]]}
189
190 \renewtheoremstyle{break}%
191 {\item[
192 \InlineClass{theoremheaderbreak}{##1\ ##2\theorem@separator}\newline
193]}%
194 {\item[
195 \InlineClass{theoremheaderbreak}%

```

```

196 {##1\ ##2\ (##3)\theoremseparator}\newline
197]}
198
199 \renewtheoremstyle{change}%
200 {\item[
201 \InlineClass{theoremheaderchange}{##2\ ##1\theoremseparator}]]%
202 {\item[
203 \InlineClass{theoremheaderchange}{##2\ ##1\ (##3)\theoremseparator}]]
204
205 \renewtheoremstyle{changebreak}%
206 {\item[
207 \InlineClass{theoremheaderchangebreak}%
208 {##2\ ##1\theoremseparator}\newline
209]}%
210 {\item[
211 \InlineClass{theoremheaderchangebreak}%
212 {##2\ ##1\ (##3)\theoremseparator}\newline
213]}
214
215 \renewtheoremstyle{margin}%
216 {\item[
217 \InlineClass{theoremheadermargin}{##2 \quad ##1\theoremseparator}
218]}%
219 {\item[
220 \InlineClass{theoremheadermargin}{##2 \quad ##1\ (##3)\theoremseparator}
221]}
222
223 \renewtheoremstyle{marginbreak}%
224 {\item[
225 \InlineClass{theoremheadermarginbreak}%
226 {##2 \quad ##1\theoremseparator}\newline
227]}%
228 {\item[
229 \InlineClass{theoremheadermarginbreak}%
230 {##2 \quad ##1\ (##3)\theoremseparator}\newline
231]}
232
233 \renewtheoremstyle{nonumberplain}%
234 {\item[
235 \InlineClass{theoremheaderplain}{##1\theoremseparator}]]%
236 {\item[
237 \InlineClass{theoremheaderplain}{##1\ (##3)\theoremseparator}]]
238
239 \renewtheoremstyle{nonumberbreak}%
240 {\item[
241 \InlineClass{theoremheaderbreak}{##1\theoremseparator}\newline
242]}%
243 {\item[
244 \InlineClass{theoremheaderbreak}{##1\ (##3)\theoremseparator}\newline
245]}
246
247 \renewtheoremstyle{empty}%
248 {\item[]}%
249 {\item[
250 \InlineClass{theoremheaderplain}{##3}]]

```

```

251
252 \renewtheoremstyle{emptybreak}%
253 {\item[]}%
254 {\item[
255 \InlineClass{theoremheaderplain}{##3}] \newline}

```

### § 358.7 Additional objects

The following manually adjust the css for the standard configuration objects which are not a purely plain style:

```

256 \ifbool{LWR@theoremamsthm}{%{

```

Upright text via CSS:

```

257 \newtheoremstyle{plainupright}%
258 {\item[
259 \InlineClass{theoremheaderplain}{##1\ ##2\theorem@separator}]]%
260 {\item[
261 \InlineClass{theoremheaderplain}{##1\ ##2\ (##3)\theorem@separator}]]}

```

Upright text and small caps header via CSS:

```

262 \newtheoremstyle{nonumberplainuprightsc}%
263 {\item[
264 \InlineClass{theoremheadersc}{##1\theorem@separator}]]%
265 {\item[
266 \InlineClass{theoremheadersc}{##1\ (##3)\theorem@separator}]]}
267 }% not amsthm

```

### § 358.8 Renewed standard configuration

The following standard configuration is renewed using the new css:

```

268 \ifbool{LWR@theoremamsthm}{%{

269 \ifx\thm@usestd\@undefined
270 \else
271 \theoremnumbering{arabic}
272 \theoremstyle{plain}
273 \RequirePackage{latexsym}
274 \theoremsymbol{\Box}
275 \theorembodyfont{\itshape}
276 \theoremheaderfont{\normalfont\bfseries}
277 \theoremseparator{}
278 \renewtheorem{Theorem}{Theorem}
279 \renewtheorem{theorem}{Theorem}
280 \renewtheorem{Satz}{Satz}
281 \renewtheorem{satz}{Satz}
282 \renewtheorem{Proposition}{Proposition}
283 \renewtheorem{proposition}{Proposition}
284 \renewtheorem{Lemma}{Lemma}
285 \renewtheorem{lemma}{Lemma}
286 \renewtheorem{Korollar}{Korollar}

```

```

287 \renewtheorem{korollar}{Korollar}
288 \renewtheorem{Corollary}{Corollary}
289 \renewtheorem{corollary}{Corollary}
290
291 \theoremstyle{plainupright}
292 \theorembodyfont{\upshape}
293 \theoremsymbol{\HTMLUnicode{25A1}}% UTF-8 white box
294 \renewtheorem{Example}{Example}
295 \renewtheorem{example}{Example}
296 \renewtheorem{Beispiel}{Beispiel}
297 \renewtheorem{beispiel}{Beispiel}
298 \renewtheorem{Bemerkung}{Bemerkung}
299 \renewtheorem{bemerkung}{Bemerkung}
300 \renewtheorem{Anmerkung}{Anmerkung}
301 \renewtheorem{anmerkung}{Anmerkung}
302 \renewtheorem{Remark}{Remark}
303 \renewtheorem{remark}{Remark}
304 \renewtheorem{Definition}{Definition}
305 \renewtheorem{definition}{Definition}
306
307 \theoremstyle{nonumberplainuprightsc}
308 \theoremsymbol{\HTMLUnicode{220E}}% UTF-8 end-of-proof
309 \renewtheorem{Proof}{Proof}
310 \renewtheorem{proof}{Proof}
311 \renewtheorem{Beweis}{Beweis}
312 \renewtheorem{beweis}{Beweis}
313 \qedsymbol{\HTMLUnicode{220E}}% UTF-8 end-of-proof
314
315 \theoremsymbol{}
316 \fi
317}% not amsthm

```

## § 358.9 amsthm option

Only if the amsthm option was given:

```

318 \ifbool{LWR@theoremamsthm}{
319
320 \gdef\th@plain{%
321 \def\theorem@headerfont{\normalfont\bfseries}\itshape%
322 \def\@begintheorem##1##2{%
323 \LWR@intheorem% lwarp
324 \item[
325 \InlineClass{theoremheaderplain}{##1\ ##2.}
326]}%
327 \def\@opargbegintheorem##1##2##3{%
328 \LWR@intheorem% lwarp
329 \item[
330 \InlineClass{theoremheaderplain}{##1\ ##2\ (##3).}
331]}}
332
333 \gdef\th@nonumberplain{%
334 \def\theorem@headerfont{\normalfont\bfseries}\itshape%
335 \def\@begintheorem##1##2{%
336 \LWR@intheorem% lwarp

```

```

337 \item[
338 \InlineClass{theoremheaderplain}{##1.}
339]}%
340 \def\@opargbegintheorem##1##2##3{%
341 \LWR@intheorem% lwarp
342 \item[
343 \InlineClass{theoremheaderplain}{##1\ (##3).}
344]}}
345
346 \gdef\th@definition{%
347 \def\theorem@headerfont{\normalfont\bfseries}\normalfont%
348 \def\@begintheorem##1##2{%
349 \LWR@intheorem% lwarp
350 \item[
351 \InlineClass{theoremheaderdefinition}{##1\ ##2.}
352]}%
353 \def\@opargbegintheorem##1##2##3{%
354 \LWR@intheorem% lwarp
355 \item[
356 \InlineClass{theoremheaderdefinition}{##1\ ##2\ (##3).}
357]}}
358
359 \gdef\th@nonumberdefinition{%
360 \def\theorem@headerfont{\normalfont\bfseries}\normalfont%
361 \def\@begintheorem##1##2{%
362 \LWR@intheorem% lwarp
363 \item[
364 \InlineClass{theoremheaderdefinition}{##1.}
365]}%
366 \def\@opargbegintheorem##1##2##3{%
367 \LWR@intheorem% lwarp
368 \item[
369 \InlineClass{theoremheaderdefinition}{##1\ (##3).}
370]}}
371
372 \gdef\th@remark{%
373 \def\theorem@headerfont{\itshape}\normalfont%
374 \def\@begintheorem##1##2{%
375 \LWR@intheorem% lwarp
376 \item[
377 \InlineClass{theoremheaderremark}{##1\ ##2.}
378]}%
379 \def\@opargbegintheorem##1##2##3{%
380 \LWR@intheorem% lwarp
381 \item[
382 \InlineClass{theoremheaderremark}{##1\ ##2\ (##3).}
383]}}
384
385 \gdef\th@nonumberremark{%
386 \def\theorem@headerfont{\itshape}\normalfont%
387 \def\@begintheorem##1##2{%
388 \LWR@intheorem% lwarp
389 \item[
390 \InlineClass{theoremheaderremark}{##1.}
391]}%

```

```

392 \def\@opargbegintheorem##1##2##3{%
393 \LWR@intheorem% lwarp
394 \item[
395 \InlineClass{theoremheaderremark}{##1\ (##3).}
396]}}
397
398 \gdef\th@proof{%
399 \def\theorem@headerfont{\normalfont\bfseries}\itshape%
400 \def\@begintheorem##1##2{%
401 \LWR@intheorem% lwarp
402 \item[
403 \InlineClass{theoremheaderproof}{##1.}
404]}%
405 \def\@opargbegintheorem##1##2##3{%
406 \LWR@intheorem% lwarp
407 \item[
408 \InlineClass{theoremheaderproof}{##1\ (##3).}
409]}}
410
411
412
413 \newcounter{proof}%
414 \if@thmmarks
415 \newcounter{currproofctr}%
416 \newcounter{endproofctr}%
417 \fi
418
419 \gdef\proofSymbol{\openbox}
420
421 \newcommand{\proofname}{Proof}
422
423 \newenvironment{proof}[1][\proofname]{
424 \th@proof
425 \def\theorem@headerfont{\itshape}%
426 \normalfont
427 \theoremsymbol{\HTMLunicode{220E}}% UTF-8 end-of-proof
428 \@thm{proof}{proof}{#1}
429 }%
430 {\@endtheorem}
431
432 }{}% amsthm option

```

## § 358.10 Ending a theorem

Patched for CSS:

```

433 \let\LWR@origendtheorem\@endtheorem
434 \renewcommand{\@endtheorem}{%
435 \ifbool{LWR@theoremmarks}{%
436 \ifsetendmark%
437 \InlineClass{theoremendmark}{\csname\InTheoType Symbol\endcsname}%
438 \setendmarkfalse%
439 \fi%
440 }{}%
441 \LWR@origendtheorem% also does \@endtrivlist

```

```

442 \ifbool{LWR@theoremmarks}{\global\setendmarktrue}{}%
443 \endBlockClass%
444 }

```

### § 358.11 **\NoEndMark**

```

445 \gdef\NoEndMark{\global\setendmarkfalse}

```

### § 358.12 **List-of**

Redefined to reuse the float mechanism to add list-of-theorem links:

`\thm@thmline {<1: printed type>} {<2: #>} {<3: optional>} {<4: page>}`

```

446 \renewcommand{\thm@thmline@noname}[4]{%
447 \hypertocfloat{1}{theorem}{thm}{#2 #3}{}%
448 }
449
450 \renewcommand{\thm@thmline@name}[4]{%
451 \hypertocfloat{1}{theorem}{thm}{#1 #2 #3}{}%
452 }

```

This was redefined by `ntheorem` when loaded, so it is now redefined for `lwarp`:

```

453 \def\thm@thmline{\thm@thmline@name}

```

Patch for CSS:

```

454 \def\listtheorems#1{
455 \LWR@html@elementclass{nav}{lohtm}%
456 \begingroup
457 \c@tocdepth=-2%
458 \def\thm@list{#1}\thm@processlist
459 \endgroup
460 \LWR@html@elementclassend{nav}{lohtm}%
461 }

```

### § 358.13 **Symbols**

Proof QED symbol:

```

462 \newcommand{\qed}{\quad\the\qedsymbol}
463
464 \AtBeginDocument{
465 \ifundefined{LWR@orig@openbox}{
466 \LetLtxMacro\LWR@orig@openbox\openbox
467 \LetLtxMacro\LWR@orig@blacksquare\blacksquare
468 \LetLtxMacro\LWR@orig@Box\Box
469
470 \def\openbox{\text{\HTMLUnicode{25A1}}}% UTF-8 white box
471 \def\blacksquare{\text{\HTMLUnicode{220E}}}% UTF-8 end-of-proof
472 \def\Box{\text{\HTMLUnicode{25A1}}}% UTF-8 white box
473
474 \appto\LWR@restoreorigformatting{%

```

```

475 \LetLtxMacro\openbox\LWR@orig@openbox%
476 \LetLtxMacro\blacksquare\LWR@orig@blacksquare%
477 \LetLtxMacro\Box\LWR@orig@Box%
478 }% appto
479 }{}% @ifundefined
480 }% AtBeginDocument

```

## § 358.14 Cross-referencing

`\thref {<label>}`

```

481 \newcommand*{\thref}[1]{\cref{#1}}%

```

## File 261 **lwarp-octave.sty**

## § 359 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 262 **lwarp-overpic.sty**

### § 360 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 84.2 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 263 **lwarp-pagegrid.sty**

§ 361     Package **pagegrid**

Pkg   pagegrid   pagegrid is ignored.

**for HTML output:**    1 \LWR@ProvidesPackageDrop{pagegrid}[2016/05/16]

                          2 \newcommand\*{\pagegridsetup}[1]{}

---

File 264 **lwarp-pagenote.sty**

§ 362     Package **pagenote**

Pkg   pagenote   pagenote works as-is, but the page option is disabled.

**for HTML output:**    1 \DeclareOption{page}{}

                          2 \LWR@ProvidesPackagePass{pagenote}[2009/09/03]

---

File 265 **lwarp-pagesel.sty**

§ 363     Package **pagesel**

Pkg   pagesel   pagesel is ignored.

**for HTML output:**    1 \LWR@ProvidesPackageDrop{pagesel}[2016/05/16]

---

File 266 **lwarp-paralist.sty**

§ 364     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 267 **lwarp-parnotes.sty**

### § 365 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}][\the parnotemark%
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 }

```

---

File 268 **lwarp-parskip.sty**

§ 366 Package **parskip**

Pkg parskip parskip is ignored.

for HTML output: Discard all options for lwarp-parskip.

```
1 \LWR@ProvidesPackageDrop{parskip}[2001/04/09]
```

---

File 269 **lwarp-pbox.sty**

§ 367 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{\setminwidth}[3][\columnwidth]{%
8 \settowidth{#2}{#3}%
9 }
10
11 \newcommand{\widthofpbox}[1]{%
12 \widthof{#1}%
13 }

```

---

File 270 **lwarp-pdfcomment.sty**

§ 368 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]{%

```

---

File 271 **lwarp-pdfcrypt.sty**

§ 369 Package **pdfcrypt**

Pkg pdfcrypt pdfcrypt is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{pdfcrypt}[2016/05/16]

```

2 \newcommand*{\pdfcryptsetup}[1]{%

```

---

File 272 **lwarp-pdflscape.sty**

§ 370 Package **pdfscape**

Pkg pdfscape pdfscape is ignored.

**for HTML output:** Discard all options for lwarp-pdflandscape:

```
1 \LWR@ProvidesPackageDrop{pdflandscape}[2016/05/14]
```

---

File 273 **lwarp-pdfmarginpar.sty**

§ 371 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 274 **lwarp-pdfpages.sty**

§ 372 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.<pagenubmer>}{some text}
\hyperlink{<linkname>.<pagenubmer>}{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 a reasonable paper size.

```

65 \xpretocmd{\includepdf}{%
66 \begingroup%
67 \setlength{\paperwidth}{8in}%
68 \setlength{\paperheight}{10.5in}%
69 }{}{}
70
71 \xapptocmd{\includepdf}{%
72 \endgroup%
73 }{}{}

```

`\includepdfmerge`      Patched to set a reasonable paper size.

```

74 \xpretocmd{\includepdfmerge}{%
75 \begingroup%
76 \setlength{\paperwidth}{8in}%
77 \setlength{\paperheight}{10.5in}%
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 275      **lwarp-pdfprivacy.sty**

§ 373      Package **pdfprivacy**

Pkg   pdfprivacy   pdfprivacy is ignored.

for HTML output:      1 \LWR@ProvidesPackageDrop{pdfprivacy}[2017/12/03]

---

File 276 **lwarp-pdfrender.sty**

§ 374      Package **pdfrender**

Pkg pdfrender pdfrender is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{pdfrender}[2016/05/17]

2 \newcommand*{\pdfrender}[1]{}
3 \newcommand{\textpdfrender}[2]{#2}

```

---

File 277 **lwarp-pdfsync.sty**

§ 375      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 278 **lwarp-pdftricks.sty**

§ 376      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 279 **lwarp-pdfx.sty**

§ 377 Package **pdfx**

Pkg pdfx pdfx is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{pdfx}[2017/05/18]

---

File 280 **lwarp-perpage.sty**

§ 378 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 % \global\expandafter\let\csname cl@abs#1\endcsname\@empty
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 281 **lwarp-pfnote.sty**

§ 379

Package

**pfnote**

Pkg

pfnote

pfnote is ignored.



**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.

for HTML output: 1 \LWR@ProvidesPackageDrop{pfnote}[1999/07/14]

---

File 282 **lwarp-phfqit.sty**

§ 380 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 283 **lwarp-pifont.sty**

§ 381 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 284 **lwarp-placeins.sty**

§ 382 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 285 **lwarp-plarydshln.sty**

§ 383 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 286 **lwarp-plext.sty**

§ 384 Package **plext**

Pkg plext plext is preloaded by jtarticle 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{\rensujj}{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\pccaption\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 287 **lwarp-plextarydshln.sty**

§ 385      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 288 **lwarp-plextcolortbl.sty**

§ 386      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 289 **lwarp-prelim2e.sty**

§ 387     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 290 **lwarp-prettyref.sty**

§ 388     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 291 **lwarp-preview.sty**

§ 389     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 292 **lwarp-psfrag.sty**

§ 390      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-~\packagediagramname)]%
4 }
5
6 \AfterEndEnvironment{psfrags}{\end{lateximage}}
```

---

File 293 **lwarp-psfragx.sty**

§ 391      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-~\packagediagramname)]%
4 \mbox{\pfx@overpix{#1}{#2}\endpfx@overpix}%
5 \end{lateximage}%
6 }
7
8 \def\@@@overpix[#1]<#2>[#3]#4{%
9 \begin{lateximage}[(-psfragx-~\packagediagramname)]%
10 \pfx@overpix{#1,ovpfgd={#2},ovpbgd={#3}}{#4}%
11 }
12
```

---

```

13 \def\endoverpix{%
14 \endpfx@overpix%
15 \end{lateximage}%
16 }

```

---

File 294 **lwarp-pst-eps.sty**

§ 392     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 295 **lwarp-pstool.sty**

§ 393     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-~\packagediagramname)]%
4 \includegraphics{#2.pdf}%
5 \end{lateximage}%
6 }
7 \LetLtxMacro\pstool@neverprocess\pstool@alwaysprocess

```

---

```

8 \LetLtxMacro\pstool@maybeprocess\pstool@alwaysprocess
9
10 \renewcommand\pstool@psfragfig[4]{%
11 \begin{lateximage}[(-pstool-~\packagediagramname)]%
12 \includegraphics{#2.pdf}%
13 \end{lateximage}%
14 }
```


---

File 296 **lwarp-pstricks.sty**

§ 394     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}{\begin{lateximage}[(pspicture)]}
3 \AfterEndEnvironment{pspicture}{\end{lateximage}}
```

---

File 297 **lwarp-pxatbegshi.sty**

§ 395     Package **pxatbegshi**

Pkg   pxatbegshi   pxatbegshi is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{pxatbegshi}[2017/11/04]

2 \LWR@origRequirePackage{lwarp-atbegshi}
```

---

File 298 **lwarp-pxeveryshi.sty**

§ 396     Package **pxeveryshi**

Pkg   pxeveryshi   pxeveryshi is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{pxeveryshi}[2012/05/19]

2 \LWR@origRequirePackage{lwarp-everyshi}
```

---

File 299 **lwarp-pxftnright.sty**

§ 397 Package **pxftnright**

Pkg pxftnright pxftnright is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{pxftnright}[2017/02/28]

2 \LWR@origRequirePackage{lwarp-ftnright}

---

File 300 **lwarp-pxjahyper.sty**

§ 398 Package **pxjahyper**

Pkg pxjahyper pxjahyper is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{pxjahyper}[2018/07/15]

---

File 301 **lwarp-quotchap.sty**

§ 399 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 302 **lwarp-quoting.sty**

\$ 400    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{imakeidx}{endquoting}}

```

---

File 303 **lwarp-ragged2e.sty**

§ 401     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 304 **lwarp-realscripts.sty**

§ 402     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@ProvidesPackageDrop{realscripts}[2016/02/13]

```

2 \let\realsuperscript\textsuperscript
3 \let\realssubscript\textsubscript
4
5 \let\fakesuperscript\textsuperscript
6 \let\fakeassubscript\textsubscript
7
8 \newlength{\subsupersep}
9
10 \newcommand*{\LWR@realscriptsalign}{}
11
12 \newcommand*{\LWR@setrealscriptsalign}[1]{%
13 \renewcommand*{\LWR@realscriptsalign}{}%
14 \ifthenelse{\equal{#1}{c}}{%
15 \renewcommand{\LWR@realscriptsalign}{%
16 \LWR@print@mbox{text-align:center} ; %
17 }%
18 }{}%
19 \ifthenelse{\equal{#1}{r}}{%
20 \renewcommand{\LWR@realscriptsalign}{%
21 \LWR@print@mbox{text-align:right} ; %
22 }%
23 }{}%
24 }
25
26 \DeclareDocumentCommand \textsubsuperscript {s O{l} mm} {%
27 \LWR@setrealscriptsalign{#2}%
28 \InlineClass[\LWR@realscriptsalign]{supsubscript}{%
29 #4\textsubscript{#3}%
30 }%
31 }
32
33 \DeclareDocumentCommand \textsupersubscript {s O{l} mm} {%
34 \LWR@setrealscriptsalign{#2}%
35 \InlineClass[\LWR@realscriptsalign]{supsubscript}{%
36 \textsubscript{#4}#3%
37 }%
38 }

```

---

File 305 **lwarp-refcheck.sty**

§ 403     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 306 **lwarp-register.sty**

§ 404 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 {\begin{center}\begin{lateximage}[(-register~\packagediagramname)]}
5 {}
6 {\LWR@patcherror{register}{register}}
7
8 \xpatchcmd{\endregister}
9 {\leftskip}
10 {%
11 \end{lateximage}\end{center}%
12 \leftskip%
13 }%
14 {}
15 {\LWR@patcherror{register}{endregister}}
16
17 \expandafter\xapptocmd\csname register*\endcsname
18 {\begin{center}\begin{lateximage}[(-register~\packagediagramname)]}
19 {}
20 {\LWR@patcherror{register}{register*}}
21
22 \expandafter\xpatchcmd\csname endregister*\endcsname
23 {\leftskip}
24 {%
25 \end{lateximage}\end{center}%
26 \leftskip%
27 }%
28 {}
29 {\LWR@patcherror{register}{endregister*}}
30
31 \setlength{\regWidth}{5in}
```

---

File 307 **lwarp-relszize.sty**

§ 405 Package **relsize**


*(Emulates or patches code by DONALD ARSENEAU, BERNIE COSELL, MATT SWIFT.)*

Pkg relsize relsize is patched for use by lwarp.

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 \let\LTxMacro\LWR@origlarger\larger
4 \let\LTxMacro\LWR@origsmaller\smaller
5 \let\LWR@relscale\relscale
6 \let\LTxMacro\LWR@origtextlarger\textlarger
7 \let\LTxMacro\LWR@origtextsmaller\textsmaller
8 \let\LWR@textscale\textscale
9
10 \appto\LWR@restoreorigformatting{%
11 \let\relsize\LWR@origrelsize%
12 \let\LTxMacro\larger\LWR@origlarger%
13 \let\LTxMacro\smaller\LWR@origsmaller%
14 \let\relscale\LWR@relscale%
15 \let\LTxMacro\textlarger\LWR@origtextlarger%
16 \let\LTxMacro\textsmaller\LWR@origtextsmaller%
17 \let\textscale\LWR@textscale%
18 }
19
20 \newcounter{LWR@relsizetemp}
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@relsizetemp}{100+(#1*20)}%
29 \InlineClass[font-size:\arabic{LWR@relsizetemp}\%]{\textlarger}{#2}%
30 }
31
32 \renewcommand*{\textsmaller}[2][1]{%
33 \setcounter{LWR@relsizetemp}{100-(#1*20)}%
34 \InlineClass[font-size:\arabic{LWR@relsizetemp}\%]{\textsmaller}{#2}%
35 }
36
37 \renewcommand*{\textscale}[2]{%
38 \setcounter{LWR@relsizetemp}{100*\real{#1}}%
39 \InlineClass[font-size:\arabic{LWR@relsizetemp}\%]{\textscale}{#2}%
40 }
```

File 308 **lwarp-repeatindex.sty**

§ 406 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 309 **lwarp-resizegather.sty**

§ 407     Package **resizegather**

Pkg    resizegather    resizegather is ignored.

**for HTML output:**    1 \LWR@ProvidesPackageDrop{resizegather}[2016/05/16]  
                           2 \newcommand\*{\resizegathersetup}[1]{}  
                           3 }

---

File 310 **lwarp-rmpage.sty**

§ 408     Package **rmpage**

Pkg    rmpage    rmpage is ignored.

**for HTML output:**    1 \LWR@ProvidesPackageDrop{rmpage}[1997/09/29]  
                           2 }

---

File 311 **lwarp-romanbar.sty**

§ 409     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 312 **lwarp-romanbarpagenumber.sty**

§ 410     Package **romanbarpagenumber**

Pkg    romanbarpagenumber    romanbarpagenumber is ignored.

**for HTML output:**    1 \LWR@ProvidesPackageDrop{romanbarpagenumber}[2015/02/06]  
                           2 }

---

File 313 **lwarp-rotating.sty**

§ 411 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 314 **lwarp-rotfloat.sty**

§ 412 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}
```

`\newfloat` {<1: type>} {<2: placement>} {<3: ext>} [<4: within>]

Emulates the `\newfloat` command from the `float` package. Sideways floats are `\let` to the same as regular floats.

“placement” is ignored.

```

4 \RenewDocumentCommand{\newfloat}{m m m o}{%
5 \IfValueTF{#4}%
6 {%
```

```

7 \DeclareFloatingEnvironment[fileext=#3,within=#4]{#1}%
8 }%
9 {%
10 \DeclareFloatingEnvironment[fileext=#3]{#1}%
11 }%
12 \csletcs{sideways#1}{#1}%
13 \csletcs{endsideways#1}{end#1}%

```

Remember the float style:

```

14 \csedef{LWR@floatstyle@#1}{\LWR@floatstyle}%
15 \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:

```

16 \cslet{listof#1s}\relax%
17 \cslet{listof#1es}\relax%
18 \cslet{listofsideways#1s}\relax%
19 \cslet{listofsideways#1es}\relax%
20 }

```

---

#### File 315 **lwarp-rviewport.sty**

### § 413 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 316 **lwarp-savetrees.sty**

### § 414 Package **savetrees**

**Pkg** `savetrees` **savetrees** is ignored.

**for HTML output:** Discard all options for `lwarp-savetrees`:

```

1 \LWR@ProvidesPackageDrop{savetrees}[2016/04/13]

```

---

File 317 **lwarp-scalefnt.sty**

§ 415     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 318 **lwarp-schemata.sty**

§ 416     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 319 **lwarp-scrextend.sty**

§ 417     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}[2018/03/30]

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 \AtBeginDocument{
14 \let\LWR@koma@orig@maketitle\maketitle
15 \DeclareDocumentCommand{\maketitle}{o}{\LWR@koma@orig@maketitle}
16 }
17
18 \DeclareDocumentCommand{\extratitle}{m}{}
19 \DeclareDocumentCommand{\titlehead}{m}{}
20 \DeclareDocumentCommand{\subject}{m}{}
21 \DeclareDocumentCommand{\publishers}{m}{\published{#1}}
22 \DeclareDocumentCommand{\uppertitleback}{m}{}
23 \DeclareDocumentCommand{\lowertitleback}{m}{}
24 \DeclareDocumentCommand{\dedication}{m}{}
25
26 \DeclareDocumentCommand{\ifthispageodd}{m m}{#1}
27
28 \DeclareDocumentCommand{\titlepagestyle}{}{}
29
30 \DeclareDocumentCommand{\cleardoublepageusingstyle}{m}{}
31 \DeclareDocumentCommand{\cleardoubleemptypage}{}{}
32 \DeclareDocumentCommand{\cleardoubleplainpage}{}{}
33 \DeclareDocumentCommand{\cleardoublestandardpage}{}{}
34 \DeclareDocumentCommand{\cleardoubleoddpager}{m}{}
35 \DeclareDocumentCommand{\cleardoubleoddpagerusingstyle}{m}{}
36 \DeclareDocumentCommand{\cleardoubleoddpageremptypage}{}{}
37 \DeclareDocumentCommand{\cleardoubleoddpagerplainpage}{}{}
38 \DeclareDocumentCommand{\cleardoubleoddpagerstandardpage}{}{}
39 \DeclareDocumentCommand{\cleardoubleevenpage}{m}{}
40 \DeclareDocumentCommand{\cleardoubleevenpageusingstyle}{m}{}
41 \DeclareDocumentCommand{\cleardoubleevenpageremptypage}{}{}
42 \DeclareDocumentCommand{\cleardoubleevenpagerplainpage}{}{}
43 \DeclareDocumentCommand{\cleardoubleevenpagerstandardpage}{}{}
44
45 \DeclareDocumentCommand{\multiplefootnoteseparator}{}{}
46 \begin{group}\let\thefootnotemark\multfootsep\@makefnmark\endgroup
47 }
48
49 \DeclareDocumentCommand{\multfootsep}{}{,}
50

```

```

51 \DeclareDocumentCommand{\footref}{m}{%
52 \begingroup
53 \unrestored@protected@xdef\@thefnmark{\ref{#1}}%
54 \endgroup
55 \@footnotemark
56 }
57
58 \DeclareDocumentCommand{\deffootnote}{o m m m}{ }
59 \DeclareDocumentCommand{\deffootnotemark}{m}{ }
60 \DeclareDocumentCommand{\setfootnoterule}{o m}{ }
61 \DeclareDocumentCommand{\raggedfootnote}{ }{ }

62 \DeclareDocumentCommand{\dictum}{o m}{
63 \begin{LWR@BlockClassWP}{\LWR@print@mbox{text-align:right}}{ }\dictum}
64 #2
65 \IfValueT{#1}
66 {
67 \LWR@stoppars%
68 \ifbool{FormatWP}
69 { \begin{BlockClass}[\LWR@print@mbox{border-top:} 1px solid gray]{dictumauthor}}
70 { \begin{BlockClass}{dictumauthor}}
71 \dictumauthorformat{#1}
72 \end{BlockClass}
73 }
74 \end{LWR@BlockClassWP}
75 }
76
77 \DeclareDocumentCommand{\dictumwidth}{ }{ }
78 \DeclareDocumentCommand{\dictumauthorformat}{m}{(#1)}
79 \DeclareDocumentCommand{\dictumrule}{ }{ }
80 \DeclareDocumentCommand{\raggeddictum}{ }{ }
81 \DeclareDocumentCommand{\raggeddictumtext}{ }{ }
82 \DeclareDocumentCommand{\raggeddictumauthor}{ }{ }
83
84 \DeclareDocumentEnvironment{labeling}{o m}
85 { %
86 \def\sc@septestext{#1}%
87 \list{ }{ }%
88 \let\makelabel\labelinglabel%
89 }
90 {
91 \endlist
92 }
93
94 \DeclareDocumentCommand{\labelinglabel}{m}{%
95 #1 \quad \sc@septestext%
96 }
97
98 \let\addmargin\relax
99 \let\endaddmargin\relax
100 \cslet{addmargin*}{\relax}
101 \cslet{endaddmargin*}{\relax}

102 \NewDocumentEnvironment{addmargin}{s O{ } m}

```

```

103 {
104 \LWR@stoppars%
105 \setlength{\LWR@templengthtwo}{#3}
106 \ifblank{#2}
107 {
108 \begin{BlockClass}[
109 \LWR@print@mbox{margin-left:\LWR@printlength{\LWR@templengthtwo}} ;
110 \LWR@print@mbox{margin-right:\LWR@printlength{\LWR@templengthtwo}}
111]{addmargin}
112 }
113 {
114 \setlength{\LWR@templengthone}{#2}
115 \begin{BlockClass}[
116 \LWR@print@mbox{margin-left:\LWR@printlength{\LWR@templengthone}} ;
117 \LWR@print@mbox{margin-right:\LWR@printlength{\LWR@templengthtwo}}
118]{addmargin}
119 }
120 }
121 {\end{BlockClass}\LWR@startpars}

```

Ref to create a starred environment:

<https://tex.stackexchange.com/questions/45401/use-the-s-star-argument-with-newdocumentenvironment>

```

122
123 \ExplSyntaxOn
124 \cs_new:cpn {addmargin*} {\addmargin*}
125 \cs_new_eq:cN {endaddmargin*} \endaddmargin
126 \ExplSyntaxOff
127
128 \DeclareDocumentCommand{\marginline}{m}{\marginpar{#1}}

```

---

## File 320 **lwarp-scrhack.sty**

### § 418 Package **scrhack**

Pkg scrhack scrhack is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{scrhack}[2018/03/30]

---

## File 321 **lwarp-scrlayer.sty**

### § 419 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*\layer valign{}{}
10 \newcommand*\layerxoffset{}{}
11 \newcommand*\laveryoffset{}{}
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 322 **lwarp-sclayer-notecolumn.sty**

§ 420      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 323 **lwarp-sclayer-scrpage.sty**

§ 421      Package **sclayer-scrpage**

*(Emulates or patches code by MARKUS KOHM.)*

Pkg   sclayer-scrpage   sclayer-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 o m m m m m m}{}
35 \NewDocumentCommand{\providetruplepagestyle}{m o o m m m m m m}{}
36 \newcommand*{\defpagestyle}[3]{}
37 \newcommand*{\newpagestyle}[3]{}
38 \newcommand*{\providepagestyle}[3]{}
39 \newcommand*{\renewpagestyle}[3]{}

```

File 324 **lwarp-scrpage2.sty**

\$ 422 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 \LWR@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 325 **lwarp-section.sty**

§ 423 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{size{\huge}}\else
4 \def\chsize{\huge}\def\hdsi{size{\Huge}}
5 \fi
6 \let\ttsize\LARGE
7 \let\ausize\large
8 \let\dasize\large
9 \let\seclsize\Large
10 \let\subsize\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\nmidot{}
24 \ifx\secindent\undefined
25 \newdimen\secindent
26 \newskip\secpreskp
27 \newskip\secpstskp
28 \newdimen\subindent
29 \newskip\subpreskp
30 \newskip\subpstskp
31 \newskip\parpstskp
32 \newcount\c@hddepth
33 \fi

```

---

File 326 **lwarp-sectionbreak.sty**

§ 424 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 327 **lwarp-sectsty.sty**

§ 425      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 328 **lwarp-semantic-markup.sty**

§ 426      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 329 **lwarp-setspace.sty**

§ 427      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 330 **lwarp-shadow.sty**

§ 428      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\shboxrule
4 \newdimen\shdim
5
6 \newcommand{\shabox}[1]{%
7 \InlineClass{shabox}{#1}%
8 }

```

---

File 331 **lwarp-shapepar.sty**

§ 429     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 332 **lwarp-showidx.sty**

§ 430     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 333 **lwarp-showkeys.sty**

§ 431     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 334 **lwarp-showtags.sty**

§ 432      Package **showtags**

Pkg    showtags    **showtags** is ignored.

**for HTML output:**    1 \LWR@ProvidesPackageDrop{showtags}% no version is given  
                          2 \newcommand{\thecitetag}[1]{}

---

File 335 **lwarp-sidecap.sty**

§ 433      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 336 **lwarp-sidenotes.sty**

§ 434 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 \captionsetup{type=#2}%
28 }
29 {%
30 \endLWR@BlockClassWP%
31 }
32
33 \RenewDocumentEnvironment{marginfigure}{o}
```

```

34 {\begin{KFLT sidenotes@marginfloat}{figure}}
35 {\end{KFLT sidenotes@marginfloat}}
36
37 \RenewDocumentEnvironment{margintable}{o}
38 {\begin{KFLT sidenotes@marginfloat}{table}}
39 {\end{KFLT sidenotes@marginfloat}}

```

The following were changed by sidenotes, and now are reset back to their lwarp-supported originals:

Restoring the definition from the L<sup>A</sup>T<sub>E</sub>X 2<sub>ε</sub> article.cls source:

```

40 \renewenvironment{figure*}
41 {\@dblfloat{figure}}
42 {\end@dblfloat}
43
44 \renewenvironment{table*}
45 {\@dblfloat{table}}
46 {\end@dblfloat}

```

---

File 337 **lwarp-SIunits.sty**

§ 435     Package **Slunits**

(Emulates or patches code by MARCEL HELDOORN.)

Pkg   SIunits   **Slunits** is patched for use by lwarp.

It is recommended to use `\unit` where possible, which combines the entire expression into a single lateximage, and adds the alt tag containing the L<sup>A</sup>T<sub>E</sub>X 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 to “(<\mathimagenam>”, which defaults to “(math image)”.

for HTML output:     1 \LWR@ProvidesPackagePass{SIunits}[2007/12/02]

Patched for copy/paste with the HTML alt tag:

```

2 \DeclareRobustCommand{\unit}[2]{%
3 \@inunitcommandtrue% original
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 \LWR@origensuredmath{% lwarp modification
12 \SI@fstyle{#1\@qsk\period@active{#2}}% original
13 }%
14 }% contents
15 \@inunitcommandfalse% original

```


---

16 }


---

File 338 **lwarp-siunitx.sty**§ 436 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.

**NOTE:** As of this writing, the siunitx extension for MATHJAX is not currently hosted at any public CDN, thus siunitx is not usable with MATHJAX unless a local copy of this extension is created first. See \MathJaxFilename to select a custom MathJax script.

 **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 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 {
80 __siunitx_unit_output_pre_print:

```

For parse-numbers=false:

```

81 % __siunitx_print:nn { number } { \ensuremath {#1} }
82 \LWR@subsingledollar{% lwarp
83 \textbackslash(\LWR@HTMLsanitize{#1} \textbackslash)% lwarp
84 }{siunitx}{%
85 __siunitx_print:nn { number } {%
86 \LWR@origensuredmath{#1}%
87 }%
88 }% lwarp

89 __siunitx_unit_output_print:
90 }
91 \group_end:% lwarp
92 }
93 %

```

For quotients, the fraction code is replaced by the symbol code:

```

94 \cs_undefine:N __siunitx_number_output_quotient_fraction:
95 \cs_new_protected:Npn __siunitx_number_output_quotient_fraction: {
96 \bool_set_true:N \l__siunitx_number_compound_bool
97 __siunitx_number_output_quotient_aux_i:
98 \tl_set_eq:NN \l__siunitx_number_out_tl
99 \l__siunitx_number_numerator_tl
100 \tl_put_right:NV \l__siunitx_number_out_tl \l__siunitx_output_quotient_tl
101 \tl_put_right:NV \l__siunitx_number_out_tl
102 \l__siunitx_number_denominator_tl
103 __siunitx_number_output_single_aux:
104 }

```

For units, the fraction code is replaced by the symbol code:

```

105 \cs_undefine:N __siunitx_unit_format_fraction_fraction:
106 \cs_new_protected:Npn __siunitx_unit_format_fraction_fraction: {
107 __siunitx_unit_format_fraction_symbol_aux:
108 \int_compare:nNt { \l__siunitx_unit_denominator_int } > { 1 }
109 {
110 \bool_if:NT \l__siunitx_unit_denominator_bracket_bool
111 {
112 \tl_put_left:NV \l__siunitx_unit_denominator_tl \l__siunitx_bracket_open_tl
113 \tl_put_right:NV \l__siunitx_unit_denominator_tl \l__siunitx_bracket_close_tl
114 }
115 }
116 \tl_set_eq:NN \l__siunitx_unit_tl \l__siunitx_unit_numerator_tl
117 \tl_put_right:NV \l__siunitx_unit_tl \l__siunitx_per_symbol_tl
118 \tl_put_right:NV \l__siunitx_unit_tl \l__siunitx_unit_denominator_tl
119 }

```

```

120 \cs_undefine:N __siunitx_angle_print_astronomy_aux:
121 \cs_new_protected:Npn __siunitx_angle_print_astronomy_aux: {
122 \prop_get:NnNT \l__siunitx_number_out_prop { mantissa-integer }
123 \l__siunitx_tmpa_tl
124 { __siunitx_print:nV { number } \l__siunitx_tmpa_tl }
125 \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}% lwarp
126 {% lateximage
127 \hbox_set:Nn \l__siunitx_angle_marker_box
128 {
129 __siunitx_print:nn { number } { { \l__siunitx_output_decimal_tl } }
130 }
131 \hbox_set:Nn \l__siunitx_angle_unit_box
132 {
133 __siunitx_print:nV { unit } \l__siunitx_unit_tl
134 \skip_horizontal:n { -\scriptspace }
135 }
136 __siunitx_angle_print_astronomy_aux:n { marker }
137 __siunitx_angle_print_astronomy_aux:n { unit }
138 \hbox_set:Nn \l__siunitx_angle_marker_box
139 {
140 \box_use:N \l__siunitx_angle_marker_box
141 \box_use:N \l__siunitx_angle_unit_box
142 }
143 \dim_compare:nNnTF
144 { \l__siunitx_angle_marker_dim } > { \l__siunitx_angle_unit_dim }
145 { __siunitx_angle_print_astronomy_marker: }
146 { __siunitx_angle_print_astronomy_unit: }
147 }% lateximage
148 {% not a lateximage
149 __siunitx_print:nV { unit } \l__siunitx_unit_tl
150 __siunitx_print:nn { number } { { \l__siunitx_output_decimal_tl } }
151 }% not a lateximage
152 \prop_get:NnNT \l__siunitx_number_out_prop { mantissa-decimal }
153 \l__siunitx_tmpa_tl
154 { __siunitx_print:nV { number } \l__siunitx_tmpa_tl }
155 }

156 \RenewDocumentCommand \num { o m } {
157 \leavevmode
158 \group_begin:% lwarp
159 \LetLtxMacro\@ensuredmath\LWR@origensuredmath% lwarp
160 \LetLtxMacro\mbox\LWR@print@mbox% lwarp
161 \bool_set_false:N \l__siunitx_font_set_bool
162 \IfNoValueF {#1}
163 { \keys_set:nn { siunitx } {#1} }
164 __siunitx_number_output:n {#2}
165 \group_end:% lwarp
166 }

167

168 \RenewDocumentCommand \numrange { o m m } {
169 \leavevmode
170 \group_begin:% lwarp
171 \LetLtxMacro\@ensuredmath\LWR@origensuredmath% lwarp
172 \LetLtxMacro\mbox\LWR@print@mbox% lwarp
173 \bool_set_false:N \l__siunitx_font_set_bool

```

```

174 \IfNoValueF {#1}
175 { \keys_set:nn { siunitx } {#1} }
176 __siunitx_range_numbers:nn {#2} {#3}
177 \group_end:% lwarp
178 }
179
180 \RenewDocumentCommand \ang { o > { \SplitArgument { 2 } { ; } } m } {
181 \group_begin:% lwarp
182 \LetLtxMacro\ensuredmath\LWR@origensuredmath% lwarp
183 \LetLtxMacro\mbox\LWR@print@mbox% lwarp
184 \IfNoValueF {#1}
185 { \keys_set:nn { siunitx } {#1} }
186 __siunitx_angle_output:nnn #2
187 \group_end:% lwarp
188 }
189
190 \RenewDocumentCommand \si { o m } {
191 \leavevmode
192 \group_begin:% lwarp
193 \LetLtxMacro\ensuredmath\LWR@origensuredmath% lwarp
194 \LetLtxMacro\mbox\LWR@print@mbox% lwarp
195 \bool_set_false:N \l__siunitx_font_set_bool
196 \IfNoValueTF {#1}
197 { __siunitx_unit_output:nn {#2} { } }
198 {
199 \keys_set:nn { siunitx } {#1}
200 __siunitx_unit_output:nn {#2} {#1}
201 }
202 \group_end:% lwarp
203 }
204
205
206 \RenewDocumentCommand{\SIRange}{o m m m}
207 {%
208 \leavevmode
209 \group_begin:% lwarp
210 \LetLtxMacro\ensuredmath\LWR@origensuredmath% lwarp
211 \LetLtxMacro\mbox\LWR@print@mbox% lwarp
212 \bool_set_false:N \l__siunitx_font_set_bool
213 \IfNoValueTF {#1}
214 { __siunitx_range_unit:nnnn {#4} { } {#2} {#3} }
215 {
216 \keys_set:nn { siunitx } {#1}
217 __siunitx_range_unit:nnnn {#4} {#1} {#2} {#3}
218 }
219 \group_end:% lwarp
220 }
221
222 \ExplSyntaxOff

```

---

File 339 **lwarp-slantsc.sty**

§ 437      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@noscsshape}{}
3 \LWR@formatted{noscsshape}
4
5 \newcommand*{\LWR@null@noscsshape}{}
6
7 \appto{\LWR@nullfonts}{%
8 \LetLtxMacro\noscsshape\LWR@null@noscsshape%
9 }
```

---

File 340 **lwarp-soul.sty**

§ 438      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]{ }
```

Set colors:

```
55 \newcommand*{\setulcolor}[1]{\renewcommand{\LWR@soululcolor}{#1}}
56 \newcommand*{\setstcolor}[1]{\renewcommand{\LWR@soulstcolor}{#1}}
57 \newcommand*{\sethlcolor}[1]{\renewcommand{\LWR@soulhlcolor}{#1}}
```

Long versions of the user-level macros:

```
58 \let\textso\so
59 \let\textul\ul
60 \let\texthl\hl
61 \let\textcaps\caps
```

---

File 341 **lwarp-soulpos.sty**

§ 439      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 342 **lwarp-soulutf8.sty**

§ 440      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 343 **lwarp-splitidx.sty**

## § 441 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 534.17 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][\%
10 \ifx\relax#1\relax
11 \if@splitidx
12 \@wrsindex[idx]{#2}%
13 \else
14 \def\@tempa{#2}%
15 \if@verbindex\@onelevel@sanitize\@tempa\fi
16 \@wrindex{\@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 \LWR@new@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 344 **lwarp-srcltx.sty**

§ 442 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 345 **lwarp-srctex.sty**

§ 443     Package **srctex**

Pkg    srctex    srctex is ignored.

**for HTML output:**    1 \LWR@ProvidesPackageDrop{srctex}[2006/11/12]  
                          2 \LWR@origRequirePackage{lwarp-srcltx}

---

File 346 **lwarp-stabular.sty**

§ 444     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 347 **lwarp-stackengine.sty**

§ 445     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}}%
6 {\begin{lateximage}[]{}[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}}%
19 {\begin{lateximage}[]{}[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}{\begin{lateximage}[]{}[vertical-align:middle]}
34 {}
35 {\LWR@patcherror{stackengine}{stackanchor pre}}
36
37 \xapptocmd{\stackanchor}{\end{lateximage}}
38 {}
39 {\LWR@patcherror{stackengine}{stackanchor app}}

```

`\Centerstack` is simply placed inside a `lateximage` with a vertical alignment:

```
40 \xpretocmd{\Centerstack}{\begin{lateximage}[]{}[vertical-align:middle]}
41 {}
42 {\LWR@patcherror{stackengine}{Centerstack pre}}
43
44 \xapptocmd{\Centerstack}{\end{lateximage}}
45 {}
46 {\LWR@patcherror{stackengine}{Centerstack app}}
```

`\savestack` reverts to print mode while saving the box, then places it inside a `lateximage` when used:

```
47 \renewcommand*\savestack[2]{%
48 \xdef\sv@name{\stack@macro@name{#1}}%
49 \@ifundefined{\sv@name content}{%
50 \expandafter\newsavebox\expandafter{\csname\sv@name content\endcsname}%
51 }{%
52 \begingroup% lwarp
53 \LWR@restoreorigformatting% lwarp
54 \RenewDocumentEnvironment{lateximage}{s o o o}{}{}% lwarp: inside group
55 \expandafter\LWR@gsavebox\csname\sv@name content\endcsname{#2}%
56 \expandafter\gdef\expandafter#1\expandafter{%
57 \expandafter\begin\expandafter{lateximage\expandafter}% lwarp
58 \expandafter\usebox\expandafter%
59 {\csname\sv@name content\endcsname}%
60 \expandafter\end\expandafter{lateximage\expandafter}% lwarp
61 }%
62 \endgroup% lwarp
63 }
```

---

File 348 **lwarp-stfloats.sty**

§ 446     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 349 **lwarp-struktex.sty**

§ 447      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}{\begin{lateximage}[(struktogramm)]}
3 \AfterEndEnvironment{struktogramm}{\end{lateximage}}
4
5 \newenvironment{LWR@HTML@centernss}{\begin{center}}{\end{center}}
6 \LWR@formattedenv{centernss}
7
8 \newcommand{\LWR@HTML@CenterNssFile}[1]{%
9 \begin{center}
10 \input{#1.nss}
11 \end{center}
12 }
13 \LWR@formatted{CenterNssFile}
14
15 \newcommand{\LWR@HTML@centernssfile}{\LWR@HTML@CenterNssFile}
16 \LWR@formatted{centernssfile}

```

---

File 350 **lwarp-subcaption.sty**

§ 448      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 \ifdef{\subcaption@minipage}{
3 \xpatchcmd{\subcaption@minipage}
4 {\minipage}
5 {\minipagefullwidth\minipage}
6 {}
7 {\LWR@patcherror{subcaption}{subcaption@minipage}}
8 }{}

```

Likewise for a `\subcaptionbox`:

```

9 \ifdef{\subcaptionbox}{
10 \xpretocmd{\subcaptionbox}
11 {\minipagefullwidth}
12 {}
13 {\LWR@patcherror{subcaption}{subcaptionbox}}
14 }{}

```


---

File 351 **lwarp-subfig.sty**

§ 449     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@\@capytype}\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\@capttype name}}%
133 {\@nameuse{thesub\@capttype}}%
134 {\LWR@isolate{#3}}%

135 \endLWR@figcaption% lwarp
136 \LWR@traceinfo{sfsubcap B2}% lwarp
137 % }%
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 % \hbext@{\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`     $\{\langle label \rangle\}$

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`     $\{\langle label \rangle\}$

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.

`\@newsubfloat`     $[\langle keys/values \rangle] \{\langle float name \rangle\}$

```

186 \LetLtxMacro\LWR@orig@newsubfloat\@newsubfloat
187
188 \def\@newsubfloat[#1]#2{%
189 \LWR@orig@newsubfloat[#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`     $\{\langle text \rangle\} \{\langle pagenum \rangle\}$

```

192 \renewcommand{\l@subfigure}[2]{\hypertocfloat{2}{subfigure}{lof}{#1}{#2}}

```

`\l@subtable`     $\{\langle text \rangle\} \{\langle pagenum \rangle\}$

```

193 \renewcommand{\l@subtable}[2]{\hypertocfloat{2}{subtable}{lot}{#1}{#2}}

```

File 352    **lwarp-subfigure.sty**

§ 450    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 353 **lwarp-supertabular.sty**

§ 451      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** 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{\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 354 **lwarp-syntonly.sty**

§ 452 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
```

---

File 355 **lwarp-tabfigures.sty**

§ 453 Package **tabfigures**

Pkg tabfigures tabfigures is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{tabfigures}[2012/01/24]

---

File 356 **lwarp-tablefootnote.sty**

§ 454 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 357 **lwarp-tables.sty**

§ 455 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 358 **lwarp-tabularx.sty**

§ 456     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 359 **lwarp-tabulary.sty**

§ 457     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 360 **lwarp-tascmac.sty**

§ 458 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 361 **lwarp-textarea.sty**

\$ 459     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@restoretextarea\@empty

```

File 362 **lwarp-textcomp.sty**


§ 460 Package **textcomp**

(Emulates or patches code by FRANK MITTELBACH, ROBIN FAIRBAIRNS, WERNER LEMBERG.)

Pkg textcomp textcomp is patched for use by lwarp.

### § 460.1 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.

### § 460.2 Package loading

**for HTML output:** 1 \LWR@ProvidesPackagePass{textcomp}[2017/04/05]

### § 460.3 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.

#### § 460.3.1 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@textrquill{\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

### § 460.3.2 **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}{}
28 \newcommand*\LWR@HTML@textmu}{μ}
29 \newcommand*\LWR@HTML@textlquill}{}
30 \newcommand*\LWR@HTML@textrquill}{}
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}

```

## § 460.4 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 \LWR@formatted{textcircled}

```

Nullify `textcomp` macros when generating filenames:

```

98 \FilenameNullify{%
99 \renewcommand*\textdegree{}%
100 \renewcommand*\textcelsius{}%
101 \renewcommand*\textohm{}%
102 \renewcommand*\textmu{}%
103 \renewcommand*\textlquill{}%
104 \renewcommand*\textrquill{}%
105 \renewcommand*\textcircledP{}%
106 \renewcommand*\texttwelvewardash{}%
107 \renewcommand*\textthreequartersemdash{}%
108 \renewcommand*\textmho{}%
109 \renewcommand*\textnaira{}%
110 \renewcommand*\textpeso{}%

```

```

111 \renewcommand*\textrecipe{}{}%
112 \renewcommand*\textinterrobang{}{}%
113 \renewcommand*\textinterrobangdown{}{}%
114 \renewcommand*\textperthousand{}{}%
115 \renewcommand*\textpertenthousand{}{}%
116 \renewcommand*\textbaht{}{}%
117 \renewcommand*\textdiscount{}{}%
118 \renewcommand*\textservicemark{}{}%
119 \renewcommand*\textcircled[1]{#1}%
120 \renewcommand*\capitalcedilla[1]{#1}%
121 \renewcommand*\capitalogonek[1]{#1}%
122 \renewcommand*\capitalgrave[1]{#1}%
123 \renewcommand*\capitalacute[1]{#1}%
124 \renewcommand*\capitalcircumflex[1]{#1}%
125 \renewcommand*\capitaltilde[1]{#1}%
126 \renewcommand*\capitaldieresis[1]{#1}%
127 \renewcommand*\capitalhungarumlaut[1]{#1}%
128 \renewcommand*\capitalring[1]{#1}%
129 \renewcommand*\capitalcaron[1]{#1}%
130 \renewcommand*\capitalbreve[1]{#1}%
131 \renewcommand*\capitalmacron[1]{#1}%
132 \renewcommand*\capitaldotaccent[1]{#1}%
133 }% FilenameNullify
134
135 }% AtBeginDocument

```

---

### File 363 **lwarp-textfit.sty**

## § 461 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 \settoheight{\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 364 **lwarp-textpos.sty**

§ 462      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 365 **lwarp-theorem.sty**

§ 463      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 16: 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.

### § 463.1 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}

```

## § 463.2 **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 {\@ythm{#1}{#2}}%
149 {\@begintheorem{#2}{\csname the#1\endcsname}\ignorespaces}}
150
151 \gdef\@endtheorem{%
152 \endtrivlist
153 \endBlockClass
154 }

```

---

File 366 **lwarp-thinsp.sty**

§ 464     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 367 **lwarp-threadcol.sty**

§ 465     Package **threadcol**

Pkg    threadcol    threadcol is ignored.

**for HTML output:**    1 \LWR@ProvidesPackageDrop{threadcol}[2013/01/06]

---

```
2 \newcommand{\setthreadname}[1]{}
```

---

File 368 **lwarp-threeparttable.sty**

§ 466      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 369 **lwarp-threeparttablex.sty**

§ 467 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 . . .
\warpHTMLonly{ % 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 370 **lwarp-thumb.sty**

§ 468      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 371 **lwarp-thumbs.sty**

§ 469      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 372 **lwarp-tikz.sty**

§ 470      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](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}%
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@printsmall}
25 \def\pgfutil@font@normalsize{\LWR@printnormalsize}
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@orignormalfont}

```

---

## File 373 **lwarp-titles.sty**

### § 471 Package **titles**

*(Emulates or patches code by JAVIER BEZOS.)*

**Pkg titles** **titles** is loaded and used by **lwarp** during HTML output. All user options and macros are ignored and disabled.

Discard all options for **lwarp-titles**:

**for HTML output:** 1 \LWR@ProvidesPackageDrop{titles}[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>] {} {<oc>} {<or>}
4 \NewDocumentCommand{\sethead}{o o o m m m}{}

```

```

\setfoot [<el>] [<ec>] [<er>] {} {<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`      $\{\langle length \rangle\}$

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}{}`

|                               |                                                                         |
|-------------------------------|-------------------------------------------------------------------------|
| <code>\ifsamemark</code>      | <code>{⟨group⟩}{⟨command⟩}{⟨true⟩}{⟨false⟩}</code>                      |
| 23                            | <code>\newcommand{\ifsamemark}[4]{}{}</code>                            |
| <code>\setfloathead</code>    | <code>* [⟨.⟩] [⟨.⟩] [⟨.⟩] {⟨.⟩} {⟨.⟩} {⟨.⟩} {⟨extra⟩} [⟨which⟩]</code>  |
| 24                            | <code>\NewDocumentCommand{\setfloathead}{s o o o m m m m m}{}{}</code>  |
| <code>\setfloatfoot</code>    | <code>* [⟨.⟩] [⟨.⟩] [⟨.⟩] {⟨.⟩} {⟨.⟩} {⟨.⟩} {⟨extra⟩} [⟨which⟩]</code>  |
| 25                            | <code>\NewDocumentCommand{\setfloatfoot}{s o o o m m m m m}{}{}</code>  |
| <code>\nextfloathead</code>   | <code>* [⟨.⟩] [⟨.⟩] [⟨.⟩] {⟨.⟩} {⟨.⟩} {⟨.⟩} {⟨extra⟩} [⟨which⟩]</code>  |
| 26                            | <code>\NewDocumentCommand{\nextfloathead}{s o o o m m m m m}{}{}</code> |
| <code>\nextfloatfoot</code>   | <code>* [⟨.⟩] [⟨.⟩] [⟨.⟩] {⟨.⟩} {⟨.⟩} {⟨.⟩} {⟨extra⟩} [⟨which⟩]</code>  |
| 27                            | <code>\NewDocumentCommand{\nextfloatfoot}{s o o o m m m m m}{}{}</code> |
| <code>\newmarkset</code>      | <code>{⟨markset⟩}</code>                                                |
| 28                            | <code>\newcommand{\newmarkset}[1]{}{}</code>                            |
| <code>\newextramark</code>    | <code>* {⟨markset⟩}{⟨macro-name⟩}</code>                                |
| 29                            | <code>\NewDocumentCommand{\newextramarkset}{s m m}{}{}</code>           |
| <code>\botextramarks</code>   | <code>{⟨markset⟩}</code>                                                |
| 30                            | <code>\newcommand{\botextramarks}[1]{}{}</code>                         |
| <code>\topextramarks</code>   | <code>{⟨markset⟩}</code>                                                |
| 31                            | <code>\newcommand{\topextramarks}[1]{}{}</code>                         |
| <code>\firstextramarks</code> | <code>{⟨markset⟩}</code>                                                |
| 32                            | <code>\newcommand{\firstextramarks}[1]{}{}</code>                       |
| <code>\nextextramarks</code>  | <code>{⟨markset⟩}</code>                                                |
| 33                            | <code>\newcommand{\nexttopextramarks}[1]{}{}</code>                     |
| <code>\outerextramarks</code> | <code>{⟨markset⟩}</code>                                                |
| 34                            | <code>\newcommand{\outerextramarks}[1]{}{}</code>                       |
| <code>\innerextramarks</code> | <code>{⟨markset⟩}</code>                                                |
| 35                            | <code>\newcommand{\innerextramarks}[1]{}{}</code>                       |

---

File 374 **lwarp-titleref.sty**

§ 472      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 375 **lwarp-titlesec.sty**

§ 473      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 \LWR@ProvidesPackageDrop{titlesec}[2016/03/21]

\titlelabel {\label-format}

2 \newcommand*{\titlelabel}[1]{}

\titleformat* {\command} {\format}

\titleformat {\command} [\shape] {\format} {\label} {\sep} {\before} [\after]

3 \newcommand\titleformat{%
4 \ifstar{\ttl@format@s}%
5 {\ttl@format@i}}
6 \newcommand{\ttl@format@s}[1]{}
7 \NewDocumentCommand{\ttl@format@i}{m o m m m o}{}

```

\chaptertitlename

```

8 \@ifundefined{@chapapp}{\let\@chapapp\chaptername}{}
9 \newcommand\chaptertitlename{\@chapapp}

\titlespacing * {<command>}{<left>}{<before>}{<after>}[<right>]
10 \NewDocumentCommand{\titlespacing}{s m m m m o}{}

\filright
11 \newcommand*{\filright}{}

\filcenter
12 \newcommand*{\filcenter}{}

\filleft
13 \newcommand*{\filleft}{}

\fillast
14 \newcommand*{\fillast}{}

\filinner
15 \newcommand*{\filinner}{}

\filouter
16 \newcommand*{\filouter}{}

\wordsep
17 \newcommand\wordsep{\fontdimen\tw@\font \@plus
18 \fontdimen\thr@\font \@minus \fontdimen4\font}

\titleline * [<align>]{<material>}
19 \NewDocumentCommand{\titleline}{s o m}{}

\titlerule [<height>]
20 \providecommand*\titlerule{\@ifstar{\ttl@row}{\ttl@rule}}
21 \newcommand*{\ttl@rule}[1][{}]{
22 \newcommand*{\ttl@row}[2][{}]{

\iftitlemeasuring {<true>}{<false>}
23 \newcommand{\iftitlemeasuring}[2]{#2}

\assignpagestyle {<command>}{<pagestyle>}

```

```
24 \newcommand{\assignpagestyle}[2]{#2}
```

```
\titleclass {\langle name \rangle} [\langle startlevel \rangle] {\langle class \rangle} [\langle cmd \rangle]
25 \NewDocumentCommand{\titleclass}{m o m o}
```

---

File 376 **lwarp-titletoc.sty**

§ 474     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 {\langle text \rangle}
```

```

11 \newcommand{\contentspush}[1]{%

\contentsuse {\langle name \rangle} {\langle text \rangle}
12 \newcommand{\contentsuse}[2]{%

\startcontents [\langle name \rangle]
13 \newcommand*{\startcontents}[1][{}]{%

\stopcontents [\langle name \rangle]
14 \newcommand*{\stopcontents}[1][{}]{%

\resumecontents [\langle name \rangle]
15 \newcommand*{\resumecontents}[1][{}]{%

\printcontents [\langle name \rangle] {\langle prefix \rangle} {\langle start \rangle} {\langle code \rangle}
16 \newcommand{\printcontents}[4][{}]{%

\startlist [\langle name \rangle] {\langle list \rangle}
17 \newcommand{\startlist}[2][{}]{%

\stoplist [\langle name \rangle] {\langle list \rangle}
18 \newcommand{\stoplist}[2][{}]{%

\resumelist [\langle name \rangle] {\langle list \rangle}
19 \newcommand{\resumelist}[2][{}]{%

\printlist [\langle name \rangle] {\langle list \rangle} {\langle prefix \rangle} {\langle code \rangle}
20 \newcommand{\printlist}[4][{}]{%

```

---

File 377 **lwarp-titling.sty**

\$ 475      Package **titling**

(Emulates or patches code by PETER WILSON.)

Pkg    titling

package support

 load order

lwarp supports the native L<sup>A</sup>T<sub>E</sub>X 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.

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
```

```

25 \pretitle{}
26 \posttitle{}
27
28 \preauthor{}
29 \postauthor{}
30
31 \predate{}
32 \postdate{}

```

`\LWR@maketitlesetup` Patches `\thanks` macros.

```

33 \renewcommand*{\LWR@maketitlesetup}{%

```

Redefine the footnote mark:

```

34 \def\@makefnmark{\@thefnmark}

\thefootnote ⇒ \nameuse{arabic}{footnote}, or
\thefootnote ⇒ \nameuse{fnsymbol}{footnote}

```

Redefine the footnote text:

```

35 \long\def\@makefntext##1{%

```

Make the footnote mark and some extra horizontal space for the tags:

```

36 \makethanksmark~%

\makethanksmark ⇒ \thanksfootmark ⇒ \tamark ⇒
\@thefnmark ⇒ \itshape a (or similar)

```

Print the text:

```

37 ##1%
38 }% \@makefntext
39 }

```

`\thanksfootmark`

```

40 \renewcommand{\thanksfootmark}{%
41 % \hb@xt@\thanksmarkwidth{\hfil\normalfont%
42 \thanksscript{%
43 \thanksfootpre \tamark \thanksfootpost%
44 }%
45 % }%
46 }

```

`\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.

```
47 \renewcommand*{\maketitle}{%
```

An HTML titlepage <div> is used for all classes.

```
48 \begin{titlepage}
```

Select which kind of footnote marks to use:

```
49 \@bsmarkseries
```

Set up special patches:

```
50 \LWR@maketitlesetup
```

Typeset the title, etc:

```
51 \@maketitle
```

Immediately generate any \thanks footnotes:

```
52 \LWR@stoppars\@thanks\LWR@startpars
```

Close the HTML titlepage div:

```
53 \end{titlepage}
```

Reset the footnote counter:

```
54 \@bscontmark
55 }
```

`\@maketitle` Typesets the title, etc. Patched for HTML.

```
56 \DeclareDocumentCommand{\@maketitle}{}{%
57 \maketitlehooka
58 {
59 \LWR@stoppars\LWR@htmltag{\LWR@tagtitle}%
60 \@bsprettitle \@title \@bspsttitle%
61 \LWR@htmltag{\LWR@tagtitleend}\LWR@startpars%
62 }
63 \maketitlehookb
64 {
65 \begin{BlockClass}{author}
66 \renewcommand{\and}{%
67 \end{BlockClass}%
68 \begin{BlockClass}{oneauthor}%
69 }
70 \begin{BlockClass}{oneauthor}%
71 \@bspreadauthor \@author \@bspstauthor%
72 \end{BlockClass}%
```

```

73 \end{BlockClass}%
74 }
75 \maketitlehookc
76 {
77 \begin{BlockClass}{titledate}%
78 \@bspredate \@date \@bspostdate%
79 \end{BlockClass}%
80 }
81 \maketitlehookd
82 }

```

`\LWR@titlingmaketitle` \maketitle for use inside an HTML titlingpage environment.

```
83 \renewcommand*{\LWR@titlingmaketitle}{%
```

Keep pending footnotes out of the title block:

```
84 \LWR@stoppars\@thanks\LWR@startpars
```

Select which kind of footnote marks to use:

```
85 \@bsmarkseries
```

Set up special patches:

```
86 \LWR@maketitlesetup
```

Typeset the title, etc:

```
87 \@maketitle
```

Immediately generate any \thanks footnotes:

```
88 \LWR@stoppars\@thanks\LWR@startpars
```

Reset the footnote counter:

```
89 \@bscontmark
90 }
```

`\thanksmarkseries` `{\langle series \rangle}`

Sets the type of footnote marks used by \thanks, where type is ‘arabic’, ‘roman’, ‘fn-symbol’, etc.

```

91 \renewcommand{\thanksmarkseries}[1]{%
92 \def\@bsmarkseries{\renewcommand{\thefootnote}{\@nameuse{#1}{footnote}}}%
93 }

```

Set default titlepage thanks footnote marks. See section 66.7.

---

```

94 \@ifclassloaded{memoir}{
95 \thanksmarkseries{arabic}
96 }{% not memoir
97 \if@titlepage
98 \thanksmarkseries{arabic}
99 \else
100 \thanksmarkseries{fnsymbol}
101 \fi
102 }% not memoir

```

---

File 378 **lwarp-tocbasic.sty**

§ 476 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}{}
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 379 **lwarp-tocbibind.sty**

§ 477 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}{0{\@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 380 **lwarp-tocdata.sty**

§ 478     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 381 **lwarp-tocenter.sty**

§ 479 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 382 **lwarp-tocloft.sty**

§ 480 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}{}
```

\cftlofttitlefont

```
9 \newcommand*{\cftloftitlefont}{}

```

\cftafterloftitle

```
10 \newcommand*{\cftafterloftitle}{}
```

```
11 \newlength{\cftbeforelofttitleskip}
```

12 \newlength{\cftafterlofttitleskip}

\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{\cftpартindent}
28 \LWR@providelength{\cftpартnumwidth}
29 \providecommand*{\cftpартfont}{}
30 \providecommand*{\cftpартpresnum}{}
31 \providecommand*{\cftpartaftersnum}{}
32 \providecommand*{\cftpartaftersnumb}{}
33 \providecommand*{\cftpартleader}{}
34 \providecommand*{\cftpартdotsep}{1}
35 \providecommand*{\cftpартpagefont}{}
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 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 383 **lwarp-tocstyle.sty**

#### § 481 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 o m m}{}
7 \NewDocumentCommand{\newtocstyle}{o o m m}{}
8 \newcommand*{\aliastoc}[2][{}]{
9 \newcommand*{\showtoc}[2][{}]{
10 \newcommand{\iftochasdepth}[4][{}]{

```

---

### File 384 **lwarp-todo.sty**

#### § 482 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\todotoc\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 385 **lwarp-todonotes.sty**

## § 483 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 \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 \begingroup%
69 \renewcommand*{\phantomsection}{}%
70 \IfValueTF{#1}{%
71 \LWRTODONOTES@orig@todo[#1]{#2}%
72 }{%
73 \LWRTODONOTES@orig@todo{#2}%
74 }
75 \endgroup%
76 }
77
78 \fi% \if@todonotes@disabled

```

---

File 386 **lwarp-topcapt.sty**

§ 484     Package **topcapt**

Pkg   topcapt   topcapt is emulated.

**for HTML output:**     1 \LWR@ProvidesPackageDrop{topcapt}[2004/12/11]


2 \LetLtxMacro\topcaption\caption

---

File 387 **lwarp-tram.sty**

§ 485     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 388 **lwarp-transparent.sty**

§ 486      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:** Discard all options for lwarp-transparent:

```
1 \LWR@ProvidesPackageDrop{transparent}[2016/05/16]

2 \newcommand*{\transparent}[1]{\edef\LWR@opacity{#1}}
3
4 \newcommand*{\texttransparent}[2]{%
5 \begingroup%
6 \transparent{#1}%
7 \InlineClass[opacity: #1]{transparent}{#2}%
8 \endgroup%
9 }
```

---

File 389 **lwarp-trimclip.sty**

§ 487      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 390 **lwarp-trivfloat.sty**

§ 488      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}
```

§ 488.1    **Combining \newfloat, \trivfloat, and algorithmicx**

**for HTML & PRINT:**    6 \begin{warppall}

**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 391 **lwarp-truncate.sty**

## § 489 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 392 **lwarp-turnthepage.sty**

## § 490 Package **turnthepage**

Pkg turnthepage turnthepage is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{turnthepage}[2011/03/24]

2 \newcommand{\turnthepage}{}

```

---

### File 393 **lwarp-twoup.sty**

## § 491 Package **twoup**

Pkg twoup twoup is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{twoup}[2007/02/26]

2 \newcommand{\cleartolastpage}{}

```

---

### File 394 **lwarp-typearea.sty**

## § 492 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 395 **lwarp-typicons.sty**

§ 493 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 396 **lwarp-ulem.sty**

§ 494 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
42 \NewDocumentCommand{\LWR@HTML@dashuline}{+m}{%
43 \InlineClass%
44 (%
45 text-decoration:underline;%
46 text-decoration-skip: auto;%
47 text-decoration-style:dashed%
48)%
49 {dashuline}{\LWR@isolate{#1}}%
50 }
51 \LWR@formatted{xout}
52
53 \NewDocumentCommand{\LWR@HTML@dotuline}{+m}{%
54 \InlineClass%
55 (%
56 text-decoration:underline;%
57 text-decoration-skip: auto;%
58 text-decoration-style: dotted%
59)%
60 {dotuline}{\LWR@isolate{#1}}%
61 }
62 \LWR@formatted{dotuline}

```

Nullified/emulated macros:

```

63 \NewDocumentCommand{\LWR@HTML@markoverwith}{m}{}
64 \LWR@formatted{markoverwith}
65
66 \NewDocumentCommand{\LWR@HTML@ULon}{+m}{\uline{#1}\egroup}
67 \LWR@formatted{ULon}

```

---

File 397 **lwarp-umoline.sty**

§ 495     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 398 **lwarp-underscore.sty**

§ 496     Package **underscore**

Pkg    underscore    underscore is ignored.

**for HTML output:**    1 \LWR@ProvidesPackageDrop{underscore}[2006/09/13]

---

File 399 **lwarp-units.sty**

§ 497     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 \CustomizeMathJax{\newcommand{\unit}[2][[]]{#1 #2}}
26 \CustomizeMathJax{\newcommand{\unitfrac}[3][[]]{#1 #2/#3}}

```

---

File 400 **lwarp-unitsdef.sty**

§ 498      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{{}^{\circ}}}%
9 {\HTMLUnicode{2032}}% prime
10 }
11
12 \renewunit{\arcsec}{%
13 \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}%
14 {\ensuremath{{}^{\circ}}}%
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 401 **lwarp-upref.sty**

§ 499     Package **upref**

Pkg upref upref is ignored.

for HTML output: Discard all options for lwarp-upref:

```
1 \LWR@ProvidesPackageDrop{upref}[2007/03/14]
```

---

File 402 **lwarp-url.sty**

§ 500     Package **url**

*(Emulates or patches code by DONALD ARSENEAU.)*

Pkg url url is patched for use by lwarp.

for HTML output: 1 \LWR@ProvidesPackagePass{url}[2013/09/16]

url uses math mode to print its string inside a group, so the original meaning of math is restored first.

```

2 \let\ltxMacro\LWR@url@origUrl@FormatString\Url@FormatString
3
4 \renewcommand*{\Url@FormatString}{%
5 \InlineClass{verbatim}{%
6 \LWR@restoreorigformatting%
7 \LWR@url@origUrl@FormatString%
8 }%
9 }

```

---

File 403 **lwarp-ospace.sty**

§ 501     Package **ospace**

Pkg ospace ospace is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{ospace}[2016/11/06]

File 404 **lwarp-verse.sty**

§ 502 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 `\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 label may be shifted by one space.

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 verse or memoir packages can place stanza numbers to the left with their
Cls memoir \flagverse \flagverse command. Do not allow them to go into the left margin, which would
\flagverse cause pdfcrop to crop the entire page further to the left:
Len \vleftskip
7 \ifdef{\vleftskip}{%
8 \setlength{\vleftskip}{\HTMLvleftskip}
9 \setlength{\leftmargini}{\HTMLleftmargini}
10 }{}
11 \LWR@forcenewpage
12 \LWR@atbeginverbatim{3}{verse}%
13 }
```

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 405 **lwarp-versednotes.sty**

§ 503 Package **versednotes**

(Emulates or patches code by NORMAN GRAY.)

Pkg versednotes versednotes is emulated.

**for HTML output:**

```
1 \LWR@ProvidesPackageDrop{versednotes}[2019/07/06]

2 \newcommand{\versednote}[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 406 **lwarp-vertbars.sty**

§ 504 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 407 **lwarp-vmargin.sty**

§ 505 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 408 **lwarp-vowel.sty**

§ 506     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--\packagediagramname)]%
5 \@vowel[#1]%
6 }
7 {%
8 \@@vowel%
9 \end{lateximage}%
10 }

```

---

File 409 **lwarp-vpe.sty**

§ 507     Package **vpe**

Pkg    vpe    **vpe** is ignored.

**for HTML output:**    1 \LWR@ProvidesPackageDrop{vpe}[2012/04/18]

---

File 410 **lwarp-vwcol.sty**

§ 508     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 \ifvwcol@prerule\LWR@vwcol@addrule{border-left}\fi
38 \ifvwcol@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 411 **lwarp-wallpaper.sty**

§ 509      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[1]{}
17 \newlength\wpXoffset
18 \newlength\wpYoffset

```

---

File 412 **lwarp-watermark.sty**

§ 510      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 413 **lwarp-widows-and-orphans.sty**

§ 511 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\WaOsetup{m}{}
3 \NewDocumentCommand\WaOparameters{}{}
4 \NewDocumentCommand\WaOignorenext{}{}

```

---

File 414 **lwarp-wrapfig.sty**

§ 512 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 }
22
23
24 \NewDocumentEnvironment{wrapfigure}{o m o m}
25 {%
26 \LWR@subwrapfigure{#2}{#4}%
27 \captionsetup{type=figure}%

```

---

```

28 }
29 {%
30 \endLWR@BlockClassWP%
31 }
32
33
34 \NewDocumentEnvironment{wraptable}{o m o m}
35 {%
36 \LWR@subwrapfigure{#2}{#4}%
37 \captionsetup{type=table}%
38 }
39 {%
40 \endLWR@BlockClassWP%
41 }
42
43
44 \NewDocumentEnvironment{wrapfloat}{m o m o m}
45 {%
46 \LWR@subwrapfigure{#3}{#5}%
47 \captionsetup{type=#1}%
48 }
49 {%
50 \endLWR@BlockClassWP%
51 }
52
53 \newlength{\wrapoverhang}

```

---

#### File 415 **lwarp-xbmks.sty**

### § 513 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 416 **lwarp-xcolor.sty**

### § 514 Package **xcolor**

*(Emulates or patches code by DR. UWE KERN.)*

Pkg xcolor xcolor is supported by lwarp.

### § 514.1 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.                                                                                                                                                                                                                                                                                                                                                                                                |

### § 514.2 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 85. 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 486.

`\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 986.

**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 986.

**HTML lateximage:** Remembers and reuses the print version.

**\colorboxBlock:**

**Print:** Becomes \colorbox.

**HTML:** Newly defined by lwarp-xcolor to use a <div>, page 987.

**HTML lateximage:** Remembers and reuses the print version \colorbox.

**\fcolorbox:**

**Print:** Modified to allow a background of none.

\LWR@print@fcolorbox at section 85

**HTML:** Redefined by lwarp-xcolor, page 987.

**HTML lateximage:** Remembers and reuses the print version.

**\fcolorboxBlock:**

**Print:** Becomes \fcolorbox. Section 85

**HTML:** Newly defined by lwarp-xcolor to use a <div>, page 988.

**HTML lateximage:** Remembers and reuses the print version \fcolorbox.

**fcolorminipage:**

**Print:** Newly defined in the lwarp core.

LWR@print@fcolorminipage at section 85

**HTML:** Newly defined by lwarp-xcolor, page 989.

**HTML lateximage:** Uses the print version.

**\boxframe:**

**Print:** Used as-is.

**HTML:** Redefined by lwarp-xcolor, page 990.

**HTML lateximage:** Remembers and reuses the print version.

### § 514.3 Package loading

**for HTML output:**

```
1 \LWR@ProvidesPackagePass{xcolor}[2016/05/11]
2 \begin{warpHTML}
```

### § 514.4 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 }
```

### § 514.5 HTML color style

**\LWR@findcurrenttextcolor** Sets \LWR@tempcolor to the current color.

```
9 \renewcommand*{\LWR@findcurrenttextcolor}{%
10 \protect\colorlet{\LWR@current@color}{.}%
11 \protect\convertcolorspec{named}{\LWR@current@color}{HTML}\LWR@tempcolor%
12 }
```

Prints a color style for the current color.

**\LWR@currenttextcolorstyle**

```
13 \newcommand*{\LWR@currenttextcolorstyle}{%
14 \LWR@findcurrenttextcolor%
15 \ifdefstring{\LWR@tempcolor}{000000}%
16 {}%
17 {color: \LWR@origpound\LWR@tempcolor ; }%
18 }
```

**\LWR@textcurrentcolor**  $\{ \langle text \rangle \}$  Like \textcolor but uses the current \color instead.

```
19 \DeclareDocumentCommand{\LWR@textcurrentcolor}{m}{%
20 \begingroup%
```

```

21 \LWR@FBcancel%
22 \LWR@findcurrenttextcolor%
23 \InlineClass[color:\LWR@origpound\LWR@tempcolor]{textcolor}{%
24 \renewcommand*\LWR@currenttextcolor{\LWR@origpound\LWR@tempcolor}%
25 #1%
26 }%
27 \endgroup%
28 }

```

`\LWR@colorstyle`    `{\langle 2: model \rangle}{\langle 3: color \rangle}`

For a color style, prints the color converted to HTML colors.

```

29 \NewDocumentCommand{\LWR@colorstyle}{m m}{%
30 \begingroup%
31 \LWR@FBcancel%

```

Use the `xcolor` package to convert to an HTML color space:

```

32 \convertcolourspec{#1}{#2}{HTML}\LWR@tempcolor%

```

Print the converted color:

```

33 \LWR@origpound\LWR@tempcolor%
34 \endgroup%
35 }

```

`\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.

```

36 \NewDocumentCommand{\LWR@backgroundcolor}{O{named} m m}{%
37 \begingroup%
38 \LWR@FBcancel%
39 \InlineClass[background:\LWR@colorstyle{#1}{#2}]{backgroundcolor}{%
40 #3%
41 }%
42 \endgroup%
43 }

```

## § 514.6 HTML border

`\LWR@borderpadding`    `{\langle colorstyle \rangle}{\langle color \rangle}` Prints the HTML attributes for a black border and padding.  
`\LWR@forceminwidth` must be used first in order to set the border width.

```

44 \newcommand*\LWR@borderpadding[2]{%
45 border:\LWR@printlength{\LWR@atleastonept} solid \LWR@colorstyle{#1}{#2} ; %
46 padding:\LWR@printlength{\fboxsep}%
47 }

```

## § 514.7 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.

```
48 \NewDocumentCommand{\LWR@HTML@color}{o m}{%
49 \IfValueTF{#1}{%
50 \LWR@print@color[#1]{#2}%
51 \convertcolorspec{#1}{#2}{HTML}\LWR@tempcolor%
52 }{%
53 \LWR@print@color{#2}%
54 \convertcolorspec{named}{#2}{HTML}\LWR@tempcolor%
55 }%
56 \edef\LWR@currenttextcolor{\LWR@origpound\LWR@tempcolor}%
57 }
58
59 \LWR@formatted{color}
```

`\textcolor` [*<model>*] {<color>} {<text>}

Converted into an HTML hex color span.

```
60 \NewDocumentCommand{\LWR@HTML@textcolor}{o m m}{%
61 \begingroup%
62 \IfValueTF{#1}{%
63 \color[#1]{#2}%
64 }{%
65 \color{#2}%
66 }
67 \InlineClass[color:\LWR@currenttextcolor]{textcolor}{#3}%
68 \endgroup%
69 }%
70
71 \LWR@formatted{textcolor}
```

`\pagecolor` [*<model>*] {<color>}

Ignored. Use css instead.

```
72 \renewcommand*{\pagecolor}[2][named]{}
```

`\nopagecolor` Ignored.

```
73 \renewcommand*{\nopagecolor}{}%
```

`\colorbox` [*<model>*] {<color>} {<text>}

Converted into an HTML hex background color <span>.

```

74 \NewDocumentCommand{\LWR@HTML@colorbox}{O{named} m +m}{%
75 \begingroup%
76 \LWR@FBcancel%
77 \InlineClass[%
78 background:\LWR@colorstyle{#1}{#2} ; %
79 padding:\LWR@printlength{\fboxsep}%
80]{colorbox}{#3}%
81 \endgroup%
82 }
83
84 \AtBeginDocument{
85 \LWR@formatted{colorbox}
86 }

```

\colorboxBlock [*<model>*] {<color>} {<text>}

Converted into an HTML hex background color <div>.

```

87 \NewDocumentCommand{\LWR@HTML@colorboxBlock}{O{named} m +m}{%
88 \begingroup%
89 \LWR@FBcancel%

90 \LWR@stoppars%

91 \begin{BlockClass}[%
92 background:\LWR@colorstyle{#1}{#2} ; %
93 padding:\LWR@printlength{\fboxsep}%
94]{colorboxBlock}
95 #3
96 \end{BlockClass}%
97 \endgroup%

```

Prevent paragraph tags around horizontal white space until the start of the next paragraph:

```

98 \global\booltrue{\LWR@minipagethispar}%
99 }
100
101 \AtBeginDocument{
102 \LWR@formatted{colorboxBlock}
103 }

```

\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.

```

104 \NewDocumentCommand{\LWR@HTML@fcolorbox}{O{named} m O{named} m +m}{%
105 \LWR@traceinfo{HTML fcolorbox #2 #4}%
106 \begingroup%
107 \LWR@FBcancel%
108 \LWR@forceminwidth{\fboxrule}%
109 \ifthenelse{\equal{#4}{none}}{%
110 {% no background color
111 \InlineClass[%
112 \LWR@borderpadding{#1}{#2}%
113]{fcolorbox}{#5}%
114 }%
115 {% yes background color
116 \InlineClass[%
117 \LWR@borderpadding{#1}{#2} ; %
118 background:\LWR@colorstyle{#3}{#4}%
119]{fcolorbox}{#5}%
120 }%
121 \endgroup%
122 }
123
124 \AtBeginDocument{
125 \LWR@formatted{fcolorbox}
126 }

```

`\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.

```

127 \NewDocumentCommand{\LWR@HTML@fcolorboxBlock}{O{named} m O{named} m +m}{%
128 \LWR@traceinfo{HTML fcolorboxBlock #2 #4}%
129 \begingroup%
130 \LWR@FBcancel%
131 \LWR@forceminwidth{\fboxrule}%

132 \LWR@stoppars%

133 \ifthenelse{\equal{#4}{none}}{%
134 {% no background color
135 \begin{BlockClass}[%
136 \LWR@borderpadding{#1}{#2}%
137]{fcolorboxBlock}
138 #5
139 \end{BlockClass}%
140 }%
141 {% yes background color
142 \convertcolorspec{#3}{#4}{HTML}\LWR@tempcolortwo%
143 \begin{BlockClass}[%
144 background:\LWR@origpound\LWR@tempcolortwo\ ; %
145 \LWR@borderpadding{#1}{#2}%
146]{fcolorboxBlock}
147 #5

```

```

148 \end{BlockClass}%
149 }%
150 \endgroup%

```

Prevent paragraph tags around horizontal white space until the start of the next paragraph:

```

151 \global\booltrue{LWR@minipagethispar}%
152 \LWR@traceinfo{HTML fcolorboxBlock done}%
153 }
154
155 \AtBeginDocument{
156 \LWR@formatted{fcolorboxBlock}
157 }

```

Creates a framed HTML <div> around its contents.

A print-output version is defined in the lwarp core: section 85

```

\LWR@subfcolorminipage {<framemodel>} {<framecolor>} {<background tag>} {<height>}

158 \NewDocumentCommand{\LWR@subfcolorminipage}{m m m m}{%

159 \LWR@stoppars%

160 \begin{BlockClass}[%
161 #3%
162 \LWR@borderpadding{#1}{#2} ; %
163 \IfValueT{#4}{height:\LWR@printlength{\LWR@tempheight} ; }%
164 width:\LWR@printlength{\LWR@tempwidth}%
165]{fcolorminipage}%
166 }

Env fcolorminipage [<1:framemodel>] {<2:framecolor>} [<3:boxmodel>] {<4:boxcolor>} [<5:align>] [<6:height>]
[<7:inner-align>] {<8:width>}

167 \NewDocumentEnvironment{LWR@HTML@fcolorminipage}{O{named} m O{named} m O{c} o o m}
168 {%
169 \LWR@FBcancel%
170 \setlength{\LWR@tempwidth}{#8}%
171 \IfValueT{#6}{\setlength{\LWR@tempheight}{#6}}%
172 \LWR@forceminwidth{\fboxrule}%
173 \convertcolorspec{#1}{#2}{HTML}\LWR@tempcolor%
174 \ifthenelse{\equal{#4}{none}}%
175 {\LWR@subfcolorminipage{#1}{#2}{#6}}%
176 {%
177 \convertcolorspec{#3}{#4}{HTML}\LWR@tempcolortwo%
178 \LWR@subfcolorminipage{#1}{#2}%
179 {background:\LWR@origpound\LWR@tempcolortwo\ ; }%
180 {#6}%
181 }%
182 }%
183 {%
184 \end{BlockClass}%

```

Prevent paragraph tags around horizontal white space until the start of the next paragraph:

```
185 \global\booltrue{LWR@minipagethispar}%
186 }
187
188 \AtBeginDocument{
189 \LWR@formattedenv{fcolorminipage}
190 }
```

`\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.

```
191 \newcommand*{\LWR@HTML@boxframe}[3]{%
192 {%
193 \setlength{\LWR@tempwidth}{#1}%
194 \setlength{\LWR@tempheight}{#2}%
195 \addtolength{\LWR@tempheight}{#3}%
196 \LWR@forceminwidth{\fboxrule}%
197 \LWR@findcurrenttextcolor%
198 \InlineClass[%
199 display:inline-block ; %
200 border:\LWR@printlength{\LWR@atleastonept} solid \LWR@currenttextcolor{} ; %
201 width:\LWR@printlength{\LWR@tempwidth} ; %
202 height:\LWR@printlength{\LWR@tempheight}%
203]{boxframe}{}%
204 }%
205 }
206
207 \LWR@formatted{boxframe}
```

## § 514.8 Row colors

`\rowc@l@rs`  $[\langle cmds \rangle] \{\langle startrow \rangle\} \{\langle odd color \rangle\} \{\langle even color \rangle\}$

```
208 \newcommand*{\LWR@xcolortempcolor}{}
209
210 \def\rowc@l@rs[#1]#2#3#4%
211 {
212 \global\rownum=1
213 \global\@rowcolorstrue
214 \@ifempty{#3}%
215 {\def\@oddrowcolor{\@norowcolor}}%
216 {%
217 \convertcolorspec{named}{#3}{HTML}\LWR@xcolortempcolor%
218 \edef\@oddrowcolor{%
219 \csdef{\LWR@xcolorrowHTMLcolor}{\LWR@xcolortempcolor}%
220 }%
221 }%
222 \@ifempty{#4}%
223 {\def\@evenrowcolor{\@norowcolor}}%
224 {%
```

```

225 \convertcolorspec{named}{#4}{HTML}\LWR@xcolortempcolor%
226 \edef\@evenrowcolor{%
227 \csdef{LWR@xcolorrowHTMLcolor}{\LWR@xcolortempcolor}%
228 }%
229 }%
230 \if@rowcmd
231 \def\@rowcolors
232 {%
233 #1%
234 \if@rowcolors
235 \noalign{%
236 \relax\ifnum\rownum<#2\@norowcolor\else
237 \ifodd\rownum\@oddrowcolor\else\@evenrowcolor\fi\fi%
238 }%
239 \fi%
240 }%
241 \else
242 \def\@rowcolors
243 {%
244 \if@rowcolors
245 \ifnum\rownum<#2%
246 \noalign{%
247 \@norowcolor
248 }
249 \else
250 #1%
251 \noalign{%
252 \ifodd\rownum\@oddrowcolor\else\@evenrowcolor\fi%
253 }%
254 \fi
255 \fi%
256 }%
257 \fi
258 \ignorespaces%
259 }

```

`\@norowcolor` Turns off color for this row.

```

260 \def\@norowcolor{%
261 \renewcommand{LWR@xcolorrowHTMLcolor}{}%
262 }

```

`\@rowc@lors` Executed at the end of each row.

```

263 \def\@rowc@lors{%
264 % \noalign{%
265 \global\advance\rownum\@ne%
266 % }%
267 \@rowcolors%
268 }

```

```

269 \end{warpHTML}

```

File 417 **lwarp-xexchangebar.sty**§ 515 Package **xexchangebar**

Pkg xexchangebar xexchangebar is ignored

**for HTML output:** 1 \LWR@ProvidesPackageDrop{xexchangebar}[2017/08/03]  
2 \LWR@origRequirePackage{lwarp-changebar}

File 418 **lwarp-xellipsis.sty**§ 516 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 \xelipchar%
24 \repeat%
25 \LWR@xellipsespace{\xelipaft}%
26 \LWR@xellipsespace{\xelippostbef}%
27 \xelippostchar%
28 \LWR@xellipsespace{\xelippostaft}%

```

29 }%  
30 }%

---

File 419 **lwarp-xetexko-vertical.sty**

§ 517      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 420 **lwarp-xfakebold.sty**

§ 518      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.

 **page breaks**    Note that the print version resets to unbold at each page break, whereas the HTML version maintains the bold state until it is undone.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{xfakebold}[2018/07/25]

2 \let\LWR@orig@setBold\setBold
3 \let\LWR@orig@unsetBold\unsetBold
4 \renewcommand*\setBold{\booltrue{LWR@xfakebold}}
5 \renewcommand*\unsetBold{\boolfalse{LWR@xfakebold}}
6
7 \renewcommand*\LWR@applyxfakebold{%
8 \ifbool{LWR@xfakebold}{\LWR@orig@setBold}{\LWR@orig@unsetBold}%
9 }
```

---

File 421 **lwarp-xfrac.sty**

§ 519      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.

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 }
```

```
69 \end{warpHTML}
```

---


## File 422 **lwarp-xltabular.sty**

### § 520 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
3 \LWR@ProvidesPackageDrop{xltabular}[2018/05/23]
4
5 \DeclareDocumentEnvironment{xltabular}{o m m}
6 {\longtable{#3}}
7 {\endlongtable}
```

---

## File 423 **lwarp-xltxtra.sty**

### § 521 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 #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{\showwhyphens}{m}{}

```

---

File 424 **lwarp-xmpincl.sty**

§ 522     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 425 **lwarp-xpiano.sty**

§ 523     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 [(-xpiano~\packagediagramname{}: \detokenize\expandafter{#2})]
12 [\detokenize\expandafter{#1}]
13 \xpiano_keyboard:nn { #1 } { #2 }
14 \end{lateximage}
15 }

```

---

```

16 \ExplSyntaxOff
17
18 \LWR@formatted{keyboard}

```

---

File 426 **lwarp-xpinyin.sty**

§ 524     Package **xpinyin**

*(Emulates or patches code by SOBEN LEE.)*

Pkg xpinyin xpinyin is partly supported. \xpinyin and pinyinscope are nullified, but \pinyin works.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{xpinyin}[2018/01/28]

2 \RenewDocumentEnvironment{pinyinscope}{0{}}{}{}
3
4 \RenewDocumentCommand{\xpinyin}{s O{ } m}{%
5 \IfBooleanTF{#1}{#3}{\@firstoftwo#3}%
6 }
7
8 \RenewDocumentCommand{\enablepinyin}{}{}

```

---

File 427 **lwarp-xr.sty**

§ 525     Package **xr**

*(Emulates or patches code by JEAN-PIERRE DRUCBERT, DAVID CARLISLE.)*

Pkg xr xr is patched for use by lwarp.

**for HTML output:** lwarp-xr-hyper also uses lwarp-xr to reuse the following definition. Only load xr if xr-hyper has not been loaded:

```

1 \ifdef{\externaldocument}{}{
2 \LWR@ProvidesPackagePass{xr}[2019/01/05]
3 }

4 \LetLtxMacro\LWR@orig@externaldocument\externaldocument
5
6 \renewcommand*{\externaldocument}[2][{}]{%
7 \ifblank{#1}{%
8 \LWR@orig@externaldocument{#2_html}%
9 }{%
10 \LWR@orig@externaldocument[#1]{#2_html}%
11 }%
12 }

```

---

File 428 **lwarp-xr-hyper.sty**

§ 526 Package **xr-hyper**

*(Emulates or patches code by DAVID CARLISLE.)*

Pkg xr-hyper xr-hyper is patched for use by lwarp.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{xr-hyper}[2000/03/22]
2
3 \LWR@origRequirePackage{lwarp-xr}
```

---

File 429 **lwarp-xtab.sty**

§ 527 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 tab character &** For \tablefirsthead, etc., enclose them as follows:

```

\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 430 **lwarp-xunicode.sty**

§ 528      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 431 **lwarp-xurl.sty**

§ 529 Package **xurl**

Pkg xurl xurl is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{xurl}[2018/06/02]

---

File 432 **lwarp-xy.sty**

§ 530 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~\packagediagramname)]}%
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 \packagediagramname)]
28 \LWR@origxygraph{#1}
29 \end{lateximage}
30 }
31
32 }% xygraph defined
33
34 }% AtBeginDocument

```

---

File 433 **lwarp-zhlineskip.sty**

§ 531     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 434 **lwarp-zwpagelayout.sty**

§ 532     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{rgbbblue}{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 435 **lwarp-patch-komascript.sty**

§ 533 Package **patch-komascript**

Pkg lwarp-patch-komascript Patches for komascript classes.

lwarp loads this package when scrbook, scrartcl, or screprt classes are detected.

Many features are ignored during the HTML conversion. The goal is source-level compatibility.

\titlehead, \subject, \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 }

```

Simple captions are used in all cases.

```

39 \AtBeginDocument{
40 \LetLtxMacro\captionbelow\caption
41 \LetLtxMacro\captionabove\caption
42
43 \LetLtxMacro\captionofbelow\captionof
44 \LetLtxMacro\captionofabove\captionof
45 }
46
47 \RenewDocumentEnvironment{captionbeside}{o m o o o s}
48 {}
49 {%
50 \IfValueTF{#1}%
51 {\caption[#1]{#2}}%
52 {\caption{#2}}%
53 }
54
55 \RenewDocumentEnvironment{captionofbeside}{m o m o o o s}
56 {}
57 {%
58 \IfValueTF{#2}%
59 {\captionof{#1}[#2]{#3}}%
60 {\captionof{#1}{#3}}%
61 }
62

```

---

```

63 \RenewDocumentCommand{\setcapindent}{s m}{}
64 \renewcommand*{\setcaphanging}{}
65 \renewcommand*{\setcapwidth}[2][]{}
66 \renewcommand*{\setcapdynwidth}[2][]{}
67 \RenewDocumentCommand{\setcapmargin}{s o m}{}

```

---

File 436 **lwarp-patch-memoir.sty**

§ 534 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.

⚠ options clash

While emulating memoir, lwarp pre-loads a number of packages (section 534.1). 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.

\verbfootnote is not supported.

\newfootnoteseries, etc. are not supported.

lwarp loads pagenote to perform memoir's pagenote functions, but there are minor differences in \pagenotesubhead and related macros.

Poem numbering is not supported.

The verbatim environment does not yet support the memoir enhancements. It is currently recommended to load and use fancyvrb instead.

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}

### § 534.1 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}% 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}% 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 \RequirePackage{lwarp-framed}% req'd
14 \RequirePackage{lwarp-hanging}% req'd
15 \RequirePackage{lwarp-makeidx}% req'd
16 \DisemulatePackage{moreverb}
17 \RequirePackage{lwarp-moreverb}
18 \RequirePackage{lwarp-mparhack}
19 \RequirePackage{lwarp-needspace}% req'd
20 \RequirePackage{lwarp-nextpage}% req'd
21 \RequirePackage{lwarp-pagenote}% req'd
22 \RequirePackage{lwarp-parskip}
23 \RequirePackage{lwarp-setspace}% req'd
24 \RequirePackage{lwarp-showidx}
25 \RequirePackage{lwarp-subfigure}% req'd
26 \makeindex

```

`subfigure` is emulated via `subfig`, which pre-defines `subfigure` and `subtable`, but memoir does not, so they must be tested for here:

```

27 \LetLtxMacro\LWR@memorignewsbfloat\newsbfloat
28 \RenewDocumentCommand{\newsbfloat}{0{} m}{%
29 \@ifundefined{c@sub#2}{%
30 \LWR@memorignewsbfloat[#1]{#2}%
31 }{}%
32 }
33
34 \RequirePackage{lwarp-tabularx}% req'd
35 \RequirePackage{lwarp-titling}% req'd
36 % \RequirePackage{lwarp-tocbibind}% not emulated by memoir
37 \RequirePackage{lwarp-tocloft}% req'd
38 \RequirePackage{lwarp-verse}% req'd

```

### § 534.2 Preliminary setup

Bypass the memoir package mechanism:

```
39 \LetLtxMacro\LWR@orig@label\@mem@old@label
```

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.

```
40 \setstocksize{190in}{20in}
41 \setlrmarginsandblock{2in}{2in}{*}
42 \setulmarginsandblock{1in}{1in}{*}
```

### § 534.3 Page layout

```
43 \renewcommand*{\stockavi}{}
44 \renewcommand*{\stockav}{}
45 \renewcommand*{\stockaiv}{}
46 \renewcommand*{\stockaiii}{}
47 \renewcommand*{\stockbvi}{}
48 \renewcommand*{\stockbv}{}
49 \renewcommand*{\stockbiv}{}
50 \renewcommand*{\stockbiii}{}
51 % \renewcommand*{\stockmetriccrownvo}{}% in docs but not in the package
52 \renewcommand*{\stockmlargecrownvo}{}
53 \renewcommand*{\stockmdemyvo}{}
54 \renewcommand*{\stocksmallroyalvo}{}
55 \renewcommand*{\pageavi}{}
56 \renewcommand*{\pageav}{}
57 \renewcommand*{\pageaiv}{}
58 \renewcommand*{\pageaiii}{}
59 \renewcommand*{\pagebvi}{}
60 \renewcommand*{\pagebv}{}
61 \renewcommand*{\pagebiv}{}
62 \renewcommand*{\pagebiii}{}
63 % \renewcommand*{\pagemetriccrownvo}{}% in docs but not in the package
64 \renewcommand*{\pagemlargecrownvo}{}
65 \renewcommand*{\pagemdemyvo}{}
66 \renewcommand*{\pagemsmallroyalvo}{}
67
68 \renewcommand*{\stockdbill}{}
69 \renewcommand*{\stockstatement}{}
70 \renewcommand*{\stockexecutive}{}
71 \renewcommand*{\stockletter}{}
72 \renewcommand*{\stockold}{}
73 \renewcommand*{\stocklegal}{}
74 \renewcommand*{\stockledger}{}
75 \renewcommand*{\stockbroadsheet}{}
76 \renewcommand*{\pagedbill}{}
77 \renewcommand*{\pagestatement}{}
78 \renewcommand*{\pageexecutive}{}
79 \renewcommand*{\pageletter}{}
80 \renewcommand*{\pageold}{}
81 \renewcommand*{\pagelegal}{}
82 \renewcommand*{\pageledger}{}

```

```
83 \renewcommand*{\pagebroadsheet}{}
84
85 \renewcommand*{\stockpottvo}{}
86 \renewcommand*{\stockfoolscapvo}{}
87 \renewcommand*{\stockcrownvo}{}
88 \renewcommand*{\stockpostvo}{}
89 \renewcommand*{\stocklargecrownvo}{}
90 \renewcommand*{\stocklargepostvo}{}
91 \renewcommand*{\stocksmalldemyvo}{}
92 \renewcommand*{\stockdemyvo}{}
93 \renewcommand*{\stockmediumvo}{}
94 \renewcommand*{\stocksmallroyalvo}{}
95 \renewcommand*{\stockroyalvo}{}
96 \renewcommand*{\stocksuperroyalvo}{}
97 \renewcommand*{\stockimperialvo}{}
98 \renewcommand*{\pagepottvo}{}
99 \renewcommand*{\pagefoolscapvo}{}
100 \renewcommand*{\pagecrownvo}{}
101 \renewcommand*{\pagepostvo}{}
102 \renewcommand*{\pagelargecrownvo}{}
103 \renewcommand*{\pagelargepostvo}{}
104 \renewcommand*{\pagesmalldemyvo}{}
105 \renewcommand*{\pagedemyvo}{}
106 \renewcommand*{\pagemediumvo}{}
107 \renewcommand*{\pagesmallroyalvo}{}
108 \renewcommand*{\pageroyalvo}{}
109 \renewcommand*{\pagesuperroyalvo}{}
110 \renewcommand*{\pageimperialvo}{}
111
112 \renewcommand*{\memfontfamily}{}
113 \renewcommand*{\memfontenc}{}
114 \renewcommand*{\memfontpack}{}
115
116 \renewcommand*{\anyptfilebase}{}
117 \renewcommand*{\anyptsize}{10}
118
119 \renewcommand*{\setstocksize}[2]{}
120 \renewcommand*{\settrimmedsize}[3]{}
121 \renewcommand*{\settrims}[2]{}
122
123 % \newlength{\lxvchars}
124 % \setlength{\lxvchars}{305pt}
125 % \newlength{\xlvchars}
126 % \setlength{\xlvchars}{190pt}
127 \renewcommand*{\setxlvchars}[1]{}
128 \renewcommand*{\setlxvchars}[1]{}
129
130 \renewcommand*{\settypeblocksize}[3]{}
131 \renewcommand*{\setlrmargins}[3]{}
132 \renewcommand*{\setlrmarginsandblock}[3]{}
133 \renewcommand*{\setbinding}[1]{}
134 \renewcommand*{\setulmargins}[3]{}
135 \renewcommand*{\setulmarginsandblock}[3]{}
136 \renewcommand*{\setcolsepandrule}[2]{}
137
```

```

138 \renewcommand*{\setheadfoot}[2]{}
139 \renewcommand*{\setheaderspaces}[3]{}
140 \renewcommand*{\setmarginnotes}[3]{}
141 \renewcommand*{\setfootins}[2]{}
142 \renewcommand*{\checkandfixthelayout}[1][{}]{ }
143 \renewcommand*{\checkthelayout}[1]{}
144 \renewcommand*{\fixthelayout}{}
145 %
146 % \newlength{\stockheight}
147 % \newlength{\trimtop}
148 % \newlength{\trimedge}
149 % \newlength{\stockwidth}
150 % \newlength{\spinewidth}
151 % \newlength{\foremargin}
152 % \newlength{\uppermargin}
153 % \newlength{\headmargin}
154 %
155 \renewcommand*{\typeoutlayout}{}
156 \renewcommand*{\typeoutstandardlayout}{}
157 \renewcommand*{\settypeoutlayoutunit}[1]{}
158 \renewcommand*{\fixpdflayout}{}
159 \renewcommand*{\fixdvipslayout}{}
160
161 \renewcommand*{\medievalpage}[1][{}]{ }
162 \renewcommand*{\isopage}[1][{}]{ }
163 \renewcommand*{\semiisopage}[1][{}]{ }
164
165 \renewcommand{\setpagebl}[3]{}
166 \renewcommand{\setpageml}[3]{}
167 \renewcommand{\setpagetl}[3]{}
168 \renewcommand{\setpagetm}[3]{}
169 \renewcommand{\setpagetr}[3]{}
170 \renewcommand{\setpagemr}[3]{}
171 \renewcommand{\setpagebr}[3]{}
172 \renewcommand{\setpagebm}[3]{}
173 \renewcommand{\setpagecc}[3]{}

```

#### § 534.4 Text and fonts

```

174 \let\miniscale\tiny
175 \let\HUGE\Huge
176
177 \renewcommand*{\abnormalparskip}[1]{}
178 \renewcommand*{\nonzeroparskip}{}
179 \renewcommand*{\traditionalparskip}{}
180
181 \let\onelineskip\baselineskip
182
183 \let\OnehalfSpacing\onehalfspacing
184 \let\DoubleSpacing\doublespacing
185 \renewcommand*{\setPagenoteSpacing}[1]{}
186 \renewcommand*{\setFloatSpacing}[1]{}
187 \let\SingleSpacing\singlespacing
188 \let\setSingleSpace\SetSinglespace
189 \let\SingleSpace\singlespace

```

```

190 \let\endSingleSpace\endsinglespace
191 \let\Spacing\spacing
192 \let\endSpacing\endspacing
193 \let\OnehalfSpace\onehalfspace
194 \let\endOnehalfSpace\endonehalfspace
195 \csletcs{OnehalfSpace*}{onehalfspace}
196 \csletcs{endOnehalfSpace*}{endonehalfspace}
197 \let\DoubleSpace\doublespace
198 \let\endDoubleSpace\enddoublespace
199 \csletcs{DoubleSpace*}{doublespace}
200 \csletcs{endDoubleSpace*}{enddoublespace}
201 \renewcommand*{\setDisplayskipStretch}[1]{}
202 \renewcommand*{\memdskipstretch}{}
203 \renewcommand*{\noDisplayskipStretch}{}
204 \renewcommand*{\memdskips}{}
205
206 \renewcommand*{\midsloppy}{}
207 \renewenvironment*{midsloppypar}{}{}
208
209 \renewcommand*{\sloppybottom}{}

```

### § 534.5 Titles

```

210 \csletcs{titlingpage*}{titlingpage}
211 \csletcs{endtitlingpage*}{endtitlingpage}
212 \let\titlingpageend\relax
213 \newcommand{\titlingpageend}[2]{}
214 \let\andnext\and
215 \renewcommand*{\thanksmarkstyle}[1]{}
216 \renewcommand{\thanksfootmark}{%
217 \thanksscript{\tmark}%
218 }
219
220 % \newlength{\thanksmarksep}

```

### § 534.6 Abstracts

```

221 \renewcommand*{\abstractcol}{}
222 \renewcommand*{\abstractintoc}{}
223 \renewcommand*{\abstractnum}{}
224 \renewcommand*{\abstractrunin}{}

```

### § 534.7 Document divisions

\book \* (*<2:PDF name>*) [*<3:TOC name>*] [*<4:PDF name>*] (*<5:PDF name>*) {*<6:name>*}

```

225 \DeclareDocumentCommand{\book}{s d() o o d() m}{%
226 \LWR@section{#1}{#3}{#6}{book}%
227 }

```

```

228 \def\@apppage{%
229 \part*{\appendixpagename}
230 }
231 \renewcommand\mempreaddapppagetotochook{}
232 \renewcommand\mempostaddapppagetotochook{}

```

```
233
234 \def\sappage{%
235 \part*\appendixpagename}
236 }

237 \DeclareDocumentCommand{\mainmatter}{s}{%
238 \booltrue{LWR@mainmatter}%
239 }
240
241 \DeclareDocumentCommand{\frontmatter}{s}{%
242 \boolfalse{LWR@mainmatter}%
243 }

244 \renewcommand*\raggedbottomsection{}
245 \renewcommand*\normalbottomsection{}
246 \renewcommand*\bottomsectionskip{}
247 \renewcommand*\bottomsectionpenalty{}
248 \csletcs{appendixpage*}{appendixpage}
249 \renewcommand*\namedsubappendices{}
250 \renewcommand*\unnamedsubappendices{}
251 \renewcommand*\setsecnumdepth[1]{}% todo tocvsec2
252 \renewcommand*\maxsecnumdepth[1]{}% todo tocvsec2
253 \renewcommand*\beforebookskip{}
254 \renewcommand*\afterbookskip{}
255 \renewcommand*\beforepartskip{}
256 \renewcommand*\afterpartskip{}
257 \renewcommand*\midbookskip{}
258 \renewcommand*\midpartskip{}
259 \renewcommand*\printbookname{}
260 \renewcommand*\booknamefont{}
261 \renewcommand*\booknamenum{}
262 \renewcommand*\printbooknum{}
263 \renewcommand*\booknumfont{}
264 \renewcommand*\printpartname{}
265 \renewcommand*\partnamefont{}
266 \renewcommand*\partnamenum{}
267 \renewcommand*\printpartnum{}
268 \renewcommand*\partnumfont{}
269 \renewcommand*\printbooktitle[1]{}
270 \renewcommand*\booktitlefont{}
271 \renewcommand*\printparttitle[1]{}
272 \renewcommand*\parttitlefont{}
273 \renewcommand*\bookpageend{}
274 \renewcommand*\bookblankpage{}
275 \renewcommand*\nobookblankpage{}
276 \renewcommand*\partpageend{}
277 \renewcommand*\partblankpage{}
278 \renewcommand*\nopartblankpage{}
279 \RenewDocumentCommand{\newleadpage}{s o m}{}% todo
280 \RenewDocumentCommand{\renewleadpage}{s o m}{}% todo
281 \renewcommand*\leadpagetoclevel{chapter}
282
283 \renewcommand*\openright{}
284 \renewcommand*\openleft{}
285 \renewcommand*\openany{}

```

```

286 \renewcommand*{\clearforchapter}{}
287 \renewcommand*{\memendofchapterhook}{}
288 \renewcommand*{\chapterheadstart}{}
289 % \newlength{\beforechapskip}
290 \renewcommand*{\afterchapternum}{}
291 % \newlength{\midchapskip}
292 \renewcommand*{\afterchaptertitle}{}
293 % \newlength{\afterchapskip}
294 \renewcommand*{\printchaptername}{}
295 \renewcommand*{\chapnamefont}{}
296 \renewcommand*{\chapternamenum}{}
297 \renewcommand*{\printchapternum}{}
298 \renewcommand*{\chapnumfont}{}
299 \renewcommand{\printchaptertitle}[1]{}
300 \renewcommand*{\chapttitlefont}{}
301 \renewcommand*{\printchapternonum}{}
302 \renewcommand*{\indentafterchapter}{}
303 \renewcommand*{\noindentafterchapter}{}
304 \renewcommand*{\insertchapterspace}{}
305
306 \renewcommand*{\chapterstyle}[1]{}
307 \renewcommand{\makechapterstyle}[2]{}
308 \renewcommand*{\chapindent}{}
309 \let\chapterprecis\cftchapterprecis
310 \let\chapterprecishere\cftchapterprecishere
311 \let\chapterprecistoc\cftchapterprecistoc
312 \renewcommand*{\precisfont}{}
313 \renewcommand*{\prechapterprecis}{}
314 \renewcommand*{\postchapterprecis}{}
315 \renewcommand{\precistocetext}[1]{}
316 \renewcommand*{\precistocfont}{}
317 \renewcommand*{\precistocformat}{}
318 % \newlength{\prechapterprecisshift}
319
320 \renewcommand*{\setbeforesecskip}[1]{}
321 \renewcommand*{\setaftersecskip}[1]{}
322 \renewcommand*{\setsecindent}[1]{}
323 \renewcommand*{\setsecheadstyle}[1]{}
324 \renewcommand*{\setbeforesubsecskip}[1]{}
325 \renewcommand*{\setaftersubsecskip}[1]{}
326 \renewcommand*{\setsubsecindent}[1]{}
327 \renewcommand*{\setsubsecheadstyle}[1]{}
328 \renewcommand*{\setbeforesubsubsecskip}[1]{}
329 \renewcommand*{\setaftersubsubsecskip}[1]{}
330 \renewcommand*{\setsubsubsecindent}[1]{}
331 \renewcommand*{\setsubsubsecheadstyle}[1]{}
332 \renewcommand*{\setbeforeparaskip}[1]{}
333 \renewcommand*{\setafterparaskip}[1]{}
334 \renewcommand*{\setparaindent}[1]{}
335 \renewcommand*{\setparaheadstyle}[1]{}
336 \renewcommand*{\setbeforesubparaskip}[1]{}
337 \renewcommand*{\setaftersubparaskip}[1]{}
338 \renewcommand*{\setsubparaindent}[1]{}
339 \renewcommand*{\setsubparaheadstyle}[1]{}
340 \renewcommand{\@hangfrom}[1]{#1}

```

```

341 \renewcommand{\sethangfrom}[1]{}
342 \renewcommand{\setsecnumformat}[1]{}
343
344 \renewcommand*{\hangsecnum}{}
345 \renewcommand*{\defaultsecnum}{}
346
347 \renewcommand*{\sechook}{}
348 \renewcommand{\setsechook}[1]{}
349 \renewcommand*{\subsechook}{}
350 \renewcommand{\setsubsechook}[1]{}
351 \renewcommand*{\subsubsechook}{}
352 \renewcommand{\setsubsubsechook}[1]{}
353 \renewcommand*{\parahook}{}
354 \renewcommand{\setparahook}[1]{}
355 \renewcommand*{\subparahook}{}
356 \renewcommand{\setsubparahook}[1]{}
357
358 \RenewDocumentCommand{\plainbreak}{s m}{\begin{center}~\end{center}}
359
360 \RenewDocumentCommand{\fancybreak}{s +m}{%
361 \begin{center}#2\end{center}%
362 }
363
364 \RenewDocumentCommand{\plainfancybreak}{s m m +m}{%
365 \begin{center}#4\end{center}%
366 }
367
368 \RenewDocumentCommand{\pfbreak}{s}{%
369 \begin{center}
370 \pfbreakdisplay
371 \end{center}
372 }
373
374 % \newlength{\pfbreakskip}
375 \renewcommand{\pfbreakdisplay}{*\quad*\quad*}
376
377 \renewcommand{\makeheadstyles}[2]{}
378 \renewcommand*{\headstyles}[1]{}

```

## § 534.8 Pagination and headers

```

379 \renewcommand*{\savepagenumber}{}
380 \renewcommand*{\restorepagenumber}{}
381 \renewcommand*{\uppercaseheads}{}
382 \renewcommand*{\nouppercaseheads}{}
383
384 \renewcommand*{\bookpagemark}[1]{}
385 \renewcommand*{\partmark}[1]{}
386 \renewcommand*{\bibmark}{}
387 \renewcommand*{\indexmark}{}
388 \renewcommand*{\glossarymark}{}
389
390 \LWR@origpagestyle{empty}
391 \renewcommand*{\ps@empty}{}
392 \renewcommand*{\makepagestyle}[1]{}

```

```

393 \renewcommand*\emptyshook{}\%
394 % \renewcommand*\empty@oddhead{}\%
395 % \renewcommand*\empty@oddfoot{}\%
396 % \renewcommand*\empty@evenhead{}\%
397 % \renewcommand*\empty@evenfoot{}\%
398 \renewcommand*\@oddhead{}\%
399 \renewcommand*\@oddfoot{}\%
400 \renewcommand*\@evenhead{}\%
401 \renewcommand*\@evenfoot{}\%
402 \renewcommand*\aliaspagestyle[2]\%
403 \renewcommand*\copypagestyle[2]\%
404
405 \renewcommand*\makeevenhead[4]\%
406 \renewcommand*\makeoddhead[4]\%
407 \renewcommand*\makeevenfoot[4]\%
408 \renewcommand*\makeoddfoot[4]\%
409 \renewcommand*\makerunningwidth[3]\%
410 % \newlength\headwidth
411 \renewcommand*\makeheadrule[3]\%
412 \renewcommand*\makefootrule[3]\%
413 \renewcommand*\makeheadfootruleprefix[3]\%
414 % \newlength\normalrulethickness
415 % \setlength\normalrulethickness{.4pt}
416 % \newlength\footruleheight
417 % \newlength\footruleskip
418 \renewcommand*\makeheadposition[5]\%
419 \renewcommand*\makepsmarks[2]\%
420 \renewcommand*\makeheadfootstrut[3]\%
421
422 \renewcommand\createplainmark[3]\%
423 \renewcommand\memUChad[1]\%
424 \renewcommand\createmark[5]\%
425 \renewcommand*\clearplainmark[1]\%
426 \renewcommand*\clearmark[1]\%
427 \renewcommand\addtopsmarks[3]\%
428 \renewcommand\ifonlyfloats[2]\%#2
429 \renewcommand*\mergepagefloatstyle[3]\%
430
431 \renewcommand*\framepichead{}\%
432 \renewcommand*\framepictextfoot{}\%
433 \renewcommand*\framepichook{}\%
434 \renewcommand*\showheadfootlocoff{}\%
435 \renewcommand*\showtextblocklocoff{}\%

```

### § 534.9 Paragraphs and lists

```

436 \renewcommand\hangfrom[1]\%#1
437 \let\centerfloat\centering
438 \renewcommand*\raggedyright[1]\%
439 % \newlength\ragrparindent
440 \renewcommand\sourceatright[2]\%[\attribution{#2}]
441 \let\memorigdbs\LWR@endofline
442 \let\memorigpar\par
443 \let\atcentercr\LWR@endofline
444

```

```

445 \renewcommand*{\linenottooshort}[1][{}]{
446 \renewcommand*{\russianpar}{}
447 \renewcommand*{\lastlinerulefill}{}
448 \renewcommand*{\lastlineparrule}{}
449 \renewcommand*{\justlastraggedleft}{}
450 \renewcommand*{\raggedrightthenleft}{}
451 \renewcommand*{\leftcenterright}{}
452
453 \renewcommand{\leftspringright}[4]{%
454 \begin{minipage}{#1\linewidth}#3\end{minipage}\quad%
455 \begin{minipage}{#2\linewidth}\begin{flushright}#4\end{flushright}\end{minipage}%
456 }
457
458 \renewenvironment*{blockdescription}
459 {\LWR@descriptionstart\LWR@origdescription}
460 {\enddescription}
461 \renewcommand*{\blockdescriptionlabel}[1]{\textbf{#1}}
462 \renewenvironment*{labelled}[1]{\begin{description}}{\end{description}}
463 \renewenvironment*{flexlabelled}[6]{\begin{description}}{\end{description}}
464 \renewcommand*{\tightlists}{}
465 \renewcommand*{\defaultlists}{}
466 \RenewDocumentCommand{\firmlists}{s}{}
467 \renewcommand*{\firmlist}{}
468 \renewcommand*{\tightlist}{}
469 \renewcommand*{\zerotrivseps}{}
470 \renewcommand*{\savetrivseps}{}
471 \renewcommand*{\restoretrivseps}{}

```

## § 534.10 Contents lists

```

472 \csletcs{tableofcontents*}{tableofcontents}
473 \csletcs{listoffigures*}{listoffigures}
474 \csletcs{listoftables*}{listoftables}
475 \renewenvironment{KeepFromToc}{}{}
476 \renewcommand*{\onecoltocetc}{}
477 \renewcommand*{\twocoltocetc}{}
478 \renewcommand*{\ensureonecol}{}
479 \renewcommand*{\restorefromonecol}{}
480 \renewcommand*{\doccoltocetc}{}
481 \renewcommand*{\maxtocdepth}[1]{}% tocvsec2
482 \renewcommand*{\settocdepth}[1]{}% tocvsec2
483
484 \renewcommand{\totheadstart}{}
485 \renewcommand{\printtoctitle}[1]{}
486 \renewcommand{\tocmark}{}
487 \renewcommand{\aftertocitle}{}
488 \renewcommand{\lofheadstart}{}
489 \renewcommand{\printloftitle}[1]{}
490 \renewcommand{\lofmark}{}
491 \renewcommand{\afterloftitle}{}
492 \renewcommand{\lotheadstart}{}
493 \renewcommand{\printlottitle}[1]{}
494 \renewcommand{\lotmark}{}
495 \renewcommand{\afterlottitle}{}
496

```

```

497 \renewcommand*{\setpnumwidth}[1]{
498 \renewcommand*{\setrmarg}[1]{
499 \renewcommand*{\cftbookbreak}{}
500 \renewcommand*{\cftpartbreak}{}
501 \renewcommand*{\cftchapterbreak}{}

502 % \newlength{\cftbeforebookskip}
503 % \newlength{\cftbookindent}
504 % \newlength{\cftbooknumwidth}
505 \renewcommand*{\cftbookfont}{}
506 \renewcommand*{\cftbookname}{}
507 \renewcommand*{\cftbookpresnum}{}
508 \renewcommand*{\cftbookaftersnum}{}
509 \renewcommand*{\cftbookaftersnumb}{}
510 \renewcommand*{\cftbookleader}{}
511 \renewcommand*{\cftbookdotsep}{1}
512 \renewcommand*{\cftbookpagefont}{}
513 \renewcommand*{\cftbookafterpnum}{}
514 \renewcommand*{\cftbookformatpnum}[1]{
515 \renewcommand*{\cftbookformatpnumhook}[1]{

```

Part is already defined by `tocloft`.

```

516 % \newlength{\cftbeforechapterskip}
517 % \newlength{\cftchapterindent}
518 % \newlength{\cftchapternumwidth}
519 \renewcommand*{\cftchapterfont}{}
520 \renewcommand*{\cftchaptername}{}
521 \renewcommand*{\cftchapterpresnum}{}
522 \renewcommand*{\cftchapteraftersnum}{}
523 \renewcommand*{\cftchapteraftersnumb}{}
524 \renewcommand*{\cftchapterleader}{}
525 \renewcommand*{\cftchapterdotsep}{1}
526 \renewcommand*{\cftchapterpagefont}{}
527 \renewcommand*{\cftchapterafterpnum}{}
528 \renewcommand*{\cftchapterformatpnum}[1]{
529 \renewcommand*{\cftchapterformatpnumhook}[1]{

530 % \newlength{\cftbeforesectionskip}
531 % \newlength{\cftsectionindent}
532 % \newlength{\cftsectionnumwidth}
533 \renewcommand*{\cftsectionfont}{}
534 \renewcommand*{\cftsectionname}{}
535 \renewcommand*{\cftsectionpresnum}{}
536 \renewcommand*{\cftsectionaftersnum}{}
537 \renewcommand*{\cftsectionaftersnumb}{}
538 \renewcommand*{\cftsectionleader}{}
539 \renewcommand*{\cftsectiondotsep}{1}
540 \renewcommand*{\cftsectionpagefont}{}
541 \renewcommand*{\cftsectionafterpnum}{}
542 \renewcommand*{\cftsectionformatpnum}[1]{
543 \renewcommand*{\cftsectionformatpnumhook}[1]{

544 % \newlength{\cftbeforesubsectionskip}
545 % \newlength{\cftsubsectionindent}
546 % \newlength{\cftsubsectionnumwidth}

```

```
547 \renewcommand*{\cftsubsectionfont}{}
548 \renewcommand*{\cftsubsectionname}{}
549 \renewcommand*{\cftsubsectionpresnum}{}
550 \renewcommand*{\cftsubsectionaftersnum}{}
551 \renewcommand*{\cftsubsectionaftersnumb}{}
552 \renewcommand*{\cftsubsectionleader}{}
553 \renewcommand*{\cftsubsectiondotsep}{1}
554 \renewcommand*{\cftsubsectionpagefont}{}
555 \renewcommand*{\cftsubsectionafterpnum}{}
556 \renewcommand*{\cftsubsectionformatpnum}[1]{}
557 \renewcommand*{\cftsubsectionformatpnumhook}[1]{}

558 % \newlength{\cftbeforesubsubsectionsip}
559 % \newlength{\cftsubsubsubsectionindent}
560 % \newlength{\cftsubsubsubsectionnumwidth}
561 \renewcommand*{\cftsubsubsubsectionfont}{}
562 \renewcommand*{\cftsubsubsubsectionname}{}
563 \renewcommand*{\cftsubsubsubsectionpresnum}{}
564 \renewcommand*{\cftsubsubsubsectionaftersnum}{}
565 \renewcommand*{\cftsubsubsubsectionaftersnumb}{}
566 \renewcommand*{\cftsubsubsubsectionleader}{}
567 \renewcommand*{\cftsubsubsubsectiondotsep}{1}
568 \renewcommand*{\cftsubsubsubsectionpagefont}{}
569 \renewcommand*{\cftsubsubsubsectionafterpnum}{}
570 \renewcommand*{\cftsubsubsubsectionformatpnum}[1]{}
571 \renewcommand*{\cftsubsubsubsectionformatpnumhook}[1]{}

572 % \newlength{\cftbeforeparagraphskip}
573 % \newlength{\cftparagraphindent}
574 % \newlength{\cftparagraphnumwidth}
575 \renewcommand*{\cftparagraphfont}{}
576 \renewcommand*{\cftparagraphname}{}
577 \renewcommand*{\cftparagraphpresnum}{}
578 \renewcommand*{\cftparagraphaftersnum}{}
579 \renewcommand*{\cftparagraphaftersnumb}{}
580 \renewcommand*{\cftparagraphleader}{}
581 \renewcommand*{\cftparagraphdotsep}{1}
582 \renewcommand*{\cftparagraphpagefont}{}
583 \renewcommand*{\cftparagraphafterpnum}{}
584 \renewcommand*{\cftparagraphformatpnum}[1]{}
585 \renewcommand*{\cftparagraphformatpnumhook}[1]{}

586 % \newlength{\cftbeforesubparagraphskip}
587 % \newlength{\cftsubparagraphindent}
588 % \newlength{\cftsubparagraphnumwidth}
589 \renewcommand*{\cftsubparagraphfont}{}
590 \renewcommand*{\cftsubparagraphname}{}
591 \renewcommand*{\cftsubparagraphpresnum}{}
592 \renewcommand*{\cftsubparagraphaftersnum}{}
593 \renewcommand*{\cftsubparagraphaftersnumb}{}
594 \renewcommand*{\cftsubparagraphleader}{}
595 \renewcommand*{\cftsubparagraphdotsep}{1}
596 \renewcommand*{\cftsubparagraphpagefont}{}
597 \renewcommand*{\cftsubparagraphafterpnum}{}
598 \renewcommand*{\cftsubparagraphformatpnum}[1]{}
599 \renewcommand*{\cftsubparagraphformatpnumhook}[1]{}

```

```
600 % \newlength{\cftbeforefigureskip}
601 % \newlength{\cftfigureindent}
602 % \newlength{\cftfigurenumwidth}
603 \renewcommand*{\cftfigurefont}{}
604 \renewcommand*{\cftfigurename}{}
605 \renewcommand*{\cftfigurepresnum}{}
606 \renewcommand*{\cftfigureaftersnum}{}
607 \renewcommand*{\cftfigureaftersnumb}{}
608 \renewcommand*{\cftfigureleader}{}
609 \renewcommand*{\cftfiguredotsep}{1}
610 \renewcommand*{\cftfigurepagefont}{}
611 \renewcommand*{\cftfigureafterpnum}{}
612 \renewcommand*{\cftfigureformatpnum}[1]{}
613 \renewcommand*{\cftfigureformatpnumhook}[1]{}

614 % \newlength{\cftbeforesubfigureskip}
615 % \newlength{\cftsubfigureindent}
616 % \newlength{\cftsubfigurenumwidth}
617 \newcommand*{\cftsubfigurefont}{}
618 \newcommand*{\cftsubfigurename}{}
619 \newcommand*{\cftsubfigurepresnum}{}
620 \newcommand*{\cftsubfigureaftersnum}{}
621 \newcommand*{\cftsubfigureaftersnumb}{}
622 \newcommand*{\cftsubfigureleader}{}
623 \newcommand*{\cftsubfiguredotsep}{1}
624 \newcommand*{\cftsubfigurepagefont}{}
625 \newcommand*{\cftsubfigureafterpnum}{}
626 \newcommand*{\cftsubfigureformatpnum}[1]{}
627 \newcommand*{\cftsubfigureformatpnumhook}[1]{}

628 % \newlength{\cftbeforetableskip}
629 % \newlength{\cfttableindent}
630 % \newlength{\cfttablenumwidth}
631 \renewcommand*{\cfttablefont}{}
632 \renewcommand*{\cfttablename}{}
633 \renewcommand*{\cfttablepresnum}{}
634 \renewcommand*{\cfttableaftersnum}{}
635 \renewcommand*{\cfttableaftersnumb}{}
636 \renewcommand*{\cfttableleader}{}
637 \renewcommand*{\cfttabledotsep}{1}
638 \renewcommand*{\cfttablepagefont}{}
639 \renewcommand*{\cfttableafterpnum}{}
640 \renewcommand*{\cfttableformatpnum}[1]{}
641 \renewcommand*{\cfttableformatpnumhook}[1]{}

642 % \newlength{\cftbeforesubtableskip}
643 % \newlength{\cftsubtableindent}
644 % \newlength{\cftsubtablenumwidth}
645 \newcommand*{\cftsubtablefont}{}
646 \newcommand*{\cftsubtablename}{}
647 \newcommand*{\cftsubtablepresnum}{}
648 \newcommand*{\cftsubtableaftersnum}{}
649 \newcommand*{\cftsubtableaftersnumb}{}
650 \newcommand*{\cftsubtableleader}{}
651 \newcommand*{\cftsubtabledotsep}{1}
652 \newcommand*{\cftsubtablepagefont}{}

```

```

653 \newcommand*{\cftsubtableafterpnum}{}
654 \newcommand*{\cftsubtableformatpnum}[1]{}
655 \newcommand*{\cftsubtableformatpnumhook}[1]{}

656 \renewcommand*{\booknumberline}[1]{}
657 \renewcommand*{\partnumberline}[1]{}
658 \renewcommand*{\chapternumberline}[1]{}
659 \renewcommand*{\numberlinehook}[1]{}
660 % \renewcommand*{\cftwhatismyname}{}%
661 \renewcommand*{\booknumberlinehook}[1]{}
662 \renewcommand*{\partnumberlinehook}[1]{}
663 \renewcommand*{\chapternumberlinehook}[1]{}
664 \renewcommand{\numberlinebox}[2]{}
665 \renewcommand{\booknumberlinebox}[2]{}
666 \renewcommand{\partnumberlinebox}[2]{}
667 \renewcommand{\chapternumberlinebox}[2]{}
668 %
669 % \newlength{\cftparfillskip}
670 \renewcommand*{\cftpagenumbersoff}[1]{}
671 \renewcommand*{\cftpagenumberon}[1]{}
672 \renewcommand*{\cftlocalchange}[3]{}
673 \renewcommand*{\cftaddtitleline}[4]{}
674 \renewcommand*{\cftaddnumtitleline}[4]{}
675 \renewcommand{\cftinsertcode}[2]{}
676 \renewcommand{\cftinserthook}[2]{}
677 \renewcommand{\settocpreprocessor}[2]{}
678 \DeclareRobustCommand{\cftpagenumbersoff}[1]{}
679 \DeclareRobustCommand{\cftpagenumberon}[1]{}

```

### § 534.11 Floats and captions

`\newfloat` [*(1: within)*] [*(2: type)*] [*(3: ext)*] [*(4: capname)*]

```

680 \RenewDocumentCommand{\newfloat}{o m m m}{%
681 \IfValueTF{#1}%
682 {\DeclareFloatingEnvironment[fileext=#3,within=#1,name={#4}]{#2}}%
683 {\DeclareFloatingEnvironment[fileext=#3,name={#4}]{#2}}%

```

`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.

```

684 \cslet{\listof#2s}\relax%
685 \cslet{\listof#2es}\relax%
686 }

```

`\newlistof` [*(within)*] [*(type)*] [*(ext)*] [*(listofname)*]

Emulated through the `\newfloat` mechanism. Note that `memoir` uses a different syntax than `tocloft` for the name.

```

687 \RenewDocumentCommand{\newlistof}{o m m m}
688 {%
689 \IfValueTF{#1}
690 {\newlistentry[#1]{#2}{#3}{0}}
691 {\newlistentry{#2}{#3}{0}}
692 \@namedef{ext@#2}{#3}%
693 \ifundefined{c@#3depth}{\newcounter{#3depth}}{}%

```

```

694 \setcounter{#3depth}{1}%
695 \@namedef{#3mark}{}%
696 \@namedef{#2}{\listof{#2}{#4}}
697 \@namedef{@cftmake#3title}{}
698 \@ifundefined{cftbefore#3titleskip}{
699 \expandafter\newlength\csname cftbefore#3titleskip\endcsname
700 \expandafter\newlength\csname cftafter#3titleskip\endcsname
701 }{}
702 \@namedef{cft#3titlefont}{}
703 \@namedef{cftafter#3title}{}
704 \@namedef{cft#3prehook}{}
705 \@namedef{cft#3posthook}{}
706 }

707 \renewcommand{\setfloatadjustment}[2]{}

```

Borrowed from the lwarp version of keyfloat:

```

708 \NewDocumentEnvironment{KFLTmemoir@marginfloat}{0{-1.2ex} m}
709 {% start
710 \LWR@BlockClassWP{float:right; width:2in; margin:10pt}{}{marginblock}%
711 \captionsetup{type=#2}%
712 }
713 {%
714 \endLWR@BlockClassWP%
715 }
716
717 \DeclareDocumentEnvironment{marginfigure}{o}
718 {\begin{KFLTmemoir@marginfloat}{figure}}
719 {\end{KFLTmemoir@marginfloat}}
720
721 \DeclareDocumentEnvironment{margintable}{o}
722 {\begin{KFLTmemoir@marginfloat}{table}}
723 {\end{KFLTmemoir@marginfloat}}

724 \renewcommand{\setmarginfloatcaptionadjustment}[2]{}
725 \renewcommand{\setmpjustification}[2]{}
726 \renewcommand*\setmpjustification{}
727 \renewcommand*\setfloatlocations}[2]{}
728 \DeclareDocumentCommand\suppressfloats{o}{}
729 \renewcommand*\FloatBlock{}
730 \renewcommand*\FloatBlockAllowAbove{}
731 \renewcommand*\FloatBlockAllowBelow{}
732 \renewcommand*\setFloatBlockFor{}
733
734 \renewcommand{\captiontitlefinal}[1]{}
735
736 \renewcommand{\flegtable}{\tablename}
737 \renewcommand{\flegfigure}{\figurename}
738 \renewcommand{\flegtocfigure}{}
739 \renewcommand{\flegtocfigure}{}
740
741
742 \renewcommand{\subcaption}[2][{}]{%
743 \ifblank{#1}{\subfloat[#2]}{\subfloat[#1][#2]}}%

```

```

744 }
745
746 \renewcommand{\contsubcaption}{\ContinuedFloat\subcaption}
747
748 \LetLtxMacro\subcaptionref\subref
749
750 \renewcommand*{\tightsubcaptions}{}
751 \renewcommand*{\loosesubcaptions}{}
752
753 \renewcommand*{\subcaptionsize}[1]{}
754 \renewcommand*{\subcaptionlabelfont}[1]{}
755 \renewcommand*{\subcaptionfont}[1]{}
756 \renewcommand*{\subcaptionstyle}[1]{}
757
758 \renewcommand*{\hangsubcaption}{}
759 \renewcommand*{\shortsubcaption}{}
760 \renewcommand*{\normalsubcaption}{}
761
762 \RenewDocumentEnvironment{sidecaption}{o m o}
763 {}
764 {
765 \IfValueTF{#1}{\caption[#1]{#2}}{\caption{#2}}%
766 \IfValueT{#3}{\label{#3}}%
767 }
768
769 % \newlength{\sidecapwidth}
770 % \newlength{\sidecapsep}
771 \renewcommand*{\setsidecaps}[2]{}
772 \renewcommand*{\sidecapmargin}[1]{}
773 % \newif\ifscapmargleft
774 \scapmargleftfalse
775 \renewcommand*{\setsidecappos}[1]{}
776
777 \RenewDocumentEnvironment{sidecontcaption}{m o}
778 {}
779 {%
780 \ContinuedFloat%
781 \caption{#1}%

```

Without \@captype, the section is referred to instead.

```

782 \IfValueT{#2}{\label[\@captype]{#2}}%
783 }

```

\sidenamedlegend does not appear to use the toc argument.

```

784 \renewenvironment{sidenamedlegend}[2][]{
785 \begin{center}
786 \@nameuse{\@captype name}\CaptionSeparator#2
787 \end{center}
788 }
789 {}
790
791 \renewenvironment{sidelegend}[1]
792 {\begin{center}

```

```

793 #1
794
795 }
796 {\end{center}}
797
798 \renewcommand*{\sidecapstyle}{}
799 \renewcommand*{\overridescapmargin}[1]{}
800 % \newlength{\sidecapraise}
801 \renewcommand*{\sidecapfloatwidth}{\linewidth}
802
803 \LetLtxMacro\ctabular\tabular
804 \LetLtxMacro\endctabular\endtabular
805
806 \renewcommand{\autorows}[5][1]{%
807 #5
808 }
809
810 \renewcommand{\autocol}[5][1]{%
811 #5
812 }

```

## § 534.12 Page notes

```

813 \renewcommand*{\feetabovelfloat}{}
814 \renewcommand*{\feetbelowfloat}{}
815 \renewcommand*{\feetatbottom}{}
816
817 \renewcommand*{\verbfootnote}[2][1]{
818 \PackageError{lwarp, memoir}
819 {Verbatim footnotes are not yet supported by lwarp.}
820 {This may be improved some day.}
821 }
822
823 \renewcommand*{\plainfootnotes}{}
824 \renewcommand*{\twocolumnfootnotes}{}
825 \renewcommand*{\threecolumnfootnotes}{}
826 \renewcommand*{\paragraphfootnotes}{}
827 \renewcommand*{\footfudgefiddle}{}
828
829 \renewcommand*{\newfootnoteseries}[1]{
830 \PackageError{lwarp, memoir}
831 {Memoir footnote series are not yet supported by lwarp.}
832 {This may be improved some day.}
833 }
834
835 \renewcommand*{\plainfootstyle}[1]{}
836 \renewcommand*{\twocolumnfootstyle}[1]{}
837 \renewcommand*{\threecolumnfootstyle}[1]{}
838 \renewcommand*{\paragraphfootstyle}[1]{}
839
840 \renewcommand*{\footfootmark}{}
841 \renewcommand*{\footmarkstyle}[1]{}
842
843 % \newlength{\footmarkwidth}
844 % \newlength{\footmarksep}

```

```
845 % \newlength{\footparindent}
846
847 \renewcommand*{\foottextfont}{}
848
849 \renewcommand*{\marginparmargin}[1]{}
850 \renewcommand*{\sideparmargin}[1]{}
851
852 \LetLtxMacro\sidepar\marginpar
853 \renewcommand*{\sideparfont}{}
854 \renewcommand*{\sideparform}{}
855 \LWR@provideLength{\sideparvshift}
856
857 \renewcommand*{\parnopar}{}
858
859 \renewcommand{\sidebar}[1]{\begin{quote}#1\end{quote}}
860 \renewcommand*{\sidebarmargin}[1]{}
861 \renewcommand*{\sidebarfont}{}
862 \renewcommand*{\sidebarform}{}
863 % \newlength{\sidebarhsep}
864 % \newlength{\sidebarvsep}
865 % \newlength{\sidebarwidth}
866 % \newlength{\sidebartopsep}
867 \renewcommand{\setsidebarheight}[1]{}
868 \renewcommand*{\setsidebars}[6]{}
869 \renewcommand*{\footnotesatfoot}{}
870 \renewcommand*{\footnotesinmargin}{}
871
872 \LetLtxMacro\sidefootnote\footnote
873 \LetLtxMacro\sidefootnotemark\footnotemark
874 \LetLtxMacro\sidefootnotetext\footnotetext
875
876 \renewcommand*{\sidefootmargin}[1]{}
877 % \newlength{\sidefoothsep}
878 % \newlength{\sidefootvsep}
879 % \newlength{\sidefootwidth}
880 % \newlength{\sidefootadjust}
881 % \newlength{\sidefootheight}
882 \renewcommand*{\setsidefootheight}[1]{}
883 % \renewcommand*{\sidefootfont}{}% in docs but not in the package
884 \renewcommand*{\setsidefeet}[6]{}
885 \renewcommand*{\sidefootmarkstyle}[1]{}
886 \renewcommand*{\sidefoottextfont}{}
887 \renewcommand*{\sidefootform}{}
888
889 \renewcommand*{\continuousnotenums}{\pncontopttrue}% from pagenote
890 \renewcommand*{\notepageref}{}
891 \renewcommand*{\prenotetext}{}
892 \renewcommand*{\postnotetext}{}
893 \renewcommand*{\idtextinnotes}[1]{}
894 \renewcommand*{\printpageinnotes}[1]{}
895 \renewcommand*{\printpageinnoteshyperref}[1]{}
896 \renewcommand*{\foottopagenote}{}
897 \renewcommand*{\pagetofootnote}{}

```

### § 534.13 **Decorative text**

```
898 \renewcommand*{\epigraphposition}[1]{}
899 \renewcommand*{\epigraphtextposition}[1]{}
900 \renewcommand*{\epigraphsourceposition}[1]{}
901 \renewcommand*{\epigraphfontsize}[1]{}
902 \renewcommand*{\epigraphforheader}[2]{}
903 \renewcommand*{\epigraphpicture}{}

```

### § 534.14 **Poetry**

```
904 \renewcommand*{\vinphantom}{}
905 \renewcommand*{\vleftofline}[1]{#1}
906 % \let\linenumberfrequency\poemlines
907 % \renewcommand*{\linenumberfont}[1]{}
908
909 \DeclareDocumentCommand{\PoemTitle}{s o o m}{%
910 \IfValueTF{#2}%
911 {\poemtitle[#2]{#4}}%
912 {\poemtitle{#4}}%
913 }
914
915 \renewcommand*{\NumberPoemTitle}{}
916 \renewcommand*{\PlainPoemTitle}{}
917 \renewcommand*{\poemtitlepstyle}{}
918 \renewcommand*{\poemtitlestarmark}[1]{}
919 \renewcommand*{\poemtitlestarpstyle}{}
920 \renewcommand*{\PoemTitleheadstart}{}
921 \renewcommand*{\printPoemTitlenonum}{}
922 \renewcommand*{\printPoemTitlenum}{}
923 \renewcommand*{\afterPoemTitlenum}{}
924 \renewcommand*{\printPoemTitletitle}[1]{}
925 \renewcommand*{\afterPoemTitle}{}
926 \newlength{\midpoemtitleskip}
927 \renewcommand*{\PoemTitlenumfont}{}
928 \renewcommand*{\PoemTitlefont}{}

```

### § 534.15 **Boxes, verbatims and files**

```
929 \renewenvironment{qframe}{\framed}{\endframed}
930 \renewenvironment{qshade}{\shaded}{\endshaded}

```

Use the comment package:

```
931 \renewcommand*{\commentsoff}[1]{\includecomment{#1}}
932 \renewcommand*{\commentson}[1]{\excludecomment{#1}}
933 \LetLtxMacro\renewcomment\commentson
934
935 \renewcommand*{\setverbatimfont}[1]{}
936 \renewcommand*{\tabson}[1]{}
937 \renewcommand*{\tabsoff}{}
938 \renewcommand*{\wrappingon}{}
939 \renewcommand*{\wrappingoff}{}
940 \renewcommand*{\verbatimindent}{}
941 \renewcommand*{\verbatimbreakchar}[1]{}

```

```
942 \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.

```
943 \renewcommand*{\bvbox}{}
944 \renewcommand*{\bvtopandtail}{}
945 \renewcommand*{\bvside}{}
946 \renewcommand*{\nobvbox}{}
947 % \newlength\bvboxsep
948 \renewcommand*{\bvtoprulehook}{}
949 \renewcommand*{\bvtopmidhook}{}
950 \renewcommand*{\bvendrulehook}{}
951 \renewcommand*{\bvleftsidehook}{}
952 \renewcommand*{\bvrightsidehook}{}
953 \renewcommand*{\bvperpagetrue}{}
954 \renewcommand*{\bvperpagefalse}{}
955 \renewcommand*{\bvtopofpage}[1]{}
956 \renewcommand*{\bvendofpage}[1]{}
957 \renewcommand*{\linenumberfrequency}[1]{}
958 \renewcommand*{\resetbvlinenumber}{}
959 \renewcommand*{\setbvlinenums}[2]{}
960 \renewcommand*{\linenumberfont}[1]{}
961 \renewcommand*{\bvnumbersinside}{}
962 \renewcommand*{\bvnumbersoutside}{}

```

## § 534.16 Cross referencing

```
963 \renewcommand*{\fref}[1]{\cref{#1}}
964 \renewcommand*{\tref}[1]{\cref{#1}}
965 \renewcommand*{\pref}[1]{\cpageref{#1}}
966 \renewcommand*{\Aref}[1]{\cref{#1}}
967 \renewcommand*{\Bref}[1]{\cref{#1}}
968 \renewcommand*{\Pref}[1]{\cref{#1}}
969 \renewcommand*{\Sref}[1]{\cref{#1}}
970 \renewcommand*{\figurerefname}{Figure}
971 \renewcommand*{\tablerefname}{Table}
972 \renewcommand*{\pagerefname}{page}
973 \renewcommand*{\bookrefname}{Book~}
974 \renewcommand*{\partrefname}{Part~}
975 \renewcommand*{\chapterrefname}{Chapter~}
976 \renewcommand*{\sectionrefname}{\S}
977 \renewcommand*{\appendixrefname}{Appendix~}
978 \LetLtxMacro\titleref\nameref
979 \renewcommand*{\headnameref}{}
980 \renewcommand*{\tocnameref}{}
981
982 \providecounter{LWR@currenttitle}
983
984 \renewcommand*{\currenttitle}{%
985 \addtocounter{LWR@currenttitle}{1}%
986 \label{currenttitle\arabic{LWR@currenttitle}}%
987 \nameref{currenttitle\arabic{LWR@currenttitle}}%
988 }
989

```

```

990 \renewcommand*{\theTitleReference}[2]{}
991 \renewcommand*{\namerefon}{}
992 \renewcommand*{\namerefoff}{}

```

### § 534.17 Back matter

Redefined to write the LWR@autoindex counter instead of page. Note that memoir has two versions, depending on the use of hyperref.

```

993 \AtBeginDocument{
994
995 \def\@wrindexhyp#1||\{\%
996 \addtocounter{LWR@autoindex}{1}%
997 \LWR@new@label{LWRindex-\arabic{LWR@autoindex}}%
998 % \ifshowindexmark\@showidx{#1}\fi
999 \protected@write\@auxout{}%
1000 {\string\@wrindexm@m{\@idxfile}{#1}{\arabic{LWR@autoindex}}}%
1001 \endgroup
1002 \@esphack}%

```

\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.

```

1003 \def\@wrspindexhyp#1||\{\%
1004 \addtocounter{LWR@autoindex}{1}%
1005 \LWR@new@label{LWRindex-\arabic{LWR@autoindex}}%
1006 % \ifshowindexmark\@showidx{#1}\fi
1007 \protected@write\@auxout{}%
1008 {%
1009 \string\@wrindexm@m{\@idxfile}{#1}{\@nameuse{the\@sptheidx}}%
1010 \string\@wrindexm@m{\@idxfile}{#1}{\arabic{LWR@autoindex}}%
1011 }%
1012 \endgroup
1013 \@esphack}%
1014
1015 }% \AtBeginDocument

```

Patched to use \_html filename and \BaseJobname:

```

1016 \catcode'_ =12%
1017 \renewcommand*{\makeindex}[1][\BaseJobname]{%
1018 \if@filesw
1019 \def\gindex{\@bsphack%
1020 \@ifnextchar [{\@index}{\@index[\BaseJobname]}}
1021 \def\specialindex{\@bsphack\@spindex}%
1022 \makememindexhook
1023 \expandafter\newwrite\csname #1@idxfile\endcsname
1024 \expandafter\immediate\openout \csname #1@idxfile\endcsname #1_html.idx\relax
1025 \typeout{Writing index file #1_html.idx }%
1026 \fi}
1027 \catcode'_ =8%

```

Patched to use `_html` filename and `\BaseJobname`. This will later be patched by the `lwarp` core.

```

1028 \catcode'_ =12%
1029 \renewcommand{\printindex}[1][\BaseJobname]{\@input@{#1_html.ind}}
1030 \catcode'_ =8%

1031 \DeclareDocumentCommand{\newblock}{}{}
1032 %
1033 \renewcommand*{\showindexmarks}{}
1034 \renewcommand*{\hideindexmarks}{}
1035
1036 \renewcommand*{\xindyindex}{}

```

### § 534.18 **Miscellaneous**

```

1037 \renewcommand*{\changemarks}{}
1038 \renewcommand*{\nochangemarks}{}
1039 \renewcommand*{\added}[1]{}
1040 \renewcommand*{\deleted}[1]{}
1041 \renewcommand*{\changed}[1]{}
1042
1043 \renewcommand*{\showtrimsoff}{}
1044 \renewcommand*{\showtrimson}{}
1045 \renewcommand*{\trimXmarks}{}
1046 \renewcommand*{\trimLmarks}{}
1047 \renewcommand*{\trimFrame}{}
1048 \renewcommand*{\trimNone}{}
1049 \renewcommand*{\trimmarkscolor}{}
1050 \renewcommand*{\trimmarks}{}
1051 \renewcommand*{\tmarktl}{}
1052 \renewcommand*{\tmarktr}{}
1053 \renewcommand*{\tmarkbr}{}
1054 \renewcommand*{\tmarkbl}{}
1055 \renewcommand*{\tmarktm}{}
1056 \renewcommand*{\tmarkmr}{}
1057 \renewcommand*{\tmarkbm}{}
1058 \renewcommand*{\tmarkml}{}
1059 \renewcommand*{\trimmark}{}
1060 \renewcommand*{\quarkmarks}{}
1061 \renewcommand*{\registrationColour}[1]{}
1062
1063 \renewcommand*{\leavespergathering}[1]{}
1064
1065 \renewcommand*{\noprelistbreak}{}
1066
1067 \renewcommand*{\cleartorecto}{}
1068 \renewcommand*{\cleartoverso}{}
1069
1070 \renewenvironment{vplace}[1][{}]{\}{}

```

### § 534.19 **ccaption emulation**

```

1071 \renewcommand*{\captiondelim}[1]{\renewcommand*{\CaptionSeparator}{#1}}
1072 \renewcommand*{\captionnamefont}[1]{}

```

```

1073 \renewcommand*{\captiontitlefont}[1]{%
1074 \renewcommand*{\flushleft}{%
1075 \renewcommand*{\centerlastline}{%
1076 \renewcommand*{\captionstyle}[2][{}]{%
1077 \DeclareDocumentCommand{\captionwidth}{m}{%
1078 \renewcommand*{\changecaptionwidth}{%
1079 \renewcommand*{\normalcaptionwidth}{%
1080 \renewcommand*{\hangcaption}{%
1081 \renewcommand*{\indentcaption}[1]{%
1082 \renewcommand*{\normalcaption}{%
1083 \renewcommand{\precaption}[1]{%
1084 \renewcommand{\postcaption}[1]{%
1085 \renewcommand{\midbicapcaption}[1]{%
1086 \renewcommand{\contcaption}[1]{%
1087 % \ContinuedFloat%
1088 % \caption{#1}%
1089 \begin{LWR@figcaption}% later becomes \caption*
1090 \LWR@isolate{\@nameuse{\@capttype name}}~%
1091 \thechapter.\thevalue{\@capttype}\CaptionSeparator\LWR@isolate{#1}%
1092 \end{LWR@figcaption}
1093 }

1094 \newlength{\abovelegendskip}
1095 \setlength{\abovelegendskip}{0.5\baselineskip}
1096 \newlength{\belowlegendskip}
1097 \setlength{\belowlegendskip}{\abovelegendskip}

```

The extra \\ here forces a <br> in HTML when \legend is used in a \marginpar.

```

1098 \renewcommand{\legend}[1]{\begin{center}#1\\end{center}}
1099
1100 \renewcommand{\namedlegend}[2][{}]{
1101 \begin{center}
1102 \@nameuse{fleg\@capttype}\CaptionSeparator#2\\
1103 \end{center}
1104 \@nameuse{flegtoc\@capttype}{#1}
1105 }
1106
1107 \renewcommand{\newfixedcaption}[3][\caption]{%
1108 \renewcommand{#2}{\def\@capttype{#3}#1}}
1109 \renewcommand{\renewfixedcaption}[3][\caption]{%
1110 \renewcommand{#2}{\def\@capttype{#3}#1}}
1111 \renewcommand{\providefixedcaption}[3][\caption]{%
1112 \providecommand{#2}{\def\@capttype{#3}#1}}
1113
1114 \renewcommand{\bitwonumcaption}[6][{}]{%
1115 \ifblank{#2}{\caption{#3}}{\caption[#2]{#3}}%
1116 \addtocounter{\@capttype}{-1}%
1117 \begingroup%
1118 \csdef{\@capttype name}{#4}%
1119 \ifblank{#5}{\caption{#6}}{\caption[#5]{#6}}%
1120 \endgroup%
1121 \ifblank{#1}{\label{#1}}%
1122 }
1123
1124 \LetLtxMacro\bionenumcaption\bitwonumcaption% todo

```

```

1125
1126 \renewcommand{\bication}[5][{}]{%
1127 \ifblank{#2}{\caption{#3}}{\caption[2]{#3}}%
1128 \begin{LWR@figcaption}% later becomes \caption*
1129 \LWR@isolate{#4} \thechapter.\the\value{\@captype}\CaptionSeparator\LWR@isolate{#5}%
1130 \end{LWR@figcaption}
1131 \ifblank{#1}{\label{#1}}%
1132 }
1133
1134 \renewcommand{\bicontcaption}[3]{%
1135 \contcaption{#1}%
1136 \begingroup%
1137 \csdef{\@captype name}{#2}%
1138 \contcaption{#3}%
1139 \endgroup%
1140 }

1141 % only in ccaption, not in memoir:
1142 % \LetLtxMacro\longbitwonumcaption\bitwonumcaption%
1143 % \LetLtxMacro\longbionenumcaption\bitwonumcaption%
1144 % \LetLtxMacro\longbication\bication%
1145
1146 \RenewDocumentCommand{\subtop}{0{} 0{} m}{%
1147 \subfloat[#1][#2]{#3}%
1148 }
1149
1150 \RenewDocumentCommand{\subbottom}{0{} 0{} m}{%
1151 \subfloat[#1][#2]{#3}%
1152 }
1153
1154 \renewcommand{\contsubtop}{%
1155 \ContinuedFloat\addtocounter{\@captype}{1}%
1156 \subtop}
1157
1158 \renewcommand{\contsubbottom}{%
1159 \ContinuedFloat\addtocounter{\@captype}{1}%
1160 \subbottom}
1161
1162 \renewcommand{\subconcluded}{%}
1163
1164 \let\subfigure\subbottom
1165 \let\subtable\subtop
1166
1167 \let\contsubtable\contsubtop
1168 \let\contsubfigure\contsubbottom

1169 \newcommand{\newfloatentry}[4][\@empty]{TODO: newfloatentry}
1170 \newcommand{\newfloatlist}[5][\@empty]{TODO: newfloatlist}
1171 \newcommand{\newfloatenv}[4][\@empty]{TODO: newfloatenv}
1172 \DeclareRobustCommand{\newfloatpagesoff}[1]{}
1173 \DeclareRobustCommand{\newfloatpageson}[1]{}
1174 \newcommand{\setnewfloatindents}[3]{}

```

## § 534.20 Final patchwork

```

1175 \newlistof{tableofcontents}{toc}{\contentsname}

```

```
1176 \newlistof{listoffigures}{lof}{\listfigurename}
1177 \newlistof{listoftables}{lot}{\listtablename}
```

---

File 437 **lwarp-common-multimedia.sty**

§ 535      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 addresource=, 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}{1.1LWR@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.

```

30 \newcommand*{LWR@multimedia@fileAV}[4]{%
31 \filename@parse{#2}%
32 \IfFileExists{#2}{%

```

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 \@filef@und\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 \href{\@filef@und}{#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 \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@printsizemargin: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`.

`\LWR@multimedia@percenterror`

```

108 \newcommand*{\LWR@multimedia@percenterror}{%
109 \PackageError{lwarp-media9}
110 {%
111 Do not use a percent comment
112 between\MessageBreak
113 \protect\includemedia\space arguments%
114 }
115 {Percent is changed to a regular character to allow its use inside a URL.}
116 }

```

`\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.

117 \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.

118 \if#1\@percentchar\LWR@multimedia@percenterror\fi%

119 \if#2\@percentchar\LWR@multimedia@percenterror\fi%

120 \if#3\@percentchar\LWR@multimedia@percenterror\fi%

Paragraph handling:

121 \LWR@stoppars%

Record the desired size.

122 \setlength{\LWR@multimedia@width}{0pt}%

123 \setlength{\LWR@multimedia@height}{0pt}%

124 \setkeys\*{\LWR@multimedia}{#1}%

If a known A/V type, create an HTML5 <video> or <audio>.

125 \IfEndWith{#3}{.mp4}{\LWR@multimedia@AV{#2}{#3}{video}{video/mp4}}{%

126 \IfEndWith{#3}{.MP4}{\LWR@multimedia@AV{#2}{#3}{video}{video/mp4}}{%

127 \IfEndWith{#3}{.mp3}{\LWR@multimedia@AV{#2}{#3}{audio}{audio/mpeg}}{%

128 \IfEndWith{#3}{.MP3}{\LWR@multimedia@AV{#2}{#3}{audio}{audio/mpeg}}{%

If an arbitrary URL, embed it.

129 \IfBeginWith{#3}{http}{\LWR@multimedia@embed{#2}{#3}}{%

130 \IfBeginWith{#3}{HTTP}{\LWR@multimedia@embed{#2}{#3}}{%

131 \IfBeginWith{#3}{ftp}{\LWR@multimedia@embed{#2}{#3}}{%

132 \IfBeginWith{#3}{FTP}{\LWR@multimedia@embed{#2}{#3}}{%

If unknown, create a link to it.

133 \href{#3}{#2}% unknown format

134 } } } } } } }

Paragraph handling:

135 \LWR@startpars%

136 \endgroup%

137 }

Catcodes which may appear in a URL.

138 \newrobustcmd\*{\LWR@multimedia}{%

139 \begingroup%

140 \catcode'\#=12%

141 \catcode'\%=12%

142 \catcode'\&=12%

143 \catcode'\~=12%

144 \catcode'\\_ =12%

145 \LWR@multimediab%

146 }

# Change History

## § 536 Chg Hist

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# Troubleshooting Index

This index is a sorted reference of problems and solutions. In order to make it easier to locate a solution, the same issue may be addressed by more than one entry.

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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