

Hypertext marks in \LaTeX

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<https://github.com/latex3/hyperref/issues>

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1 Documentation overview for `hyperref`

The documentation for package `hyperref` consists of several files:

Manual The **USER MANUAL** (also available as HTML).

ChangeLog This file records the version history (also available as text file).

Options This file provides a short option summary.

Bookmark talk, slides Slides for the talk “PDF information and navigation elements with `hyperref`, `pdfTeX` and `thumbpdf`” at Euro \TeX 1999.

Bookmark talk, paper The paper version of the talk.

Source code documentation:

☞ **`hyperref.dtx`** This is the source code documentation for `hyperref` (this file).

`backref.dtx` “Back referencing from bibliographical citations”

`nameref.dtx` “Section name references in \LaTeX ”

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3 File hyccheck.tex

Many commands of L^AT_EX or other packages cannot be overloaded, but have to be redefined by hyperref directly. If these commands change in newer versions, these changes are not noticed by hyperref. With this test file this situation can be checked. It defines the command `\checkcommand` that is more powerful than L^AT_EX's `\CheckCommand`, because it takes `\DeclareRobustCommand` and optional parameters better into account.

```
1 \check
2 \documentclass{article}
3 \makeatletter
```

`\checklatex` Optional argument: release date of L^AT_EX.

```
4 \newcommand*{\checklatex}[1]{}{
5   \typeout{}%
6   \typeout{* Format: `LaTeX2e' #1}%
7   \typeout{\space\space Loaded: `fmtname' \fmtversion}%
8 }
```

`\checkpackage` The argument of `\checkpackage` is the package name without extension optionally followed by a release date.

```
9 \newcommand*{\checkpackage}[1]{%
10  \def\HyC@package{#1}%
11  \let\HyC@date\@empty
12  \@ifnextchar{\HyC@getDate\HyC@checkPackage
13 }
```

`\HyC@getDate` The release date is scanned.

```
14 \def\HyC@getDate[#1]{%
15  \def\HyC@date{#1}%
16  \HyC@checkPackage
17 }
```

`\HyC@checkPackage`

```
18 \def\HyC@checkPackage{%
19  \typeout{}%
20  \begingroup
21  \edef\x{\endgroup
22    \noexpand\RequirePackage{\HyC@package}%
23    \ifx\HyC@date\@empty\relax\else\HyC@date\fi%
24  }%
25  \x
26  \typeout{}%
27  \typeout{%
28    * Package `HyC@package'%
29    \ifx\HyC@date\@empty
30      \else
31        \space\HyC@date
32      \fi
33  }%
34  \@ifundefined{ver@\HyC@package.sty}{%
35  }{%
36    \typeout{%
37      \space\space Loaded: `HyC@package' %
38      \cname ver@\HyC@package.sty\endcsname
39    }%
```



```

40 }%
41 }

```

`\checkcommand` The macro `\checkcommand` parses the next tokens as a \LaTeX definition and compares this definition with the current meaning of that command.

```

42 \newcommand*{\checkcommand}[1]{%
43   \begingroup
44   \ifx\long#1\relax
45     \expandafter\HyC@checklong
46   \else
47     \def\HyC@defcmd{#1}%
48     \expandafter\let\expandafter\HyC@next
49       \csname HyC@\expandafter\@gobble\string#1\endcsname
50     \expandafter\HyC@checkcommand
51   \fi
52 }

```

`\HyC@checklong` The definition command `\def` or `\edef` is read.

```

53 \def\HyC@checklong#1{%
54   \def\HyC@defcmd{\long#1}%
55   \expandafter\let\expandafter\HyC@next
56     \csname HyC@\expandafter\@gobble\string#1\endcsname
57   \HyC@checkcommand
58 }

```

`\HyC@checkcommand` The optional star of \LaTeX 's definitions is parsed.

```

59 \def\HyC@checkcommand{%
60   \ifx\HyC@next\relax
61     \PackageError{hycheck}{%
62       Unknown command `~\expandafter\strip@prefix\meaning\HyC@cmd'%
63     }\@ehd
64     \expandafter\endinput
65   \fi
66   \@ifstar{%
67     \def\HyC@star{*}%
68     \HyC@check
69   }{%
70     \let\HyC@star\@empty
71     \HyC@check
72   }%
73 }

```

`\HyC@check` The macro `\HyC@check` reads the definition command.

```

74 \def\HyC@check#1{%
75   \def\HyC@cmd{#1}%
76   \let\HyC@org@cmd#1%
77   \let#1\relax
78   \let\HyC@param\@empty
79   \HyC@Toks{}%
80   \let\HyC@org@optcmd\HyC@noValue
81   \let\HyC@org@robustcmd\HyC@noValue
82   \let\HyC@org@robustoptcmd\HyC@noValue
83   \HyC@next
84 }

```

`\HyC@noValue`

```

85 \def\HyC@noValue{NoValue}

```


`\HyC@newcommand` The code for `\newcommand`.

```
86 \def\HyC@newcommand{%
87   \let\HyC@@cmd\HyC@cmd
88   \@ifnextchar[\HyC@nc@opt\HyC@nc@noopt
89 }
```

`\HyC@Toks` A register for storing the default value of an optional argument.

```
90 \newtoks\HyC@Toks
```

`\HyC@nc@noopt` This macro `\HyC@nc@noopt` is called, if the parser has reached the definition text.

```
91 \long\def\HyC@nc@noopt#1{%
92   \edef\x{%
93     \expandafter\noexpand\HyC@defcmd
94     \HyC@star
95     \expandafter\noexpand\HyC@cmd
96     \HyC@param\the\HyC@Toks
97   }%
98   \x{#1}%
99   \HyC@doCheck
100 }
```

`\HyC@nc@opt` This macro scans the first optional argument of a \LaTeX definition (number of arguments).

```
101 \def\HyC@nc@opt[#1]{%
102   \def\HyC@param{{#1}}%
103   \@ifnextchar[\HyC@nc@default\HyC@nc@noopt
104 }
```

`\HyC@nc@default` Macro `\HyC@nc@default` scans the default for an optional argument.

```
105 \def\HyC@nc@default[#1]{%
106   \HyC@Toks={{#1}}%
107   \edef\HyC@optcmd{%
108     \expandafter\noexpand
109     \csname\expandafter\string\HyC@@cmd\endcsname
110   }%
111   \expandafter\let\expandafter\HyC@org@optcmd\HyC@optcmd
112   \HyC@nc@noopt
113 }
```

`\HyC@DeclareRobustCommand` `\DeclareRobustCommand{\cmd}` makes the command `\cmd` robust, that then calls `\cmd␣` with an space at the end of the command name, defined by `\newcommand`. Therefore the further parsing is done by `\HyC@nc@opt` or `\HyC@nc@noopt` of the `\HyC@newcommand` chain.

```
114 \def\HyC@DeclareRobustCommand{%
115   \edef\HyC@robustcmd{%
116     \expandafter\noexpand
117     \csname\expandafter\expandafter\expandafter\@gobble
118     \expandafter\string\HyC@cmd\space\endcsname
119   }%
120   \expandafter\let\expandafter\HyC@org@robustcmd\HyC@robustcmd
121   \expandafter\let\HyC@robustcmd\relax
122   \let\HyC@@cmd\HyC@robustcmd
123   \@ifnextchar[\HyC@nc@opt\HyC@nc@noopt
124 }
```


`\HyC@def` The parameter text of `\def` or `\edef` is stored in the token register `\HyC@Toks`.

```

\HyC@edef 125 \def\HyC@def#1#{%
          126 \HyC@Toks={#1}%
          127 \HyC@nc@noopt
          128 }
          129 \let\HyC@edef\HyC@def

```

`\HyC@doCheck` This command performs the checks and prints the result.

```

          130 \def\HyC@doCheck{%
          131 \typeout{* Checking ` \HyC@string\HyC@cmd'.}%
          132 \HyC@checkItem{cmd}%
          133 \HyC@checkItem{robustcmd}%
          134 \HyC@checkItem{optcmd}%
          135 \HyC@checkItem{robustoptcmd}%
          136 \endgroup
          137 }

```

`\HyC@checkItem` A single check.

```

          138 \def\HyC@checkItem#1{%
          139 \expandafter\ifx\csname HyC@org@#1\endcsname\HyC@noValue
          140 \else
          141 \expandafter\expandafter\expandafter\ifx
          142 \csname HyC@#1\expandafter\endcsname
          143 \csname HyC@org@#1\endcsname
          144 \expandafter\HyC@checkOk\csname HyC@#1\endcsname
          145 \else
          146 \expandafter\HyC@checkFailed
          147 \csname HyC@#1\expandafter\endcsname
          148 \csname HyC@org@#1\endcsname
          149 \fi
          150 \fi
          151 }

```

`\HyC@string` Some shorthands.

```

\HyC@meaning 152 \def\HyC@string#1{\expandafter\string#1}
              153 \def\HyC@meaning#1{\expandafter\meaning#1}

```

`\HyC@checkOk` The result, if the check succeeds.

```

          154 \def\HyC@checkOk#1{%
          155 \typeout{\space\space` \HyC@string#1' ok.}%
          156 }

```

`\HyC@checkFailed` The result, if the check fails.

```

          157 \def\HyC@checkFailed#1#2{%
          158 \typeout{\space\space` \HyC@string#1' failed.}%
          159 \typeout{\space\space* original: \meaning#2}%
          160 \typeout{\space\space* expected: \HyC@meaning#1}%
          161 }

          162 % *****
          163 \</check>
          164 \<*/package>

```


4 Package options and setup

4.1 Save catcodes

There are many packages that change the standard catcodes.

First we save the original meaning of ``` and `=` in the token register `\toks@`, because we need the two characters in the macros `\Hy@SetCatcodes` and `\Hy@RestoreCatcodes`.

```
165 \begingroup
166 \makeother`%
167 \makeother=%
168 \edef\x{%
169   \edef\noexpand\x{%
170     \endgroup
171     \noexpand\toks@{%
172       \catcode 96=\noexpand\the\catcode`\noexpand`\relax
173       \catcode 61=\noexpand\the\catcode`\noexpand\=\relax
174     }%
175   }%
176   \noexpand\x
177 }%
178 \x
179 \makeother`
180 \makeother=
```

`\Hy@SetCatcodes`

```
181 \def\Hy@SetCatcodes{%
182   \makeother`%
183   \makeother=%
184   \catcode`\$=3 %
185   \catcode`\&=4 %
186   \catcode`\^=7 %
187   \catcode`\_ =8 %
188   \makeother\| %
189   \makeother\: %
190   \makeother\(%
191   \makeother\) %
192   \makeother\[ %
193   \makeother\] %
194   \makeother\/ %
195   \makeother\! %
196   \makeother\< %
197   \makeother\> %
198   \makeother\. %
199   \makeother\; %
200   \makeother\+ %
201   \makeother\- %
202   \makeother\" %
203   \makeother\' %
204 }
```

`\Hy@RestoreCatcodes`

```
205 \begingroup
206 \def\x#1{\catcode`\noexpand#1=\the\catcode`#1\relax}%
207 \xdef\Hy@RestoreCatcodes{%
208   \the\toks@
209   \x\$%

```



```

210 \x\&%
211 \x\^%
212 \x\_%
213 \x\|%
214 \x\:%
215 \x\(%
216 \x\) %
217 \x\[ %
218 \x\] %
219 \x\/%
220 \x\!%
221 \x\<%
222 \x\>%
223 \x\.%
224 \x\;%
225 \x\+%
226 \x\-%
227 \x\"%
228 \x\'%
229 }%
230 \endgroup

231 \Hy@SetCatcodes
232 \RequirePackage{ltxcmds}[2010/11/12]
233 \RequirePackage{iftex}[2019/10/24]
234 \RequirePackage{pdftexcmds}[2009/04/10]
235 \@ifpackagelater{pdftexcmds}{2010/11/04}{}{}%
236 \ltx@ifundefined{pdfdraftmode}{}%
237 \let\pdf@ifdraftmode\ltx@secondoftwo
238 }{%
239 \ifpdf
240 \def\pdf@ifdraftmode{%
241 \ifnum\pdfdraftmode=\ltx@one
242 \expandafter\ltx@firstoftwo
243 \else
244 \expandafter\ltx@secondoftwo
245 \fi
246 }%
247 \else
248 \let\pdf@ifdraftmode\ltx@secondoftwo
249 \fi
250 }%
251 }

252 \RequirePackage{infwarerr}[2010/04/08]
253 \RequirePackage{keyval}[1997/11/10]
254 \RequirePackage{kvsetkeys}[2007/09/29]
255 \RequirePackage{kvdefinekeys}[2011/04/07]
256 \RequirePackage{pdfescape}[2007/11/11]
257 \RequirePackage{hycolor}
258 \RequirePackage{letltxmacro}[2008/06/13]
259 \RequirePackage{auxhook}[2009/12/14]
260 \def\Hy@Error{\@PackageError{hyperref}}
261 \def\Hy@Warning{\@PackageWarning{hyperref}}
262 \def\Hy@WarningNoLine{\@PackageWarningNoLine{hyperref}}
263 \def\Hy@Info{\@PackageInfo{hyperref}}
264 \def\Hy@InfoNoLine{\@PackageInfoNoLine{hyperref}}
265 \def\Hy@Message#1{%

```



```

266 \GenericWarning{%
267   (hyperref)\@spaces\@spaces\@spaces\@spaces
268 }{%
269   Package hyperref Message: #1\ltx@gobble
270 }%
271 }

```

4.2 Version check

\Hy@VersionChecked

```

272 \chardef\Hy@VersionChecked=0 %

```

\Hy@VersionCheck

```

273 \def\Hy@VersionCheck#1{%
274   \begingroup
275   \ltx@ifundefined{ver@hyperref.sty}{%
276     \Hy@Error{%
277       This should not happen!\MessageBreak
278       Missing hyperref version%
279     }\@ehd
280   }{%
281     \ltx@ifundefined{ver@#1}{%
282       \Hy@Error{%
283         This should not happen!\MessageBreak
284         Missing version of `#1'%
285       }\@ehd
286     }{%
287       \def\x##1##2##3{%
288         \expandafter\expandafter\expandafter\Hy@@VersionCheck
289         \expandafter\expandafter\expandafter##2%
290         \csname ver@##3\endcsname##1##1\@nil
291       }%
292       \x{ }\y{hyperref.sty}%
293       \x{ }\z{#1}%
294       \ifx\y\z
295       \else
296         \edef\a{#1}%
297         \edef\b{\HyOpt@CustomDriver.def}%
298         \ifx\a\b
299           \Hy@WarningNoLine{%
300             Version mismatch (custom driver)!\MessageBreak
301             * \y: hyperref.sty\MessageBreak
302             * \z: \a
303           }%
304         \else
305           \Hy@Error{%
306             Version mismatch!\MessageBreak
307             * \y: hyperref.sty\MessageBreak
308             * \z: \a
309           }\@ehd
310         \fi
311       \fi
312     }%
313   }%
314 \endgroup
315 \chardef\Hy@VersionChecked=1 %
316 }

```


\Hy@@VersionCheck

```
317 \def\Hy@@VersionCheck #1#2 #3 #4\@nil{%
318   \def#1{#2 #3}%
319 }
```

4.3 Checks with regular expressions

```
320 \ltx@ifundefined{pdfmatch}{%
321   \def\Hy@Match#1#2#3#4#5{%
322   }{%
323   \def\Hy@Match#1#2#3{%
324     \begingroup
325     \edef\~{\ltx@backslashchar\string~}%
326     \edef\.{\ltx@backslashchar.}%
327     \edef\[\{\ltx@backslashchar[]}%
328     \edef\${\ltx@backslashchar$}%
329     \edef\(\{\ltx@backslashchar(}%
330     \edef\)\{\ltx@backslashchar)}%
331     \edef\|{\ltx@backslashchar|}%
332     \edef\*{\ltx@backslashchar*}%
333     \edef\+{\ltx@backslashchar+}%
334     \edef\?{\ltx@backslashchar?}%
335     \edef\{\{\ltx@backslashchar\ltx@leftbracechar}%
336     \edef\}\{\ltx@rightbracechar}%
337     \edef\\{\ltx@backslashchar\ltx@backslashchar}%
338     \let\ \ltx@space
339     \ifcase\pdfmatch#2{#3}{#1} %
340       \endgroup
341       \expandafter\ltx@secondoftwo
342     \or
343       \endgroup
344       \expandafter\ltx@firstoftwo
345     \else
346       \Hy@Warning{%
347         Internal error: Wrong pattern!\MessageBreak
348         --> #3 <--\MessageBreak
349         Pattern check ignored%
350       }%
351       \endgroup
352       \expandafter\ltx@firstoftwo
353     \fi
354   }%
355   \ltx@ifpackagelater{ltxcmds}{2010/09/11}{%
356     \begingroup
357     \lccode`0=\{\relax
358     \lowercase{\endgroup
359       \def\ltx@leftbracechar{0}%
360     }%
361     \begingroup
362     \lccode`0=\}\relax
363     \lowercase{\endgroup
364       \def\ltx@rightbracechar{0}%
365     }%
366   }%
367 }
```


4.4 Compatibility with format dumps

`\AfterBeginDocument` For use with pre-compiled formats, created using the `ldump` package, there needs to be 2 hooks for adding material delayed until `\begin{document}`. These are called `\AfterBeginDocument` and `\AtBeginDocument`. If `ldump` is not loaded, then a single hook suffices for normal L^AT_EX processing.

The default definition of `\AfterBeginDocument` cannot be done by `\let` because of problems with `xypic`.

```
368 \@ifundefined{AfterBeginDocument}{%
369   \def\AfterBeginDocument{\AtBeginDocument}%
370 }{}%
```

`\Hy@AtBeginDocument` For the case that package ‘hyperref’ is loaded using `\AtBeginDocument`, we have to wrap the calls of `\AtBeginDocument`/`\AfterBeginDocument` in `\AtEndOfPackage`. However, packages must be loaded in `\AtEndOfPackage` *before* package ‘kvoptions’ has to perform its option cleanup. Therefore we use a hook.

```
371 \def\Hy@AtBeginDocument{%
372   \ltx@LocalAppendToMacro\Hy@AtBeginDocumentHook
373 }
```

`\Hy@AtEndOfPackage`

```
374 \def\Hy@AtEndOfPackage{%
375   \ltx@LocalAppendToMacro\Hy@AtEndOfPackageHook
376 }
```

`\Hy@AtBeginDocumentHook`

```
377 \let\Hy@AtBeginDocumentHook\ltx@empty
```

`\Hy@AtEndOfPackageHook`

```
378 \let\Hy@AtEndOfPackageHook\ltx@empty
```

Install the hook, before package ‘kvoptions’ is loaded.

```
379 \AtEndOfPackage{%
380   \Hy@AtEndOfPackageHook
381   \let\Hy@AtEndOfPackageHook\@undefined
382   \AfterBeginDocument{%
383     \Hy@AtBeginDocumentHook}%
384   \let\Hy@AtBeginDocumentHook\@undefined
385   }%
386 }
```

Package `kvoptions` is used for processing options that are given as key value pairs. The package provides `\ProcessKeyvalOptions`, formerly known as `\ProcessOptionsWithKV`.

```
387 \RequirePackage{kvoptions}[2009/07/21]
```

4.5 Switches

```
388 \newif\ifHy@stoppedearly
389 \newif\ifHy@typexml
390 \newif\ifHy@activeanchor
391 \newif\ifHy@backref
392 \newif\ifHy@bookmarks
393 \newif\ifHy@bookmarksnumbered
394 \newif\ifHy@bookmarksopen
395 \newif\ifHy@breaklinks
```



```

396 \newif\ifHy@pdfcenterwindow
397 \newif\ifHy@CJKbookmarks
398 \newif\ifHy@colorlinks
399 \newif\ifHy@destlabel
400 \newif\ifHy@draft
401 \let\Hy@finaltrue\Hy@draftfalse
402 \let\Hy@finalfalse\Hy@drafttrue
403 \newif\ifHy@pdfescapeform
404 \newif\ifHy@hyperfigures
405 \newif\ifHy@pdffitwindow
406 \newif\ifHy@frenchlinks
407 \newif\ifHy@hyperfootnotes
408 \newif\ifHy@hyperindex
409 \newif\ifHy@hypertextnames
410 \newif\ifHy@implicit
411 \newif\ifHy@linktocpage
412 \newif\ifHy@localanchorname
413 \newif\ifHy@pdfmenubar
414 \newif\ifHy@naturalnames
415 \newif\ifHy@nesting
416 \newif\ifHy@pdfnewwindowset
417 \newif\ifHy@pdfnewwindow
418 \newif\ifHy@ocgcolorlinks
419 \newif\ifHy@pageanchor
420 \newif\ifHy@pdfpagelabels
421 \newif\ifHy@pdfpagehidden
422 \newif\ifHy@pdfstring
423 \newif\ifHy@plainpages
424 \newif\ifHy@psize
425 \newif\ifHy@raiselinks
426 \newif\ifHy@seminarslides
427 \newif\ifHy@setpagesize
428 \newif\ifHy@texht
429 \newif\ifHy@psdextra
430 \newif\ifHy@pdftoolbar
431 \newif\ifHy@unicode
432 \newif\ifHy@pdfusetitle
433 \newif\ifHy@verbose
434 \let\Hy@debugtrue\Hy@verbosetrue
435 \let\Hy@debugfalse\Hy@verbosefalse
436 \newif\ifHy@pdfwindowui
437 \newif\ifHy@pdfdisplaydoctitle
438 \newif\ifHy@pdfa

```

Defaults for the switches are now set.

```

439 \Hy@backreffalse
440 \Hy@bookmarksnumberedfalse
441 \Hy@bookmarksopenfalse
442 \Hy@bookmarksstrue
443 \Hy@breaklinksfalse
444 \Hy@pdfcenterwindowfalse
445 \Hy@CJKbookmarksfalse
446 \Hy@destlabelfalse
447 \Hy@pdfescapeformfalse
448 \Hy@hyperfiguresfalse
449 \Hy@pdffitwindowfalse
450 \Hy@hyperfootnotetrue
451 \Hy@hyperindextrue

```



```

452 \Hy@hypertextnamestrue
453 \Hy@implicittrue
454 \Hy@linktocpagefalse
455 \Hy@localanchornamefalse
456 \Hy@pdfmenubartrue
457 \Hy@naturalnamesfalse
458 \Hy@nestingfalse
459 \Hy@pdfnewwindowsetfalse
460 \Hy@pdfnewwindowfalse
461 \Hy@pageanchortrue
462 \Hy@pdfpagelabelstrue
463 \Hy@pdfpagehiddenfalse
464 \Hy@pdfstringfalse
465 \Hy@plainpagesfalse
466 \Hy@raiselinksfalse
467 \Hy@setpagesizetrue
468 \Hy@texhtfalse
469 \Hy@psdextrafalse
470 \Hy@pdftoolbartrue
471 \Hy@typexmlfalse
472 \Hy@unicodefalse
473 \Hy@pdfusetitlefalse
474 \Hy@verbosefalse
475 \Hy@pdfwindowuitrue
476 \Hy@pdfdisplaydoctitlefalse
477 \Hy@pdfafalse

```

5 Common help macros

\Hy@StepCount

```

478 \def\Hy@StepCount#1{\advance#1 by 1 }%

```

\Hy@GlobalStepCount

```

479 \def\Hy@GlobalStepCount#1{\global\advance#1 by 1 }%

```

```

480 \newdimen\@linkdim
481 \let\Hy@driver\ltx@empty
482 \let\MaybeStopEarly\relax
483 \newcount\Hy@linkcounter
484 \newcount\Hy@pagecounter
485 \Hy@linkcounter0
486 \Hy@pagecounter0

```

5.1 Macros for recursions

```

487 \let\Hy@ReturnEnd\@empty
488 \long\def\Hy@ReturnAfterFiFiEnd#1\fi#2\Hy@ReturnEnd{\fi\fi#1}
489 \long\def\Hy@ReturnAfterElseFiFiEnd#1\else#2\Hy@ReturnEnd{\fi\fi#1}

```

5.2 Babel's protection of shorthand characters

\Hy@safe@activetrue Babel's switch setting commands cannot be used directly, because they can be undefined if babel is not loaded.

\Hy@safe@activesfalse

```

490 \def\Hy@safe@activetrue{\csname @safe@activetrue\endcsname}
491 \def\Hy@safe@activesfalse{\csname @safe@activesfalse\endcsname}

```


5.3 Coordinate transformations

At some places numbers in pdf units are expected (eg: FitBH, ...). The following macros perform the transformation from TeX units (pt) to PDF units (bp).

`\hypercalcbp` The user macro `\hypercalcbp` can be used, for example, inside option values:

```
pdfstartview={FitBH\hypercalcbp{\paperheight-\topmargin-1in}}
```

- It cannot be used inside `\usepackage`, because LaTeX expands the options before package `hyperref` is loaded and `\hypercalcbp` is defined.
- With e-TeX extensions an expandable implementation is very easy; `\hypercalcbp` can be used everywhere and is expanded at use.
- Without e-TeX's features `\hypercalcbp` cannot be implemented expandable (practically) and have to be supported by `\hypercalcbpdef`. Limitations:
 - Works only in options that use `\hypercalcbpdef` (currently only `pdfstartview`).
 - For calculations package `calc` has to be loaded.
 - The expansion of the argument is done at definition time.

Example (TeX):

```
\usepackage{calc}
\usepackage[...]{hyperref}
\hypersetup{
  pdfstartview={FitBH\hypercalcbp{\paperheight-\topmargin-1in}
  \headheight-\headsep}
}
```

`\hypercalcbp`

```
492 \begingroup\expandafter\expandafter\expandafter\endgroup
493 \expandafter\ifx\csname dimexpr\endcsname\relax
494   \def\hypercalcbpdef#1#2{%
495     \begingroup
496       \toks@{}%
497       \HyCal@scan#2\hypercalcbp\@nil
498     \expandafter\endgroup
499     \expandafter\def\expandafter#1\expandafter{\the\toks@}%
500   }%
501   \def\HyCal@scan#1\hypercalcbp#2\@nil{%
502     \toks@\expandafter{\the\toks@ #1}%
503     \ifx\#2\%
504       \else
505         \ltx@ReturnAfterFi{%
506           \HyCal@do#2\@nil
507         }%
508       \fi
509     }%
510   \def\HyCal@do#1#2\@nil{%
511     \@ifpackageloaded{calc}{%}{%
512       \Hy@Warning{%
513         For calculations \string\hypercalcbp\space needs\MessageBreak
514         package calc or e-TeX%
515       }%
516     }%
```



```

517 \setlength{\dimen@}{#1}%
518 \setlength{\dimen@}{0.99626401\dimen@}%
519 \edef\x{%
520   \toks@{%
521     \the\toks@
522     \strip@pt\dimen@
523   }%
524 } \x
525 \HyCal@scan#2\@nil
526 }%
527 \else
528 \def\hypercalcbp#1{%
529   \strip@pt\dimexpr 0.99626401\dimexpr(#1)\relax\relax
530 }%
531 \def\hypercalcbpdef{\def}%
532 \fi

```

6 Dealing with PDF strings

The PDF string stuff done by Heiko Oberdiek.

Naming convention: All internal commands that are only needed by `\pdfstringdef` are prefixed with `\HyPsd@`.

6.1 Description of PDF strings

The PDF specification defines several places to hold text strings (bookmark names, document information, text annotations, etc.). The PDF strings have following properties:

- They are surrounded by parentheses. The hexadecimal form is not supported.
- Like PostScript language strings they use the same escaping mechanism:

<code>\\</code>	the backslash itself
<code>\), \((</code>	unbalanced parentheses
<code>\n, \r, \t, \b, \f</code>	special white space escape sequences
<code>\ddd</code>	octal character code <code>ddd</code>
- Strings are stored either in `PDFDocEncoding`, which is a superset of ISO-Latin1 and is compatible with Unicode with character codes below 256, or in Unicode.

6.2 Definition of `\pdfstringdef`

The central macro for dealing with PDF strings is `\pdfstringdef`. It defines a command `#1` to be the result of the conversion from the string in `#2` to a legal `PDFDocEncoded` string. Currently the definition is global, but this can be changed in the future.

Important: In `TEX`'s view PDF strings are written to a file and are expanded only in its mouth. Stomach commands that cannot be expanded further aren't executed, they are written verbatim. But the PDF reader that reads such a string isn't a `TEX` interpreter!

The macro `\pdfstringdef` consists of three main parts:

1. Preprocessing. Here the expansion is prepared. The encoding is set and many commands are redefined, so that they work appropriate.

2. Expansion. The \TeX string is expanded the first time to get a PDF string.
3. Postprocessing. The result of the expansion is checked and converted to the final form.

`\pdfstringdef` `\pdfstringdef` works on the tokens in `#2` and converts them to a PDF string as far as possible:

- The result should obey the rules of the PDF specification for strings.
- The string can safely be processed by \TeX , because the tokens have only catcodes 10 until 12.

The result is stored in the command token given in `#1`.

```
533 \def\pdfstringdef#1#2{%
```

Many redefinitions are needed, so all the work is done in a group.

```
534 \begingroup
```

6.2.1 Preprocessing

Octal escape sequences. To avoid problems with eight bit or non printable characters, the octal escape notation is supported. So most glyphs in the encoding definitions for PD1 and PU produce these octal escape sequences. All three octal digits have to be used:

- Wrong results are avoided, if digits follow that are not part of the octal sequence.
- Macros rely on the fact that the octal sequences always consist of three digits (vtex driver, Unicode support).

The escape sequences start with a backslash. By `\string` it will be printed. Therefore it is ensured that the \TeX escape character indeed prints as a normal backslash. Eventually this line can be removed, because this is standard \LaTeX behaviour.

```
535 \escapechar`\%
```

From the view of \TeX an octal sequence consists of the command tokens `\0` until `\3` and two digits. For saving tokens `\0`, `\1`, `\2`, and `\3` are directly used without a preceding `\string` in the glyph definitions. This is done here locally by defining the `\0` until `\3` commands. So the user can use octal escape sequences directly, the disadvantage is that a previous definition of this short commands does not apply.

```
536 \edef\0{\string\0}%
537 \edef\1{\string\1}%
538 \edef\2{\string\2}%
539 \edef\3{\string\3}%
```

Setting font encoding. The unicode encoding uses `\8` and `\9` as marker for the higher byte. `\8` is an abbreviation for the higher bytes 0 until 7 that can be expressed by one digit. `\8` will be converted to `\00`. However `\9` only marks the next three digits as higher byte and will be removed later.

The encoding is set by `\enc@update` for optimizing reasons.

```
540 \ifHy@unicode
541 \edef\8{\string\8}%
542 \edef\9{\string\9}%
```



```

543 \fontencoding{PU}%
544 \HyPsd@UTFviii
545 \def\ifpdfstringunicode##1##2{##1}%
546 \else
547 \fontencoding{PD1}%
548 \def\ifpdfstringunicode##1##2{##2}%
549 \fi
550 \let\utf@viii@undeferr\HyPsd@utf@viii@undeferr
551 \enc@update

```

Internal encoding commands. `\pdfstringdef` interpretes text strings which are not allowed to contain mathematical stuff. The text glyph commands will produce a warning, if called in math mode. But this warning disturbs while expanding. Therefore we check for math mode here, before `\@inmathwarn` will be disabled (see below).

```

552 \@inmathwarn\pdfstringdef

```

If a glyph is used, that isn't in the PD1/PU encoding there will be an infinite error loop, because the NFSS encoding stuff have to be expanded unprotected (`\edef`), so that the assignments of `\@changed@cmd` don't take place. To patch this behaviour I only found `\@inmathwarn` as a usable hook. While an `\edef` a warning message by `\@inmathwarn` or `\TextSymbolUnavailable` cannot be give out, so `\@inmathwarn` should be disabled. And with the help of it the assignments in `\@changed@cmd` can easily be caught (see below).

```

553 \let\@inmathwarn\HyPsd@inmathwarn

```

Unknown composite characters are built with `\add@accent`, so it is redefined to provide a warning.

```

554 \let\add@accent\HyPsd@add@accent

```

Commands that don't use NFSS directly. There are several commands that prints characters in the printable ASCII area that don't obey the NFSS, so they have to be redefined here. UF 29.09.2017: added a mapping for `\noboundary`, see issue #37 <https://github.com/latex3/hyperref/issues/37> No test for PU, if some definition for PD1 is added it will work too.

```

555 \let\{\textbraceleft
556 \let\}\textbraceright
557 \let\\\textbackslash
558 \let\#\textnumbersign
559 \let\$\textdollar
560 \let\%\textpercent
561 \let\&\textampersand
562 % \let\~\textasciitilde
563 \let\_ \textunderscore
564 \let\P\textparagraph
565 \let\ldots\textellipsis
566 \let\dots\textellipsis
567 \ltx@ifundefined{textEncodingNoboundary}%
568 {}{\let\noboundary\textEncodingNoboundary}%

```

Newline `\newline` or `\\` do not work in bookmarks, in text annotations they should expand to `\r`. In pdf strings `\\` stands for a backslash. Therefore the commands are disabled now. The user can redefine them for a result what he want:

backslash: `\pdfstringdefDisableCommands{\let\\\textbackslash}`

new line: `\pdfstringdefDisableCommands{\let\\\textCR}`

disabled: `\pdfstringdefDisableCommands{\let\\\empty}`

At any case, however, the optional argument or the star cannot be scanned in a 100% sure manner.

```
569 \def\{\pdfstringdefWarn\}%
570 \def\newline{\pdfstringdefWarn\newline}%
```

Logos. Because the box shifting used in the T_EX logo does not work while writing to a file, the standard T_EX logos are redefined.

```
571 \def\TeX{\TeX}%
572 \def\LaTeX{La\TeX}%
573 \def\LaTeXe{%
574   \LaTeX2%
575   \ifHy@unicode\textepsilon\else e\fi
576 }%
577 \def\eTeX{%
578   \ifHy@unicode\textepsilon\else e\fi
579   -\TeX%
580 }%
581 \def\SliTeX{Sli\TeX}%
582 \def\MF{Metafont}%
583 \def\MP{Metapost}%
```

Standard font commands. Because font changes do not work, the standard font switching commands are disabled.

```
584 \let\fontencoding\@gobble
585 \let\fontfamily\@gobble
586 \let\fontseries\@gobble
587 \let\fontshape\@gobble
588 \let\fontsize\@gobbletwo
589 \let\selectfont\@empty
590 \let\usefont\@gobblefour
591 \let\emph\@firstofone
592 \let\textnormal\@firstofone
593 \let\textrm\@firstofone
594 \let\textsf\@firstofone
595 \let\texttt\@firstofone
596 \let\textbf\@firstofone
597 \let\textmd\@firstofone
598 \let\textit\@firstofone
599 \let\textsc\@firstofone
600 \let\textsl\@firstofone
601 \let\textup\@firstofone
602 \let\normalfont\@empty
603 \let\rmfamily\@empty
604 \let\sffamily\@empty
605 \let\ttfamily\@empty
606 \let\bfseries\@empty
607 \let\mdseries\@empty
608 \let\itshape\@empty
609 \let\scshape\@empty
610 \let\slshape\@empty
611 \let\upshape\@empty
612 \let\em\@empty
```



```

613 \let\rm\@empty
614 \let\Huge\@empty
615 \let\LARGE\@empty
616 \let\Large\@empty
617 \let\footnotesize\@empty
618 \let\huge\@empty
619 \let\large\@empty
620 \let\normalsize\@empty
621 \let\scriptsize\@empty
622 \let\small\@empty
623 \let\tiny\@empty
624 \let\mathversion\@gobble
625 \let\phantom\@gobble
626 \let\vphantom\@gobble
627 \let\hphantom\@gobble

```

Package pifont.

```

628 \let\ding\HyPsd@ding
629 \let\Cube\HyPsd@DieFace
630 %* \HyPsd@DieFace -> \epsdice (epsdice)
631 %* \HyPsd@DieFace -> \fcdice (hhcount)

```

Environments.

```

632 \def\begin#1{\csname#1\endcsname}%
633 \def\end#1{\csname end#1\endcsname}%

```

Package color.

```

634 \def\textcolor##1##{\@secondoftwo}%

```

Upper- and lowercase.

```

635 \def\MakeUppercase{\MakeUppercaseUnsupportedInPdfStrings}%
636 \def\MakeLowercase{\MakeLowercaseUnsupportedInPdfStrings}%

```

Support of math commands without prefix text. This is controlled by option “psdextra” and only activated with Unicode PDF strings.

```

637 \ifHy@psdextra
638 \ifHy@unicode
639 \csname psdmapshortnames\endcsname
640 \csname psdaliasnames\endcsname
641 \fi
642 \fi

```

Package babel. Whereever “naturalnames” is used, disable \textlatin (from Babel 3.6k). Thanks to Felix Neubauer (Email: Felix.Neubauer@gmx.net).

```

643 \let\foreignlanguage\@secondoftwo
644 \let\textlatin\@firstofone
645 \ltx@ifundefined{language@group}{\}%
646 \let\bbl@info\@gobble
647 \csname HyPsd@babel@\language@group\endcsname
648 }%
649 \HyPsd@GreekPatch
650 \HyPsd@SpanishPatch
651 \HyPsd@RussianPatch

```



```

652 \HyPsd@BabelPatch
653 \let\@safe@activetrue\relax
654 \let\@safe@activesfalse\relax

  Disable \cyr, used in russianb.ldf.
655 \let\cyr\relax

  Redefine \es@roman, used in spanish.ldf.
656 \let\es@roman\@Roman

```

Package german.

```

657 \let\glqq\textglqq
658 \let\grqq\textgrqq
659 \let\glq\textglq
660 \let\grq\textgrq
661 \let\flqq\textflqq
662 \let\frqq\textfrqq
663 \let\flq\textflq
664 \let\frq\textfrq

```

Package french. The support is deferred, because it needs `\GenericError` to be disabled (see below).

Package FrenchPro. This package uses:

```

\if@mid@expandable{not fully expandable code}{fully expandable
code}

665 \let\if@mid@expandable\@firstoftwo

```

AMS classes.

```

666 \HyPsd@AMSclassfix

```

Redefinition of \hspace \hspace don't work in bookmarks, the following fix tries to set a space if the argument is a positive length.

```

667 \let\hspace\HyPsd@hspace

```

Commands of referencing and indexing systems. Some \LaTeX commands that are legal in `\section` commands have to be disabled here.

```

668 \let\label\@gobble
669 \let\index\@gobble
670 \let\glossary\@gobble
671 \let\href\HyPsd@href
672 \let\@mkboth\@gobbletwo

  The \ref and \pageref is much more complicate because of their star form.
673 \let\ref\HyPsd@ref
674 \let\pageref\HyPsd@pageref
675 \let\nameref\HyPsd@nameref
676 \let\autoref\HyPsd@autoref

```


Miscellaneous commands.

```
677 \let\leavevmode\@empty
678 \let\mbox\@empty
```

`\halign` causes error messages because of the template character `#`.

```
679 \def\halign{\pdfstringdefWarn\halign\@gobble}%
680 \let\ignorespaces\HyPsd@ignorespaces
681 \let\Hy@SectionAnchorHref\@gobble
682 \let\ensuremath\@firstofone
```

Patch for cjk bookmarks.

```
683 \HyPsd@CJKhook
```

User hook. The switch `\Hy@pdfstring` is turned on. So user commands can detect that they are processed not to be typesetted within \TeX 's stomach, but to be expanded by the mouth to give a PDF string. At this place before interpreting the string in `#2` additional redefinitions can be added by the hook `\pdfstringdef-PreHook`.

The position in the middle of the redefinitions is a compromise: The user should be able to provide his own (perhaps better) redefinitions, but some commands should have their original meaning, because they can be used in the hook (`\bgroup`, or `\@protected@testopt`, and `\@ifnextchar` for `\renewcommand`).

```
684 \Hy@pdfstringtrue
685 \pdfstringdefPreHook
```

Spaces. For checking the token of the string, spaces must be masked, because they cannot be caught by undelimited arguments.

```
686 \HyPsd@LetUnexpandableSpace\space
687 \HyPsd@LetUnexpandableSpace\ %
688 \HyPsd@LetUnexpandableSpace~%
689 \HyPsd@LetUnexpandableSpace\nobreakspace
```

Package `xspace`.

```
690 \ltx@ifundefined{@xspace}{%
691 \let\xspace\HyPsd@ITALCORR
692 }{%
693 \let\xspace\HyPsd@XSPACE
694 }%
695 \let\/\HyPsd@ITALCORR
696 \let\bgroup\/%
697 \let\egroup\/%
```

Redefinitions of miscellaneous commands. Hyphenation does not make sense.

```
698 \let\discretionary\@gobbletwo
```

`\@ifstar` is defined in \LaTeX as follows:

```
\def\@ifstar#1{\@ifnextchar_*{\@firstoftwo{#1}}}
```

`\@ifnextchar` doesn't work, because it uses stomach commands like `\let` and `\futurelet`. But it doesn't break. Whereas `\@firstoftwo{#1}` gives an error message because `\@firstoftwo` misses its second argument.

A mimicry of `\@ifnextchar` only with expandible commands would be very extensive and the result would be only an approximation. So here a cheaper solution follows in order to get rid of the error message at least:

```
699 \def\@ifnextchar{\HyPsd@ifnextchar\@ifnextchar}%
700 \def\kernel@ifnextchar{\HyPsd@ifnextchar\kernel@ifnextchar}%
701 \def\new@ifnextchar{\HyPsd@ifnextchar\new@ifnextchar}%
702 \let\@protected@testopt\HyPsd@protected@testopt
```

Support for package ‘xargs’:

```
703 \let\@protected@testopt@xargs\HyPsd@protected@testopt
```

6.2.2 Expansion

There are several possibilities to expand tokens within \LaTeX :

`\protected@edef`: The weakest form isn’t usable, because it does not expand the font encoding commands. They are made robust and protect themselves.

`\csname`: First the string is expanded within a `\csname` and `\endcsname`. Then the command name is converted to characters with catcode 12 by `\string` and the first escape character removed by `\@gobble`. This method has the great *advantage* that stomach tokens that aren’t allowed in PDF strings are detected by \TeX and reported as errors in order to force the user to write correct things. So he get no wrong results by forgetting the proofreading of his text. But the *disadvantage* is that old wrong code cannot processed without errors. Mainly the error message is very cryptic and for the normal user hard to understand. \TeX provides no way to catch the error caused by `\csname` or allows to support the user with a descriptive error message. Therefore the experienced user had to enable this behaviour by an option `exactdef` in previous versions less or equal 6.50.

`\edef`: This version uses this standard form for expansion. It is stronger than \LaTeX ’s `\protected@edef`. So the font encoding mechanism works and the glyph commands are converted to the correct tokens for PDF strings with the definitions of the PD1 encoding. Because the protecting mechanism of \LaTeX doesn’t work within an `\edef`, there are situations thinkable where code can break. For example, assignments and definitions aren’t performed and so undefined command errors or argument parsing errors can occur. But this is only a compatibility problem with old texts. Now there are possibilities to write code that gives correct PDF strings (see `\texorpdfstring`). In the most cases unexpandable commands and tokens (math shift, grouping characters) remains. They don’t cause an error like with `\csname`. However a PDF reader isn’t \TeX , so these tokens are viewed verbatim. So this version detects them now, and removes them with an descriptive warning for the user. As additional features xspace support is possible and grouping characters can be used without problems, because they are removed silently.

Generic messages. While expanding via `\xdef` the `\Generic...` messages don’t work and causes problems (error messages, invalid .out file). So they are disabled while expanding and removed silently, because a user warning would be too expensive (memory and runtime, `\pdfstringdef` is slow enough).

```
704 \begingroup
705 \let\GenericError\@gobblefour
706 \let\GenericWarning\@gobbletwo
707 \let\GenericInfo\@gobbletwo
```


Package french. This fix only works, if `\GenericError` is disabled.

```

708 \ifx\nofrenchguillemets\@undefined
709 \else
710 \nofrenchguillemets
711 \fi

```

Definition commands and expansion. Redefining the defining commands (see sec. 6.5.12). The original meaning of `\xdef` is saved in `\Hy@temp`.

```

712 \let\Hy@temp\xdef
713 \let\def\HyPsd@DefCommand
714 \let\gdef\HyPsd@DefCommand
715 \let\edef\HyPsd@DefCommand
716 \let\xdef\HyPsd@DefCommand
717 \let\futurelet\HyPsd@LetCommand
718 \let\let\HyPsd@LetCommand
719 \Hy@temp#1{#2}%
720 \endgroup

```

6.2.3 Postprocessing

If the string is empty time can be saved by omitting the postprocessing process.

```

721 \ifx#1\@empty
722 \else

```

Protecting spaces and removing grouping characters. In order to check the tokens we must separate them. This will be done with `TEX`'s argument parsing. With this method we must take the following item into account, that makes things a little more complicate:

- `TEX` does not accept a space as an undelimited argument, it cancels space tokens while looking for an undelimited argument. Therefore we must protect the spaces now.
- An argument can be a single token or a group of many tokens. And within curly braces tokens aren't found by `TEX`'s argument scanning process. Third curly braces as grouping characters cannot be expanded further, so they don't vanish by the string expansion above. So these characters with catcode 1 and 2 are removed in the following and replaced by an marker for the xspace support.
- `TEX` silently removes the outmost pair of braces of an argument. To prevent this on unwanted places, in the following the character `|` is appended to the string to make an outer brace to an inner one.

First the top level spaces are protected by replacing. Then the string is scanned to detect token groups. Each token group will now be space protected and again scanned for another token groups.

```

723 \HyPsd@ProtectSpaces#1%
724 \let\HyPsd@String\@empty
725 \expandafter\HyPsd@RemoveBraces\expandafter{#1|}%
726 \global\let#1\HyPsd@String

```


Check tokens. After removing the spaces and the grouping characters the string now should only consists of the following tokens/catcodes:

- 0 command names with start with an escape character.
- 3 math shift
- 4 alignment tabs
- 6 parameter, but this is unlikely.
- 7 superscript
- 8 subscript
- 11 letter
- 12 other
- 13 commands that are active characters.

After `\HyPsd@CheckCatcodes` the command `\HyPsd@RemoveMask` is reused to remove the group protection character `|`. This character is needed to ensure that the string at least consists of one token if `\HyPsd@CheckCatcodes` is called.

Because of internal local assignments and tabulars group braces are used.

```

727 \let\HyPsd@SPACEOPTI\relax
728 {%
729 \let\HyPsd@String\@empty
730 \expandafter\HyPsd@CheckCatcodes#1\HyPsd@End
731 \global\let#1\HyPsd@String
732 }%
733 \expandafter\HyPsd@RemoveMask\expandafter
734 |\expandafter\@empty#1\HyPsd@End#1%
```

`\HyPsd@CheckCatcodes` should no have removed the tokens with catcode 3, 4, 7, and 8. Because a parameter token (6) would cause to many errors before, there should now be only tokens with catcodes 11 or 12. So I think there is no need for a safety step like:

```
\xdef#1{\expandafter\strip@prefix\meaning#1}%
```

Looking for wrong glyphs. The case that glyphs aren't defined in the PD1 encoding is caught above in such a way, that the glyph name and a marker is inserted into the string. Now we can safely scan the string for this marker and provide a descriptive warning.

```

735 \expandafter
736 \HyPsd@Subst\expandafter{\HyPsd@GLYPHERR}{\relax}#1%
737 \let\HyPsd@String\@empty
738 \expandafter\HyPsd@GlyphProcess#1\relax\@empty
739 \global\let#1\HyPsd@String
```

Backslash. The double backslash disturbs parsing octal sequences, for example in an string like `abc\\051` the sequence `\051` is detected although the second `\` belongs to the first backslash.

```
740 \HyPsd@StringSubst{\}{\textbackslash}#1%
```

Spaces. All spaces have already the form `\040`. The last postprocessing step will be an optimizing of the spaces, so we already introduce already the necessary command `\HyPsd@SPACEOPTI`. But first it is defined to be `\relax` in order to prevent a too early expansion by an `\edef`. Secondly a `\relax` serves as a marker for a token that is detected by `\xspace`.

The code of `frenchb.ldf` can produce an additional space before `\guillemotright`, because `\lastskip` and `\unskip` do not work. Therefore it is removed here.


```

741 \ifHy@unicode
742 \expandafter\HyPsd@StringSubst\csname 80\040\endcsname
743 \HyPsd@SPACEOPTI#1%
744 \edef\Hy@temp@A{\HyPsd@SPACEOPTI\HyPsd@SPACEOPTI\80\273}%
745 \expandafter\HyPsd@Subst\expandafter{\Hy@temp@A}%
746 {\HyPsd@SPACEOPTI\80\273}#1%
747 \else
748 \HyPsd@StringSubst{\040}\HyPsd@SPACEOPTI#1%
749 \expandafter\HyPsd@Subst\expandafter{%
750 \expandafter\HyPsd@SPACEOPTI\expandafter\HyPsd@SPACEOPTI
751 \string\273}\HyPsd@SPACEOPTI\273}#1%
752 \fi

```

Right parenthesis. Also `\xspace` detects a right parenthesis. For the `\xspace` support and the following parenthesis check the different parenthesis notations `)`, `\)`, and `\051` are converted to one type `\)` and before `\HyPsd@empty` with the meaning of `\relax` is introduced for `\xspace`. By redefining to `\@empty` `\HyPsd@empty` can easily be removed later.

```

753 \ifHy@unicode
754 \HyPsd@StringSubst{\}){\80\051}#1%
755 \HyPsd@Subst){\80\051}#1%
756 \let\HyPsd@empty\relax
757 \expandafter\HyPsd@StringSubst\csname 80\051\endcsname
758 {\HyPsd@empty\80\051}#1%
759 \else
760 \HyPsd@StringSubst{\}){\051}#1%
761 \HyPsd@Subst){\051}#1%
762 \let\HyPsd@empty\relax
763 \HyPsd@StringSubst{\051}{\HyPsd@empty\string\)}#1%
764 \fi

```

Support for package `xspace`. `\xspace` looks for the next token and decides if it expands to a space or not. Following tokens prevent its transformation to a space: Beginning and end of group, handled above by replacing by an italic correction, several punctuation marks, a closing parentheses, and several spaces.

Without package `xspace` there are tokens with catcode 11 and 12, `\HyPsd@empty` and `\HyPsd@SPACEOPTI`. With package `xspace` marker for the italic correction `\/` and `\xspace` come with. In the package `xspace` case the two markers are replaced by commands and an `\edef` performs the `\xspace` processing.

In the opposite of the original `\xspace` `\HyPsd@xspace` uses an argument instead of a `\futurelet`, so we have to provide such an argument, if `\HyPsd@xspace` comes last. Because `\HyPsd@Subst` with several equal tokens (`--`) needs a safe last token, in both cases the string gets an additional `\HyPsd@empty`.

```

765 \expandafter\HyPsd@Subst\expandafter{\//}\HyPsd@empty#1%
766 \ltx@ifundefined{@xspace}{%
767 }{%
768 \let\HyPsd@xspace\relax
769 \expandafter\HyPsd@Subst\expandafter
770 {\HyPsd@XSPACE}\HyPsd@xspace#1%
771 \let\HyPsd@xspace\HyPsd@doxspace
772 }%
773 \xdef#1{#1\HyPsd@empty}%

```

Ligatures. \TeX forms ligatures in its stomach, but the PDF strings are treated only by \TeX 's mouth. The `PDFDocEncoding` contains some ligatures, but the

current version 3 of the AcrobatReader lacks the `fi` and `fl` glyphs, and the Linux version lacks the `emdash` and `endash` glyphs. So the necessary code is provided here, but currently disabled, hoping that version 4 of the AcrobatReader is better. To break the ligatures the user can use an empty group, because it leads to an insertion of an `\HyPsd@empty`. If this ligature code will be enabled some day, then the italic correction should also break the ligatures. Currently this occurs only, if package `xspace` is loaded.

Since newer AcrobatReader versions now show the en- and emdash in a correct way (AR7/Linux, AR8/Linux), the substitution code for them is enabled starting with version 6.78l.

```

774 \HyPsd@Subst{---}\textemdash#1%
775 \HyPsd@Subst{--}\textendash#1%
776 % \HyPsd@Subst{fi}\textfi#1%
777 % \HyPsd@Subst{fl}\textfl#1%
778 \HyPsd@Subst{!}\textexclamdown#1%
779 \HyPsd@Subst{?}\textquestiondown#1%
```

With the next `\edef` we get rid of the token `\HyPsd@empty`.

```

780 \let\HyPsd@empty\@empty
```

Left parentheses. Left parentheses are now converted to safe forms to avoid problems with unmatched ones (`\(` with PDFDocEncoding, the octal sequence with Unicode).

An optimization is possible. Matched parentheses can be replaced by a `()` pair. But this code is removed to save \TeX memory and time.

```

781 \ifHy@unicode
782 \HyPsd@StringSubst\(\textparenleft#1%
783 \HyPsd@Subst(\textparenleft#1%
784 \else
785 \HyPsd@StringSubst\({\050}#1%
786 \HyPsd@Subst({\050}#1%
787 \HyPsd@StringSubst{\050}\string\{)#1%
788 \fi
```

Optimizing spaces. Spaces are often used, but they have a very long form `\040`. They are converted back to real spaces, but not all, so that no space follows after another. In the bookmark case several spaces are written to the `.out` file, but if the entries are read back, several spaces are merged to a single one.

With Unicode the spaces are replaced by their octal sequences.

```

789 \ifHy@unicode
790 \edef\HyPsd@SPACEOPTI{\80\040}%
791 \else
792 \let\HyPsd@SPACEOPTI\HyPsd@spaceopti
793 \fi
794 \xdef#1{#1\@empty}%
795 \fi
```

Converting to Unicode. At last the eight bit letters have to be converted to Unicode, the masks `\8` and `\9` are removed and the Unicode marker is added.

```

796 \endgroup
797 \begingroup
798 \ifHy@unicode
799 \HyPsd@ConvertToUnicode#1%
```


Try conversion back to PDFDocEncoding.

```
800 \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
801 \ltx@ifundefined{StringEncodingConvertTest}{%
802 }{%
803 \EdefUnescapeString\HyPsd@temp#1%
804 \ifxetex
805 \let\HyPsd@UnescapedString\HyPsd@temp
806 \StringEncodingConvertTest\HyPsd@temp\HyPsd@temp
807 {utf16be}{ascii-print}{%
808 \EdefEscapeString\HyPsd@temp\HyPsd@temp
809 \global\let#1\HyPsd@temp
810 \HyPsd@EscapeTeX#1%
811 \Hy@unicodedefalse
812 }{%
813 \HyPsd@ToBigChars#1%
814 \HyPsd@EscapeTeX#1%
815 }%
816 \else
817 \StringEncodingConvertTest\HyPsd@temp\HyPsd@temp
818 {utf16be}{pdfdoc}{%
819 \EdefEscapeString\HyPsd@temp\HyPsd@temp
820 \global\let#1\HyPsd@temp
821 \HyPsd@EscapeTeX#1%
822 \Hy@unicodedefalse
823 }{}%
824 \fi
825 }%
826 \fi
827 \fi
828 \HyPsd@XeTeXBigCharsfalse
```

User hook. The hook `\pdfstringdefPostHook` can be used for the purpose to postprocess the string further.

```
829 \pdfstringdefPostHook#1%
830 \endgroup
831 }
```

`\Hy@pdfstringdef`

```
832 \def\Hy@pdfstringdef#1#2{%
833 \pdfstringdef\Hy@gtemp{#2}%
834 \let#1\Hy@gtemp
835 }
```

6.3 Encodings

6.3.1 XeTeX

```
836 \edef\Hy@temp{\catcode0=\the\catcode0\relax}
837 \catcode\z@=12 %
838 \ifxetex
839 \expandafter\@firstofone
840 \else
841 \let\HyPsd@XeTeXBigCharstrue\@empty
842 \let\HyPsd@XeTeXBigCharsfalse\@empty
843 \expandafter\@gobble
844 \fi
845 {%
```



```

846 \newif\ifHyPsd@XeTeXBigChars
847 \def\HyPsd@XeTeXBigCharsfalse{%
848   \global\let\ifHyPsd@XeTeXBigChars\iffalse
849 }%
850 \def\HyPsd@XeTeXBigCharstrue{%
851   \global\let\ifHyPsd@XeTeXBigChars\iftrue
852 }%
853 \def\HyPsd@ToBigChars#1{%
854   \ifHyPsd@XeTeXBigChars
855     \edef\EscapeHex\HyPsd@UnescapedString{%
856       \expandafter\@gobbletwo\HyPsd@UnescapedString
857     }%
858     \begingroup
859     \toks@{}%
860     \escapechar=92\relax
861     \let\x\HyPsd@ToBigChar
862     \expandafter\HyPsd@ToBigChar\HyPsd@UnescapedString
863     \relax\relax\relax\relax\relax\relax\relax
864     \edef\x{%
865       \endgroup
866       \gdef\noexpand#1{\the\toks@}%
867     }%
868     \x
869   \fi
870 }%
871 \def\HyPsd@ToBigChar#1#2#3#4{%
872   \ifx\relax#1\relax
873     \let\x\relax
874   \else
875     \count@=#1#2#3#4\relax
876     \let\y\@empty
877     \lccode\z@=\count@
878     \ifnum\count@=40 % (
879       \let\y\@backslashchar
880     \else
881       \ifnum\count@=41 % )
882         \let\y\@backslashchar
883       \else
884         \ifnum\count@=92 % backslash
885           \let\y\@backslashchar
886         \else
887           \ifnum\count@=10 % newline
888             \edef\y##1{\string\n}%
889           \else
890             \ifnum\count@=13 % carriage return
891               \edef\y##1{\string\r}%
892             \fi
893           \fi
894         \fi
895       \fi
896     \fi
897     \lowercase{%
898       \toks@\expandafter{%
899         \the\expandafter\toks@
900       }
901       \y
902       ^^@%
903     }%

```



```

903 }%
904 \fi
905 \x
906 }%
907 }
908 \Hy@temp

```

6.3.2 Workaround for package linguex

```

909 \@ifpackageloaded{linguex}{%
910 \let\HyLinguex@OrgB\b
911 \let\HyLinguex@OrgC\c
912 \let\HyLinguex@OrgD\d
913 \def\HyLinguex@Restore{%
914 \let\b\HyLinguex@OrgB
915 \let\c\HyLinguex@OrgC
916 \let\d\HyLinguex@OrgD
917 }%
918 \Hy@AtEndOfPackage{%
919 \pdfstringdefDisableCommands{%
920 \ltx@ifundefined{oldb}{\let\b\oldb}%
921 \ltx@ifundefined{oldc}{\let\c\oldc}%
922 \ltx@ifundefined{oldd}{\let\d\oldd}%
923 }%
924 }%
925 }{%
926 \let\HyLinguex@Restore\relax
927 }%

```

6.3.3 Catcodes saving and restoring for .def files

\Hy@SaveCatcodeSettings

```

928 \def\Hy@SaveCatcodeSettings#1{%
929 \expandafter\edef\csname Hy@cat@#1\endcsname{%
930 \endlinechar=\the\endlinechar\relax
931 \catcode32 \the\catcode32\relax % (space)
932 \catcode34 \the\catcode34\relax % "
933 \catcode35 \the\catcode35\relax % #
934 \catcode37 \the\catcode37\relax % (percent)
935 \catcode40 \the\catcode40\relax % (
936 \catcode41 \the\catcode41\relax % )
937 \catcode42 \the\catcode42\relax % *
938 \catcode46 \the\catcode46\relax % .
939 \catcode58 \the\catcode58\relax % :
940 \catcode60 \the\catcode60\relax % <
941 \catcode61 \the\catcode61\relax % =
942 \catcode62 \the\catcode62\relax % >
943 \catcode64 \the\catcode64\relax % @
944 \catcode91 \the\catcode91\relax % [
945 \catcode92 \the\catcode92\relax % \
946 \catcode93 \the\catcode93\relax % ]
947 \catcode123 \the\catcode123\relax % {
948 \catcode124 \the\catcode124\relax % |
949 \catcode125 \the\catcode125\relax % }
950 }%
951 \endlinechar=-1 %
952 \catcode32 10 % (space)
953 \catcode34 12 % "
954 \catcode35 6 % #

```



```

955 \catcode37 14 % (percent)
956 \catcode40 12 % (
957 \catcode41 12 % )
958 \catcode42 12 % *
959 \catcode46 12 % .
960 \catcode58 12 % :
961 \catcode60 12 % <
962 \catcode61 12 % =
963 \catcode62 12 % >
964 \catcode91 12 % [
965 \catcode92 0 % \
966 \catcode93 12 % ]
967 \catcode123 1 % {
968 \catcode124 12 % |
969 \catcode125 2 % }
970 \makeatletter
971 }

```

`\Hy@RestoreCatcodeSettings`

```

972 \def\Hy@RestoreCatcodeSettings#1{%
973   \csname Hy@cat@#1\endcsname
974   \expandafter\let\csname Hy@cat@#1\endcsname\relax
975 }

```

6.3.4 PD1 encoding

The PD1 encoding implements the PDFDocEncoding for use with $\text{\LaTeX} 2_{\epsilon}$'s NFSS. Because the informational strings are not set by \TeX 's typesetting mechanism but for interpreting by the PDF reader, the glyphs of the PD1 encoding are implemented to be safely written to a file (PDF output file, .out file).

The PD1 encoding can be specified as an option of the 'fontenc' package or loaded here. It does not matter what font family is selected, as \TeX does not process it anyway. So use CM.

```

976 \@ifundefined{T@PD1}{%
977   \Hy@SaveCatcodeSettings{pd1}%
978   \input{pd1enc.def}%
979   \Hy@RestoreCatcodeSettings{pd1}%
980   \HyLinguex@Restore
981 }{}
982 \DeclareFontFamily{PD1}{pdf}{}
983 \DeclareFontShape{PD1}{pdf}{m}{n}{ <-> cmr10 }{}
984 \DeclareFontSubstitution{PD1}{pdf}{m}{n}

```

6.3.5 PU encoding

The PU encoding implements the Unicode encoding for use with \LaTeX 's NFSS. Because of large memory requirements the encoding file for Unicode support is only loaded, if option `unicode` is specified as package option.

`\HyPsd@LoadUnicode` Because the file `puenc.def` takes a lot of memory, the loading is defined in the macro `\HyPsd@LoadUnicode` called by the package option `unicode`.

```

985 \def\HyPsd@LoadUnicode{%
986   \@ifundefined{T@PU}{%
987     \Hy@SaveCatcodeSettings{pu}%
988     \input{puenc.def}%
989     \Hy@RestoreCatcodeSettings{pu}%

```



```

990 \HyLinguex@Restore
991 }{}%
992 \DeclareFontFamily{PU}{pdf}{}%
993 \DeclareFontShape{PU}{pdf}{m}{n}{ <-> cmr10 }{}%
994 \DeclareFontSubstitution{PU}{pdf}{m}{n}%
995 \HyPsd@LoadExtra
996 \let\HyPsd@LoadUnicode\relax
997 }

```

`\HyPsd@LoadExtra`

```

998 \def\HyPsd@LoadExtra{%
999 \ifHy@psdextra
1000 \ltx@iffileloaded{puenc.def}{%
1001 \Hy@SaveCatcodeSettings{psdextra}%
1002 \input{psdextra.def}%
1003 \Hy@RestoreCatcodeSettings{psdextra}%
1004 \let\HyPsd@LoadExtra\relax
1005 }{}%
1006 \fi
1007 }

```

6.4 Additional user commands

6.4.1 `\texorpdfstring`

`\texorpdfstring` While expanding the string in `\pdfstringdef` the switch `\ifHy@pdfstring` is set. This is used by the full expandible macro `\texorpdfstring`. It expects two arguments, the first contains the string that will be set and processed by $\mathrm{T}_{\mathrm{E}}\mathrm{X}$'s stomach, the second contains the replacement for PDF strings.

```

1008 \def\texorpdfstring{%
1009 \ifHy@pdfstring
1010 \expandafter\@secondoftwo
1011 \else
1012 \expandafter\@firstoftwo
1013 \fi
1014 }

```

6.4.2 Hooks for `\pdfstringdef`

`\pdfstringdefPreHook` Default definition of the hooks for `\pdfstringdef`. The construct `\@ifundefined` with `\let` is a little bit faster than `\providecommand`.

```

\pdfstringdefPostHook
1015 \@ifundefined{pdfstringdefPreHook}{%
1016 \let\pdfstringdefPreHook\@empty
1017 }{}
1018 \@ifundefined{pdfstringdefPostHook}{%
1019 \let\pdfstringdefPostHook\@gobble
1020 }{}

```

`\pdfstringdefDisableCommands` In `\pdfstringdefPreHook` the user can add code that is executed before the string, that have to be converted by `\pdfstringdef`, is expanded. So replacements for problematic macros can be given. The code in `\pdfstringdefPreHook` should not be replaced perhaps by an `\renewcommand`, because a previous meaning gets lost.

Macro `\pdfstringdefDisableCommands` avoids this, because it reuses the old meaning of the hook and appends the new code to `\pdfstringdefPreHook`, e.g.:


```

\pdfstringdefDisableCommands{%
  \let~\textasciitilde
  \def\url{\pdfstringdefWarn\url}%
  \let\textcolor\@gobble
}%

```

In the argument of `\pdfstringdefDisableCommands` the character `@` can be used in command names. So it is easy to use useful L^AT_EX commands like `\@gobble` or `\@firstofone`.

```

1021 \def\pdfstringdefDisableCommands{%
1022   \begingroup
1023   \makeatletter
1024   \HyPsd@DisableCommands
1025 }

```

`\HyPsd@DisableCommands`

```

1026 \long\def\HyPsd@DisableCommands#1{%
1027   \ltx@GlobalAppendToMacro\pdfstringdefPreHook{#1}%
1028   \endgroup
1029 }

```

(Partial) fix for bug in frenchb.ldf 2010/08/21 v2.5a that destroys `\pdfstringdefDisableCommands` after usage in `\AtBeginDocument`.

```

1030 \let\HyPsd@pdfstringdefDisableCommands\pdfstringdefDisableCommands
1031 \AtBeginDocument{%
1032   \ifundefined{pdfstringdefDisableCommands}{%
1033     \let\pdfstringdefDisableCommands\HyPsd@pdfstringdefDisableCommands
1034   }{}%
1035 }

```

`\pdfstringdefWarn` The purpose of `\pdfstringdefWarn` is to produce a warning message, so the user can see, that something can go wrong with the conversion to PDF strings.

The prefix `\<>` is added to the token. `\noexpand` protects the probably undefined one during the first expansion step. Then `\HyPsd@CheckCatcodes` can detect the not allowed token, `\HyPsd@CatcodeWarning` prints a warning message, after `\HyPsd@RemovePrefix` has removed the prefix.

`\pdfstringdefWarn` is intended for document authors or package writers, examples for use can be seen in the definition of `\HyPsd@ifnextchar` or `\HyPsd@protected@testopt`.

```

1036 \def\pdfstringdefWarn#1{%
1037   \expandafter\noexpand\csname<>\string#1\endcsname
1038 }

```

6.5 Help macros for expansion

6.5.1 `\ignorespaces`

`\HyPsd@ignorespaces` With the help of a trick using `\romannumeral` the effect of `\ignorespaces` can be simulated a little. In a special case using an alphabetic constant `\romannumeral` eats an optional space. If the constant is zero, then the `\romannumeral` expression vanishes. The following macro uses this trick twice, thus `\HyPsd@ignorespaces` eats up to two following spaces.

```

1039 \begingroup
1040   \catcode0=12 %
1041   \def\x{\endgroup
1042     \def\HyPsd@ignorespaces{%

```



```

1043 \romannumeral\expandafter`\expandafter^^@%
1044 \romannumeral^^@%
1045 }%
1046 }%
1047 \x

```

6.5.2 Babel languages

Since version 2008/03/16 v3.8j babel uses inside `\AtBeginDocument`:

```

\pdfstringdefDisableCommands{%
  \language\languageshorthands{system}%
}

```

As consequence the shorthands are shown in the bookmarks, not its result. Therefore `\languageshorthands` is disabled before the user hook. If there is a need to use the command, then `\HyOrg@languageshorthands` can be used inside `\pdfstringdefDisableCommands`.

```

1048 \def\HyPsd@BabelPatch{%
1049 \let\HyOrg@languageshorthands\languageshorthands
1050 \let\languageshorthands\HyPsd@LanguageShorthands
1051 }
1052 \begingroup\expandafter\expandafter\expandafter\endgroup
1053 \expandafter\ifx\csname pdf@strcmp\endcsname\relax
1054 \let\HyPsd@langshort@system\@empty
1055 \def\HyPsd@LanguageShorthands#1{%
1056 \expandafter\ifx\csname HyPsd@langshort@#1\endcsname
1057 \HyPsd@langshort@system
1058 \expandafter\@gobble
1059 \else
1060 \expandafter\@firstofone
1061 \fi
1062 {%
1063 \HyOrg@languageshorthands{#1}%
1064 }%
1065 }%
1066 \else
1067 \def\HyPsd@LanguageShorthands#1{%
1068 \ifnum\pdf@strcmp{#1}{system}=\z@
1069 \expandafter\@gobble
1070 \else
1071 \expandafter\@firstofone
1072 \fi
1073 {%
1074 \HyOrg@languageshorthands{#1}%
1075 }%
1076 }%
1077 \fi
1078 \def\Hy@temp{%
1079 \@ifpackageloaded{babel}{%
1080 \@ifpackagelater{babel}{2008/03/16}{%
1081 \let\Hy@temp\@empty
1082 }{%
1083 \def\HyPsd@BabelPatch{%
1084 \let\HyOrg@languageshorthands\languageshorthands
1085 }%
1086 }%
1087 }{%

```



```

1088 }
1089 \Hy@temp
1090 \expandafter\Hy@AtBeginDocument\expandafter{\Hy@temp}
1091 \newif\ifHy@next

    Nothing to do for english.
1092 \ltx@ifundefined{danish@sh@}{@sel}{-}{-}%
1093 \def\HyPsd@babel@danish{%
1094   \declare@shorthand{danish}{-}{-}%
1095   \declare@shorthand{danish}{-}{-}%
1096 }%
1097 }
1098 \ltx@ifundefined{dutch@sh@}{@sel}{-}{-}%
1099 \def\HyPsd@babel@dutch{%
1100   \declare@shorthand{dutch}{-}{-}%
1101   \declare@shorthand{dutch}{-}{-}%
1102 }%
1103 }
1104 \ltx@ifundefined{finnish@sh@}{@sel}{-}{-}%
1105 \def\HyPsd@babel@finnish{%
1106   \declare@shorthand{finnish}{-}{-}%
1107 }%
1108 }
1109 \ltx@ifundefined{french@sh@}{@sel}{-}{-}%
1110 \def\HyPsd@babel@frenchb{%
1111   \def\guill@spacing{ }%
1112 }%
1113 }
1114 \ltx@ifundefined{german@sh@}{@sel}{-}{-}%
1115 \def\HyPsd@babel@german{%
1116   \declare@shorthand{german}{f}{f}%
1117   \declare@shorthand{german}{-}{-}%
1118   \declare@shorthand{german}{-}{-}%
1119 }%
1120 }
1121 \ltx@ifundefined{macedonian@sh@}{@sel}{-}{-}%
1122 \def\HyPsd@babel@macedonian{%
1123   \declare@shorthand{macedonian}{-}{-}%
1124   \declare@shorthand{macedonian}{-}{-}%
1125 }%
1126 }{}
1127 \ltx@ifundefined{ngerman@sh@}{@sel}{-}{-}%
1128 \def\HyPsd@babel@ngerman{%
1129   \declare@shorthand{ngerman}{-}{-}%
1130   \declare@shorthand{ngerman}{-}{-}%
1131 }%
1132 }
1133 \ltx@ifundefined{portuges@sh@}{@sel}{-}{-}%
1134 \def\HyPsd@babel@portuges{%
1135   \declare@shorthand{portuges}{-}{-}%
1136 }%
1137 }
1138 \ltx@ifundefined{russian@sh@}{@sel}{-}{-}%
1139 \def\HyPsd@babel@russian{%
1140   \declare@shorthand{russian}{-}{-}%
1141   \declare@shorthand{russian}{-}{-}%
1142 }%

```



```

1143 }
1144 \ltx@ifundefined{slovene@sh@{@sel}}{%
1145   \def\HyPsd@babel@slovene{%
1146     \declare@shorthand{slovene}{"}{|}%
1147   }%
1148 }

```

Nested quoting environments are not supported (<<, >>).

```

1149 \ltx@ifundefined{spanish@sh@>@sel}}{%
1150   \def\HyPsd@babel@spanish{%
1151     \declare@shorthand{spanish}{<<}{\guillemotleft}%
1152     \declare@shorthand{spanish}{>>}{\guillemotright}%
1153     \declare@shorthand{spanish}{"}{'}%
1154     \declare@shorthand{spanish}{"}{~}{-}%
1155     \declare@shorthand{spanish}{"}{!}{\textexclamdown}%
1156     \declare@shorthand{spanish}{"}{?}{\textquestiondown}%
1157   }%
1158 }
1159 \ltx@ifundefined{swedish@sh@{@sel}}{%
1160   \def\HyPsd@babel@swedish{%
1161     \declare@shorthand{swedish}{"}{|}%
1162     \declare@shorthand{swedish}{"}{~}{-}%
1163   }%
1164 }
1165 \ltx@ifundefined{ukrainian@sh@{@sel}}{%
1166   \def\HyPsd@babel@ukrainian{%
1167     \declare@shorthand{ukrainian}{"}{|}%
1168     \declare@shorthand{ukrainian}{"}{~}{-}%
1169   }%
1170 }
1171 \ltx@ifundefined{usorbian@sh@{@sel}}{%
1172   \def\HyPsd@babel@usorbian{%
1173     \declare@shorthand{usorbian}{"}{f}{f}%
1174     \declare@shorthand{usorbian}{"}{|}%
1175   }%
1176 }
1177 \ltx@ifundefined{greek@sh@\string-@sel}}{%
1178   \let\HyPsd@GreekPatch\@empty
1179 }{%
1180   \def\HyPsd@GreekPatch{%
1181     \let\greeknumeral\HyPsd@greeknumeral
1182     \let\Greeknnumeral\HyPsd@Greeknnumeral
1183   }%
1184 }
1185 \def\HyPsd@greeknumeral#1{%
1186   \HyPsd@GreekNum\@firstoftwo{#1}%
1187 }
1188 \def\HyPsd@Greeknnumeral#1{%
1189   \HyPsd@GreekNum\@secondoftwo{#1}%
1190 }
1191 \def\HyPsd@GreekNum#1#2{%
1192   \ifHy@unicode
1193     \ifnum#2<\@ne
1194       \@arabic{#2}%
1195     \else
1196       \ifnum#2<1000000 %
1197         \HyPsd@@GreekNum#1{#2}%
1198       \else

```



```

1199     \@arabic{#2}%
1200     \fi
1201   \fi
1202 \else
1203   \@arabic{#2}%
1204   \fi
1205 }
1206 \def\HyPsd@@GreekNum#1#2{%
1207   \ifnum#2<\@m
1208     \ifnum#2<10 %
1209       \expandafter\HyPsd@GreekNumI
1210       \expandafter\@gobble\expandafter#1\number#2%
1211     \else
1212       \ifnum#2<100 %
1213         \expandafter\HyPsd@GreekNumII
1214         \expandafter\@gobble\expandafter#1\number#2%
1215       \else
1216         \expandafter\HyPsd@GreekNumIII
1217         \expandafter\@gobble\expandafter#1\number#2%
1218       \fi
1219     \fi
1220     \ifnum#2>\z@
1221       \textnumeralsigngreek
1222     \fi
1223 \else
1224   \ifnum#2<\@M
1225     \expandafter\HyPsd@GreekNumIV\expandafter#1\number#2%
1226   \else
1227     \ifnum#2<100000 %
1228       \expandafter\HyPsd@GreekNumV\expandafter#1\number#2%
1229     \else
1230       \expandafter\HyPsd@GreekNumVI\expandafter#1\number#2%
1231     \fi
1232   \fi
1233 \fi
1234 }
1235 \def\HyPsd@GreekNumI#1#2#3{%
1236   #1{%
1237     \ifnum#3>\z@
1238       \textnumeralsignlowergreek
1239     \fi
1240   }%
1241   \expandafter#2%
1242   \ifcase#3 %
1243     {}{}%
1244     \or\textalpha\textAlpha
1245     \or\textbeta\textBeta
1246     \or\textgamma\textGamma
1247     \or\textdelta\textDelta
1248     \or\textepsilon\textEpsilon
1249     \or\textstigmagreek\textStigmagreek
1250     \or\textzeta\textZeta
1251     \or\texteta\textEta
1252     \or\texttheta\textTheta
1253   \else
1254     {}{}%
1255   \fi

```



```

1256 }
1257 \def\HyPsd@GreekNumII#1#2#3#4{%
1258   #1{%
1259     \ifnum#3>\z@
1260       \textnumeralsignlowergreek
1261     \fi
1262   }%
1263   \expandafter#2%
1264   \ifcase#3 %
1265     {}{}%
1266     \or\textiota\textIota
1267     \or\textkappa\textKappa
1268     \or\textlambda\textLambda
1269     \or\textmu\textMu
1270     \or\textnu\textNu
1271     \or\textxi\textXi
1272     \or\textomicron\textOmicron
1273     \or\textpi\textPi
1274     \or\textkoppagreek\textKoppagreek
1275     \else
1276       {}{}%
1277     \fi
1278   \HyPsd@GreekNumI#1#2#4%
1279 }
1280 \def\HyPsd@GreekNumIII#1#2#3#4#5{%
1281   #1{%
1282     \ifnum#3>\z@
1283       \textnumeralsignlowergreek
1284     \fi
1285   }%
1286   \expandafter#2%
1287   \ifcase#3 %
1288     {}{}%
1289     \or\textrho\textRho
1290     \or\textsigma\textSigma
1291     \or\texttau\textTau
1292     \or\textupsilon\textUpsilon
1293     \or\textphi\textPhi
1294     \or\textchi\textChi
1295     \or\textpsi\textPsi
1296     \or\textomega\textOmega
1297     \or\textsampigreek\textSampigreek
1298     \else
1299       {}{}%
1300     \fi
1301   \HyPsd@GreekNumII#1#2#4#5%
1302 }
1303 \def\HyPsd@GreekNumIV#1#2#3#4#5{%
1304   \HyPsd@GreekNumI\@firstofone#1#2%
1305   \HyPsd@@@GreekNum#1{#3#4#5}%
1306 }
1307 \def\HyPsd@GreekNumV#1#2#3#4#5#6{%
1308   \HyPsd@GreekNumII\@firstofone#1#2#3%
1309   \HyPsd@@@GreekNum#1{#4#5#6}%
1310 }
1311 \def\HyPsd@GreekNumVI#1#2#3#4#5#6#7{%
1312   \HyPsd@GreekNumIII\@firstofone#1#2#3#4%

```



```

1313 \HyPsd@@GreekNum#1{#5#6#7}%
1314 }

1315 \def\HyPsd@SpanishPatch{%
1316 \ltx@ifundefined{es@save@dot}{%
1317 }{%
1318 \let\.\es@save@dot
1319 }%
1320 }

```

Shorthand "-" of "russianb.ldf" is not expandable, therefore it is disabled and replaced by -.

```

1321 \def\HyPsd@RussianPatch{%
1322 \ltx@ifundefined{russian@sh@"@-@}{%
1323 }{%
1324 \@namedef{russian@sh@"@-@}{-}%
1325 }%
1326 }

```

6.5.3 CJK patch

```

1327 \RequirePackage{intcalc}[2007/09/27]

\HyPsd@CJKhook

1328 \def\HyPsd@CJKhook{%
1329 \ltx@ifpackageloaded{CJK}{%
1330 \let\CJK@kern\relax
1331 \let\CJKkern\relax
1332 \let\CJK@CJK\relax
1333 \ifHy@CJKbookmarks
1334 \HyPsd@CJKhook@bookmarks
1335 \fi
1336 \HyPsd@CJKhook@unicode
1337 }{%
1338 }

```

6.5.4 CJK bookmarks

\HyPsd@CJKhook Some internal commands of package cjk are redefined to avoid error messages. For a rudimental support of CJK bookmarks the active characters are redefined so that they print themselves.

After preprocessing of Big5 encoded data the following string for a double-byte character is emitted:

```
^^7f<arg1>^^7f<arg2>^^7f
```

<arg1> is the first byte in the range (always > 0x80); <arg2> is the second byte in decimal notation (≥ 0x40).

```

1339 \begingroup
1340 \catcode"7F=\active
1341 \toks@{%
1342 \let\CJK@ignorespaces\empty
1343 \def\CJK@char#1{\@gobbletwo}%
1344 \let\CJK@charx\@gobblefour
1345 \let\CJK@punctchar\@gobblefour
1346 \def\CJK@punctcharx#1{\@gobblefour}%
1347 \catcode"7F=\active
1348 \def^^7f#1^^7f#2^^7f{%

```



```

1349 \string #1\HyPsd@DecimalToOctal{#2}%
1350 }%
1351 % ... ?
1352 \ifHy@unicode
1353 \def\Hy@cjkpu{\80}%
1354 \else
1355 \let\Hy@cjkpu\@empty
1356 \fi
1357 \HyPsd@CJKActiveChars
1358 }%
1359 \count@=127 %
1360 \@whilenum\count@<255 \do{%
1361 \advance\count@ by 1 %
1362 \lccode\~=\count@
1363 \lowercase{%
1364 \toks@\expandafter{\the\toks@ ~}%
1365 }%
1366 }%
1367 \toks@\expandafter{\the\toks@ !}%
1368 \xdef\HyPsd@CJKhook@bookmarks{%
1369 \the\toks@
1370 }%
1371 \endgroup

```

`\HyPsd@CJKActiveChars` The macro `\HyPsd@CJKActiveChars` is only defined to limit the memory consumption of `\HyPsd@CJKhook`.

```

1372 \def\HyPsd@CJKActiveChars#1{%
1373 \ifx#1!%
1374 \let\HyPsd@CJKActiveChars\relax
1375 \else
1376 \edef#1{\noexpand\Hy@cjkpu\string#1}%
1377 \fi
1378 \HyPsd@CJKActiveChars
1379 }

```

`\HyPsd@DecimalToOctal` A character, given by the decimal number is converted to a PDF character.

```

1380 \def\HyPsd@DecimalToOctal#1{%
1381 \ifcase #1 %
1382 \or \000\or \001\or \002\or \003\or \004\or \005\or \006\or \007%
1383 \or \010\or \011\or \012\or \013\or \014\or \015\or \016\or \017%
1384 \or \020\or \021\or \022\or \023\or \024\or \025\or \026\or \027%
1385 \or \030\or \031\or \032\or \033\or \034\or \035\or \036\or \037%
1386 \or \040\or \041\or \042\or \043\or \044\or \045\or \046\or \047%
1387 \or \050\or \051\or \052\or \053\or \054\or \055\or \056\or \057%
1388 \or 0\or 1\or 2\or 3\or 4\or 5\or 6\or 7%
1389 \or 8\or 9\or \072\or \073\or \074\or \075\or \076\or \077%
1390 \or @\or A\or B\or C\or D\or E\or F\or G%
1391 \or H\or I\or J\or K\or L\or M\or N\or O%
1392 \or P\or Q\or R\or S\or T\or U\or V\or W%
1393 \or X\or Y\or Z\or \133\or \134\or \135\or \136\or \137%
1394 \or \140\or a\or b\or c\or d\or e\or f\or g%
1395 \or h\or i\or j\or k\or l\or m\or n\or o%
1396 \or p\or q\or r\or s\or t\or u\or v\or w%
1397 \or x\or y\or z\or \173\or \174\or \175\or \176\or \177%
1398 \or \200\or \201\or \202\or \203\or \204\or \205\or \206\or \207%
1399 \or \210\or \211\or \212\or \213\or \214\or \215\or \216\or \217%
1400 \or \220\or \221\or \222\or \223\or \224\or \225\or \226\or \227%

```



```

1401 \or \230\or \231\or \232\or \233\or \234\or \235\or \236\or \237%
1402 \or \240\or \241\or \242\or \243\or \244\or \245\or \246\or \247%
1403 \or \250\or \251\or \252\or \253\or \254\or \255\or \256\or \257%
1404 \or \260\or \261\or \262\or \263\or \264\or \265\or \266\or \267%
1405 \or \270\or \271\or \272\or \273\or \274\or \275\or \276\or \277%
1406 \or \300\or \301\or \302\or \303\or \304\or \305\or \306\or \307%
1407 \or \310\or \311\or \312\or \313\or \314\or \315\or \316\or \317%
1408 \or \320\or \321\or \322\or \323\or \324\or \325\or \326\or \327%
1409 \or \330\or \331\or \332\or \333\or \334\or \335\or \336\or \337%
1410 \or \340\or \341\or \342\or \343\or \344\or \345\or \346\or \347%
1411 \or \350\or \351\or \352\or \353\or \354\or \355\or \356\or \357%
1412 \or \360\or \361\or \362\or \363\or \364\or \365\or \366\or \367%
1413 \or \370\or \371\or \372\or \373\or \374\or \375\or \376\or \377%
1414 \fi
1415 }

```

6.5.5 CJK unicode

\HyPsd@CJKhook@unicode

```

1416 \def\HyPsd@CJKhook@unicode{%
1417 \let\Unicode\HyPsd@CJK@Unicode
1418 \let\CJKnumber\HyPsd@CJKnumber
1419 \let\CJKdigits\HyPsd@CJKdigits
1420 }

```

\HyPsd@CJK@Unicode

```

1421 \def\HyPsd@CJK@Unicode#1#2{%
1422 \ifnum#1<256 %
1423 \HyPsd@DecimalToOctalFirst{#1}%
1424 \HyPsd@DecimalToOctalSecond{#2}%
1425 \else
1426 \933%
1427 \expandafter\expandafter\expandafter\HyPsd@HighA
1428 \intcalcDiv{#1}{4}!%
1429 \933%
1430 \ifcase\intcalcMod{#1}{4} %
1431 4\or 5\or 6\or 7%
1432 \fi
1433 \HyPsd@DecimalToOctalSecond{#2}%
1434 \fi
1435 }

1436 \def\HyPsd@HighA#1!{%
1437 \expandafter\expandafter\expandafter\HyPsd@HighB
1438 \IntCalcDiv#1!64!!%
1439 \expandafter\expandafter\expandafter\HyPsd@HighD
1440 \IntCalcMod#1!64!!%
1441 }

1442 \def\HyPsd@HighB#1!{%
1443 \expandafter\expandafter\expandafter\HyPsd@HighC
1444 \IntCalcDec#1!!%
1445 }

1446 \def\HyPsd@HighC#1!{%
1447 \IntCalcDiv#1!4!%
1448 \@backslashchar
1449 \IntCalcMod#1!4!%
1450 }

```



```

1451 \def\HyPsd@HighD#1!{%
1452   \ifcase\IntCalcDiv#1!8! %
1453     0\or 1\or 2\or 3\or 4\or 5\or 6\or 7%
1454   \fi
1455   \ifcase\IntCalcMod#1!8! %
1456     0\or 1\or 2\or 3\or 4\or 5\or 6\or 7%
1457   \fi
1458 }
1459 \def\HyPsd@DecimalToOctalFirst#1{%
1460   \9%
1461   \ifcase#1 %
1462     000\or 001\or 002\or 003\or 004\or 005\or 006\or 007%
1463     \or 010\or 011\or 012\or 013\or 014\or 015\or 016\or 017%
1464     \or 020\or 021\or 022\or 023\or 024\or 025\or 026\or 027%
1465     \or 030\or 031\or 032\or 033\or 034\or 035\or 036\or 037%
1466     \or 040\or 041\or 042\or 043\or 044\or 045\or 046\or 047%
1467     \or 050\or 051\or 052\or 053\or 054\or 055\or 056\or 057%
1468     \or 060\or 061\or 062\or 063\or 064\or 065\or 066\or 067%
1469     \or 070\or 071\or 072\or 073\or 074\or 075\or 076\or 077%
1470     \or 100\or 101\or 102\or 103\or 104\or 105\or 106\or 107%
1471     \or 120\or 111\or 112\or 113\or 114\or 115\or 116\or 117%
1472     \or 120\or 121\or 122\or 123\or 124\or 125\or 126\or 127%
1473     \or 130\or 131\or 132\or 133\or 134\or 135\or 136\or 137%
1474     \or 140\or 141\or 142\or 143\or 144\or 145\or 146\or 147%
1475     \or 150\or 151\or 152\or 153\or 154\or 155\or 156\or 157%
1476     \or 160\or 161\or 162\or 163\or 164\or 165\or 166\or 167%
1477     \or 170\or 171\or 172\or 173\or 174\or 175\or 176\or 177%
1478     \or 200\or 201\or 202\or 203\or 204\or 205\or 206\or 207%
1479     \or 210\or 211\or 212\or 213\or 214\or 215\or 216\or 217%
1480     \or 220\or 221\or 222\or 223\or 224\or 225\or 226\or 227%
1481     \or 230\or 231\or 232\or 233\or 234\or 235\or 236\or 237%
1482     \or 240\or 241\or 242\or 243\or 244\or 245\or 246\or 247%
1483     \or 250\or 251\or 252\or 253\or 254\or 255\or 256\or 257%
1484     \or 260\or 261\or 262\or 263\or 264\or 265\or 266\or 267%
1485     \or 270\or 271\or 272\or 273\or 274\or 275\or 276\or 277%
1486     \or 300\or 301\or 302\or 303\or 304\or 305\or 306\or 307%
1487     \or 310\or 311\or 312\or 313\or 314\or 315\or 316\or 317%
1488     \or 320\or 321\or 322\or 323\or 324\or 325\or 326\or 327%
1489     \or 330\or 331\or 332\or 333\or 334\or 335\or 336\or 337%
1490     \or 340\or 341\or 342\or 343\or 344\or 345\or 346\or 347%
1491     \or 350\or 351\or 352\or 353\or 354\or 355\or 356\or 357%
1492     \or 360\or 361\or 362\or 363\or 364\or 365\or 366\or 367%
1493     \or 370\or 371\or 372\or 373\or 374\or 375\or 376\or 377%
1494   \fi
1495 }
1496 \def\HyPsd@DecimalToOctalSecond#1{%
1497   \ifcase #1 %
1498     \000\or \001\or \002\or \003\or \004\or \005\or \006\or \007%
1499     \or \010\or \011\or \012\or \013\or \014\or \015\or \016\or \017%
1500     \or \020\or \021\or \022\or \023\or \024\or \025\or \026\or \027%
1501     \or \030\or \031\or \032\or \033\or \034\or \035\or \036\or \037%
1502     \or \040\or \041\or \042\or \043\or \044\or \045\or \046\or \047%
1503     \or \050\or \051\or \052\or \053\or \054\or \055\or \056\or \057%
1504     \or \060\or \061\or \062\or \063\or \064\or \065\or \066\or \067%
1505     \or \070\or \071\or \072\or \073\or \074\or \075\or \076\or \077%
1506     \or \100\or \101\or \102\or \103\or \104\or \105\or \106\or \107%
1507     \or \110\or \111\or \112\or \113\or \114\or \115\or \116\or \117%

```



```

1508 \or \120\or \121\or \122\or \123\or \124\or \125\or \126\or \127%
1509 \or \130\or \131\or \132\or \133\or \134\or \135\or \136\or \137%
1510 \or \140\or \141\or \142\or \143\or \144\or \145\or \146\or \147%
1511 \or \150\or \151\or \152\or \153\or \154\or \155\or \156\or \157%
1512 \or \160\or \161\or \162\or \163\or \164\or \165\or \166\or \167%
1513 \or \170\or \171\or \172\or \173\or \174\or \175\or \176\or \177%
1514 \or \200\or \201\or \202\or \203\or \204\or \205\or \206\or \207%
1515 \or \210\or \211\or \212\or \213\or \214\or \215\or \216\or \217%
1516 \or \220\or \221\or \222\or \223\or \224\or \225\or \226\or \227%
1517 \or \230\or \231\or \232\or \233\or \234\or \235\or \236\or \237%
1518 \or \240\or \241\or \242\or \243\or \244\or \245\or \246\or \247%
1519 \or \250\or \251\or \252\or \253\or \254\or \255\or \256\or \257%
1520 \or \260\or \261\or \262\or \263\or \264\or \265\or \266\or \267%
1521 \or \270\or \271\or \272\or \273\or \274\or \275\or \276\or \277%
1522 \or \300\or \301\or \302\or \303\or \304\or \305\or \306\or \307%
1523 \or \310\or \311\or \312\or \313\or \314\or \315\or \316\or \317%
1524 \or \320\or \321\or \322\or \323\or \324\or \325\or \326\or \327%
1525 \or \330\or \331\or \332\or \333\or \334\or \335\or \336\or \337%
1526 \or \340\or \341\or \342\or \343\or \344\or \345\or \346\or \347%
1527 \or \350\or \351\or \352\or \353\or \354\or \355\or \356\or \357%
1528 \or \360\or \361\or \362\or \363\or \364\or \365\or \366\or \367%
1529 \or \370\or \371\or \372\or \373\or \374\or \375\or \376\or \377%
1530 \fi
1531 }

1532 \def\HyPsd@CJKnumber#1{%
1533 \ifnum#1<\z@
1534 \CJK@minus
1535 \expandafter\HyPsd@@CJKnumber\expandafter{\number-\number#1}%
1536 \else
1537 \expandafter\HyPsd@@CJKnumber\expandafter{\number#1}%
1538 \fi
1539 }

1540 \def\HyPsd@@CJKnumber#1{%
1541 \ifcase#1 %
1542 \CJK@zero\or\CJK@one\or\CJK@two\or\CJK@three\or\CJK@four\or
1543 \CJK@five\or\CJK@six\or\CJK@seven\or\CJK@eight\or\CJK@nine\or
1544 \CJK@ten\or\CJK@ten\CJK@one\or\CJK@ten\CJK@two\or
1545 \CJK@ten\CJK@three\or\CJK@ten\CJK@four\or\CJK@ten\CJK@five\or
1546 \CJK@ten\CJK@six\or\CJK@ten\CJK@seven\or\CJK@ten\CJK@eight\or
1547 \CJK@ten\CJK@nine
1548 \else
1549 \ifnum#1<10000 %
1550 \HyPsd@CJKnumberFour#1!\@empty{20}%
1551 \@empty
1552 \else
1553 \ifnum#1<100000000 %
1554 \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1555 \IntCalcDiv#1!10000!%
1556 !\{20}%
1557 \CJK@tenthousand
1558 \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1559 \IntCalcMod#1!10000!%
1560 !\CJK@zero{10}%
1561 \@empty
1562 \else
1563 \expandafter\HyPsd@CJKnumberLarge
1564 \number\IntCalcDiv#1!100000000!\expandafter!%

```



```

1565     \number\IntCalcMod#1!100000000!!%
1566     \fi
1567   \fi
1568 \fi
1569 }
1570 \def\HyPsd@CJKnumberLarge#1!#2!{%
1571   \HyPsd@CJKnumberFour#1!{}{20}%
1572   \CJK@hundredmillion
1573   \ifnum#2=\z@
1574   \else
1575     \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1576       \IntCalcDiv#2!10000!%
1577     !\CJK@zero{10}%
1578     \CJK@tenthousand
1579     \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1580       \IntCalcMod#2!10000!%
1581     !\CJK@zero{10}%
1582     \@empty
1583   \fi
1584 }
1585 \def\HyPsd@CJKnumberFour#1!#2#3{%
1586   \ifnum#1=\z@
1587     \expandafter\@gobble
1588   \else
1589     \ifnum#1<1000 %
1590       #2%
1591       \HyPsd@CJKnumberThree#1!{}{#3}%
1592     \else
1593       \HyPsd@@@CJKnumber{\IntCalcDiv#1!1000!}%
1594       \CJK@thousand
1595       \expandafter\expandafter\expandafter\HyPsd@CJKnumberThree
1596         \IntCalcMod#1!1000!%
1597       !\CJK@zero{10}%
1598     \fi
1599   \fi
1600 }
1601 \def\HyPsd@CJKnumberThree#1!#2#3{%
1602   \ifnum#1=\z@
1603   \else
1604     \ifnum#1<100 %
1605       #2%
1606       \HyPsd@CJKnumberTwo#1!{}{#3}%
1607     \else
1608       \HyPsd@@@CJKnumber{\IntCalcDiv#1!100!}%
1609       \CJK@hundred
1610       \expandafter\expandafter\expandafter\HyPsd@CJKnumberTwo
1611         \IntCalcMod#1!100!%
1612       !\CJK@zero{10}%
1613     \fi
1614   \fi
1615 }
1616 \def\HyPsd@CJKnumberTwo#1!#2#3{%
1617   \ifnum#1=\z@
1618   \else
1619     \ifnum#1<#3 %
1620       #2%
1621       \HyPsd@@@CJKnumber{#1}%

```



```

1622 \else
1623 \HyPsd@@CJKnumber{\IntCalcDiv#1!10!}%
1624 \CJK@ten
1625 \ifnum\IntCalcMod#1!10!=\z@
1626 \else
1627 \HyPsd@@CJKnumber{\IntCalcMod#1!10!}%
1628 \fi
1629 \fi
1630 \fi
1631 }

1632 \def\HyPsd@CJKdigits#1{%
1633 \ifx*#1\relax
1634 \expandafter\HyPsd@@CJKdigits\expandafter\CJK@zero
1635 \else
1636 \HyPsd@@CJKdigits\CJK@null{#1}%
1637 \fi
1638 }

1639 \def\HyPsd@@CJKdigits#1#2{%
1640 \ifx\#2\%
1641 \else
1642 \HyPsd@@@CJKdigits#1#2\@nil
1643 \fi
1644 }%
1645 \def\HyPsd@@@CJKdigits#1#2#3\@nil{%
1646 \HyPsd@CJKdigit#1{#2}%
1647 \ifx\#3\%
1648 \expandafter\@gobble
1649 \else
1650 \expandafter\@firstofone
1651 \fi
1652 {%
1653 \HyPsd@@@CJKdigits#1#3\@nil
1654 }%
1655 }

1656 \def\HyPsd@CJKdigit#1#2{%
1657 \ifcase#2 %
1658 #1\or
1659 \CJK@one\or\CJK@two\or\CJK@three\or\CJK@four\or
1660 \CJK@five\or\CJK@six\or\CJK@seven\or\CJK@eight\or\CJK@nine
1661 \fi
1662 }

```

6.5.6 \@inmathwarn-Patch

`\HyPsd@inmathwarn` The patch of `\@inmathwarn` is needed to get rid of the infinite error loop with glyphs of other encodings (see the explanation above). Potentially the patch is dangerous, if the code in `ltoutenc.dtx` changes. Checked with \LaTeX 2 ϵ versions [1998/06/01] and [1998/12/01]. I expect that versions below [1995/12/01] don't work.

To understand the patch easier, the original code of `\@current@cmd` and `\@changed@cmd` follows (\LaTeX 2 ϵ release [1998/12/01]). In the normal case `\pdfstringdef` is executed in a context where `\protect` has the meaning of `\@typeset-protect` (`=\relax`).

```

\def\@current@cmd#1{%
\ifx\protect\@typeset@protect
\ifx\@inmathwarn#1%

```



```

\else
\expandafter\@gobble
\fi}
\def\@changed@cmd#1#2{%
\ifx\protect\@typeset@protect
\inmathwarn#1%
\expandafter\ifx\csname\cf@encoding\string#1\endcsname\relax
\expandafter\ifx\csname_\string#1\endcsname\relax
\expandafter\def\csname_\string#1\endcsname{%
\TextSymbolUnavailable#1%
}%
\fi
\global\expandafter\let
\csname\cf@encoding_\string#1\expandafter\endcsname
\csname_\string#1\endcsname
\fi
\csname\cf@encoding\string#1%
\expandafter\endcsname
\else
\expandafter\@gobble
\fi}
\gdef\TextSymbolUnavailable#1{%
\@latex@error{%
Command_\protect#1_unavailable_in_encoding_\cf@encoding%
}\@eha}
\def\@inmathwarn#1{%
\ifmmode
\@latex@warning{Command_\protect#1_invalid_in_math_mode}%
\fi}

1663 \def\HyPsd@inmathwarn#1#2{%
1664   \ifx#2\expandafter
1665     \expandafter\ifx\csname\cf@encoding\string#1\endcsname\relax
1666       \HyPsd@GLYPHERR
1667       \expandafter\@gobble\string#1%
1668       >%
1669       \expandafter\expandafter\expandafter\HyPsd@EndWithElse
1670     \else
1671       \expandafter\expandafter\expandafter\HyPsd@GobbleFiFi
1672     \fi
1673   \else
1674     \expandafter#2%
1675   \fi
1676 }
1677 \def\HyPsd@GobbleFiFi#1\fi#2\fi{}
1678 \def\HyPsd@EndWithElse#1\else\else}

```

\HyPsd@add@accent

```

1679 \def\HyPsd@add@accent#1#2{%
1680   \HyPsd@GLYPHERR\expandafter\@gobble\string#1+\string#2>%
1681   #2%
1682 }%

```

6.5.7 Unexpandable spaces

\HyPsd@LetUnexpandableSpace In \HyPsd@@ProtectSpaces the space tokens are replaced by not expandable commands, that work like spaces:

- So they can be caught by undelimited arguments.
- And they work in number, dimension, and skip assignments.

These properties are used in `\HyPsd@CheckCatcodes`.

```
1683 \def\HyPsd@LetUnexpandableSpace#1{%
1684   \expandafter\futurelet\expandafter#1\expandafter\@gobble\space\relax
1685 }
```

`\HyPsd@UnexpandableSpace` `\HyPsd@UnexpandableSpace` is used in `\HyPsd@@ProtectSpaces`. In `\HyPsd@@ProtectSpaces` the space tokens are replaced by unexpandable commands `\HyPsd@UnexpandableSpace`, but that have the effect of spaces.

```
1686 \HyPsd@LetUnexpandableSpace\HyPsd@UnexpandableSpace
```

6.5.8 Marker for commands

`\HyPsd@XSPACE` Some commands and informations cannot be utilized before the string expansion and the checking process. Command names are filtered out, so we need another way to transport the information: An unusual `#` with catcode 12 marks the beginning of the extra information.

```
1687 \edef\HyPsd@XSPACE{\string#\string X}
1688 \edef\HyPsd@ITALCORR{\string#\string I}
1689 \edef\HyPsd@GLYPHERR{\string#\string G}
```

6.5.9 `\hspace` fix

`\HyPsd@hspace`

```
1690 \def\HyPsd@hspace#1{\HyPsd@@hspace#1*\END}
```

`\HyPsd@@hspace` `\HyPsd@@hspace` checks whether `\hspace` is called in its star form.

```
1691 \def\HyPsd@@hspace#1*##2\END{%
1692   \ifx\##2\%
1693     \HyPsd@hspacetest{#1}%
1694   \else
1695     \expandafter\HyPsd@hspacetest
1696   \fi
1697 }
```

`\HyPsd@hspacetest` `\HyPsd@hspacetest` replaces the `\hspace` by a space, if the length is greater than zero.

```
1698 \def\HyPsd@hspacetest#1{\ifdim#1>\z@\space\fi}
```

6.5.10 Fix for AMS classes

```
1699 \ltx@ifundefined{tocsection}{%
1700   \let\HyPsd@AMSclassfix\relax
1701 }{%
1702   \def\HyPsd@AMSclassfix{%
1703     \let\tocpart\HyPsd@tocsection
1704     \let\tocchapter\HyPsd@tocsection
1705     \let\tocappendix\HyPsd@tocsection
1706     \let\tocsection\HyPsd@tocsection
1707     \let\tocsubsection\HyPsd@tocsection
1708     \let\tocsubsubsection\HyPsd@tocsection
1709     \let\tocparagraph\HyPsd@tocsection
1710   }%
```



```

1711 \def\HyPsd@tocsection#1#2#3{%
1712   \if @#2@\else\if @#1@\else#1 \fi#2. \fi
1713   #3%
1714 }%
1715 }

```

6.5.11 Reference commands

`\HyPsd@href`

```

1716 \def\HyPsd@href#1#{\@secondoftwo}

```

`\HyPsd@ref` Macro `\HyPsd@ref` calls the macro `\HyPsd@@ref` for star checking. The same methods like in `\HyPsd@hspace` is used.

```

1717 \def\HyPsd@ref#1{\HyPsd@@ref#1*\END}%

```

`\HyPsd@@ref` Macro `\HyPsd@@ref` checks if a star is present.

```

1718 \def\HyPsd@@ref#1*#2\END{%
1719   \ifx\#2\%
1720     \HyPsd@@@ref{#1}%
1721   \else
1722     \expandafter\HyPsd@@@ref
1723   \fi
1724 }%

```

`\HyPsd@@@ref` `\HyPsd@@@ref` does the work and extracts the first argument.

```

1725 \def\HyPsd@@@ref#1{%
1726   \expandafter\ifx\csname r@#1\endcsname\relax
1727     ??%
1728   \else
1729     \expandafter\expandafter\expandafter
1730     \@car\csname r@#1\endcsname\@nil
1731   \fi
1732 }

```

`\HyPsd@pageref` Macro `\HyPsd@pageref` calls the macro `\HyPsd@@pageref` for star checking. The same methods like in `\HyPsd@hspace` is used.

```

1733 \def\HyPsd@pageref#1{\HyPsd@@pageref#1*\END}

```

`\HyPsd@@pageref` Macro `\HyPsd@@pageref` checks if a star is present.

```

1734 \def\HyPsd@@pageref#1*#2\END{%
1735   \ifx\#2\%
1736     \HyPsd@@@pageref{#1}%
1737   \else
1738     \expandafter\HyPsd@@@pageref
1739   \fi
1740 }

```

`\HyPsd@@@pageref` `\HyPsd@@@pageref` does the work and extracts the second argument.

```

1741 \def\HyPsd@@@pageref#1{%
1742   \expandafter\ifx\csname r@#1\endcsname\relax
1743     ??%
1744   \else
1745     \expandafter\expandafter\expandafter\expandafter
1746     \expandafter\expandafter\expandafter\@car
1747     \expandafter\expandafter\expandafter\@gobble
1748     \csname r@#1\endcsname{}\@nil
1749   \fi
1750 }

```


`\HyPsd@nameref` Macro `\HyPsd@nameref` calls the macro `\HyPsd@@nameref` for star checking. The same methods like in `\HyPsd@hspace` is used.

```

1751 \def\HyPsd@nameref#1{\HyPsd@@nameref#1*\END}

```

`\HyPsd@@nameref` Macro `\HyPsd@@nameref` checks if a star is present.

```

1752 \def\HyPsd@@nameref#1*#2\END{%
1753   \ifx\#2\%
1754     \HyPsd@@@nameref{#1}%
1755   \else
1756     \expandafter\HyPsd@@@nameref
1757   \fi
1758 }

```

`\HyPsd@@@nameref` `\HyPsd@@@nameref` does the work and extracts the third argument.

```

1759 \def\HyPsd@@@nameref#1{%
1760   \expandafter\ifx\csname r@#1\endcsname\relax
1761     ??%
1762   \else
1763     \expandafter\expandafter\expandafter\expandafter
1764     \expandafter\expandafter\expandafter\@car
1765     \expandafter\expandafter\expandafter\@gobbletwo
1766     \csname r@#1\endcsname{}\}\@nil
1767   \fi
1768 }

```

`\HyPsd@autoref` Macro `\HyPsd@autoref` calls the macro `\HyPsd@@autoref` for star checking. The same methods like in `\HyPsd@hspace` is used.

```

1769 \def\HyPsd@autoref#1{\HyPsd@@autoref#1*\END}

```

`\HyPsd@@autoref` Macro `\HyPsd@@autoref` checks if a star is present.

```

1770 \def\HyPsd@@autoref#1*#2\END{%
1771   \ifx\#2\%
1772     \HyPsd@@@autoref{#1}%
1773   \else
1774     \expandafter\HyPsd@@@autoref
1775   \fi
1776 }

```

`\HyPsd@@@autoref` `\HyPsd@@@autoref` does the work and extracts the second argument.

```

1777 \def\HyPsd@@@autoref#1{%
1778   \expandafter\ifx\csname r@#1\endcsname\relax
1779     ??%
1780   \else
1781     \expandafter\expandafter\expandafter\HyPsd@autorefname
1782     \csname r@#1\endcsname{}\}\}\@nil
1783   \expandafter\expandafter\expandafter
1784   \@car\csname r@#1\endcsname\@nil
1785   \fi
1786 }

```

`\HyPsd@autorefname` At least a basic definition for getting the `\autoref` name.

```

1787 \def\HyPsd@autorefname#1#2#3#4#5\@nil{%
1788   \ifx\#4\%
1789   \else
1790     \HyPsd@@@autorefname#4.\@nil
1791   \fi
1792 }

```


`\HyPsd@@autorefname`

```

1793 \def\HyPsd@@autorefname#1.#2\@nil{%
1794   \ltx@ifundefined{#1autorefname}{}%
1795   \ltx@ifundefined{#1name}{}%
1796   }{%
1797     \csname#1name\endcsname\space
1798   }%
1799 }{%
1800   \csname#1autorefname\endcsname\space
1801 }%
1802 }

```

6.5.12 Redefining the defining commands

Definitions aren't allowed, because they aren't executed in an only expanding context. So the command to be defined isn't defined and can perhaps be undefined. This would causes TeX to stop with an error message. With a deep trick it is possible to define commands in such a context: `\csname` does the job, it defines the command to be `\relax`, if it has no meaning.

Active characters cannot be defined with this trick. It is possible to define all undefined active characters (perhaps that they have the meaning of `\relax`). To avoid side effects this should be done in `\pdfstringdef` shortly before the `\xdef` job. But checking and defining all possible active characters of the full range (0 until 255) would take a while. `\pdfstringdef` is slow enough, so this isn't done.

`\HyPsd@DefCommand` and `\HyPsd@LetCommand` expands to the commands `\<def>-command` and `\<let>-command` with the meaning of `\def` and `\let`. So it is detected by `\HyPsd@CheckCatcodes` and the command name `\<def>-command` or `\<let>-command` should indicate a forbidden definition command.

The command to be defined is converted to a string and back to a command name with the help of `\csname`. If the command is already defined, `\noexpand` prevents a further expansion, even though the command would expand to legal stuff. If the command don't have the meaning of `\relax`, `\HyPsd@CheckCatcodes` will produce a warning. (The command itself can be legal, but the warning is legitimate because of the position after a defining command.)

The difference between `\HyPsd@DefCommand` and `\HyPsd@LetCommand` is that the first one also cancels this arguments, the parameter and definition text. The right side of the `\let` commands cannot be canceled with an undelimited parameter because of a possible space token after `\futurelet`.

To avoid unmathcted `\if...` tokens, the cases `\let\if...\iftrue` and `\let\if...\iffalse` are checked and ignored.

`\HyPsd@DefCommand`

`\HyPsd@LetCommand`

```

1803 \begingroup
1804   \def\x#1#2{%
1805     \endgroup
1806     \let#1\def
1807     \def\HyPsd@DefCommand##1##2###{%
1808       #1%
1809       \expandafter\noexpand
1810       \csname\expandafter\@gobble\string##1\@empty\endcsname
1811       \@gobble
1812     }%
1813     \let#2\let
1814     \def\HyPsd@@LetCommand##1{%
1815       \expandafter\ifx\csname##1\expandafter\endcsname

```



```

1816             \csname iftrue\endcsname
1817     \pdfstringdefWarn\let
1818     \expandafter\@gobble
1819   \else
1820     \expandafter\ifx\csname##1\expandafter\endcsname
1821       \csname iffalse\endcsname
1822     \pdfstringdefWarn\let
1823     \expandafter\expandafter\expandafter\@gobble
1824   \else
1825     #2%
1826     \expandafter\noexpand
1827     \csname##1\expandafter\expandafter\expandafter\endcsname
1828   \fi
1829 \fi
1830 }%
1831 }%
1832 \expandafter\x\csname <def>-command\expandafter\endcsname
1833     \csname <let>-command\endcsname
1834 \def\HyPsd@LetCommand#1{%
1835   \expandafter\expandafter\expandafter\HyPsd@@LetCommand
1836   \expandafter\expandafter\expandafter{%
1837     \expandafter\@gobble\string#1\@empty
1838   }%
1839 }

```

6.5.13 \ifnextchar

`\HyPsd@ifnextchar` In `\pdfstringdef \@ifnextchar` is disabled via a `\let` command to save time. First a warning message is given, then the three arguments are canceled. `\@ifnextchar` cannot work in a correct manner, because it uses `\futurelet`, but this is a stomach feature, that doesn't work in an expanding context. There are several variants of `\@ifnextchar`:

- `\@ifnextchar`
- `\kernel@ifnextchar`
- `\new@ifnextchar` from package `amsgen.sty` (bug report latex/3662).

```

1840 \def\HyPsd@ifnextchar#1{%
1841   \pdfstringdefWarn#1%
1842   \expandafter\@gobbletwo\@gobble
1843 }

```

6.5.14 \@protected@testoptifnextchar

`\HyPsd@protected@testopt` Macros with optional arguments doesn't work properly, because they call `\@ifnextchar` to detect the optional argument (see the explanation of `\HyPsd@ifnextchar`). But a warning, that `\@ifnextchar` doesn't work, doesn't help the user very much. Therefore `\@protected@testopt` is also disabled, because its first argument is the problematic macro with the optional argument and it is called before `\@ifnextchar`.

```

1844 \def\HyPsd@protected@testopt#1{%
1845   \pdfstringdefWarn#1%
1846   \@gobbletwo
1847 }

```


6.6 Help macros for postprocessing

6.6.1 Generic warning.

`\HyPsd@Warning` For several reasons `\space` is masked and does not have its normal meaning. But it is used in warning messages, so it is redefined locally:

```
1848 \def\HyPsd@Warning#1{%
1849   \begingroup
1850   \let\space\ltx@space
1851   \Hy@Warning{#1}%
1852   \endgroup
1853 }
```

6.6.2 Protecting spaces

```
1854 \RequirePackage{etexcmds}[2007/09/09]
1855 \ifetex@unexpanded
1856   \expandafter\@secondoftwo
1857 \else
1858   \expandafter\@firstoftwo
1859 \fi
1860 {%
```

`\HyPsd@ProtectSpaces` `\HyPsd@ProtectSpaces` calls with the expanded string `\HyPsd@@ProtectSpacesFi`. The expanded string is protected by `|` at the beginning and end of the expanded string. Because of this there can be no group at the beginning or end of the string and grouping characters are not removed by the call of `\HyPsd@@ProtectSpacesFi`.

```
1861 \def\HyPsd@ProtectSpaces#1{%
1862   \iftrue
1863     \expandafter\HyPsd@@ProtectSpacesFi
1864     \expandafter|\expandafter\@empty#1| \HyPsd@End#1%
1865   \fi
1866 }%
```

`\HyPsd@@ProtectSpacesFi` The string can contain command tokens, so it is better to use an `\def` instead of an `\edef`.

```
1867 \def\HyPsd@@ProtectSpacesFi#1 #2\HyPsd@End#3\fi{%
1868   \fi
1869   \ifx\scrollmode#2\scrollmode
1870     \HyPsd@RemoveMask#1\HyPsd@End#3%
1871   \else
1872     \gdef#3{#1\HyPsd@UnexpandableSpace#2}%
1873     \expandafter\HyPsd@@ProtectSpacesFi#3\HyPsd@End#3%
1874   \fi
1875 }%
```

Remove mask.

`\HyPsd@RemoveMask` `\HyPsd@RemoveMask` removes the protecting `|`. It is used by `\HyPsd@@ProtectSpacesFi` and by the code in `\pdfstringdef` that removes the grouping characters.

```
1876 \def\HyPsd@RemoveMask|#1|\HyPsd@End#2{%
1877   \toks@{\expandafter{#1}%
1878   \xdef#2{\the\toks@}%
1879 }
```



```

1880 }{%
1881   \let\HyPsd@fi\fi
1882   \def\HyPsd@ProtectSpaces#1{%
1883     \xdef#1{%
1884       \iftrue
1885         \expandafter\HyPsd@@ProtectSpacesFi
1886         \expandafter|\expandafter\@empty#1| %
1887       \HyPsd@fi
1888     }%
1889     \expandafter\HyPsd@RemoveMask#1\HyPsd@End#1%
1890   }%
1891   \def\HyPsd@@ProtectSpacesFi#1 #2\HyPsd@fi{%
1892     \fi
1893     \etex@unexpanded{#1}%
1894     \ifx\scrollmode#2\scrollmode
1895     \else
1896       \HyPsd@@ProtectSpacesFi\HyPsd@UnexpandableSpace#2%
1897     \HyPsd@fi
1898   }%
1899   \def\HyPsd@RemoveMask|#1|\HyPsd@End#2{%
1900     \xdef#2{\etex@unexpanded\expandafter{#1}}%
1901   }%
1902 }

```

6.6.3 Remove grouping braces

`\HyPsd@RemoveBraces #1` contains the expanded string, the result will be locally written in command `\HyPsd@String`.

```

1903 \def\HyPsd@RemoveBraces#1{%
1904   \ifx\scrollmode#1\scrollmode
1905   \else
1906     \HyPsd@@RemoveBracesFi#1\HyPsd@End{#1}%
1907   \fi
1908 }

```

`\HyPsd@@RemoveBraces` `\HyPsd@@RemoveBraces` is called with the expanded string, the end marked by `\HyPsd@End`, the expanded string again, but enclosed in braces and the string command. The first expanded string is scanned by the parameter text `#1#2`. By a comparison with the original form in `#3` we can decide whether `#1` is a single token or a group. To avoid the case that `#2` is a group, the string is extended by a `|` before.

While removing the grouping braces an italic correction marker is inserted for supporting package `xspace` and letting ligatures broken.

Because the string is already expanded, the `\if` commands should disappeared. So we can move some parts out of the argument of `\ltx@ReturnAfterFi`.

```

1909 \def\HyPsd@@RemoveBracesFi#1#2\HyPsd@End#3\fi{%
1910   \fi
1911   \def\Hy@temp@A{#1#2}%
1912   \def\Hy@temp@B{#3}%
1913   \ifx\Hy@temp@A\Hy@temp@B
1914     \expandafter\def\expandafter\HyPsd@String\expandafter{%
1915       \HyPsd@String#1%
1916     }%
1917     \ifx\scrollmode#2\scrollmode
1918     \else
1919       \Hy@ReturnAfterFiFiEnd{%

```



```

1920     \HyPsd@RemoveBraces{#2}%
1921   }%
1922   \fi
1923 \else
1924   \def\Hy@temp@A{#1}%
1925   \HyPsd@AppendItalcorr\HyPsd@String
1926   \ifx\Hy@temp@A\@empty
1927     \Hy@ReturnAfterElseFiFiEnd{%
1928       \HyPsd@RemoveBraces{#2}%
1929     }%
1930 \else
1931   \HyPsd@ProtectSpaces\Hy@temp@A
1932   \HyPsd@AppendItalcorr\Hy@temp@A
1933   \Hy@ReturnAfterFiFiEnd{%
1934     \expandafter\HyPsd@RemoveBraces\expandafter
1935       {\Hy@temp@A#2}%
1936   }%
1937   \fi
1938 \fi
1939 \Hy@ReturnEnd
1940 }

```

`\HyPsd@AppendItalcorr` The string can contain commands yet, so it is better to use `\def` instead of a shorter `\edef`. The two help macros limit the count of `\expandafter`.

```

1941 \def\HyPsd@AppendItalcorr#1{%
1942   \expandafter\HyPsd@@AppendItalcorr\expandafter{\/#1%
1943 }
1944 \def\HyPsd@@AppendItalcorr#1#2{%
1945   \expandafter\def\expandafter#2\expandafter{#2#1}%
1946 }

```

6.6.4 Catcode check

Workaround for LuaTeX. `\HyPsd@CheckCatcodes` might trigger a bug of LuaTeX (0.60.2, 0.70.1, 0.70.2, ...) in the comparison with `\ifcat`, see <http://tracker.luatex.org/view.php?id=773>.

```

1947 \ltx@ifundefined{directlua}{%
1948 }{%
1949   \expandafter\ifx\csname\endcsname\relax\fi
1950 }

```

Check catcodes.

`\HyPsd@CheckCatcodes` Because `\ifcat` expands its arguments, this is prevented by `\noexpand`. In case of command tokens and active characters `\ifcat` now sees a `\relax`. After protecting spaces and removing braces `#1` should be a single token, no group of several tokens, nor an empty group. (So the `\expandafter\relax` between `\ifcat` and `\noexpand` is only for safety and it should be possible to remove it.)

`\protect` and `\relax` should be removed silently. But it is too dangerous and breaks some code giving them the meaning of `\@empty`. So commands with the meaning of `\protect` are removed here. (`\protect` should have the meaning of `\@typeset@protect` that is equal to `\relax`).

For the comparison with active characters, `~` cannot be used because it has the meaning of a blank space here. And active characters need to be checked, if they have been defined using `\protected`.


```

1951 \begingroup
1952 \catcode`\Q=\active
1953 \let Q\ltx@empty
1954 \gdef\HyPsd@CheckCatcodes#1#2\HyPsd@end{%
1955 \global\let\HyPsd@Rest\relax
1956 \ifcat\relax\noexpand#1\relax
1957 \ifx#1\protect
1958 \else
1959 \ifx#1\penalty
1960 \setbox\z@=\hbox{%
1961 \afterassignment\HyPsd@AfterCountRemove
1962 \count@=#2\HyPsd@end
1963 }%
1964 \else
1965 \ifx#1\kern
1966 \setbox\z@=\hbox{%
1967 \afterassignment\HyPsd@AfterDimenRemove
1968 \dimen@=#2\HyPsd@end
1969 }%
1970 \else
1971 \ifx#1\hskip
1972 \setbox\z@=\hbox{%
1973 \afterassignment\HyPsd@AfterSkipRemove
1974 \skip@=#2\HyPsd@end
1975 }%
1976 \else
1977 \HyPsd@CatcodeWarning{#1}%
1978 \fi
1979 \fi
1980 \fi
1981 \fi
1982 \else
1983 \ifcat\noexpand#1\noexpandQ% active character
1984 \expandafter\expandafter\expandafter\def
1985 \expandafter\expandafter\expandafter\HyPsd@String
1986 \expandafter\expandafter\expandafter{%
1987 \expandafter\HyPsd@String\string#1%
1988 }%
1989 \else
1990 \ifcat#1A% letter
1991 \expandafter\def\expandafter\HyPsd@String\expandafter{%
1992 \HyPsd@String#1%
1993 }%
1994 \else
1995 \ifcat#1 % SPACE
1996 \expandafter\def\expandafter\HyPsd@String\expandafter{%
1997 \HyPsd@String\HyPsd@SPACEOPTI
1998 }%
1999 \else
2000 \ifcat$#1%
2001 \HyPsd@CatcodeWarning{math shift}%
2002 \else
2003 \ifcat&#1%
2004 \HyPsd@CatcodeWarning{alignment tab}%
2005 \else
2006 \ifcat^#1%
2007 \HyPsd@CatcodeWarning{superscript}%

```



```

2008         \else
2009         \ifcat_#1%
2010         \HyPsd@CatcodeWarning{subscript}%
2011         \else
2012         \expandafter\def\expandafter\HyPsd@String\expandafter{%
2013         \HyPsd@String#1%
2014         }%
2015         \fi
2016     \fi
2017 \fi
2018 \fi
2019 \fi
2020 \fi
2021 \fi
2022 \fi
2023 \ifx\HyPsd@Rest\relax
2024 \ifx\scrollmode#2\scrollmode
2025 \else
2026 \Hy@ReturnAfterFiFiEnd{%
2027 \HyPsd@CheckCatcodes#2\HyPsd@End
2028 }%
2029 \fi
2030 \else
2031 \ifx\HyPsd@Rest\@empty
2032 \else
2033 \Hy@ReturnAfterFiFiEnd{%
2034 \expandafter\HyPsd@CheckCatcodes\HyPsd@Rest\HyPsd@End
2035 }%
2036 \fi
2037 \fi
2038 \Hy@ReturnEnd
2039 }%
2040 \endgroup

```

Remove counts, dimens, skips.

`\HyPsd@AfterCountRemove` Counts like `\penalty` are removed silently.

```

2041 \def\HyPsd@AfterCountRemove#1\HyPsd@End{%
2042 \gdef\HyPsd@Rest{#1}%
2043 }

```

`\HyPsd@AfterDimenRemove` If the value of the dimen (`\kern`) is zero, it can be removed silently. All other values are difficult to interpret. Negative values do not work in bookmarks. Should positive values be removed or should they be replaced by space(s)? The following code replaces positive values greater than `1ex` with a space and removes them else.

```

2044 \def\HyPsd@AfterDimenRemove#1\HyPsd@End{%
2045 \ifdim\ifx\HyPsd@String\@empty\z@\else\dimen@>1ex %
2046 \HyPsd@ReplaceSpaceWarning{\string\kern\space\the\dimen@}%
2047 \gdef\HyPsd@Rest{\HyPsd@UnexpandableSpace #1}%
2048 \else
2049 \ifdim\dimen@=\z@
2050 \else
2051 \HyPsd@RemoveSpaceWarning{\string\kern\space\the\dimen@}%
2052 \fi
2053 \gdef\HyPsd@Rest{#1}%
2054 \fi
2055 }

```


`\HyPsd@AfterSkipRemove` The glue part of skips do not work in PDF strings and are ignored. Skips (`\hskip`), that are not zero, have the same interpreting problems like `dimens` (see above).

```

2056 \def\HyPsd@AfterSkipRemove#1\HyPsd@end{%
2057   \ifdim\ifx\HyPsd@String\@empty\z@\else\skip@>\fi>lex %
2058   \HyPsd@ReplaceSpaceWarning{\string\hskip\space\the\skip@}%
2059   \gdef\HyPsd@Rest{\HyPsd@UnexpandableSpace #1}%
2060   \else
2061     \ifdim\skip@=\z@
2062     \else
2063       \HyPsd@RemoveSpaceWarning{\string\kern\space\the\skip@}%
2064     \fi
2065     \gdef\HyPsd@Rest{#1}%
2066   \fi
2067 }

```

Catcode warnings.

`\HyPsd@CatcodeWarning` `\HyPsd@CatcodeWarning` produces a warning for the user.

```

2068 \def\HyPsd@CatcodeWarning#1{%
2069   \HyPsd@Warning{%
2070     Token not allowed in a PDF string (%)
2071     \ifHy@unicode
2072       Unicode%
2073     \else
2074       PDFDocEncoding%
2075     \fi
2076   }:%
2077   \MessageBreak removing `~\HyPsd@RemoveCmdPrefix#1'~
2078 }%
2079 }
2080 \begingroup
2081 \catcode`~|=0 %
2082 \catcode`~\=12 %
2083 |gdef|HyPsd@RemoveCmdPrefix#1{%
2084   |expandafter|HyPsd@@RemoveCmdPrefix
2085   |string#1|@empty\<>-|@empty|@empty
2086 }%
2087 |gdef|HyPsd@@RemoveCmdPrefix#1\<>-#2|@empty#3|@empty{#1#2}%
2088 |endgroup

```

`\HyPsd@RemoveSpaceWarning`

```

2089 \def\HyPsd@RemoveSpaceWarning#1{%
2090   \HyPsd@Warning{%
2091     Token not allowed in a PDF string (%)
2092     \ifHy@unicode
2093       Unicode%
2094     \else
2095       PDFDocEncoding%
2096     \fi
2097   }:%
2098   \MessageBreak #1~\MessageBreak
2099   removed%
2100 }%
2101 }

```

`\HyPsd@ReplaceSpaceWarning`


```

2102 \def\HyPsd@ReplaceSpaceWarning#1{%
2103   \HyPsd@Warning{%
2104     Token not allowed in a PDF string (%
2105     \ifHy@unicode
2106       Unicode%
2107     \else
2108       PDFDocEncoding%
2109     \fi
2110   ):%
2111   \MessageBreak #1\MessageBreak
2112   replaced by space%
2113 }%
2114 }

```

6.6.5 Check for wrong glyphs

A wrong glyph is marked with `\relax`, the glyph name follows, delimited by `>`. `\@empty` ends the string.

```

2115 \def\HyPsd@GlyphProcess#1\relax#2\@empty{%
2116   \expandafter\def\expandafter\HyPsd@String\expandafter{%
2117     \HyPsd@String#1%
2118   }%
2119   \ifx\#2\%
2120   \else
2121     \ltx@ReturnAfterFi{%
2122       \HyPsd@GlyphProcessWarning#2\@empty
2123     }%
2124   \fi
2125 }
2126 \def\HyPsd@GlyphProcessWarning#1>#2\@empty{%
2127   \HyPsd@@@GlyphProcessWarning#1++>%
2128   \HyPsd@GlyphProcess#2\@empty
2129 }
2130 \def\HyPsd@@@GlyphProcessWarning#1+#2+#3>{%
2131   \ifx\#2\%
2132     \HyPsd@Warning{%
2133       Glyph not defined in %
2134       P\ifHy@unicode U\else D1\fi\space encoding,\MessageBreak
2135       removing \@backslashchar#1'%
2136     }%
2137   \else
2138     \HyPsd@Warning{%
2139       Composite letter \@backslashchar#1+#2'\MessageBreak
2140       not defined in P\ifHy@unicode U\else D1\fi\space encoding,%
2141       \MessageBreak
2142       removing \@backslashchar#1'%
2143     }%
2144   \fi
2145 }

```

Spaces.

`\HyPsd@spaceopti` In the string the spaces are represented by `\HyPsd@spaceopti` tokens. Within an `\edef` it prints itself as a simple space and looks for its next argument. If another space follows, so it replaces the next `\HyPsd@spaceopti` by an protected space `\040`.


```

2146 \def\HyPsd@spaceopti#1{ % first space
2147   \ifx\HyPsd@spaceopti#1%
2148     \040%
2149   \else
2150     #1%
2151   \fi
2152 }%

```

6.6.6 Replacing tokens

`\HyPsd@Subst` To save tokens `\HyPsd@StringSubst` is an wrapper for the command `\HyPsd@Subst` that does all the work: In string stored in command `#3` it replaces the tokens `#1` with `#2`.

`#1` Exact the tokens that should be replaced.
`#2` The replacement (don't need to be expanded).
`#3` Command with the string.

```

2153 \def\HyPsd@Subst#1#2#3{%
2154   \def\HyPsd@@ReplaceFi##1#1##2\END\fi{%
2155     \fi
2156     ##1%
2157     \ifx\scrollmode##2\scrollmode
2158     \else
2159       #2%
2160       \HyPsd@@ReplaceFi##2\END
2161     \fi
2162   }%
2163   \xdef#3{%
2164     \iftrue
2165       \expandafter\HyPsd@@ReplaceFi#3#1\END
2166     \fi
2167   }%
2168 }

```

`\HyPsd@StringSubst` To save tokens in `\pdfstringdef \HyPsd@StringSubst` is a wrapper, that expands argument `#1` before calling `\HyPsd@Subst`.

```

2169 \def\HyPsd@StringSubst#1{%
2170   \expandafter\HyPsd@Subst\expandafter{\string#1}%
2171 }

```

`\HyPsd@EscapeTeX`

```

2172 \begingroup
2173   \lccode`\!=`\%%
2174   \lccode`\|=`\%%
2175   \lccode`\(=\{%
2176   \lccode`\)=`\}%
2177   \lccode`0=\ltx@zero
2178   \lccode`1=\ltx@zero
2179   \lccode`3=\ltx@zero
2180   \lccode`4=\ltx@zero
2181   \lccode`5=\ltx@zero
2182   \lccode`7=\ltx@zero
2183 \lowercase{\endgroup
2184   \def\HyPsd@EscapeTeX#1{%
2185     \HyPsd@Subst!{|045}#1%
2186     \HyPsd@Subst({|173}#1%
2187     \HyPsd@Subst){|175}#1%
2188   }%

```


2189 }

6.6.7 Support for package xspace

`\HyPsd@doxspace` `\xspace` does not work, because it uses a `\futurelet` that cannot be executed in \TeX 's mouth. So this implementation uses an argument to examine the next token. In a previous version I reused `\@xspace`, but this version is shorter and easier to understand.

```

2190 \def\HyPsd@doxspace#1{%
2191   \ifx#1\relax\else
2192   \ifx#1.\else
2193   \ifx#1:\else
2194   \ifx#1,\else
2195   \ifx#1;\else
2196   \ifx#1!\else
2197   \ifx#1?\else
2198   \ifx#1/\else
2199   \ifx#1-\else
2200   \ifx#1'\else
2201     \HyPsd@SPACEOPTI
2202   \fi
2203   \fi
2204   \fi
2205   \fi
2206   \fi
2207   \fi
2208   \fi
2209   \fi
2210   \fi
2211   \fi
2212   #1%
2213 }%
```

6.6.8 Converting to Unicode

Eight bit characters are converted to the sixteen bit ones, `\8` is replaced by `\00`, and `\9` is removed. The result should be a valid Unicode PDF string without the Unicode marker at the beginning.

```

2214 \begingroup
2215   \catcode`\|=0 %
2216   \catcode`\|=12 %
```

`\HyPsd@ConvertToUnicode`

```

2217 |gdef\HyPsd@ConvertToUnicode#1{%
2218   |xdef#1{%
2219     |expandafter\HyPsd@DoConvert#1|@empty|@empty|@empty
2220   }%
2221   |ifx#1|@empty
2222   |else
2223     |xdef#1{%
2224       \376\377%
2225       #1%
2226     }%
2227   |fi
2228 }%
```


\HyPsd@DoConvert

```
2229 |gdef|HyPsd@DoConvert#1{%
2230   |ifx#1|@empty
2231   |else
2232     |ltx@ReturnAfterFi{%
2233       |ifx#1\%%
2234       \%%
2235       |expandafter|HyPsd@DoEscape
2236     |else
2237       |HyPsd@Char{#1}%
2238       |expandafter|HyPsd@DoConvert
2239     |fi
2240   }%
2241 |fi
2242 }%
```

\HyPsd@DoEscape

```
2243 |gdef|HyPsd@DoEscape#1{%
2244   |ifx#19%
2245     |expandafter|HyPsd@GetTwoBytes
2246   |else
2247     |ltx@ReturnAfterFi{%
2248       |ifx#18%
2249       00%
2250       |expandafter|HyPsd@GetTwoBytes
2251     |else
2252       #1%
2253       |expandafter|HyPsd@GetOneByte
2254     |fi
2255   }%
2256 |fi
2257 }%
```

\HyPsd@GetTwoBytes

```
2258 |gdef|HyPsd@GetTwoBytes#1\#2#3#4{%
2259   #1\#2#3#4%
2260   |HyPsd@DoConvert
2261 }%
```

\HyPsd@GetOneByte

```
2262 |gdef|HyPsd@GetOneByte#1#2{%
2263   #1#2%
2264   |HyPsd@DoConvert
2265 }%
2266 |endgroup
```

\HyPsd@@GetNextTwoTokens \TeX does only allow nine parameters, so we need another macro to get more arguments.

```
2267 \def\HyPsd@GetNextTwoTokens#1#2#3\END#4{%
2268   \xdef#4{#4#1#2}%
2269   \HyPsd@@ConvertToUnicode#3\END#4%
2270 }
```

\HyPsd@Char

```
2271 \begingroup
2272   \catcode0=9 %
2273   \catcode`\^=7 %
```



```

2274 \catcode\^^^=12 %
2275 \def\x{^^^^0000}%
2276 \expandafter\endgroup
2277 \ifx\x\@empty
2278 \def\HyPsd@Char#1{%
2279 \ifnum`#1<128 %
2280 \@backslashchar 000#1%
2281 \else
2282 \ifnum`#1<65536 %
2283 \expandafter\HyPsd@CharTwoByte\number`#1!%
2284 \else
2285 \expandafter\expandafter\expandafter\HyPsd@CharSurrogate
2286 \intcalcSub{`#1}{65536}!%
2287 \fi
2288 \fi
2289 }%
2290 \def\HyPsd@CharTwoByte#1!{%
2291 \expandafter\expandafter\expandafter\HyPsd@CharOctByte
2292 \IntCalcDiv#1!256!!%
2293 \expandafter\expandafter\expandafter\HyPsd@CharOctByte
2294 \IntCalcMod#1!256!!%
2295 }%
2296 \def\HyPsd@CharOctByte#1!{%
2297 \@backslashchar
2298 \IntCalcDiv#1!64!%
2299 \intcalcDiv{\IntCalcMod#1!64!}{8}%
2300 \IntCalcMod#1!8!%
2301 }%
2302 \def\HyPsd@CharSurrogate#1!{%
2303 \@backslashchar 33%
2304 \IntCalcDiv#1!262144!%
2305 \expandafter\expandafter\expandafter\HyPsd@CharOctByte
2306 \intcalcDiv{\IntCalcMod#1!262144!}{1024}!%
2307 \@backslashchar 33%
2308 \expandafter\expandafter\expandafter\IntCalcAdd
2309 \intcalcDiv{\IntCalcMod#1!1024!}{256}!4!%
2310 \expandafter\expandafter\expandafter\HyPsd@CharOctByte
2311 \IntCalcMod#1!256!!%
2312 }%
2313 \else
2314 \def\HyPsd@Char#1{%
2315 \@backslashchar 000#1%
2316 }%
2317 \fi

```

6.6.9 Support for UTF-8 input encoding

After `\usepackage[utf8]{inputenc}` there are macros that expect the UTF-8 octets as arguments. Therefore we can calculate the PDF octal sequences directly. Because the PDF format is limited to UCS-2, conversion macros are needed for UTF-8 sequences with two and three octets only.

This calculation must be done in an expandable context, so we use `eTeX` here for performance reasons. Unhappily the results of divisions are rounded. Thus a circumvention via `\dimexpr` is used, e.g.:

```

\numexpr 123/4\relax is replaced by
\number\dimexpr.25\dimexpr 123sp\relax\relax

```



```

2318 \begingroup\expandafter\expandafter\expandafter\endgroup
2319 \expandafter\ifx\csname numexpr\endcsname\relax
2320 \let\HyPsd@UTFviii\relax
2321 \else
2322 \begingroup
2323 \lccode\~=`^^f4\relax
2324 \lowercase{\endgroup
2325 \def\HyPsd@UTFviii{%
2326 \let\UTFviii@two@octets\HyPsd@UTFviii@two
2327 \let\UTFviii@three@octets\HyPsd@UTFviii@three
2328 \let\UTFviii@four@octets\HyPsd@UTFviii@four
2329 \ifx~\HyPsd@UTFviii@ccxliv@undef
2330 \let~\HyPsd@UTFviii@ccxliv@def
2331 \fi
2332 \let\unichar\HyPsd@unichar
2333 }%
2334 }%
2335 \def\HyPsd@UTFviii@ccxliv@undef{\@inpenc@undefined@{utf8}}%
2336 \edef\HyPsd@UTFviii@ccxliv@def{%
2337 \noexpand\UTFviii@four@octets\string ^^f4%
2338 }%

```

The two octet form of UTF-8 110aaabb (A) and 10cccd (B) must be converted into octal numbers 00a and bcd. The result is \8a\bcd (with a, b, c, d as octal numbers). The conversion equations.

$$a := A/4 - 48 \quad (1)$$

$$b := A - 4 * (A/4) \quad (2)$$

$$c := B/8 - 8 * ((8 * (B/8))/8) \quad (3)$$

$$d := B - 8 * (B/8) \quad (4)$$

$$(5)$$

```

2339 \def\HyPsd@UTFviii@two#1#2{%
2340 \expandafter\HyPsd@UTFviii@@two
2341 \number\dimexpr.25\dimexpr`#1sp\expandafter\relax\expandafter|
2342 \number`#1\expandafter|
2343 \number\dimexpr.125\dimexpr`#2sp\expandafter\relax\expandafter|
2344 \number`#2 \@nil
2345 }%
2346 \def\HyPsd@UTFviii@@two#1|#2|#3|#4\@nil{%
2347 \expandafter\8%
2348 \number\dimexpr #1-48\expandafter\relax
2349 \csname\number\dimexpr #2-4*#1\relax\expandafter\endcsname
2350 \number\dimexpr #3-8*%
2351 \number\dimexpr.125\dimexpr#3sp\relax\relax\expandafter\relax
2352 \number\dimexpr #4-8*#3\relax
2353 }%

```

Three octet form: 1110aabb (A), 10bcccd (B), and 10eeefff (C). The result is \9abc\def (with a, ..., f as octal numbers). The conversion equations:

$$a := A/4 - 56 \quad (6)$$

$$b := 2 * (A - 4 * (A/4)) + ((B - 128 < 32)?0 : 1) \quad (7)$$

$$c := B/4 - 32 - ((B - 128 < 32)?0 : 8) \quad (8)$$

$$d := B - 4 * (B/4) \quad (9)$$

$$e := C/8 - 16 \quad (10)$$

$$f := C - 8 * (C/8) \quad (11)$$

$$(12)$$

```

2354 \def\HyPsd@UTFviii@three#1#2#3{%
2355 \expandafter\HyPsd@UTFviii@@three
2356 \number\dimexpr.25\dimexpr`#1sp\expandafter\relax\expandafter| %
2357 \number`#1\expandafter| %
2358 \number\ifnum\numexpr`#2-128\relax <32 0\else 1\fi\expandafter| %
2359 \number\dimexpr.25\dimexpr`#2sp\expandafter\relax\expandafter| %
2360 \number`#2\expandafter| %
2361 \number\dimexpr.125\dimexpr`#3sp\expandafter\relax\expandafter| %
2362 \number`#3 \@nil
2363 }%
2364 \def\HyPsd@UTFviii@@three#1|#2|#3|#4|#5|#6|#7\@nil{%
2365 \expandafter\%
2366 \number\numexpr #1-56\expandafter\relax
2367 \number\numexpr 2*(#2-4*#1)+#3\expandafter\relax
2368 \number\numexpr #4 - 32 -\ifcase#3 0\else 8\fi\expandafter\relax
2369 \csname\number\numexpr #5-4*#4\relax\expandafter\endcsname
2370 \number\numexpr #6-16\expandafter\relax
2371 \number\numexpr #7-8*#6\relax
2372 }%

```

Surrogates: 4 octets in UTF-8, a surrogate pair in UTF-16. High surrogate range: U+D800–U+DBFF, low surrogate range: U+DC00–U+DFFF.

```

UTF-8: 11110uuuuuuuu10uuzzzzzzuuuu10yyyyyyuuuu10xxxxxx
wwwu==uuuuuuu1
UTF-16: 110110wwwuuuuuuwwzzzzzyuuuu110111yyuuuuuuyyxxxxxx
octal: 0110110wwuu0wwuzzzzzyuu01101101yyuu0yyxxxxxxx

```

```

2373 \def\HyPsd@UTFviii@four#1#2{%
2374 \expandafter\HyPsd@@UTFviii@four\number
2375 \numexpr-1+(`#1-240)*4+\dimexpr.0625\dimexpr`#2sp-128sp%
2376 \expandafter|\number
2377 \numexpr`#2-16*\dimexpr.0625\dimexpr`#2sp| %
2378 }%
2379 \def\HyPsd@@UTFviii@four#1|#2|#3{%
2380 \933\number\dimexpr.25\dimexpr#1sp\relax\relax
2381 \csname\number\numexpr#1-4*\dimexpr.25\dimexpr#1sp\endcsname
2382 \ifodd#2 %
2383 \number\numexpr(#2-1)/2\relax
2384 \else
2385 \number\numexpr#2/2\relax
2386 \fi
2387 \number\numexpr\ifodd#2 4+\fi
2388 \dimexpr.0625\dimexpr`#3sp-128sp\relax\relax\relax
2389 \933%
2390 \expandafter\HyPsd@@@UTFviii@four\number
2391 \numexpr`#3-16*\dimexpr.0625\dimexpr`#3sp| %
2392 }%
2393 \def\HyPsd@@@UTFviii@four#1|#2{%
2394 \number\numexpr4+\dimexpr.25\dimexpr#1sp\relax\relax\relax
2395 \csname\number\numexpr#1-4*\dimexpr.25\dimexpr#1sp\endcsname
2396 \number\dimexpr.125\dimexpr`#2sp-128sp\relax\relax
2397 \number\numexpr`#2-8*\dimexpr.125\dimexpr`#2sp\relax\relax\relax
2398 }%

```


Input encoding utf8x of package ucs uses macro \unichar. Values greater than "FFFF are not supported.

```

2399 \def\HyPsd@unichar#1{%
2400 \ifHy@unicode
2401 \ifnum#1>"10FFFF %
2402 \HyPsd@UnicodeReplacementCharacter % illegal
2403 \else
2404 \ifnum#1>"FFFF %

```

High-surrogate code point. ("D800 = 55296, \p@ = 1pt = 65536sp)

```

2405 \expandafter\HyPsd@unichar\expandafter{%
2406 \number\numexpr 55296+%
2407 \dimexpr.0009765625\dimexpr\number#1sp-\p@
2408 \relax\relax\relax
2409 }%

```

Low-surrogate code point. ("DC00 = 56320, "DC00 - 65536 = -9216)

```

2410 \expandafter\HyPsd@unichar\expandafter{%
2411 \number\numexpr#1-9216%
2412 -1024*\dimexpr.0009765625\dimexpr\number#1sp-\p@
2413 \relax\relax\relax
2414 }%
2415 \else
2416 \ifnum#1>"7FF %
2417 \9%
2418 \expandafter\HyPsd@unichar@first@byte\expandafter{%
2419 \number
2420 \dimexpr.00390625\dimexpr\number#1sp\relax\relax
2421 }%
2422 \else
2423 \8%
2424 \number\dimexpr.00390625\dimexpr\number#1sp\relax\relax
2425 \fi
2426 \expandafter\HyPsd@unichar@second@byte\expandafter{%
2427 \number
2428 \numexpr#1-256*\number
2429 \dimexpr.00390625\dimexpr\number#1sp\relax\relax\relax
2430 }%
2431 \fi
2432 \fi
2433 \else
2434 .% unsupported (Unicode -> PDF Doc Encoding)
2435 \fi
2436 }%
2437 \def\HyPsd@UnicodeReplacementCharacter{\9377\375}%
2438 \def\HyPsd@unichar@first@byte#1{%
2439 \number\dimexpr.015625\dimexpr#1sp\relax\relax
2440 \expandafter\HyPsd@unichar@octtwo\expandafter{%
2441 \number
2442 \numexpr#1-64*\number\dimexpr.015625\dimexpr#1sp%
2443 \relax\relax\relax
2444 }%
2445 }%
2446 \def\HyPsd@unichar@second@byte#1{%
2447 \csname\number\dimexpr.015625\dimexpr#1sp\relax\relax\endcsname
2448 \expandafter\HyPsd@unichar@octtwo\expandafter{%
2449 \number
2450 \numexpr#1-64*\number\dimexpr.015625\dimexpr#1sp%

```



```

2451 \relax\relax\relax
2452 }%
2453 }%
2454 \def\HyPsd@unichar@octtwo#1{%
2455 \number\dimexpr.125\dimexpr#1sp\relax\relax
2456 \number\dimexpr#1-8*\number\dimexpr.125\dimexpr#1sp%
2457 \relax\relax\relax
2458 }%
2459 \fi

```

`\HyPsd@utf@viii@undeferr` `\utf@viii@undeferr` comes from file `utf8x.def` from package `ucs`.

```

2460 \def\HyPsd@utf@viii@undeferr#1#2#3#4#5#6{%
2461 \ifx\@gobble#1%
2462 \else
2463 [Please insert \textbackslash PrerenderUnicode%
2464 \textbraceleft#1\textbraceright\space
2465 into preamble]%
2466 \fi
2467 }%

```

6.6.10 Support for die faces (ifsym et. al.)

`\HyPsd@DieFace` Die faces are provided by

Package	Macro
ifsym	<code>\Cube</code>
epsdice	<code>\epsdice</code>
hhcount	<code>\fcdice</code>

`\Cube` and `\epsdice` restrict the range to the numbers one to six. `\fcdice` generates for larger numbers several dice faces with the sum matching the number. The implementation for the PDF strings follows `\fcdice`.

```

2468 \def\HyPsd@DieFace#1{%
2469 \ifHy@unicode
2470 \ifnum#1<1 %
2471 \HyPsd@UnicodeReplacementCharacter
2472 \else
2473 \ifnum#1>6 %
2474 \9046\205%
2475 \expandafter\expandafter\expandafter
2476 \HyPsd@DieFaceLarge\intcalcSub{#1}{6}!%
2477 \else
2478 \9046\20\intcalcDec{#1}%
2479 \fi
2480 \fi
2481 \else
2482 .% Die faces are not part of PDFDocEncoding
2483 \fi
2484 }

```

`\HyPsd@DieFaceLarge`

```

2485 \def\HyPsd@DieFaceLarge#1{%
2486 \ifnum#1>6 %
2487 \expandafter\ltx@firstoftwo
2488 \else
2489 \expandafter\ltx@secondoftwo

```



```

2490 \fi
2491 {%
2492 \9046\205%
2493 \expandafter\expandafter\expandafter
2494 \HyPsd@DieFaceLarge\IntCalcSub#1!6!!%
2495 }{%
2496 \9046\20\IntCalcDec#1!%
2497 }%
2498 }

```

6.6.11 Support for moon phases of package china2e

```

2499 \def\HyPsd@MoonPha#1{%
2500 \ifcase\intcalcNum{#1} %
2501 \HyPsd@UnicodeReplacementCharacter
2502 \or % 1
2503 % U+1F31A NEW MOON WITH FACE; \MoonPha{1} (china2e)
2504 \9330\074\9337\032%
2505 \or % 2
2506 \HyPsd@UnicodeReplacementCharacter
2507 \or % 3
2508 % U+1F31D FULL MOON WITH FACE; \MoonPha{3} (china2e)
2509 \9330\074\9337\035%
2510 \or % 4
2511 % U+1F31C LAST QUARTER MOON WITH FACE; \MoonPha{4} (china2e)
2512 \9330\074\9337\034%
2513 \else
2514 \HyPsd@UnicodeReplacementCharacter
2515 \fi
2516 }
2517 %* \HyPsd@MoonPha -> \MoonPha

```

6.6.12 Support for package pifont

\HyPsd@ding

```

2518 \def\HyPsd@ding#1{%
2519 \ifHy@unicode
2520 \ifnum#1<32 %
2521 \HyPsd@UnicodeReplacementCharacter
2522 \else
2523 \ifnum#1>254 %
2524 \HyPsd@UnicodeReplacementCharacter
2525 \else
2526 \ifnum#1<127 %
2527 \expandafter\expandafter\expandafter
2528 \HyPsd@@@ding\intcalcNum{#1}!%
2529 \else
2530 \ifnum#1>160 %
2531 \expandafter\expandafter\expandafter
2532 \HyPsd@@@ding\intcalcNum{#1}!%
2533 \else
2534 \HyPsd@UnicodeReplacementCharacter
2535 \fi
2536 \fi
2537 \fi
2538 \fi
2539 \else
2540 .% Dingbats are not part of PDFDocEncoding

```



```

2541 \fi
2542 }

\HyPsd@@ding
2543 \def\HyPsd@@ding#1!{%
2544 \ltx@ifundefined{HyPsd@ding@#1}{%
2545 \ifnum#1<127 %
2546 \9047%
2547 \HyPsd@DecimalToOctalSecond{\IntCalcSub#1!32!}%
2548 \else
2549 \ifnum#1<168 %
2550 \9047\14\IntCalcSub#1!160!%
2551 \else
2552 \ifnum#1>181 %
2553 \9047\HyPsd@DecimalToOctalSecond{\IntCalcSub#1!64!}%
2554 \else
2555 % 172..181 -> U+2460..U+2469
2556 \9044\HyPsd@DecimalToOctalSecond{\IntCalcSub#1!76!}%
2557 \fi
2558 \fi
2559 \fi
2560 }{%
2561 \csname HyPsd@ding@#1\endcsname
2562 }%
2563 }

2564 \@namedef{HyPsd@ding@32}{\space}
2565 % U+260E BLACK TELEPHONE
2566 \@namedef{HyPsd@ding@37}{\9046\016}% U+260E
2567 % U+261B BLACK RIGHT POINTING INDEX
2568 \@namedef{HyPsd@ding@42}{\9046\033}% U+261B
2569 % U+261E WHITE RIGHT POINTING INDEX
2570 \@namedef{HyPsd@ding@43}{\9046\036}% U+261E
2571 % U+2605 BLACK STAR
2572 \@namedef{HyPsd@ding@72}{\9046\005}% U+2605
2573 % U+25CF BLACK CIRCLE
2574 \@namedef{HyPsd@ding@108}{\9045\317}% U+25CF
2575 % U+25A0 BLACK SQUARE
2576 \@namedef{HyPsd@ding@110}{\9045\240}% U+25A0
2577 % U+25B2 BLACK UP-POINTING TRIANGLE
2578 \@namedef{HyPsd@ding@115}{\9045\262}% U+25B2
2579 % U+25BC BLACK DOWN-POINTING TRIANGLE
2580 \@namedef{HyPsd@ding@116}{\9045\274}% U+25BC
2581 % U+25C6 BLACK DIAMOND
2582 \@namedef{HyPsd@ding@117}{\9045\306}% U+25C6
2583 % U+25D7 RIGHT HALF BLACK CIRCLE
2584 \@namedef{HyPsd@ding@119}{\9045\327}% U+25D7
2585 \@namedef{HyPsd@ding@168}{\textclubsuitblack}%
2586 \@namedef{HyPsd@ding@169}{\textdiamondsuitblack}%
2587 \@namedef{HyPsd@ding@170}{\textheartsuitblack}%
2588 \@namedef{HyPsd@ding@171}{\textspadesuitblack}%
2589 \@namedef{HyPsd@ding@213}{\textrightarrow}%
2590 \@namedef{HyPsd@ding@214}{\textleftarrow}%
2591 \@namedef{HyPsd@ding@215}{\textupdownarrow}%
2592 \@namedef{HyPsd@ding@240}{\HyPsd@UnicodeReplacementCharacter}

```


7 Support of other packages

7.1 Class memoir

```
2593 \@ifclassloaded{memoir}{%
2594   \Hy@AtEndOfPackage{\RequirePackage{memhfixc}}}%
2595 }
```

7.2 Package subfigure

Added fix for version 2.1. Here `\sub@label` is defined.

```
2596 \@ifpackageloaded{subfigure}{%
2597   \ltx@ifundefined{sub@label}{%
2598     \Hy@hypertexnamesfalse
2599   }{%
2600     \renewcommand*{\sub@label}[1]{%
2601       \@bsphack
2602       \subfig@oldlabel{#1}%
2603       \if@filesw
2604         \begingroup
2605           \edef\@currentlabstr{%
2606             \expandafter\strip@prefix\meaning\@currentlabelname
2607           }%
2608           \protected@write\@auxout{}{%
2609             \string\newlabel{sub@#1}{%
2610               {\@nameuse{\@thesub\@capttype}}%
2611               {\thepage}%
2612             }%
2613             \expandafter\strip@period\@currentlabstr
2614             \relax.\relax\@@@%
2615           }%
2616           {\@currentHref}%
2617           {}%
2618         }%
2619       }%
2620     \endgroup
2621   \fi
2622   \@esphack
2623 }%
2624 \@ifpackagelater{subfigure}{2002/03/26}{%
2625   \providecommand*{\toclevel@subfigure}{1}%
2626   \providecommand*{\toclevel@subtable}{1}%
2627 }%
2628 }%
2629 }
```

7.3 Package xr and xr-hyper

The beta version of `xr` that supports `\XR@addURL` is called `xr-hyper`. Therefore we test for the macro itself and not for the package name:

```
2630 \ltx@ifundefined{XR@addURL}{%
2631 }
```

If reading external aux files check whether they have a non zero fourth field in `\newlabel` and if so, add the URL as the fifth field.

```
2632 \def\xr@addURL#1{\xr@dURL#1{}{}{}\\}%
2633 \def\xr@dURL#1#2#3#4#5\\{%
2634   {#1}{#2}%
2635 }
```



```

2635 \if!#4!%
2636 \else
2637   {#3}{#4}{\XR@URL}%
2638 \fi
2639 }%
2640 }

2641 \def\Hy@true{true}
2642 \def\Hy@false{false}

```

Providing dummy definitions.

```

2643 \let\literalps@out\@gobble
2644 \newcommand\pdfbookmark[3][]{ }
2645 \def\Acrobatmenu#1#2{\leavevmode#2}
2646 \def\Hy@writebookmark#1#2#3#4#5{ }%

```

8 Help macros for links

Anchors get created on the baseline of where they occur. If an XYZ PDF view is set, this means that the link places the top of the screen *on the baseline* of the target. If this is an equation, for instance, it means that you cannot see anything. Some links, of course, are created at the start of environments, and so it works. To allow for this, anchors are raised, where possible, by some small amount. This defaults to `\baselineskip`, but users can set it to something else in two ways (thanks to Heiko Oberdiek for suggesting this):

1. Redefine `\HyperRaiseLinkDefault` to be eg the height of a `\strut`
2. Redefine `\HyperRaiseLinkHook` to do something complicated; it must give a value to `\HyperRaiseLinkLength`, which is what actually gets used

```

2647 \let\HyperRaiseLinkHook\@empty
2648 \def\HyperRaiseLinkDefault{\baselineskip}

```

`\HyperRaiseLinkHook` allows the user to reassign `\HyperRaiseLinkLength`.

```

2649 \newcount\Hy@SavedSpaceFactor
2650 \def\Hy@SaveSpaceFactor{%
2651   \global\Hy@SavedSpaceFactor=\ifhmode\spacefactor\else\z@ \fi
2652 }
2653 \def\Hy@RestoreSpaceFactor{%
2654   \relax
2655   \ifhmode
2656     \ifnum\Hy@SavedSpaceFactor>\z@
2657       \spacefactor=\Hy@SavedSpaceFactor
2658     \fi
2659   \fi
2660 }
2661 \def\Hy@SaveSavedSpaceFactor{%
2662   \edef\Hy@RestoreSavedSpaceFactor{%
2663     \global\Hy@SavedSpaceFactor=\the\Hy@SavedSpaceFactor\relax
2664   }%
2665 }
2666 \def\Hy@raisedlink#1{%
2667   \ifvmode
2668     #1%
2669   \else
2670     \Hy@SaveSpaceFactor
2671     \penalty\@M

```



```

2672 \smash{%
2673 \begingroup
2674 \let\HyperRaiseLinkLength\@tempdima
2675 \setlength\HyperRaiseLinkLength\HyperRaiseLinkDefault
2676 \HyperRaiseLinkHook
2677 \expandafter\endgroup
2678 \expandafter\raise\the\HyperRaiseLinkLength\hbox{%
2679 \Hy@RestoreSpaceFactor
2680 #1%
2681 \Hy@SaveSpaceFactor
2682 }%
2683 }%
2684 \Hy@RestoreSpaceFactor
2685 \fi
2686 }

```

\Hy@SaveLastskip Inserting a \special command to set a destination destroys the \lastskip value.
\Hy@RestoreLastskip

```

2687 \def\Hy@SaveLastskip{%
2688 \let\Hy@RestoreLastskip\relax
2689 \ifvmode
2690 \ifdim\lastskip=\z@
2691 \let\Hy@RestoreLastskip\nobreak
2692 \else
2693 \begingroup
2694 \skip@=-\lastskip
2695 \edef\x{%
2696 \endgroup
2697 \def\noexpand\Hy@RestoreLastskip{%
2698 \noexpand\ifvmode
2699 \noexpand\nobreak
2700 \vskip\the\skip@
2701 \vskip\the\lastskip\relax
2702 \noexpand\fi
2703 }%
2704 }%
2705 \x
2706 \fi
2707 \else
2708 \ifhmode
2709 \ifdim\lastskip=\z@
2710 \let\Hy@RestoreLastskip\nobreak
2711 \else
2712 \begingroup
2713 \skip@=-\lastskip
2714 \edef\x{%
2715 \endgroup
2716 \def\noexpand\Hy@RestoreLastskip{%
2717 \noexpand\ifhmode
2718 \noexpand\nobreak
2719 \hskip\the\skip@
2720 \hskip\the\lastskip\relax
2721 \noexpand\fi
2722 }%
2723 }%
2724 \x
2725 \fi
2726 \fi

```



```

2727 \fi
2728 }%

```

9 Options

```

2729 \SetupKeyvalOptions{%
2730   family=Hyp,%
2731   prefix=HyOpt%
2732 }

```

9.1 Help macros

\IfHyperBooleanExists

```

2733 \def\IfHyperBooleanExists#1{%
2734   \ltx@ifundefined{Hy@#1false}\ltx@secondoftwo{%
2735     \ltx@ifundefined{KV@Hyp@#1@default}\ltx@secondoftwo\ltx@firstoftwo
2736   }%
2737 }

2738 \@namedef{KV@Hyp@stoppeearly@default}{}

```

\IfHyperBoolean

```

2739 \def\IfHyperBoolean#1{%
2740   \IfHyperBooleanExists{#1}{%
2741     \csname ifHy@#1\endcsname
2742     \expandafter\ltx@firstoftwo
2743   \else
2744     \expandafter\ltx@secondoftwo
2745   \fi
2746 } \ltx@secondoftwo
2747 }

```

\Hy@boolkey

```

2748 \def\Hy@boolkey#1#2{%
2749   \edef\Hy@tempa{#2}%
2750   \lowercase\expandafter{%
2751     \expandafter\def\expandafter\Hy@tempa\expandafter{\Hy@tempa}%
2752   }%
2753   \ifx\Hy@tempa\@empty
2754     \let\Hy@tempa\Hy@true
2755   \fi
2756   \ifx\Hy@tempa\Hy@true
2757   \else
2758     \ifx\Hy@tempa\Hy@false
2759     \else
2760       \let\Hy@tempa\relax
2761     \fi
2762   \fi
2763   \ifx\Hy@tempa\relax
2764     \Hy@WarnOptionValue{#2}{#1}{`true' or `false'}%
2765   \else
2766     \Hy@Info{Option `#1' set ``\Hy@tempa'}%
2767     \csname Hy@#1\Hy@tempa\endcsname
2768   \fi
2769 }

```


\Hy@WarnOptionValue

```

2770 \def\Hy@WarnOptionValue#1#2#3{%
2771   \Hy@Warning{%
2772     Unexpected value `#1'\MessageBreak
2773     of option `#2' instead of\MessageBreak
2774     #3%
2775   }%
2776 }

```

\Hy@DisableOption

```

2777 \def\Hy@DisableOption#1{%
2778   \ltx@ifundefined{KV@Hyp@#1@default}{%
2779     \define@key{Hyp}{#1}%
2780   }{%
2781     \define@key{Hyp}{#1}[]%
2782   }%
2783   {\Hy@WarnOptionDisabled{#1}}%
2784 }
2785

```

\Hy@WarnOptionDisabled

```

2786 \def\Hy@WarnOptionDisabled#1{%
2787   \Hy@Warning{%
2788     Option `#1' has already been used,\MessageBreak
2789     setting the option has no effect%
2790   }%
2791 }

```

\Hy@CheckOptionValue Some options take a string value out of a limited set of values. Macro \Hy@CheckOptionValue checks whether the given value #1 for option #2 is a member of the value list #3.

```

2792 \def\Hy@CheckOptionValue#1#2#3{%
2793   \begingroup
2794   \edef\x{#1}%
2795   \@onelevel@sanitize\x
2796   \let\y=y%
2797   \def\do##1##2{%
2798     \def\z{##1}%
2799     \@onelevel@sanitize\z
2800     \ifx\x\z
2801       \let\y=n%
2802     \let\do\@gobbletwo
2803   \fi
2804   }%
2805   #3%
2806   \ifx\y y%
2807     \def\do##1##2{%
2808       * `##1'%
2809       \ifx\\##2\\\else\space(##2)\fi
2810       \MessageBreak
2811     }%
2812     \Hy@Warning{%
2813       Values of option `#2':\MessageBreak
2814       #3%
2815       * An empty value disables the option.\MessageBreak
2816       Unknown value `x'%
2817     }%

```



```

2818   \fi
2819 \endgroup
2820 }

\Hy@DefNameKey #1: option name
#2: \do list with known values, first argument of \do is value, second argument
is a comment.
2821 \def\Hy@DefNameKey#1{%
2822   \expandafter\Hy@@DefNameKey\csname @#1\endcsname{#1}%
2823 }

\Hy@@DefNameKey #1: macro for value storage
#2: option name
#3: \do list with known values.
2824 \def\Hy@@DefNameKey#1#2#3{%
2825   \define@key{Hyp}{#2}{%
2826     \edef#1{##1}%
2827     \ifx#1\@empty
2828     \else
2829       \Hy@CheckOptionValue{##1}{#2}{#3}%
2830     \fi
2831   }%
2832   \let#1\@empty
2833 }

\Hy@UseNameKey
2834 \def\Hy@UseNameKey#1#2{%
2835   \ifx#2\@empty
2836   \else
2837     /#1/#2%
2838   \fi
2839 }

```

9.2 Defining the options

```

2840 \define@key{Hyp}{implicit}[true]{%
2841   \Hy@boolkey{implicit}{#1}%
2842 }
2843 \define@key{Hyp}{draft}[true]{%
2844   \Hy@boolkey{draft}{#1}%
2845 }
2846 \define@key{Hyp}{final}[true]{%
2847   \Hy@boolkey{final}{#1}%
2848 }
2849 \let\KV@Hyp@nolinks\KV@Hyp@draft
2850 \def\Hy@ObsoletePaperOption#1{%
2851   \Hy@WarningNoLine{%
2852     Option `#1' is no longer used%
2853   }%
2854   \define@key{Hyp}{#1}[true]{}%
2855 }
2856 \def\Hy@temp#1{%
2857   \define@key{Hyp}{#1}[true]{%
2858     \Hy@ObsoletePaperOption{#1}%
2859   }%
2860 }

```



```

2861 \Hy@temp{a4paper}
2862 \Hy@temp{a5paper}
2863 \Hy@temp{b5paper}
2864 \Hy@temp{letterpaper}
2865 \Hy@temp{legalpaper}
2866 \Hy@temp{executivepaper}

2867 \define@key{Hyp}{setpagesize}[true]{%
2868   \Hy@boolkey{setpagesize}{#1}%
2869 }
2870 \define@key{Hyp}{debug}[true]{%
2871   \Hy@boolkey{debug}{#1}%
2872 }
2873 \define@key{Hyp}{linktocpage}[true]{%
2874   \Hy@boolkey{linktocpage}{#1}%
2875   \ifHy@linktocpage
2876     \let\Hy@linktoc\Hy@linktoc@page
2877   \else
2878     \let\Hy@linktoc\Hy@linktoc@section
2879   \fi
2880 }
2881 \chardef\Hy@linktoc@none=0 %
2882 \chardef\Hy@linktoc@section=1 %
2883 \chardef\Hy@linktoc@page=2 %
2884 \chardef\Hy@linktoc@all=3 %
2885 \ifHy@linktocpage
2886   \let\Hy@linktoc\Hy@linktoc@page
2887 \else
2888   \let\Hy@linktoc\Hy@linktoc@section
2889 \fi
2890 \define@key{Hyp}{linktoc}{%
2891   \@ifundefined{Hy@linktoc@#1}{%
2892     \Hy@Warning{%
2893       Unexpected value `#1' of\MessageBreak
2894       option `linktoc' instead of `none',\MessageBreak
2895       `section', `page' or `all'%
2896     }%
2897   }{%
2898     \expandafter\let\expandafter\Hy@linktoc
2899     \csname Hy@linktoc@#1\endcsname
2900   }%
2901 }
2902 \define@key{Hyp}{extension}{\def\XR@ext{#1}}
2903 \let\XR@ext\relax
2904 \define@key{Hyp}{verbose}[true]{%
2905   \Hy@boolkey{verbose}{#1}%
2906 }
2907 \define@key{Hyp}{typexml}[true]{%
2908   \Hy@boolkey{typexml}{#1}%
2909 }

```

If we are going to PDF via HyperTeX `\special` commands, the dvips (-z option) processor does not know the *height* of a link, as it works solely on the position of the closing `\special`. If we use this option, the `\special` is raised up by the right amount, to fool the dvi processor.

```

2910 \define@key{Hyp}{raiselinks}[true]{%
2911   \Hy@boolkey{raiselinks}{#1}%
2912 }

```


Most PDF-creating drivers do not allow links to be broken

```

2913 \def\Hy@setbreaklinks#1{%
2914   \csname breaklinks#1\endcsname
2915 }
2916 \def\Hy@breaklinks@unsupported{%
2917   \ifx\Hy@setbreaklinks\@gobble
2918     \ifHy@breaklinks
2919       \Hy@WarningNoLine{%
2920         You have enabled option `breaklinks'.\MessageBreak
2921         But driver ``\Hy@driver.def' does not support this.\MessageBreak
2922         Expect trouble with the link areas of broken links%
2923       }%
2924     \fi
2925   \fi
2926 }
2927 \define@key{Hyp}{breaklinks}[true]{%
2928   \Hy@boolkey{breaklinks}{#1}%
2929   \let\Hy@setbreaklinks\@gobble
2930 }
2931 \define@key{Hyp}{localanchorname}[true]{%
2932   \Hy@boolkey{localanchorname}{#1}%
2933 }

```

Determines whether an automatic anchor is put on each page

```

2934 \define@key{Hyp}{pageanchor}[true]{%
2935   \Hy@boolkey{pageanchor}{#1}%
2936 }

```

Are the page links done as plain arabic numbers, or do they follow the formatting of the package? The latter loses if you put in typesetting like `\textbf` or the like.

```

2937 \define@key{Hyp}{plainpages}[true]{%
2938   \Hy@boolkey{plainpages}{#1}%
2939 }

```

Are the names for anchors made as per the HyperTeX system, or do they simply use what L^AT_EX provides?

```

2940 \define@key{Hyp}{naturalnames}[true]{%
2941   \Hy@boolkey{naturalnames}{#1}%
2942 }

```

Completely ignore the names as per the HyperTeX system, and use unique counters.

```

2943 \define@key{Hyp}{hypertexnames}[true]{%
2944   \Hy@boolkey{hypertexnames}{#1}%
2945 }

```

Currently, dvips doesn't allow anchors nested within targets, so this option tries to stop that happening. Other processors may be able to cope.

```

2946 \define@key{Hyp}{nesting}[true]{%
2947   \Hy@boolkey{nesting}{#1}%
2948 }
2949 \define@key{Hyp}{destlabel}[true]{%
2950   \Hy@boolkey{destlabel}{#1}%
2951 }

```

```

2952 \define@key{Hyp}{unicode}[true]{%
2953   \Hy@boolkey{unicode}{#1}%
2954   \ifHy@unicode
2955     \def\HyPsd@pdfencoding{unicode}%

```



```

2956 \HyPsd@LoadUnicode
2957 \else
2958 \def\HyPsd@pdfencoding{pdfdoc}%
2959 \fi
2960 }
2961 \Hy@AtBeginDocument{%
2962 \ifx\HyPsd@LoadUnicode\relax
2963 \else
2964 \def\HyPsd@LoadUnicode{%
2965 \Hy@Error{%
2966 Unicode support for bookmarks is not available.\MessageBreak
2967 Activate unicode support by using one of the options\MessageBreak
2968 `unicode', `pdfencoding=unicode', `pdfencoding=auto'\MessageBreak
2969 in the preamble%
2970 } \@ehc
2971 \global\let\HyPsd@LoadUnicode\relax
2972 \global\Hy@unicodedefalse
2973 \global\let\Hy@unicodetrue\Hy@unicodedefalse
2974 }%
2975 \fi
2976 }

2977 \define@key{Hyp}{pdfencoding}{%
2978 \edef\HyPsd@temp{#1}%
2979 \ifx\HyPsd@temp\HyPsd@pdfencoding@pdfdoc
2980 \let\HyPsd@pdfencoding\HyPsd@temp
2981 \Hy@unicodedefalse
2982 \else
2983 \ifcase\ifx\HyPsd@temp\HyPsd@pdfencoding@unicode
2984 \z@
2985 \else
2986 \ifx\HyPsd@temp\HyPsd@pdfencoding@auto
2987 \z@
2988 \else
2989 \@ne
2990 \fi
2991 \fi
2992 \let\HyPsd@pdfencoding\HyPsd@temp
2993 \hypersetup{unicode}%
2994 \ifHy@unicode
2995 \def\HyPsd@pdfencoding{#1}%
2996 \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
2997 \HyPsd@LoadStringEncoding
2998 \fi
2999 \else
3000 \Hy@Warning{Cannot switch to unicode bookmarks}%
3001 \let\HyPsd@pdfencoding\HyPsd@pdfencoding@pdfdoc
3002 \fi
3003 \else
3004 \@onelevel@sanitize\HyPsd@temp
3005 \Hy@Warning{%
3006 Values of option `pdfencoding':\MessageBreak
3007 `pdfdoc', `unicode', `auto'.\MessageBreak
3008 Ignoring unknown value ``\HyPsd@temp'%
3009 }%
3010 \fi
3011 \fi
3012 }

```



```

3013 \def\HyPsd@pdfencoding@auto{auto}
3014 \def\HyPsd@pdfencoding@pdfdoc{pdfdoc}
3015 \def\HyPsd@pdfencoding@unicode{unicode}
3016 \let\HyPsd@pdfencoding\Hy@pdfencoding@pdfdoc
3017 \def\HyPsd@LoadStringEnc{%
3018   \RequirePackage{stringenc}[2009/12/15]%
3019   \let\HyPsd@LoadStringEnc\relax
3020 }
3021 \Hy@AtBeginDocument{%
3022   \ifpackageloaded{stringenc}{%
3023     \let\HyPsd@LoadStringEnc\relax
3024   }{%
3025     \def\HyPsd@LoadStringEnc{%
3026       \Hy@WarningNoLine{%
3027         Missing package `stringenc'. Use `pdfencoding=auto'\MessageBreak
3028         in the preamble or load the package there%
3029       }%
3030     }%
3031   }%
3032 }

3033 \define@key{Hyp}{psdextra}[true]{%
3034   \Hy@boolkey{psdextra}{#1}%
3035   \HyPsd@LoadExtra
3036 }

3037 \def\hypersetup{\kvsetkeys{Hyp}}

3038 \newif\ifHy@setpdfversion
3039 \define@key{Hyp}{pdfversion}{%
3040   \ifundefined{Hy@pdfversion@#1}{%
3041     \PackageWarning{hyperref}{%
3042       Unsupported PDF version `#1'.\MessageBreak
3043       Valid values: 1.2 until 1.9%
3044     }%
3045   }{%
3046     \Hy@setpdfversiontrue
3047     \edef\Hy@pdfversion{\@nameuse{Hy@pdfversion@#1}}%
3048   }%
3049 }
3050 \@namedef{Hy@pdfversion@1.2}{2}%
3051 \@namedef{Hy@pdfversion@1.3}{3}%
3052 \@namedef{Hy@pdfversion@1.4}{4}%
3053 \@namedef{Hy@pdfversion@1.5}{5}%
3054 \@namedef{Hy@pdfversion@1.6}{6}%
3055 \@namedef{Hy@pdfversion@1.7}{7}%
3056 \@namedef{Hy@pdfversion@1.8}{8}%
3057 \@namedef{Hy@pdfversion@1.9}{9}%
3058 \def\Hy@pdfversion{5}

```

10 Options for different drivers

```

3059 \newif\ifHy@DviMode
3060 \let\Hy@DviErrMsg\ltx@empty
3061 \ifpdf
3062   \def\Hy@DviErrMsg{pdfTeX or LuaTeX is running in PDF mode}%
3063 \else
3064   \ifxetex
3065     \def\Hy@DviErrMsg{XeTeX is running}%

```



```

3066 \else
3067   \ifvtex
3068     \ifnum\OpMode=\z@
3069       \Hy@DviModetrue
3070     \else
3071       \def\Hy@DviErrMsg{VTeX is running, but not in DVI mode}%
3072     \fi
3073   \else
3074     \Hy@DviModetrue
3075   \fi
3076 \fi
3077 \fi
3078 \def\HyOpt@CheckDvi#1{%
3079   \ifHy@DviMode
3080     \expandafter\ltx@firstofone
3081   \else
3082     \Hy@Error{%
3083       Wrong DVI mode driver option `#1',\MessageBreak
3084       because \Hy@DviErrMsg
3085     }\@ehc
3086     \expandafter\ltx@gobble
3087   \fi
3088 }

3089 \DeclareVoidOption{tex4ht}{%
3090   \Hy@texhttrue
3091   \kvsetkeys{Hyp}{colorlinks=true}%
3092   \def\BeforeTeXIVht{\RequirePackage{color}}%
3093   \def\Hy@driver{htex4ht}%
3094   \def\MaybeStopEarly{%
3095     \Hy@Message{Stopped early}%
3096     \Hy@AtBeginDocument{%
3097       \PDF@FinishDoc
3098       \gdef\PDF@FinishDoc{}%
3099     }%
3100   \endinput
3101 }%
3102 }

3103 \DeclareVoidOption{pdftex}{%
3104   \ifpdf
3105     \def\Hy@driver{hpdftex}%
3106     \PassOptionsToPackage{pdftex}{color}%
3107   \else
3108     \Hy@Error{%
3109       Wrong driver option `pdftex',\MessageBreak
3110       because pdfTeX in PDF mode is not detected%
3111     }\@ehc
3112   \fi
3113 }

3114 \DeclareVoidOption{luatex}{%
3115   \ifpdf
3116     \ifx\pdfextension\@undefined
3117       \def\Hy@driver{hpdftex}%
3118       \PassOptionsToPackage{pdftex}{color}%
3119     \else
3120       \def\Hy@driver{hluatex}%
3121       \PassOptionsToPackage{luatex}{color}%
3122     \fi

```



```

3123 \else
3124   \Hy@Error{%
3125     Wrong driver option `luatex',\MessageBreak
3126     because luaTeX in PDF mode is not detected%
3127   }\@ehc
3128 \fi
3129 }
3130 \DeclareVoidOption{nativepdf}{%
3131   \HyOpt@CheckDvi{nativepdf}{%
3132     \def\Hy@driver{hdvips}%
3133     \PassOptionsToPackage{dvips}{color}%
3134   }%
3135 }
3136 \DeclareVoidOption{dvipdfm}{%
3137   \HyOpt@CheckDvi{dvipdfm}{%
3138     \def\Hy@driver{hdvipdfm}%
3139   }%
3140 }
3141 \DeclareVoidOption{dvipdfmx}{%
3142   \HyOpt@CheckDvi{dvipdfmx}{%
3143     \def\Hy@driver{hdvipdfm}%
3144     \PassOptionsToPackage{dvipdfmx}{color}%
3145   }%
3146 }
3147 \define@key{Hyp}{dvipdfmx-outline-open}[true]{%
3148   \expandafter\ifx\csname if#1\expandafter\endcsname
3149     \csname iftrue\endcsname
3150   \chardef\SpecialDvipdfmxOutlineOpen\@ne
3151 \else
3152   \chardef\SpecialDvipdfmxOutlineOpen\z@
3153 \fi
3154 }
3155 \DeclareVoidOption{xetex}{%
3156   \ifxetex
3157     \def\Hy@driver{hxetex}%
3158   \else
3159     \Hy@Error{%
3160       Wrong driver option `xetex',\MessageBreak
3161       because XeTeX is not detected%
3162     }\@ehc
3163   \fi
3164 }
3165 \DeclareVoidOption{pdfmark}{%
3166   \HyOpt@CheckDvi{pdfmark}{%
3167     \def\Hy@driver{hdvips}%
3168   }%
3169 }
3170 \DeclareVoidOption{dvips}{%
3171   \HyOpt@CheckDvi{dvips}{%
3172     \def\Hy@driver{hdvips}%
3173     \PassOptionsToPackage{dvips}{color}%
3174   }%
3175 }
3176 \DeclareVoidOption{hypertex}{%
3177   \HyOpt@CheckDvi{hypertex}{%
3178     \def\Hy@driver{hypertex}%
3179   }%

```



```

3180 }
3181 \let\Hy@MaybeStopNow\relax
3182 \DeclareVoidOption{vtex}{%
3183   \ifvtex
3184     \ifnum 0\ifnum\OpMode<1 1\fi \ifnum\OpMode>3 1\fi =0 %
3185     \def\Hy@driver{hvtex}%
3186   \else
3187     \ifnum\OpMode=10\relax
3188     \def\Hy@driver{hvtexhtm}%
3189     \def\MaybeStopEarly{%
3190       \Hy@Message{Stopped early}%
3191       \Hy@AtBeginDocument{%
3192         \PDF@FinishDoc
3193         \gdef\PDF@FinishDoc{}}%
3194       }%
3195     \endinput
3196   }%
3197   \else
3198     \Hy@Error{%
3199       Wrong driver option `vtex',\MessageBreak
3200       because of wrong OpMode (\the\OpMode)%
3201     }\@ehc
3202   \fi
3203   \fi
3204   \else
3205     \Hy@Error{%
3206       Wrong driver option `vtex',\MessageBreak
3207       because VTeX is not running%
3208     }\@ehc
3209   \fi
3210 }
3211 \DeclareVoidOption{vtexpdfmark}{%
3212   \ifvtex
3213     \ifnum 0\ifnum\OpMode<1 1\fi \ifnum\OpMode>3 1\fi =0 %
3214     \def\Hy@driver{hvtexmrk}%
3215   \else
3216     \Hy@Error{%
3217       Wrong driver option `vtexpdfmark',\MessageBreak
3218       because of wrong OpMode (\the\OpMode)%
3219     }\@ehc
3220   \fi
3221   \else
3222     \Hy@Error{%
3223       Wrong driver option `vtexpdfmark,\MessageBreak
3224       because VTeX is not running%
3225     }\@ehc
3226   \fi
3227 }
3228 \DeclareVoidOption{dviwindo}{%
3229   \HyOpt@CheckDvi{dviwindo}{%
3230     \def\Hy@driver{hdviwind}%
3231     \kvsetkeys{Hyp}{colorlinks}%
3232     \PassOptionsToPackage{dviwindo}{color}%
3233   }%
3234 }
3235 \DeclareVoidOption{dvipsone}{%
3236   \HyOpt@CheckDvi{dvipsone}{%

```



```

3237 \def\Hy@driver{hdvipson}%
3238 \PassOptionsToPackage{dvipsone}{color}%
3239 }%
3240 }
3241 \DeclareVoidOption{textures}{%
3242 \HyOpt@CheckDvi{textures}{%
3243 \def\Hy@driver{htexture}%
3244 }%
3245 }
3246 \DeclareVoidOption{latex2html}{%
3247 \HyOpt@CheckDvi{latex2html}{%
3248 \Hy@AtBeginDocument{\@latex2htmlX}%
3249 }%
3250 }

```

No more special treatment for ps2pdf. Let it sink or swim.

```

3251 \DeclareVoidOption{ps2pdf}{%
3252 \HyOpt@CheckDvi{ps2pdf}{%
3253 \def\Hy@driver{hdvips}%
3254 \PassOptionsToPackage{dvips}{color}%
3255 }%
3256 }
3257 \let\HyOpt@DriverFallback\ltx@empty
3258 \define@key{Hyp}{driverfallback}{%
3259 \ifHy@DviMode
3260 \def\HyOpt@DriverFallback{#1}%
3261 \Hy@Match\HyOpt@DriverFallback}{%
3262 ~(|dvipdfm|dvipdfmx|dvips|dvipsone|dviwindo|hypertex|ps2pdf|
3263 latex2html|tex4ht)$%
3264 }{}%
3265 \Hy@Warning{%
3266 Invalid driver `#1' for option\MessageBreak
3267 `driverfallback'%
3268 }%
3269 \let\HyOpt@DriverFallback\ltx@empty
3270 }%
3271 \fi
3272 }
3273 \let\HyOpt@CustomDriver\ltx@empty
3274 \define@key{Hyp}{customdriver}{%
3275 \IfFileExists{#1.def}{%
3276 \def\HyOpt@CustomDriver{#1}%
3277 }{%
3278 \Hy@Warning{%
3279 Missing driver file `#1.def',\MessageBreak
3280 ignoring custom driver%
3281 }%
3282 }%
3283 }

```

11 Options to add extra features

Make included figures (assuming they use the standard graphics package) be hypertext links. Off by default. Needs more work.

```

3284 \define@key{Hyp}{hyperfigures}[true]{%
3285 \Hy@boolkey{hyperfigures}{#1}%
3286 }

```


The automatic footnote linking can be disabled by option hyperfootnotes.

```
3287 \define@key{Hyp}{hyperfootnotes}[true]{%
3288   \Hy@boolkey{hyperfootnotes}{#1}%
3289 }
```

Set up back-referencing to be hyper links, by page, slide or section number,

```
3290 \def\back@none{none}
3291 \def\back@section{section}
3292 \def\back@page{page}
3293 \def\back@slide{slide}
3294 \define@key{Hyp}{backref}[section]{%
3295   \lowercase{\def\Hy@tempa{#1}}%
3296   \ifx\Hy@tempa\@empty
3297     \let\Hy@tempa\back@section
3298   \fi
3299   \ifx\Hy@tempa\Hy@false
3300     \let\Hy@tempa\back@none
3301   \fi
3302   \ifx\Hy@tempa\back@slide
3303     \let\Hy@tempa\back@section
3304   \fi
3305   \ifx\Hy@tempa\back@page
3306     \PassOptionsToPackage{hyperpageref}{backref}%
3307     \Hy@backreftrue
3308   \else
3309     \ifx\Hy@tempa\back@section
3310       \PassOptionsToPackage{hyperref}{backref}%
3311       \Hy@backreftrue
3312     \else
3313       \ifx\Hy@tempa\back@none
3314         \Hy@backreffalse
3315       \else
3316         \Hy@WarnOptionValue{#1}{backref}{%
3317           `section', `slide', `page', `none',\MessageBreak
3318           or `false'}%
3319       \fi
3320     \fi
3321   \fi
3322 }
3323 \define@key{Hyp}{pagebackref}[true]{%
3324   \edef\Hy@tempa{#1}%
3325   \lowercase\expandafter{%
3326     \expandafter\def\expandafter\Hy@tempa\expandafter{\Hy@tempa}%
3327   }%
3328   \ifx\Hy@tempa\@empty
3329     \let\Hy@tempa\Hy@true
3330   \fi
3331   \ifx\Hy@tempa\Hy@true
3332     \PassOptionsToPackage{hyperpageref}{backref}%
3333     \Hy@backreftrue
3334   \else
3335     \ifx\Hy@tempa\Hy@false
3336       \Hy@backreffalse
3337     \else
3338       \Hy@WarnOptionValue{#1}{pagebackref}{`true' or `false'}%
3339     \fi
3340   \fi
3341 }
```


Make index entries be links back to the relevant pages. By default this is turned on, but may be stopped.

```
3342 \define@key{Hyp}{hyperindex}[true]{%
3343   \Hy@boolkey{hyperindex}{#1}%
3344 }
```

Configuration of encap char.

```
3345 \define@key{Hyp}{encap}[|]{%
3346   \def\HyInd@EncapChar{#1}%
3347 }
```

12 Language options

The `\autoref` feature depends on the language.

```
3348 \def\HyLang@afrikaans{%
3349   \def\equationautorefname{Vergelyking}%
3350   \def\footnoteautorefname{Voetnota}%
3351   \def\itemautorefname{Item}%
3352   \def\figureautorefname{Figuur}%
3353   \def\tableautorefname{Tabel}%
3354   \def\partautorefname{Deel}%
3355   \def\appendixautorefname{Bylae}%
3356   \def\chapterautorefname{Hoofstuk}%
3357   \def\sectionautorefname{Afdeling}%
3358   \def\subsectionautorefname{Subafdeling}%
3359   \def\subsubsectionautorefname{Subsubafdeling}%
3360   \def\paragraphautorefname{Paragraaf}%
3361   \def\subparagraphautorefname{Subparagraaf}%
3362   \def\FancyVerbLineautorefname{Lyn}%
3363   \def\theoremautorefname{Teorema}%
3364   \def\pageautorefname{Bladsy}%
3365 }
3366 \def\HyLang@english{%
3367   \def\equationautorefname{Equation}%
3368   \def\footnoteautorefname{footnote}%
3369   \def\itemautorefname{item}%
3370   \def\figureautorefname{Figure}%
3371   \def\tableautorefname{Table}%
3372   \def\partautorefname{Part}%
3373   \def\appendixautorefname{Appendix}%
3374   \def\chapterautorefname{chapter}%
3375   \def\sectionautorefname{section}%
3376   \def\subsectionautorefname{subsection}%
3377   \def\subsubsectionautorefname{subsubsection}%
3378   \def\paragraphautorefname{paragraph}%
3379   \def\subparagraphautorefname{subparagraph}%
3380   \def\FancyVerbLineautorefname{line}%
3381   \def\theoremautorefname{Theorem}%
3382   \def\pageautorefname{page}%
3383 }
3384 \def\HyLang@french{%
3385   \def\equationautorefname{'Equation}%
3386   \def\footnoteautorefname{note}%
3387   \def\itemautorefname{item}%
3388   \def\figureautorefname{Figure}%
3389   \def\tableautorefname{Tableau}%

```



```

3390 \def\partautorefname{Partie}%
3391 \def\appendixautorefname{Appendice}%
3392 \def\chapterautorefname{chapitre}%
3393 \def\sectionautorefname{section}%
3394 \def\subsectionautorefname{sous-section}%
3395 \def\subsubsectionautorefname{sous-sous-section}%
3396 \def\paragraphautorefname{paragraphe}%
3397 \def\subparagraphautorefname{sous-paragraphe}%
3398 \def\FancyVerbLineautorefname{ligne}%
3399 \def\theoremautorefname{Th\'eor\`eme}%
3400 \def\pageautorefname{page}%
3401 }
3402 \def\HyLang@german{%
3403 \def\equationautorefname{Gleichung}%
3404 \def\footnoteautorefname{Fu\ss note}%
3405 \def\itemautorefname{Punkt}%
3406 \def\figureautorefname{Abbildung}%
3407 \def\tableautorefname{Tabelle}%
3408 \def\partautorefname{Teil}%
3409 \def\appendixautorefname{Anhang}%
3410 \def\chapterautorefname{Kapitel}%
3411 \def\sectionautorefname{Abschnitt}%
3412 \def\subsectionautorefname{Unterabschnitt}%
3413 \def\subsubsectionautorefname{Unterunterabschnitt}%
3414 \def\paragraphautorefname{Absatz}%
3415 \def\subparagraphautorefname{Unterabsatz}%
3416 \def\FancyVerbLineautorefname{Zeile}%
3417 \def\theoremautorefname{Theorem}%
3418 \def\pageautorefname{Seite}%
3419 }
3420 \def\HyLang@italian{%
3421 \def\equationautorefname{Equazione}%
3422 \def\footnoteautorefname{nota}%
3423 \def\itemautorefname{punto}%
3424 \def\figureautorefname{Figura}%
3425 \def\tableautorefname{Tabella}%
3426 \def\partautorefname{Parte}%
3427 \def\appendixautorefname{Appendice}%
3428 \def\chapterautorefname{Capitolo}%
3429 \def\sectionautorefname{sezione}%
3430 \def\subsectionautorefname{sottosezione}%
3431 \def\subsubsectionautorefname{sottosottosezione}%
3432 \def\paragraphautorefname{paragrafo}%
3433 \def\subparagraphautorefname{sottoparagrafo}%
3434 \def\FancyVerbLineautorefname{linea}%
3435 \def\theoremautorefname{Teorema}%
3436 \def\pageautorefname{Pag.\@}%
3437 }
3438 \def\HyLang@magyar{%
3439 \def\equationautorefname{Egyenlet}%
3440 \def\footnoteautorefname{l\'abjegyzet}%
3441 \def\itemautorefname{Elem}%
3442 \def\figureautorefname{'Abra}%
3443 \def\tableautorefname{T\'abl\'azat}%
3444 \def\partautorefname{R\'esz}%
3445 \def\appendixautorefname{F\'uggel\'ek}%
3446 \def\chapterautorefname{fejezet}%

```



```

3447 \def\sectionautorefname{szakasz}%
3448 \def\subsectionautorefname{alszakasz}%
3449 \def\subsubsectionautorefname{alalszakasz}%
3450 \def\paragraphautorefname{bekezd'es}%
3451 \def\subparagraphautorefname{albekezd'es}%
3452 \def\FancyVerbLineautorefname{sor}%
3453 \def\theoremautorefname{T'etel}%
3454 \def\pageautorefname{oldal}%
3455 }
3456 \def\HyLang@portuges{%
3457 \def\equationautorefname{Equa\c c\~ao}%
3458 \def\footnoteautorefname{Nota de rodap'e}%
3459 \def\itemautorefname{Item}%
3460 \def\figureautorefname{Figura}%
3461 \def\tableautorefname{Tabela}%
3462 \def\partautorefname{Parte}%
3463 \def\appendixautorefname{Ap\~endice}%
3464 \def\chapterautorefname{Cap'itulo}%
3465 \def\sectionautorefname{Se\c c\~ao}%
3466 \def\subsectionautorefname{Subse\c c\~ao}%
3467 \def\subsubsectionautorefname{Subsubse\c c\~ao}%
3468 \def\paragraphautorefname{par'agrafo}%
3469 \def\subparagraphautorefname{subpar'agrafo}%
3470 \def\FancyVerbLineautorefname{linha}%
3471 \def\theoremautorefname{Teorema}%
3472 \def\pageautorefname{P'agina}%
3473 }

```

Next commented section for Russian is provided by Olga Lapko.

Next follow the checked reference names with commented variants and explanations. All they are abbreviated and they won't create a grammatical problems in the *middle* of sentences.

The most weak points in these abbreviations are the `\equationautorefname`, `\theoremautorefname` and the `\FancyVerbLineautorefname`. But those three, and also the `\footnoteautorefname` are not *too* often referenced. Another rather weak point is the `\appendixautorefname`.

```

3474 \def\HyLang@russian{%

```

The abbreviated reference to the equation: it is not for “the good face of the book”, but maybe it will be better to get the company for the `\theoremautorefname`?

```

3475 \def\equationautorefname{\cyr\cyrv\cyrery\cyr.}%

```

The name of the equation reference has common form for both nominative and accusative but changes in other forms, like “of `\autoref{auto}`” etc. The full name must follow full name of the `\theoremautorefname`.

```

3476 % \def\equationautorefname{%
3477 %   \cyr\cyrv\cyrery\cyr\cyra\cyrzh\cyre\cyrn\cyri\cyre
3478 % }%

```

The variant of footnote has abbreviation form of the synonym of the word “footnote”. This variant of abbreviated synonym has alternative status (maybe obsolete?).

```

3479 \def\footnoteautorefname{%
3480   \cyr\cyrp\cyro\cyrd\cyrs\cyrt\cyr. \cyrp\cyr\cyri\cyrm.%
3481 }%

```

Commented form of the full synonym for “footnote”. It has common form for both nominative and accusative but changes in other forms, like “of `\autoref{auto}`”


```

3482 % \def\footnoteautorefname{%
3483 %   \cyr\cyrp\cyro\cyrd\cyrs\cyrt\cyrr\cyro\cyrch\cyrn\cyro\cyre\ %
3484 %   \cyrp\cyrr\cyri\cyrm\cyre\cyrch\cyra\cyrn\cyri\cyre
3485 % }%

```

Commented forms of the “footnote”: have different forms, the same is for the nominative and accusative. (The others needed?)

```

3486 % \def\Nomfootnoteautorefname{\cyr\cyrs\cyrn\cyro\cyrs\cyrk\cyra}%
3487 % \def\Accfootnoteautorefname{\cyr\cyrs\cyrn\cyro\cyrs\cyrk\cyru}%

```

Name of the list item, can be confused with the paragraph reference name, but reader could understand meaning from context(?). Commented variant has common form for both nominative and accusative but changes in other forms, like “of \autoref{auto}” etc.

```

3488 \def\itemautorefname{\cyr\cyrp.}%
3489 % \def\itemautorefname{\cyr\cyrp\cyru\cyrn\cyrk\cyrt}%

```

Names of the figure and table have stable (standard) abbreviation forms. No problem in the middle of sentence.

```

3490 \def\figureautorefname{\cyr\cyrr\cyri\cyrs.}%
3491 \def\tableautorefname{\cyr\cyrt\cyra\cyrb\cyrl.}%

```

Names of the part, chapter, section(s) have stable (standard) abbreviation forms. No problem in the middle of sentence.

```

3492 \def\partautorefname{\cyr\cyrch.}%
3493 \def\chapterautorefname{\cyr\cyrg\cyrl.}%
3494 \def\sectionautorefname{\cyr\cyrr\cyra\cyrz\cyrd.}%

```

Name of the appendix can use this abbreviation, but it is not standard for books, i.e, not for “the good face of the book”. Commented variant has common form for both nominative and accusative but changes in other forms, like “of \autoref{auto}” etc.

```

3495 \def\appendixautorefname{\cyr\cyrp\cyrr\cyri\cyrl.}%
3496 % \def\appendixautorefname{%
3497 %   \cyr\cyrp\cyrr\cyri\cyrl\cyro\cyrz\cyre\cyrn\cyri\cyre
3498 % }%

```

The sectioning command have stable (almost standard) and common abbreviation form for all levels (the meaning of these references visible from the section number). No problem.

```

3499 \def\subsectionautorefname{\cyr\cyrr\cyra\cyrz\cyrd.}%
3500 \def\subsubsectionautorefname{\cyr\cyrr\cyra\cyrz\cyrd.}%

```

The names of references to paragraphs also have stable (almost standard) and common abbreviation form for all levels (the meaning of these references is visible from the section number). No problem in the middle of sentence.

```

3501 \def\paragraphautorefname{\cyr\cyrp.}%
3502 \def\subparagraphautorefname{\cyr\cyrp.}%

```

Commented variant can be used in books but since it has common form for both nominative and accusative but it changes in other forms, like “of \autoref{auto}” etc.

```

3503 % \def\paragraphautorefname{\cyr\cyrp\cyru\cyrn\cyrk\cyrt}%
3504 % \def\subparagraphautorefname{\cyr\cyrp\cyru\cyrn\cyrk\cyrt}%

```

The name of verbatim line. Here could be a standard of the abbreviation (used very rare). But the author preprint publications (which have not any editor or corrector) can use this abbreviation for the page reference. So the meaning of the line reference can be read as reference to the page.

```

3505 \def\FancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr.}%

```


Commented names of the “verbatim line”: have different forms, also the nominative and accusative.

```
3506 % \def\NomFancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr\cyro\cyrk\cyra}%
3507 % \def\AccFancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr\cyro\cyrk\cyru}%
```

The alternative, ve-e-e-ery professional abbreviation, was used in typography markup for typesetters.

```
3508 % \def\FancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr\cyrk.}%
```

The names of theorem: if we want have “the good face of the book”, so the theorem reference must have the full name (like equation reference). But ...

```
3509 \def\theoremautorefname{\cyr\cyrt\cyre\cyro\cyrr.}%
```

Commented forms of the “theorem”: have different forms, also the nominative and accusative.

```
3510 % \def\Nomtheoremautorefname{\cyr\cyrt\cyre\cyro\cyrr\cyre\cyrm\cyra}%
3511 % \def\Acctheoremautorefname{\cyr\cyrt\cyre\cyro\cyrr\cyre\cyrm\cyru}%
```

Name of the page stable (standard) abbreviation form. No problem.

```
3512 \def\pageautorefname{\cyr\cyrs.}%
3513 }
```

```
3514 \def\HyLang@spanish{%
3515 \def\equationautorefname{Ecuaci\`on}%
3516 \def\footnoteautorefname{Nota a pie de p\`agina}%
3517 \def\itemautorefname{Elemento}%
3518 \def\figureautorefname{Figura}%
3519 \def\tableautorefname{Tabla}%
3520 \def\partautorefname{Parte}%
3521 \def\appendixautorefname{Ap\`endice}%
3522 \def\chapterautorefname{Cap\`itulo}%
3523 \def\sectionautorefname{Secci\`on}%
3524 \def\subsectionautorefname{Subsecci\`on}%
3525 \def\subsubsectionautorefname{Subsubsecci\`on}%
3526 \def\paragraphautorefname{P\`arrafo}%
3527 \def\subparagraphautorefname{Subp\`arrafo}%
3528 \def\FancyVerbLineautorefname{L\`inea}%
3529 \def\theoremautorefname{Teorema}%
3530 \def\pageautorefname{P\`agina}%
3531 }
```

```
3532 \def\HyLang@catalan{%
3533 \def\equationautorefname{Equaci\`o}%
3534 \def\footnoteautorefname{Nota al peu de p\`agina}%
3535 \def\itemautorefname{Element}%
3536 \def\figureautorefname{Figura}%
3537 \def\tableautorefname{Taula}%
3538 \def\partautorefname{Part}%
3539 \def\appendixautorefname{Ap\`endix}%
3540 \def\chapterautorefname{Cap\`itol}%
3541 \def\sectionautorefname{Secci\`o}%
3542 \def\subsectionautorefname{Subsecci\`o}%
3543 \def\subsubsectionautorefname{Subsubsecci\`o}%
3544 \def\paragraphautorefname{Par\`agraf}%
3545 \def\subparagraphautorefname{Subpar\`agraf}%
3546 \def\FancyVerbLineautorefname{L\`inia}%
3547 \def\theoremautorefname{Teorema}%
3548 \def\pageautorefname{P\`agina}%
3549 }
```



```

3550 \def\HyLang@vietnamese{%
3551   \def\equationautorefname{Ph\uhorn{}}\ohorn{}ng tr\`inh}%
3552   \def\footnoteautorefname{Ch\`u th\`ich}%
3553   \def\itemautorefname{m\`d{u}c}%
3554   \def\figureautorefname{H\`inh}%
3555   \def\tableautorefname{B\`h{a}ng}%
3556   \def\partautorefname{Ph\`acircumflex{}n}%
3557   \def\appendixautorefname{Ph\`d{u} l\`d{u}c}%
3558   \def\chapterautorefname{ch\uhorn{}}\ohorn{}ng}%
3559   \def\sectionautorefname{m\`d{u}c}%
3560   \def\subsectionautorefname{m\`d{u}c}%
3561   \def\subsubsectionautorefname{m\`d{u}c}%
3562   \def\paragraphautorefname{dj{o}d{a}n}%
3563   \def\subparagraphautorefname{dj{o}d{a}n}%
3564   \def\FancyVerbLineautorefname{d\`ong}%
3565   \def\theoremautorefname{DJ{}}\d{i}nh l\`y}%
3566   \def\pageautorefname{Trang}%
3567 }

```

Greek, see github issue 52

```

3568 \def\HyLang@greek{%
3569   \def\equationautorefname{\textEpsilon\textxi\acconos\textiota\textsigma\textomega\textsigma\texteta}%
3570   \def\footnoteautorefname{\textupsilon\textpi\textomicron\textsigma\texteta\textmu\textepsilon\acconos\textiota\textomega\textsigma\texteta}%
3571   \def\itemautorefname{\textalpha\textnu\texttau\textiota\textkappa\textepsilon\acconos\textiota\textmu\textepsilon\textnu\textomicron}%
3572   \def\figureautorefname{\textSigma\textchi\acconos\texteta\textmu\textalpha}%
3573   \def\tableautorefname{\textPi\acconos\textiota\textnu\textalpha\textkappa\textalpha}%
3574   \def\partautorefname{\textMu\acconos\textepsilon\textrho\textomicron\textvarsigma}%
3575   \def\appendixautorefname{\textPi\textalpha\textrho\acconos\textalpha\textrho\texttau\texteta\textmu\textalpha}%
3576   \def\chapterautorefname{\textkappa\textepsilon\textphi\acconos\textalpha\textlambda\textalpha\textiota\textomicron}%
3577   \def\sectionautorefname{\textepsilon\textnu\acconos\textomicron\texttau\texteta\texttau\textalpha}%
3578   \def\subsectionautorefname{\textupsilon\textpi\textomicron\textepsilon\textnu\acconos\textomicron\texttau\texteta\texttau\textalpha}%
3579   \def\subsubsectionautorefname{\textupsilon\textpi\textomicron-\textupsilon\textpi\textomicron\textrho\textalpha\textphi\textomicron\textvarsigma}%
3580   \def\paragraphautorefname{\textpi\textalpha\textrho\acconos\textalpha\textgamma\textrho\textalpha\textphi\textomicron\textvarsigma}%
3581   \def\subparagraphautorefname{\textupsilon\textpi\textomicron\textpi\textalpha\textrho\acconos\textalpha\textgamma\textrho\textalpha\textphi\textomicron\textvarsigma}%
3582   \def\FancyVerbLineautorefname{\textgamma\textrho\textalpha\textmu\textmu\acconos\texteta}%
3583   \def\theoremautorefname{\textTheta\textepsilon\acconos\textomega\textrho\texteta\textmu\textalpha}%
3584   \def\pageautorefname{\textsigma\textepsilon\textlambda\acconos\textiota\textdelta\textalpha}%
3585 }
3586 \def\HyLang@dutch{%
3587   \def\equationautorefname{Vergelijking}%
3588   \def\footnoteautorefname{voetnoot}%

```



```

3589 \def\itemautorefname{punt}%
3590 \def\figureautorefname{Figuur}%
3591 \def\tableautorefname{Tabel}%
3592 \def\partautorefname{Deel}%
3593 \def\appendixautorefname{Bijlage}%
3594 \def\chapterautorefname{hoofdstuk}%
3595 \def\sectionautorefname{paragraaf}%
3596 \def\subsectionautorefname{deelparagraaf}%
3597 \def\subsubsectionautorefname{deel-deelparagraaf}%
3598 \def\paragraphautorefname{alinea}%
3599 \def\subparagraphautorefname{deelalinea}%
3600 \def\FancyVerbLineautorefname{regel}%
3601 \def\theoremautorefname{Stelling}%
3602 \def\pageautorefname{pagina}%
3603 }

```

Instead of package babel's definition of `\addto` the implementation of package `varioref` is used. Additionally argument `#1` is checked for `\relax`.

```

3604 \def\HyLang@addto#1#2{%
3605   #2%
3606   \@temptokena{#2}%
3607   \ifx#1\relax
3608     \let#1\@empty
3609   \fi
3610   \ifx#1\@undefined
3611     \edef#1{\the\@temptokena}%
3612   \else
3613     \toks@\expandafter{#1}%
3614     \edef#1{\the\toks@\the\@temptokena}%
3615   \fi
3616   \@temptokena{}\toks@\@temptokena
3617 }

3618 \def\HyLang@DeclareLang#1#2#3{%
3619   \@ifpackagewith{babel}{#1}{%
3620     \expandafter\HyLang@addto
3621       \csname extras#1\expandafter\endcsname
3622       \csname HyLang@#2\endcsname
3623     \begingroup
3624       \edef\x{\endgroup
3625         #3%
3626       }%
3627     \x
3628     \@namedef{HyLang@#1@done}{}%
3629   }{}%
3630   \begingroup
3631     \edef\x##1#2{%
3632       \noexpand\ifx##2\relax
3633         \errmessage{No definitions for language #2' found!}%
3634       \noexpand\fi
3635     \endgroup
3636     \noexpand\define@key{Hyp}{#1}[]{%
3637       \noexpand\@ifundefined{HyLang@#1@done}{%
3638         \noexpand\HyLang@addto{\noexpand##1}{\noexpand##2}%
3639         #3%
3640       \noexpand\@namedef{HyLang@#1@done}{}%
3641     }{}%
3642   }%

```



```

3643 }%
3644 \expandafter\x\csname extras#1\expandafter\endcsname
3645 \csname HyLang@#2\endcsname
3646 }
3647 \HyLang@DeclareLang{english}{english}{}
3648 \HyLang@DeclareLang{UKenglish}{english}{}
3649 \HyLang@DeclareLang{british}{english}{}
3650 \HyLang@DeclareLang{USenglish}{english}{}
3651 \HyLang@DeclareLang{american}{english}{}
3652 \HyLang@DeclareLang{german}{german}{}
3653 \HyLang@DeclareLang{austrian}{german}{}
3654 \HyLang@DeclareLang{ngerman}{german}{}
3655 \HyLang@DeclareLang{naustrian}{german}{}
3656 \HyLang@DeclareLang{russian}{russian}{\noexpand\hypersetup{unicode}}
3657 \HyLang@DeclareLang{brazil}{portuges}{}
3658 \HyLang@DeclareLang{brazilian}{portuges}{}
3659 \HyLang@DeclareLang{portuguese}{portuges}{}
3660 \HyLang@DeclareLang{spanish}{spanish}{}
3661 \HyLang@DeclareLang{catalan}{catalan}{}
3662 \HyLang@DeclareLang{afrikaans}{afrikaans}{}
3663 \HyLang@DeclareLang{french}{french}{}
3664 \HyLang@DeclareLang{frenchb}{french}{}
3665 \HyLang@DeclareLang{français}{french}{}
3666 \HyLang@DeclareLang{acadian}{french}{}
3667 \HyLang@DeclareLang{canadien}{french}{}
3668 \HyLang@DeclareLang{italian}{italian}{}
3669 \HyLang@DeclareLang{magyar}{magyar}{}
3670 \HyLang@DeclareLang{hungarian}{magyar}{}
3671 \HyLang@DeclareLang{greek}{greek}{}
3672 \HyLang@DeclareLang{dutch}{dutch}{}

```

More work is needed in case of options vietnamese and vietnam.

```

3673 \DeclareVoidOption{vietnamese}{%
3674 \HyLang@addto\extrasvietnamese\HyLang@vietnamese
3675 \Hy@AtEndOfPackage{%
3676 \@ifundefined{T@PU}{}{}%
3677 \input{puvnenc.def}%
3678 }%
3679 }%
3680 }
3681 \DeclareVoidOption{vietnam}{%
3682 \HyLang@addto\extrasvietnam\HyLang@vietnamese
3683 \Hy@AtEndOfPackage{%
3684 \@ifundefined{T@PU}{}{}%
3685 \input{puvnenc.def}%
3686 }%
3687 }%
3688 }

```

Similar for option arabic that just loads the additions to PU encoding for Arabi.

```

3689 \DeclareVoidOption{arabic}{%
3690 \Hy@AtEndOfPackage{%
3691 \@ifundefined{T@PU}{}{}%
3692 \input{puarenc.def}%
3693 }%
3694 }%
3695 }

```


13 Options to change appearance of links

Colouring links at the L^AT_EX level is useful for debugging, perhaps.

```
3696 \define@key{Hyp}{colorlinks}[true]{%
3697   \Hy@boolkey{colorlinks}{#1}%
3698 }
3699 \DeclareVoidOption{hidelinks}{%
3700   \Hy@colorlinksfalse
3701   \Hy@ocgcolorlinksfalse
3702   \Hy@frenchlinksfalse
3703   \def\Hy@colorlink##1{\begingroup}%
3704   \def\Hy@endcolorlink{\endgroup}%
3705   \def\@pdfborder{0 0 0}%
3706   \let\@pdfborderstyle\ltx@empty
3707 }
3708 \define@key{Hyp}{ocgcolorlinks}[true]{%
3709   \Hy@boolkey{ocgcolorlinks}{#1}%
3710 }
3711 \Hy@AtBeginDocument{%
3712   \begingroup
3713   \@ifundefined{OBJ@OCG@view}{%
3714     \ifHy@ocgcolorlinks
3715       \Hy@Warning{%
3716         Driver does not support `ocgcolorlinks',\MessageBreak
3717         using `colorlinks' instead%
3718       }%
3719     \fi
3720   }{%
3721   }%
3722 }
3723 \define@key{Hyp}{frenchlinks}[true]{%
3724   \Hy@boolkey{frenchlinks}{#1}%
3725 }
```

14 Bookmarking

```
3726 \begingroup\expandafter\expandafter\expandafter\endgroup
3727 \expandafter\ifx\csname chapter\endcsname\relax
3728   \def\toclevel@part{0}%
3729 \else
3730   \def\toclevel@part{-1}%
3731 \fi
3732 \def\toclevel@chapter{0}
3733 \def\toclevel@section{1}
3734 \def\toclevel@subsection{2}
3735 \def\toclevel@subsubsection{3}
3736 \def\toclevel@paragraph{4}
3737 \def\toclevel@subparagraph{5}
3738 \def\toclevel@figure{0}
3739 \def\toclevel@table{0}
3740 \@ifpackageloaded{listings}{%
3741   \providecommand*\theHlstlisting{\thelstlisting}%
3742   \providecommand*\toclevel@lstlisting{0}%
3743 }{}
3744 \@ifpackageloaded{listing}{%
3745   \providecommand*\theHlisting{\thelisting}%
3746 }
```



```

3746 \providecommand*\toclevel@listing{0}%
3747 }{}

```

```

3748 \define@key{Hyp}{bookmarks}[true]{%
3749   \Hy@boolkey{bookmarks}{#1}%
3750 }

```

```

3751 \define@key{Hyp}{bookmarksopen}[true]{%
3752   \Hy@boolkey{bookmarksopen}{#1}%
3753 }

```

The depth of the outlines is controlled by option `bookmarksdepth`. The option acts globally and distinguishes three cases:

- `bookmarksdepth`: Without value `hyperref` uses counter `tocdepth` (compatible behaviour and default).
- `bookmarksdepth=<number>`: the depth is set to `<number>`.
- `bookmarksdepth=<name>`: The `<name>` must not start with a number or minus sign. It is a document division name (part, chapter, section, ...). Internally the value of macro `\toclevel@<name>` is used.

```

3754 \let\Hy@bookmarksdepth\c@tocdepth
3755 \define@key{Hyp}{bookmarksdepth}[]{}%
3756 \begingroup
3757   \edef\x{#1}%
3758   \ifx\x\empty
3759     \global\let\Hy@bookmarksdepth\c@tocdepth
3760   \else
3761     \@ifundefined{toclevel@\x}{%
3762       \@onelevel@sanitize\x
3763       \edef\y{\expandafter\@car\x\@nil}%
3764       \ifcase 0\expandafter\ifx\y-1\fi
3765         \expandafter\ifnum\expandafter`\y>47 %
3766         \expandafter\ifnum\expandafter`\y<58 1\fi\fi\relax
3767       \Hy@Warning{Unknown document division name (\x)}%
3768     \else
3769       \setbox\z@=\hbox{%
3770         \count@=\x
3771         \xdef\Hy@bookmarksdepth{\the\count@}%
3772       }%
3773     \fi
3774   }{}%
3775   \setbox\z@=\hbox{%
3776     \count@=\csname toclevel@\x\endcsname
3777     \xdef\Hy@bookmarksdepth{\the\count@}%
3778   }%
3779 }%
3780 \fi
3781 \endgroup
3782 }

```

‘bookmarksopenlevel’ to specify the open level. From Heiko Oberdiek.

```

3783 \define@key{Hyp}{bookmarksopenlevel}{%
3784   \def\@bookmarksopenlevel{#1}%
3785 }
3786 \def\@bookmarksopenlevel{\maxdimen}
3787 % `bookmarkstype' to specify which `toc' file to mimic
3788 \define@key{Hyp}{bookmarkstype}{%
3789   \def\Hy@bookmarkstype{#1}%

```



```

3790 }
3791 \def\Hy@bookmarkstype{toc}

```

Richard Curnow <richard@curnow.demon.co.uk> suggested this functionality. It adds section numbers etc to bookmarks.

```

3792 \define@key{Hyp}{bookmarksnumbered}[true]{%
3793   \Hy@boolkey{bookmarksnumbered}{#1}%
3794 }

```

Option CJKbookmarks enables the patch for CJK bookmarks.

```

3795 \define@key{Hyp}{CJKbookmarks}[true]{%
3796   \Hy@boolkey{CJKbookmarks}{#1}%
3797 }

3798 \def\Hy@temp#1{%
3799   \expandafter\Hy@@temp\csname @#1color\endcsname{#1}%
3800 }
3801 \def\Hy@@temp#1#2#3{%
3802   \define@key{Hyp}{#2color}{%
3803     \HyColor@HyperrefColor{##1}#1%
3804   }%
3805   \def#1{#3}%
3806 }
3807 \Hy@temp{link}{red}
3808 \Hy@temp{anchor}{black}
3809 \Hy@temp{cite}{green}
3810 \Hy@temp{file}{cyan}
3811 \Hy@temp{url}{magenta}
3812 \Hy@temp{menu}{red}
3813 \Hy@temp{run}{\@filecolor}
3814 \define@key{Hyp}{pagecolor}{%
3815   \Hy@WarningPageColor
3816 }
3817 \def\Hy@WarningPageColor{%
3818   \Hy@WarningNoLine{Option `pagecolor' is not available anymore}%
3819   \global\let\Hy@WarningPageColor\relax
3820 }
3821 \define@key{Hyp}{allcolors}{%
3822   \HyColor@HyperrefColor{#1}\@linkcolor
3823   \HyColor@HyperrefColor{#1}\@anchorcolor
3824   \HyColor@HyperrefColor{#1}\@citecolor
3825   \HyColor@HyperrefColor{#1}\@filecolor
3826   \HyColor@HyperrefColor{#1}\@urlcolor
3827   \HyColor@HyperrefColor{#1}\@menucolor
3828   \HyColor@HyperrefColor{#1}\@runcolor
3829 }

3830 \def\hyperbaseurl#1{\def\@baseurl{#1}}
3831 \define@key{Hyp}{baseurl}{\hyperbaseurl{#1}}
3832 \let\@baseurl\empty
3833 \def\hyperlinkfileprefix#1{\def\Hy@linkfileprefix{#1}}
3834 \define@key{Hyp}{linkfileprefix}{\hyperlinkfileprefix{#1}}
3835 \hyperlinkfileprefix{file:}

```

15 PDF-specific options

`\@pdfpagetransition` The value of option pdfpagetransition is stored in `\@pdfpagetransition`. Its initial value is set to `\relax` in order to be able to differentiate between a not used option

and an option with an empty value.

```
3836 \let\@pdfpagetransition\relax
3837 \define@key{Hyp}{pdfpagetransition}{%
3838   \def\@pdfpagetransition{#1}%
3839 }
```

`\@pdfpageduration` The value of option `pdfpageduration` is stored in `\@pdfpageduration`. Its initial value is set to `\relax` in order to be able to differentiate between a not used option and an option with an empty value.

```
3840 \let\@pdfpageduration\relax
3841 \define@key{Hyp}{pdfpageduration}{%
3842   \def\@pdfpageduration{#1}%
3843   \Hy@Match\@pdfpageduration{}{%
3844     ^([0-9]+\.[0-9]*|[0-9]*\.[0-9]+)$%
3845   }{%
3846     \Hy@Warning{%
3847       Invalid value '\@pdfpageduration'\MessageBreak
3848       of option 'pdfpageduration'\MessageBreak
3849       is replaced by an empty value%
3850     }%
3851     \let\@pdfpageduration\ltx@empty
3852   }%
3853 }
```

The entry for the `/Hid` key in the page object is only necessary, if it is used and set to true for at least one time. If it is always false, then the `/Hid` key is not written to the pdf page object in order not to enlarge the pdf file.

```
3854 \newif\ifHy@useHidKey
3855 \Hy@useHidKeyfalse
3856 \define@key{Hyp}{pdfpagehidden}[true]{%
3857   \Hy@boolkey{pdfpagehidden}{#1}%
3858   \ifHy@pdfpagehidden
3859     \global\Hy@useHidKeytrue
3860   \fi
3861 }
```

The value of the `bordercolor` options are not processed by the color package. Therefore the value consists of space separated rgb numbers in the range 0 until 1.

Package `xcolor` provides `\XC@bordercolor` since version 1.1. If the two spaces in the color specification are missing, then the value is processed as color specification from package `xcolor` by using `\XC@bordercolor` (since `xcolor` 2004/05/09 v1.11, versions 2005/03/24 v2.02 until 2006/11/28 v2.10 do not work because of a bug that is fixed in 2007/01/21 v2.11).

```
3862 \def\Hy@ColorList{cite,file,link,menu,run,url}
3863 \@for\Hy@temp:=\Hy@ColorList\do{%
3864   \edef\Hy@temp{%
3865     \noexpand\define@key{Hyp}{\Hy@temp bordercolor}{%
3866       \noexpand\HyColor@HyperrefBorderColor
3867       {##1}%
3868       \expandafter\noexpand\csname @\Hy@temp bordercolor\endcsname
3869       {hyperref}%
3870       {\Hy@temp bordercolor}%
3871     }%
3872   }%
3873   \Hy@temp
```



```

3874 }
3875 \define@key{Hyp}{pagebordercolor}{%
3876 \Hy@WarningPageBorderColor
3877 }
3878 \def\Hy@WarningPageBorderColor{%
3879 \Hy@WarningNoLine{Option `pagebordercolor' is not available anymore}%
3880 \global\let\Hy@WarningPageBorderColor\relax
3881 }
3882 \define@key{Hyp}{allbordercolors}{%
3883 \def\Hy@temp##1##2{%
3884 \HyColor@HyperrefBorderColor{#1}##1{hyperref}{##2bordercolor}%
3885 }%
3886 \Hy@temp\@citebordercolor{cite}%
3887 \Hy@temp\@filebordercolor{file}%
3888 \Hy@temp\@linkbordercolor{link}%
3889 \Hy@temp\@menubordercolor{menu}%
3890 \Hy@temp\@runbordercolor{run}%
3891 \Hy@temp\@urlbordercolor{url}%
3892 }

3893 \define@key{Hyp}{pdfhighlight}{\def\@pdfhighlight{#1}}
3894 \Hy@DefNameKey{pdfhighlight}{%
3895 \do{/I}{Invert}%
3896 \do{/N}{None}%
3897 \do{/O}{Outline}%
3898 \do{/P}{Push}%
3899 }
3900 \def\Hy@setpdfhighlight{%
3901 \ifx\@pdfhighlight\@empty
3902 \else
3903 /H\@pdfhighlight
3904 \fi
3905 }
3906 \define@key{Hyp}{pdfborder}{%
3907 \let\Hy@temp\@pdfborder
3908 \def\@pdfborder{#1}%
3909 \Hy@Match\@pdfborder{}{%
3910 ~\HyPat@NonNegativeReal/ %
3911 \HyPat@NonNegativeReal/ %
3912 \HyPat@NonNegativeReal/%
3913 ( ?\[ \HyPat@NonNegativeReal/( \HyPat@NonNegativeReal/)*])?%$%
3914 }-}{%
3915 \Hy@Warning{%
3916 Invalid value `\'@pdfborder'\MessageBreak
3917 for option `pdfborder'.\MessageBreak
3918 Option setting is ignored%
3919 }%
3920 \let\@pdfborder\Hy@temp
3921 }%
3922 }
3923 \define@key{Hyp}{pdfborderstyle}{%
3924 \let\Hy@temp\@pdfborderstyle
3925 \def\@pdfborderstyle{#1}%
3926 \Hy@Match\@pdfborderstyle{}{%
3927 ~%
3928 ( */Type */Border%
3929 | */W +\HyPat@NonNegativeReal/%
3930 | */S */[SDBIU]%

```



```

3931 | */D *[*(\HyPat@NonNegativeReal/( \HyPat@NonNegativeReal/))?)?]%
3932 )* *$%
3933 }{}{%
3934 \Hy@Warning{%
3935   Invalid value ` \@pdfborderstyle'\MessageBreak
3936   for option `pdfborderstyle'.\MessageBreak
3937   Option setting is ignored%
3938 }%
3939 \let\@pdfborderstyle\Hy@temp
3940 }%
3941 }
3942 \def\Hy@setpdfborder{%
3943   \ifx\@pdfborder\@empty
3944   \else
3945     /Border[\@pdfborder]%
3946   \fi
3947   \ifx\@pdfborderstyle\@empty
3948   \else
3949     /BS<<\@pdfborderstyle>>%
3950   \fi
3951 }
3952 \Hy@DefNameKey{pdfpagemode}{%
3953   \do{UseNone}{}%
3954   \do{UseOutlines}{}%
3955   \do{UseThumbs}{}%
3956   \do{FullScreen}{}%
3957   \do{UseOC}{PDF 1.5}%
3958   \do{UseAttachments}{PDF 1.6}%
3959 }
3960 \Hy@DefNameKey{pdfnonfullscreenpagemode}{%
3961   \do{UseNone}{}%
3962   \do{UseOutlines}{}%
3963   \do{UseThumbs}{}%
3964   \do{FullScreen}{}%
3965   \do{UseOC}{PDF 1.5}%
3966   \do{UseAttachments}{PDF 1.6}%
3967 }
3968 \Hy@DefNameKey{pdfdirection}{%
3969   \do{L2R}{Left to right}%
3970   \do{R2L}{Right to left}%
3971 }
3972 \Hy@DefNameKey{pdfviewarea}{%
3973   \do{MediaBox}{}%
3974   \do{CropBox}{}%
3975   \do{BleedBox}{}%
3976   \do{TrimBox}{}%
3977   \do{ArtBox}{}%
3978 }
3979 \Hy@DefNameKey{pdfviewclip}{%
3980   \do{MediaBox}{}%
3981   \do{CropBox}{}%
3982   \do{BleedBox}{}%
3983   \do{TrimBox}{}%
3984   \do{ArtBox}{}%
3985 }
3986 \Hy@DefNameKey{pdfprintarea}{%
3987   \do{MediaBox}{}%

```



```

3988 \do{CropBox}{}%
3989 \do{BleedBox}{}%
3990 \do{TrimBox}{}%
3991 \do{ArtBox}{}%
3992 }
3993 \Hy@DefNameKey{pdfprintclip}{%
3994 \do{MediaBox}{}%
3995 \do{CropBox}{}%
3996 \do{BleedBox}{}%
3997 \do{TrimBox}{}%
3998 \do{ArtBox}{}%
3999 }
4000 \Hy@DefNameKey{pdfprintscaling}{%
4001 \do{AppDefault}{}%
4002 \do{None}{}%
4003 }
4004 \Hy@DefNameKey{pdfduplex}{%
4005 \do{Simplex}{}%
4006 \do{DuplexFlipShortEdge}{}%
4007 \do{DuplexFlipLongEdge}{}%
4008 }
4009 \Hy@DefNameKey{pdfpicktraybypdftype}{%
4010 \do{true}{}%
4011 \do{false}{}%
4012 }
4013 \define@key{Hyp}{pdfprintpagerange}{%
4014 \def\@pdfprintpagerange{#1}%
4015 }
4016 \Hy@DefNameKey{pdfnumcopies}{%
4017 \do{2}{two copies}%
4018 \do{3}{three copies}%
4019 \do{4}{four copies}%
4020 \do{5}{five copies}%
4021 }
4022 \define@key{Hyp}{pdfusetitle}[true]{%
4023 \Hy@boolkey{pdfusetitle}{#1}%
4024 }
4025 \def\HyXeTeX@CheckUnicode{%
4026 \ifxetex
4027 \ifHy@unicode
4028 \else
4029 \Hy@WarningNoLine{%
4030 XeTeX driver only supports unicode.\MessageBreak
4031 Enabling option `unicode'%
4032 }%
4033 \kvsetkeys{Hyp}{unicode}%
4034 \fi
4035 \else
4036 \let\HyXeTeX@CheckUnicode\relax
4037 \fi
4038 }
4039 \def\HyPsd@PrerenderUnicode#1{%
4040 \begingroup
4041 \expandafter\ifx\csname PrerenderUnicode\endcsname\relax
4042 \else
4043 \sbox0{%
4044 \let\GenericInfo\@gobbles

```



```

4045     \let\GenericWarning\@gobbletwo
4046     \let\GenericError\@gobblefour
4047     \PrerenderUnicode{#1}%
4048 }%
4049 \fi
4050 \endgroup
4051 }
4052 \define@key{Hyp}{pdftitle}{%
4053   \HyXeTeX@CheckUnicode
4054   \HyPsd@XeTeXBigCharstrue
4055   \HyPsd@PrerenderUnicode{#1}%
4056   \pdfstringdef\@pdftitle{#1}%
4057 }
4058 \define@key{Hyp}{pdfauthor}{%
4059   \HyXeTeX@CheckUnicode
4060   \HyPsd@XeTeXBigCharstrue
4061   \HyPsd@PrerenderUnicode{#1}%
4062   \pdfstringdef\@pdfauthor{#1}%
4063 }
4064 \define@key{Hyp}{pdfproducer}{%
4065   \HyXeTeX@CheckUnicode
4066   \HyPsd@XeTeXBigCharstrue
4067   \HyPsd@PrerenderUnicode{#1}%
4068   \pdfstringdef\@pdfproducer{#1}%
4069 }
4070 \define@key{Hyp}{pdfcreator}{%
4071   \HyXeTeX@CheckUnicode
4072   \HyPsd@XeTeXBigCharstrue
4073   \HyPsd@PrerenderUnicode{#1}%
4074   \pdfstringdef\@pdfcreator{#1}%
4075 }
4076 \define@key{Hyp}{addtopdfcreator}{%
4077   \HyXeTeX@CheckUnicode
4078   \HyPsd@XeTeXBigCharstrue
4079   \HyPsd@PrerenderUnicode{#1}%
4080   \pdfstringdef\@pdfcreator{\@pdfcreator, #1}%
4081 }
4082 \define@key{Hyp}{pdfcreationdate}{%
4083   \begingroup
4084     \Hy@unicodfalse
4085     \pdfstringdef\@pdfcreationdate{#1}%
4086   \endgroup
4087 }
4088 \define@key{Hyp}{pdfmoddate}{%
4089   \begingroup
4090     \Hy@unicodfalse
4091     \pdfstringdef\@pdfmoddate{#1}%
4092   \endgroup
4093 }
4094 \define@key{Hyp}{pdfsubject}{%
4095   \HyXeTeX@CheckUnicode
4096   \HyPsd@XeTeXBigCharstrue
4097   \HyPsd@PrerenderUnicode{#1}%
4098   \pdfstringdef\@pdfsubject{#1}%
4099 }
4100 \define@key{Hyp}{pdfkeywords}{%
4101   \HyXeTeX@CheckUnicode

```



```

4102 \HyPsd@XeTeXBigCharstrue
4103 \HyPsd@PrerenderUnicode{#1}%
4104 \pdfstringdef\@pdfkeywords{#1}%
4105 }
4106 \define@key{Hyp}{pdftrapped}{%
4107 \lowercase{\edef\Hy@temp{#1}}%
4108 \ifx\Hy@temp\HyInfo@trapped@true
4109 \def\@pdftrapped{True}%
4110 \else
4111 \ifx\Hy@temp\HyInfo@trapped@false
4112 \def\@pdftrapped{False}%
4113 \else
4114 \ifx\Hy@temp\HyInfo@trapped@unknown
4115 \def\@pdftrapped{Unknown}%
4116 \else
4117 \ifx\Hy@temp\@empty
4118 \else
4119 \Hy@Warning{%
4120     Unsupported value `#1'\MessageBreak
4121     for option `pdftrapped'%
4122 }%
4123 \fi
4124 \def\@pdftrapped{}%
4125 \fi
4126 \fi
4127 \fi
4128 }
4129 \def\HyInfo@trapped@true{true}
4130 \def\HyInfo@trapped@false{false}
4131 \def\HyInfo@trapped@unknown{unknown}
4132 \def\HyInfo@TrappedUnsupported{%
4133 \ifx\@pdftrapped\@empty
4134 \else
4135 \Hy@WarningNoLine{`pdftrapped' is not supported by this driver}%
4136 \gdef\HyInfo@TrappedUnsupported{}%
4137 \fi
4138 }
4139 \define@key{Hyp}{pdfinfo}{%
4140 \kvsetkeys{pdfinfo}{#1}%
4141 }
4142 \def\Hy@temp#1{%
4143 \lowercase{\Hy@temp@A{#1}}{#1}%
4144 }
4145 \def\Hy@temp@A#1#2{%
4146 \define@key{pdfinfo}{#2}{%
4147 \hypersetup{pdf#1={#1}}}%
4148 }%
4149 }
4150 \Hy@temp{Title}
4151 \Hy@temp{Author}
4152 \Hy@temp{Keywords}
4153 \Hy@temp{Subject}
4154 \Hy@temp{Creator}
4155 \Hy@temp{Producer}
4156 \Hy@temp{CreationDate}
4157 \Hy@temp{ModDate}
4158 \Hy@temp{Trapped}

```



```

4159 \newif\ifHyInfo@AddonUnsupported
4160 \kv@set@family@handler{pdfinfo}{%
4161   \HyInfo@AddonHandler{#1}{#2}%
4162 }
4163 \let\HyInfo@do\relax
4164 \def\HyInfo@AddonHandler#1#2{%
4165   \ifx\kv@value\relax
4166     \Hy@Warning{%
4167       Option `pdfinfo': ignoring key `\'kv@key' without value%
4168     }%
4169   \else
4170     \EdefEscapeName\HyInfo@KeyEscaped{\'kv@key}%
4171     \EdefUnescapeName\HyInfo@Key{\HyInfo@KeyEscaped}%
4172     \expandafter\ifx\csname KV@pdfinfo@\HyInfo@Key\endcsname\relax
4173     \ifHyInfo@AddonUnsupported
4174       \Hy@Warning{%
4175         This driver does not support additional\MessageBreak
4176         information entries, therefore\MessageBreak
4177         `\'kv@key' is ignored%
4178       }%
4179     \else
4180       \def\HyInfo@tmp##1{%
4181         \kv@define@key{pdfinfo}{##1}{%
4182           \HyXeTeX@CheckUnicode
4183           \HyPsd@XeTeXBigCharstrue
4184           \HyPsd@PrerenderUnicode{####1}%
4185           \pdfstringdef\HyInfo@Value{####1}%
4186           \global\expandafter
4187           \let\csname HyInfo@Value@##1\endcsname
4188             \HyInfo@Value
4189         }%
4190       }%
4191       \expandafter\HyInfo@tmp\expandafter{\HyInfo@Key}%
4192       \global\expandafter
4193       \let\csname KV@pdfinfo@\HyInfo@Key\expandafter\endcsname
4194       \csname KV@pdfinfo@\HyInfo@Key\endcsname
4195       \xdef\HyInfo@AddonList{%
4196         \HyInfo@AddonList
4197         \HyInfo@do{\HyInfo@Key}%
4198       }%
4199       \kv@parse@normalized{%
4200         \HyInfo@Key={#2}%
4201       }{%
4202         \kv@processor@default{pdfinfo}%
4203       }%
4204     \fi
4205   \else
4206     \kv@parse@normalized{%
4207       \HyInfo@Key={#2}%
4208     }{%
4209       \kv@processor@default{pdfinfo}%
4210     }%
4211   \fi
4212 \fi
4213 }
4214 \def\HyInfo@GenerateAddons{%
4215   \ifHyInfo@AddonUnsupported

```



```

4216 \def\HyInfo@Addons{%
4217 \else
4218 \begingroup
4219 \toks@{%
4220 \def\HyInfo@do##1{%
4221 \EdefEscapeName\HyInfo@Key{##1}%
4222 \edef\x{%
4223 \toks@{%
4224 \the\toks@
4225 /\HyInfo@Key(\csname HyInfo@Value@##1\endcsname)%
4226 }%
4227 }%
4228 \x
4229 }%
4230 \HyInfo@AddonList
4231 \edef\x{\endgroup
4232 \def\noexpand\HyInfo@Addons{\the\toks@}%
4233 }%
4234 \x
4235 \fi
4236 }
4237 \global\let\HyInfo@AddonList\ltx@empty

4238 \define@key{Hyp}{pdfview}{\calculate@pdfview#1 \\\}
4239 \define@key{Hyp}{pdfinkmargin}{\setpdfinkmargin{#1}}
4240 \let\setpdfinkmargin\gobble
4241 \def\calculate@pdfview#1 #2\{\%
4242 \def\@pdfview{#1}%
4243 \ifx\#2\%
4244 \def\@pdfviewparams{-32768}%
4245 \else
4246 \def\@pdfviewparams{#2}%
4247 \fi
4248 }
4249 \begingroup\expandafter\expandafter\expandafter\endgroup
4250 \expandafter\ifx\csname numexpr\endcsname\relax
4251 \def\Hy@number#1{%
4252 \expandafter\@firstofone\expandafter{\number#1}%
4253 }%
4254 \else
4255 \def\Hy@number#1{%
4256 \the\numexpr#1\relax
4257 }%
4258 \fi
4259 \define@key{Hyp}{pdfstartpage}{\%
4260 \ifx\#1\%
4261 \let\@pdfstartpage\ltx@empty
4262 \else
4263 \edef\@pdfstartpage{\Hy@number{#1}}%
4264 \fi
4265 }%
4266 \define@key{Hyp}{pdfstartview}{\%
4267 \ifx\#1\%
4268 \let\@pdfstartview\ltx@empty
4269 \else
4270 \hypercalcbpdef\@pdfstartview{/#1}%
4271 \fi
4272 }

```



```

4273 \def\HyPat@NonNegativeReal/{%
4274 \ *([0-9]+\.[0-9]*|[0-9]*\.[0-9]+) *%
4275 }
4276 \define@key{Hyp}{pdfremotestartview}{%
4277 \ifx\#1\%
4278 \def\@pdfremotestartview{/Fit}%
4279 \else
4280 \hypercalcbpdef\@pdfremotestartview{#1}%
4281 \edef\@pdfremotestartview{\@pdfremotestartview}%
4282 \Hy@Match\@pdfremotestartview{%
4283 ^XYZ(%
4284 )| %
4285 (null|-\HyPat@NonNegativeReal/) %
4286 (null|-\HyPat@NonNegativeReal/) %
4287 (null|\HyPat@NonNegativeReal/)%
4288 )| % end of "XYZ"
4289 Fit(%
4290 )| %
4291 B| %
4292 (H|V|BH|BV)(%
4293 )| %
4294 (null|\HyPat@NonNegativeReal/)%
4295 )| %
4296 R %
4297 \HyPat@NonNegativeReal/ %
4298 \HyPat@NonNegativeReal/ %
4299 \HyPat@NonNegativeReal/ %
4300 \HyPat@NonNegativeReal/%
4301 ) % end of "Fit"
4302 )$%
4303 }-}%
4304 \Hy@Warning{%
4305 Invalid value \@pdfremotestartview'\MessageBreak
4306 of `pdfremotestartview'\MessageBreak
4307 is replaced by `Fit'%
4308 }%
4309 \let\@pdfremotestartview\@empty
4310 }%
4311 \ifx\@pdfremotestartview\@empty
4312 \def\@pdfremotestartview{/Fit}%
4313 \else
4314 \edef\@pdfremotestartview{/ \@pdfremotestartview}%
4315 \fi
4316 \fi
4317 }
4318 \define@key{Hyp}{pdfpagescrop}{\edef\@pdfpagescrop{#1}}
4319 \define@key{Hyp}{pdftoolbar}[true]{%
4320 \Hy@boolkey{pdftoolbar}{#1}%
4321 }
4322 \define@key{Hyp}{pdfmenubar}[true]{%
4323 \Hy@boolkey{pdfmenubar}{#1}%
4324 }
4325 \define@key{Hyp}{pdfwindowui}[true]{%
4326 \Hy@boolkey{pdfwindowui}{#1}%
4327 }
4328 \define@key{Hyp}{pdffitwindow}[true]{%
4329 \Hy@boolkey{pdffitwindow}{#1}%

```



```

4330 }
4331 \define@key{Hyp}{pdfcenterwindow}[true]{%
4332   \Hy@boolkey{pdfcenterwindow}{#1}%
4333 }
4334 \define@key{Hyp}{pdfdisplaydoctitle}[true]{%
4335   \Hy@boolkey{pdfdisplaydoctitle}{#1}%
4336 }
4337 \define@key{Hyp}{pdfa}[true]{%
4338   \Hy@boolkey{pdfa}{#1}%
4339 }
4340 \define@key{Hyp}{pdfnewwindow}[true]{%
4341   \def\Hy@temp{#1}%
4342   \ifx\Hy@temp@empty
4343     \Hy@pdfnewwindowsetfalse
4344   \else
4345     \Hy@pdfnewwindowsettrue
4346     \Hy@boolkey{pdfnewwindow}{#1}%
4347   \fi
4348 }
4349 \def\Hy@SetNewWindow{%
4350   \ifHy@pdfnewwindowset
4351     /NewWindow %
4352   \ifHy@pdfnewwindow true\else false\fi
4353 }
4354 }
4355 \Hy@DefNameKey{pdfpagelayout}{%
4356   \do{SinglePage}{}%
4357   \do{OneColumn}{}%
4358   \do{TwoColumnLeft}{}%
4359   \do{TwoColumnRight}{}%
4360   \do{TwoPageLeft}{PDF 1.5}%
4361   \do{TwoPageRight}{PDF 1.5}%
4362 }
4363 \define@key{Hyp}{pdflang}{%
4364   \edef\@pdflang{#1}%
4365   \def\Hy@temp{\relax}%
4366   \ifx\@pdflang\Hy@temp
4367     \let\@pdflang\relax
4368   \fi
4369   \ifx\@pdflang\relax
4370   \else
4371     \ifx\@pdflang\ltx@empty
4372     \else

```

Test according to ABNF of RFC 3066.

```

4373   \Hy@Match\@pdflang{icase}{%
4374     ~%
4375     [a-z]{1,8}%
4376     (-[a-z0-9]{1,8})*%
4377     $%
4378   }{%

```

Test according to ABNF of RFC 5646.

```

4379   \Hy@Match\@pdflang{icase}{%
4380     ~%
4381     (%
4382     % langtag
4383     (% language

```



```

4384      [a-z]{2,3}%
4385      ([a-z]{3}(-[a-z]{3}){0,2})?% extlang
4386      |[a-z]{4}% reserved for future use
4387      |[a-z]{5,8}% registered language subtag
4388      )%
4389      (-[a-z]{4})?% script
4390      (-([a-z]{2}|[0-9]{3}))?% region
4391      (-([a-z]{5,8}|[0-9][a-z0-9]{3}))% variant
4392      (-[0-9a-wyz](-[a-z0-9]{2,8})+)% extension
4393      (-x(-[a-z0-9]{1,8})+)?% privateuse
4394      % privateuse
4395      |x(-[a-z0-9]{1,8})+%
4396      % grandfathered/irregular
4397      |en-GB-oed%
4398      |i-(ami|bnn|default|enochian|hak|klinton|lux|
4399      mingo|navajo|pwn|tao|tay|tsu)%
4400      |sgn-(BE-FR|BE-NL|CH-DE)%
4401      % grandfathered/regular
4402      |art-lojban%
4403      |cel-gaulish%
4404      |no-(bok|nyn)%
4405      |zh-(guoyu|hakka|min|min-nan|xiang)%
4406      )%
4407      $%
4408      }{%

```

Test for unique extensions.

```

4409      \Hy@Match{-\@pdflang}{icase}{-[a-wyz0-9]-}{%
4410      \Hy@Match\@pdflang{icase}{~x-}{~}{%
4411      % remove privateuse
4412      \edef\Hy@temp{-\@pdflang}%
4413      \Hy@Match\Hy@temp{icase}{~}{%
4414      ~%
4415      (%
4416      (-[a-wyz0-9]|-[a-z0-9]{2,8})%
4417      )%
4418      -x-%
4419      }{%
4420      \edef\Hy@temp{%
4421      \expandafter\strip@prefix\pdfastmatch1%
4422      }%
4423      }{}%
4424      \Hy@Match\Hy@temp{icase}{~}{%
4425      (-[a-wyz0-9]-).*\ltx@backslashchar1%
4426      }{%
4427      \Hy@Warning{%
4428      Invalid language identifier `#1'\MessageBreak
4429      for option `pdfang', because it violates\MessageBreak
4430      well-formedness defined in RFC 4646\MessageBreak
4431      by duplicate singleton subtags%
4432      }%
4433      \let\@pdfang\relax
4434      }{}%
4435      }%
4436      }{}%

```

User-assigned country codes are forbidden in language tags (RFC 3066).

```

4437      \ifx\@pdfang\relax

```



```

4438 \else
4439 \Hy@Match\@pdflang{icase}{%
4440 ~%
4441 [a-zA-Z]{2}-%
4442 (%
4443 aa|AA|%
4444 [qQ][m-zA-Z]|%
4445 [xX][a-zA-Z]|%
4446 zz|ZZ%
4447 )%
4448 (-|$)%
4449 }{%
4450 \Hy@Warning{%
4451 Invalid language identifier `#1'\MessageBreak
4452 for option `pdflang' because of invalid country code%
4453 \MessageBreak
4454 in second subtag (RFC 3066)%
4455 }%
4456 \let\@pdflang\relax
4457 }{%}%
4458 \fi
4459 }{%
4460 \Hy@Warning{%
4461 Invalid language identifier `#1'\MessageBreak
4462 for option `pdflang', because it violates\MessageBreak
4463 well-formedness defined in RFC 5646%
4464 }%
4465 \let\@pdflang\relax
4466 }%
4467 }{%
4468 \Hy@Warning{%
4469 Invalid language identifier `#1'\MessageBreak
4470 for option `pdflang' (RFC 3066)%
4471 }%
4472 \let\@pdflang\relax
4473 }%
4474 \fi
4475 \fi
4476 }
4477 \define@key{Hyp}{pdfpagelabels}[true]{%
4478 \Hy@boolkey{pdfpagelabels}{#1}%
4479 }
4480 \define@key{Hyp}{pdfescapeform}[true]{%
4481 \Hy@boolkey{pdfescapeform}{#1}%
4482 }

```

Default values:

```

4483 \def\@linkbordercolor{1 0 0}
4484 \def\@urlbordercolor{0 1 1}
4485 \def\@menubordercolor{1 0 0}
4486 \def\@filebordercolor{0 .5 .5}
4487 \def\@runbordercolor{0 .7 .7}
4488 \def\@citebordercolor{0 1 0}
4489 \def\@pdfhighlight{/I}
4490 \let\@pdftitle\ltx@empty
4491 \let\@pdfauthor\ltx@empty
4492 \let\@pdfproducer\relax
4493 \def\@pdfcreator{LaTeX with hyperref}

```



```

4494 \let\@pdfcreationdate\ltx@empty
4495 \let\@pdfmoddate\ltx@empty
4496 \let\@pdfsubject\ltx@empty
4497 \let\@pdfkeywords\ltx@empty
4498 \let\@pdftrapped\ltx@empty
4499 \let\@pdfpagescrop\ltx@empty
4500 \def\@pdfstartview{/Fit}
4501 \def\@pdfremotestartview{/Fit}
4502 \def\@pdfstartpage{1}
4503 \let\@pdfprintpagerange\ltx@empty
4504 \let\@pdflang\relax
4505 \let\PDF@SetupDoc\@empty
4506 \let\PDF@FinishDoc\@empty
4507 \let\phantomsection\@empty
4508 \let\special@paper\@empty
4509 \def\HyperDestNameFilter#1{#1}
4510 \Hy@AtBeginDocument{%
4511   \begingroup
4512     \edef\x{\@ifundefined{stockheight}\paperheight\stockheight}%
4513     \dimen@=\x\relax
4514     \ifdim\dimen@>\z@
4515       \else
4516         \dimen@=11in\relax
4517         \Hy@WarningNoLine{%
4518           Height of page (\expandafter\string\x) %
4519           is invalid (\the\x),\MessageBreak
4520           using 11in%
4521         }%
4522       \fi
4523       \dimen@=0.99626401\dimen@
4524       \xdef\Hy@pageheight{\strip@pt\dimen@}%
4525     \endgroup
4526 }
4527 \def\HyInd@EncapChar{||}

```

Allow the user to use `\ExecuteOptions` in the `cfg` file even though this package does not use the normal option mechanism. Use `\hyper@normalise` as a scratch macro, since it is going to be defined in a couple of lines anyway.

```

4528 \let\hyper@normalise\ExecuteOptions
4529 \let\ExecuteOptions\hypersetup
4530 \Hy@RestoreCatcodes
4531 \InputIfFileExists{hyperref.cfg}{-}{-}
4532 \Hy@SetCatcodes
4533 \let\ExecuteOptions\hyper@normalise
4534 \ifx\Hy@MaybeStopNow\relax
4535 \else
4536   \Hy@stoppedearlytrue
4537   \expandafter\Hy@MaybeStopNow
4538 \fi
4539 \Hy@stoppedearlyfalse

```

To add flexibility, we will not use the ordinary processing of package options, but put them through the *keyval* package. This section was written by David Carlisle.

```

4540 \SetupKeyvalOptions{family=Hyp}
4541 \DeclareLocalOptions{%
4542   a4paper,a5paper,b5paper,letterpaper,legalpaper,executivepaper%
4543 }

```


Add option `tex4ht` if package `tex4ht` is loaded.

```

4544 \@ifpackagewith{hyperref}{tex4ht}{%
4545 }{%
4546   \@ifpackageloaded{tex4ht}{%
4547     \PassOptionsToPackage{tex4ht}{hyperref}%
4548   }{%
4549     \ltx@ifundefined{HCode}{%
4550     }{%
4551       \begingroup
4552       \def\Hy@pkg{tex4ht}%
4553       \def\Hy@temp@A#1\RequirePackage[#2]#3#4\Hy@NIL{%
4554         \def\Hy@param{#2#3}%
4555         \ifx\Hy@param\ltx@empty
4556           \expandafter\ltx@gobble
4557         \else
4558           \def\Hy@param{#3}%
4559           \ifx\Hy@param\Hy@pkg
4560             \PassOptionsToPackage{#2}{tex4ht}%
4561             \expandafter\expandafter\expandafter\@gobble
4562           \else
4563             \expandafter\expandafter\expandafter\ltx@firstofone
4564           \fi
4565         \fi
4566         {\Hy@temp@A#4\Hy@NIL}%
4567       }%
4568       \expandafter
4569       \Hy@temp@A\@documentclasshook\RequirePackage[]{}\Hy@NIL
4570     \endgroup
4571     \PassOptionsToPackage{tex4ht}{hyperref}%
4572   }%
4573 }%
4574 }

4575 \let\ReadBookmarks\relax
4576 \ProcessKeyvalOptions{Hyp}

```

After processing options.

15.1 Package `xspace` support

```

4577 \def\Hy@xspace@end{%
4578 \ltx@ifundefined{xspaceaddexceptions}{%
4579   \Hy@AtBeginDocument{%
4580     \ltx@ifundefined{xspaceaddexceptions}{%
4581     }{%
4582       \def\Hy@xspace@end{%
4583         \ltx@gobble{end for xspace}%
4584       }%
4585       \xspaceaddexceptions{%
4586         \Hy@xspace@end,\hyper@linkend,\hyper@anchorend
4587       }%
4588     }%
4589   }%
4590 }{%
4591   \def\Hy@xspace@end{%
4592     \ltx@gobble{end for xspace}%
4593   }%
4594   \xspaceaddexceptions{\Hy@xspace@end,\hyper@linkend,\hyper@anchorend}%

```


4595 }

15.2 Option draft

```
4596 \Hy@AtBeginDocument{%
4597   \ifHy@draft
4598     \let\hyper@@anchor\@gobble
4599     \gdef\hyper@link#1#2#3{#3\Hy@xspace@end}%
4600     \def\hyper@anchorstart#1#2{#2\Hy@xspace@end}%
4601     \def\hyper@anchorend{\Hy@xspace@end}%
4602     \let\hyper@linkstart\@gobbletwo
4603     \def\hyper@linkend{\Hy@xspace@end}%
4604     \def\hyper@linkurl#1#2{#1\Hy@xspace@end}%
4605     \def\hyper@linkfile#1#2#3{#1\Hy@xspace@end}%
4606     \def\hyper@link@[#1]#2#3#4{#4\Hy@xspace@end}%
4607     \def\Acrobatmenu#1#2{\leavevmode#2\Hy@xspace@end}%
4608     \let\PDF@SetupDoc\@empty
4609     \let\PDF@FinishDoc\@empty
4610     \let\@fifthoffive\@secondoftwo
4611     \let\@secondoffive\@secondoftwo
4612     \let\ReadBookmarks\relax
4613     \let\WriteBookmarks\relax
4614     \Hy@WarningNoLine{Draft mode on}%
4615   \fi
4616   \Hy@DisableOption{draft}%
4617   \Hy@DisableOption{nolinks}%
4618   \Hy@DisableOption{final}%
4619 }
```

15.3 PDF/A

```
4620 \Hy@DisableOption{pdfa}
4621 \ifHy@pdfa
4622   \ifnum \Hy@pdfversion < 4
4623     \kvsetkeys{Hyp}{pdfversion=1.4}%
4624   \fi
4625   \Hy@DisableOption{pdfversion}%
4626   \def\Hy@Acrobatmenu#1#2{%
4627     \leavevmode
4628     \begingroup
4629       \edef\x{#1}%
4630       \@onelevel@sanitize\x
4631       \ifx\x\Hy@NextPage
4632         \let\y=Y%
4633       \else
4634         \ifx\x\Hy@PrevPage
4635           \let\y=Y%
4636         \else
4637           \ifx\x\Hy@FirstPage
4638             \let\y=Y%
4639           \else
4640             \ifx\x\Hy@LastPage
4641               \let\y=Y%
4642             \else
4643               \let\y=N%
4644             \fi
4645           \fi
4646         \fi
4647       \fi
```



```

4648 \expandafter\endgroup
4649 \ifx\y Y%
4650 \else
4651 \Hy@Error{%
4652 PDF/A: Named action `#1' is not permitted%
4653 }\@ehc
4654 {#2}%
4655 \expandafter\@gobble
4656 \fi
4657 }%
4658 \def\Hy@temp#1{%
4659 \expandafter\def\csname Hy@#1\endcsname{#1}%
4660 \expandafter\@onelevel@sanitize\csname Hy@#1\endcsname
4661 }%
4662 \Hy@temp{NextPage}%
4663 \Hy@temp{PrevPage}%
4664 \Hy@temp{FirstPage}%
4665 \Hy@temp{LastPage}%
4666 \else
4667 \def\Hy@Acrobatmenu#1#2{\leavevmode}%
4668 \fi

```

15.4 Patch for babel's \texttilde

Babel does not define \texttilde in NFSS2 manner, so the NFSS2 definitions of PD1 or PU encoding is not compatible. To fix this, \texttilde is defined in babel manner.

```

4669 \Hy@nextfalse
4670 \ltx@ifundefined{spanish@sh@"@sel}{\Hy@nexttrue}
4671 \ltx@ifundefined{galician@sh@"@sel}{\Hy@nexttrue}
4672 \ltx@ifundefined{estonian@sh@"@sel}{\Hy@nexttrue}
4673 \ifHy@next
4674 \let\texttilde\~%
4675 \fi

4676 \def\Hy@wrapper@babel#1#2{%
4677 \begingroup
4678 \Hy@safe@activetrue
4679 \set@display@protect
4680 \edef\x{#2}%
4681 \@onelevel@sanitize\x
4682 \toks@{#1}%
4683 \edef\x{\endgroup\the\toks@{\x}}%
4684 \x
4685 }
4686 \def\Hy@WrapperDef#1{%
4687 \begingroup
4688 \escapechar=\m@ne
4689 \xdef\Hy@gtemp{%
4690 \expandafter\noexpand\csname HyWrap@\string#1\endcsname
4691 }%
4692 \endgroup
4693 \edef#1{%
4694 \noexpand\Hy@wrapper@babel
4695 \expandafter\noexpand\Hy@gtemp
4696 }%
4697 \expandafter\def\Hy@gtemp
4698 }

```



```

4699 \ifHy@hyperfigures
4700   \Hy@Info{Hyper figures ON}%
4701 \else
4702   \Hy@Info{Hyper figures OFF}%
4703 \fi
4704 \ifHy@nesting
4705   \Hy@Info{Link nesting ON}%
4706 \else
4707   \Hy@Info{Link nesting OFF}%
4708 \fi
4709 \ifHy@hyperindex
4710   \Hy@Info{Hyper index ON}%
4711 \else
4712   \Hy@Info{Hyper index OFF}%
4713 \fi
4714 \ifHy@plainpages
4715   \Hy@Info{Plain pages ON}%
4716 \else
4717   \Hy@Info{Plain pages OFF}%
4718 \fi
4719 \ifHy@backref
4720   \Hy@Info{Backreferencing ON}%
4721 \else
4722   \Hy@Info{Backreferencing OFF}%
4723 \fi
4724 \ifHy@typexml
4725   \Hy@AtEndOfPackage{%
4726     \RequirePackage{color}%
4727     \RequirePackage{nameref}[2012/07/28]%
4728   }%
4729 \fi
4730 \Hy@DisableOption{typexml}
4731 \ifHy@implicit
4732   \Hy@InfoNoLine{Implicit mode ON; LaTeX internals redefined}%
4733 \else
4734   \Hy@InfoNoLine{Implicit mode OFF; no redefinition of LaTeX internals}%
4735   \def\MaybeStopEarly{%
4736     \Hy@Message{Stopped early}%
4737     \Hy@AtBeginDocument{%
4738       \PDF@FinishDoc
4739       \gdef\PDF@FinishDoc{}}%
4740   }%
4741   \endinput
4742 }%
4743 \Hy@AtBeginDocument{%
4744   \let\autoref\ref
4745   \let\autopageref\pageref
4746   \ifx\@pdfpagemode\@empty
4747     \gdef\@pdfpagemode{UseNone}%
4748   \fi
4749   \global\Hy@backreffalse
4750 }%
4751 \Hy@AtEndOfPackage{%
4752   \global\let\ReadBookmarks\relax
4753   \global\let\WriteBookmarks\relax
4754 }%
4755 \fi

```



```
4756 \Hy@DisableOption{implicit}
```

15.4.1 Driver loading

```
4757 \Hy@AtEndOfPackage{%
4758   \ifpackageloaded{tex4ht}{%
4759     \def\Hy@driver{htex4ht}%
4760     \Hy@texhttrue
4761   }%}
```

Some drivers can be detected. Check for these drivers, whether the given driver option is ok. Otherwise force the right driver or use the default driver.

```
4762 \ifx\Hy@driver\@empty
4763 \else
4764   \ifx\pdfextension\@undefined
4765     \def\Hy@temp{hpdftex}%
4766   \else
4767     \def\Hy@temp{hluatex}%
4768   \fi
4769 \ifpdf
4770   \ifx\Hy@driver\Hy@temp
4771   \else
4772     \Hy@WarningNoLine{%
4773       Wrong driver `\'Hy@driver.def';\MessageBreak
4774       pdfTeX is running in PDF mode.\MessageBreak
4775       Forcing driver `\'Hy@temp.def'%
4776     }%
4777     \let\Hy@driver\Hy@temp
4778   \fi
4779 \else
4780   \ifx\Hy@driver\Hy@temp
4781     \Hy@WarningNoLine{%
4782       Wrong driver `\'Hy@driver.def';\MessageBreak
4783       pdfTeX is not running in PDF mode.\MessageBreak
4784       Using default driver%
4785     }%
4786     \let\Hy@driver\@empty
4787   \fi
4788 \fi
4789 \fi
4790 \ifHy@texht
4791 \else
4792   \ifx\Hy@driver\@empty
4793   \else
4794     \def\Hy@temp{hxetex}%
4795   \ifxetex
4796     \ifx\Hy@driver\Hy@temp
4797     \else
4798       \Hy@WarningNoLine{%
4799         Wrong driver `\'Hy@driver.def';\MessageBreak
4800         XeTeX is running.\MessageBreak
4801         Forcing driver `\'Hy@temp.def' for XeTeX%
4802       }%
4803       \let\Hy@driver\Hy@temp
4804     \fi
4805   \fi
4806 \fi
4807 \fi
```



```

4808 \ifx\Hy@driver\@empty
4809 \else
4810 \def\Hy@temp{hvtexhtm}%
4811 \ifnum\ifvtex\OpMode\else\m@ne\fi=10 %
4812 \ifx\Hy@driver\Hy@temp
4813 \else
4814 \Hy@WarningNoLine{%
4815   Wrong driver ``\Hy@driver.def';\MessageBreak
4816   VTeX is running in HTML mode.\MessageBreak
4817   Forcing driver ``\Hy@temp.def'%
4818 }%
4819 \let\Hy@driver\Hy@temp
4820 \fi
4821 \else
4822 \ifx\Hy@driver\Hy@temp
4823 \Hy@WarningNoLine{%
4824   Wrong driver ``\Hy@driver.def';\MessageBreak
4825   VTeX is not running in HTML mode.\MessageBreak
4826   Using default driver%
4827 }%
4828 \let\Hy@driver\@empty
4829 \fi
4830 \fi
4831 \fi

```

If the driver is not given, find the right driver or use the default driver.

```

4832 \let\HyOpt@DriverType\ltx@empty
4833 \ifx\HyOpt@CustomDriver\ltx@empty
4834 \ifx\Hy@driver\@empty
4835 \def\HyOpt@DriverType{ (autodetected)}%
4836 \providecommand*{\Hy@defaultdriver}{hypertex}%
4837 \ifpdf
4838 \ifx\pdfextension\@undefined
4839 \def\Hy@driver{hpdfTeX}%
4840 \else
4841 \def\Hy@driver{hluatex}%
4842 \fi
4843 \else
4844 \ifxetex
4845 \def\Hy@driver{hxetex}%
4846 \else
4847 \ifnum\ifvtex\OpMode\else\m@ne\fi=10 %
4848 \def\Hy@driver{hvtexhtm}%
4849 \def\MaybeStopEarly{%
4850   \Hy@Message{Stopped early}%
4851   \Hy@AtBeginDocument{%
4852     \PDF@FinishDoc
4853     \gdef\PDF@FinishDoc{}}%
4854   }%
4855 \endinput
4856 }%
4857 \else
4858 \ifnum\ifvtex\OpMode\else\m@ne\fi=\@ne
4859 \def\Hy@driver{hvtex}%
4860 \else
4861 \ifnum\ifvtex\OpMode\else\m@ne\fi=\tw@
4862 \def\Hy@driver{hvtex}%
4863 \else

```



```

4864         \ifx\HyOpt@DriverFallback\ltx@empty
4865         \let\Hy@driver\Hy@defaultdriver
4866         \def\HyOpt@DriverType{ (default)}%
4867     \else
4868         \begingroup
4869         \toks@\expandafter{\HyOpt@DriverFallback}%
4870         \edef\x{\endgroup
4871             \noexpand\kvsetkeys{Hyp}{\the\toks@}%
4872             }%
4873         \x
4874         \ifx\Hy@driver\ltx@empty
4875         \let\Hy@driver\Hy@defaultdriver
4876         \def\HyOpt@DriverType{ (default)}%
4877     \else
4878         \def\HyOpt@DriverType{ (fallback)}%
4879     \fi
4880 \fi
4881 \fi
4882 \fi
4883 \fi
4884 \fi
4885 \fi
4886 \ifx\Hy@driver\Hy@defaultdriver
4887 \def\Hy@temp{hdvwind}%
4888 \ifx\Hy@temp\Hy@driver
4889 \kvsetkeys{Hyp}{colorlinks}%
4890 \PassOptionsToPackage{dviwindo}{color}%
4891 \fi
4892 \fi
4893 \fi
4894 \else
4895 \def\HyOpt@DriverType{ (custom)}%
4896 \let\Hy@driver\HyOpt@CustomDriver
4897 \fi
4898 \Hy@InfoNoLine{Driver\HyOpt@DriverType: \Hy@driver}%
4899 \chardef\Hy@VersionChecked=0 %
4900 \input{\Hy@driver.def}%
4901 \ifcase\Hy@VersionChecked
4902 \Hy@VersionCheck{\Hy@driver.def}%
4903 \fi
4904 \let\@unprocessedoptions\relax
4905 \Hy@RestoreCatcodes
4906 \Hy@DisableOption{tex4ht}%
4907 \Hy@DisableOption{pdftex}%
4908 \Hy@DisableOption{nativepdf}%
4909 \Hy@DisableOption{dvipdfm}%
4910 \Hy@DisableOption{dvipdfmx}%
4911 \Hy@DisableOption{dvipdfmx-outline-open}%
4912 \Hy@DisableOption{pdfmark}%
4913 \Hy@DisableOption{dvips}%
4914 \Hy@DisableOption{hypertex}%
4915 \Hy@DisableOption{vtex}%
4916 \Hy@DisableOption{vtexpdfmark}%
4917 \Hy@DisableOption{dviwindo}%
4918 \Hy@DisableOption{dvipsone}%
4919 \Hy@DisableOption{textures}%
4920 \Hy@DisableOption{latex2html}%

```



```

4921 \Hy@DisableOption{ps2pdf}%
4922 \Hy@DisableOption{xetex}%
4923 \Hy@DisableOption{driverfallback}%
4924 \Hy@DisableOption{customdriver}%
4925 \Hy@DisableOption{pdfversion}%
4926 }

```

Support for open outlines is enabled for XeTeX >= 0.9995. I don't know, if older versions also support this. AFAIK older dvipdfmx versions will break, thus the switch cannot be turned on by default.

```

4927 \newif\ifHy@DvipdfmxOutlineOpen
4928 \ifxetex
4929 \ifdim\number\XeTeXversion\XeTeXrevision in<0.9995in %
4930 \else
4931 \chardef\SpecialDvipdfmxOutlineOpen\@ne
4932 \Hy@DvipdfmxOutlineOpenttrue
4933 \fi
4934 \fi
4935 \begingroup\expandafter\expandafter\expandafter\endgroup
4936 \expandafter\ifx\csname SpecialDvipdfmxOutlineOpen\endcsname\relax
4937 \else
4938 \ifnum\SpecialDvipdfmxOutlineOpen>\z@
4939 \Hy@DvipdfmxOutlineOpenttrue
4940 \fi
4941 \fi

```

15.4.2 Bookmarks

```

4942 \def\WriteBookmarks{0}
4943 \def\@bookmarkopenstatus#1{%
4944 \ifHy@bookmarksopen

```

The purpose of the \@firstofone-number-space-construct is that no \relax will be inserted by TeX before the \else:

```

4945 \ifnum#1<\expandafter\@firstofone\expandafter
4946 \{\number\@bookmarkopenlevel\} % explicit space
4947 \else
4948 -%
4949 \fi
4950 \else
4951 -%
4952 \fi
4953 }
4954 \ifHy@bookmarks
4955 \Hy@Info{Bookmarks ON}%
4956 \ifx\@pdfpagemode\@empty
4957 \def\@pdfpagemode{UseOutlines}%
4958 \fi
4959 \else
4960 \let\@bookmarkopenstatus\ltx@gobble
4961 \Hy@Info{Bookmarks OFF}%
4962 \Hy@AtEndOfPackage{%
4963 \global\let\ReadBookmarks\relax
4964 \global\let\WriteBookmarks\relax
4965 }%
4966 \ifx\@pdfpagemode\@empty
4967 \def\@pdfpagemode{UseNone}%
4968 \fi
4969 \fi

```



```

4970 \Hy@DisableOption{bookmarks}

    Add wrapper for setting standard catcodes (babel's shorthands).
4971 \def\Hy@CatcodeWrapper#1{%
4972   \let\Hy@endWrap\ltx@empty
4973   \def\TMP@EnsureCode##1##2{%
4974     \edef\Hy@endWrap{%
4975       \Hy@endWrap
4976       \catcode##1 \the\catcode##1\relax
4977     }%
4978     \catcode##1 ##2\relax
4979   }%
4980   \TMP@EnsureCode{10}{12}% ^^J
4981   \TMP@EnsureCode{33}{12}% !
4982   \TMP@EnsureCode{34}{12}% "
4983   \TMP@EnsureCode{36}{3}% $ (math)
4984   \TMP@EnsureCode{38}{4}% & (alignment)
4985   \TMP@EnsureCode{39}{12}% '
4986   \TMP@EnsureCode{40}{12}% (
4987   \TMP@EnsureCode{41}{12}% )
4988   \TMP@EnsureCode{42}{12}% *
4989   \TMP@EnsureCode{43}{12}% +
4990   \TMP@EnsureCode{44}{12}% ,
4991   \TMP@EnsureCode{45}{12}% -
4992   \TMP@EnsureCode{46}{12}% .
4993   \TMP@EnsureCode{47}{12}% /
4994   \TMP@EnsureCode{58}{12}% :
4995   \TMP@EnsureCode{59}{12}% ;
4996   \TMP@EnsureCode{60}{12}% <
4997   \TMP@EnsureCode{61}{12}% =
4998   \TMP@EnsureCode{62}{12}% >
4999   \TMP@EnsureCode{63}{12}% ?
5000   \TMP@EnsureCode{91}{12}% [
5001   \TMP@EnsureCode{93}{12}% ]
5002   \TMP@EnsureCode{94}{7}% ^ (superscript)
5003   \TMP@EnsureCode{95}{8}% _ (subscript)
5004   \TMP@EnsureCode{96}{12}% `
5005   \TMP@EnsureCode{124}{12}% |
5006   \TMP@EnsureCode{126}{13}% ~ (active)
5007   ##1\relax
5008   \Hy@endWrap
5009 }

```

`\HyColor@UseColor` expects a macro as argument. It contains the color specification.

```

5010 \Hy@AtBeginDocument{%
5011   \ifHy@ocgcolorlinks
5012     \kvsetkeys{Hyp}{colorlinks}%
5013     \ifHy@pdfa
5014       \Hy@Warning{%
5015         PDF/A: Optional Content Groups are prohibited,\MessageBreak
5016         using `colorlinks' instead of `ocgcolorlinks'%
5017       }%
5018       \Hy@ocgcolorlinksfalse
5019     \fi
5020   \fi
5021   \ifHy@ocgcolorlinks
5022   \else
5023     \Hy@DisableOption{ocgcolorlinks}%

```



```

5024 \fi
5025 \ifHy@colorlinks
5026 \def\@pdfborder{0 0 0}%
5027 \let\@pdfborderstyle\@empty
5028 \ifHy@typexml
5029 \else
5030 \Hy@CatcodeWrapper{%
5031 \RequirePackage{color}%
5032 }%
5033 \fi
5034 \def\Hy@colorlink#1{%
5035 \begingroup
5036 \HyColor@UseColor#1%
5037 }%
5038 \def\Hy@endcolorlink{\endgroup}%
5039 \Hy@Info{Link coloring ON}%
5040 \else
5041 \ifHy@frenchlinks
5042 \def\Hy@colorlink#1{\begingroup\fontshape{\scdefault}\selectfont}%
5043 \def\Hy@endcolorlink{\endgroup}%
5044 \Hy@Info{French linking ON}%
5045 \else
for grouping consistency:
5046 \def\Hy@colorlink#1{\begingroup}%
5047 \def\Hy@endcolorlink{\endgroup}%
5048 \Hy@Info{Link coloring OFF}%
5049 \fi
5050 \fi
5051 \Hy@DisableOption{colorlinks}%
5052 \Hy@DisableOption{frenchlinks}%
5053 \ifHy@texht
5054 \long\def\@firstoffive#1#2#3#4#5{#1}%
5055 \long\def\@secondoffive#1#2#3#4#5{#2}%
5056 \long\def\@thirdoffive#1#2#3#4#5{#3}%
5057 \long\def\@fourthoffive#1#2#3#4#5{#4}%
5058 \long\def\@fifthoffive#1#2#3#4#5{#5}%
5059 \providecommand*\@safe@activetrue{}%
5060 \providecommand*\@safe@activesfalse{}%
5061 \def\T@ref#1{%
5062 \Hy@safe@activetrue
5063 \expandafter\@setref\csname r@#1\endcsname\@firstoffive{#1}%
5064 \Hy@safe@activesfalse
5065 }%
5066 \def\T@pageref#1{%
5067 \Hy@safe@activetrue
5068 \expandafter\@setref\csname r@#1\endcsname\@secondoffive{#1}%
5069 \Hy@safe@activesfalse
5070 }%
5071 \else
5072 \ifHy@typexml
5073 \else
5074 \Hy@CatcodeWrapper{%
5075 \RequirePackage{nameref}[2012/07/28]%
5076 }%
5077 \fi
5078 \fi
5079 \DeclareRobustCommand\ref{%

```



```

5080 \ifstar\@refstar\T@ref
5081 }%
5082 \DeclareRobustCommand\pageref{%
5083 \ifstar\@pagerefstar\T@pageref
5084 }%
5085 % \ifclassloaded{memoir}{%
5086 % \ltx@ifundefined{@mem@titlerefno link}\ltx@secondoftwo{%
5087 % \ltx@ifundefined{@mem@titleref}\ltx@secondoftwo\ltx@firstoftwo
5088 % }%
5089 % }\ltx@secondoftwo
5090 % {%
5091 % \DeclareRobustCommand*{\nameref}{%
5092 % \ifstar\@mem@titlerefno link\@mem@titleref
5093 % }%
5094 % }{%
5095 \DeclareRobustCommand*{\nameref}{%
5096 \ifstar\@namerefstar\T@nameref
5097 }%
5098 % }%
5099 \ifHy@implicit
5100 \else
5101 \let \@pagerefstar\T@pageref
5102 \let \@refstar\T@ref
5103 \let \@namerefstar\T@nameref
5104 \fi
5105 }
5106 \Hy@AtBeginDocument{%
5107 \ifHy@texht
5108 \else
5109 \Hy@CatcodeWrapper\ReadBookmarks
5110 \fi
5111 }
5112 \ifHy@backref
5113 \RequirePackage{backref}%
5114 \else
5115 \let\Hy@backout\@gobble
5116 \fi
5117 \Hy@DisableOption{backref}
5118 \Hy@DisableOption{pagebackref}
5119 \Hy@activeanchorfalse

```

16 User hypertext macros

We need to normalise all user commands taking a URL argument; Within the argument the following special definitions apply: \#, \%, ~ produce #, %, ~ respectively. for consistency \~ produces ~ as well. At the *top level only* ie not within the argument of another command, you can use # and % unescaped, to produce themselves. even if, say, # is entered as # it will be converted to \# so it does not die if written to an aux file etc. \# will write as # locally while making \specials.

```

5120 \begingroup
5121 \endlinechar=-1 %
5122 \catcode`\^^A=14 %
5123 \catcode`\^^M\active
5124 \catcode`\%\active
5125 \catcode`\#\active

```



```

5126 \catcode`\_\active
5127 \catcode`\$\active
5128 \catcode`\&\active
5129 \gdef\hyper@normalise{^^A
5130   \begingroup
5131   \catcode`\^M\active
5132   \def^^M{ }^^A
5133   \catcode`\%\active
5134   \let%\@percentchar
5135   \let%\@percentchar
5136   \catcode`\#\active
5137   \def#{\hyper@hash}^^A
5138   \def#{\hyper@hash}^^A
5139   \@makeother\&^^A
5140   \edef&{\string&}^^A
5141   \edef\&{\string&}^^A
5142   \edef\textunderscore{\string_}^^A
5143   \let_\textunderscore
5144   \catcode`\_\active
5145   \let_\textunderscore
5146   \let~\hyper@tilde
5147   \let~\hyper@tilde
5148   \let\textasciitilde\hyper@tilde
5149   \let\\ \@backslashchar
5150   \edef$\string$}^^A
5151   \Hy@safe@activestrue
5152   \hyper@n@rmalise
5153 }^^A
5154 \catcode`\#=6 ^^A
5155 \gdef\Hy@ActiveCarriageReturn{^^M}^^A
5156 \gdef\hyper@n@rmalise#1#2{^^A
5157   \def\Hy@tempa{#2}^^A
5158   \ifx\Hy@tempa\Hy@ActiveCarriageReturn
5159     \ltx@ReturnAfterElseFi{^^A
5160       \hyper@@normalise{#1}^^A
5161     }^^A
5162   \else
5163     \ltx@ReturnAfterFi{^^A
5164       \hyper@@normalise{#1}{#2}^^A
5165     }^^A
5166   \fi
5167 }^^A
5168 \gdef\hyper@@normalise#1#2{^^A
5169   \edef\Hy@tempa{^^A
5170     \endgroup
5171     \noexpand#1{\Hy@RemovePercentCr#2%\@nil}^^A
5172   }^^A
5173   \Hy@tempa
5174 }^^A
5175 \gdef\Hy@RemovePercentCr#1%\@nil{^^A
5176   #1^^A
5177   \ifx\limits#2\limits
5178   \else
5179     \ltx@ReturnAfterFi{^^A
5180       \Hy@RemovePercentCr #2\@nil
5181     }^^A
5182   \fi

```



```

5183 }^^A
5184 \endgroup
5185 \providecommand*\hyper@chars{%
5186 \let\#\hyper@hash
5187 \let\%\@percentchar
5188 \Hy@safe@activetrue
5189 }

5190 \def\hyperlink#1#2{%
5191 \hyper@@link{}\{#1\}\{#2\}%
5192 }

5193 \def\Hy@VerboseLinkStart#1#2{%
5194 \ifHy@verbose
5195 \begingroup
5196 \Hy@safe@activetrue
5197 \xdef\Hy@VerboseGlobalTemp{(#1) `#2'}%
5198 \Hy@Info{Reference \Hy@VerboseGlobalTemp}%
5199 \xdef\Hy@VerboseGlobalTemp{%
5200 \Hy@VerboseGlobalTemp, %
5201 line \the\inputlineno
5202 }%
5203 \endgroup
5204 \let\Hy@VerboseLinkInfo\Hy@VerboseGlobalTemp
5205 \@onelevel@sanitize\Hy@VerboseLinkInfo
5206 \fi
5207 }

5208 \def\Hy@VerboseLinkInfo{<VerboseLinkInfo>}
5209 \def\Hy@VerboseLinkStop{%
5210 \ifHy@verbose
5211 \begingroup
5212 \edef\x{\endgroup
5213 \write\m@ne{%
5214 Package `hyperref' Info: %
5215 End of reference \Hy@VerboseLinkInfo.%
5216 }%
5217 }%
5218 \x
5219 \fi
5220 }

5221 \def\Hy@VerboseAnchor#1{%
5222 \ifHy@verbose
5223 \begingroup
5224 \Hy@safe@activetrue
5225 \Hy@Info{Anchor ``\HyperDestNameFilter{#1}''}%
5226 \endgroup
5227 \fi
5228 }

5229 \def\Hy@AllowHyphens{%
5230 \relax
5231 \ifhmode
5232 \penalty\@M
5233 \hskip\z@skip
5234 \fi
5235 }

5236 \DeclareRobustCommand*\href[1]{}{%
5237 \begingroup

```



```

5238 \setkeys{href}{#1}%
5239 \@ifnextchar\bgroup\Hy@href{\hyper@normalise\href@}%
5240 }
5241 \def\Hy@href#{%
5242 \hyper@normalise\href@
5243 }
5244 \begingroup
5245 \catcode`\$=6 %
5246 \catcode`\#=12 %
5247 \gdef\href$1{\expandafter\href@split$1##\}%
5248 \gdef\href@split$1#$2#$3\\$4{%
5249 \hyper@@link{$1}{$2}{$4}%
5250 \endgroup
5251 }%
5252 \endgroup

```

Option ‘page’.

```

5253 \define@key{href}{page}{%
5254 \def\Hy@href@page{#1}%
5255 }
5256 \let\Hy@href@page\@empty
5257 \newcount\c@Hy@tempcnt
5258 \def\theHy@tempcnt{\the\c@Hy@tempcnt}
5259 \def\Hy@MakeRemoteAction{%
5260 \ifx\Hy@href@page\@empty
5261 \def\Hy@href@page{0}%
5262 \else
5263 \setcounter{Hy@tempcnt}{\Hy@href@page}%
5264 \ifnum\c@Hy@tempcnt<\@ne
5265 \Hy@Warning{%
5266 Invalid page number (\theHy@tempcnt)\MessageBreak
5267 for remote PDF file.\MessageBreak
5268 Using page 1%
5269 }%
5270 \def\Hy@href@page{0}%
5271 \else
5272 \global\advance\c@Hy@tempcnt\m@ne
5273 \edef\Hy@href@page{\theHy@tempcnt}%
5274 \fi
5275 \fi

```

If a next action is set, then also a new window should be opened. Otherwise AR reclaims that it closes the current file with discarding the next actions.

```

5276 \ifx\Hy@href@nextactionraw\@empty
5277 \else
5278 \Hy@pdfnewwindowsettrue
5279 \Hy@pdfnewwindowtrue
5280 \fi
5281 }

```

Option ‘pdfremotestartview’.

```

5282 \define@key{href}{pdfremotestartview}{%
5283 \setkeys{Hyp}{pdfremotestartview={#1}}%
5284 }

```

Option ‘pdfnewwindow’.

```

5285 \let\KV@href@pdfnewwindow\KV@Hyp@pdfnewwindow
5286 \let\KV@href@pdfnewwindow@default\KV@Hyp@pdfnewwindow@default

```


Option ‘ismap’.

```

5287 \newif\ifHy@href@ismap
5288 \define@key{href}{ismap}[true]{%
5289   \ltx@ifundefined{Hy@href@ismap#1}{%
5290     \Hy@Error{%
5291       Invalid value (#1) for key `ismap'.\MessageBreak
5292       Permitted values are `true' or `false'.\MessageBreak
5293       Ignoring `ismap'%
5294     }\@ehc
5295   }{%
5296     \csname Hy@href@ismap#1\endcsname
5297   }%
5298 }
```

Option ‘nextactionraw’.

```

5299 \let\Hy@href@nextactionraw\@empty
5300 \define@key{href}{nextactionraw}{%
5301   \edef\Hy@href@nextactionraw{#1}%
5302   \ifx\Hy@href@nextactionraw\@empty
5303   \else
5304     \Hy@Match\Hy@href@nextactionraw{}{%
5305       ^(\HyPat@ObjRef/|<<.*[/|.+>>|
5306       \[( ?\HyPat@ObjRef/|<<.*[/|.+>>)+ ?)]$%
5307     }{%
5308       \Hy@Warning{Invalid value for `nextactionraw':.\MessageBreak
5309       \Hy@href@nextactionraw\MessageBreak
5310       The action is discarded%
5311     }%
5312   }%
5313   \ifx\Hy@href@nextactionraw\@empty
5314   \else
5315     \edef\Hy@href@nextactionraw{/Next \Hy@href@nextactionraw}%
5316   \fi
5317 \fi
5318 }
5319 \def\HyPat@ObjRef/{.+}
```

Load package `url.sty` and save the meaning of the original `\url` in `\nolinkurl`.

```

5320 \RequirePackage{url}
5321 \let\HyOrg@url\url
5322 \def\Hurl{\begingroup \Url}
5323 \DeclareRobustCommand*{\nolinkurl}{\hyper@normalise\nolinkurl@}
5324 \def\nolinkurl@#1{\Hurl{#1}}
5325 \DeclareRobustCommand*{\url}{\hyper@normalise\url@}
5326 \def\url@#1{\hyper@linkurl{\Hurl{#1}}{#1}}
5327 \DeclareRobustCommand*{\hyperimage}{\hyper@normalise\hyper@image}
5328 \providecommand\hyper@image[2]{#2}
5329 \def\hypertarget#1#2{%
5330   \ifHy@nesting
5331     \hyper@@anchor{#1}{#2}%
5332   \else
5333     \hyper@@anchor{#1}{\relax}#2%
5334   \fi
5335 }
```

`\hyperref` is more complicated, as it includes the concept of a category of link, used to make the name. This is not really used in this package. `\hyperdef` sets up an anchor in the same way. They each have three parameters of category,

linkname, and marked text, and `\hyperref` also has a first parameter of URL. If there is an optional first parameter to `\hyperdef`, it is the name of a L^AT_EX label which can be used in a short form of `\hyperref` later, to avoid remembering the name and category.

```

5336 \DeclareRobustCommand*{\hyperref}{%
5337   \@ifnextchar[{\Hy@babelnormalise\label@hyperref}\@hyperref
5338 }
5339 \def\Hy@babelnormalise#1[#2]{%
5340   \begingroup
5341     \Hy@safe@activetrue
5342     \edef\Hy@tempa{%
5343       \endgroup
5344       \noexpand#1[#2]}%
5345   }%
5346   \Hy@tempa
5347 }
5348 \def\@hyperref{\hyper@normalise\@hyperref}
5349 \def\@hyperref#1#2#3{%
5350   \edef\ref@one{\ifx\#2\#2\else#2.\fi#3}%
5351   \expandafter\tryhyper@link\ref@one\{#1}%
5352 }
5353 \def\tryhyper@link#1\#2{%
5354   \hyper@@link{#2}{#1}%
5355 }

5356 \def\hyperdef{\@ifnextchar[{\label@hyperdef}\@hyperdef}]
5357 \def\@hyperdef#1#2#3{%, category, name, text
5358   \ifx\#1\%
5359     \def\Hy@AnchorName{#2}%
5360   \else
5361     \def\Hy@AnchorName{#1.#2}%
5362   \fi
5363   \ifHy@nesting
5364     \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{#3}%
5365   \else
5366     \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{\relax}{#3}%
5367   \fi
5368 }

```

We also have a need to give a L^AT_EX *label* to a hyper reference, to ease the pain of referring to it later. `\hyperrefundefinedlink` may be redefined by a user to add colour or other formatting.

```

5369 \let\hyperrefundefinedlink\@firstofone
5370 \def\label@hyperref[#1]{%
5371   \expandafter\label@\@hyperref\csname r@#1\endcsname{#1}%
5372 }%
5373 \def\label@\@hyperref#1#2#3{%
5374   \ifx#1\relax
5375     \protect\G@refundefinedtrue
5376     \@latex@warning{%
5377       Hyper reference `#2' on page \thepage \space undefined%
5378     }%
5379     \begingroup
5380       \hyperrefundefinedlink{#3}%
5381     \endgroup
5382   \else
5383     \hyper@@link{\expandafter\@fifthoffive#1}%
5384     {\expandafter\@fourthoffive#1\@empty\@empty}{#3}%

```



```

5385 \fi
5386 }
5387 \def\label@hyperdef[#1]#2#3#4{% label name, category, name,
5388 % anchor text
5389 \@bsphack
5390 \ifx\#2\%
5391 \def\Hy@AnchorName{#3}%
5392 \else
5393 \def\Hy@AnchorName{#2.#3}%
5394 \fi
5395 \if@filesw
5396 \protected@write\@auxout{}{%
5397 \string\newlabel{#1}{\Hy@AnchorName}{\Hy@AnchorName}}%
5398 }%
5399 \fi
5400 \@esphack
5401 \ifHy@nesting
5402 \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{#4}%
5403 \else
5404 \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{\relax}#4%
5405 \fi
5406 }

```

16.1 Link box support for XeTeX

```

5407 \newdimen\XeTeXLinkMargin
5408 \setlength{\XeTeXLinkMargin}{2pt}
5409 \ifxetex
5410 \font\XeTeXLink@font=pzdr at 1sp\relax
5411 \newcommand*\XeTeXLink@space{%
5412 \begingroup
5413 \XeTeXLink@font
5414 \@xxxii
5415 \endgroup
5416 }%
5417 \newcommand{\XeTeXLinkBox}[1]{%
5418 \begingroup
5419 \leavevmode
5420 \sbox\z@{#1}%
5421 \begingroup
5422 \dimen@=\dp\z@
5423 \advance\dimen@\XeTeXLinkMargin
5424 \setbox\tw@=\llap{%
5425 \hb@xt@\XeTeXLinkMargin{%
5426 \lower\dimen@\hbox{\XeTeXLink@space}%
5427 \hss
5428 }%
5429 }%
5430 \dp\tw@=\dp\z@
5431 \ht\tw@=\ht\z@
5432 \copy\tw@
5433 \endgroup
5434 \copy\z@
5435 \dimen@=\ht\z@
5436 \advance\dimen@\XeTeXLinkMargin
5437 \setbox\tw@=\rlap{%
5438 \hb@xt@\XeTeXLinkMargin{%

```



```

5439      \hss
5440      \raise\dimen@\hbox{\XeTeXLink@space}%
5441    }%
5442  }%
5443  \dp\tw@=\dp\z@
5444  \ht\tw@=\ht\z@
5445  \copy\tw@
5446  \endgroup
5447 }%
5448 \else
5449 \newcommand*{\XeTeXLinkBox}[1]{%
5450   \begingroup
5451   \leavevmode
5452   \sbox\z@{#1}%
5453   \copy\z@
5454   \endgroup
5455 }%
5456 \fi

```

17 Underlying basic hypertext macros

Links have an optional type, a filename (possibly a URL), an internal name, and some marked text. (Caution: the internal name may contain babel shorthand characters.) If the second parameter is empty, its an internal link, otherwise we need to open another file or a URL. A link start has a type, and a URL.

```

5457 \def\hyper@@link{\let\Hy@reserved@a\relax
5458   \@ifnextchar{\hyper@link@}{\hyper@link@[link]}%
5459 }
5460 % #1: type
5461 % #2: URL
5462 % #3: destination name
5463 % #4: text
5464 \def\hyper@link@[#1]#2#3#4{%
5465   \ltx@ifempty{#4}{% link text
5466     \Hy@Warning{Suppressing empty link}%
5467   }{%
5468     \begingroup
5469     \protected@edef\Hy@tempa{#2}%
5470     \edef\Hy@tempb{#3}%
5471     \ifx\Hy@tempa\ltx@empty
5472       \ifx\Hy@tempb\ltx@empty
5473         \Hy@Warning{Suppressing link with empty target}%
5474         \toks@{%
5475           \endgroup
5476           \ltx@secondoftwo
5477         }%
5478       \else
5479         \toks@{%
5480           \endgroup
5481           \hyper@link{#1}%
5482         }%
5483       \fi
5484     \else
5485       \toks@{%
5486         \endgroup
5487         \expandafter\hyper@readexternallink#2\\{#1}%
5488       }%

```



```

5489 \fi
5490 \Hy@safe@activesfalse
5491 \toks@\expandafter{%
5492   \the\expandafter\toks@
5493   \expandafter{\Hy@tempb}{#4}%
5494 }%
5495 \the\toks@
5496 }%
5497 }

```

The problem here is that the first (URL) parameter may be a local **file**: reference (in which case some browsers treat it differently) or a genuine URL, in which case we'll have to activate a real Web browser. Note that a simple name is also a URL, as that is interpreted as a relative file name. We have to worry about **#** signs in a local file as well.

```

5498 \def\hyper@readexternallink#1\\#2#3#4{%
5499   \begingroup
5500   \let\\relax
5501   \expandafter\endgroup
5502   \expandafter\@hyper@\@readexternallink#1\\#{2}{#3}{#4}%
5503 }
5504 \def\@hyper@\@readexternallink#1\\#2#3#4{%

```

Parameters are:

1. The URL or file name
2. The type
3. The internal name
4. The link string

We need to get the 1st parameter properly expanded, so we delimit the arguments rather than passing it inside a group.

```

5505 \@hyper@readexternallink#{2}{#3}{#4}#1::\#{1}%
5506 }

```

Now (potentially), we are passed: 1) The link type 2) The internal name, 3) the link string, 4) the URL type (http, mailto, file etc), 5) the URL details 6) anything after a real : in the URL 7) the whole URL again

```

5507 \def\@pdftempwordfile{file}%
5508 \def\@pdftempwordrun{run}%
5509 \def\@hyper@readexternallink#1#2#3#4:#5:#6\\#7{%

```

If there are no colons at all (**#6** is blank), its a local file; if the URL type (**#4**) is blank, its probably a Mac filename, so treat it like a **file**: URL. The only flaw is if its a relative Mac path, with several colon-separated elements — then we lose.

Such names must be prefixed with an explicit **dvi**:

```

5510 \ifx\\#6\\%
5511   \@hyper@linkfile file:#7\\#{3}{#2}{#7}%
5512 \else
5513   \ifx\\#4\\%
5514     \@hyper@linkfile file:#7\\#{3}{#2}{#7}%
5515   \else

```

If the URL type is 'file', pass it for local opening

```

5516   \def\@pdftempa{#4}%
5517   \ifx\@pdftempa\@pdftempwordfile
5518     \@hyper@linkfile#7\\#{3}{#2}{#7}%
5519   \else

```


if it starts 'run:', its to launch an application.

```

5520 \ifx\@pdftempa\@pdftempwordrun
5521 \ifHy@pdfa
5522 \Hy@Error{%
5523 PDF/A: Launch action is prohibited%
5524 }\@ehc
5525 \begingroup
5526 \leavevmode
5527 #2%
5528 \endgroup
5529 \else
5530 \@hyper@launch#7\{\#3}\#2}%
5531 \fi
5532 \else

```

otherwise its a URL

```

5533 \hyper@linkurl{\#3}\#7\ifx\#2\else\hyper@hash#2\fi}%
5534 \fi
5535 \fi
5536 \fi
5537 \fi
5538 }

```

By default, turn run: into file:

```

5539 \def\@hyper@launch run:#1\#2#3{% filename, anchor text, linkname
5540 \hyper@linkurl{\#2}%
5541 \Hy@linkfileprefix
5542 #1%
5543 \ifx\#3\%
5544 \else
5545 \hyper@hash
5546 #3%
5547 \fi
5548 }%
5549 }

```

D P Story <story@uakron.edu> pointed out that relative paths starting .. fell over. Switched to using \filename@parse to solve this.

```

5550 \def\@hyper@linkfile file:#1\#2#3#4{%
5551 %file url,link string, name, original uri
5552 \filename@parse{\#1}%
5553 \ifx\filename@ext\relax
5554 \edef\filename@ext{\XR@ext}%
5555 \fi
5556 \def\use@file{\filename@area\filename@base.\filename@ext}%
5557 \Hy@IfStringEndsWith\filename@ext\XR@ext{%
5558 \hyper@linkfile{\#2}\use@file{\#3}%
5559 }{%
5560 \ifx\@baseurl\@empty
5561 \hyper@linkurl{\#2}%
5562 #4\ifx\#3\else\hyper@hash#3\fi
5563 }%
5564 \else
5565 \hyper@linkurl{\#2}\use@file\ifx\#3\else\hyper@hash#3\fi}%
5566 \fi
5567 }%
5568 }
5569 \def\Hy@IfStringEndsWith#1#2{%

```



```

5570 \begingroup
5571 \edef\x{#1}%
5572 \@onelevel@sanitize\x
5573 \edef\x{.\x}%
5574 \edef\y{#2}%
5575 \@onelevel@sanitize\y
5576 \edef\y{.\y}%
5577 \expandafter\def\expandafter\z\expandafter##\expandafter1\y##2\@nil{%
5578 \endgroup
5579 \ifx\relax##2\relax
5580 \expandafter\ltx@secondoftwo
5581 \else
5582 \expandafter\ltx@firstoftwo
5583 \fi
5584 }%
5585 \expandafter\expandafter\expandafter\z\expandafter\x\y\@nil
5586 }

5587 \def\Hy@StringLocalhost{localhost}
5588 \@onelevel@sanitize\Hy@StringLocalhost
5589 \def\Hy@CleanupFile#1{%
5590 \edef#1{#1}%
5591 \expandafter\Hy@@CleanupFile#1\hbox{//\hbox\@nil{#1}%
5592 }
5593 \def\Hy@@CleanupFile#1//#2/#3\hbox#4\@nil#5{%
5594 \begingroup
5595 \toks@{\endgroup}%
5596 \def\x{#1}%
5597 \ifx\x\@empty
5598 \def\x{#2}%
5599 \ifx\x\@empty
5600 \toks@{\endgroup\def#5{/#3}}%
5601 \else
5602 \@onelevel@sanitize\x
5603 \ifx\x\Hy@StringLocalhost
5604 \toks@{\endgroup\def#5{/#3}}%
5605 \fi
5606 \fi
5607 \fi
5608 \the\toks@
5609 }

```

Anchors have a name, and marked text. We have to be careful with the marked text, as if we break off part of something to put a `\special` around it, all hell breaks loose. Therefore, we check the category code of the first token, and only proceed if its safe. Tanmoy sorted this out.

A curious case arises if the original parameter was in braces. That means that `#2` comes here a multiple letters, and the `noexpand` just looks at the first one, putting the rest in the output. Yuck.

```

5610 \long\def\hyper@@anchor#1#2{\@hyper@@anchor#1\relax#2\relax}
5611 \long\def\@hyper@@anchor#1\relax#2#3\relax{%
5612 \ifx\#1\%
5613 #2\Hy@Warning{Ignoring empty anchor}%
5614 \else
5615 \def\anchor@spot{#2#3}%
5616 \let\put@me@back\@empty
5617 \ifx\relax#2\relax
5618 \else

```



```

5619 \ifHy@nesting
5620 \else
5621 \ifcat a\noexpand#2\relax
5622 \else
5623 \ifcat 0\noexpand#2 \relax
5624 \else
5625 % \typeout{Anchor start is not alphanumeric %
5626 % on input line\the\inputlineno%
5627 % }%
5628 \let\anchor@spot\@empty
5629 \def\put@me@back{#2#3}%
5630 \fi
5631 \fi
5632 \fi
5633 \fi
5634 \ifHy@activeanchor
5635 \anchor@spot
5636 \else
5637 \hyper@anchor{#1}%
5638 \fi
5639 \expandafter\put@me@back
5640 \fi
5641 \let\anchor@spot\@empty
5642 }
5643 \let\anchor@spot\ltx@empty

```

18 Option ‘destlabel’

```

5644 \ifHy@destlabel

```

```

\hyper@newdestlabel

```

```

5645 \def\hyper@newdestlabel#1#2{%
5646 \begingroup
5647 \Hy@safe@activetrue
5648 \edef\x{\endgroup
5649 \noexpand\@newl@bel{HyDL}{#1}{#2}%
5650 }%
5651 \x
5652 }%

```

```

\hyper@destlabel@hook

```

```

5653 \providecommand*\hyper@destlabel@hook{}%

```

```

\Hy@DestRename

```

```

5654 \newcommand*\Hy@DestRename}[2]{%
5655 \ltx@ifundefined{HyDL!#1}{%
5656 \begingroup
5657 \Hy@safe@activetrue
5658 \edef\dest@name{#1}%
5659 \edef\label@name{#2}%
5660 \hyper@destlabel@hook
5661 \Hy@IsNotEmpty{dest@name}{%
5662 \Hy@IsNotEmpty{label@name}{%
5663 \global\expandafter
5664 \let\csname HyDL!#1\endcsname\ltx@empty
5665 \if@files
5666 \protected@write\@auxout{}{%

```



```

5667         \string\hyper@newdestlabel
5668         {#1}%
5669         {\label@name}%
5670     }%
5671     \fi
5672 }%
5673 }%
5674 \endgroup
5675 }{}%
5676 }%

```

\HyperDestRename

```

5677 \newcommand*{\HyperDestRename}[2]{%
5678   \AtBeginDocument{%
5679     \Hy@DestRename{#1}{#2}%
5680   }%
5681 }%
5682 \AtBeginDocument{%
5683   \let\HyperDestRename\Hy@DestRename
5684 }%

```

\Hy@IsNotEmpty

```

5685 \def\Hy@IsNotEmpty#1{%
5686   \ltx@ifundefined{#1}\ltx@gobble{%
5687     \expandafter\ifx\csname#1\endcsname\ltx@empty
5688     \expandafter\ltx@gobble
5689   \else
5690     \expandafter\ltx@firstofone
5691   \fi
5692 }%
5693 }%

5694 \ltx@GlobalAppendToMacro\label@hook{%
5695   \HyperDestRename\@currentHref\label@name
5696 }%

```

\HyperDestLabelReplace

```

5697 \def\HyperDestLabelReplace#1{%
5698   \ltx@ifundefined{HyDL@#1}{%
5699     #1%
5700   }{%
5701     \csname HyDL@#1\endcsname
5702   }%
5703 }%

```

\HyperDestNameFilter

```

5704 \let\HyperDestNameFilter\HyperDestLabelReplace

5705 \else

```

\hyper@newdestlabel

```

5706 \let\hyper@newdestlabel\ltx@gobbletwo

```

\HyperDestLabelReplace

```

5707 \let\HyperDestLabelReplace\ltx@firstofone

```

\HyperDestRename

@gobbletwo

```
5708 \fi
```

```
5709 \Hy@DisableOption{destlabel}
```

Provide a dummy default definition of `\hyper@newdestlabel` inside the .aux files.

```
5710 \AddLineBeginAux{%
```

```
5711   \string\providecommand\string\hyper@newdestlabel[2]{}%
```

```
5712 }
```

19 Compatibility with the *L^AT_EX2html* package

Map our macro names on to Nikos', so that documents prepared for that system will work without change.

Note, however, that the whole complicated structure for segmenting documents is not supported; it is assumed that the user will load `html.sty` first, and then `hyperref.sty`, so that the definitions in `html.sty` take effect, and are then overridden in a few circumstances by this package.

```
5713 \let\htmladdimg\hyperimage
```

```
5714 \def\htmladdnormallink#1#2{\href{#2}{#1}}
```

```
5715 \def\htmladdnormallinkfoot#1#2{\href{#2}{#1}\footnote{#2}}
```

```
5716 \def\htmlref#1#2{% anchor text, label
```

```
5717   \label@hyperref[{#2}]{#1}%
```

```
5718 }
```

This is really too much. The *L^AT_EX2html* package defines its own `\hyperref` command, with a different syntax. Was this always here? Its weird, anyway. We interpret it in the 'printed' way, since we are about fidelity to the page.

```
5719 \def\@@latextohtmlX{%
```

```
5720   \let\hhyperref\hyperref
```

```
5721   \def\hyperref##1##2##3##4{% anchor text for HTML
```

```
5722     % text to print before label in print
```

```
5723     % label
```

```
5724     % post-label text in print
```

```
5725     ##2\ref{##4}##3%
```

```
5726   }%
```

```
5727 }
```

20 Forms creation

Allow for creation of PDF or HTML forms. The effects here are limited somewhat by the need to support both output formats, so it may not be as clever as something which only wants to make PDF forms.

I (Sebastian) could not have started this without the encouragement of T V Raman.

20.1 Field flags

The field flags are organized in a bit set.

```
5728 \RequirePackage{bitset}
```


Each flag has a option name, an \if switch, and a bit position. The default is always ‘false’, the flag is clear. This is also the default of the switch created by \newif.

The names of the flags in the PDF specification (1.7) are used as lowercase option names.

```
\HyField@NewFlag #1: type: F annot flags, Ff field flags
#2: PDF name
#3: PDF position
5729 \def\HyField@NewFlag#1#2{%
5730   \lowercase{\HyField@NewOption{#2}}%
5731   \lowercase{\HyField@NewBitsetFlag{#2}}{#2}{#1}%
5732 }
```

```
\HyField@NewFlagOnly
5733 \def\HyField@NewFlagOnly#1#2{%
5734   \lowercase{\HyField@NewBitsetFlag{#2}}{#2}{#1}%
5735 }
```

```
\HyField@NewOption #1: option name
5736 \def\HyField@NewOption#1{%
5737   \expandafter\newif\csname ifFld@#1\endcsname
5738   \define@key{Field}{#1}[true]{%
5739     \lowercase{\Field@boolkey{##1}}{#1}%
5740   }%
5741 }
```

\HyField@NewBitsetFlag Package ‘bitset’ uses zero based positions, the PDF specification starts with one.

```
#1: option
#2: PDF name
#3: type: F annot flags, Ff field flags
#4: PDF position
5742 \def\HyField@NewBitsetFlag#1#2#3#4{%
5743   \begingroup
5744     \count@=#4\relax
5745     \advance\count@\m@ne
5746     \def\x##1{%
5747       \endgroup
5748       \expandafter\def\csname HyField@#3@##1\endcsname{##1}%
5749       \expandafter\ifx\csname HyField@#3@##1\endcsname\relax
5750         \expandafter\edef\csname HyField@#3@##1\endcsname{%
5751           (\number#4) #2%
5752         }%
5753       \else
5754         \expandafter\edef\csname HyField@#3@##1\endcsname{%
5755           \csname HyField@#3@##1\endcsname
5756           /#2%
5757         }%
5758       \fi
5759     }%
5760     \expandafter\x\expandafter{\the\count@}%
5761 }
```

```
\HyField@UseFlag The bit set is HyField@#1
5762 \def\HyField@UseFlag#1#2{%
5763   \lowercase{\HyField@@UseFlag{#2}}{#1}%
5764 }
```


\HyField@@UseFlag

```
5765 \def\HyField@@UseFlag#1#2{%
5766   \bitsetSetValue{HyField@#2}{%
5767     \csname HyField@#2@#1\endcsname
5768   }{%
5769     \csname ifFld@#1\endcsname 1\else 0\fi
5770   }%
5771 }
```

\HyField@SetFlag The bit set is HyField@#1

```
5772 \def\HyField@SetFlag#1#2{%
5773   \lowercase{\HyField@@SetFlag{#2}}{#1}%
5774 }
```

\HyField@@SetFlag

```
5775 \def\HyField@@SetFlag#1#2{%
5776   \bitsetSetValue{HyField@#2}{%
5777     \csname HyField@#2@#1\endcsname
5778   }{1}%
5779 }
```

\HyField@PrintFlags

```
5780 \def\HyField@PrintFlags#1#2{%
5781   \ifHy@verbose
5782     \begingroup
5783     \let\Hy@temp\@empty
5784     \let\MessageBreak\relax
5785     \expandafter\@for\expandafter\x\expandafter:\expandafter=%
5786     \bitsetGetSetBitList{HyField@#1}\do{%
5787       \edef\Hy@temp{%
5788         \Hy@temp
5789         \csname HyField@#1@\x\endcsname\MessageBreak
5790       }%
5791     }%
5792   \edef\x{\endgroup
5793     \noexpand\Hy@Info{%
5794       Field flags: %
5795       \expandafter\ifx\@car#1\@nil S\else/\fi
5796       #1 %
5797       \bitsetGetDec{HyField@#1} %
5798       (0x\bitsetGetHex{HyField@#1}{32})\MessageBreak
5799       \Hy@temp
5800     for #2%
5801   }%
5802   }\x
5803 \fi
5804 }
```

20.1.1 Declarations of field flags

“Table 8.70 Field flags common to all field types”

```
5805 \HyField@NewFlag{Ff}{ReadOnly}{1}
5806 \HyField@NewFlag{Ff}{Required}{2}
5807 \HyField@NewFlag{Ff}{NoExport}{3}
```

“Table 8.75 Field flags specific to button fields”

```
5808 \HyField@NewFlag{Ff}{NoToggleToOff}{15}
```



```

5809 \HyField@NewFlag{Ff}{Radio}{16}
5810 \HyField@NewFlag{Ff}{Pushbutton}{17}
5811 \HyField@NewFlag{Ff}{RadiosInUnison}{26}

```

“Table 8.77 Field flags specific to text fields”

```

5812 \HyField@NewFlag{Ff}{Multiline}{13}
5813 \HyField@NewFlag{Ff}{Password}{14}
5814 \HyField@NewFlag{Ff}{FileSelect}{21}% PDF 1.4
5815 \HyField@NewFlag{Ff}{DoNotSpellCheck}{23}% PDF 1.4
5816 \HyField@NewFlag{Ff}{DoNotScroll}{24}% PDF 1.4
5817 \HyField@NewFlag{Ff}{Comb}{25}% PDF 1.4
5818 \HyField@NewFlag{Ff}{RichText}{26}% PDF 1.5

```

“Table 8.79 field flags specific to choice fields”

```

5819 \HyField@NewFlag{Ff}{Combo}{18}
5820 \HyField@NewFlag{Ff}{Edit}{19}
5821 \HyField@NewFlag{Ff}{Sort}{20}
5822 \HyField@NewFlag{Ff}{MultiSelect}{22}% PDF 1.4
5823 % \HyField@NewFlag{Ff}{DoNotSpellCheck}{23}% PDF 1.4
5824 \HyField@NewFlag{Ff}{CommitOnSelChange}{27}% PDF 1.5

```

Signature fields are not supported.

Until 6.76i hyperref uses field option ‘combo’ to set three flags ‘Combo’, ‘Edit’, and ‘Sort’. Option ‘popdown’ sets flag ‘Combo’ only.

```

5825 \newif\ifFld@popdown
5826 \define@key{Field}{popdown}[true]{%
5827   \lowercase{\Field@boolkey{#1}}{popdown}%
5828 }

```

Annotation flags. The form objects are widget annotations. There are two flags for readonly settings, the one in the annotation flags is ignored, instead the other in the field flags is used.

Flag `Print` is not much useful, because `hyperref` do not use the appearance entry of the annotations for most fields.

```

5829 \HyField@NewFlag{F}{Invisible}{1}
5830 \HyField@NewFlag{F}{Hidden}{2}% PDF 1.2
5831 \HyField@NewFlag{F}{Print}{3}% PDF 1.2
5832 \HyField@NewFlag{F}{NoZoom}{4}% PDF 1.2
5833 \HyField@NewFlag{F}{NoRotate}{5}% PDF 1.3
5834 \HyField@NewFlag{F}{NoView}{6}% PDF 1.3
5835 \HyField@NewFlag{F}{Locked}{8}% PDF 1.4
5836 \HyField@NewFlag{F}{ToggleNoView}{9}% PDF 1.5
5837 \HyField@NewFlag{F}{LockedContents}{10}% PDF 1.7

5838 \ifHy@pdfa
5839   \def\HyField@PDFAFldWarning#1#2{%
5840     \Hy@Warning{%
5841       PDF/A: Annotation flag `#1' must\MessageBreak
5842       be set to `#2'%
5843     }%
5844   }%
5845   \Fld@invisiblefalse
5846   \def\Fld@invisibletrue{%
5847     \HyField@PDFAFldWarning{invisible}{false}%
5848   }%
5849   \Fld@hiddenfalse
5850   \def\Fld@hiddentrue{%
5851     \HyField@PDFAFldWarning{hidden}{false}%
5852   }%

```



```

5853 \Fld@printtrue
5854 \def\Fld@printfalse{%
5855   \HyField@PDFAFIagWarning{print}{true}%
5856 }%
5857 \Fld@nozoomtrue
5858 \def\Fld@nozoomfalse{%
5859   \HyField@PDFAFIagWarning{nozoom}{true}%
5860 }%
5861 \Fld@norotatetrue
5862 \def\Fld@norotatefalse{%
5863   \HyField@PDFAFIagWarning{norotate}{true}%
5864 }%
5865 \Fld@noviewfalse
5866 \def\Fld@noviewtrue{%
5867   \HyField@PDFAFIagWarning{noview}{false}%
5868 }%
5869 \fi

```

Submit flags. Flag 1 Include/Exclude is not supported, use option noexport instead.

```

5870 \HyField@NewFlag{Submit}{IncludeNoValueFields}{2}
5871 \HyField@NewFlagOnly{Submit}{ExportFormat}{3}
5872 \HyField@NewFlag{Submit}{GetMethod}{4}
5873 \HyField@NewFlag{Submit}{SubmitCoordinates}{5}
5874 \HyField@NewFlagOnly{Submit}{XFDF}{6}
5875 \HyField@NewFlag{Submit}{IncludeAppendSaves}{7}
5876 \HyField@NewFlag{Submit}{IncludeAnnotations}{8}
5877 \HyField@NewFlagOnly{Submit}{SubmitPDF}{9}
5878 \HyField@NewFlag{Submit}{CanonicalFormat}{10}
5879 \HyField@NewFlag{Submit}{ExclNonUserAnnots}{11}
5880 \HyField@NewFlag{Submit}{ExclFKey}{12}
5881 \HyField@NewFlag{Submit}{EmbedForm}{14}

5882 \define@key{Field}{export}{%
5883   \lowercase{\def\Hy@temp{#1}}%
5884   \@ifundefined{Fld@export@\Hy@temp}{%
5885     \@onelevel@sanitize\Hy@temp
5886     \Hy@Error{%
5887       Unknown export format ` \Hy@temp'.\MessageBreak
5888       Known formats are `FDF', `HTML', `XFDF', and `PDF'%
5889     }\@ehc
5890   }{%
5891     \let\Fld@export\Hy@temp
5892   }%
5893 }
5894 \def\Fld@export{fdf}
5895 \@namedef{Fld@export@fdf}{0}%
5896 \@namedef{Fld@export@html}{1}%
5897 \@namedef{Fld@export@xfdf}{2}%
5898 \@namedef{Fld@export@pdf}{3}%

```

20.1.2 Set submit flags

\HyField@FlagsSubmit

```

5899 \def\HyField@FlagsSubmit{%
5900   \bitsetReset{HyField@Submit}%
5901   \ifcase\@nameuse{Fld@export@\Fld@export} %
5902     % FDF

```



```

5903 \HyField@UseFlag{Submit}{IncludeNoValueFields}%
5904 \HyField@UseFlag{Submit}{SubmitCoordinates}%
5905 \HyField@UseFlag{Submit}{IncludeAppendSaves}%
5906 \HyField@UseFlag{Submit}{IncludeAnnotations}%
5907 \HyField@UseFlag{Submit}{CanonicalFormat}%
5908 \HyField@UseFlag{Submit}{ExclNonUserAnnots}%
5909 \HyField@UseFlag{Submit}{ExclFKey}%
5910 \HyField@UseFlag{Submit}{EmbedForm}%
5911 \or % HTML
5912 \HyField@SetFlag{Submit}{ExportFormat}%
5913 \HyField@UseFlag{Submit}{IncludeNoValueFields}%
5914 \HyField@UseFlag{Submit}{GetMethod}%
5915 \HyField@UseFlag{Submit}{SubmitCoordinates}%
5916 \HyField@UseFlag{Submit}{CanonicalFormat}%
5917 \or % XFDF
5918 \HyField@SetFlag{Submit}{XFDF}%
5919 \HyField@UseFlag{Submit}{IncludeNoValueFields}%
5920 \HyField@UseFlag{Submit}{SubmitCoordinates}%
5921 \HyField@UseFlag{Submit}{CanonicalFormat}%
5922 \or % PDF
5923 \HyField@SetFlag{Submit}{SubmitPDF}%
5924 \HyField@UseFlag{Submit}{GetMethod}%
5925 \fi
5926 \HyField@PrintFlags{Submit}{submit button field}%
5927 \bitsetIsEmpty{HyField@Submit}{%
5928 \let\Fld@submitflags\ltx@empty
5929 }{%
5930 \edef\Fld@submitflags{/Flags \bitsetGetDec{HyField@Submit}}%
5931 }%
5932 }

```

20.1.3 Set annot flags in fields

\HyField@FlagsAnnot

```

5933 \def\HyField@FlagsAnnot#1{%
5934 \bitsetReset{HyField@F}%
5935 \HyField@UseFlag{F}{Invisible}%
5936 \HyField@UseFlag{F}{Hidden}%
5937 \HyField@UseFlag{F}{Print}%
5938 \HyField@UseFlag{F}{NoZoom}%
5939 \HyField@UseFlag{F}{NoRotate}%
5940 \HyField@UseFlag{F}{NoView}%
5941 \HyField@UseFlag{F}{Locked}%
5942 \HyField@UseFlag{F}{ToggleNoView}%
5943 \HyField@UseFlag{F}{LockedContents}%
5944 \HyField@PrintFlags{F}{#1}%
5945 \bitsetIsEmpty{HyField@F}{%
5946 \let\Fld@annotflags\ltx@empty
5947 }{%
5948 \edef\Fld@annotflags{/F \bitsetGetDec{HyField@F}}%
5949 }%
5950 }

```

20.1.4 Pushbutton field

\HyField@FlagsPushButton

```

5951 \def\HyField@FlagsPushButton{%

```



```

5952 \HyField@FlagsAnnot{push button field}%
5953 \bitsetReset{HyField@Ff}%
5954 \HyField@UseFlag{Ff}{ReadOnly}%
5955 \HyField@UseFlag{Ff}{Required}%
5956 \HyField@UseFlag{Ff}{NoExport}%
5957 \HyField@SetFlag{Ff}{Pushbutton}%
5958 \HyField@PrintFlags{Ff}{push button field}%
5959 \bitsetIsEmpty{HyField@Ff}{%
5960   \let\Fld@flags\ltx@empty
5961 }{%
5962   \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
5963 }%
5964 }

```

20.1.5 Check box field

\HyField@FlagsCheckBox

```

5965 \def\HyField@FlagsCheckBox{%
5966   \HyField@FlagsAnnot{check box field}%
5967   \bitsetReset{HyField@Ff}%
5968   \HyField@UseFlag{Ff}{ReadOnly}%
5969   \HyField@UseFlag{Ff}{Required}%
5970   \HyField@UseFlag{Ff}{NoExport}%
5971   \HyField@PrintFlags{Ff}{check box field}%
5972   \bitsetIsEmpty{HyField@Ff}{%
5973     \let\Fld@flags\ltx@empty
5974   }{%
5975     \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
5976   }%
5977 }

```

20.1.6 Radio button field

\HyField@FlagsRadioButton

```

5978 \def\HyField@FlagsRadioButton{%
5979   \HyField@FlagsAnnot{radio button field}%
5980   \bitsetReset{HyField@Ff}%
5981   \HyField@UseFlag{Ff}{ReadOnly}%
5982   \HyField@UseFlag{Ff}{Required}%
5983   \HyField@UseFlag{Ff}{NoExport}%
5984   \HyField@UseFlag{Ff}{NoToggleToOff}%
5985   \HyField@SetFlag{Ff}{Radio}%
5986   \HyField@UseFlag{Ff}{RadiosInUnison}%
5987   \HyField@PrintFlags{Ff}{radio button field}%
5988   \bitsetIsEmpty{HyField@Ff}{%
5989     \let\Fld@flags\ltx@empty
5990   }{%
5991     \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
5992   }%
5993 }

```

20.1.7 Text fields

\HyField@FlagsText

```

5994 \def\HyField@FlagsText{%
5995   \HyField@FlagsAnnot{text field}%
5996   \bitsetReset{HyField@Ff}%

```



```

5997 \HyField@UseFlag{Ff}{ReadOnly}%
5998 \HyField@UseFlag{Ff}{Required}%
5999 \HyField@UseFlag{Ff}{NoExport}%
6000 \HyField@UseFlag{Ff}{Multiline}%
6001 \HyField@UseFlag{Ff}{Password}%
6002 \HyField@UseFlag{Ff}{FileSelect}%
6003 \HyField@UseFlag{Ff}{DoNotSpellCheck}%
6004 \HyField@UseFlag{Ff}{DoNotScroll}%
6005 \ifFld@comb
6006 \ifcase0\ifFld@multiline
6007 \else\ifFld@password
6008 \else\ifFld@fileselect
6009 \else 1\fi\fi\fi\relax
6010 \Hy@Error{%
6011 Field option `comb' cannot used together with\MessageBreak
6012 `multiline', `password', or `fileselect'%
6013 }\@ehc
6014 \else
6015 \HyField@UseFlag{Ff}{Comb}%
6016 \fi
6017 \fi
6018 \HyField@UseFlag{Ff}{RichText}%
6019 \HyField@PrintFlags{Ff}{text field}%
6020 \bitsetIsEmpty{HyField@Ff}{%
6021 \let\Fld@flags\ltx@empty
6022 }{%
6023 \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
6024 }%
6025 }

```

20.1.8 Choice fields

\HyField@FlagsChoice

```

6026 \def\HyField@FlagsChoice{%
6027 \HyField@FlagsAnnot{choice field}%
6028 \bitsetReset{HyField@Ff}%
6029 \HyField@UseFlag{Ff}{ReadOnly}%
6030 \HyField@UseFlag{Ff}{Required}%
6031 \HyField@UseFlag{Ff}{NoExport}%
6032 \HyField@UseFlag{Ff}{Combo}%
6033 \ifFld@combo
6034 \HyField@UseFlag{Ff}{Edit}%
6035 \fi
6036 \HyField@UseFlag{Ff}{Sort}%
6037 \HyField@UseFlag{Ff}{MultiSelect}%
6038 \ifFld@combo
6039 \ifFld@edit
6040 \HyField@UseFlag{Ff}{DoNotSpellCheck}%
6041 \fi
6042 \fi
6043 \HyField@UseFlag{Ff}{CommitOnSelChange}%
6044 \HyField@PrintFlags{Ff}{choice field}%
6045 \bitsetIsEmpty{HyField@Ff}{%
6046 \let\Fld@flags\ltx@empty
6047 }{%
6048 \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
6049 }%

```


6050 }

20.2 Choice field

`\HyField@PDFChoices` #1: list of choices in key value syntax, key = exported name, value = displayed text.

Input: `\Fld@default`, `\Fld@value`, `\ifFld@multiselect`

Result: `\Fld@choices` with entries: `/Opt`, `/DV`, `/V`, `/I`.

```
6051 \def\HyField@PDFChoices#1{%
6052   \begingroup
6053   \global\let\Fld@choices\ltx@empty
6054   \let\HyTmp@optlist\ltx@empty
6055   \let\HyTmp@optitem\relax
6056   \count@=0 %
6057   \kv@parse{#1}{%
6058     \Hy@pdfstringdef\kv@key\kv@key
6059     \ifx\kv@value\relax
6060       \ifnum\Hy@pdfversion<3 % implementation note 122, PDF spec 1.7
6061         \xdef\Fld@choices{\Fld@choices(\kv@key)(\kv@key)}%
6062       \else
6063         \xdef\Fld@choices{\Fld@choices(\kv@key)}%
6064       \fi
6065     \else
6066       \Hy@pdfstringdef\kv@value\kv@value
6067       \xdef\Fld@choices{\Fld@choices(\kv@value)(\kv@key)}%
6068     \fi
6069   \edef\HyTmp@optlist{%
6070     \HyTmp@optlist
6071     \HyTmp@optitem{\the\count@}{\kv@key}0%
6072   }%
6073   \advance\count@ by 1 %
6074   \@gobbletwo
6075 }%
6076 \xdef\Fld@choices{/Opt[\Fld@choices]}%
6077 \ifFld@multiselect
6078   \HyField@@PDFChoices{DV}\Fld@default
6079   \HyField@@PDFChoices{V}\Fld@value
6080 \else
6081   \ifx\Fld@default\relax
6082   \else
6083     \pdfstringdef\Hy@gtemp\Fld@default
6084     \xdef\Fld@choices{\Fld@choices/DV(\Hy@gtemp)}%
6085   \fi
6086   \ifx\Fld@value\relax
6087   \else
6088     \pdfstringdef\Hy@gtemp\Fld@value
6089     \xdef\Fld@choices{\Fld@choices/V(\Hy@gtemp)}%
6090   \fi
6091 \fi
6092 \endgroup
6093 }
```

`\HyField@@PDFChoices`

```
6094 \def\HyField@@PDFChoices#1#2{%
6095   \ifx#2\relax
6096   \else
6097     \count@=0 %
```



```

6098 \def\HyTmp@optitem##1##2##3{%
6099 \def\HyTmp@key{##2}%
6100 \ifx\HyTmp@key\Hy@gtemp
6101 \expandafter\def\expandafter\HyTmp@optlist\expandafter{%
6102 \HyTmp@optlist
6103 \HyTmp@optitem{##1}{##2}1%
6104 }%
6105 \let\HyTmp@found=Y%
6106 \else
6107 \expandafter\def\expandafter\HyTmp@optlist\expandafter{%
6108 \HyTmp@optlist
6109 \HyTmp@optitem{##1}{##2}##3%
6110 }%
6111 \fi
6112 }%
6113 \expandafter\comma@parse\expandafter{#2}{%
6114 \pdfstringdef\Hy@gtemp\comma@entry
6115 \let\HyTmp@found=N %
6116 \expandafter\let\expandafter\HyTmp@optlist\expandafter\@empty
6117 \HyTmp@optlist
6118 \ifx\HyTmp@found Y%
6119 \advance\count@ by 1 %
6120 \else
6121 \@onelevel@sanitize\comma@entry
6122 \PackageWarning{hyperref}{%
6123 \string\ChoiceBox: Ignoring value `\'comma@entry',%
6124 \MessageBreak
6125 it cannot be found in the choices%
6126 }%
6127 \fi
6128 \@gobble
6129 }%
6130 \def\HyTmp@optitem##1##2##3{%
6131 \ifnum##3=1 %
6132 (##2)%
6133 \fi
6134 }%
6135 \ifcase\count@
6136 \or
6137 \xdef\Fld@choices{\Fld@choices/#1\HyTmp@optlist}%
6138 \else
6139 \xdef\Fld@choices{\Fld@choices/#1[\HyTmp@optlist]}%
6140 \ifx#1V%
6141 \def\HyTmp@optitem##1##2##3{%
6142 \ifnum##3=1 %
6143 \@firstofone{ ##1}%
6144 \fi
6145 }%
6146 \edef\HyTmp@optlist{\HyTmp@optlist}%
6147 \xdef\Fld@choices{%
6148 \Fld@choices
6149 /I[\expandafter\@firstofone\HyTmp@optlist]%
6150 }%
6151 \fi
6152 \fi
6153 \fi
6154 }

```


20.3 Forms

\HyField@SetKeys

```

6155 \def\HyField@SetKeys{%
6156   \kvsetkeys{Field}%
6157 }

6158 \newif\ifFld@checked
6159 \newif\ifFld@disabled
6160 \Fld@checkedfalse
6161 \Fld@disabledfalse
6162 \newcount\Fld@menulength
6163 \newdimen\Fld@Width
6164 \newdimen\Fld@charsize
6165 \Fld@charsize=10\p@
6166 \def\Fld@maxlen{0}
6167 \def\Fld@align{0}
6168 \def\Fld@color{0 0 0 rg}
6169 \def\Fld@bcolor{1 1 1}
6170 \def\Fld@bordercolor{1 0 0}
6171 \def\Fld@bordersep{1\p@}
6172 \def\Fld@borderwidth{1}
6173 \def\Fld@borderstyle{S}
6174 \def\Fld@cbsymbol{4}
6175 \def\Fld@radiosymbol{H}
6176 \def\Fld@rotation{0}
6177 \def\Form{\@ifnextchar[{\@Form}{\@Form[]}}
6178 \def\endForm{\@endForm}
6179 \newif\ifForm@html
6180 \Form@htmlfalse
6181 \def\Fld@boolkey#1#2{%
6182   \csname Form@#2\ifx\relax#1\relax true\else#1\fi\endcsname
6183 }
6184 \define@key{Form}{action}{%
6185   \hyper@normalise\Hy@DefFormAction{#1}%
6186 }
6187 \def\Hy@DefFormAction{\def\Fld@action}
6188 \def\enc@html{html}
6189 \define@key{Form}{encoding}{%
6190   \def\Hy@tempa{#1}%
6191   \ifx\Hy@tempa\enc@html
6192     \Form@htmltrue
6193   \def\Fld@export{html}%
6194   \else
6195     \Hy@Warning{%
6196       Form `encoding' key with \MessageBreak
6197       unknown value `#1'%
6198     }%
6199     \Form@htmlfalse
6200   \fi
6201 }
6202 \define@key{Form}{method}{%
6203   \lowercase{\def\Hy@temp{#1}}%
6204   \@ifundefined{Form@method@\Hy@temp}{%
6205     \@onelevel@sanitize\Hy@temp
6206     \Hy@Error{%
6207       Unknown method ``\Hy@temp'.\MessageBreak
6208       Known values are `post' and `get'%

```



```

6209   }\@ehc
6210 }{%
6211   \let\Form@method\Hy@temp
6212   \ifcase\@nameuse{Form@method@\Hy@temp} %
6213     \Fld@getmethodfalse
6214   \else
6215     \Fld@getmethodtrue
6216   \fi
6217 }%
6218 }
6219 \def\Form@method{}
6220 \@namedef{Form@method@post}{0}
6221 \@namedef{Form@method@get}{1}
6222 \newif\ifHyField@NeedAppearances
6223 \def\HyField@NeedAppearancesfalse{%
6224   \global\let\ifHyField@NeedAppearances\iffalse
6225 }
6226 \def\HyField@NeedAppearancetrue{%
6227   \global\let\ifHyField@NeedAppearances\iftrue
6228 }
6229 \HyField@NeedAppearancetrue
6230 \define@key{Form}{NeedAppearances}[true]{%
6231   \edef\Hy@tempa{#1}%
6232   \ifx\Hy@tempa\Hy@true
6233     \HyField@NeedAppearancetrue
6234   \else
6235     \ifx\Hy@tempa\Hy@false
6236       \HyField@NeedAppearancesfalse
6237     \else
6238       \Hy@Error{%
6239         Unexpected value `~\Hy@tempa'\MessageBreak
6240         of option `NeedAppearances' instead of\MessageBreak
6241         `true' or `false'%
6242       }\@ehc
6243     \fi
6244   \fi
6245 }
6246 \def\Field@boolkey#1#2{%
6247   \csname Fld@#2\ifx\relax#1\relax true\else#1\fi\endcsname
6248 }
6249 \ifHy@texht
6250   \newtoks\Field@toks
6251   \Field@toks={ }%
6252   \def\Field@addtoks#1#2{%
6253     \edef\@processme{\Field@toks{~the~\Field@toks~space #1="#2"}}%
6254     \@processme
6255   }%
6256 \else
6257   \def\Hy@WarnHTMLFieldOption#1{%
6258     \Hy@Warning{%
6259       HTML field option `~#1'\MessageBreak
6260       is ignored%
6261     }%
6262   }%
6263 \fi
6264 \def\Fld@checkequals#1=#2=#3\\{%
6265   \def\@currDisplay{#1}%

```



```

6266 \ifx\|#2\|
6267 \def\@currValue{#1}%
6268 \else
6269 \def\@currValue{#2}%
6270 \fi
6271 \expandafter\Hy@pdfstringdef\expandafter\@currValue\expandafter{\@currValue}%
6272 }
6273 \define@key{Field}{loc}{%
6274 \def\Fld@loc{#1}%
6275 }
6276 \define@key{Field}{checked}[true]{%
6277 \lowercase{\Field@boolkey{#1}}{checked}%
6278 }
6279 \define@key{Field}{disabled}[true]{%
6280 \lowercase{\Field@boolkey{#1}}{disabled}%
6281 }
6282 \ifHy@texht
6283 \define@key{Field}{accesskey}{%
6284 \Field@addtoks{accesskey}{#1}%
6285 }%
6286 \define@key{Field}{tabkey}{%
6287 \Field@addtoks{tabkey}{#1}%
6288 }%
6289 \else
6290 \define@key{Field}{accesskey}{%
6291 \Hy@WarnHTMLFieldOption{accesskey}%
6292 }%
6293 \define@key{Field}{tabkey}{%
6294 \Hy@WarnHTMLFieldOption{tabkey}%
6295 }%
6296 \fi
6297 \define@key{Field}{name}{%
6298 \def\Fld@name{#1}%
6299 }
6300 \let\Fld@altname\relax
6301 \define@key{Field}{altname}{%
6302 \def\Fld@altname{#1}%
6303 }
6304 \let\Fld@mappingname\relax
6305 \define@key{Field}{mappingname}{%
6306 \def\Fld@mappingname{#1}%
6307 }
6308 \define@key{Field}{width}{%
6309 \def\Fld@width{#1}%
6310 \Field@Width#1\setbox0=\hbox{m}%
6311 }
6312 \define@key{Field}{maxlen}{%
6313 \def\Fld@maxlen{#1}%
6314 }
6315 \define@key{Field}{menulength}{%
6316 \Field@menulength=#1\relax
6317 }
6318 \define@key{Field}{height}{%
6319 \def\Fld@height{#1}%
6320 }
6321 \define@key{Field}{charsize}{%
6322 \setlength{\Fld@charsize}{#1}%

```



```

6323 }
6324 \define@key{Field}{borderwidth}{%
6325   \Hy@defaultbp\Fld@borderwidth{#1}%
6326 }
6327 \def\Hy@defaultbp#1#2{%
6328   \begingroup
6329   \afterassignment\Hy@defaultbpAux
6330   \dimen@=#2bp\relax{#1}{#2}%
6331 }
6332 \begingroup\expandafter\expandafter\expandafter\endgroup
6333 \expandafter\ifx\csname dimexpr\endcsname\relax
6334   \def\Hy@defaultbpAux#1\relax#2#3{%
6335     \ifx!#1!%
6336       \endgroup
6337       \def#2{#3}%
6338     \else
6339       \dimen@=.99626\dimen@
6340       \edef\x{\endgroup
6341         \def\noexpand#2{%
6342           \strip@pt\dimen@
6343         }%
6344       }\x
6345       \fi
6346     }%
6347   \else
6348     \def\Hy@defaultbpAux#1\relax#2#3{%
6349       \ifx!#1!%
6350         \endgroup
6351         \def#2{#3}%
6352       \else
6353         \edef\x{\endgroup
6354           \def\noexpand#2{%
6355             \strip@pt\dimexpr\dimen@*800/803\relax
6356           }%
6357         }\x
6358         \fi
6359       }%
6360   \fi
6361 \define@key{Field}{borderstyle}{%
6362   \let\Hy@temp\Fld@borderstyle
6363   \def\Fld@borderstyle{#1}%
6364   \Hy@Match\Fld@borderstyle{}{%
6365     ~[SDBIU]$%
6366   }{}{%
6367     \Hy@Warning{%
6368       Invalid value `~\pdfborderstyle'\MessageBreak
6369       for option `pdfborderstyle'. Valid values:\MessageBreak
6370       \space\space S (Solid), D (Dashed), B (Beveled),\MessageBreak
6371       \space\space I (Inset), U (Underline)\MessageBreak
6372       Option setting is ignored%
6373     }%
6374     \let\Fld@borderstyle\Hy@temp
6375   }%
6376 }
6377 \define@key{Field}{bordersep}{%
6378   \def\Fld@bordersep{#1}%
6379 }

```



```

6380 \define@key{Field}{default}{%
6381   \Hy@pdfstringdef\Fld@default{#1}%
6382 }
6383 \define@key{Field}{align}{%
6384   \def\Fld@align{#1}%
6385 }
6386 \define@key{Field}{value}{%
6387   \Hy@pdfstringdef\Fld@value{#1}%
6388 }
6389 \define@key{Field}{checkboxsymbol}{%
6390   \Fld@DingDef\Fld@cbsymbol{#1}%
6391 }
6392 \define@key{Field}{radiosymbol}{%
6393   \Fld@DingDef\Fld@radiosymbol{#1}%
6394 }
6395 \def\Fld@DingDef#1#2{%
6396   \let\Fld@temp\ltx@empty
6397   \Fld@@@DingDef#2\ding{ }\@nil
6398   \let#1\Fld@temp
6399 }
6400 \def\Fld@@@DingDef#1\ding#2#3\@nil{%
6401   \expandafter\def\expandafter\Fld@temp\expandafter{%
6402     \Fld@temp
6403     #1%
6404   }%
6405   \ifx\\#3\\%
6406     \expandafter\@gobble
6407   \else
6408     \begingroup
6409     \lccode`0=#2\relax
6410     \lowercase{\endgroup
6411       \expandafter\def\expandafter\Fld@temp\expandafter{%
6412         \Fld@temp
6413         0%
6414       }%
6415     }%
6416     \expandafter\@firstofone
6417   \fi
6418   {%
6419     \Fld@@@DingDef#3\@nil
6420   }%
6421 }
6422 \define@key{Field}{rotation}{%
6423   \def\Fld@rotation{#1}%
6424 }
6425 \define@key{Field}{backgroundcolor}{%
6426   \HyColor@FieldBColor{#1}\Fld@bcolor{hyperref}{backgroundcolor}%
6427 }
6428 \define@key{Field}{bordercolor}{%
6429   \HyColor@FieldBColor{#1}\Fld@bordercolor{hyperref}{bordercolor}%
6430 }
6431 \define@key{Field}{color}{%
6432   \HyColor@FieldColor{#1}\Fld@color{hyperref}{color}%
6433 }
6434 \let\Fld@onclick@code\ltx@empty
6435 \let\Fld@format@code\ltx@empty

```



```

6436 \let\Fld@validate@code\ltx@empty
6437 \let\Fld@calculate@code\ltx@empty
6438 \let\Fld@keystroke@code\ltx@empty
6439 \let\Fld@onfocus@code\ltx@empty
6440 \let\Fld@onblur@code\ltx@empty
6441 \let\Fld@onmousedown@code\ltx@empty
6442 \let\Fld@onmouseup@code\ltx@empty
6443 \let\Fld@onenter@code\ltx@empty
6444 \let\Fld@onexit@code\ltx@empty
6445 \def\Hy@temp#1{%
6446   \expandafter\Hy@@temp\csname Fld@#1@code\endcsname{#1}%
6447 }
6448 \def\Hy@@temp#1#2{%
6449   \ifHy@pdfa
6450     \define@key{Field}{#2}{%
6451       \Hy@Error{%
6452         PDF/A: Additional action `#2' is prohibited%
6453       }\@ehc
6454     }%
6455   \else
6456     \define@key{Field}{#2}{%
6457       \def#1{##1}%
6458     }%
6459   \fi
6460 }
6461 \Hy@temp{keystroke}
6462 \Hy@temp{format}
6463 \Hy@temp{validate}
6464 \Hy@temp{calculate}
6465 \Hy@temp{onfocus}
6466 \Hy@temp{onblur}
6467 \Hy@temp{onenter}
6468 \Hy@temp{onexit}

6469 \let\Fld@calculate@sortkey\ltx@empty
6470 \define@key{Field}{calculatesortkey}[1]{%
6471   \def\Fld@calculate@sortkey{#1}%
6472 }

6473 \ifHy@texht
6474   \def\Hy@temp#1{%
6475     \define@key{Field}{#1}{%
6476       \Field@addtoks{#1}{##1}%
6477     }%
6478   }%
6479 \else
6480   \def\Hy@temp#1{%
6481     \define@key{Field}{#1}{%
6482       \Hy@WarnHTMLFieldOption{#1}%
6483     }%
6484   }%
6485 \fi
6486 \Hy@temp{ondblclick}
6487 \Hy@temp{onmousedown}
6488 \Hy@temp{onmouseup}
6489 \Hy@temp{onmouseover}
6490 \Hy@temp{onmousemove}
6491 \Hy@temp{onmouseout}
6492 \Hy@temp{onkeydown}

```



```

6493 \Hy@temp{onkeyup}
6494 \Hy@temp{onselect}
6495 \Hy@temp{onchange}
6496 \Hy@temp{onkeypress}
6497 \ifHy@texht
6498   \define@key{Field}{onclick}{%
6499     \Field@addtoks{onclick}{#1}%
6500   }%
6501 \else
6502   \ifHy@pdfa
6503     \define@key{Field}{onclick}{%
6504       \Hy@Error{%
6505         PDF/A: Action `onclick' is prohibited%
6506       }\@ehc
6507     }%
6508   \else
6509     \define@key{Field}{onclick}{%
6510       \def\Fld@onclick@code{#1}%
6511     }%
6512   \fi
6513 \fi

6514 \DeclareRobustCommand\TextField{%
6515   \@ifnextchar[{\@TextField}{\@TextField[]}%
6516 }
6517 \DeclareRobustCommand\ChoiceMenu{%
6518   \@ifnextchar[{\@ChoiceMenu}{\@ChoiceMenu[]}%
6519 }
6520 \DeclareRobustCommand\CheckBox{%
6521   \@ifnextchar[{\@CheckBox}{\@CheckBox[]}%
6522 }
6523 \DeclareRobustCommand\PushButton{%
6524   \@ifnextchar[{\@PushButton}{\@PushButton[]}%
6525 }
6526 \DeclareRobustCommand\Gauge{%
6527   \@ifnextchar[{\@Gauge}{\@Gauge[]}%
6528 }
6529 \DeclareRobustCommand\Submit{%
6530   \@ifnextchar[{\@Submit}{\@Submit[]}%
6531 }
6532 \DeclareRobustCommand\Reset{%
6533   \@ifnextchar[{\@Reset}{\@Reset[]}%
6534 }
6535 \def\LayoutTextField#1#2{% label, field
6536   \def\Hy@temp{#1}%
6537   \ifx\Hy@temp\@empty
6538     #2%
6539   \else
6540     #1 #2%
6541   \fi
6542 }
6543 \def\LayoutChoiceField#1#2{% label, field
6544   \def\Hy@temp{#1}%
6545   \ifx\Hy@temp\@empty
6546     #2%
6547   \else
6548     #1 #2%
6549   \fi

```



```

6550 }
6551 \def\LayoutCheckField#1#2{% label, field
6552   \def\Hy@temp{#1}%
6553   \ifx\Hy@temp\@empty
6554     #2%
6555   \else
6556     #1 #2%
6557   \fi
6558 }
6559 \def\LayoutPushButtonField#1{% button
6560   #1%
6561 }
6562 \def\MakeRadioField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
6563 \def\MakeCheckField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
6564 \def\MakeTextField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
6565 \def\MakeChoiceField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
6566 \def\MakeButtonField#1{%
6567   \sbox0{%
6568     \hskip\Fld@borderwidth bp#1\hskip\Fld@borderwidth bp%
6569   }%
6570   \@tempdima\ht0 %
6571   \advance\@tempdima by \Fld@borderwidth bp %
6572   \advance\@tempdima by \Fld@borderwidth bp %
6573   \ht0\@tempdima
6574   \@tempdima\dp0 %
6575   \advance\@tempdima by \Fld@borderwidth bp %
6576   \advance\@tempdima by \Fld@borderwidth bp %
6577   \dp0\@tempdima
6578   \box0\relax
6579 }
6580 \def\DefaultHeightofSubmit{14pt}
6581 \def\DefaultWidthofSubmit{2cm}
6582 \def\DefaultHeightofReset{14pt}
6583 \def\DefaultWidthofReset{2cm}
6584 \def\DefaultHeightofCheckBox{\normalbaselineskip}
6585 \def\DefaultWidthofCheckBox{\normalbaselineskip}
6586 \def\DefaultHeightofChoiceMenu{\normalbaselineskip}
6587 \def\DefaultWidthofChoiceMenu{\normalbaselineskip}
6588 \def\DefaultHeightofText{\normalbaselineskip}
6589 \def\DefaultHeightofTextMultiline{4\normalbaselineskip}
6590 \def\DefaultWidthofText{3cm}
6591 \def\DefaultOptionsofSubmit{print,name=Submit,noexport}
6592 \def\DefaultOptionsofReset{print,name=Reset,noexport}
6593 \def\DefaultOptionsofPushButton{print}
6594 \def\DefaultOptionsofCheckBox{print}
6595 \def\DefaultOptionsofText{print}

Default options for the types of \ChoiceMenu.
6596 \def\DefaultOptionsofListBox{print}
6597 \def\DefaultOptionsofComboBox{print,edit,sort}
6598 \def\DefaultOptionsofPopdownBox{print}
6599 \def\DefaultOptionsofRadio{print,notoggletooff}

```

21 Setup

```

6600 \ifHy@hyperfigures
6601   \Hy@Info{Hyper figures ON}%

```



```

6602 \else
6603   \Hy@Info{Hyper figures OFF}%
6604 \fi
6605 \ifHy@nesting
6606   \Hy@Info{Link nesting ON}%
6607 \else
6608   \Hy@Info{Link nesting OFF}%
6609 \fi
6610 \ifHy@hyperindex
6611   \Hy@Info{Hyper index ON}%
6612 \else
6613   \Hy@Info{Hyper index OFF}%
6614 \fi
6615 \ifHy@backref
6616   \Hy@Info{backreferencing ON}%
6617 \else
6618   \Hy@Info{backreferencing OFF}%
6619 \fi
6620 \ifHy@colorlinks
6621   \Hy@Info{Link coloring ON}%
6622 \else
6623   \Hy@Info{Link coloring OFF}%
6624 \fi
6625 \ifHy@ocgcolorlinks
6626   \Hy@Info{Link coloring with OCG ON}%
6627 \else
6628   \Hy@Info{Link coloring with OCG OFF}%
6629 \fi
6630 \ifHy@pdfa
6631   \Hy@Info{PDF/A mode ON}%
6632 \else
6633   \Hy@Info{PDF/A mode OFF}%
6634 \fi

```

22 Low-level utility macros

We need unrestricted access to the #, ~ and " characters, so make them nice macros.

```

6635 \edef\hyper@hash{\string#}
6636 \edef\hyper@tilde{\string~}
6637 \edef\hyper@quote{\string"}

```

Support \label before \begin{document}.

```

6638 \def\@currentHref{Doc-Start}
6639 \let\Hy@footnote@currentHref\@empty

```

We give the start of document a special label; this is used in backreferencing-by-section, to allow for cites before any sectioning commands. Set up PDF info.

```

6640 \Hy@AtBeginDocument{%
6641   \Hy@pdfstringtrue
6642   \PDF@SetupDoc
6643   \let\PDF@SetupDoc\@empty
6644   \Hy@DisableOption{pdfpagescrop}%
6645   \Hy@DisableOption{pdfpagemode}%
6646   \Hy@DisableOption{pdfnonfullscreenpagemode}%
6647   \Hy@DisableOption{pdfdirection}%
6648   \Hy@DisableOption{pdfviewarea}%
6649   \Hy@DisableOption{pdfviewclip}%

```



```

6650 \Hy@DisableOption{pdfprintarea}%
6651 \Hy@DisableOption{pdfprintclip}%
6652 \Hy@DisableOption{pdfprintscaling}%
6653 \Hy@DisableOption{pdfduplex}%
6654 \Hy@DisableOption{pdfpicktraybypdftype}%
6655 \Hy@DisableOption{pdfprintpagerange}%
6656 \Hy@DisableOption{pdfnumcopies}%
6657 \Hy@DisableOption{pdfstartview}%
6658 \Hy@DisableOption{pdfstartpage}%
6659 \Hy@DisableOption{pdftoolbar}%
6660 \Hy@DisableOption{pdfmenubar}%
6661 \Hy@DisableOption{pdfwindowui}%
6662 \Hy@DisableOption{pdfitwindow}%
6663 \Hy@DisableOption{pdfcenterwindow}%
6664 \Hy@DisableOption{pdfdisplaydoctitle}%
6665 \Hy@DisableOption{pdfpagelayout}%
6666 \Hy@DisableOption{pdflang}%
6667 \Hy@DisableOption{baseurl}%
6668 \ifHy@texht\else\hyper@anchorstart{Doc-Start}\hyper@anchorend\fi
6669 \Hy@pdfstringfalse
6670 }

```

Ignore star from referencing macros:

```

6671 \LetLtxMacro\NoHy@OrgRef\ref
6672 \DeclareRobustCommand*{\ref}{%
6673   \@ifstar\NoHy@OrgRef\NoHy@OrgRef
6674 }
6675 \LetLtxMacro\NoHy@OrgPageRef\pageref
6676 \DeclareRobustCommand*{\pageref}{%
6677   \@ifstar\NoHy@OrgPageRef\NoHy@OrgPageRef
6678 }

```

23 Localized nullifying of package

Sometimes we just don't want the wretched package interfering with us. Define an environment we can put in manually, or include in a style file, which stops the hypertext functions doing anything. This is used, for instance, in the Elsevier classes, to stop `hyperref` playing havoc in the front matter.

```

6679 \def\NoHyper{%
6680   \def\hyper@link@[##1]##2##3##4{##4\Hy@xspace@end}%
6681   \def\hyper@@anchor##1##2{##2\Hy@xspace@end}%
6682   \global\let\hyper@livelink\hyper@link
6683   \gdef\hyper@link###1##2##3{##3\Hy@xspace@end}%
6684   \let\hyper@anchor\ltx@gobble
6685   \let\hyper@anchorstart\ltx@gobble
6686   \def\hyper@anchorend{\Hy@xspace@end}%
6687   \let\hyper@linkstart\ltx@gobbletwo
6688   \def\hyper@linkend{\Hy@xspace@end}%
6689   \def\hyper@linkurl##1##2{##1\Hy@xspace@end}%
6690   \def\hyper@linkfile##1##2##3{##1\Hy@xspace@end}%
6691   \let\Hy@backout\@gobble
6692 }
6693 \def@stop@hyper{%
6694   \def\hyper@link@[##1]##2##3##4{##4\Hy@xspace@end}%
6695   \let\Hy@backout\@gobble
6696   \let\hyper@@anchor\ltx@gobble

```



```

6697 \def\hyper@link##1##2##3{##3\Hy@xspace@end}%
6698 \let\hyper@anchor\ltx@gobble
6699 \let\hyper@anchorstart\ltx@gobble
6700 \def\hyper@anchorend{\Hy@xspace@end}%
6701 \let\hyper@linkstart\ltx@gobbletwo
6702 \def\hyper@linkend{\Hy@xspace@end}%
6703 \def\hyper@linkurl##1##2{##1\Hy@xspace@end}%
6704 \def\hyper@linkfile##1##2##3{##1\Hy@xspace@end}%
6705 }
6706 \def\endNoHyper{%
6707 \global\let\hyper@link\hyper@livelink
6708 }
6709 \end{package}

```

24 Package nohyperref

This package is introduced by Sebastian Rahtz.

Package nohyperref is a dummy package that defines some low level and some top-level commands. It is done for jadetex, which calls hyperref low-level commands, but it would also be useful with people using normal hyperref, who really do not want the package loaded at all.

Some low-level commands:

```

6710 \*nohyperref
6711 \RequirePackage{letltxmacro}[2008/06/13]
6712 \let\hyper@@anchor\@gobble
6713 \def\hyper@link##1##2##3{##3}%
6714 \let\hyper@anchorstart\@gobble
6715 \let\hyper@anchorend\@empty
6716 \let\hyper@linkstart\@gobbletwo
6717 \let\hyper@linkend\@empty
6718 \def\hyper@linkurl##1##2{##1}%
6719 \def\hyper@linkfile##1##2##3{##1}%
6720 \def\hyper@link@[##1]##2##3{##1}%
6721 \let\PDF@SetupDoc\@empty
6722 \let\PDF@FinishDoc\@empty
6723 \def\nohyperpage#1{#1}

```

Some top-level commands:

```

6724 \def\Acrobatmenu#1#2{\leavevmode#2}
6725 \let\pdfstringdefDisableCommands\@gobbletwo
6726 \let\texorpdfstring\@firstoftwo
6727 \let\pdfbookmark\@undefined
6728 \newcommand\pdfbookmark[3]{}{}
6729 \let\phantomsection\@empty
6730 \let\hypersetup\@gobble
6731 \let\hyperbaseurl\@gobble
6732 \newcommand*{\href}[3]{}{#3}
6733 \let\hyperdef\@gobbletwo
6734 \let\hyperlink\@gobble
6735 \let\hypertarget\@gobble
6736 \def\hyperref{%
6737 \ifnextchar[\@gobbleopt{\expandafter\@gobbletwo\@gobble}%
6738 }
6739 \long\def\@gobbleopt[#1]{}
6740 \let\hyperpage\@empty

```

Ignore star from referencing macros:


```

6741 \LetLtxMacro\NoHy@OrgRef\ref
6742 \DeclareRobustCommand*{\ref}{%
6743   \@ifstar\NoHy@OrgRef\NoHy@OrgRef
6744 }
6745 \LetLtxMacro\NoHy@OrgPageRef\pageref
6746 \DeclareRobustCommand*{\pageref}{%
6747   \@ifstar\NoHy@OrgPageRef\NoHy@OrgPageRef
6748 }
6749 </nohyperref>

```

25 The Mangling Of Aux and Toc Files

Some extra tests so that the hyperref package may be removed or added to a document without having to remove .aux and .toc files (this section is by David Carlisle) All the code is delayed to `\begin{document}`

```

6750 <*package>
6751 \Hy@AtBeginDocument{%

```

First the code to deal with removing the hyperref package from a document.

Write some stuff into the aux file so if the next run is done without hyperref, then `\contentsline` and `\newlabel` are defined to cope with the extra arguments.

```

6752 \if@filesw
6753   \ifHy@typexml
6754     \immediate\closeout\@mainaux
6755     \immediate\openout\@mainaux\jobname.aux\relax
6756     \immediate\write\@auxout{<relaxxml>\relax}%
6757   \fi
6758   \immediate\write\@auxout{%
6759     \string\providecommand\string\HyperFirstAtBeginDocument{%
6760       \string\AtBeginDocument}^^J%
6761     \string\HyperFirstAtBeginDocument{%
6762       \string\ifx\string\hyper@anchor\string\@undefined^^J%
6763       \string\global\string\let\string\oldcontentsline\string\contentsline^^J%
6764       \string\gdef\string\contentsline%
6765         \string#1\string#2\string#3\string#4{%
6766           \string\oldcontentsline%
6767             {\string#1}{\string#2}{\string#3}}^^J%
6768       \string\global\string\let\string\oldnewlabel\string\newlabel^^J%
6769       \string\gdef\string\newlabel\string#1\string#2{%
6770         \string\newlabelxx{\string#1}\string#2}^^J%
6771       \string\gdef\string\newlabelxx%
6772         \string#1\string#2\string#3\string#4\string#5\string#6{%
6773         \string\oldnewlabel{\string#1}{\string#2}{\string#3}}^^J%

```

But the new aux file will be read again at the end, with the normal definitions expected, so better put things back as they were.

```

6774     \string\AtEndDocument{%
6775       \string\ifx\string\hyper@anchor\string\@undefined^^J%
6776       \string\let\string\contentsline\string\oldcontentsline^^J%
6777       \string\let\string\newlabel\string\oldnewlabel^^J%
6778       \string\fi%
6779     }^^J%

```

If the document is being run with hyperref put this definition into the aux file, so we can spot it on the next run.

```

6780     \string\fi%
6781   }^^J%

```



```

6782 \string\global\string\let\string\hyper@last\relax^^J%
6783 \string\gdef\string\HyperFirstAtBeginDocument\string#1{\string#1}%
6784 }%
6785 \fi
6786 \let\HyperFirstAtBeginDocument\ltx@firstofone

```

Now the code to deal with adding the hyperref package to a document with aux and toc written the standard way.

If hyperref was used last time, do nothing. If it was not used, or an old version of hyperref was used, don't use that TOC at all but generate a warning. Not ideal, but better than failing with pre-5.0 hyperref TOCs.

```

6787 \ifx\hyper@last\@undefined
6788 \def\@starttoc#1{%
6789 \begingroup
6790 \makeatletter
6791 \ltx@ifpackageloaded{parskip}{\parskip\z@}{}%
6792 \IfFileExists{\jobname.#1}{%
6793 \Hy@WarningNoLine{%
6794 old #1 file detected, not used; run LaTeX again%
6795 }%
6796 }{}%
6797 \if@filesw
6798 \expandafter\newwrite\csname tf@#1\endcsname
6799 \immediate\openout\csname tf@#1\endcsname \jobname.#1\relax
6800 \fi
6801 \@nobreakfalse
6802 \endgroup
6803 }%
6804 \def\newlabel#1#2{\@newl@bel r{#1}{#2}{}{}{}}%
6805 \fi
6806 }

```

26 Title strings

If options `pdftitle` and `pdfauthor` are not used, these informations for the pdf information dictionary can be extracted by the `\title` and `\author`.

```

6807 \ifHy@pdfusetitle
6808 \let\HyOrg@title\title
6809 \let\HyOrg@author\author
6810 \def\title{\@ifnextchar[{\Hy@scanopttitle}{\Hy@scantitle}}%
6811 \def\Hy@scanopttitle[#1]{%
6812 \gdef\Hy@title{#1}%
6813 \HyOrg@title[{#1}]%
6814 }%
6815 \def\Hy@scantitle#1{%
6816 \gdef\Hy@title{#1}%
6817 \HyOrg@title{#1}%
6818 }%
6819 \def\author{\@ifnextchar[{\Hy@scanoptauthor}{\Hy@scanauthor}}%
6820 \def\Hy@scanoptauthor[#1]{%
6821 \gdef\Hy@author{#1}%
6822 \HyOrg@author[{#1}]%
6823 }%
6824 \def\Hy@scanauthor#1{%
6825 \gdef\Hy@author{#1}%
6826 \HyOrg@author{#1}%

```


6827 }%

The case, that `\title`, or `\author` are given before `hyperref` is loaded, is much more complicate, because LaTeX initializes the macros `\@title` and `\@author` with LaTeX error and warning messages.

```

6828 \begingroup
6829 \def\process@me#1\@nil#2{%
6830 \expandafter\let\expandafter\x\csname @#2\endcsname
6831 \edef\y{\expandafter\strip@prefix\meaning\x}%
6832 \def\c##1##2\@nil{%
6833 \ifx\\##1\\%
6834 \else
6835 \expandafter\gdef\csname Hy@#2\expandafter\endcsname
6836 \expandafter{\x}%
6837 \fi
6838 }%
6839 \expandafter\c\y\relax#1\@nil
6840 }%
6841 \expandafter\process@me\string\@latex@\@nil{title}%
6842 \expandafter\process@me\string\@latex@\@nil{author}%
6843 \endgroup
6844 \fi
6845 \Hy@DisableOption{pdfusetitle}

```

Macro `\Hy@UseMaketitleInfos` is used in the driver files, before the information entries are used.

The newline macro `\newline` or `\\` is much more complicate. In the title a good replacement can be a space, but can be already a space after `\\` in the title string. So this space is removed by scanning for the next non-empty argument.

In the macro `\author` the newline can perhaps separate the different authors, so the newline expands here to a comma with space.

The possible arguments such as space or the optional argument after the newline macros are not detected.

A possible ¹ removes its argument.

```

6846 \def\Hy@UseMaketitleString#1{%
6847 \ltx@ifundefined{Hy@#1}{-}{%
6848 \begingroup
6849 \let\Hy@saved@hook\pdfstringdefPreHook
6850 \pdfstringdefDisableCommands{%
6851 \expandafter\let\expandafter\\\csname Hy@newline@#1\endcsname
6852 \let\newline\\%
6853 \def\and{; }%
6854 \let\thanks\@gobble%
6855 }%
6856 \expandafter\ifx\csname @pdf#1\endcsname\@empty
6857 \expandafter\pdfstringdef\csname @pdf#1\endcsname{%
6858 \csname Hy@#1\endcsname\@empty
6859 }%
6860 \fi
6861 \global\let\pdfstringdefPreHook\Hy@saved@hook
6862 \endgroup
6863 }%
6864 }
6865 \def\Hy@newline@title#1{ #1}
6866 \def\Hy@newline@author#1{, #1}
6867 \def\Hy@UseMaketitleInfos{%
6868 \Hy@UseMaketitleString{title}%

```



```

6869 \Hy@UseMaketitleString{author}%
6870 }

```

27 Page numbers

This stuff is done by Heiko Oberdiek.

28 Every page

```

6871 \RequirePackage{atbegshi}[2007/09/09]
6872 \let\Hy@EveryPageHook\ltx@empty
6873 \let\Hy@EveryPageBoxHook\ltx@empty
6874 \let\Hy@FirstPageHook\ltx@empty
6875 \AtBeginShipout{%
6876   \Hy@EveryPageHook
6877   \ifx\Hy@EveryPageBoxHook\ltx@empty
6878   \else
6879     \setbox\AtBeginShipoutBox=\vbox{%
6880       \offinterlineskip
6881       \Hy@EveryPageBoxHook
6882       \box\AtBeginShipoutBox
6883     }%
6884   \fi
6885 }
6886 \ltx@iffileloaded{hpdftex.def}{%
6887   \AtBeginShipout{%
6888     \Hy@FirstPageHook
6889     \global\let\Hy@FirstPageHook\ltx@empty
6890   }%
6891 }{%
6892   \AtBeginShipoutFirst{%
6893     \Hy@FirstPageHook
6894   }%
6895 }
6896 \g@addto@macro\Hy@FirstPageHook{%
6897   \PDF@FinishDoc
6898   \global\let\PDF@FinishDoc\ltx@empty
6899 }

```

28.1 PDF /PageLabels

Internal macros of this module are marked with \HyPL@.

```

6900 \ifHy@pdfpagelabels
6901   \begingroup\expandafter\expandafter\expandafter\endgroup
6902   \expandafter\ifx\csname thepage\endcsname\relax
6903     \Hy@pdfpagelabelsfalse
6904     \Hy@WarningNoLine{%
6905       Option `pdfpagelabels' is turned off\MessageBreak
6906       because \string\thepage\space is undefined%
6907     }%
6908     \csname fi\endcsname
6909     \csname iffalse\expandafter\endcsname
6910   \fi

```

\thispdfpagelabel The command \thispdfpagelabel allows to label a special page without the redefinition of \thepage for the page.


```

6911 \def\thispdfpagelabel#1{%
6912   \gdef\HyPL@thisLabel{#1}%
6913 }%
6914 \global\let\HyPL@thisLabel\relax

```

`\HyPL@Labels` The page labels are collected in `\HyPL@Labels` and set at the end of the document.

```

6915 \let\HyPL@Labels\ltx@empty

```

`\Hy@abspage` We have to know the the absolute page number and introduce a new counter for that.

```

6916 \newcount\Hy@abspage
6917 \Hy@abspage=0 %

```

For comparisons with the values of the previous page, some variables are needed:

```

6918 \def\HyPL@LastType{init}%
6919 \def\HyPL@LastNumber{0}%
6920 \let\HyPL@LastPrefix\ltx@empty

```

Definitions for the PDF names of the L^AT_EX pendants.

```

6921 \def\HyPL@arabic{D}%
6922 \def\HyPL@Roman{R}%
6923 \def\HyPL@roman{r}%
6924 \def\HyPL@Alph{A}%
6925 \def\HyPL@alph{a}%

6926 \let\HyPL@SlidesSetPage\ltx@empty
6927 \ltx@ifclassloaded{slides}{%
6928   \def\HyPL@SlidesSetPage{%
6929     \advance\c@page\ltx@one
6930     \ifnum\value{page}>\ltx@one
6931       \protected@edef\HyPL@SlidesOptionalPage{%
6932         \Hy@SlidesFormatOptionalPage{\thepage}%
6933       }%
6934     \else
6935       \let\HyPL@SlidesOptionalPage\ltx@empty
6936     \fi
6937     \advance\c@page-\ltx@one
6938     \def\HyPL@page{%
6939       \csname the\Hy@SlidesPage\endcsname
6940       \HyPL@SlidesOptionalPage
6941     }%
6942   }%
6943 }{}%

```

`\HyPL@EveryPage` If a page is shipout and the page number is known, `\HyPL@EveryPage` has to be called. It stores the current page label.

```

6944 \def\HyPL@EveryPage{%
6945   \begingroup
6946   \ifx\HyPL@thisLabel\relax
6947     \let\HyPL@page\thepage
6948     \HyPL@SlidesSetPage
6949   \else
6950     \let\HyPL@page\HyPL@thisLabel
6951     \global\let\HyPL@thisLabel\relax
6952   \fi
6953   \let\HyPL@Type\relax
6954   \ifnum\c@page>0 %
6955     \ifx\HyPL@SlidesSetPage\ltx@empty

```



```

6956     \expandafter\HyPL@CheckThePage\HyPL@page\@nil
6957     \fi
6958   \fi
6959   \let\Hy@temp Y%
6960   \ifx\HyPL@Type\HyPL@LastType
6961   \else
6962     \let\Hy@temp N%
6963   \fi
6964   \ifx\HyPL@Type\relax
6965     \pdfstringdef\HyPL@Prefix{\HyPL@page}%
6966   \else
6967     \pdfstringdef\HyPL@Prefix\HyPL@Prefix
6968   \fi
6969   \ifx\HyPL@Prefix\HyPL@LastPrefix
6970   \else
6971     \let\Hy@temp N%
6972   \fi
6973   \if Y\Hy@temp
6974     \advance\c@page by -1 %
6975     \ifnum\HyPL@LastNumber=\the\c@page\relax
6976     \else
6977       \let\Hy@temp N%
6978     \fi
6979     \Hy@StepCount\c@page
6980   \fi
6981   \if N\Hy@temp
6982     \ifx\HyPL@Type\relax
6983       \HyPL@StorePageLabel{/P(\HyPL@Prefix)}%
6984     \else
6985       \HyPL@StorePageLabel{%
6986         \ifx\HyPL@Prefix\@empty
6987         \else
6988           /P(\HyPL@Prefix)%
6989         \fi
6990         /S/\csname HyPL\HyPL@Type\endcsname
6991         \ifnum\the\c@page=1 %
6992         \else
6993           \space/St \the\c@page
6994         \fi
6995       }%
6996     \fi
6997   \fi
6998   \xdef\HyPL@LastNumber{\the\c@page}%
6999   \global\let\HyPL@LastType\HyPL@Type
7000   \global\let\HyPL@LastPrefix\HyPL@Prefix
7001   \endgroup
7002   \Hy@GlobalStepCount\Hy@abspage
7003 }%

```

`\HyPL@CheckThePage` Macro `\HyPL@CheckThePage` calls `\HyPL@@CheckThePage` that does the job.

```

7004 \def\HyPL@CheckThePage#1\@nil{%
7005   \HyPL@@CheckThePage{#1}#1\csname\endcsname\c@page\@nil
7006 }%

```

`\HyPL@@CheckThePage` The first check is, is `\thepage` is defined such as in L^AT_EX, e.g.: `\csname @arabic\endcsname\c@page`. In the current implementation the check fails, if there is another `\csname` before.

The second check tries to detect `\arabic{page}` at the end of the definition text of `\thepage`.

```

7007 \def\HyPL@@CheckThePage#1#2\csname#3\endcsname\c@page#4\@nil{%
7008   \def\Hy@tempa{#4}%
7009   \def\Hy@tempb{\csname\endcsname\c@page}%
7010   \ifx\Hy@tempa\Hy@tempb
7011     \expandafter\ifx\csname HyPL#3\endcsname\relax
7012     \else
7013       \def\HyPL@Type{#3}%
7014       \def\HyPL@Prefix{#2}%
7015       \fi
7016     \else
7017       \begingroup
7018       \let\Hy@next\endgroup
7019       \let\HyPL@found\@undefined
7020       \def\arabic{\HyPL@Format{arabic}}%
7021       \def\Roman{\HyPL@Format{Roman}}%
7022       \def\roman{\HyPL@Format{roman}}%
7023       \def\Alph{\HyPL@Format{Alph}}%
7024       \def\alph{\HyPL@Format{alph}}%
7025       \protected@edef\Hy@temp{#1}%
7026       \ifx\HyPL@found\relax
7027         \toks@{\expandafter{\Hy@temp}}%
7028         \edef\Hy@next{\endgroup
7029           \noexpand\HyPL@@@CheckThePage\the\toks@
7030           \noexpand\HyPL@found\relax\noexpand\@nil
7031         }%
7032       \fi
7033       \Hy@next
7034     \fi
7035   }%

```

`\HyPL@Format` The help macro `\HyPL@Format` is executed while a `\protected@edef` in the second check method of `\HyPL@@CheckPage`. The first occurrences of, for example, `\arabic{page}` is marked by `\HyPL@found` that is also defined by `\csname`.

```

7036 \def\HyPL@Format#1#2{%
7037   \ifx\HyPL@found\@undefined
7038     \expandafter\ifx\csname c@#2\endcsname\c@page
7039       \expandafter\noexpand\csname HyPL@found\endcsname{#1}%
7040     \else
7041       \expandafter\noexpand\csname#1\endcsname{#2}%
7042     \fi
7043   \else
7044     \expandafter\noexpand\csname#1\endcsname{#2}%
7045   \fi
7046 }%

```

`\HyPL@@@CheckThePage` If the second check method is successful, `\HyPL@@@CheckThePage` scans the result of `\HyPL@Format` and stores the found values.

```

7047 \def\HyPL@@@CheckThePage#1\HyPL@found#2#3\@nil{%
7048   \def\Hy@tempa{#3}%
7049   \def\Hy@tempb{\HyPL@found\relax}%
7050   \ifx\Hy@tempa\Hy@tempb
7051     \def\HyPL@Type{#2}%
7052     \def\HyPL@Prefix{#1}%
7053   \fi
7054 }%

```


`\HyPL@StorePageLabel` Dummy for drivers that does not support `/PageLabel`.

```

7055 \providecommand*\HyPL@StorePageLabel}[1]{}%

\HyPL@Useless The /PageLabels entry does not make sense, if the absolute page numbers and the
page labels are the same. Then \HyPL@Labels has the meaning of \HyPL@Useless.
7056 \def\HyPL@Useless{0<</S/D>>}%
7057 \@onelevel@sanitize\HyPL@Useless

\HyPL@SetPageLabels The page labels are written to the PDF catalogue. The command \Hy@PutCatalog
is defined in the driver files.
7058 \def\HyPL@SetPageLabels{%
7059   \@onelevel@sanitize\HyPL@Labels
7060   \ifx\HyPL@Labels\@empty
7061   \else
7062     \ifx\HyPL@Labels\HyPL@Useless
7063     \else
7064       \Hy@PutCatalog{/PageLabels<</Nums[\HyPL@Labels]>>}%
7065     \fi
7066   \fi
7067 }%

7068 \g@addto@macro\Hy@EveryPageHook{\HyPL@EveryPage}%
7069 \fi

Option ‘pdfpagelabels’ has been used and is now disabled.
7070 \Hy@DisableOption{pdfpagelabels}
7071 \</package>

```

28.1.1 pdfTeX and VTeX

Because of pdfTeX’s `\pdfcatalog` command the `/PageLabels` entry can set at end of document in the first run.

```

\Hy@PutCatalog
7072 \<{*pdfTeX}>
7073 \pdf@ifdraftmode{%
7074   \let\Hy@PutCatalog\ltx@gobble
7075 }{%
7076   \let\Hy@PutCatalog\pdfcatalog
7077 }
7078 \</pdfTeX>

```

The code for VTeX is more complicate, because it does not allow the direct access to the `/Catalog` object. The command scans its argument and looks for a `/PageLabels` entry.

VTeX 6.59g is the first version, that implements `\special{!pdfpagelabels...}`. For this version `\VTeXversion` reports 660.

```

7079 \<{*vTeX}>
7080 \providecommand*\XR@ext{pdf}
7081 \edef\Hy@VTeXversion{%
7082   \ifx\VTeXversion\@undefined
7083     \z@
7084   \else
7085     \ifx\VTeXversion\relax
7086     \z@

```



```

7087 \else
7088 \VTeXversion
7089 \fi
7090 \fi
7091 }
7092 \begingroup
7093 \ifnum\Hy@VTeXversion<660 %
7094 \gdef\Hy@PutCatalog#1{%
7095 \Hy@WarningNoLine{%
7096 VTeX 6.59g or above required for pdfpagelabels%
7097 }%
7098 }%
7099 \else
7100 \gdef\Hy@PutCatalog#1{%
7101 \Hy@vt@PutCatalog#1/PageLabels<<>>\@nil
7102 }%
7103 \gdef\Hy@vt@PutCatalog#1/PageLabels<<#2>>#3\@nil{%
7104 \ifx\#2\%
7105 \else
7106 \immediate\special{!pdfpagelabels #2}%
7107 \fi
7108 }%
7109 \fi
7110 \endgroup
7111 </vtex>

7112 <*pdfTeX | vtex>

```

`\HyPL@StorePageLabel` This macro adds the entry #1 to `\HyPL@Labels`.

```

7113 \ifHy@pdfpagelabels
7114 \def\HyPL@StorePageLabel#1{%
7115 \toks@ \expandafter{\HyPL@Labels}%
7116 \xdef\HyPL@Labels{%
7117 \the\toks@
7118 \the\Hy@abspage<<#1>>%
7119 }%
7120 }%

```

Package `atveryend` is used to get behind the final `\clearpage` and to avoid a `\clearpage` in `\AtEndDocument`. Then the PDF catalog entry for `\PageLabels` is set.

```

7121 \RequirePackage{atveryend}[2009/12/07]%
7122 \AtVeryEndDocument{%
7123 \HyPL@SetPageLabels
7124 }%

7125 \fi
7126 </pdfTeX | vtex>

```

28.1.2 xetex

```

7127 <*xetex>
7128 \HyPsd@LoadUnicode
7129 \Hy@unicodetrue
7130 \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@unicode
7131 \else
7132 \let\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
7133 \fi

```



```

7134 \HyPsd@LoadStringEnc
7135 \define@key{Hyp}{unicode}[true]{%
7136   \Hy@boolkey{unicode}{#1}%
7137   \ifHy@unicode
7138   \else
7139     \Hy@Warning{%
7140       XeTeX driver only supports `unicode=true'. Ignoring\MessageBreak
7141       option setting `unicode=false'%
7142     }%
7143   \Hy@unicodetrue
7144   \fi
7145 }
7146 \define@key{Hyp}{pdfencoding}{%
7147   \edef\HyPsd@temp{#1}%
7148   \ifx\HyPsd@temp\HyPsd@pdfencoding@unicode
7149     \let\HyPsd@pdfencoding\HyPsd@temp
7150   \else
7151     \ifx\HyPsd@temp\HyPsd@pdfencoding@auto
7152       \let\HyPsd@pdfencoding\HyPsd@temp
7153     \else
7154       \Hy@Warning{%
7155         XeTeX driver only supports\MessageBreak
7156         `pdfencoding=unicode|auto'. Ignoring option\MessageBreak
7157         setting `pdfencoding=\HyPsd@temp'%
7158       }%
7159     \fi
7160   \fi
7161 }
7162 \let\HyXeTeX@CheckUnicode\relax

```

Since 2016 (x)dvipdfmx has a special to control the spacing of annotation borders.
So let's make use of it:

```

7163 \def\setpdfinkmargin#1{%
7164   \begingroup
7165   \setlength{\dimen@}{#1}%
7166   \special{dvipdfmx:config g \strip@pt\dimen@}%
7167   \endgroup}
7168 \</xetex>

```

28.1.3 pdfmarkbase, dvipdfm, xetex

```

7169 \<*pdfmarkbase>
7170 \begingroup
7171 \@ifundefined{headerps@out}{-}{%
7172   \toks@\expandafter{\Hy@FirstPageHook}%
7173   \xdef\Hy@FirstPageHook{%
7174     \noexpand\headerps@out{%
7175       systemdict /pdfmark known%
7176       {%
7177         userdict /?pdfmark systemdict /exec get put%
7178       }{%
7179         userdict /?pdfmark systemdict /pop get put %
7180         userdict /pdfmark systemdict /cleartomark get put%
7181       }%
7182     }%
7183   }%
7184   \the\toks@
7185 }%
7186 }%

```



```

7187 \endgroup
7188 \</pdfmarkbase>

\Hy@PutCatalog
7189 \<dvipdfm | xetex>\def\Hy@PutCatalog#1{\@pdfmark{docview <<#1>>}}
7190 \<*pdfmarkbase>
7191 \def\Hy@PutCatalog#1{%
7192   \pdfmark{pdfmark=/PUT,Raw={\string{Catalog\string} <<#1>>}}%
7193 }
7194 \</pdfmarkbase>

7195 \<*pdfmarkbase | dvipdfm | xetex>
7196 \ifHy@pdfpagelabels

```

\HyPL@StorePageLabel This macro writes a string to the .aux file.

```

7197 \def\HyPL@StorePageLabel#1{%
7198   \if@filesw
7199     \begingroup
7200     \edef\Hy@tempa{\the\Hy@abspage<<#1>>}%
7201     \immediate\write\@mainaux{%
7202       \string\HyPL@Entry{\Hy@tempa}%
7203     }%
7204     \endgroup
7205   \fi
7206 }%

```

Write a dummy definition of \HyPL@Entry for the case, that the next run is done without hyperref. A marker for the rerun warning is set and the /PageLabels is written.

```

7207 \Hy@AtBeginDocument{%
7208   \if@filesw
7209     \immediate\write\@mainaux{%
7210       \string\providecommand\string*\string\HyPL@Entry[1]{}%
7211     }%
7212   \fi
7213   \ifx\HyPL@Labels\@empty
7214     \Hy@WarningNoLine{Rerun to get /PageLabels entry}%
7215   \else
7216     \HyPL@SetPageLabels
7217   \fi
7218   \let\HyPL@Entry\@gobble
7219 }%

```

\HyPL@Entry

```

7220 \def\HyPL@Entry#1{%
7221   \expandafter\gdef\expandafter\HyPL@Labels\expandafter{%
7222     \HyPL@Labels
7223     #1%
7224   }%
7225 }%

7226 \fi
7227 \</pdfmarkbase | dvipdfm | xetex>

7228 \<*package>

7229 \ifx\MaybeStopEarly\relax
7230 \else
7231   \Hy@stoppeadearlytrue

```



```

7232 \expandafter\MaybeStopEarly
7233 \fi
7234 \Hy@stoppedearlyfalse

```

29 Automated L^AT_EX hypertext cross-references

Anything which can be referenced advances some counter; we overload this to put in a hypertext starting point (with no visible anchor), and make a note of that for later use in `\label`. This will fail badly if `\theH<name>` does not expand to a sensible reference. This means that classes or package which introduce new elements need to define an equivalent `\theH<name>` for every `\the<name>`. We do make a trap to make `\theH<name>` be the same as `\arabic{<name>}`, if `\theH<name>` is not defined, but this is not necessarily a good idea. Alternatively, the ‘naturalnames’ option uses whatever L^AT_EX provides, which may be useable. But then its up to you to make sure these are legal PDF and HTML names. The ‘hypertextnames=false’ option just makes up arbitrary names.

All the shenanigans is to make sure section numbers etc are always arabic, separated by dots. Who knows how people will set up `\@currentlabel`? If they put spaces in, or brackets (quite legal) then the hypertext processors will get upset.

But this is flaky, and open to abuse. Styles like `subeqn` will mess it up, for starters. Appendices are an issue, too. We just hope to cover most situations. We can at least cope with the standard sectioning structure, allowing for `\part` and `\chapter`.

Start with a fallback for equations

```

7235 \def\Hy@CounterExists#1{%
7236   \begingroup\expandafter\expandafter\expandafter\endgroup
7237   \expandafter\ifx\csname c@#1\endcsname\relax
7238     \expandafter\@gobble
7239   \else
7240     \begingroup\expandafter\expandafter\expandafter\endgroup
7241     \expandafter\ifx\csname the#1\endcsname\relax
7242       \expandafter\expandafter\expandafter\@gobble
7243     \else
7244       \expandafter\expandafter\expandafter\@firstofone
7245     \fi
7246   \fi
7247 }
7248 \Hy@CounterExists{section}{%
7249   \providecommand\theHequation{\theHsection.\arabic{equation}}}%
7250 }
7251 \Hy@CounterExists{part}{%
7252   \providecommand\theHpart{\arabic{part}}}%
7253 }
7254 \ltx@ifundefined{thechapter}{%
7255   \providecommand\theHsection   {\arabic{section}}}%
7256   \providecommand\theHfigure    {\arabic{figure}}}%
7257   \providecommand\theHtable     {\arabic{table}}}%
7258 }{%
7259   \providecommand\theHchapter   {\arabic{chapter}}}%
7260   \providecommand\theHfigure    {\theHchapter.\arabic{figure}}}%
7261   \providecommand\theHtable     {\theHchapter.\arabic{table}}}%
7262   \providecommand\theHsection   {\theHchapter.\arabic{section}}}%
7263 }
7264 \providecommand\theHsubsection  {\theHsection.\arabic{subsection}}
7265 \providecommand\theHsubsubsection{\theHsubsection.\arabic{subsubsection}}

```



```

7266 \providecommand\theHparagraph {\theHsubsubsection.\arabic{paragraph}}
7267 \providecommand\theHsubparagraph {\theHparagraph.\arabic{subparagraph}}
7268 \providecommand\theHtheorem {\theHsection.\arabic{theorem}}
7269 \providecommand\theHthm {\theHsection.\arabic{thm}}

```

Thanks to Greta Meyer (gbd@pop.cwru.edu) for making me realize that enumeration starts at 0 for every list! But `\item` occurs inside `\trivlist`, so check if its a real `\item` before incrementing counters.

```

7270 \let\H@item\item
7271 \newcounter{Item}
7272 \def\theHItem{\arabic{Item}}
7273 \def\item{%
7274   \@hyper@itemfalse
7275   \if@nmbrlist\@hyper@itemtrue\fi
7276   \H@item
7277 }

7278 \providecommand\theHenumi {\theHItem}
7279 \providecommand\theHenumii {\theHItem}
7280 \providecommand\theHenumiii {\theHItem}
7281 \providecommand\theHenumiv {\theHItem}
7282 \providecommand\theHHfootnote {\arabic{Hfootnote}}
7283 \providecommand\theHmpfootnote{\arabic{mpfootnote}}
7284 \@ifundefined{theHHmpfootnote}{%
7285   \let\theHHmpfootnote\theHHfootnote
7286 }{}

```

Tanmoy asked for this default handling of undefined `\theH<name>` situations. It really isn't clear what would be ideal, whether to turn off hyperizing of unknown elements, to pick up the textual definition of the counter, or to default it to something like `\arabic{name}`. We take the latter course, slightly worriedly.

```

7287 \let\H@refstepcounter\refstepcounter
7288 \edef\name@of@eq{equation}%
7289 \edef\name@of@slide{slide}%

```

We do not want the handler for `\refstepcounter` to cut in during the processing of `\item` (we handle that separately), so we provide a bypass conditional.

```

7290 \newif\if@hyper@item
7291 \newif\if@skiphyperref
7292 \@hyper@itemfalse
7293 \@skiphyperreffalse
7294 \def\refstepcounter#1{%
7295   \ifHy@pdfstring
7296   \else
7297     \H@refstepcounter{#1}%
7298     \edef\This@name{#1}%
7299     \ifx\This@name\name@of@slide
7300     \else
7301       \if@skiphyperref
7302       \else
7303         \if@hyper@item
7304         \stepcounter{Item}%
7305         \hyper@refstepcounter{Item}%
7306         \@hyper@itemfalse
7307       \else
7308         \hyper@refstepcounter{#1}%
7309       \fi
7310     \fi
7311   \fi

```



```

7312 \fi
7313 }
7314 \let\Hy@saved@refstepcounter\refstepcounter

```

AMSTeX processes all equations twice; we want to make sure that the hyper stuff is not executed twice, so we use the AMS `\ifmeasuring@`, initialized if AMS math is not used.

```

7315 \@ifpackageloaded{amsmath}{-}{\newif\ifmeasuring@\measuring@false}

```

`\hyper@refstepcounter`

```

7316 \def\hyper@refstepcounter#1{%
7317   \edef\This@name{#1}%
7318   \ifx\This@name\name@of@eq
7319     \@ifundefined{theHequation}{%
7320       \make@stripped@name{\theequation}%
7321       \let\theHequation\newname
7322     }{}%
7323   \fi
7324   \HyCnt@ProvideTheHCounter{#1}%
7325   \hyper@makecurrent{#1}%
7326   \ifmeasuring@
7327   \else
7328     \Hy@raisedlink{%
7329       \hyper@anchorstart{\@currentHref}\hyper@anchorend
7330     }%
7331   \fi
7332 }

```

`\Hy@ProvideTheHCounter` `\theH<counter>` is not set for counters that are defined before ‘hyperref’ is loaded. In `\cl@ckpt`, the clear counter list of the artificial counter `ckpt`, L^AT_EX remembers the defined counters (needed for `\include`). We check the clear counter lists, whether our counter is present. If we found it, then we add the parent counter value to `\theH<counter>`. The `\@elt` list is used in sanitized form for the comparison, because the list might contain other stuff than `\@elts`. Also it simplifies the implementation, because L^AT_EX’, substring search `\in@` can be used.

```

7333 \def\HyCnt@ProvideTheHCounter#1{%
7334   \@ifundefined{theH#1}{%
7335     \expandafter\def\csname theH#1\endcsname{}%
7336     \def\Hy@temp{\@elt{#1}}%
7337     \ltx@onelevel@sanitize\Hy@temp
7338     \let\HyOrg@elt\@elt
7339     \edef\@elt{%
7340       \noexpand\HyCnt@LookForParentCounter
7341       \expandafter\noexpand\csname theH#1\endcsname
7342     }%
7343     \cl@ckpt
7344     \let\@elt\HyOrg@elt
7345     \expandafter
7346     \ltx@LocalAppendToMacro\csname theH#1\endcsname\expandafter\endcsname
7347     \expandafter{%
7348       \expandafter\@arabic\csname c@#1\endcsname
7349     }%
7350   }{}%
7351 }

```

`\Hy@LookForParentCounter`

```

7352 \def\HyCnt@LookForParentCounter#1#2{%

```



```

7353 \expandafter\let\expandafter\Hy@temp@A\csname cl@#2\endcsname
7354 \ltx@ifundefined{cl@#2}{%
7355 }{%
7356 \ltx@onelevel@sanitize\Hy@temp@A
7357 \edef\Hy@temp@A{%
7358 \noexpand\in@{\Hy@temp}{\Hy@temp@A}%
7359 }\Hy@temp@A
7360 \fin@
7361 \ltx@ifundefined{theH#2}{%
7362 \expandafter\ltx@LocalAppendToMacro\expandafter#1%
7363 \expandafter{%
7364 \expandafter\@arabic\csname c@#2\endcsname.%
7365 }%
7366 }{%
7367 \expandafter\ltx@LocalAppendToMacro\expandafter#1%
7368 \expandafter{%
7369 \csname theH#2\endcsname.%
7370 }%
7371 }%
7372 \fi
7373 }%
7374 }

```

After `\appendix` “chapter” (or “section” for classes without chapter) should be replaced by “appendix” to get `\autoref` work. Macro `\Hy@chapapp` contains the current valid name like `\@chapapp`, which cannot be used, because this string depends on the current language.

The “french” package defines counter `\thechapter` by `\newcounterchapter`, if `\@ifundefinedchapter`.

```

7375 \begingroup\expandafter\expandafter\expandafter\endgroup
7376 \expandafter\ifx\csname chapter\endcsname\relax
7377 \def\Hy@chapterstring{section}%
7378 \else
7379 \def\Hy@chapterstring{chapter}%
7380 \fi
7381 \def\Hy@appendixstring{appendix}
7382 \def\Hy@chapapp{\Hy@chapterstring}
7383 \ltx@ifundefined{appendix}{%
7384 }{%
7385 \let\HyOrg@appendix\appendix
7386 \def\Hy@AlphNoErr#1{%
7387 \ifnum\value{#1}>26 %
7388 Alph\number\value{#1}%
7389 \else
7390 \ifnum\value{#1}<1 %
7391 Alph\number\value{#1}%
7392 \else
7393 \Alph{#1}%
7394 \fi
7395 \fi
7396 }%
7397 \def\appendix{%
7398 \ltx@ifundefined{chapter}{%
7399 \gdef\theHsection{\Hy@AlphNoErr{section}}%
7400 }{%
7401 \gdef\theHchapter{\Hy@AlphNoErr{chapter}}%
7402 }%

```



```

7403 \xdef\Hy@chapapp{\Hy@appendixstring}%
7404 \HyOrg@appendix
7405 }%
7406 }

```

\Hy@Test@alph

```

7407 \def\Hy@Test@alph#1{%
7408 \ifcase#1\or
7409 a\or b\or c\or d\or e\or f\or g\or h\or i\or j\or
7410 k\or l\or m\or n\or o\or p\or q\or r\or s\or t\or
7411 u\or v\or w\or x\or y\or z%
7412 \else
7413 \@ctrerr
7414 \fi
7415 }

```

\Hy@Test@Alph

```

7416 \def\Hy@Test@Alph#1{%
7417 \ifcase#1\or
7418 A\or B\or C\or D\or E\or F\or G\or H\or I\or J\or
7419 K\or L\or M\or N\or O\or P\or Q\or R\or S\or T\or
7420 U\or V\or W\or X\or Y\or Z%
7421 \else
7422 \@ctrerr
7423 \fi
7424 }

```

\hyper@makecurrent Because of Babel mucking around, nullify \textlatin when making names. And \@number because of babel's lrbabel.def.

```

7425 \def\hyper@makecurrent#1{%
7426 \begingroup
7427 \Hy@safe@activestru
7428 \edef\Hy@param{#1}%
7429 \ifx\Hy@param\Hy@chapterstring
7430 \let\Hy@param\Hy@chapapp
7431 \fi
7432 \ifHy@hypertextnames
7433 \let\@number\@firstofone
7434 \def\@fnsymbol##1{\fnsymbol\number##1}%
7435 \def\@arabic##1{\number##1}%
7436 \ifx\@alph\Hy@Test@alph
7437 \else
7438 \def\@alph{alph\number}%
7439 \fi
7440 \ifx\@Alph\Hy@Test@Alph
7441 \else
7442 \def\@Alph{Alph\number}%
7443 \fi
7444 \ifHy@naturalnames
7445 \let\textlatin\@firstofone
7446 \xdef\HyperGlobalCurrentHref{\csname the#1\endcsname}%
7447 \else
7448 \xdef\HyperGlobalCurrentHref{%
7449 \csname
7450 the%
7451 \expandafter\ifx\csname theH#1\endcsname\relax\else H\fi
7452 #1%

```



```

7453     \endcsname
7454   }%
7455 \fi
7456 \xdef\HyperGlobalCurrentHref{%
7457   \Hy@param.\expandafter\strip@prefix\meaning\HyperGlobalCurrentHref
7458 }%
7459 \else
7460   \Hy@GlobalStepCount\Hy@linkcounter
7461   \xdef\HyperGlobalCurrentHref{\Hy@param.\the\Hy@linkcounter}%
7462 \fi
7463 \endgroup
7464 \let\HyperLocalCurrentHref\HyperGlobalCurrentHref
7465 \ifHy@localanchorname
7466   \let\@currentHref\HyperLocalCurrentHref
7467 \else
7468   \global\let\@currentHref\HyperGlobalCurrentHref
7469 \fi
7470 }

```

`\Hy@MakeCurrentHref`

```

7471 \def\Hy@MakeCurrentHref#1{%
7472   \edef\HyperLocalCurrentHref{#1}%
7473   \@onelevel@sanitize\HyperLocalCurrentHref
7474   \global\let\HyperGlobalCurrentHref\HyperLocalCurrentHref
7475   \let\HyperLocalCurrentHref\HyperGlobalCurrentHref
7476   \ifHy@localanchorname
7477     \let\@currentHref\HyperLocalCurrentHref
7478   \else
7479     \global\let\@currentHref\HyperGlobalCurrentHref
7480   \fi
7481 }

```

`\Hy@MakeCurrentHrefAuto`

```

7482 \def\Hy@MakeCurrentHrefAuto#1{%
7483   \Hy@GlobalStepCount\Hy@linkcounter
7484   \Hy@MakeCurrentHref{#1.\the\Hy@linkcounter}%
7485 }

```

`\@currentHlabel` `\@currentHlabel` is only defined for compatibility with package ‘hypdvips’.

```

7486 \def\@currentHlabel{\@currentHref}

7487 \@ifpackageloaded{fancyvrb}{%
7488   \@ifpackagelater{fancyvrb}{1998/05/20}{%
7489     \def\FV@StepLineNo{%
7490       \FV@SetLineNo
7491       \def\FV@StepLineNo{\H@refstepcounter{FancyVerbLine}}%
7492       \FV@SetLineNo
7493     }%
7494   }%
7495 }{}

```

30 Package lastpage support

Package lastpage directly writes the `\newlabel` command to the aux file. Because package hyperref requires additional arguments, the internal command `\lastpage@putlabel` is redefined. The patch is deferred by `\AtBeginDocument`, because it is possible that package lastpage is loaded after package hyperref. The

same algorithm (options `hypertextnames` and `plainpages`) is used to get the page anchor name as in `\Hy@EveryPageAnchor` (see sec. 39). The link will not work if option `pageanchor` is set to `false`.

`\lastpage@putlabel`

```

7496 \Hy@AtBeginDocument{%
7497   \@ifclassloaded{revtex4}{%
7498     \@namedef{ver@lastpage.sty}{1994/06/25}%
7499   }{}%
7500   \@ifpackageloaded{lastpage}{%
7501     \ifHy@pageanchor
7502     \else
7503       \Hy@WarningNoLine{%
7504         The \string\pageref{LastPage} link doesn't work\MessageBreak
7505         with disabled option `pageanchor'%
7506       }%
7507     \fi
7508     \def\lastpage@putlabel{%
7509       \addtocounter{page}{-1}%
7510       \if@filesw
7511         \begingroup
7512           \let\@number\@firstofone
7513           \ifHy@pageanchor
7514             \ifHy@hypertextnames
7515               \ifHy@plainpages
7516                 \def\Hy@temp{\arabic{page}}%
7517               \else
7518                 \Hy@unicodedefalse
7519                 \pdfstringdef\Hy@temp{\thepage}%
7520               \fi
7521             \else
7522               \def\Hy@temp{\the\Hy@pagecounter}%
7523             \fi
7524           \fi
7525           \immediate\write\@auxout{%
7526             \string\newlabel
7527             {LastPage}{}{\thepage}{}{%
7528               \ifHy@pageanchor page.\Hy@temp\fi}{}%
7529             }%
7530         \endgroup
7531       \fi
7532       \addtocounter{page}{1}%
7533     }%
7534   \@ifclassloaded{revtex4}{%
7535     \begingroup
7536     \toks@\expandafter{\lastpage@putlabel}%
7537     \edef\x{\endgroup
7538       \def\noexpand\lastpage@putlabel{%
7539         \noexpand\stepcounter{page}%
7540         \the\toks@
7541         \noexpand\addtocounter{page}\noexpand\m@ne
7542       }%
7543     }%
7544     \x
7545   }{}%
7546 }{}%
7547 }
```



```

7548 \package
7549 \*check
7550 \checkpackage{lastpage}[1994/06/25]
7551 \checkcommand\def\lastpage@putlabel{%
7552   \addtocounter{page}{-1}%
7553   \immediate\write\@auxout{%
7554     \string\newlabel{LastPage}{\the\thepage}}%
7555   }%
7556   \addtocounter{page}{1}%
7557 }
7558 \check
7559 \*package

```

31 Package ifthen support

Since version 6.75a this is done in package nameref.

For compatibility `\hypergetref` and `\hypergetpageref` are still provided. But they do not generate warnings, if the reference is undefined.

```

7560 \def\hypergetref#1{\getrefbykeydefault{#1}{}}
7561 \def\hypergetpageref#1{\getrefbykeydefault{#1}{page}{0}}

```

32 Package titlesec and titletoc support

This code is contributed by Javier Bezos (Email: jbezos@arrakis.es).

Package titlesec support:

```

7562 \@ifpackageloaded{titlesec}{%
7563   \def\ttl@Hy@steplink#1{%
7564     \Hy@MakeCurrentHrefAuto{#1*}%
7565     \edef\ttl@Hy@saveanchor{%
7566       \noexpand\Hy@raisedlink{%
7567         \noexpand\hyper@anchorstart{\@currentHref}%
7568         \noexpand\hyper@anchorend
7569         \def\noexpand\ttl@Hy@SavedCurrentHref{\@currentHref}%
7570         \noexpand\ttl@Hy@PatchSaveWrite
7571       }%
7572     }%
7573   }%
7574   \def\ttl@Hy@PatchSaveWrite{%
7575     \begingroup
7576     \toks@\expandafter{\ttl@savewrite}%
7577     \edef\x{\endgroup
7578       \def\noexpand\ttl@savewrite{%
7579         \let\noexpand\@currentHref
7580         \noexpand\ttl@Hy@SavedCurrentHref
7581         \the\toks@
7582       }%
7583     }%
7584     \x
7585   }%
7586   \def\ttl@Hy@refstepcounter#1{%
7587     \let\ttl@b\Hy@raisedlink
7588     \def\Hy@raisedlink##1{%
7589       \def\ttl@Hy@saveanchor{\Hy@raisedlink{##1}}%
7590     }%
7591     \refstepcounter{#1}%

```



```

7592 \let\Hy@raisedlink\ttl@b
7593 }%
7594 }{}

Package titletoc support:
7595 \@ifpackageloaded{titletoc}{%
7596 \def\ttl@gobblecontents#1#2#3#4{\ignorespaces}%
7597 }{}

```

33 Package varioref support

Package nameref uses five arguments for the ref system. Fix provided by Felix Neubauer (felix.neubauer@gmx.net).

```

7598 \AtBeginDocument{%
7599 \def\Hy@varioref@undefined{{??}{??}{}}{}
7600 \@ifpackageloaded{varioref}{%
7601 \def\vref@pagenum#1#2{%
7602 \ifundefined{r@#2}{%
7603 \expandafter\let\csname r@#2\endcsname\Hy@varioref@undefined
7604 }{}%
7605 \edef#1{\getpagerefnumber{#2}}%
7606 }%
7607 }{}

```

Package varioref redefines `\refstepcounter`, thus it needs fixing, if the package is loaded *after* `hyperref`.

```

7608 \def\Hy@varioref@refstepcounter#1{%
7609 \stepcounter{#1}%
7610 \protected@edef\currentlabel{%
7611 \csname p@#1\expandafter\endcsname\csname the#1\endcsname
7612 }%
7613 }
7614 \ifx\refstepcounter\Hy@varioref@refstepcounter
7615 \let\H@refstepcounter\refstepcounter
7616 \let\refstepcounter\Hy@saved@refstepcounter
7617 \fi
7618 }

```

34 Package longtable support

Sometimes the anchor of the longtable goes to the previous page. Thus the following patch separates the anchor setting and counter incrementation by `hyperref`'s `\refstepcounter` and the anchor setting is moved after `\vskip\LTpre`.

Patch of `\LT@array`: replace `\refstepcounter` by the original `\H@refstepcounter` without anchor generation

```

7619 \@ifpackageloaded{longtable}{%
7620 \begingroup
7621 \def\y{\LT@array}%
7622 \ifundefined{scr@LT@array}{%
7623 \ifundefined{adl@LT@array}{\def\y{\adl@LT@array}}%
7624 }\def\y{\scr@LT@array}%
7625 \long\def\x\refstepcounter#1#2\@sharp#3#4\@nil{%
7626 \expandafter\endgroup
7627 \expandafter\def\y[##1]##2{%
7628 \H@refstepcounter{#1}%

```



```

7629 \hyper@makecurrent{table}%
7630 \let\Hy@LT@currentHref\@currentHref
7631 #2\@sharp#####4%
7632 }%
7633 }%
7634 \expandafter\expandafter\expandafter\x\y[{#1}]{#2}\@nil
Patch of \LT@start: add anchor before first line after \vskip\LTpre
7635 \begingroup
7636 \def\x#1\ifvoid\LT@foot#2\fi#3\@nil{%
7637 \endgroup
7638 \def\LT@start{%
7639 #1%
7640 \ifvoid\LT@foot#2\fi
7641 \let\@currentHref\Hy@LT@currentHref
7642 \Hy@raisedlink{%
7643 \hyper@anchorstart{\@currentHref}\hyper@anchorend
7644 }%
7645 #3%
7646 }%
7647 }%
7648 \expandafter\x\LT@start\@nil
7649 }{}

```

35 Equations

We want to make the whole equation a target anchor. Overload equation, temporarily reverting to original `\refstepcounter`. If, however, it is in AMS math, we do not do anything, as the tag mechanism is used there (see section 42). The exception is that we move the equation incrementation inside the math environment to avoid specials outside and a wrong vertical spacing of equation environments.

```

7650 \let\new@refstepcounter\refstepcounter
7651 \let\H@equation\equation
7652 \let\H@endequation\endequation
7653 \@ifpackageloaded{amsmath}{%
7654 \long\def\Hy@temp{%
7655 \incr@eqnum
7656 \mathdisplay@push
7657 \st@rredfalse \global\@eqnswtrue
7658 \mathdisplay{equation}%
7659 }%
7660 \ifx\Hy@temp\equation
7661 \expandafter\ifx\csname if@fleqn\expandafter\endcsname
7662 \csname iftrue\endcsname
7663 \else
7664 \long\def\equation{%
7665 \mathdisplay@push
7666 \st@rredfalse \global\@eqnswtrue
7667 \mathdisplay{equation}%
7668 \incr@eqnum
7669 }%
7670 \fi
7671 \fi
7672 }{%
7673 \def\equation{%
7674 \let\refstepcounter\H@refstepcounter

```



```

7675 \H@equation
7676 \ifundefined{theHequation}{%
7677 \make@stripped@name{\theequation}%
7678 \let\theHequation\newname
7679 }{}%
7680 \hyper@makecurrent{equation}%

```

`\mathopen` is needed in case the equation starts with an unary minus, for example.

```

7681 \mathopen{%
7682 \Hy@raisedlink{\hyper@anchorstart{\@currentHref}}%
7683 }%
7684 \let\refstepcounter\new@refstepcounter
7685 }%
7686 \def\endequation{%
7687 \ifx\Hy@raisedlink\ltx@empty
7688 \hyper@anchorend
7689 \else
7690 \mathclose{\Hy@raisedlink{\hyper@anchorend}}%
7691 \fi
7692 \H@endequation
7693 }%
7694 }

```

My goodness, why can't L^AT_EX be consistent? Why is `\eqnarray` set up differently from other objects?

People (you know who you are, Thomas Beuth) sometimes make an `eqnarray` where *all* the lines end with `\notag`, so there is no suitable anchor at all. In this case, pass by on the other side.

```

7695 \newif\if@eqnstar
7696 \@eqnstarfalse
7697 \let\H@eqnarray\eqnarray
7698 \let\H@endeqnarray\endeqnarray
7699 \def\eqnarray{%
7700 \let\Hy@reserved@a\relax
7701 \def\@currentHref{}%
7702 \H@eqnarray
7703 \if@eqnstar
7704 \else
7705 \ifx\\\@currentHref\\%
7706 \else
7707 \ifundefined{theHequation}{%
7708 \make@stripped@name{\theequation}%
7709 \let\theHequation\newname
7710 }{}%
7711 \hyper@makecurrent{equation}%
7712 \mathopen{%
7713 \Hy@raisedlink{%
7714 \hyper@anchorstart{\@currentHref}\hyper@anchorend
7715 }%
7716 }%
7717 \fi
7718 \fi
7719 }
7720 \def\endeqnarray{%
7721 \H@endeqnarray
7722 }

```

This is quite heavy-handed, but it works for now. If its an `eqnarray*` we need to

disable the hyperref actions. There may well be a cleaner way to trap this. Bill Moss found this.

```

7723 \@namedef{eqnarray*}{%
7724   \def\@eqnocr{\nonumber\@seqnocr}\@eqnstartrue\eqnarray
7725 }
7726 \@namedef{endeqnarray*}{%
7727   \nonumber\endeqnarray\@eqnstarfalse
7728 }

```

Then again, we have the *subeqnarray* package. Tanmoy provided some code for this:

```

7729 \ltx@ifundefined{subeqnarray}{}{%
7730   \let\H@subeqnarray\subeqnarray
7731   \let\H@endsubeqnarray\endsubeqnarray
7732   \def\subeqnarray{%
7733     \let\Hy@reserved@a\relax
7734     \H@subeqnarray
7735     \@ifundefined{theHequation}{%
7736       \make@stripped@name{\theequation}%
7737       \let\theHequation\newname
7738     }{}%
7739     \hyper@makecurrent{equation}%
7740     \hyper@anchorstart{\@currentHref}{\hyper@anchorend
7741   }%
7742   \def\endsubeqnarray{%
7743     \H@endsubeqnarray
7744   }%
7745   \providecommand\theHsubequation{\theHequation\alph{subequation}}%
7746 }

```

The aim of this macro is to produce a sanitized version of its argument, to make it a safe label.

```

7747 \def\make@stripped@name#1{%
7748   \begingroup
7749   \escapechar\m@ne
7750   \global\let\newname\@empty
7751   \protected@edef\Hy@tempa{#1}%
7752   \edef\@tempb{%
7753     \noexpand\@tfor\noexpand\Hy@tempa:=%
7754     \expandafter\strip@prefix\meaning\Hy@tempa
7755   }%
7756   \@tempb\do{%
7757     \if\Hy@tempa\else
7758     \if\Hy@tempa\else
7759       \xdef\newname{\newname\Hy@tempa}%
7760     \fi
7761   \fi
7762   }%
7763   \endgroup
7764 }

```

Support for amsmath's subequations:

```

7765 \begingroup\expandafter\expandafter\expandafter\endgroup
7766 \expandafter\ifx\csname subequations\endcsname\relax
7767 \else
7768   \let\HyOrg@subequations\subequations
7769   \def\subequations{%
7770     \stepcounter{equation}%

```



```

7771 \protected@edef\theHparentequation{%
7772 \ifundefined{theHequation}\theequation\theHequation
7773 }%
7774 \addtocounter{equation}{-1}%
7775 \HyOrg@subequations
7776 \def\theHequation{\theHparentequation\alph{equation}}%
7777 \ignorespaces
7778 }%
7779 \fi

```

Support for package `amsthm` (Daniel Müllner): also `cleveref`.

```

7780 \Hy@AtBeginDocument{%
7781 \ifpackageloaded{cleveref}{%
7782 \let\Hy@savethm\@thm
7783 \def\@thm{\ifhmode\unskip\fi\Hy@savethm}%
7784 }{%
7785 \ifpackageloaded{amsthm}{%

```

Class `amsbook` uses a different definition of `\@thm`, where two lines are added (thanks to Dan Luecking for his analysis):

```

\let\thm@indent\indent\%_indent
\thm@headfont{\scshape}%_heading_font_small_caps

7786 \def\Hy@temp#1#2#3{%
7787 \ifhmode\unskip\unskip\par\fi
7788 \normalfont
7789 \trivlist
7790 \let\thmheadnl\relax
7791 \let\thm@swap\@gobble
7792 \let\thm@indent\indent % indent
7793 \thm@headfont{\scshape}% heading font small caps
7794 \thm@notefont{\fontseries\mddefault\upshape}%
7795 \thm@headpunct{.}% add period after heading
7796 \thm@headsep 5\p@ plus\p@ minus\p@\relax
7797 \thm@space@setup
7798 #1% style overrides
7799 \@topsep \thm@preskip % used by thm head
7800 \@topsepadd \thm@postskip % used by \@endparenv
7801 \def\@tempa{#2}\ifx\@empty\@tempa
7802 \def\@tempa{\@oparg{\@begintheorem{#3}{}}}%
7803 \else
7804 \refstepcounter{#2}%
7805 \def\@tempa{%
7806 \@oparg{\@begintheorem{#3}{\csname the#2\endcsname}}}%
7807 }%
7808 \fi
7809 \@tempa
7810 }%
7811 \ifx\Hy@temp\@thm
7812 \def\@thm#1#2#3{%
7813 \ifhmode
7814 \unskip\unskip\par
7815 \fi
7816 \normalfont
7817 \trivlist
7818 \let\thmheadnl\relax
7819 \let\thm@swap\@gobble
7820 \let\thm@indent\indent % indent

```



```

7821 \thm@headfont{\scshape}% heading font small caps
7822 \thm@notefont{\fontseries\mddefault\upshape}%
7823 \thm@headpunct{.}% add period after heading
7824 \thm@headsep 5\p@ plus\p@ minus\p@\relax
7825 \thm@space@setup
7826 #1% style overrides
7827 \@topsep \thm@preskip          % used by thm head
7828 \@topsepadd \thm@postskip      % used by \@endparenv
7829 \def\dth@counter{#2}%
7830 \ifx\@empty\dth@counter
7831   \def\@tempa{%
7832     \@oparg{\@begintheorem{#3}{}}{}%
7833   }%
7834 \else
7835   \H@refstepcounter{#2}%
7836   \hyper@makecurrent{#2}%
7837   \let\Hy@dth@currentHref\@currentHref
7838   \def\@tempa{%
7839     \@oparg{\@begintheorem{#3}{\csname the#2\endcsname}}{}%
7840   }%
7841 \fi
7842 \@tempa
7843 }%
7844 \else
7845 \def\@thm#1#2#3{%
7846   \ifhmode
7847     \unskip\unskip\par
7848   \fi
7849   \normalfont
7850   \trivlist
7851   \let\thmheadnl\relax
7852   \let\thm@swap\@gobble
7853   \thm@notefont{\fontseries\mddefault\upshape}%
7854   \thm@headpunct{.}% add period after heading
7855   \thm@headsep 5\p@ plus\p@ minus\p@\relax
7856   \thm@space@setup
7857   #1% style overrides
7858   \@topsep \thm@preskip          % used by thm head
7859   \@topsepadd \thm@postskip      % used by \@endparenv
7860   \def\dth@counter{#2}%
7861   \ifx\@empty\dth@counter
7862     \def\@tempa{%
7863       \@oparg{\@begintheorem{#3}{}}{}%
7864     }%
7865   \else
7866     \H@refstepcounter{#2}%
7867     \hyper@makecurrent{#2}%
7868     \let\Hy@dth@currentHref\@currentHref
7869     \def\@tempa{%
7870       \@oparg{\@begintheorem{#3}{\csname the#2\endcsname}}{}%
7871     }%
7872   \fi
7873   \@tempa
7874 }%
7875 \fi
7876 \dth@everypar={%
7877   \@minipagefalse

```



```

7878 \global\@newlistfalse
7879 \@noparitemfalse
7880 \if@inlabel
7881 \global\@inlabelfalse
7882 \begingroup
7883 \setbox\z@\lastbox
7884 \ifvoid\z@
7885 \kern-\itemindent
7886 \fi
7887 \endgroup
7888 \ifx\@empty\dth@counter
7889 \else
7890 \Hy@raisedlink{%
7891 \hyper@anchorstart{%
7892 \ltx@ifundefined{Hy@dth@currentHref}%
7893 \@currentHref\Hy@dth@currentHref
7894 }\hyper@anchorend
7895 }%
7896 \fi
7897 \unhbox\@labels
7898 \fi
7899 \if@nobreak
7900 \@nobreakfalse \clubpenalty\@M
7901 \else
7902 \clubpenalty\@clubpenalty \everypar{}%
7903 \fi
7904 }%
7905 }%

```

non `amsthm` case, remove final space on line before a theorem for githib issue 11.

```

7906 {%
7907 \let\Hy@savethm\@thm
7908 \def\@thm{\ifhmode\unskip\fi\Hy@savethm}%
7909 }%
7910 }%
7911 }

```

36 Footnotes

The footnote mark is a hypertext link, and the text is a target. We separately number the footnotes sequentially through the text, separately from whatever labels the text assigns. Too hard to keep track of markers otherwise. If the raw forms `\footnotemark` and `\footnotetext` are used, force them to use un-hyper original.

```

7912 \ifHy@hyperfootnotes
7913 \newcounter{Hfootnote}%
7914 \let\H@@footnotetext\@footnotetext
7915 \let\H@@footnotemark\@footnotemark
7916 \def\@xfootnotenext[#1]{%
7917 \begingroup
7918 \csname c@\@mpfn\endcsname #1\relax
7919 \unrestored@protected@xdef\@thefnmark{\thempfn}%
7920 \endgroup
7921 \ifx\@footnotetext\@mpfootnotetext
7922 \expandafter\H@@mpfootnotetext
7923 \else

```



```

7924 \expandafter\H@@footnotetext
7925 \fi
7926 }%
7927 \def\xfootnotemark[#1]{%
7928 \begingroup
7929 \c@footnote #1\relax
7930 \unrestored@protected@xdef\@thefnmark{\thefootnote}%
7931 \endgroup
7932 \H@@footnotemark
7933 }%
7934 \let\H@@mpfootnotetext\@mpfootnotetext
7935 \long\def\@mpfootnotetext#1{%
7936 \H@@mpfootnotetext{%
7937 \ifHy@nesting
7938 \expandafter\ltx@firstoftwo
7939 \else
7940 \expandafter\ltx@secondoftwo
7941 \fi
7942 {%
7943 \expandafter\hyper@@anchor\expandafter{%
7944 \Hy@footnote@currentHref
7945 }{\ignorespaces #1}%
7946 }{%
7947 \Hy@raisedlink{%
7948 \expandafter\hyper@@anchor\expandafter{%
7949 \Hy@footnote@currentHref
7950 }{\relax}%
7951 }\ignorespaces #1%
7952 }%
7953 }%
7954 }%
7955 \long\def\@footnotetext#1{%
7956 \H@@footnotetext{%
7957 \ifHy@nesting
7958 \expandafter\ltx@firstoftwo
7959 \else
7960 \expandafter\ltx@secondoftwo
7961 \fi
7962 {%
7963 \expandafter\hyper@@anchor\expandafter{%
7964 \Hy@footnote@currentHref
7965 }{\ignorespaces #1}%
7966 }{%
7967 \Hy@raisedlink{%
7968 \expandafter\hyper@@anchor\expandafter{%
7969 \Hy@footnote@currentHref
7970 }{\relax}%
7971 }%
7972 \let\@currentHref\Hy@footnote@currentHref
7973 \let\@currentlabelname\@empty
7974 \ignorespaces #1%
7975 }%
7976 }%
7977 }%

```

Redefine `\@footnotemark`, borrowing its code (at the cost of getting out of sync with `latex.ltx`), to take advantage of its white space and hyphenation fudges. If we just overload it, we can get variant documents (the word before the footnote is

treated differently). Thanks to David Carlisle and Brian Ripley for confusing and helping me on this.

```

7978 \def\@footnotemark{%
7979 \leavevmode
7980 \ifhmode\edef\@x@sf{\the\spacefactor}\nobreak\fi
7981 \stepcounter{Hfootnote}%
7982 \global\let\Hy@saved@currentHref\@currentHref
7983 \hyper@makecurrent{Hfootnote}%
7984 \global\let\Hy@footnote@currentHref\@currentHref
7985 \global\let\@currentHref\Hy@saved@currentHref
7986 \hyper@linkstart{link}{\Hy@footnote@currentHref}%
7987 \@makefnmark
7988 \hyper@linkend
7989 \ifhmode\spacefactor\@x@sf\fi
7990 \relax
7991 }%

```

Tabularx causes footnote problems, disable the linking if that is loaded. Since v6.82i footnotes are only disabled inside the environment ‘tabularx’.

```

7992 \@ifpackageloaded{tabularx}{%
7993 \let\HyOrg@TX@endtabularx\TX@endtabularx
7994 \def\Hy@tabularx@hook{%
7995 \let\@footnotetext\H@@footnotetext
7996 \let\@footnotemark\H@@footnotemark
7997 \let\@mpfootnotetext\H@@mpfootnotetext
7998 }%
7999 \begingroup
8000 \toks@\expandafter{\TX@endtabularx}%
8001 \xdef\Hy@gtemp{%
8002 \noexpand\Hy@tabularx@hook
8003 \the\toks@
8004 }%
8005 \endgroup
8006 \let\TX@endtabularx\Hy@gtemp
8007 }{}%

```

Support for footnotes in p columns of longtable. Here \footnote commands are splitted into \footnotemark and a call of \footnotetext with the optional argument, that is not supported by hyperref. The result is a link by \footnotemark without valid anchor

```

8008 \@ifpackageloaded{longtable}{%
8009 \CheckCommand*{\LT@p@ftntext}[1]{%
8010 \edef\@tempa{%
8011 \the\LT@p@ftn
8012 \noexpand\footnotetext[\the\c@footnote]%
8013 }%
8014 \global\LT@p@ftn\expandafter{\@tempa{#1}}%
8015 }%
8016 \long\def\LT@p@ftntext#1{%
8017 \edef\@tempa{%
8018 \the\LT@p@ftn
8019 \begingroup
8020 \noexpand\c@footnote=\the\c@footnote\relax
8021 \noexpand\protected\xdef\noexpand\@thefnmark{%
8022 \noexpand\thempfn
8023 }%
8024 \noexpand\Hy@LT@footnotetext{%
8025 \Hy@footnote@currentHref

```



```

8026     }%
8027 }%
8028 \global\LT@p@ftn\expandafter{%
8029   \@tempa{#1}%
8030   \endgroup
8031 }%
8032 }%
8033 \long\def\Hy@LT@footnotetext#1#2{%
8034   \H@@@footnotetext{%
8035     \ifHy@nesting
8036       \hyper@@anchor{#1}{#2}%
8037     \else
8038       \Hy@raisedlink{%
8039         \hyper@@anchor{#1}{\relax}%
8040       }%
8041       \def\@currentHref{#1}%
8042       \let\@currentlabelname\@empty
8043       #2%
8044     \fi
8045   }%
8046 }%
8047 }{}%

```

Footnotes for fancyvrb (Fix by Manuel Pégourié-Gonnard).

```

8048 \ifpackageloaded{fancyvrb}{%
8049   \def\V@@@footnotetext{%
8050     \insert\footins\bgroup
8051     \csname reset@font\endcsname
8052     \footnotesize
8053     \interlinepenalty\interfootnotelinepenalty
8054     \splittopskip\footnotesep
8055     \splitmaxdepth\dp\strutbox
8056     \floatingpenalty \@MM
8057     \hsize\columnwidth
8058     \@parboxrestore
8059     \edef\@currentlabel{\csname p@footnote\endcsname\@thefnmark}%
8060     \@makefntext{}%
8061     \rule{\z@}{\footnotesep}%
8062     \bgroup
8063     \aftergroup\V@@@footnotetext
8064     \Hy@raisedlink{%
8065       \expandafter\hyper@@anchor\expandafter{%
8066         \Hy@footnote@currentHref
8067       }{\relax}%
8068     }%
8069     \let\@currentHref\Hy@footnote@currentHref
8070     \let\@currentlabelname\@empty
8071     \ignorespaces
8072   }%
8073 }{}%

```

KOMA-Script defines `\footref` that uses both `\ref` and `\@footnotemark` resulting in two links, one of them wrong.

```

8074 \def\Hy@temp#1{%
8075   \begingroup
8076   \unrestored@protected@xdef\@thefnmark{\ref{#1}}%
8077   \endgroup
8078   \@footnotemark

```



```

8079 }%
8080 \ifx\Hy@temp\footref
8081   \def\footref#1{%
8082     \begingroup
8083       \unrestored@protected@xdef\@thefnmark{\ref{#1}}%
8084     \endgroup
8085     \H@@footnotemark
8086   }%
8087 \fi

```

But the special footnotes in `\maketitle` are much too hard to deal with properly. Let them revert to plain behaviour. The koma classes add an optional argument.

```

8088 \let\HyOrg@maketitle\maketitle
8089 \def\maketitle{%
8090   \let\Hy@saved@footnotemark\@footnotemark
8091   \let\Hy@saved@footnotetext\@footnotetext
8092   \let\@footnotemark\H@@footnotemark
8093   \let\@footnotetext\H@@footnotetext
8094   \@ifnextchar[\Hy@maketitle@optarg{% ]
8095     \HyOrg@maketitle
8096     \Hy@maketitle@end
8097   }%
8098 }%
8099 \def\Hy@maketitle@optarg[#1]{%
8100   \HyOrg@maketitle[{#1}]%
8101   \Hy@maketitle@end
8102 }%
8103 \def\Hy@maketitle@end{%
8104   \ifx\@footnotemark\H@@footnotemark
8105     \let\@footnotemark\Hy@saved@footnotemark
8106   \fi
8107   \ifx\@footnotetext\H@@footnotetext
8108     \let\@footnotetext\Hy@saved@footnotetext
8109   \fi
8110 }%

```

`\realfootnote` Does anyone remember the function and purpose of `\realfootnote`?

```

8111 \def\realfootnote{%
8112   \@ifnextchar[\@xfootnote{%
8113     \stepcounter{\@mpfn}%
8114     \protected@xdef\@thefnmark{\thempfn}%
8115     \H@@footnotemark\H@@footnotetext
8116   }%
8117 }%
8118 \fi
8119 \Hy@DisableOption{hyperfootnotes}
8120 \</package>
8121 \< *check>
8122 \checklatex
8123 \checkcommand\def\@xfootnotenext[#1]{%
8124   \begingroup
8125     \csname c@\@mpfn\endcsname #1\relax
8126     \unrestored@protected@xdef\@thefnmark{\thempfn}%
8127   \endgroup
8128   \@footnotetext

```



```

8129 }
8130 \checkcommand\def\@xfootnotemark[#1]{%
8131   \begingroup
8132     \c@footnote #1\relax
8133     \unrestored@protected@xdef\@thefnmark{\thefootnote}%
8134   \endgroup
8135   \@footnotemark
8136 }
8137 \checkcommand\def\@footnotemark{%
8138   \leavevmode
8139   \ifhmode\edef\@x@sf{\the\spacefactor}\nobreak\fi
8140   \@makefnmark
8141   \ifhmode\spacefactor\@x@sf\fi
8142   \relax
8143 }
8144 \end{check}
8145 \end{package}

```

37 Float captions

Make the float caption the hypertext anchor; curiously enough, we can't just copy the definition of `\@caption`. Its all to do with expansion. It screws up. Sigh.

```

8146 \def\caption{%
8147   \ifx\@captive\@undefined
8148     \@latex@error{\noexpand\caption outside float}\@ehd
8149     \expandafter\@gobble
8150   \else
8151     \H@refstepcounter\@captive
8152     \let\Hy@tempa\@caption
8153     \@ifundefined{float@caption}{%
8154       }{%
8155         \expandafter\ifx\csname @float@c@\@captive\endcsname
8156           \float@caption
8157         \let\Hy@tempa\Hy@float@caption
8158       \fi
8159     }%
8160     \expandafter\@firstofone
8161   \fi
8162   {\@dblarg{\Hy@tempa\@captive}}%
8163 }
8164 \long\def\@caption#1[#2]#3{%
8165   \expandafter\ifx\csname if@capstart\expandafter\endcsname
8166     \csname iftrue\endcsname
8167     \global\let\@currentHref\hc@currentHref
8168   \else
8169     \hyper@makecurrent{\@captive}%
8170   \fi
8171   \@ifundefined{NR@getttitle}{%
8172     \def\@currentlabelname{#2}%
8173   }{%
8174     \NR@getttitle{#2}%
8175   }%
8176   \par\addcontentsline{\csname ext@#1\endcsname}{#1}{%
8177     \protect\numberline{\csname the#1\endcsname}{\ignorespaces #2}%
8178   }%
8179   \begingroup

```



```

8180 \parboxrestore
8181 \if@minipage
8182 \setminipage
8183 \fi
8184 \normalsize
8185 \expandafter\ifx\csname if@capstart\expandafter\endcsname
8186 \csname iftrue\endcsname
8187 \global\@capstartfalse
8188 \@makecaption{\csname fnum@#1\endcsname}{\ignorespaces#3}%
8189 \else
8190 \@makecaption{\csname fnum@#1\endcsname}{%
8191 \ignorespaces

```

If we cannot have nesting, the anchor is empty.

```

8192 \ifHy@nesting
8193 \expandafter\hyper@@anchor\expandafter{\@currentHref}{#3}%
8194 \else
8195 \Hy@raisedlink{%
8196 \expandafter\hyper@@anchor\expandafter{%
8197 \@currentHref
8198 }{\relax}%
8199 }%
8200 #3%
8201 \fi
8202 }%
8203 \fi
8204 \par
8205 \endgroup
8206 }

```

Compatibility with float.sty: anchor setting at the top of the float, if the float is controlled by float.sty. Several `\caption` commands inside one float are not supported.

`\HyNew@float@makebox` is introduced as feature request of Axel Sommerfeldt to make the life easier for his package ‘caption’.

```

8207 \let\Hy@float@caption\@caption
8208 \newcommand{\HyNew@float@makebox}[1]{%
8209 \HyOrg@float@makebox{%
8210 #1\relax
8211 \ifx\Hy@float@currentHref\@undefined
8212 \else
8213 \expandafter\hyper@@anchor\expandafter{%
8214 \Hy@float@currentHref
8215 }{\relax}%
8216 \global\let\Hy@float@currentHref\@undefined
8217 \fi
8218 }%
8219 }%
8220 \@ifpackageloaded{float}{%
8221 \def\Hy@float@caption{%
8222 \ifx\Hy@float@currentHref\@undefined
8223 \hyper@makecurrent{\@cuptype}%
8224 \global\let\Hy@float@currentHref\@currentHref
8225 \else
8226 \let\@currentHref\Hy@float@currentHref
8227 \fi
8228 \float@caption
8229 }%

```



```

8230 \let\HyOrg@float@makebox\float@makebox
8231 \let\float@makebox\HyNew@float@makebox
8232 }{}

8233 \</package>
8234 \<{*check>
8235 \checklatex[1999/06/01 - 2000/06/01]
8236 \checkcommand\def\caption{%
8237   \ifx\@cuptype\@undefined
8238     \@latex@error{\noexpand\caption outside float}\@ehd
8239     \expandafter\@gobble
8240   \else
8241     \refstepcounter\@cuptype
8242     \expandafter\@firstofone
8243   \fi
8244   {\@dblarg{\@caption\@cuptype}}}%
8245 }
8246 \checkcommand\long\def\@caption#1[#2]#3{%
8247   \par
8248   \addcontentsline{\csname ext@#1\endcsname}{#1}{%
8249     \protect\numberline{\csname the#1\endcsname}{\ignorespaces #2}%
8250   }%
8251   \begingroup
8252     \@parboxrestore
8253     \if@minipage
8254       \@setminipage
8255     \fi
8256     \normalsize
8257     \@makecaption{\csname fnum@#1\endcsname}{\ignorespaces #3}\par
8258   \endgroup
8259 }
8260 \</check>
8261 \<{*package>

```

38 Bibliographic references

This is not very robust, since many styles redefine these things. The package used to redefine `\@citex` and the like; then we tried adding the `hyperref` call explicitly into the `.aux` file. Now we redefine `\bibcite`; this still breaks some citation packages so we have to work around them. But this remains extremely dangerous. Any or all of *achemso* and *drftcite* may break.

However, lets make an attempt to get *natbib* right, because thats a powerful, important package. Patrick Daly (daly@linmpi.mpg.de) has provided hooks for us, so all we need to do is activate them.

```

8262 \def\hyper@natlinkstart#1{%
8263   \Hy@backout{#1}%
8264   \hyper@linkstart{cite}{cite.#1}%
8265   \def\hyper@nat@current{#1}%
8266 }
8267 \def\hyper@natlinkend{%
8268   \hyper@linkend
8269 }
8270 \def\hyper@natlinkbreak#1#2{%
8271   \hyper@linkend#1\hyper@linkstart{cite}{cite.#2}%
8272 }
8273 \def\hyper@natanchorstart#1{%

```



```

8274 \Hy@raisedlink{\hyper@anchorstart{cite.#1}}%
8275 }
8276 \def\hyper@natanchorend{\hyper@anchorend}

```

Do not play games if we have natbib support. Macro `extra@binfo` added for chapterbib support. Chapterbib also wants `\@extra@binfo` in the hyper-link, but since the link tag is not expanded immediately, we use `\@extra@b@citeb`, so cites in a chapter will link to the bibliography in that chapter.

```

8277 \ltx@ifundefined{NAT@parse}{%
8278   \providecommand*\@extra@binfo{}%
8279   \providecommand*\@extra@b@citeb{}%
8280   \def\bibcite#1#2{%
8281     \@newl@bel{b}{#1}\@extra@binfo}%
8282     \hyper@@link[cite]{}{cite.#1\@extra@b@citeb}{#2}%
8283   }%
8284 }%
8285 \gdef\@extra@binfo{}%

```

Package `babel` redefines `\bibcite` with macro `\bbl@cite@choice`. It needs to be overwritten to avoid the warning “Label(s) may have changed.”.

```

8286 \let\Hy@bibcite\bibcite
8287 \begingroup
8288   \@ifundefined{bbl@cite@choice}{}{%
8289     \g@addto@macro\bbl@cite@choice{%
8290       \let\bibcite\Hy@bibcite
8291     }%
8292   }%
8293 \endgroup

```

`\@BIBLABEL` is working around a ‘feature’ of RevTeX.

```

8294 \providecommand*\@BIBLABEL{\@biblabel}%
8295 \def\@bibitem[#1]#2{%
8296   \@skiphyperrreftrue
8297   \H@item[%
8298     \ifx\Hy@raisedlink\@empty
8299       \hyper@anchorstart{cite.#2\@extra@b@citeb}%
8300       \@BIBLABEL{#1}%
8301       \hyper@anchorend
8302     \else
8303       \Hy@raisedlink{%
8304         \hyper@anchorstart{cite.#2\@extra@b@citeb}\hyper@anchorend
8305       }%
8306       \@BIBLABEL{#1}%
8307     \fi
8308     \hfill
8309   ]%
8310   \@skiphyperrreffalse
8311   \if@filesw
8312     \begingroup
8313       \let\protect\noexpand
8314       \immediate\write\@auxout{%
8315         \string\bibcite{#2}{#1}%
8316       }%
8317     \endgroup
8318   \fi
8319   \ignorespaces
8320 }%

```


Since `\bibitem` is doing its own labelling, call the raw version of `\item`, to avoid extra spurious labels

```

8321 \def\@bibitem#1{%
8322   \@skiphyperreftrue\H@item\@skiphyperreffalse
8323   \Hy@raisedlink{%
8324     \hyper@anchorstart{cite.#1\@extra@b@citeb}\relax\hyper@anchorend
8325   }%
8326   \if@filesw
8327     \begingroup
8328     \let\protect\noexpand
8329     \immediate\write\@auxout{%
8330       \string\bibcite{#1}{\the\value{\@listctr}}}%
8331     }%
8332   \endgroup
8333   \fi
8334   \ignorespaces
8335 }%
8336 }{}

8337 \</package>
8338 \< *check>
8339 \checklatex
8340 \checkcommand\def\@lbibitem[#1]#2{%
8341   \item[\@biblabel{#1}\hfill]%
8342   \if@filesw
8343     {%
8344       \let\protect\noexpand
8345       \immediate\write\@auxout{%
8346         \string\bibcite{#2}{#1}%
8347       }%
8348     }%
8349   \fi
8350   \ignorespaces
8351 }
8352 \checkcommand\def\@bibitem#1{%
8353   \item
8354   \if@filesw
8355     \immediate\write\@auxout{%
8356       \string\bibcite{#1}{\the\value{\@listctr}}}%
8357     }%
8358   \fi
8359   \ignorespaces
8360 }
8361 \</check>
8362 \< *package>

```

RevTeX (bless its little heart) takes over `\bibcite` and looks at the result to measure something. Make this a hypertext link and it goes ape. Therefore, make an anodyne result first, call its business, then go back to the real thing.

```

8363 \@ifclassloaded{revtex}{%
8364   \Hy@Info{*** compatibility with revtex **** }%
8365   \def\revtex@checking#1#2{%
8366     \expandafter\let\expandafter\T@temp\csname b@#1\endcsname
8367     \expandafter\def\csname b@#1\endcsname{#2}%
8368     \@SetMaxRnhefLabel{#1}%
8369     \expandafter\let\csname b@#1\endcsname\T@temp
8370   }%

```


Tanmoy provided this replacement for CITEX. Lord knows what it does. For chapterbib added: extra@b@citeb

```

8371 \ifundefined{@CITE}{\def\CITE{\@cite}}{}%
8372 \providecommand*{\@extra@b@citeb}{}%
8373 \def\CITEX[#1]#2{%
8374   \let\@citea\@empty
8375   \leavevmode
8376   \unskip
8377   $~{%
8378     \scriptstyle
8379     \@CITE{%
8380       \@for\@citeb:=#2\do{%
8381         \@citea
8382         \def\@citea{,\penalty\@m\ }%
8383         \edef\@citeb{\expandafter\@firstofone\@citeb}%
8384         \if@filesw
8385           \immediate\write\@auxout{\string\citation{\@citeb}}%
8386         \fi
8387         \ifundefined{b@\@citeb\extra@b@citeb}{%
8388           \mbox{\reset@font\bfseries ?}%
8389           \G@refundefinedtrue
8390           \@latex@warning{%
8391             Citation `'\@citeb' on page \thepage \space undefined%
8392           }%
8393         }{%
8394           {\csname b@\@citeb\extra@b@citeb\endcsname}%
8395         }%
8396       }%
8397     }{#1}%
8398   }$%
8399 }%

```

No, life is too short. I am not going to understand the Revtex \@collapse macro, I shall just restore the original behaviour of \@citex; sigh. This is SO vile.

```

8400 \def\citex[#1]#2{%
8401   \let\@citea\@empty
8402   \@cite{%
8403     \@for\@citeb:=#2\do{%
8404       \@citea
8405       \def\@citea{,\penalty\@m\ }%
8406       \edef\@citeb{\expandafter\@firstofone\@citeb}%
8407       \if@filesw
8408         \immediate\write\@auxout{\string\citation{\@citeb}}%
8409       \fi
8410       \ifundefined{b@\@citeb\extra@b@citeb}{%
8411         \mbox{\reset@font\bfseries ?}%
8412         \G@refundefinedtrue
8413         \@latex@warning{%
8414           Citation `'\@citeb' on page \thepage \space undefined%
8415         }%
8416       }{%
8417         \hbox{\csname b@\@citeb\extra@b@citeb\endcsname}%
8418       }%
8419     }%
8420   }{#1}%
8421 }%
8422 }{}

```


38.1 Package harvard

Override Peter Williams' Harvard package; we have to a) make each of the citation types into a link; b) make each citation write a backref entry, and c) kick off a backreference section for each bibliography entry.

The redefinitions have to be deferred to `\begin{document}`, because if `harvard.sty` is loaded and `html.sty` is present and detects `pdfTeX`, then `hyperref` is already loaded at the begin of `harvard.sty`, and the `\newcommand` macros causes error messages.

```

8423 \ifpackageloaded{harvard}{%
8424   \Hy@AtBeginDocument{%
8425     \Hy@Info{*** compatibility with harvard *** }%
8426     \Hy@raiselinksfalse
8427     \def\harvardcite#1#2#3#4{%
8428       \global\@namedef{HAR@fn@#1}{\hyper@link[cite]{}{cite.#1}{#2}}%
8429       \global\@namedef{HAR@an@#1}{\hyper@link[cite]{}{cite.#1}{#3}}%
8430       \global\@namedef{HAR@yr@#1}{\hyper@link[cite]{}{cite.#1}{#4}}%
8431       \global\@namedef{HAR@df@#1}{\csname HAR@fn@#1\endcsname}%
8432     }%
8433     \def\HAR@citetoaux#1{%
8434       \if@filesw\immediate\write\@auxout{\string\citation{#1}}\fi%
8435       \ifHy@backref
8436         \ifx\@empty\@currentlabel
8437           \else
8438             \@bsphack
8439             \if@filesw
8440               \protected@write\@auxout{}{%
8441                 \string\writefile{brf}{%
8442                   \string\backcite{#1}{%
8443                     {thepage}{\@currentlabel}{\@currentHref}%
8444                   }%
8445                 }%
8446               }%
8447             \fi
8448             \@esphack
8449           \fi
8450         \fi
8451       }%
8452       \def\harvarditem{%
8453         \@ifnextchar[{\@harvarditem}{\@harvarditem[\null]}%
8454       }%
8455       \def\@harvarditem[#1]#2#3#4#5\par{%
8456         \item[]%
8457         \hyper@anchorstart{cite.#4}\relax\hyper@anchorend
8458         \if@filesw
8459           \begingroup
8460             \def\protect##1{\string ##1\space}%
8461             \ifthenelse{\equal{#1}{\null}}{%
8462               {\def\next{{#4}{#2}{#2}{#3}}}%
8463               {\def\next{{#4}{#2}{#1}{#3}}}%
8464             \immediate\write\@auxout{\string\harvardcite\codeof\next}%
8465           \endgroup
8466         \fi
8467         \protect\hspace*{-\labelwidth}%
8468         \protect\hspace*{-\labelsep}%
8469         \ignorespaces
8470         #5%

```



```

8471 \ifHy@backref
8472 \newblock
8473 \backref{\csname br@#4\endcsname}%
8474 \fi
8475 \par
8476 }%

```

\HAR@checkcitations Package hyperref has added \hyper@@link, so the original test \HAR@checkcitations will fail every time and always will appear the “Changed labels” warning. So we have to redefine \Har@checkcitations:

```

8477 \long\def\HAR@checkcitations#1#2#3#4{%
8478 \def\HAR@tempa{\hyper@@link[cite]{\cite.#1}{#2}}%
8479 \expandafter\ifx\csname HAR@fn@#1\endcsname\HAR@tempa
8480 \def\HAR@tempa{\hyper@@link[cite]{\cite.#1}{#3}}%
8481 \expandafter\ifx\csname HAR@an@#1\endcsname\HAR@tempa
8482 \def\HAR@tempa{\hyper@@link[cite]{\cite.#1}{#4}}%
8483 \expandafter\ifx\csname HAR@yr@#1\endcsname\HAR@tempa
8484 \else
8485 \@tempswatrue
8486 \fi
8487 \else
8488 \@tempswatrue
8489 \fi
8490 \else
8491 \@tempswatrue
8492 \fi
8493 }%
8494 }%

8495 {}

```

38.2 Package chicago

The links by \citeN and \shortciteN should include the closing parentheses.

```

8496 \@ifpackageloaded{chicago}{%

```

\citeN

```

8497 \def\citeN{%
8498 \def\@citeseppen{-1000}%
8499 \def\@cite##1##2{##1}%
8500 \def\citeauthoryear##1##2##3{##1 (##3\@cite@opt)}%
8501 \@citedata@opt
8502 }%

```

\shortciteN

```

8503 \def\shortciteN{%
8504 \def\@citeseppen{-1000}%
8505 \def\@cite##1##2{##1}%
8506 \def\citeauthoryear##1##2##3{##2 (##3\@cite@opt)}%
8507 \@citedata@opt
8508 }%

```

\@citedata@opt

```

8509 \def\@citedata@opt{%
8510 \let\@cite@opt\@empty
8511 \@ifnextchar [{%

```



```

8512 \@tempwattrue
8513 \@citedatax@opt
8514 }{%
8515 \@tempwafalse
8516 \@citedatax[]%
8517 }%
8518 }%

\@citedatax@opt

8519 \def\@citedatax@opt[#1]{%
8520 \def\@cite@opt{, #1}%
8521 \@citedatax[{#1}]%
8522 }%

8523 }{}


```

39 Page numbers

The last page should not contain a /Dur key, because there is no page after the last page. Therefore at the last page there should be a command `\hypersetup{pdf-pageduration={}}`. This can be set with `\AtEndDocument`, but it can be too late, if the last page is already finished, or too early, if lots of float pages will follow. Therefore currently nothing is done by hyperref.

This where we supply a destination for each page.

```

8524 \ltx@ifclassloaded{slides}{%
8525 \def\Hy@SlidesFormatOptionalPage#1{(#1)}%
8526 \def\Hy@PageAnchorSlidesPlain{%
8527 \advance\c@page\ltx@one
8528 \edef\Hy@TempPageAnchor{%
8529 \noexpand\hyper@@anchor{%
8530 page.\the\c@slide.\the\c@overlay.\the\c@note%
8531 \ifnum\c@page=\ltx@one
8532 \else
8533 .\the\c@page
8534 \fi
8535 }%
8536 }%
8537 \advance\c@page-\ltx@one
8538 }%
8539 \def\Hy@PageAnchorSlide{%
8540 \advance\c@page\ltx@one
8541 \ifnum\c@page>\ltx@one
8542 \ltx@ifundefined{theHpage}{%
8543 \protected@edef\Hy@TheSlideOptionalPage{%
8544 \Hy@SlidesFormatOptionalPage{\thepage}%
8545 }%
8546 }{%
8547 \protected@edef\Hy@TheSlideOptionalPage{%
8548 \Hy@SlidesFormatOptionalPage{\theHpage}%
8549 }%
8550 }%
8551 \else
8552 \def\Hy@TheSlideOptionalPage{}%
8553 \fi
8554 \advance\c@page-\ltx@one
8555 \pdfstringdef\@the@H@page{%

```



```

8556 \csname
8557 the%
8558 \ltx@ifundefined{theH\Hy@SlidesPage}{H}%
8559 \Hy@SlidesPage
8560 \endcsname
8561 \Hy@TheSlideOptionalPage
8562 }%
8563 \ltx@gobblethree
8564 }%
8565 \def\Hy@SlidesPage{slide}%
8566 \g@addto@macro\slide{%
8567 \def\Hy@SlidesPage{slide}%
8568 }%
8569 \g@addto@macro\overlay{%
8570 \def\Hy@SlidesPage{overlay}%
8571 }%
8572 \g@addto@macro\note{%
8573 \def\Hy@SlidesPage{note}%
8574 }%
8575 }{%
8576 \def\Hy@PageAnchorSlidesPlain{}%
8577 \def\Hy@PageAnchorSlide{}%
8578 }
8579 \def\Hy@EveryPageAnchor{%
8580 \Hy@DistillerDestFix
8581 \ifHy@pageanchor
8582 \ifHy@hypertextnames
8583 \ifHy@plainpages
8584 \def\Hy@TempPageAnchor{\hyper@@anchor{page.\the\c@page}}%
8585 \Hy@PageAnchorSlidesPlain
8586 \else
8587 \begingroup
8588 \let\@number\@firstofone
8589 \Hy@unicodedefalse
8590 \Hy@PageAnchorSlide
8591 \pdfstringdef\@the@H@page{\thepage}%
8592 \endgroup
8593 \EdefUnescapeString\@the@H@page{\@the@H@page}%
8594 \def\Hy@TempPageAnchor{\hyper@@anchor{page.\@the@H@page}}%
8595 \fi
8596 \else
8597 \Hy@GlobalStepCount\Hy@pagecounter
8598 \def\Hy@TempPageAnchor{%
8599 \hyper@@anchor{page.\the\Hy@pagecounter}%
8600 }%
8601 \fi
8602 \vbox to 0pt{%
8603 \kern\voffset
8604 \kern\topmargin
8605 \kern-1bp\relax
8606 \hbox to 0pt{%
8607 \kern\hoffset
8608 \kern\ifodd\value{page}%
8609 \oddsidemargin
8610 \else
8611 \evensidemargin
8612 \fi

```



```

8613      \kern-1bp\relax
8614      \Hy@TempPageAnchor\relax
8615      \hss
8616    }%
8617    \vss
8618  }%
8619  \fi
8620 }
8621 \g@addto@macro\Hy@EveryPageBoxHook{%
8622   \Hy@EveryPageAnchor
8623 }

```

40 Table of contents

TV Raman noticed that people who add arbitrary material into the TOC generate a bad or null link. We avoid that by checking if the current destination is empty. But if ‘the most recent destination’ is not what you expect, you will be in trouble.

```

8624 % In newer \LaTeX\ releases this is defined to put a \verb|%| at the end of the
8625 % line in the \texttt{toc}file.
8626 %   \begin{macrocode}
8627 \providecommand\protected@file@percent{}

8628 \def\addcontentsline#1#2#3{% toc extension, type, tag
8629   \begingroup
8630     \let\label\@gobble
8631     \ifx\@currentHref\@empty
8632       \Hy@Warning{%
8633         No destination for bookmark of \string\addcontentsline,%
8634         \MessageBreak destination is added%
8635       }%
8636     \phantomsection
8637   \fi
8638   \expandafter\ifx\csname toplevel@#2\endcsname\relax
8639     \begingroup
8640       \def\Hy@tempa{#1}%
8641       \ifx\Hy@tempa\Hy@bookmarkstype
8642         \Hy@WarningNoLine{%
8643           bookmark level for unknown #2 defaults to 0%
8644         }%
8645       \else
8646         \Hy@Info{bookmark level for unknown #2 defaults to 0}%
8647       \fi
8648     \endgroup
8649     \expandafter\gdef\csname toplevel@#2\endcsname{0}%
8650   \fi
8651   \edef\Hy@toplevel{\csname toplevel@#2\endcsname}%
8652   \Hy@writebookmark{\csname the#2\endcsname}%
8653     {#3}%
8654     {\@currentHref}%
8655     {\Hy@toplevel}%
8656     {#1}%
8657   \ifHy@verbose
8658     \begingroup
8659       \def\Hy@tempa{#3}%
8660       \@onelevel@sanitize\Hy@tempa
8661       \let\temp@online\on@line
8662       \let\on@line\@empty

```



```

8663 \Hy@Info{%
8664 bookmark\temp@online:\MessageBreak
8665 thecounter {\csname the#2\endcsname}\MessageBreak
8666 text {\Hy@tempa}\MessageBreak
8667 reference {\@currentHref}\MessageBreak
8668 toplevel {\Hy@toclevel}\MessageBreak
8669 type {#1}%
8670 }%
8671 \endgroup
8672 \fi
8673 \addtocontents{#1}{%
8674 \protect\contentsline{#2}{#3}{\thepage}{\@currentHref}\protected@file@per-
cent
8675 }%
8676 \endgroup
8677 }

```

`\contentsline` The page number might be empty. In this case the link for the page number is suppressed to avoid little link boxes.

```

8678 \def\contentsline#1#2#3#4{%
8679 \begingroup
8680 \Hy@safe@activestrue
8681 \edef\x{\endgroup
8682 \def\noexpand\Hy@tocdestname{#4}%
8683 }\x
8684 \ifx\Hy@tocdestname\ltx@empty
8685 \csname l@#1\endcsname{#2}{#3}%
8686 \else
8687 \ifcase\Hy@linktoc % none
8688 \csname l@#1\endcsname{#2}{#3}%
8689 \or % section
8690 \csname l@#1\endcsname{%
8691 \hyper@linkstart{link}{\Hy@tocdestname}{#2}\hyper@linkend
8692 }{#3}%
8693 \or % page
8694 \def\Hy@temp{#3}%
8695 \ifx\Hy@temp\ltx@empty
8696 \csname l@#1\endcsname{#2}{#3}%
8697 \else
8698 \csname l@#1\endcsname{#2}{#3}%
8699 \hyper@linkstart{link}{\Hy@tocdestname}{#3}\hyper@linkend
8700 }%
8701 \fi
8702 \else % all
8703 \def\Hy@temp{#3}%
8704 \ifx\Hy@temp\ltx@empty
8705 \csname l@#1\endcsname{%
8706 \hyper@linkstart{link}{\Hy@tocdestname}{#2}\hyper@linkend
8707 }{}%
8708 \else
8709 \csname l@#1\endcsname{%
8710 \hyper@linkstart{link}{\Hy@tocdestname}{#2}\hyper@linkend
8711 }{}%
8712 \hyper@linkstart{link}{\Hy@tocdestname}{#3}\hyper@linkend
8713 }%
8714 \fi
8715 \fi

```



```

8716 \fi
8717 }

8718 \</package>
8719 \< *check>
8720 \checklatex
8721 \checkcommand\def\addcontentsline#1#2#3{%
8722 \addtocontents{#1}{\protect\contentsline{#2}{#3}{\thepage}}%
8723 }
8724 \checkcommand\def\contentsline#1{\csname l@#1\endcsname}
8725 \</check>
8726 \< *package>

```

41 New counters

The whole theorem business makes up new counters on the fly; we are going to intercept this. Sigh. Do it at the level where new counters are defined.

```

8727 \let\H@definecounter\@definecounter
8728 \def\@definecounter#1{%
8729 \H@definecounter{#1}%
8730 \expandafter\gdef\csname theH#1\endcsname{\arabic{#1}}%
8731 }

```

But what if they have used the optional argument to e.g. `\newtheorem` to determine when the numbering is reset? OK, we'll trap that too.

```

8732 \let\H@newctr\@newctr
8733 \def\@newctr#1[#2]{%
8734 \H@newctr#1[#2]%
8735 \expandafter\gdef\csname theH#1\endcsname{%
8736 \csname the\@ifundefined{theH#2}{-}{H}#2\endcsname.\arabic{#1}%
8737 }%
8738 }

```

42 AMS \LaTeX compatibility

Oh, no, they don't use anything as simple as `\refstepcounter` in the AMS! We need to intercept some low-level operations of theirs. Damned if we are going to try and work out what they get up to. Just stick a label of 'AMS' on the front, and use the label *they* worked out. If that produces something invalid, I give up. They'll change all the code again anyway, I expect (SR).

Version 6.77p uses a patch by Ross Moore.

```

8739 \<@ifpackageloaded{amsmath}{%
8740 \def\Hy@make@anchor{%
8741 \Hy@MakeCurrentHrefAuto{AMS}%
8742 \Hy@raisedlink{\hyper@anchorstart{\@currentHref}\hyper@anchorend}%
8743 }%
8744 \def\Hy@make@df@tag@@#1{%
8745 \gdef\df@tag{%
8746 \maketag@@@{\Hy@make@anchor#1}%
8747 \def\@currentlabel{#1}%
8748 }%
8749 }%
8750 \def\Hy@make@df@tag@@@#1{%
8751 \gdef\df@tag{%
8752 \tagform@{\Hy@make@anchor#1}%

```



```

8753 \toks@{\xp{p@equation{#1}}}%
8754 \edef\@currentlabel{\the\toks@}%
8755 }%
8756 }%
8757 \let\HyOrg@make@df@tag@@\make@df@tag@@
8758 \let\HyOrg@make@df@tag@@@\make@df@tag@@@
8759 \let\make@df@tag@@\Hy@make@df@tag@@
8760 \let\make@df@tag@@@\Hy@make@df@tag@@@
8761 }{}

```

Only play with `\seteqlebal` if we are using pdf_{tex}. Other drivers cause problems; requested by Michael Downes (AMS).

```

8762 \@ifpackagewith{hyperref}{pdftex}{%
8763 \let\H@seteqlabel\@seteqlabel
8764 \def\@seteqlabel#1{%
8765 \H@seteqlabel{#1}%
8766 \xdef\@currentHref{AMS.\the\Hy@linkcounter}%
8767 \Hy@raisedlink{%
8768 \hyper@anchorstart{\@currentHref}\hyper@anchorend
8769 }%
8770 }%
8771 }{}

```

This code I simply cannot remember what I was trying to achieve. The final result seems to do nothing anyway.

```

\let\H@tagform@\tagform@
\def\tagform@#1{%
  \maketag@@@{\hyper@@anchor{\@currentHref}%
  \{\ignorespaces#1\unskip\}}%
}
\def\eqref#1{\textup{\H@tagform@\ref{#1}}}

```

42.1 `\@addtoreset` and `\numberwithin` patches

`\@addtoreset` puts a counter to the reset list of another counter. After a reset the counter starts again with perhaps already used values. Therefore the hyperref version of the counter print command `\theHcounter` is redefined in order to add the parent counter.

```

8772 \let\HyOrg@addtoreset\@addtoreset
8773 \def\@addtoreset#1#2{%
8774 \HyOrg@addtoreset{#1}{#2}%
8775 \expandafter\xdef\csname theH#1\endcsname{%
8776 \expandafter\noexpand
8777 \csname the\@ifundefined{theH#2}{H#2}\endcsname
8778 .\noexpand\the\noexpand\value{#1}%
8779 }%
8780 }

```

`\numberwithin` A appropriate definition of hyperref's companion counter (`\theH...`) is added for correct link names.

```

8781 </package>
8782 *check>
8783 \checkpackage{amsmath}[1999/12/14 - 2000/06/06]
8784 \checkcommand\newcommand{\numberwithin}[3][\arabic]{%
8785 \@ifundefined{c@#2}{\@nocounterr{#2}}{%
8786 \@ifundefined{c@#3}{\@nocnterr{#3}}{%
8787 \@addtoreset{#2}{#3}%

```



```

8788 \exp\edef\csname the#2\endcsname{%
8789 \exp\@nx\csname the#3\endcsname .\@nx#1{#2}%
8790 }%
8791 }%
8792 }%
8793 }%
8794 \check
8795 \*package
8796 \ifpackageloaded{amsmath}{%
8797 \ifpackagelater{amsmath}{1999/12/14}{%
8798 \renewcommand*{\numberwithin}[3][\arabic]{%
8799 \@ifundefined{c@#2}{\@nocounterr{#2}}{%
8800 \@ifundefined{c@#3}{\@nocnterr{#3}}{%
8801 \HyOrg@addtoreset{#2}{#3}%
8802 \exp\edef\csname the#2\endcsname{%
8803 \exp\@nx\csname the#3\endcsname .\@nx#1{#2}%
8804 }%
8805 \exp\edef\csname theH#2\endcsname{%
8806 \exp\@nx
8807 \csname the\@ifundefined{theH#3}{}H#3\endcsname
8808 .\@nx#1{#2}%
8809 }%
8810 }%
8811 }%
8812 }%
8813 }{%
8814 \Hy@WarningNoLine{%
8815 \string\numberwithin\space of package `amsmath' %
8816 only fixed\MessageBreak
8817 for version 2000/06/06 v2.12 or newer%
8818 }%
8819 }%
8820 }{}

```

43 Included figures

Simply intercept the low level graphics package macro.

```

8821 \ifHy@hyperfigures
8822 \let\Hy@Gin@setfile\Gin@setfile
8823 \def\Gin@setfile#1#2#3{%
8824 \hyperimage{#3}{\Hy@Gin@setfile{#1}{#2}{#3}}%
8825 }%
8826 \fi
8827 \Hy@DisableOption{hyperfigures}

```

44 hyperindex entries

Internal command names are prefixed with `\HyInd@`.

Hyper-indexing works crudely, by forcing code onto the end of the index entry with the `|` feature; this puts a hyperlink around the printed page numbers. It will not proceed if the author has already used the `|` specifier for something like boldening entries. That would make `Makeindex` fail (cannot have two `|` specifiers). The solution is for the author to use generic coding, and put in the requisite `\hyperpage` in his/her own macros along with the boldness.

This section is poor stuff; it's open to all sorts of abuse. Sensible large projects will design their own indexing macros any bypass this.

```

8828 \ifHy@hyperindex
8829 \def\HyInd@ParenLeft{()%
8830 \def\HyInd@ParenRight{)%}
8831 \def\hyperindexformat#1#2{%
8832 \let\HyOrg@hyperpage\hyperpage
8833 \let\hyperpage\@firstofone
8834 #1{\HyOrg@hyperpage{#2}}%
8835 \let\hyperpage\HyOrg@hyperpage
8836 }%
8837 \Hy@nextfalse
8838 \@ifpackageloaded{multind}{\Hy@nexttrue}{}%
8839 \@ifpackageloaded{index}{\Hy@nexttrue}{}%
8840 \@ifpackageloaded{amsmidx}{\Hy@nexttrue}{}%
8841 \begingroup
8842 \lccode`\|=\expandafter`\HyInd@EncapChar\relax
8843 \lccode`\/=\relax
8844 \lowercase{\endgroup
8845 \ifHy@next
8846 \let\HyInd@org@wrindex\@wrindex
8847 \def\@wrindex#1#2{\HyInd@@wrindex{#1}#2||\}%
8848 \def\HyInd@@wrindex#1#2|#3|#4\{\%
8849 \ifx\|#3\%
8850 \HyInd@org@wrindex{#1}{#2|hyperpage}%
8851 \else
8852 \HyInd@@@wrindex{#1}{#2}#3\%
8853 \fi
8854 }%
8855 \def\HyInd@@@wrindex#1#2#3#4\{\%
8856 \def\Hy@temp@A{#3}%
8857 \ifcase0\ifx\Hy@temp@A\HyInd@ParenLeft 1\fi
8858 \ifx\Hy@temp@A\HyInd@ParenRight 1\fi
8859 \relax
8860 \HyInd@org@wrindex{#1}{%
8861 #2|hyperindexformat{/#3#4}%
8862 }%
8863 \else
8864 \ifx\|#4\%
8865 \ifx\Hy@temp@A\HyInd@ParenRight
8866 \HyInd@org@wrindex{#1}{#2|#3}%
8867 \else
8868 \HyInd@org@wrindex{#1}{#2|#3hyperpage}%
8869 \fi
8870 \else
8871 \HyInd@org@wrindex{#1}{%
8872 #2|#3hyperindexformat{/#4}%
8873 }%
8874 \fi
8875 \fi
8876 }%
8877 \else
8878 \def\@wrindex#1{\@wrindex#1||\}%
8879 \def\@wrindex#1|#2|#3\{\%
8880 \if@filesw
8881 \ifx\|#2\%
8882 \protected@write\@indexfile{}{%

```



```

8883         \string\indexentry{#1|hyperpage}{\thepage}%
8884     }%
8885     \else
8886         \HyInd@@@wrindex{#1}#2\\%
8887     \fi
8888 \fi
8889 \endgroup
8890 \@esphack
8891 }%
8892 \def\HyInd@@@wrindex#1#2#3\\{%
8893     \def\Hy@temp@A{#2}%
8894     \ifcase0\ifx\Hy@temp@A\HyInd@ParenLeft 1\fi
8895         \ifx\Hy@temp@A\HyInd@ParenRight 1\fi
8896         \relax
8897     \protected@write\@indexfile{}{%
8898         \string\indexentry{%
8899             #1|hyperindexformat{/#2#3}%
8900         }{\thepage}%
8901     }%
8902     \else
8903         \ifx\\#3\\%
8904             \ifx\Hy@temp@A\HyInd@ParenRight
8905                 \HyInd@DefKey{#1}%
8906                 \ltx@ifundefined{HyInd@(\HyInd@key)}{%
8907                     \let\Hy@temp\ltx@empty
8908                 }{%
8909                     \expandafter\let\expandafter\Hy@temp
8910                         \csname HyInd@(\HyInd@key)\endcsname
8911                 }%
8912                 \protected@write\@indexfile{}{%
8913                     \string\indexentry{#1|#2\Hy@temp}{\thepage}%
8914                 }%
8915             \else
8916                 \protected@write\@indexfile{}{%
8917                     \string\indexentry{#1|#2hyperpage}{\thepage}%
8918                 }%
8919                 \HyInd@DefKey{#1}%
8920                 \expandafter
8921                 \gdef\csname HyInd@(\HyInd@key)\endcsname{%
8922                     hyperpage%
8923                 }%
8924             \fi
8925         \else
8926             \protected@write\@indexfile{}{%
8927                 \string\indexentry{%
8928                     #1|#2hyperindexformat{/#3}%
8929                 }{\thepage}%
8930             }%
8931             \ifx\Hy@temp@A\HyInd@ParenLeft
8932                 \HyInd@DefKey{#1}%
8933                 \expandafter
8934                 \gdef\csname HyInd@(\HyInd@key)\endcsname{%
8935                     hyperindexformat{/#3}%
8936                 }%
8937             \fi
8938         \fi
8939     \fi

```



```

8940 }%
8941 \def\HyInd@DefKey#1{%
8942   \begingroup
8943     \let\protect\@unexpandable@protect
8944     \edef\Hy@temp{#1}%
8945     \ltx@onelevel@sanitize\Hy@temp
8946     \global\let\HyInd@key\Hy@temp
8947   \endgroup
8948 }%
8949 \fi
8950 }%
8951 \fi
8952 \Hy@DisableOption{hyperindex}
8953 \Hy@DisableOption{encap}

```

`\nohyperpage` The definition of `\nohyperpage` is just a precaution. It is used to mark code that does not belong to a page number, but `\nohyperpage` is never executed.

```

8954 \def\nohyperpage#1{#1}

```

This again is quite flaky, but allow for the common situation of a page range separated by en-rule. We split this into two different hyperlinked pages.

```

8955 \def\hyperpage#1{%
8956   \HyInd@hyperpage#1\nohyperpage{}\@nil
8957 }
8958 \def\HyInd@hyperpage#1\nohyperpage#2#3\@nil{%
8959   \HyInd@@hyperpage{#1}%
8960   #2%
8961   \def\Hy@temp{#3}%
8962   \ifx\Hy@temp\@empty
8963     \else
8964       \ltx@ReturnAfterFi{%
8965         \HyInd@hyperpage#3\@nil
8966       }%
8967     \fi
8968 }
8969 \def\HyInd@@hyperpage#1{\@hyperpage#1----\}
8970 \def\@hyperpage#1--#2--#3\{\%
8971   \ifx\#2\%
8972     \@commahyperpage{#1}%
8973   \else
8974     \HyInd@pagelink{#1}--\HyInd@pagelink{#2}%
8975   \fi
8976 }
8977 \def\@commahyperpage#1{\@commahyperpage#1, \}
8978 \def\@commahyperpage#1, #2,#3\{\%
8979   \ifx\#2\%
8980     \HyInd@pagelink{#1}%
8981   \else
8982     \HyInd@pagelink{#1}, \HyInd@pagelink{#2}%
8983   \fi
8984 }

```

The argument of `\hyperpage` can be empty. And the line breaking algorithm of `Makeindex` can introduce spaces. So we have to remove them.

```

8985 \def\HyInd@pagelink#1{%
8986   \begingroup
8987   \toks@={}%

```



```

8988 \HyInd@removespaces#1 \@nil
8989 \endgroup
8990 }
8991 \def\HyInd@removespaces#1 #2\@nil{%
8992 \toks@=\expandafter{\the\toks@#1}%
8993 \ifx\#2\%
8994 \edef\x{\the\toks@}%
8995 \ifx\x\@empty
8996 \else
8997 \hyperlink{page.\the\toks@}{\the\toks@}%
8998 \fi
8999 \else
9000 \ltx@ReturnAfterFi{%
9001 \HyInd@removespaces#2\@nil
9002 }%
9003 \fi
9004 }

```

45 Compatibility with foiltex

```

9005 \@ifclassloaded{foils}{%
9006 \providecommand*\ext@table{lot}%
9007 \providecommand*\ext@figure{lof}%
9008 }{}

```

46 Compatibility with seminar slide package

This requires `seminar.bg2`, version 1.6 or later. Contributions by Denis Girou (denis.girou@idris.fr).

```

9009 \@ifclassloaded{seminar}{%
9010 \Hy@seminarstrue
9011 \providecommand\theHslide{\arabic{slide}}%
9012 }{%
9013 \Hy@seminarslidesfalse
9014 }
9015 \@ifpackageloaded{slidesec}{%
9016 \providecommand\theHslidesection {\arabic{slidesection}}%
9017 \providecommand\theHslidesubsection{%
9018 \theHslidesection.\arabic{slidesubsection}}%
9019 }%
9020 \def\slide@heading[#1]#2{%
9021 \H@refstepcounter{slidesection}%
9022 \@addtoreset{slidesubsection}{slidesection}%
9023 \addtocontents{los}{%
9024 \protect\l@slide{\the\c@slidesection}{\ignorespaces#1}%
9025 {\@SCTR}{slideheading.\theslide\theslide\theslide}%
9026 }%
9027 \def\Hy@tempa{#2}%
9028 \ifx\Hy@tempa\@empty
9029 \else
9030 {%
9031 \edef\@currentlabel{%
9032 \csname p@slidesection\endcsname\theslide\theslide\theslide
9033 }%
9034 \makeslideheading{#2}%
9035 }%

```



```

9036 \fi
9037 \gdef\theslideheading{#1}%
9038 \gdef\theslidesubheading{}%
9039 \ifHy@bookmarksnumbered
9040 \def\Hy@slidetitle{\theslidesection\space #1}%
9041 \else
9042 \def\Hy@slidetitle{#1}%
9043 \fi
9044 \ifHy@hypertexnames
9045 \ifHy@naturalnames
9046 \hyper@@anchor{slideheading.\theslidesection}{\relax}%
9047 \Hy@writebookmark
9048 {\theslidesection}%
9049 {\Hy@slidetitle}%
9050 {slideheading.\theslidesection}%
9051 {1}%
9052 {toc}%
9053 \else
9054 \hyper@@anchor{slideheading.\theHslidesection}{\relax}%
9055 \Hy@writebookmark
9056 {\theslidesection}%
9057 {\Hy@slidetitle}%
9058 {slideheading.\theHslidesection}%
9059 {1}%
9060 {toc}%
9061 \fi
9062 \else
9063 \Hy@GlobalStepCount\Hy@linkcounter
9064 \hyper@@anchor{slideheading.\the\Hy@linkcounter}{\relax}%
9065 \Hy@writebookmark
9066 {\theslidesection}%
9067 {\Hy@slidetitle}%
9068 {slideheading.\the\Hy@linkcounter}%
9069 {1}%
9070 {toc}%
9071 \fi
9072 }%
9073 \def\slide@subheading[#1]#2{%
9074 \H@refstepcounter{slidesubsection}%
9075 \addtocontents{los}{%
9076 \protect\l@subslide{\the\c@slidesubsection}{\ignorespaces#1}%
9077 {\@SCTR}{slideheading.\theslidesubsection}%
9078 }%
9079 \def\Hy@tempa{#2}%
9080 \ifx\Hy@tempa\@empty
9081 \else
9082 {%
9083 \edef\@currentlabel{%
9084 \csname p@slidesubsection\endcsname\theslidesubsection
9085 }%
9086 \makeslidesubheading{#2}%
9087 }%
9088 \fi
9089 \gdef\theslidesubheading{#1}%
9090 \ifHy@bookmarksnumbered
9091 \def\Hy@slidetitle{\theslidesubsection\space #1}%
9092 \else

```



```

9093 \def\Hy@slidetitle{#1}%
9094 \fi
9095 \ifHy@hypertextnames
9096 \ifHy@naturalnames
9097 \hyper@@anchor{slideheading.\theslidesubsection}{\relax}%
9098 \Hy@writebookmark
9099 {\theslidesubsection}%
9100 {\Hy@slidetitle}%
9101 {slideheading.\theslidesubsection}%
9102 {2}%
9103 {toc}%
9104 \else
9105 \hyper@@anchor{slideheading.\theHslidesubsection}{\relax}%
9106 \Hy@writebookmark
9107 {\theslidesubsection}%
9108 {\Hy@slidetitle}%
9109 {slideheading.\theHslidesubsection}%
9110 {2}%
9111 {toc}%
9112 \fi
9113 \else
9114 \Hy@GlobalStepCount\Hy@linkcounter
9115 \hyper@@anchor{slideheading.\the\Hy@linkcounter}{\relax}%
9116 \Hy@writebookmark
9117 {\theslidesubsection}%
9118 {\Hy@slidetitle}%
9119 {slideheading.\the\Hy@linkcounter}%
9120 {1}%
9121 {toc}%
9122 \fi
9123 }%
9124 \providecommand*\listslidenamelist{List of Slides}%
9125 \def\listofslides{%
9126 \section*{%
9127 \listslidenamelist
9128 \@mkboth{%
9129 \expandafter\MakeUppercase\listslidenamelist
9130 }{%
9131 \expandafter\MakeUppercase\listslidenamelist
9132 }%
9133 }%
9134 \def\l@slide##1##2##3##4{%
9135 \slide@undottedcline{%
9136 \slidenumberline{##3}{\hyperlink{##4}{##2}}}%
9137 }{}%
9138 }%
9139 \let\l@subslide\l@slide
9140 \@startlos
9141 }%
9142 \def\slide@contents{%
9143 \def\l@slide##1##2##3##4{%
9144 \slide@cline{\slidenumberline{##3}{\hyperlink{##4}{##2}}}{##3}%
9145 }%
9146 \let\l@subslide\@gobblefour
9147 \@startlos
9148 }%
9149 \def\Slide@contents{%

```



```

9150 \def\l@slide##1##2##3##4{%
9151 \ifcase\lslide@flag
9152 \message{##1 ** \the\c@slidesection}%
9153 \ifnum##1>\c@slidesection
9154 \def\lslide@flag{1}%
9155 {%
9156 \large
9157 \slide@cline{%
9158 \slidenumberline{$\Rightarrow\bullet$}%
9159 {\hyperlink{##4}{##2}}}%
9160 }{##3}%
9161 }%
9162 \else
9163 {%
9164 \large
9165 \slide@cline{%
9166 \slidenumberline{$\surd\;\bullet$}%
9167 {\hyperlink{##4}{##2}}}%
9168 }{##3}%
9169 }%
9170 \fi
9171 \or
9172 \def\lslide@flag{2}%
9173 {%
9174 \large
9175 \slide@cline{%
9176 \slidenumberline{$\bullet$}%
9177 {\hyperlink{##4}{##2}}}%
9178 }{##3}%
9179 }%
9180 \or
9181 {%
9182 \large
9183 \slide@cline{%
9184 \slidenumberline{$\bullet$}%
9185 {\hyperlink{##4}{##2}}}%
9186 }{##3}%
9187 }%
9188 \fi
9189 }%
9190 \def\l@subslide##1##2##3##4{%
9191 \ifnum\lslide@flag=1 %
9192 \@undottedtocline{2}{3.8em}{3.2em}{\hyperlink{##4}{##2}}{}}%
9193 \fi
9194 }%
9195 \def\lslide@flag{0}%
9196 \@startlos
9197 }%
9198 }{}

```

This breaks TeX4ht, so leave it to last. Emend `\@setref` to put out a hypertext link as well as its normal text (which is used as an anchor). (`\endinput` have to be on the same line like `\fi`, or you have to use `\expandafter` before.)

```

9199 \ifHy@texht
9200 \expandafter\endinput
9201 \fi
9202 \let\real@setref\@setref
9203 \def\@setref#1#2#3{% curname, extract group, refname

```



```

9204 \ifx#1\relax
9205   \protect\G@refundefinedtrue
9206   \nfss@text{\reset@font\bfseries ??}%
9207   \@latex@warning{%
9208     Reference `#3' on page \thepage \space undefined%
9209   }%
9210 \else
9211   \expandafter\Hy@setref@link#1\@empty\@empty\@nil{#2}%
9212 \fi
9213 }

```

`\Hy@setref@link` extracts the reference information entries, because `\hyper@@link` does not expand arguments for the automatic link type detection.

```

9214 \def\Hy@setref@link#1#2#3#4#5#6\@nil#7{%
9215   \begingroup
9216   \toks0={\hyper@@link{#5}{#4}}%
9217   \toks1=\expandafter{#7{#1}{#2}{#3}{#4}{#5}}%
9218   \edef\x{\endgroup
9219     \the\toks0 {\the\toks1 }%
9220   }%
9221   \x
9222 }
9223 \def\@pagesetref#1#2#3{% csname, extract macro, ref
9224   \ifx#1\relax
9225     \protect\G@refundefinedtrue
9226     \nfss@text{\reset@font\bfseries ??}%
9227     \@latex@warning{%
9228       Reference `#3' on page \thepage \space undefined%
9229     }%
9230   \else
9231     \protect\hyper@@link
9232     {\expandafter\@fifthoffive#1}%
9233     {page.\expandafter\@secondoffive#1}%
9234     {\expandafter\@secondoffive#1}%
9235   \fi
9236 }
9237 </package>
9238 <*check>
9239 \checklatex
9240 \checkcommand\def\@setref#1#2#3{%
9241   \ifx#1\relax
9242     \protect\G@refundefinedtrue
9243     \nfss@text{\reset@font\bfseries ??}%
9244     \@latex@warning{%
9245       Reference `#3' on page \thepage \space undefined%
9246     }%
9247   \else
9248     \expandafter#2#1\null
9249   \fi
9250 }
9251 </check>
9252 <*package>

```

Now some extended referencing. `\ref*` and `\pageref*` are not linked, and `\autoref` prefixes with a tag based on the type.

```

9253 \def\HyRef@StarSetRef#1{%
9254   \begingroup
9255   \Hy@safe@activestru

```



```

9256 \edef\x{#1}%
9257 \@onelevel@sanitize\x
9258 \edef\x{\endgroup
9259 \noexpand\HyRef@@StarSetRef
9260 \expandafter\noexpand\csname r@\x\endcsname{x}}%
9261 }%
9262 \x
9263 }
9264 \def\HyRef@@StarSetRef#1#2#3{%
9265 \ifx#1\@undefined
9266 \let#1\relax
9267 \fi
9268 \real@setref#1#3{#2}%
9269 }
9270 \def\@refstar#1{%
9271 \HyRef@StarSetRef{#1}\@firstoffive
9272 }
9273 \def\@pagerefstar#1{%
9274 \HyRef@StarSetRef{#1}\@secondoffive
9275 }
9276 \def\@namerefstar#1{%
9277 \HyRef@StarSetRef{#1}\@thirdoffive
9278 }
9279
9280 \Hy@AtBeginDocument{%
9281 \@ifpackageloaded{varioref}{%
9282 \def\@Refstar#1{%
9283 \HyRef@StarSetRef{#1}\HyRef@MakeUppercaseFirstOfFive
9284 }%
9285 \def\HyRef@MakeUppercaseFirstOfFive#1#2#3#4#5{%
9286 \MakeUppercase#1%
9287 }%
9288 \DeclareRobustCommand*\Ref}{%
9289 \@ifstar\@Refstar\HyRef@Ref
9290 }%
9291 \def\HyRef@Ref#1{%
9292 \hyperref[{#1}]{\Ref*{#1}}%
9293 }%

```

Test if we are running new 2019 varioref or old one:

```

9294 %FMi
9295 \ifdefined\vp@gerefstar
9296 \renewcommand\Vref@star[2][]{%
9297 \begingroup
9298 \let\T@pageref\@pagerefstar
9299 \Ref*{#2}
9300 \vpageref[#1]{#2}%
9301 \endgroup
9302 }%
9303 \renewcommand\Vr@f[2][]{%
9304 \begingroup
9305 \let\T@pageref\@pagerefstar
9306 \hyperref[{#2}]{%
9307 \Ref*{#2}
9308 \vpageref[#1]{#2}%
9309 }%
9310 \endgroup
9311 }%

```



```

9312 \renewcommand\vr@f[2][]{%
9313 \begingroup
9314 \let\T@pageref\@pagerefstar
9315 \hyperref[#2]{}%
9316 \ref*{#2}
9317 \vpageref[#1]{#2}%
9318 }%
9319 \endgroup
9320 }%
9321 \renewcommand\vref@star[2][]{%
9322 \begingroup
9323 \let\T@pageref\@pagerefstar
9324 \ref*{#2}
9325 \vpageref[#1]{#2}%
9326 \endgroup
9327 }%
old varioref:
9328 \else
9329 \def\Vr@f#1{%
9330 \leavevmode\unskip\vref@space
9331 \hyperref[#1]{}%
9332 \Ref*{#1}%
9333 \let\vref@space\nobreakspace
9334 \@vpageref[\unskip]{#1}%
9335 }%
9336 }%
9337 \def\vr@f#1{%
9338 \leavevmode\unskip\vref@space
9339 \begingroup
9340 \let\T@pageref\@pagerefstar
9341 \hyperref[#1]{}%
9342 \ref*{#1}%
9343 \vpageref[\unskip]{#1}%
9344 }%
9345 \endgroup
9346 }%
9347 \fi
9348 %FMi -end mod
9349 }{}%
9350 }
9351
9352 \DeclareRobustCommand*\autopageref{%
9353 \ifstar%
9354 \HyRef@autopagerefname\pageref*%
9355 }\HyRef@autopageref
9356 }
9357 \def\HyRef@autopageref#1{%
9358 \hyperref[#1]{\HyRef@autopagerefname\pageref*{#1}}%
9359 }
9360 \def\HyRef@autopagerefname{%
9361 \ltx@ifundefined{pageautorefname}{%
9362 \ltx@ifundefined{pagename}{%
9363 \Hy@Warning{No autoref name for `page'}%
9364 }{}%
9365 \pagename\nobreakspace
9366 }%
9367 }{}%

```



```

9368 \pageautorefname\nobreakspace
9369 }%
9370 }

```

\leavevmode is added to make package wrapfigure happy, if \autoref starts a paragraph.

```

9371 \DeclareRobustCommand*{\autoref}{%
9372 \leavevmode
9373 \@ifstar{\HyRef@autoref@gobbletwo}{\HyRef@autoref@hyper@@link}%
9374 }
9375 \def\HyRef@autoref#1#2{%
9376 \begingroup
9377 \Hy@safe@activetrue
9378 \expandafter\HyRef@autosetref\csname r@#2\endcsname{#2}{#1}%
9379 \endgroup
9380 }
9381 \def\HyRef@autosetref#1#2#3{% link command, csname, refname
9382 \HyRef@ShowKeysRef{#2}%
9383 \ifcase 0\ifx#1\relax 1\fi\ifx#1\Hy@varioref@undefined 1\fi\relax
9384 \edef\HyRef@thisref{%
9385 \expandafter\@fourthoffive#1\@empty\@empty\@empty
9386 }%
9387 \expandafter\HyRef@testreftype\HyRef@thisref.\.%
9388 \Hy@safe@activesfalse
9389 #3{%
9390 \expandafter\@fifthoffive#1\@empty\@empty\@empty
9391 }{%
9392 \expandafter\@fourthoffive#1\@empty\@empty\@empty
9393 }{%
9394 \HyRef@currentHtag
9395 \expandafter\@firstoffive#1\@empty\@empty\@empty
9396 \null
9397 }%
9398 \else
9399 \protect\G@refundefinedtrue
9400 \nfss@text{\reset@font\bfseries ??}%
9401 \@latex@warning{%
9402 Reference `#2' on page \thepage\space undefined%
9403 }%
9404 \fi
9405 }
9406 \def\HyRef@testreftype#1.#2\{\%
9407 \ltx@ifundefined{#1autorefname}{%
9408 \ltx@ifundefined{#1name}{%
9409 \HyRef@StripStar#1\*\@nil{#1}%
9410 \ltx@ifundefined{\HyRef@name autorefname}{%
9411 \ltx@ifundefined{\HyRef@name name}{%
9412 \def\HyRef@currentHtag{%
9413 \Hy@Warning{No autoref name for `#1'}%
9414 }{%
9415 \edef\HyRef@currentHtag{%
9416 \expandafter\noexpand\csname\HyRef@name name\endcsname
9417 \noexpand~%
9418 }%
9419 }%
9420 }{%
9421 \edef\HyRef@currentHtag{%
9422 \expandafter\noexpand

```



```

9423     \csname\HyRef@name autorefname\endcsname
9424     \noexpand~%
9425   }%
9426 }%
9427 }{%
9428   \edef\HyRef@currentHtag{%
9429     \expandafter\noexpand\csname#1name\endcsname
9430     \noexpand~%
9431   }%
9432 }%
9433 }{%
9434   \edef\HyRef@currentHtag{%
9435     \expandafter\noexpand\csname#1autorefname\endcsname
9436     \noexpand~%
9437   }%
9438 }%
9439 }
9440 \def\HyRef@StripStar#1*\#2\@nil#3{%
9441   \def\HyRef@name{#2}%
9442   \ifx\HyRef@name\HyRef@CaseStar
9443     \def\HyRef@name{#1}%
9444   \else
9445     \def\HyRef@name{#3}%
9446   \fi
9447 }
9448 \def\HyRef@CaseStar{*\\}
9449 \def\HyRef@currentHtag{}

```

Support for package `showkeys`.

`\HyRef@ShowKeysRef`

```

9450 \let\HyRef@ShowKeysRef\@gobble
9451 \def\HyRef@ShowKeysInit{%
9452   \begingroup\expandafter\expandafter\expandafter\endgroup
9453   \expandafter\ifx\csname SK@@label\endcsname\relax
9454   \else
9455     \ifx\SK@ref\@empty
9456     \else
9457       \def\HyRef@ShowKeysRef{%
9458         \SK@\SK@\@ref
9459       }%
9460     \fi
9461   \fi
9462 }
9463 \@ifpackageloaded{showkeys}{%
9464   \HyRef@ShowKeysInit
9465 }{%
9466   \Hy@AtBeginDocument{%
9467     \@ifpackageloaded{showkeys}{%
9468       \HyRef@ShowKeysInit
9469     }{}%
9470   }%
9471 }

```

Defaults for the names that `\autoref` uses.

```

9472 \providecommand*\AMSautorefname{\equationautorefname}
9473 \providecommand*\Hfootnoteautorefname{\footnoteautorefname}
9474 \providecommand*\Itemautorefname{\itemautorefname}

```



```

9475 \providecommand*\itemautorefname{item}
9476 \providecommand*\equationautorefname{Equation}
9477 \providecommand*\footnoteautorefname{footnote}
9478 \providecommand*\itemautorefname{item}
9479 \providecommand*\figureautorefname{Figure}
9480 \providecommand*\tableautorefname{Table}
9481 \providecommand*\partautorefname{Part}
9482 \providecommand*\appendixautorefname{Appendix}
9483 \providecommand*\chapterautorefname{chapter}
9484 \providecommand*\sectionautorefname{section}
9485 \providecommand*\subsectionautorefname{subsection}
9486 \providecommand*\subsubsectionautorefname{subsubsection}
9487 \providecommand*\paragraphautorefname{paragraph}
9488 \providecommand*\subparagraphautorefname{subparagraph}
9489 \providecommand*\FancyVerbLineautorefname{line}
9490 \providecommand*\theoremautorefname{Theorem}
9491 \providecommand*\pageautorefname{page}
9492 \end{package}

```

47 Configuration files

47.1 PS/PDF strings

Some drivers write PS or PDF strings. These strings are delimited by parentheses, therefore a lonely unmatched parenthesis must be avoided to avoid PS or PDF syntax errors. Also the backslash character itself has to be protected.

`\Hy@pstringdef` Therefore such strings should be passed through `\Hy@pstringdef`. The first argument holds a macro for the result, the second argument is the string that needs protecting. Since version 1.30.0 pdf_T_EX offers `\pdfescapestring`.

```

9493 {*\pdfTeX | dvipdfm | xetex | vtex | pdfmarkbase | dviwindo}
9494 \begingroup\expandafter\expandafter\expandafter\endgroup
9495 \expandafter\ifx\csname pdf@escapestring\endcsname\relax
9496   \begingroup
9497     \catcode`\|=0 %
9498     \@makeother\|%
9499     |@firstofone{|endgroup
9500     |def|Hy@pstringdef#1#2{%
9501       |begingroup
9502         |edef~{|string~}%
9503         |xdef|Hy@gtemp{#2}%
9504         |endgroup
9505         |let#1|Hy@gtemp
9506         |@onelevel@sanitize#1%
9507         |edef#1{|expandafter|Hy@ExchangeBackslash#1\|@nil}%
9508         |edef#1{|expandafter|Hy@ExchangeLeftParenthesis#1(|@nil}%
9509         |edef#1{|expandafter|Hy@ExchangeRightParenthesis#1)|@nil}%
9510       }%
9511       |def|Hy@ExchangeBackslash#1\#2|@nil{%
9512         #1%
9513         |ifx|\#2|\%%
9514         |else
9515           \\\%
9516           |ltx@ReturnAfterFi{%
9517             |Hy@ExchangeBackslash#2|@nil
9518           }%

```



```

9519   |fi
9520  }%
9521 }%
9522 \def\Hy@ExchangeLeftParenthesis#1(#2\@nil{%
9523   #1%
9524   \ifx\|#2\|}%
9525   \else
9526     \@backslashchar(%
9527     \ltx@ReturnAfterFi{%
9528       \Hy@ExchangeLeftParenthesis#2\@nil
9529     }%
9530   \fi
9531 }%
9532 \def\Hy@ExchangeRightParenthesis#1)#2\@nil{%
9533   #1%
9534   \ifx\|#2\|}%
9535   \else
9536     \@backslashchar)%
9537     \ltx@ReturnAfterFi{%
9538       \Hy@ExchangeRightParenthesis#2\@nil
9539     }%
9540   \fi
9541 }%
9542 \else
9543   \def\Hy@pstringdef#1#2{%
9544     \begingroup
9545       \edef~{\string~}%
9546       \xdef\Hy@gtemp{\pdf@escapestring{#2}}%
9547     \endgroup
9548     \let#1\Hy@gtemp
9549   }%
9550 \fi
9551 </pdfTeX | dvipdfm | xetex | vtex | pdfmarkbase | dviwindo>

```

47.2 pdfTeX

```

9552 (*pdfTeX)
9553 \providecommand*\XR@ext\pdf
9554 \Hy@setbreaklinks{true}
9555 \def\HyPat@ObjRef{%
9556   [0-9]*[1-9][0-9]* 0 R%
9557 }

```

This driver is for Han The Thanh's T_EX variant which produces PDF directly. This has new primitives to do PDF things, which usually translate almost directly to PDF code, so there is a lot of flexibility which we do not at present harness.

Set PDF version if requested by option `pdfversion`.

- pdfT_EX 1.10a, 2003-01-16: `\pdfoptionpdfminorversion`
- pdfT_EX 1.30, 2005-08-081: `\pdfminorversion`

```

9558 \let\Hy@pdfminorversion\relax
9559 \begingroup\expandafter\expandafter\expandafter\endgroup
9560 \expandafter\ifx\curname pdfminorversion\endcurname\relax
9561 \begingroup\expandafter\expandafter\expandafter\endgroup
9562 \expandafter\ifx\curname pdfoptionpdfminorversion\endcurname\relax
9563 \else
9564   \def\Hy@pdfminorversion{\pdfoptionpdfminorversion}%

```



```

9565 \fi
9566 \else
9567 \def\Hy@pdfminorversion{\pdfminorversion}%
9568 \fi
9569 \@ifundefined{Hy@pdfminorversion}{%
9570 \PackageInfo{hyperref}{%
9571 PDF version is not set, because pdfTeX is too old (<1.10a)%
9572 }%
9573 }{%
9574 \ifHy@ocgcolorlinks
9575 \ifnum\Hy@pdfminorversion<5 %
9576 \kvsetkeys{Hyp}{pdfversion=1.5}%
9577 \fi
9578 \fi
9579 \ifHy@setpdfversion
9580 \ifnum\Hy@pdfversion<5 %
9581 \ltx@ifundefined{pdfobjcompresslevel}{%
9582 }{%
9583 \ifHy@verbose
9584 \Hy@InfoNoLine{%
9585 PDF object streams are disabled, because they are%
9586 \MessageBreak
9587 not supported in requested PDF version %
9588 1.\Hy@pdfversion
9589 }%
9590 \fi
9591 \pdfobjcompresslevel=\ltx@zero
9592 }%
9593 \fi
9594 \ifnum\Hy@pdfminorversion=\Hy@pdfversion\relax
9595 \else
9596 \let\Hy@temp\ltx@empty
9597 \def\Hy@temp@A#1#2{%
9598 \ifnum#1>\ltx@zero
9599 \edef\Hy@temp{%
9600 \Hy@temp
9601 \space\space
9602 \the#1\space #2%
9603 \ifnum#1=\ltx@one\else s\fi
9604 \MessageBreak
9605 }%
9606 \fi
9607 }%
9608 \Hy@temp@A\pdflastobj{PDF object}%
9609 \Hy@temp@A\pdflastxform{form XObject}%
9610 \Hy@temp@A\pdflastximage{image XObject}%
9611 \Hy@temp@A\pdflastannot{annotation}%
9612 \ltx@ifundefined{pdflastlink}{%
9613 }{%
9614 \Hy@temp@A\pdflastlink{link}%
9615 }%
9616 \ifx\Hy@temp\ltx@empty
9617 \Hy@pdfminorversion=\Hy@pdfversion\relax
9618 \else
9619 \let\Hy@temp@A\ltx@empty
9620 \ifnum\Hy@pdfversion=4 %
9621 \IfFileExists{pdf14.sty}{%

```



```

9622     \def\Hy@temp@A{%
9623       \MessageBreak
9624       Or \string\RequirePackage{pdf14} can be used%
9625       \MessageBreak
9626       before \string\documentclass\space as shortcut%
9627     }%
9628   }{}%
9629 \fi
9630 \Hy@WarningNoLine{%
9631   The PDF version number could not be set,\MessageBreak
9632   because some PDF objects are already written:%
9633   \MessageBreak
9634   \Hy@temp
9635   The version should be set as early as possible:%
9636   \MessageBreak
9637   \space\space
9638   \expandafter\string\Hy@pdfminorversion=\Hy@pdfversion
9639   \string\relax
9640   \ifnum\Hy@pdfversion<5 %
9641     \ltx@ifundefined{pdfobjcompresslevel}{}%
9642   }{%
9643     \MessageBreak
9644     \space\space
9645     \string\pdfobjcompresslevel=0\string\relax
9646   }%
9647 \fi
9648   \Hy@temp@A
9649 }%
9650 \fi
9651 \fi
9652 \PackageInfo{hyperref}{}%
9653   \expandafter\string\Hy@pdfminorversion
9654   :=\number\Hy@pdfversion\space
9655 }%
9656 \fi
9657 \edef\Hy@pdfversion{\number\Hy@pdfminorversion}%
9658 }
9659 \Hy@DisableOption{pdfversion}%
9660 \ifHy@ocgcolorlinks
9661   \pdf@ifdraftmode{}{%
9662     \immediate\pdfobj{%
9663       <<%
9664       /Type/OCG%
9665       /Name(View)%
9666       /Usage<<%
9667       /Print<<%
9668       /PrintState/OFF%
9669       >>%
9670       /View<<%
9671       /ViewState/ON%
9672       >>%
9673     >>%
9674   >>%
9675 }%
9676 \edef\OBJ@OCG@view{\the\pdfobj\space 0 R}%
9677 \immediate\pdfobj{%
9678   <<%

```



```

9679      /Type/OCG%
9680      /Name(Print)%
9681      /Usage<<%
9682      /Print<<%
9683      /PrintState/ON%
9684      >>%
9685      /View<<%
9686      /ViewState/OFF%
9687      >>%
9688      >>%
9689      >>%
9690      }%
9691      \edef\OBJ@OCG@print{\the\pdfastobj\space 0 R}%
9692      \immediate\pdfobj{%
9693      [%
9694      \OBJ@OCG@view\space\OBJ@OCG@print
9695      ]%
9696      }%
9697      \edef\OBJ@OCGs{\the\pdfastobj\space 0 R}%
9698      \pdfcatalog{%
9699      /OCProperties<<%
9700      /OCGs \OBJ@OCGs
9701      /D<<%
9702      /OFF[\OBJ@OCG@print]%
9703      /AS[%
9704      <<%
9705      /Event/View%
9706      /OCGs \OBJ@OCGs
9707      /Category[/View]%
9708      >>%
9709      <<%
9710      /Event/Print%
9711      /OCGs \OBJ@OCGs
9712      /Category[/Print]%
9713      >>%
9714      <<%
9715      /Event/Export%
9716      /OCGs \OBJ@OCGs
9717      /Category[/Print]%
9718      >>%
9719      ]%
9720      >>%
9721      >>%
9722      }%
9723      \begingroup
9724      \edef\x{\endgroup
9725      \pdfpageresources{%
9726      \the\pdfpageresources
9727      /Properties<<%
9728      /OCView \OBJ@OCG@view
9729      /OCPrint \OBJ@OCG@print
9730      >>%
9731      }%
9732      }%
9733      \x
9734      }%
9735      \Hy@AtBeginDocument{%

```



```

9736 \def\Hy@colorlink#1{%
9737 \begingroup
9738 \ifHy@ocgcolorlinks
9739 \def\Hy@ocgcolor{#1}%
9740 \setbox0=\hbox\bgroup\color@begingroup
9741 \else
9742 \HyColor@UseColor#1%
9743 \fi
9744 }%
9745 \def\Hy@endcolorlink{%
9746 \ifHy@ocgcolorlinks
9747 \color@endgroup\egroup
9748 \mbox{%
9749 \pdfliteral page{/OC/OCPrint BDC}%
9750 \rlap{\copy0}%
9751 \pdfliteral page{EMC/OC/OCView BDC}%
9752 \begingroup
9753 \expandafter\HyColor@UseColor\Hy@ocgcolor
9754 \box0 %
9755 \endgroup
9756 \pdfliteral page{EMC}%
9757 }%
9758 \fi
9759 \endgroup
9760 }%
9761 }%
9762 \else
9763 \Hy@DisableOption{ocgcolorlinks}%
9764 \fi

```

First, allow for some changes and additions to pdftex syntax:

```

9765 \def\setpdfinkmargin#1{%
9766 \begingroup
9767 \setlength{\dimen@}{#1}%
9768 \expandafter\endgroup
9769 \expandafter\pdfinkmargin\the\dimen@relax
9770 }
9771 \ifx\pdfstartlink\@undefined% less than version 14
9772 \let\pdfstartlink\pdfannotlink
9773 \let\pdfinkmargin\@tempdima
9774 \let\pdfxform\pdfform
9775 \let\pdfastxform\pdfastform
9776 \let\pdfrefxform\pdfrefform
9777 \else
9778 \pdfinkmargin1pt %
9779 \fi

```

First set up the default linking

```

9780 \providecommand*\@pdfview{XYZ}

```

First define the anchors:

```

9781 \Hy@WrapperDef\new@pdfink#1{%
9782 \ifhmode
9783 \@savsf\spacefactor
9784 \fi
9785 \Hy@SaveLastskip
9786 \Hy@VerboseAnchor{#1}%
9787 \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
9788 \Hy@DestName\Hy@pstringDest\@pdfview

```



```

9789 \Hy@RestoreLastskip
9790 \ifhmode
9791   \spacefactor\@savs
9792 \fi
9793 }
9794 \let\pdf@endanchor\@empty

```

`\Hy@DestName` Wrap the call of `\pdfdest` name in `\Hy@DestName`. Then it can easier be caught by package `hypdestopt`.

```

9795 \def\Hy@DestName#1#2{%
9796   \pdfdest name{#1}#2\relax
9797 }

```

Now the links; the interesting part here is the set of attributes which define how the link looks. We probably want to add a border and color it, but there are other choices. This directly translates to PDF code, so consult the manual for how to change this. We will add an interface at some point.

```

9798 \providecommand*\@pdfborder{0 0 1}
9799 \providecommand*\@pdfborderstyle{}
9800 \def\Hy@undefinedname{UNDEFINED}
9801 \def\find@pdflink#1#2{%
9802   \leavevmode
9803   \protected@edef\Hy@testname{#2}%
9804   \ifx\Hy@testname\@empty
9805     \Hy@Warning{%
9806       Empty destination name,\MessageBreak
9807       using '\Hy@undefinedname'%
9808     }%
9809     \let\Hy@testname\Hy@undefinedname
9810   \else
9811     \Hy@pstringdef\Hy@testname{%
9812       \expandafter\HyperDestNameFilter\expandafter{\Hy@testname}%
9813     }%
9814   \fi
9815   \Hy@StartlinkName{%
9816     \ifHy@pdfa /F 4\fi
9817     \Hy@setpdfborder
9818     \Hy@setpdfhighlight
9819     \ifx\CurrentBorderColor\relax
9820       \else
9821         /C[\CurrentBorderColor]%
9822       \fi
9823   }\Hy@testname
9824   \expandafter\Hy@colorlink\csname @#1color\endcsname
9825 }
9826 \def\Hy@StartlinkName#1#2{%
9827   \pdfstartlink attr{#1}goto name{#2}\relax
9828 }
9829 \def\close@pdflink{%
9830   \Hy@endcolorlink
9831   \Hy@VerboseLinkStop
9832   \pdfendlink
9833 }
9834 \def\hyper@anchor#1{%
9835   \new@pdflink{#1}\anchor@spot\pdf@endanchor
9836 }
9837 \def\hyper@anchorstart#1{%

```



```

9838 \new@pdfink{#1}%
9839 \Hy@activeanchortrue
9840 }
9841 \def\hyper@anchorend{%
9842 \pdf@endanchor
9843 \Hy@activeanchorfalse
9844 }
9845 \def\hyper@linkstart#1#2{%
9846 \Hy@VerboseLinkStart{#1}{#2}%
9847 \ltx@ifundefined{#@1bordercolor}{%
9848 \let\CurrentBorderColor\relax
9849 }{%
9850 \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
9851 }%
9852 \find@pdfink{#1}{#2}%
9853 }
9854 \def\hyper@linkend{\close@pdfink}
9855 \def\hyper@link#1#2#3{%
9856 \Hy@VerboseLinkStart{#1}{#2}%
9857 \ltx@ifundefined{#@1bordercolor}{%
9858 \let\CurrentBorderColor\relax
9859 }{%
9860 \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
9861 }%
9862 \find@pdfink{#1}{#2}#3\Hy@xspace@end
9863 \close@pdfink
9864 }
9865 \let\CurrentBorderColor\@linkbordercolor
9866 \def\hyper@linkurl#1#2{%
9867 \begingroup
9868 \Hy@pstringdef\Hy@pstringURI{#2}%
9869 \hyper@chars
9870 \leavevmode
9871 \pdfstartlink
9872 attr{%
9873 \Hy@setpdfborder
9874 \Hy@setpdfhighlight
9875 \ifx\@urlbordercolor\relax
9876 \else
9877 /C[\@urlbordercolor]%
9878 \fi
9879 }%
9880 user{%
9881 /Subtype/Link%
9882 \ifHy@pdfa /F 4\fi
9883 /A<<%
9884 /Type/Action%
9885 /S/URI%
9886 /URI(\Hy@pstringURI)%
9887 \ifHy@href@ismap
9888 /IsMap true%
9889 \fi
9890 \Hy@href@nextactionraw
9891 >>%
9892 }%
9893 \relax
9894 \Hy@colorlink\@urlcolor#1\Hy@xspace@end

```



```

9895 \close@pdflink
9896 \endgroup
9897 }
9898 \def\hyper@linkfile#1#2#3{% anchor text, filename, linkname
9899 \begingroup
9900 \def\Hy@pstringF{#2}%
9901 \Hy@CleanupFile\Hy@pstringF
9902 \Hy@pstringdef\Hy@pstringF\Hy@pstringF
9903 \Hy@pstringdef\Hy@pstringD{#3}%
9904 \Hy@MakeRemoteAction
9905 \leavevmode
9906 \pdfstartlink
9907 attr{%
9908 \Hy@setpdfborder
9909 \Hy@setpdfhighlight
9910 \ifx\@filebordercolor\relax
9911 \else
9912 /C[\@filebordercolor]%
9913 \fi
9914 }%
9915 user {%
9916 /Subtype/Link%
9917 \ifHy@pdfa /F 4\fi
9918 /A<<%
9919 /F(\Hy@pstringF)%
9920 /S/GoToR%
9921 \Hy@SetNewWindow

```

If #3 is empty, page 0; if its a number, Page number, otherwise a named destination.

```

\afterassignment\xxx\count@=0\foo!%

```

```

\def\xxx#1!{%
\ifx\xxx#1\xxx
\foo\was\an\integer
\else
\it\wasnt
\fi}

```

```

9922 \ifx\#3\%
9923 /D[\Hy@href@page\@pdfremotestartview]%
9924 \else
9925 /D(\Hy@pstringD)%
9926 \fi
9927 \Hy@href@nextactionraw
9928 >>%
9929 }%
9930 \relax
9931 \Hy@colorlink\@filecolor#1\Hy@xspace@end
9932 \close@pdflink
9933 \endgroup
9934 }
9935 \def\@hyper@launch run:#1\#2#3{% filename, anchor text linkname
9936 \begingroup
9937 \Hy@pstringdef\Hy@pstringF{#1}%
9938 \Hy@pstringdef\Hy@pstringP{#3}%
9939 \leavevmode

```



```

9940 \pdfstartlink
9941   attr{%
9942     \Hy@setpdfborder
9943     \Hy@setpdfhighlight
9944     \ifx\@runbordercolor\relax
9945     \else
9946       /C[\@runbordercolor]%
9947     \fi
9948   }%
9949   user {%
9950     /Subtype/Link%
9951     \ifHy@pdfa /F 4\fi
9952     /A<<%
9953       /F(\Hy@pstringF)%
9954       /S/Launch%
9955       \Hy@SetNewWindow
9956       \ifx\#3\%
9957       \else
9958         /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
9959       \fi
9960       \Hy@href@nextactionraw
9961     >>%
9962   }%
9963   \relax
9964   \Hy@colorlink\@runcolor#2\Hy@xspace@end
9965   \close@pdflink
9966 \endgroup
9967 }

```

\PDF@SetupDox

```

9968 \def\PDF@SetupDoc{%
9969   \ifx\@pdfpagescrop\@empty
9970   \else
9971     \edef\process@me{%
9972       \pdfpagesattr=%
9973       /CropBox[\@pdfpagescrop]%
9974       \expandafter\ifx\expandafter\the\pdfpagesattr\%
9975       \else
9976         ^^J\the\pdfpagesattr
9977       \fi
9978     }%
9979   }%
9980   \process@me
9981   \fi
9982   \Hy@pstringdef\Hy@pstringB{\@baseurl}%
9983   \pdfcatalog{%
9984     /PageMode/\@pdfpagemode
9985     \ifx\@baseurl\@empty
9986     \else
9987       /URI<</Base(\Hy@pstringB)>>%
9988     \fi
9989   }%
9990   \ifx\@pdfstartpage\@empty
9991   \else
9992     \ifx\@pdfstartview\@empty
9993     \else
9994       openaction goto page\@pdfstartpage{\@pdfstartview}%

```



```

9995 \fi
9996 \fi
9997 \edef\Hy@temp{%
9998 \ifHy@pdftoolbar\else /HideToolbar true\fi
9999 \ifHy@pdfmenubar\else /HideMenubar true\fi
10000 \ifHy@pdfwindowui\else /HideWindowUI true\fi
10001 \ifHy@pdfwindow /FitWindow true\fi
10002 \ifHy@pdfcenterwindow /CenterWindow true\fi
10003 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
10004 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
10005 \Hy@UseNameKey{Direction}\@pdfdirection
10006 \Hy@UseNameKey{ViewArea}\@pdfviewarea
10007 \Hy@UseNameKey{ViewClip}\@pdfviewclip
10008 \Hy@UseNameKey{PrintArea}\@pdfprintarea
10009 \Hy@UseNameKey{PrintClip}\@pdfprintclip
10010 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
10011 \Hy@UseNameKey{Duplex}\@pdfduplex
10012 \ifx\@pdfpicktraybypdfsize\@empty
10013 \else
10014 /PickTrayByPDFSize \@pdfpicktraybypdfsize
10015 \fi
10016 \ifx\@pdfprintpagerange\@empty
10017 \else
10018 /PrintPageRange[\@pdfprintpagerange]%
10019 \fi
10020 \ifx\@pdfnumcopies\@empty
10021 \else
10022 /NumCopies \@pdfnumcopies
10023 \fi
10024 }%
10025 \pdfcatalog{%
10026 \ifx\Hy@temp\@empty
10027 \else
10028 /ViewerPreferences<<\Hy@temp>>%
10029 \fi
10030 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
10031 \ifx\@pdflang\relax
10032 \else
10033 /Lang(\@pdflang)%
10034 \fi
10035 }%
10036 }

```

\PDF@FinishDoc

```

10037 \def\PDF@FinishDoc{%
10038 \pdf@ifdraftmode{}\{%
10039 \Hy@UseMaketitleInfos
10040 \HyInfo@GenerateAddons
10041 \pdfinfo{%
10042 /Author(\@pdfauthor)%
10043 /Title(\@pdftitle)%
10044 /Subject(\@pdfsubject)%
10045 /Creator(\@pdfcreator)%
10046 \ifx\@pdfcreationdate\@empty
10047 \else
10048 /CreationDate(\@pdfcreationdate)%
10049 \fi
10050 \ifx\@pdfmoddate\@empty

```



```

10051 \else
10052 /ModDate(\@pdfmoddate)%
10053 \fi
10054 \ifx\@pdfproducer\relax
10055 \else
10056 /Producer(\@pdfproducer)%
10057 \fi
10058 /Keywords(\@pdfkeywords)%
10059 \ifx\@pdftrapped\@empty
10060 \else
10061 /Trapped/\@pdftrapped
10062 \fi
10063 \HyInfo@Addons
10064 }%
10065 }%
10066 \Hy@DisableOption{pdfauthor}%
10067 \Hy@DisableOption{pdftitle}%
10068 \Hy@DisableOption{pdfsubject}%
10069 \Hy@DisableOption{pdfcreator}%
10070 \Hy@DisableOption{addtopdfcreator}%
10071 \Hy@DisableOption{pdfcreationdate}%
10072 \Hy@DisableOption{pdfmoddate}%
10073 \Hy@DisableOption{pdfproducer}%
10074 \Hy@DisableOption{pdfkeywords}%
10075 \Hy@DisableOption{pdftrapped}%
10076 \Hy@DisableOption{pdfinfo}%
10077 }

```

`\hyper@pagetransition` `\@pdfpagetransition` is initialized with `\relax`. So it indicates, if option `pdfpagetransition` is used. First previous `/Trans` entries are removed. If a new `/Trans` key exists, it is appended to `\pdfpageattr`.

```

10078 \def\hyper@pagetransition{%
10079 \ifx\@pdfpagetransition\relax
10080 \else
10081 \expandafter\Hy@RemoveTransPageAttr
10082 \the\pdfpageattr^^J/Trans{}>>\END
10083 \ifx\@pdfpagetransition\@empty
10084 \else
10085 \edef\@processme{%
10086 \global\pdfpageattr{%
10087 \the\pdfpageattr
10088 ^^J/Trans << /S /\@pdfpagetransition\space >>%
10089 }%
10090 }%
10091 \@processme
10092 \fi
10093 \fi
10094 }

```

`\Hy@RemoveTransPageAttr` Macro `\Hy@RemoveTransPageAttr` removes a `/Trans` entry from `\pdfpageattr`. It is called with the end marker `^^J/Trans{}>>\END`. The trick is the empty group that does not appear in legal `\pdfpageattr` code. It appears in argument `#2` and shows, whether the parameter text catches a really `/Trans` object or the end marker.

```

10095 \gdef\Hy@RemoveTransPageAttr#1^^J/Trans#2#3>>#4\END{%
10096 \ifx\#2\%
10097 \global\pdfpageattr{#1}%

```



```

10098 \else
10099 \Hy@RemoveTransPageAttr#1#4\END
10100 \fi
10101 }

```

`\hyper@pageduration` `\@pdfpageduration` is initialized with `\relax`. So it indicates, if option `pdfpage-`
duration is used. First previous `/Dur` entries are removed. If a new `/Dur` key
exists, it is appended to `\pdfpageattr`.

```

10102 \def\hyper@pageduration{%
10103 \ifx\@pdfpageduration\relax
10104 \else
10105 \expandafter
10106 \Hy@RemoveDurPageAttr\the\pdfpageattr^^J/Dur{} \END
10107 \ifx\@pdfpageduration\@empty
10108 \else
10109 \edef\@processme{%
10110 \global\pdfpageattr{%
10111 \the\pdfpageattr
10112 ^^J/Dur \@pdfpageduration\space
10113 }%
10114 }%
10115 \@processme
10116 \fi
10117 \fi
10118 }

```

`\Hy@RemoveDurPageAttr` Macro `\Hy@RemoveDurPageAttr` removes a `/Dur` entry from `\pdfpageattr`. It
is called with the end marker `^^J/Dur{} \END`. The trick is the empty group
that does not appear in legal `\pdfpageattr` code. It appears in argument `#2` and
shows, whether the parameter text catches a really `/Dur` object or the end marker.

```

10119 \gdef\Hy@RemoveDurPageAttr#1^^J/Dur#2#3 #4\END{%
10120 \ifx\#2\%
10121 \global\pdfpageattr{#1}%
10122 \else
10123 \Hy@RemoveDurPageAttr#1#4\END
10124 \fi
10125 }

```

`\hyper@pagehidden` The boolean value of the key `/Hid` is stored in switch `\ifHy@pdfpagehidden`. First
previous `/Hid` entries are removed, then the new one is appended, if the value is
true (the PDF default is false).

```

10126 \def\hyper@pagehidden{%
10127 \ifHy@useHidKey
10128 \expandafter
10129 \Hy@RemoveHidPageAttr\the\pdfpageattr^^J/Hid{} \END
10130 \ifHy@pdfpagehidden
10131 \edef\@processme{%
10132 \global\pdfpageattr{%
10133 \the\pdfpageattr
10134 ^^J/Hid true % SPACE
10135 }%
10136 }%
10137 \@processme
10138 \fi
10139 \fi
10140 }

```


`\Hy@RemoveHidPageAttr` Macro `\Hy@RemoveHidPageAttr` removes a `/Hid` entry from `\pdfpageattr`. It is called with the end marker `^^J/Hid{} \END`. The trick is the empty group that does not appear in legal `\pdfpageattr` code. It appears in argument `#2` and shows, whether the parameter text catches a really `/Hid` object or the end marker.

```

10141 \gdef\Hy@RemoveHidPageAttr#1^^J/Hid#2#3 #4\END{%
10142   \ifx\#2\%
10143     \global\pdfpageattr{#1}%
10144   \else
10145     \Hy@RemoveHidPageAttr#1#4\END
10146   \fi
10147 }

10148 \pdf@ifdraftmode{}{%
10149   \g@addto@macro\Hy@EveryPageHook{%
10150     \hyper@pagetransition
10151     \hyper@pageduration
10152     \hyper@pagehidden
10153   }%
10154 }
```

Also XeTeX support `\pdfpagewidth` and `\pdfpageheight`, but it does not provide `\pdfhorigin` and `\pdfvorigin`.

```

10155 </pdftex>
10156 <*pdftex | xetex>
10157 \Hy@AtBeginDocument{%
10158   \ifHy@setpagesize
10159     \expandafter\@firstofone
10160   \else
10161     \expandafter\@gobble
10162   \fi
10163 }%
10164 \@ifclassloaded{seminar}{%
10165 <*pdftex>
10166   \setlength{\pdfhorigin}{1truein}%
10167   \setlength{\pdfvorigin}{1truein}%
10168 </pdftex>
10169   \ifportrait
10170     \ifdim\paperwidth=\z@
10171     \else
10172       \setlength{\pdfpagewidth}{\strip@pt\paperwidth truept}%
10173     \fi
10174     \ifdim\paperheight=\z@
10175     \else
10176       \setlength{\pdfpageheight}{\strip@pt\paperheight truept}%
10177     \fi
10178   \else
10179     \ifdim\paperheight=\z@
10180     \else
10181       \setlength{\pdfpagewidth}{\strip@pt\paperheight truept}%
10182     \fi
10183     \ifdim\paperwidth=\z@
10184     \else
10185       \setlength{\pdfpageheight}{\strip@pt\paperwidth truept}%
10186     \fi
10187   \fi
10188 }{%
10189   \ltx@ifundefined{stockwidth}{%
```



```

10190 \ifdim\paperwidth>\z@
10191 \setlength{\pdfpagewidth}{\paperwidth}%
10192 \fi
10193 \ifdim\paperheight>\z@
10194 \setlength{\pdfpageheight}{\paperheight}%
10195 \fi
10196 }{%
10197 \ifdim\stockwidth>\z@
10198 \setlength{\pdfpagewidth}{\stockwidth}%
10199 \fi
10200 \ifdim\stockheight>\z@
10201 \setlength{\pdfpageheight}{\stockheight}%
10202 \fi
10203 }%
10204 }%
10205 }%
10206 \Hy@DisableOption{setpagesize}%
10207 }
10208 </pdftex|xetex>
10209 <*pdftex>
10210 \def\Acrobatmenu#1#2{%
10211 \Hy@Acrobatmenu{#1}{#2}{%
10212 \leavevmode
10213 \EdefEscapeName\Hy@temp@menu{#1}%
10214 \pdfstartlink
10215 attr{%
10216 \Hy@setpdfborder
10217 \Hy@setpdfhighlight
10218 \ifx\@menubordercolor\relax
10219 \else
10220 /C[\@menubordercolor]%
10221 \fi
10222 }%
10223 user{%
10224 /Subtype/Link%
10225 \ifHy@pdfa /F 4\fi
10226 /A<<%
10227 /S/Named%
10228 /N/\Hy@temp@menu
10229 \Hy@href@nextactionraw
10230 >>%
10231 }%
10232 \relax
10233 \Hy@colorlink\@menucolor#2%
10234 \close@pdflink
10235 }%
10236 }

```

47.2.1 Fix for problem with different nesting levels

`\AtBeginShipoutFirst` adds an additional box layer around the first output page. This disturbs pdfTeX's low level link commands `\pdfstartlink` and `\pdfendlink`, if a link is broken across the first and second output page.

The problem could be fixed by replacing `\AtBeginShipoutFirst`, because the box layer is not necessary for pdfTeX—no `\specials` need to be inserted. However it's easier to add an additional box level for the pages after the first one. Also `\AtBeginShipoutFirst` could be invoked independently from `hyperref`.

Since version 2011/10/05 v1.16 of package ‘atbegshi’ `\AtBeginShipoutFirst` does not add a additional box layer.

```

10237 \def\Hy@FixNotFirstPage{%
10238   \gdef\Hy@FixNotFirstPage{%
10239     \setbox\AtBeginShipoutBox=\hbox{%
10240       \copy\AtBeginShipoutBox
10241     }%
10242   }%
10243 }
10244 \ltx@ifpackagelater{atbegshi}{2011/10/05}{%
10245 }{%
10246   \AtBeginShipout{\Hy@FixNotFirstPage}%
10247 }
10248 \pdfTeX

```

47.3 hypertex

The HyperTeX specification (this is borrowed from an article by Arthur Smith) says that conformant viewers/translators must recognize the following set of `\special` commands:

href: `html:`

name: `html:`

end: `html:`

image: `html:`

base_name: `html:<base href = "href_string">`

The *href*, *name* and *end* commands are used to do the basic hypertext operations of establishing links between sections of documents. The *image* command is intended (as with current html viewers) to place an image of arbitrary graphical format on the page in the current location. The *base_name* command is be used to communicate to the *dvi* viewer the full (URL) location of the current document so that files specified by relative URL’s may be retrieved correctly.

The *href* and *name* commands must be paired with an *end* command later in the TeX file — the TeX commands between the two ends of a pair form an *anchor* in the document. In the case of an *href* command, the *anchor* is to be highlighted in the *dvi* viewer, and when clicked on will cause the scene to shift to the destination specified by *href_string*. The *anchor* associated with a name command represents a possible location to which other hypertext links may refer, either as local references (of the form `href="#name_string"` with the *name_string* identical to the one in the name command) or as part of a URL (of the form `URL#name_string`). Here *href_string* is a valid URL or local identifier, while *name_string* could be any string at all: the only caveat is that ‘” characters should be escaped with a backslash (\), and if it looks like a URL name it may cause problems.

```

10249 \*hypertex
10250 \providecommand*\XR@ext{}{dvi}
10251 \let\PDF@FinishDoc\ltx@empty
10252 \def\PDF@SetupDoc{%
10253   \ifx\@baseurl\@empty
10254     \else
10255       \special{html:<base href="\@baseurl">}%

```



```

10256 \fi
10257 }
10258 \Hy@WrapperDef\hyper@anchor#1{%
10259 \Hy@SaveLastskip
10260 \Hy@VerboseAnchor{#1}%
10261 \begingroup
10262 \let\protect=\string
10263 \hyper@chars
10264 \special{html:<a name=%
10265 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
10266 \endgroup
10267 \Hy@activeanchortrue
10268 \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
10269 \special{html:</a>}%
10270 \Hy@activeanchorfalse
10271 \Hy@RestoreLastskip
10272 }
10273 \Hy@WrapperDef\hyper@anchorstart#1{%
10274 \Hy@SaveLastskip
10275 \Hy@VerboseAnchor{#1}%
10276 \begingroup
10277 \hyper@chars
10278 \special{html:<a name=%
10279 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
10280 \endgroup
10281 \Hy@activeanchortrue
10282 }
10283 \def\hyper@anchorend{%
10284 \special{html:</a>}%
10285 \Hy@activeanchorfalse
10286 \Hy@RestoreLastskip
10287 }
10288 \def\@urltype{url}
10289 \def\hyper@linkstart#1#2{%
10290 \Hy@VerboseLinkStart{#1}{#2}%
10291 \expandafter\Hy@colorlink\csname @#1color\endcsname
10292 \def\Hy@tempa{#1}%
10293 \ifx\Hy@tempa\@urltype
10294 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
10295 \else
10296 \begingroup
10297 \hyper@chars
10298 \special{html:<a href=%
10299 \hyper@quote\#\HyperDestNameFilter{#2}\hyper@quote>}%
10300 \endgroup
10301 \fi
10302 }
10303 \def\hyper@linkend{%
10304 \special{html:</a>}%
10305 \Hy@endcolorlink
10306 }
10307 \def\hyper@linkfile#1#2#3{%
10308 \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\else\##3\fi}%
10309 }
10310 \def\hyper@linkurl#1#2{%

```

If we want to raise up the final link `\special`, we need to get its height; ask me why \LaTeX constructs make this totally foul up, and make us revert to basic \TeX .

I do not know.

```

10311 \leavevmode
10312 \ifHy@raiselinks
10313 \Hy@SaveSpaceFactor
10314 \Hy@SaveSavedSpaceFactor
10315 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
10316 \Hy@RestoreSavedSpaceFactor
10317 \@linkdim\dp\@tempboxa
10318 \lower\@linkdim\hbox{%
10319 \hyper@chars
10320 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
10321 }%
10322 \Hy@colorlink\@urlcolor
10323 \Hy@RestoreSpaceFactor
10324 #1%
10325 \Hy@SaveSpaceFactor
10326 \@linkdim\ht\@tempboxa

```

Because of the interaction with the dvihps processor, we have to subtract a little from the height. This is not clean, or checked. Check with Mark Doyle about what gives here. It may not be needed with the new dvips (Jan 1997).

```

10327 \advance\@linkdim by -6.5\p@
10328 \raise\@linkdim\hbox{\special{html:</a>}}%
10329 \Hy@endcolorlink
10330 \Hy@RestoreSpaceFactor
10331 \else
10332 \begingroup
10333 \hyper@chars
10334 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
10335 \Hy@colorlink\@urlcolor#1\Hy@xspace@end
10336 \special{html:</a>}%
10337 \Hy@endcolorlink
10338 \endgroup
10339 \fi
10340 }

```

Very poor implementation of \hyper@link without considering #1.

```

10341 \def\hyper@link#1#2#3{%
10342 \Hy@VerboseLinkStart{#1}{#2}%
10343 \hyper@linkurl{#3}{\# \Hy@HyperDestNameFilter{#2}}%
10344 }

10345 \def\hyper@image#1#2{%
10346 \begingroup
10347 \hyper@chars
10348 \special{html:<img src=\hyper@quote#1\hyper@quote>}%
10349 \endgroup
10350 }
10351 </hypertex>
10352 <*\dviwindo>

```

47.4 dviwindo

[This was developed by David Carlisle]. Within a file dviwindo hyperlinking is used, for external URL's a call to \wwwbrowser is made. (You can define this command before or after loading the hyperref package if the default c:/netscape/netscape is not suitable) Dviwindo could in fact handle external links

to dvi files on the same machine without calling a web browser, but that would mean parsing the URL to recognise such, and this is currently not done.

This was more or less blindly copied from the hypertext cfg. For dviwindo, L^AT_EX must specify the size of the active area for links. For some hooks this information is available but for some, the start and end of the link are specified separately in which case a fixed size area of 10000000sp wide by \baselineskip high is used.

```

10353 \providecommand*\XR@ext}{dvi}
10354 \providecommand*\wwwbrowser{c:\string\netscape\string\netscape}
10355 \Hy@WrapperDef\hyper@anchor#1{%
10356   \Hy@SaveLastskip
10357   \Hy@VerboseAnchor{#1}%
10358   \begingroup
10359     \let\protect=\string
10360     \special{mark: #1}%
10361   \endgroup
10362   \Hy@activeanchortrue
10363   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
10364   \Hy@activeanchorfalse
10365   \Hy@RestoreLastskip
10366 }
10367 \Hy@WrapperDef\hyper@anchorstart#1{%
10368   \Hy@SaveLastskip
10369   \Hy@VerboseAnchor{#1}%
10370   \special{mark: #1}%
10371   \Hy@activeanchortrue
10372 }
10373 \def\hyper@anchorend{%
10374   \Hy@activeanchorfalse
10375   \Hy@RestoreLastskip
10376 }
10377 \def\hyper@linkstart#1#2{%
10378   \Hy@VerboseLinkStart{#1}{#2}%
10379   \expandafter\Hy@colorlink\csname @#1color\endcsname
10380   \special{button: %
10381     10000000 %
10382     \number\baselineskip\space
10383     #2%
10384   }%
10385 }
10386 \def\hyper@linkend{%
10387   \Hy@endcolorlink
10388 }
10389 \def\hyper@link#1#2#3{%
10390   \Hy@VerboseLinkStart{#1}{#2}%
10391   \leavevmode
10392   \ifHy@raiselinks
10393     \Hy@SaveSpaceFactor
10394     \Hy@SaveSavedSpaceFactor
10395     \sbox\@tempboxa{\Hy@RestoreSpaceFactor#3}%
10396     \Hy@RestoreSavedSpaceFactor
10397     \@linkdim\dp\@tempboxa
10398     \lower\@linkdim\hbox{%
10399       \special{button: %
10400         \number\wd\@tempboxa\space
10401         \number\ht\@tempboxa\space
10402         #2%

```



```

10403 }%
10404 \expandafter\Hy@colorlink\csname @#1color\endcsname
10405 \Hy@RestoreSpaceFactor
10406 #3\Hy@xspace@end
10407 \Hy@SaveSpaceFactor
10408 \Hy@endcolorlink
10409 }%
10410 \@linkdim\ht\@tempboxa
10411 \advance\@linkdim by -6.5\p@
10412 \raise\@linkdim\hbox{}%
10413 \Hy@RestoreSpaceFactor
10414 \else
10415 \special{button: %
10416 \number\wd\@tempboxa\space
10417 \number\ht\@tempboxa\space
10418 #2%
10419 }%
10420 \expandafter\Hy@colorlink\csname @#1color\endcsname
10421 #3\Hy@xspace@end
10422 \Hy@endcolorlink
10423 \fi
10424 }
10425 \def\hyper@linkurl#1#2{%
10426 \begingroup
10427 \hyper@chars
10428 \leavevmode
10429 \ifHy@raiselinks
10430 \Hy@SaveSpaceFactor
10431 \Hy@SaveSavedSpaceFactor
10432 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
10433 \Hy@RestoreSavedSpaceFactor
10434 \@linkdim\dp\@tempboxa
10435 \lower\@linkdim\hbox{%
10436 \special{button: %
10437 \number\wd\@tempboxa\space
10438 \number\ht\@tempboxa\space
10439 launch: \wwwbrowser\space
10440 #2%
10441 }%
10442 \Hy@colorlink\@urlcolor
10443 \Hy@RestoreSpaceFactor
10444 #1\Hy@xspace@end
10445 \Hy@SaveSpaceFactor
10446 \Hy@endcolorlink
10447 }%
10448 \@linkdim\ht\@tempboxa
10449 \advance\@linkdim by -6.5\p@
10450 \raise\@linkdim\hbox{}%
10451 \Hy@RestoreSpaceFactor
10452 \else
10453 \special{button: %
10454 \number\wd\@tempboxa\space
10455 \number\ht\@tempboxa\space
10456 launch: \wwwbrowser\space
10457 #2%
10458 }%
10459 \Hy@colorlink\@urlcolor

```



```

10460      #1\Hy@xspace@end
10461      \Hy@endcolorlink
10462    \fi
10463  \endgroup
10464 }
10465 \def\hyper@linkfile#1#2#3{%
10466   \begingroup
10467     \hyper@chars
10468     \leavevmode
10469     \ifHy@raiselinks
10470       \Hy@SaveSpaceFactor
10471       \Hy@SaveSavedSpaceFactor
10472       \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
10473       \Hy@RestoreSavedSpaceFactor
10474       \@linkdim\dp\@tempboxa
10475       \lower\@linkdim\hbox{%
10476         \special{button: %
10477           \number\wd\@tempboxa\space
10478           \number\ht\@tempboxa\space
10479           #3,%
10480           file: #2%
10481         }%
10482         \Hy@colorlink\@filecolor
10483         \Hy@RestoreSpaceFactor
10484         #1\Hy@xspace@end
10485         \Hy@SaveSpaceFactor
10486         \Hy@endcolorlink
10487       }%
10488       \@linkdim\ht\@tempboxa
10489       \advance\@linkdim by -6.5\p@
10490       \raise\@linkdim\hbox{}%
10491       \Hy@RestoreSpaceFactor
10492     \else
10493       \special{button: %
10494         \number\wd\@tempboxa\space
10495         \number\ht\@tempboxa\space
10496         #3,%
10497         file: #2%
10498       }%
10499       \Hy@colorlink\@filecolor
10500       #1\Hy@xspace@end
10501       \Hy@endcolorlink
10502     \fi
10503   \endgroup
10504 }
10505 \HyInfo@AddonUnsupportedtrue
10506 \def\PDF@FinishDoc{%
10507   \Hy@UseMaketitleInfos
10508   \HyInfo@TrappedUnsupported
10509   \special{PDF: Keywords \@pdfkeywords}%
10510   \special{PDF: Title \@pdftitle}%
10511   \special{PDF: Creator \@pdfcreator}%
10512   \ifx\@pdfcreationdate\@empty
10513   \else
10514     \special{PDF: CreationDate \@pdfcreationdate}%
10515   \fi
10516   \ifx\@pdfmoddate\@empty

```



```

10517 \else
10518   \special{PDF: ModDate \@pdfmoddate}%
10519 \fi
10520 \special{PDF: Author \@pdfauthor}%
10521 \ifx\@pdfproducer\relax
10522 \else
10523   \special{PDF: Producer \@pdfproducer}%
10524 \fi
10525 \special{PDF: Subject \@pdfsubject}%
10526 \Hy@DisableOption{pdfauthor}%
10527 \Hy@DisableOption{pdftitle}%
10528 \Hy@DisableOption{pdfsubject}%
10529 \Hy@DisableOption{pdfcreator}%
10530 \Hy@DisableOption{addtopdfcreator}%
10531 \Hy@DisableOption{pdfcreationdate}%
10532 \Hy@DisableOption{pdfcreationdate}%
10533 \Hy@DisableOption{pdfmoddate}%
10534 \Hy@DisableOption{pdfproducer}%
10535 \Hy@DisableOption{pdfkeywords}%
10536 \Hy@DisableOption{pdftrapped}%
10537 \Hy@DisableOption{pdfinfo}%
10538 }
10539 \def\PDF@SetupDoc{%
10540   \ifx\@baseurl\@empty
10541   \else
10542     \special{PDF: Base \@baseurl}%
10543   \fi
10544   \ifx\@pdfpagescrop\@empty\else
10545     \special{PDF: BBox \@pdfpagescrop}%
10546   \fi
10547   \def\Hy@temp{}%
10548   \ifx\@pdfstartpage\@empty
10549   \else
10550     \ifx\@pdfstartview\@empty
10551     \else
10552       \edef\Hy@temp{%
10553         ,Page=\@pdfstartpage
10554         ,View=\@pdfstartview
10555       }%
10556     \fi
10557   \fi
10558   \edef\Hy@temp{%
10559     \noexpand\pdfmark{%
10560       pdfmark=/DOCVIEW,%
10561       PageMode=/\@pdfpagemode
10562     }\Hy@temp
10563   }%
10564 }%
10565 \Hy@temp
10566 \ifx\@pdfpagescrop\@empty
10567 \else
10568   \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
10569 \fi
10570 \edef\Hy@temp{%
10571   \ifHy@pdftoolbar\else /HideToolbar true\fi
10572   \ifHy@pdfmenubar\else /HideMenubar true\fi
10573   \ifHy@pdfwindowui\else /HideWindowUI true\fi

```



```

10574 \ifHy@pdffitwindow /FitWindow true\fi
10575 \ifHy@pdfcenterwindow /CenterWindow true\fi
10576 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
10577 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
10578 \Hy@UseNameKey{Direction}\@pdfdirection
10579 \Hy@UseNameKey{ViewArea}\@pdfviewarea
10580 \Hy@UseNameKey{ViewClip}\@pdfviewclip
10581 \Hy@UseNameKey{PrintArea}\@pdfprintarea
10582 \Hy@UseNameKey{PrintClip}\@pdfprintclip
10583 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
10584 \Hy@UseNameKey{Duplex}\@pdfduplex
10585 \ifx\@pdfpicktraybypdfsize\@empty
10586 \else
10587 /PickTrayByPDFSize \@pdfpicktraybypdfsize
10588 \fi
10589 \ifx\@pdfprintpagerange\@empty
10590 \else
10591 /PrintPageRange[\@pdfprintpagerange]%
10592 \fi
10593 \ifx\@pdfnumcopies\@empty
10594 \else
10595 /NumCopies \@pdfnumcopies
10596 \fi
10597 }%
10598 \pdfmark{pdfmark=/PUT,%
10599 Raw={%
10600 \string{Catalog\string}<<%
10601 \ifx\Hy@temp\@empty
10602 \else
10603 /ViewerPreferences<<\Hy@temp>>%
10604 \fi
10605 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
10606 \ifx\@pdflang\relax
10607 \else
10608 /Lang(\@pdflang)%
10609 \fi
10610 >>%
10611 }%
10612 }%
10613 }
10614 </dviwindo>
10615 <*\dvi pdfm | xetex>

```

47.5 dvipdfm/xetex dvi to PDF converter

Provided by Mark Wicks (mwicks@kettering.edu)

```

10616 \providecommand*\XR@ext}{pdf}
10617 \Hy@setbreaklinks{true}
10618 \def\HyPat@ObjRef{%
10619 \@[^ ]+}%
10620 }
10621 \newsavebox{\pdfm@box}
10622 \def\@pdfm@mark#1{\special{pdf:#1}}
10623 \Hy@WrapperDef\@pdfm@dest#1{%
10624 \Hy@SaveLastskip
10625 \Hy@VerboseAnchor{#1}%
10626 \begingroup

```



```

10627 \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
10628 \def\x{XYZ}%
10629 \ifx\x\@pdfview
10630 \def\x{XYZ @xpos @ypos null}%
10631 \else
10632 \def\x{FitH}%
10633 \ifx\x\@pdfview
10634 \def\x{FitH @ypos}%
10635 \else
10636 \def\x{FitBH}%
10637 \ifx\x\@pdfview
10638 \def\x{FitBH @ypos}%
10639 \else
10640 \def\x{FitV}%
10641 \ifx\x\@pdfview
10642 \def\x{FitV @xpos}%
10643 \else
10644 \def\x{FitBV}%
10645 \ifx\x\@pdfview
10646 \def\x{FitBV @xpos}%
10647 \else
10648 \def\x{Fit}%
10649 \ifx\x\@pdfview
10650 \let\x\@pdfview
10651 \else
10652 \def\x{FitB}%
10653 \ifx\x\@pdfview
10654 \let\x\@pdfview
10655 \else
10656 \def\x{FitR}%
10657 \ifx\x\@pdfview
10658 \Hy@Warning{\pdfview=FitR' is not supported}%
10659 \def\x{XYZ @xpos @ypos null}%
10660 \else
10661 \@onelevel@sanitize\@pdfview
10662 \Hy@Warning{%
10663   Unknown value '\@pdfview' for pdfview%
10664 }%
10665 \def\x{XYZ @xpos @ypos null}%
10666 \fi
10667 \fi
10668 \fi
10669 \fi
10670 \fi
10671 \fi
10672 \fi
10673 \fi
10674 \@pdfm@mark{dest (\Hy@pstringDest) [@thispage /\x]}%
10675 \endgroup
10676 \Hy@RestoreLastskip
10677 }
10678 \providecommand*\@pdfview{XYZ}
10679 \providecommand*\@pdfborder{0 0 1}
10680 \providecommand*\@pdfborderstyle{}
10681 \def\hyper@anchor#1{%
10682 \@pdfm@dest{#1}%
10683 }

```



```

10684 \def\hyper@anchorstart#1{%
10685   \Hy@activeanchortrue
10686   \@pdfm@dest{#1}%
10687 }
10688 \def\hyper@anchorend{%
10689   \Hy@activeanchorfalse
10690 }
10691 \newcounter{Hy@AnnotLevel}
10692 \ifHy@ocgcolorlinks
10693   \def\OBJ@OCG@view{@OCG@view}%
10694   \@pdfm@mark{%
10695     obj \OBJ@OCG@view <<%
10696       /Type/OCG%
10697       /Name(View)%
10698       /Usage<<%
10699       /Print<<%
10700       /PrintState/OFF%
10701       >>%
10702       /View<<%
10703       /ViewState/ON%
10704       >>%
10705       >>%
10706     }%
10707   }%
10708   \@pdfm@mark{close \OBJ@OCG@view}%
10709   \def\OBJ@OCG@print{@OCG@print}%
10710   \@pdfm@mark{%
10711     obj \OBJ@OCG@print <<%
10712       /Type/OCG%
10713       /Name(Print)%
10714       /Usage<<%
10715       /Print<<%
10716       /PrintState/ON%
10717       >>%
10718       /View<<%
10719       /ViewState/OFF%
10720       >>%
10721       >>%
10722     }%
10723   }%
10724   \@pdfm@mark{close \OBJ@OCG@print}%
10725   \def\OBJ@OCGs{@OCGs}%
10726   \@pdfm@mark{%
10727     obj \OBJ@OCGs [%
10728       \OBJ@OCG@view\space\OBJ@OCG@print
10729     ]%
10730   }%
10731   \@pdfm@mark{close \OBJ@OCGs}%
10732   \@pdfm@mark{%
10733     put @catalog <<%
10734       /OCProperties<<%
10735       /OCGs \OBJ@OCGs
10736       /D<<%
10737       /OFF[\OBJ@OCG@print]%
10738       /AS[%
10739         <<%
10740         /Event/View%

```



```

10741         /OCGs \OBJ@OCGs
10742         /Category[/View]%
10743     >>%
10744     <<%
10745         /Event/Print%
10746         /OCGs \OBJ@OCGs
10747         /Category[/Print]%
10748     >>%
10749     <<%
10750         /Event/Export%
10751         /OCGs \OBJ@OCGs
10752         /Category[/Print]%
10753     >>%
10754     ]%
10755     >>%
10756     >>%
10757     >>%
10758 }%
10759 \AtBeginShipout{%
10760     \setbox\AtBeginShipoutBox=\hbox{%
10761         \copy\AtBeginShipoutBox
10762         \@pdfm@mark{%
10763             put @resources <<%
10764             /Properties<<%
10765             /OCView \OBJ@OCG@view
10766             /OCPrint \OBJ@OCG@print
10767         >>%
10768         >>%
10769     }%
10770 }%
10771 }%
10772 \Hy@AtBeginDocument{%
10773     \def\Hy@colorlink#1{%
10774         \begingroup
10775         \ifHy@ocgcolorlinks
10776             \def\Hy@ocgcolor{#1}%
10777             \setbox0=\hbox\bgroup\color@begingroup
10778         \else
10779             \HyColor@UseColor#1%
10780         \fi
10781     }%
10782     \def\Hy@endcolorlink{%
10783         \ifHy@ocgcolorlinks
10784             \color@endgroup\egroup
10785             \mbox{%
10786                 \@pdfm@mark{content /OC/OCPrint BDC}%
10787                 \rlap{\copy0}%
10788                 \@pdfm@mark{content EMC/OC/OCView BDC}%
10789             \begingroup
10790                 \expandafter\HyColor@UseColor\Hy@ocgcolor
10791                 \box0 %
10792             \endgroup
10793             \@pdfm@mark{content EMC}%
10794         }%
10795     \fi
10796     \endgroup
10797 }%

```



```

10798 }%
10799 \else
10800 \Hy@DisableOption{ocgcolorlinks}%
10801 \fi

```

Use primitive counter arithmetic here to avoid amsmath redefining `\stepcounter` (github issue/13)

```

10802 \def\Hy@BeginAnnot#1{%
10803   \global\advance\c@Hy@AnnotLevel\@ne
10804   \ifnum\c@Hy@AnnotLevel=\@ne
10805     #1%
10806   \fi
10807 }
10808 \def\Hy@endAnnot{%
10809   \ifnum\value{Hy@AnnotLevel}=\@ne
10810     \Hy@endcolorlink
10811     \@pdfm@mark{eann}%
10812   \fi
10813   \global\advance\c@Hy@AnnotLevel\m@ne
10814 }
10815 \def\Hy@undefinedname{UNDEFINED}
10816 \def\hyper@linkstart#1#2{%
10817   \Hy@VerboseLinkStart{#1}{#2}%
10818   \leavevmode
10819   \Hy@BeginAnnot{%
10820     \protected@edef\Hy@testname{#2}%
10821     \ifx\Hy@testname\@empty
10822       \Hy@Warning{%
10823         Empty destination name,\MessageBreak
10824         using '\Hy@undefinedname'%
10825       }%
10826     \let\Hy@testname\Hy@undefinedname
10827   \else
10828     \Hy@pstringdef\Hy@testname{%
10829       \expandafter\HyperDestNameFilter\expandafter{%
10830         \Hy@testname
10831       }%
10832     }%
10833   \fi
10834   \@pdfm@mark{%
10835     bann<<%
10836     /Type/Annot%
10837     /Subtype/Link%
10838     \ifHy@pdfa /F 4\fi
10839     \Hy@setpdfborder
10840     \Hy@setpdfhighlight
10841     \expandafter\ifx\csname @#1bordercolor\endcsname\relax
10842     \else
10843       /C[\csname @#1bordercolor\endcsname]%
10844     \fi
10845     /A<<%
10846     /S/GoTo%
10847     /D(\Hy@testname)%
10848     \Hy@href@nextactionraw
10849     >>%
10850     >>%
10851   }%

```



```

10852 \expandafter\Hy@colorlink\csname @#1color\endcsname
10853 }%
10854 }
10855 \def\hyper@linkend{\Hy@EndAnnot}%
10856 \def\hyper@link#1#2#3{%
10857 \hyper@linkstart{#1}{#2}#3\Hy@xspace@end\hyper@linkend
10858 }
10859 \def\hyper@linkfile#1#2#3{%
10860 \leavevmode
10861 \Hy@BeginAnnot{%
10862 \def\Hy@pstringF{#2}%
10863 \Hy@CleanupFile\Hy@pstringF
10864 \Hy@pstringdef\Hy@pstringF\Hy@pstringF
10865 \Hy@pstringdef\Hy@pstringD{#3}%
10866 \Hy@MakeRemoteAction
10867 \@pdfm@mark{%
10868 bann<<%
10869 /Type/Annot%
10870 /Subtype/Link%
10871 \ifHy@pdfa /F 4\fi
10872 \Hy@setpdfborder
10873 \Hy@setpdfhighlight
10874 \ifx\@filebordercolor\relax
10875 \else
10876 /C[\@filebordercolor]%
10877 \fi
10878 /A<<%
10879 /S/GoToR%
10880 /F(\Hy@pstringF)%
10881 /D%
10882 \ifx\#3\%
10883 [\Hy@href@page\@pdfremotestartview]%
10884 \else
10885 (\Hy@pstringD)%
10886 \fi
10887 \Hy@SetNewWindow
10888 \Hy@href@nextactionraw
10889 >>%
10890 >>%
10891 }%
10892 \Hy@colorlink\@filecolor
10893 }%
10894 #1\Hy@xspace@end
10895 \Hy@EndAnnot
10896 }
10897 \def\@hyper@launch run:#1\#2#3{% filename, anchor text linkname
10898 \leavevmode
10899 \Hy@BeginAnnot{%
10900 \Hy@pstringdef\Hy@pstringF{#1}%
10901 \Hy@pstringdef\Hy@pstringP{#3}%
10902 \@pdfm@mark{%
10903 bann<<%
10904 /Type/Annot%
10905 /Subtype/Link%
10906 \ifHy@pdfa /F 4\fi
10907 \Hy@setpdfborder
10908 \Hy@setpdfhighlight

```



```

10909     \ifx\@runbordercolor\relax
10910     \else
10911     /C[\@runbordercolor]%
10912     \fi
10913     /A<<%
10914     /F(\Hy@pstringF)%
10915     /S/Launch%
10916     \Hy@SetNewWindow
10917     \ifx\|#3\%
10918     \else
10919     /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
10920     \fi
10921     \Hy@href@nextactionraw
10922     >>%
10923     >>%
10924     }%
10925     \Hy@colorlink\@runcolor
10926     }%
10927     #2\Hy@xspace@end
10928     \Hy@EndAnnot
10929 }
10930 \def\hyper@linkurl#1#2{%
10931     \leavevmode
10932     \Hy@BeginAnnot{%
10933         \Hy@pstringdef\Hy@pstringURI{#2}%
10934         \@pdfm@mark{%
10935             bann<<%
10936             /Type/Annot%
10937             /Subtype/Link%
10938             \ifHy@pdfa /F 4\fi
10939             \Hy@setpdfborder
10940             \Hy@setpdfhighlight
10941             \ifx\@urlbordercolor\relax
10942             \else
10943             /C[\@urlbordercolor]%
10944             \fi
10945             /A<<%
10946             /S/URI%
10947             /URI(\Hy@pstringURI)%
10948             \ifHy@href@ismap
10949             /IsMap true%
10950             \fi
10951             \Hy@href@nextactionraw
10952             >>%
10953             >>%
10954             }%
10955             \Hy@colorlink\@urlcolor
10956             }%
10957             #1\Hy@xspace@end
10958             \Hy@EndAnnot
10959 }
10960 \def\Acrobatmenu#1#2{%
10961     \Hy@Acrobatmenu{#1}{#2}{%
10962         \Hy@BeginAnnot{%
10963             \EdefEscapeName\Hy@temp@menu{#1}%
10964             \@pdfm@mark{%
10965                 bann<<%

```



```

10966      /Type/Annot%
10967      /Subtype/Link%
10968      \ifHy@pdfa /F 4\fi
10969      \Hy@setpdfborder
10970      \Hy@setpdfhighlight
10971      \ifx\@menubordercolor\relax
10972      \else
10973      /C[\@menubordercolor]%
10974      \fi
10975      /A<<%
10976      /S/Named%
10977      /N/\Hy@temp@menu
10978      \Hy@href@nextactionraw
10979      >>%
10980      >>%
10981      }%
10982      \Hy@colorlink\@menucolor
10983      }%
10984      #2\Hy@xspace@end
10985      \Hy@endAnnot
10986      }%
10987      }
10988
10989      \def\PDF@FinishDoc{%
10990      \Hy@UseMaketitleInfos
10991      \HyInfo@GenerateAddons
10992      \@pdfm@mark{%
10993      docinfo<<%
10994      /Title(\@pdftitle)%
10995      /Subject(\@pdfsubject)%
10996      /Creator(\@pdfcreator)%
10997      \ifx\@pdfcreationdate\@empty
10998      \else
10999      /CreationDate(\@pdfcreationdate)%
11000      \fi
11001      \ifx\@pdfmoddate\@empty
11002      \else
11003      /ModDate(\@pdfmoddate)%
11004      \fi
11005      /Author(\@pdfauthor)%
11006      \ifx\@pdfproducer\relax
11007      \else
11008      /Producer(\@pdfproducer)%
11009      \fi
11010      /Keywords(\@pdfkeywords)%
11011      \ifx\@pdftrapped\@empty
11012      \else
11013      /Trapped/\@pdftrapped
11014      \fi
11015      \HyInfo@Addons
11016      >>%
11017      }%
11018      \Hy@DisableOption{pdfauthor}%
11019      \Hy@DisableOption{pdftitle}%
11020      \Hy@DisableOption{pdfsubject}%
11021      \Hy@DisableOption{pdfcreator}%
11022      \Hy@DisableOption{addtopdfcreator}%

```



```

11023 \Hy@DisableOption{pdfcreationdate}%
11024 \Hy@DisableOption{pdfcreationdate}%
11025 \Hy@DisableOption{pdfmoddate}%
11026 \Hy@DisableOption{pdfproducer}%
11027 \Hy@DisableOption{pdfkeywords}%
11028 \Hy@DisableOption{pdftrapped}%
11029 \Hy@DisableOption{pdfinfo}%
11030 }

11031 \def\PDF@SetupDoc{%
11032 \edef\Hy@temp{%
11033 \ifHy@pdftoolbar\else /HideToolbar true\fi
11034 \ifHy@pdfmenubar\else /HideMenubar true\fi
11035 \ifHy@pdfwindowui\else /HideWindowUI true\fi
11036 \ifHy@pdfwindow /FitWindow true\fi
11037 \ifHy@pdfcenterwindow /CenterWindow true\fi
11038 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
11039 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
11040 \Hy@UseNameKey{Direction}\@pdfdirection
11041 \Hy@UseNameKey{ViewArea}\@pdfviewarea
11042 \Hy@UseNameKey{ViewClip}\@pdfviewclip
11043 \Hy@UseNameKey{PrintArea}\@pdfprintarea
11044 \Hy@UseNameKey{PrintClip}\@pdfprintclip
11045 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
11046 \Hy@UseNameKey{Duplex}\@pdfduplex
11047 \ifx\@pdfpicktraybypdfsize\@empty
11048 \else
11049 /PickTrayByPDFSize \@pdfpicktraybypdfsize
11050 \fi
11051 \ifx\@pdfprintpagerange\@empty
11052 \else
11053 /PrintPageRange[\@pdfprintpagerange]%
11054 \fi
11055 \ifx\@pdfnumcopies\@empty
11056 \else
11057 /NumCopies \@pdfnumcopies
11058 \fi
11059 }%
11060 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
11061 \@pdfm@mark{%
11062 docview<<%
11063 \ifx\@pdfstartpage\@empty
11064 \else
11065 \ifx\@pdfstartview\@empty
11066 \else
11067 /OpenAction[@page\@pdfstartpage\@pdfstartview]%
11068 \fi
11069 \fi
11070 \ifx\@baseurl\@empty
11071 \else
11072 /URI<</Base(\Hy@pstringB)>>%
11073 \fi
11074 /PageMode/\@pdfpagemode
11075 \ifx\Hy@temp\@empty
11076 \else
11077 /ViewerPreferences<<\Hy@temp>>%
11078 \fi
11079 \Hy@UseNameKey{PageLayout}\@pdfpagelayout

```



```

11080 \ifx\@pdflang\relax
11081 \else
11082 /Lang(\@pdflang)%
11083 \fi
11084 >>%
11085 }%
11086 \ifx\@pdfpagescrop\@empty
11087 \else
11088 \@pdfm@mark{put @pages <</CropBox[\@pdfpagescrop]>>}%
11089 \fi
11090 }
11091 </dvipdfm | xetex>
11092 < *dvipdfm | xetex>

```

\hyper@pagetransition

```

11093 \def\hyper@pagetransition{%
11094 \ifx\@pdfpagetransition\relax
11095 \else
11096 \ifx\@pdfpagetransition\@empty
11097 \else
11098 \special{pdf:put @thispage %
11099 <</Trans<</S/\@pdfpagetransition>>>>%
11100 }%
11101 \fi
11102 \fi
11103 }

```

\hyper@pageduration

```

11104 \def\hyper@pageduration{%
11105 \ifx\@pdfpageduration\relax
11106 \else
11107 \ifx\@pdfpageduration\@empty
11108 \else
11109 \special{pdf:put @thispage %
11110 <</Dur \@pdfpageduration>>>>%
11111 }%
11112 \fi
11113 \fi
11114 }

```

\hyper@pagehidden

```

11115 \def\hyper@pagehidden{%
11116 \ifHy@useHidKey
11117 \special{pdf:put @thispage %
11118 <</Hid \ifHy@pdfpagehidden true\else false\fi>>%
11119 }%
11120 \fi
11121 }

11122 \g@addto@macro\Hy@EveryPageBoxHook{%
11123 \hyper@pagetransition
11124 \hyper@pageduration
11125 \hyper@pagehidden
11126 }
11127 </dvipdfm | xetex>

```


XeTeX uses pdfTeX's method `\pdfpagewidth` and `\pdfpageheight` for setting the paper size.

```

11128 <*dvipdfm>
11129 \AtBeginShipoutFirst{%
11130   \ifHy@setpagesize
11131     \begingroup
11132     \@ifundefined{stockwidth}{-%
11133       \ifdim\paperwidth>\z@
11134         \ifdim\paperheight>\z@
11135           \special{papersize=\the\paperwidth,\the\paperheight}%
11136         \fi
11137       \fi
11138     }{%
11139       \ifdim\stockwidth>\z@
11140         \ifdim\stockheight>\z@
11141           \special{papersize=\the\stockwidth,\the\stockheight}%
11142         \fi
11143       \fi
11144     }%
11145   \endgroup
11146 \fi
11147 \Hy@DisableOption{setpagesize}%
11148 }
11149 </dvipdfm>

```

47.6 VTeX typesetting system

Provided by MicroPress, May 1998. They require VTeX version 6.02 or newer; see <http://www.micropress-inc.com/> for details.

```

11150 <*vtexhtml>
11151 \providecommand*\XR@ext}{htm}
11152 \RequirePackage{vtexhtml}
11153 \newif\if@Localurl
11154 \let\PDF@FinishDoc\ltx@empty
11155 \def\PDF@SetupDoc{%
11156   \ifx\@baseurl\@empty
11157     \else
11158       \special{!direct <base href="\@baseurl">}%
11159     \fi
11160 }
11161 \def\@urltype{url}
11162 \def\hyper@link#1#2#3{%
11163   \Hy@VerboseLinkStart{#1}{#2}%
11164   \leavevmode
11165   \special{!direct <a href=%
11166     \hyper@quote\hyper@hash\HyperDestNameFilter{#2}\hyper@quote>}%
11167   #3\Hy@xspace@end
11168   \special{!direct </a>}%
11169 }
11170 \def\hyper@linkurl#1#2{%
11171   \begingroup
11172   \hyper@chars
11173   \leavevmode
11174   \MathBSuppress=1\relax
11175   \special{!direct <a href=%
11176     \hyper@quote\HyperDestNameFilter{#2}\hyper@quote>}%
11177   #1\Hy@xspace@end

```



```

11178 \MathBSuppress=0\relax
11179 \special{!direct </a>}%
11180 \endgroup
11181 }
11182 \def\hyper@linkfile#1#2#3{%
11183 \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\\else\##3\fi}%
11184 }
11185 \def\hyper@linkstart#1#2{%
11186 \Hy@VerboseLinkStart{#1}{#2}%
11187 \def\Hy@tempa{#1}\ifx\Hy@tempa\@urltype
11188 \@Localurltrue
11189 \special{!direct <a href=\hyper@quote#2\hyper@quote>}%
11190 \else
11191 \@Localurlfalse
11192 \begingroup
11193 \hyper@chars
11194 \special{!aref \HyperDestNameFilter{#2}}%
11195 \endgroup
11196 \fi
11197 }
11198 \def\hyper@linkend{%
11199 \if@Localurl
11200 \special{!endaref}%
11201 \else
11202 \special{!direct </a>}%
11203 \fi
11204 }
11205 \Hy@WrapperDef\hyper@anchorstart#1{%
11206 \Hy@SaveLastskip
11207 \Hy@VerboseAnchor{#1}%
11208 \begingroup
11209 \hyper@chars
11210 \special{!aname #1}%
11211 \special{!direct <a name=%
11212 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
11213 \endgroup
11214 \Hy@activeanchortrue
11215 }
11216 \def\hyper@anchorend{%
11217 \special{!direct </a>}%
11218 \Hy@activeanchorfalse
11219 \Hy@RestoreLastskip
11220 }
11221 \Hy@WrapperDef\hyper@anchor#1{%
11222 \Hy@SaveLastskip
11223 \Hy@VerboseAnchor{#1}%
11224 \begingroup
11225 \let\protect=\string
11226 \hyper@chars
11227 \leavevmode
11228 \special{!aname #1}%
11229 \special{!direct <a name=%
11230 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
11231 \endgroup
11232 \Hy@activeanchortrue
11233 \bgroup\anchor@spot\egroup
11234 \special{!direct </a>}%

```



```

11235 \Hy@activeanchorfalse
11236 \Hy@RestoreLastskip
11237 }
11238 \def\@Form[#1]{%
11239 \Hy@Message{Sorry, TeXpider does not yet support FORMs}%
11240 }
11241 \let\@endForm\ltx@empty
11242 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
11243 \Hy@Message{Sorry, TeXpider does not yet support FORM gauges}%
11244 }
11245 \def\@TextField[#1]#2{% parameters, label
11246 \Hy@Message{Sorry, TeXpider does not yet support FORM text fields}%
11247 }
11248 \def\@CheckBox[#1]#2{% parameters, label
11249 \Hy@Message{Sorry, TeXpider does not yet support FORM checkboxes}%
11250 }
11251 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
11252 \Hy@Message{Sorry, TeXpider does not yet support FORM choice menus}%
11253 }
11254 \def\@PushButton[#1]#2{% parameters, label
11255 \Hy@Message{Sorry, TeXpider does not yet support FORM pushbuttons}%
11256 }
11257 \def\@Reset[#1]#2{%
11258 \Hy@Message{Sorry, TeXpider does not yet support FORMs}%
11259 }
11260 \def\@Submit[#1]#2{%
11261 \Hy@Message{Sorry, TeXpider does not yet support FORMs}%
11262 }
11263 \</vtexhtml>
11264 \*vtex>

```

VTeX version 6.68 supports `\mediawidth` and `\mediaheight`. The `\ifx` construct is better than a `\csname`, because it avoids the definition and the hash table entry of a previous undefined macro.

```

11265 \ifx\mediaheight\@undefined
11266 \else
11267 \ifx\mediaheight\relax
11268 \else
11269 \ifHy@setpagesize
11270 \providecommand*\VTeXInitMediaSize{%
11271 \ltx@IfUndefined{stockwidth}{%
11272 \ifdim\paperheight>0pt %
11273 \setlength\mediaheight\paperheight
11274 \fi
11275 \ifdim\paperheight>0pt %
11276 \setlength\mediawidth\paperwidth
11277 \fi
11278 }{%
11279 \ifdim\stockheight>0pt %
11280 \setlength\mediaheight\stockheight
11281 \fi
11282 \ifdim\stockwidth>0pt %
11283 \setlength\mediawidth\stockwidth
11284 \fi
11285 }%
11286 }%
11287 \Hy@AtBeginDocument{\VTeXInitMediaSize}%

```



```

11288 \fi
11289 \Hy@DisableOption{setpagesize}%
11290 \fi
11291 \fi
Older versions of VTeX require xyz in lower case.
11292 \providecommand*\@pdfview{xyz}
11293 \providecommand*\@pdfborder{0 0 1}
11294 \providecommand*\@pdfborderstyle{}
11295 \let\CurrentBorderColor\@linkbordercolor
11296 \Hy@WrapperDef\hyper@anchor#1{%
11297 \Hy@SaveLastskip
11298 \Hy@VerboseAnchor{#1}%
11299 \begingroup
11300 \let\protect=\string
11301 \hyper@chars
11302 \special{!aname \HyperDestNameFilter{#1};\@pdfview}%
11303 \endgroup
11304 \Hy@activeanchortrue
11305 \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
11306 \Hy@activeanchorfalse
11307 \Hy@RestoreLastskip
11308 }
11309 \Hy@WrapperDef\hyper@anchorstart#1{%
11310 \Hy@SaveLastskip
11311 \Hy@VerboseAnchor{#1}%
11312 \begingroup
11313 \hyper@chars
11314 \special{!aname \HyperDestNameFilter{#1};\@pdfview}%
11315 \endgroup
11316 \Hy@activeanchortrue
11317 }
11318 \def\hyper@anchorend{%
11319 \Hy@activeanchorfalse
11320 \Hy@RestoreLastskip
11321 }
11322 \def\@urltype{url}
11323 \def\Hy@undefinedname{UNDEFINED}
11324 \def\hyper@linkstart#1#2{%
11325 \Hy@VerboseLinkStart{#1}{#2}%
11326 \Hy@pstringdef\Hy@pstringURI{#2}%
11327 \expandafter\Hy@colorlink\csname @#1color\endcsname
11328 \ltx@ifundefined{@#1bordercolor}{%
11329 \let\CurrentBorderColor\relax
11330 }{%
11331 \edef\CurrentBorderColor{%
11332 \csname @#1bordercolor\endcsname
11333 }%
11334 }%
11335 \def\Hy@tempa{#1}%
11336 \ifx\Hy@tempa\@urltype
11337 \special{!%
11338 aref <u=/Type/Action/S/URI/URI(\Hy@pstringURI)%
11339 \ifHy@href@ismap
11340 /IsMap true%
11341 \fi
11342 \Hy@href@nextactionraw
11343 >};%

```



```

11344     a=<%
11345         \ifHy@pdfa /F 4\fi
11346         \Hy@setpdfborder
11347         \ifx\CurrentBorderColor\relax
11348             \else
11349                 /C [\CurrentBorderColor]%
11350             \fi
11351         >%
11352     }%
11353 \else
11354     \protected@edef\Hy@testname{#2}%
11355     \ifx\Hy@testname@empty
11356         \Hy@Warning{%
11357             Empty destination name,\MessageBreak
11358             using ``\Hy@undefinedname'%
11359         }%
11360     \let\Hy@testname\Hy@undefinedname
11361 \fi
11362 \special{!%
11363     aref \expandafter\HyperDestNameFilter
11364         \expandafter{\Hy@testname};%
11365     a=<%
11366         \ifHy@pdfa /F 4\fi
11367         \Hy@setpdfborder
11368         \ifx\CurrentBorderColor\relax
11369             \else
11370                 /C [\CurrentBorderColor]%
11371             \fi
11372         >%
11373     }%
11374 \fi
11375 }
11376 \def\hyper@linkend{%
11377     \special{!endaref}%
11378     \Hy@endcolorlink
11379 }
11380 \def\hyper@linkfile#1#2#3{%
11381     \leavevmode
11382     \def\Hy@pstringF{#2}%
11383     \Hy@CleanupFile\Hy@pstringF
11384     \special{!%
11385         aref <%
11386         \ifnum\Hy@VTeXversion>753 \ifHy@pdfnewwindow n\fi\fi
11387         f=\Hy@pstringF>#3;%
11388         a=<%
11389             \ifHy@pdfa /F 4\fi
11390             \Hy@setpdfborder
11391             \ifx\@filebordercolor\relax
11392                 \else
11393                     /C [\@filebordercolor]%
11394                 \fi
11395             >%
11396         }%
11397         \Hy@colorlink\@filecolor
11398         #1\Hy@xspace@end
11399         \Hy@endcolorlink
11400     \special{!endaref}%

```



```

11401 }
11402 \def\hyper@linkurl#1#2{%
11403   \begingroup
11404     \Hy@pstringdef\Hy@pstringURI{#2}%
11405     \hyper@chars
11406     \leavevmode
11407     \special{!%
11408       aref <u=/Type/Action/S/URI/URI(\Hy@pstringURI)%
11409         \ifHy@href@ismap
11410           /IsMap true%
11411         \fi
11412         \Hy@href@nextactionraw
11413       >,%
11414       a=<%
11415         \ifHy@pdfa /F 4\fi
11416         \Hy@setpdfborder
11417         \ifx\@urlbordercolor\relax
11418           \else
11419             /C [\@urlbordercolor]%
11420         \fi
11421       >%
11422     }%
11423     \Hy@colorlink\@urlcolor
11424     #1\Hy@xspace@end
11425     \Hy@endcolorlink
11426     \special{!endaref}%
11427   \endgroup
11428 }
11429 \def\hyper@link#1#2#3{%
11430   \Hy@VerboseLinkStart{#1}{#2}%
11431   \ltx@ifundefined{#@#1bordercolor}{%
11432     \let\CurrentBorderColor\relax
11433   }{%
11434     \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
11435   }%
11436   \leavevmode
11437   \protected@edef\Hy@testname{#2}%
11438   \ifx\Hy@testname\@empty
11439     \Hy@Warning{%
11440       Empty destination name,\MessageBreak
11441       using ``\Hy@undefinedname'%
11442     }%
11443     \let\Hy@testname\Hy@undefinedname
11444   \fi
11445   \special{!%
11446     aref \expandafter\HyperDestNameFilter
11447       \expandafter{\Hy@testname};%
11448     a=<%
11449       \ifHy@pdfa /F 4\fi
11450       \Hy@setpdfborder
11451       \ifx\CurrentBorderColor\relax
11452         \else
11453           /C [\CurrentBorderColor]%
11454       \fi
11455     >%
11456   }%
11457   \expandafter

```



```

11458 \Hy@colorlink\csname @#1color\endcsname
11459 #3\Hy@xspace@end
11460 \Hy@endcolorlink
11461 \special{!endaref}%
11462 }
11463 \def\hyper@image#1#2{%
11464 \hyper@linkurl{#2}{#1}%
11465 }
11466 \def\@hyper@launch run:#1\#2#3{%
11467 \Hy@pstringdef\Hy@pstringF{#1}%
11468 \Hy@pstringdef\Hy@pstringP{#3}%
11469 \leavevmode
11470 \special{!aref %
11471 <u=%
11472 /Type/Action%
11473 /S/Launch%
11474 /F(\Hy@pstringF)%
11475 \Hy@SetNewWindow
11476 \ifx\#3\%
11477 \else
11478 /Win<</F(\Hy@pstringF)/P(\Hy@pstringP)>>%
11479 \fi
11480 \Hy@href@nextactionraw
11481 >,%
11482 a=<%
11483 \ifHy@pdfa /F 4\fi
11484 \Hy@setpdfborder
11485 \ifx\@runbordercolor\relax
11486 \else
11487 /C[\@runbordercolor]%
11488 \fi
11489 >%
11490 }%
11491 \Hy@colorlink\@runcolor
11492 #2\Hy@xspace@end
11493 \Hy@endcolorlink
11494 \special{!endaref}%
11495 }
11496 \def\Acrobatmenu#1#2{%
11497 \EdefEscapeName\Hy@temp@menu{#1}%
11498 \Hy@Acrobatmenu{#1}{#2}{%
11499 \special{!%
11500 aref <u=/S /Named /N /\Hy@temp@menu>;%
11501 a=<%
11502 \ifHy@pdfa /F 4\fi
11503 \Hy@setpdfborder
11504 \ifx\@menubordercolor\relax
11505 \else
11506 /C[\@menubordercolor]%
11507 \fi
11508 >%
11509 }%
11510 \Hy@colorlink\@menucolor
11511 #2\Hy@xspace@end
11512 \Hy@endcolorlink
11513 \special{!endaref}%
11514 }%

```


11515 }

The following code (transition effects) is made by Alex Kostin.

The code below makes sense for VTeX 7.02 or later.

Please never use \ifundefined{VTeXversion}{..}{..} *globally*.

```
11516 \ifnum\Hy@VTeXversion<702 %
11517 \else
11518 \def\hyper@pagetransition{%
11519 \ifx\@pdfpagetransition\relax
11520 \else
11521 \ifx\@pdfpagetransition\@empty
```

Standard incantation.

1. Does an old entry have to be deleted? 2. If 1=yes, how to delete?

```
11522 \else
11523 \hvtex@parse@trans\@pdfpagetransition
11524 \fi
11525 \fi
11526 }%
```

I have to write an “honest” parser to convert raw PDF code into VTeX \special.
(AVK)

Syntax of VTeX \special{!trans <transition_effect>}:
 <transition_effect> ::= <transition_style>[,<transition_duration>]
 <transition_style> ::= <Blinds_effect> | <Box_effect> |
 <Dissolve_effect> | <Glitter_effect> |
 <Split_effect> | <Wipe_effect>
 <Blinds_effect> ::= B[<effect_dimension>]
 <Box_effect> ::= X[<effect_motion>]
 <Dissolve_effect> ::= D
 <Glitter_effect> ::= G[<effect_direction>]
 <Split_effect> ::= S[<effect_motion>][<effect_dimension>]
 <Wipe_effect> ::= W[<effect_direction>]
 <Replace_effect> ::= R
 <effect_direction> ::= <number>
 <effect_dimension> ::= H | V
 <effect_motion> ::= I | O
 <transition_duration> ::= <number>

Transition codes:

```
11527 \def\hvtex@trans@effect@Blinds{\def\hvtex@trans@code{B}}%
11528 \def\hvtex@trans@effect@Box{\def\hvtex@trans@code{X}}%
11529 \def\hvtex@trans@effect@Dissolve{\def\hvtex@trans@code{D}}%
11530 \def\hvtex@trans@effect@Glitter{\def\hvtex@trans@code{G}}%
11531 \def\hvtex@trans@effect@Split{\def\hvtex@trans@code{S}}%
11532 \def\hvtex@trans@effect@Wipe{\def\hvtex@trans@code{W}}%
11533 \def\hvtex@trans@effect@R{\def\hvtex@trans@code{R}}%
```

Optional parameters:

```
11534 \def\hvtex@par@dimension{/Dm}%
11535 \def\hvtex@par@direction{/Di}%
11536 \def\hvtex@par@duration{/D}%
11537 \def\hvtex@par@motion{/M}%
```

Tokenizer:

```
11538 \def\hvtex@gettoken{%
11539 \expandafter\hvtex@gettoken@\hvtex@buffer\@nil
11540 }%
```


Notice that tokens in the input buffer must be space delimited.

```

11541 \def\hvtex@gettoken@#1 #2\@nil{%
11542 \edef\hvtex@token{#1}%
11543 \edef\hvtex@buffer{#2}%
11544 }%
11545 \def\hvtex@parse@trans#1{%

```

Initializing code:

```

11546 \let\hvtex@trans@code\@empty
11547 \let\hvtex@param@dimension\@empty
11548 \let\hvtex@param@direction\@empty
11549 \let\hvtex@param@duration\@empty
11550 \let\hvtex@param@motion\@empty
11551 \edef\hvtex@buffer{#1\space}%

```

First token is the PDF transition name without escape.

```

11552 \hvtex@gettoken
11553 \ifx\hvtex@token\@empty

```

Leading space(s)?

```

11554 \ifx\hvtex@buffer\@empty

```

The buffer is empty, nothing to do.

```

11555 \else
11556 \hvtex@gettoken
11557 \fi
11558 \fi
11559 \csname hvtex@trans@effect@\hvtex@token\endcsname

```

Now is time to parse optional parameters.

```

11560 \hvtex@trans@params
11561 }%

```

Reentrant macro to parse optional parameters.

```

11562 \def\hvtex@trans@params{%
11563 \ifx\hvtex@buffer\@empty
11564 \else
11565 \hvtex@gettoken
11566 \let\hvtex@trans@par\hvtex@token
11567 \ifx\hvtex@buffer\@empty
11568 \else
11569 \hvtex@gettoken
11570 \ifx\hvtex@trans@par\hvtex@par@duration

```

/D is the effect duration in seconds. V_TE_X special takes it in milliseconds.

```

11571 \let\hvtex@param@duration\hvtex@token
11572 \else \ifx\hvtex@trans@par\hvtex@par@motion

```

/M can be either /I or /O

```

11573 \expandafter\edef\expandafter\hvtex@param@motion
11574 \expandafter{\expandafter\@gobble\hvtex@token}%
11575 \else \ifx\hvtex@trans@par\hvtex@par@dimension

```

/Dm can be either /H or /V

```

11576 \expandafter\edef\expandafter\hvtex@param@dimension
11577 \expandafter{\expandafter\@gobble\hvtex@token}%
11578 \else \ifx\hvtex@trans@par\hvtex@par@direction

```

Valid values for /Di are 0, 270, 315 (the Glitter effect) or 0, 90, 180, 270 (the Wipe effect).

```

11579 \let\hvtex@param@direction\hvtex@token

```



```

11580     \fi\fi\fi\fi
11581     \fi
11582     \fi
11583     \ifx\hvtex@buffer\@empty
11584         \let\next\hvtex@produce@trans
11585     \else
11586         \let\next\hvtex@trans@params
11587     \fi
11588     \next
11589 }%

```

Merge <transition_effect> and issue the special when possible. Too lazy to validate optional parameters.

```

11590 \def\hvtex@produce@trans{%
11591     \let\vtex@trans@special\@empty
11592     \if S\hvtex@trans@code
11593         \edef\vtex@trans@special{\hvtex@trans@code
11594             \hvtex@param@dimension\hvtex@param@motion}%
11595     \else\if B\hvtex@trans@code
11596         \edef\vtex@trans@special{%
11597             \hvtex@trans@code\hvtex@param@dimension
11598         }%
11599     \else\if X\hvtex@trans@code
11600         \edef\vtex@trans@special{%
11601             \hvtex@trans@code\hvtex@param@motion
11602         }%
11603     \else\if W\hvtex@trans@code
11604         \edef\vtex@trans@special{%
11605             \hvtex@trans@code\hvtex@param@direction
11606         }%
11607     \else\if D\hvtex@trans@code
11608         \let\vtex@trans@special\hvtex@trans@code
11609     \else\if R\hvtex@trans@code
11610         \let\vtex@trans@special\hvtex@trans@code
11611     \else\if G\hvtex@trans@code
11612         \edef\vtex@trans@special{%
11613             \hvtex@trans@code\hvtex@param@direction
11614         }%
11615     \fi\fi\fi\fi\fi\fi
11616     \ifx\vtex@trans@special\@empty
11617     \else
11618         \ifx\hvtex@param@duration\@empty
11619         \else
11620             \setlength{\dimen@}{\hvtex@param@duration\p@}%

```

I'm not guilty of possible overflow.

```

11621     \multiply\dimen@\@m
11622     \edef\vtex@trans@special{%
11623         \vtex@trans@special,\strip@pt\dimen@
11624     }%
11625     \fi

```

And all the mess is just for this.

```

11626     \special{!trans \vtex@trans@special}%
11627     \fi
11628 }%

11629 \def\hyper@pageduration{%
11630     \ifx\@pdfpageduration\relax

```



```

11631 \else
11632 \ifx\@pdfpageduration\@empty
11633 \special{!duration-}%
11634 \else
11635 \special{!duration \@pdfpageduration}%
11636 \fi
11637 \fi
11638 }%
11639 \def\hyper@pagehidden{%
11640 \ifHy@useHidKey
11641 \special{!hidden\ifHy@pdfpagehidden +\else -\fi}%
11642 \fi
11643 }%
11644 \g@addto@macro\Hy@EveryPageBoxHook{%
11645 \hyper@pagetransition
11646 \hyper@pageduration
11647 \hyper@pagehidden
11648 }%
11649 \fi

```

Caution: In opposite to the other drivers, the argument of `\special{!onopen #1}` is a reference name. The VTeX's postscript mode will work with a version higher than 7.0x.

The command `\VTeXOS` is defined since version 7.45. Magic values encode the operating system:

- 1: WinTel
- 2: Linux
- 3: OS/2
- 4: MacOS
- 5: MacOS/X

```

11650 \ifx\@pdfproducer\relax
11651 \def\@pdfproducer{VTeX}%
11652 \ifnum\Hy@VTeXversion>\z@
11653 \count@\VTeXversion
11654 \divide\count@ 100 %
11655 \edef\@pdfproducer{\@pdfproducer\space v\the\count@}%
11656 \multiply\count@ -100 %
11657 \advance\count@\VTeXversion
11658 \edef\@pdfproducer{%
11659 \@pdfproducer
11660 .\ifnum\count@<10 0\fi\the\count@
11661 \ifx\VTeXOS\@undefined\else
11662 \ifnum\VTeXOS>0 %
11663 \ifnum\VTeXOS<6 %
11664 \space(
11665 \ifcase\VTeXOS
11666 \or Windows\or Linux\or OS/2\or MacOS\or MacOS/X%
11667 \fi
11668 )%
11669 \fi
11670 \fi
11671 \fi
11672 ,\space
11673 \ifnum\OpMode=\@one PDF\else PS\fi
11674 \space backend%
11675 \ifx\gexmode\@undefined\else
11676 \ifnum\gexmode>\z@\space with GeX\fi

```



```

11677 \fi
11678 }%
11679 \fi
11680 \fi

```

Current **!pdfinfo** key syntax:

Key	Field	Type
a	Author	String
b	CropBox	String
c	Creator	String
k	Keywords	String
l	PageLayout	PS
p	PageMode	PS
r	Producer	String
s	Subject	String
t	Title	String
u	URI	PS
v	ViewPreferences	PS

Note: PS objects that are dicts are in <<<.>>> (yuck; no choice).

```

11681 \def\PDF@SetupDoc{%
11682 \ifx\@pdfpagescrop\@empty
11683 \else
11684 \special{!pdfinfo b=<\@pdfpagescrop>}%
11685 \fi
11686 \ifx\@pdfstartpage\@empty
11687 \else
11688 \ifx\@pdfstartview\@empty
11689 \else
11690 \special{!onopen Page\@pdfstartpage}%
11691 \fi
11692 \fi
11693 \special{!pdfinfo p=</\@pdfpagemode>}%
11694 \ifx\@baseurl\@empty
11695 \else
11696 \special{!pdfinfo u=<<</Base (\@baseurl)>>>}%
11697 \fi
11698 \special{!pdfinfo v=<<<%
11699 \ifHy@pdftoolbar\else /HideToolbar true\fi
11700 \ifHy@pdfmenubar\else /HideMenubar true\fi
11701 \ifHy@pdfwindowui\else /HideWindowUI true\fi
11702 \ifHy@pdfwindow /FitWindow true\fi
11703 \ifHy@pdfcenterwindow /CenterWindow true\fi
11704 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
11705 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
11706 \Hy@UseNameKey{Direction}\@pdfdirection
11707 \Hy@UseNameKey{ViewArea}\@pdfviewarea
11708 \Hy@UseNameKey{ViewClip}\@pdfviewclip
11709 \Hy@UseNameKey{PrintArea}\@pdfprintarea
11710 \Hy@UseNameKey{PrintClip}\@pdfprintclip
11711 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
11712 \Hy@UseNameKey{Duplex}\@pdfduplex
11713 \ifx\@pdfpicktraybypdfsize\@empty
11714 \else
11715 /PickTrayByPDFSize \@pdfpicktraybypdfsize
11716 \fi
11717 \ifx\@pdfprintpagerange\@empty
11718 \else

```



```

11719 /PrintPageRange[\@pdfprintpagerange]%
11720 \fi
11721 \ifx\@pdfnumcopies\@empty
11722 \else
11723 /NumCopies \@pdfnumcopies
11724 \fi
11725 >>>}%
11726 \ifx\@pdfpagelayout\@empty
11727 \else
11728 \special{!pdfinfo l=</\@pdfpagelayout\space>}%
11729 \fi
11730 }%
11731 \HyInfo@AddonUnsupportedtrue
11732 \define@key{Hyp}{pdfcreationdate}{%
11733 \Hy@Warning{%
11734 VTeX does not support pdfcreationdate.\MessageBreak
11735 Therefore its setting is ignored%
11736 }%
11737 }
11738 \define@key{Hyp}{pdfmoddate}{%
11739 \Hy@Warning{%
11740 VTeX does not support pdfmoddate.\MessageBreak
11741 Therefore its setting is ignored%
11742 }%
11743 }
11744 \def\PDF@FinishDoc{%
11745 \Hy@UseMaketitleInfos
11746 \HyInfo@TrappedUnsupported
11747 \special{!pdfinfo a=<\@pdfauthor>}%
11748 \special{!pdfinfo t=<\@pdftitle>}%
11749 \special{!pdfinfo s=<\@pdfsubject>}%
11750 \special{!pdfinfo c=<\@pdfcreator>}%
11751 \ifx\@pdfproducer\relax
11752 \else
11753 \special{!pdfinfo r=<\@pdfproducer>}%
11754 \fi
11755 \special{!pdfinfo k=<\@pdfkeywords>}%
11756 \Hy@DisableOption{pdfauthor}%
11757 \Hy@DisableOption{pdftitle}%
11758 \Hy@DisableOption{pdfsubject}%
11759 \Hy@DisableOption{pdfcreator}%
11760 \Hy@DisableOption{addtopdfcreator}%
11761 \Hy@DisableOption{pdfcreationdate}%
11762 \Hy@DisableOption{pdfcreationdate}%
11763 \Hy@DisableOption{pdfmoddate}%
11764 \Hy@DisableOption{pdfproducer}%
11765 \Hy@DisableOption{pdfkeywords}%
11766 \Hy@DisableOption{pdftrapped}%
11767 \Hy@DisableOption{pdfinfo}%
11768 }
11769 </vtex>

```

47.7 Fix for Adobe bug number 466320

If a destination occurs at the very begin of a page, the destination is moved to the previous page by Adobe Distiller 5. As workaround Adobe suggests:

```
/showpage_{
```



```

    _/_/showpage
    _/_clippath_stroke_/_erasepage
  }_/_bind_/_def

```

But unfortunately this fix generates an empty page at the end of the document. Therefore another fix is used by writing some clipped text.

```

11770 <dviwindo>\def\literalps@out#1{\special{ps:#1}}%
11771 <package>\providecommand*{\Hy@DistillerDestFix}{}
11772 <*pdfmark | dviwindo>
11773 \def\Hy@DistillerDestFix{%
11774   \begingroup
11775     \let\x\literalps@out

```

The fix has to be passed unchanged through GeX, if VTeX in PostScript mode with GeX is used.

```

11776   \ifnum \@ifundefined{OpMode}{0}{}%
11777     \@ifundefined{gexmode}{0}{}%
11778     \ifnum\gexmode>0 \OpMode\else 0\fi
11779   }>1 %
11780   \def\x##1{%
11781     \immediate\special{!=##1}%
11782   }%
11783 \fi
11784 \x{%
11785   /product where{%
11786     pop %
11787     product(Distiller)search{%
11788       pop pop pop %
11789       version(.)search{%
11790         exch pop exch pop%
11791         (3011)eq{%
11792           gsave %
11793           newpath 0 0 moveto closepath clip%
11794           /Courier findfont 10 scalefont setfont %
11795           72 72 moveto(.).show %
11796           grestore%
11797         }if%
11798         }{pop}ifelse%
11799         }{pop}ifelse%
11800       }if%
11801     }%
11802   \endgroup
11803 }
11804 </pdfmark | dviwindo>

```

47.8 Direct pdfmark support

Drivers that load `pdfmark.def` have to provide the correct macro definitions of

<code>\@pdfproducer</code>	for document information
<code>\literalps@out</code>	PostScript output
<code>\headerps@out</code>	PostScript output that goes in the header area

and the correct definitions of the following PostScript procedures:

H.S	start of anchor, link or rect
#1 H.A	end of anchor, argument=baselineskip in pt
#1 H.L	end of link, argument=baselineskip in pt
H.R	end of rect
H.B	raw rect code

```

11805 (*pdfmark)
11806 \Hy@breaklinks@unsupported
11807 \def\HyPat@ObjRef{%
11808   \{[~{}]+\}%
11809 }
11810 \Hy@WrapperDef\hyper@anchor#1{%
11811   \Hy@SaveLastskip
11812   \Hy@VerboseAnchor{#1}%
11813   \begingroup
11814     \pdfmark[\anchor@spot]{%
11815       pdfmark=/DEST,%
11816       linktype=anchor,%
11817       View=/\@pdfview \@pdfviewparams,%
11818       DestAnchor={#1}%
11819     }%
11820   \endgroup
11821   \Hy@RestoreLastskip
11822 }
11823 \ltx@ifundefined{hyper@anchorstart}{\endinput}
11824 \Hy@WrapperDef\hyper@anchorstart#1{%
11825   \Hy@SaveLastskip
11826   \Hy@VerboseAnchor{#1}%
11827   \literalps@out{H.S}%
11828   \Hy@AllowHyphens
11829   \xdef\hyper@currentanchor{#1}%
11830   \Hy@activeanchortrue
11831 }
11832 \def\hyper@anchorend{%
11833   \literalps@out{\strip@pt@and@otherjunk\baselineskip\space H.A}%
11834   \pdfmark{%
11835     pdfmark=/DEST,%
11836     linktype=anchor,%
11837     View=/\@pdfview \@pdfviewparams,%
11838     DestAnchor=\hyper@currentanchor,%
11839   }%
11840   \Hy@activeanchorfalse
11841   \Hy@RestoreLastskip
11842 }
11843 \def\hyper@linkstart#1#2{%
11844   \Hy@VerboseLinkStart{#1}{#2}%
11845   \ifHy@breaklinks
11846   \else
11847     \leavevmode
11848     \ifmmode
11849       \def\Hy@LinkMath{$}%
11850     \else
11851       \let\Hy@LinkMath\ltx@empty
11852     \fi
11853     \Hy@SaveSpaceFactor
11854     \hbox\bgroup
11855     \Hy@RestoreSpaceFactor
11856     \Hy@LinkMath

```



```

11857 \fi
11858 \expandafter\Hy@colorlink\csname @#1color\endcsname
11859 \literalps@out{H.S}%
11860 \Hy@AllowHyphens
11861 \xdef\hyper@currentanchor{#2}%
11862 \gdef\hyper@currentlinktype{#1}%
11863 }
11864 \def\hyper@linkend{%
11865 \literalps@out{\strip@pt@and@otherjunk\baselineskip\space H.L}%
11866 \ltx@ifundefined{@\hyper@currentlinktype bordercolor}{%
11867 \let\Hy@tempcolor\relax
11868 }{%
11869 \edef\Hy@tempcolor{%
11870 \csname @\hyper@currentlinktype bordercolor\endcsname
11871 }%
11872 }%
11873 \pdfmark{%
11874 pdfmark=/ANN,%
11875 linktype=link,%
11876 Subtype=/Link,%
11877 PDFAFlags=4,%
11878 Dest=\hyper@currentanchor,%
11879 AcroHighlight=\@pdfhighlight,%
11880 Border=\@pdfborder,%
11881 BorderStyle=\@pdfborderstyle,%
11882 Color=\Hy@tempcolor,%
11883 Raw=H.B%
11884 }%
11885 \Hy@endcolorlink
11886 \ifHy@breaklinks
11887 \else
11888 \Hy@LinkMath
11889 \Hy@SaveSpaceFactor
11890 \egroup
11891 \Hy@RestoreSpaceFactor
11892 \fi
11893 }

```

We have to allow for `\baselineskip` having an optional stretch and shrink (you meet this in slide packages, for instance), so we need to strip off the junk. David Carlisle, of course, wrote this bit of code.

```

11894 \begingroup
11895 \catcode`P=12 %
11896 \catcode`T=12 %
11897 \lowercase{\endgroup
11898 \gdef\rem@ptetc#1.#2PT#3!{#1\ifnum#2>\z@.#2\fi}%
11899 }
11900 \def\strip@pt@and@otherjunk#1{\expandafter\rem@ptetc\the#1!}

```

`\hyper@pagetransition`

```

11901 \def\hyper@pagetransition{%
11902 \ifx\@pdfpagetransition\relax
11903 \else
11904 \ifx\@pdfpagetransition\@empty
11905 % 1. Does an old entry have to be deleted?
11906 % 2. If 1=yes, how to delete?
11907 \else

```



```

11908 \pdfmark{%
11909 pdfmark=/PUT,%
11910 Raw={%
11911 \string{ThisPage\string}%
11912 <</Trans << /S /\@pdfpagetransition\space >> >>%
11913 }%
11914 }%
11915 \fi
11916 \fi
11917 }

```

\hyper@pageduration

```

11918 \def\hyper@pageduration{%
11919 \ifx\@pdfpageduration\relax
11920 \else
11921 \ifx\@pdfpageduration\@empty
11922 % 1. Does an old entry have to be deleted?
11923 % 2. If 1=yes, how to delete?
11924 \else
11925 \pdfmark{%
11926 pdfmark=/PUT,%
11927 Raw={%
11928 \string{ThisPage\string}%
11929 <</Dur \@pdfpageduration>>%
11930 }%
11931 }%
11932 \fi
11933 \fi
11934 }

```

\hyper@pagehidden

```

11935 \def\hyper@pagehidden{%
11936 \ifHy@useHidKey
11937 \pdfmark{%
11938 pdfmark=/PUT,%
11939 Raw={%
11940 \string{ThisPage\string}%
11941 <</Hid \ifHy@pdfpagehidden true\else false\fi>>%
11942 }%
11943 }%
11944 \fi
11945 }

11946 \g@addto@macro\Hy@EveryPageBoxHook{%
11947 \hyper@pagetransition
11948 \hyper@pageduration
11949 \hyper@pagehidden
11950 }

11951 \def\hyper@image#1#2{%
11952 \hyper@linkurl{#2}{#1}%
11953 }
11954 \def\Hy@undefinedname{UNDEFINED}
11955 \def\hyper@link#1#2#3{%
11956 \Hy@VerboseLinkStart{#1}{#2}%
11957 \ltx@ifundefined{@#1bordercolor}{%
11958 \let\Hy@tempcolor\relax
11959 }{%

```



```

11960 \edef\Hy@tempcolor{\csname @#1bordercolor\endcsname}%
11961 }%
11962 \begingroup
11963 \protected@edef\Hy@testname{#2}%
11964 \ifx\Hy@testname\@empty
11965 \Hy@Warning{%
11966 Empty destination name,\MessageBreak
11967 using ``\Hy@undefinedname'%
11968 }%
11969 \let\Hy@testname\Hy@undefinedname
11970 \fi
11971 \pdfmark[{#3}]{%
11972 Color=\Hy@tempcolor,%
11973 linktype={#1},%
11974 AcroHighlight=\@pdfhighlight,%
11975 Border=\@pdfborder,%
11976 BorderStyle=\@pdfborderstyle,%
11977 pdfmark=/ANN,%
11978 Subtype=/Link,%
11979 PDFAFlags=4,%
11980 Dest=\Hy@testname
11981 }%
11982 \endgroup
11983 }
11984 \newtoks\pdf@docset
11985 \def\PDF@FinishDoc{%
11986 \Hy@UseMaketitleInfos
11987 \Hy@Info@GenerateAddons
11988 \let\Hy@temp\@empty
11989 \ifx\@pdfcreationdate\@empty
11990 \else
11991 \def\Hy@temp{CreationDate=\@pdfcreationdate,}%
11992 \fi
11993 \ifx\@pdfmoddate\@empty
11994 \else
11995 \expandafter\def\expandafter\Hy@temp\expandafter{%
11996 \Hy@temp
11997 ModDate=\@pdfmoddate,%
11998 }%
11999 \fi
12000 \ifx\@pdfproducer\relax
12001 \else
12002 \expandafter\def\expandafter\Hy@temp\expandafter{%
12003 \Hy@temp
12004 Producer=\@pdfproducer,%
12005 }%
12006 \fi
12007 \expandafter
12008 \pdfmark\expandafter{%
12009 \Hy@temp
12010 pdfmark=/DOCINFO,%
12011 Title=\@pdftitle,%
12012 Subject=\@pdfsubject,%
12013 Creator=\@pdfcreator,%
12014 Author=\@pdfauthor,%
12015 Keywords=\@pdfkeywords,%
12016 Trapped=\@pdftrapped

```



```

12017 }%
12018 \ifx\HyInfo@Addons\@empty
12019 \else
12020   \pdfmark{%
12021     pdfmark=/DOCINFO,%
12022     Raw={\HyInfo@Addons}%
12023   }%
12024 \fi
12025 \Hy@DisableOption{pdfauthor}%
12026 \Hy@DisableOption{pdftitle}%
12027 \Hy@DisableOption{pdfsubject}%
12028 \Hy@DisableOption{pdfcreator}%
12029 \Hy@DisableOption{addtopdfcreator}%
12030 \Hy@DisableOption{pdfcreationdate}%
12031 \Hy@DisableOption{pdfcreationdate}%
12032 \Hy@DisableOption{pdfmoddate}%
12033 \Hy@DisableOption{pdfproducer}%
12034 \Hy@DisableOption{pdfkeywords}%
12035 \Hy@DisableOption{pdftrapped}%
12036 \Hy@DisableOption{pdfinfo}%
12037 }
12038 \def\PDF@SetupDoc{%
12039   \def\Hy@temp{}%
12040   \ifx\@pdfstartpage\@empty
12041     \else
12042       \ifx\@pdfstartview\@empty
12043         \else
12044           \edef\Hy@temp{%
12045             ,Page=\@pdfstartpage
12046             ,View=\@pdfstartview
12047           }%
12048         \fi
12049       \fi
12050       \edef\Hy@temp{%
12051         \noexpand\pdfmark{%
12052           pdfmark=/DOCVIEW,%
12053           PageMode=/\@pdfpagemode
12054         }\Hy@temp
12055       }%
12056     }%
12057   \Hy@temp
12058   \ifx\@pdfpagescrop\@empty
12059     \else
12060       \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
12061     \fi
12062   \edef\Hy@temp{%
12063     \ifHy@pdftoolbar\else /HideToolbar true\fi
12064     \ifHy@pdfmenubar\else /HideMenubar true\fi
12065     \ifHy@pdfwindowui\else /HideWindowUI true\fi
12066     \ifHy@pdfwindow /FitWindow true\fi
12067     \ifHy@pdfcenterwindow /CenterWindow true\fi
12068     \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
12069     \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
12070     \Hy@UseNameKey{Direction}\@pdfdirection
12071     \Hy@UseNameKey{ViewArea}\@pdfviewarea
12072     \Hy@UseNameKey{ViewClip}\@pdfviewclip
12073     \Hy@UseNameKey{PrintArea}\@pdfprintarea

```



```

12074 \Hy@UseNameKey{PrintClip}\@pdfprintclip
12075 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
12076 \Hy@UseNameKey{Duplex}\@pdfduplex
12077 \ifx\@pdfpicktraybypdfsize\@empty
12078 \else
12079 /PickTrayByPDFSize \@pdfpicktraybypdfsize
12080 \fi
12081 \ifx\@pdfprintpagerange\@empty
12082 \else
12083 /PrintPageRange[\@pdfprintpagerange]%
12084 \fi
12085 \ifx\@pdfnumcopies\@empty
12086 \else
12087 /NumCopies \@pdfnumcopies
12088 \fi
12089 }%
12090 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
12091 \pdfmark{%
12092 pdfmark=/PUT,%
12093 Raw={%
12094 \string{Catalog\string}<<%
12095 \ifx\Hy@temp\@empty
12096 \else
12097 /ViewerPreferences<<\Hy@temp>>%
12098 \fi
12099 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
12100 \ifx\@pdflang\relax
12101 \else
12102 /Lang(\@pdflang)%
12103 \fi
12104 \ifx\@baseurl\@empty
12105 \else
12106 /URI<</Base(\Hy@pstringB)>>%
12107 \fi
12108 >>%
12109 }%
12110 }%
12111 }
12112 \pdfmark>
12113 \pdfmarkbase>

```

We define a single macro, pdfmark, which uses the ‘keyval’ system to define the various allowable keys; these are *exactly* as listed in the pdfmark reference for Acrobat 3.0. The only addition is pdfmark which specifies the type of pdfmark to create (like ANN, LINK etc). The surrounding round and square brackets in the pdfmark commands are supplied, but you have to put in / characters as needed for the values.

```

12114 \newif\ifHy@pdfmarkerror
12115 \def\pdfmark{\@ifnextchar{\pdfmark@}{\pdfmark@[]}}
12116 \def\pdfmark@[#1]#2{%
12117 \Hy@pdfmarkerrorfalse
12118 \edef\@processme{\noexpand\pdf@toks={\the\pdf@defaulttoks}}%
12119 \@processme
12120 \let\pdf@type\relax
12121 \let\pdf@objdef\ltx@empty
12122 \kvsetkeys{PDF}{#2}%
12123 \ifHy@pdfmarkerror

```



```

12124 \else
12125   \ifx\pdf@type\relax
12126     \Hy@WarningNoLine{no pdfmark type specified in #2!!}%
12127     \ifx\#1\%
12128       \else
12129         \pdf@rect{#1}%
12130       \fi
12131     \else
12132       \ifx\#1\%
12133         \literalps@out{%
12134           [%
12135             \ifx\pdf@objdef\ltx@empty
12136               \else
12137                 /_objdef\string{\pdf@objdef\string}%
12138             \fi
12139             \the\pdf@toks\space\pdf@type\space pdfmark%
12140           ]%
12141         \else
12142           \ltx@ifundefined{@\pdf@linktype color}{%
12143             \Hy@colorlink\@linkcolor
12144           }{%
12145             \expandafter\Hy@colorlink
12146               \csname @\pdf@linktype color\endcsname
12147           }%
12148           \pdf@rect{#1}%
12149         \literalps@out{%
12150           [%
12151             \ifx\pdf@objdef\ltx@empty
12152               \else
12153                 /_objdef\string{\pdf@objdef\string}%
12154             \fi
12155             \the\pdf@toks\space\pdf@type\space pdfmark%
12156           ]%
12157           \Hy@endcolorlink
12158         \fi
12159       \fi
12160     \fi
12161 }

```

The complicated bit is working out the right enclosing rectangle of some piece of T_EX text, needed by the /Rect key. This solution originates with Toby Thain (toby@netspace.net.au).

For the case breaklinks is enabled, I have added two hooks, the first one for package setouterhbox, it provides a hopefully better method without setting the text twice.

```
\usepackage[hyperref]{setouterhbox}
```

With the second hook, also you can set the text twice, e.g.:

```

\long\def\Hy@setouterhbox#1#2{\long\def\my@temp{#2}}
\def\Hy@breaklinksunhbox#1{\my@temp}

```

```

12162 \newsavebox{\pdf@box}
12163 \providecommand*{\Hy@setouterhbox}{\sbox}
12164 \providecommand*{\Hy@breaklinksunhbox}{\unhbox}
12165 \def\Hy@DEST{/DEST}
12166 \def\pdf@rect#1{%
12167   \begingroup

```



```

12168 \chardef\x=1 %
12169 \def\Hy@temp{#1}%
12170 \ifx\Hy@temp\ltx@empty
12171 \chardef\x=0 %
12172 \else
12173 \def\y{\anchor@spot}%
12174 \ifx\Hy@temp\y
12175 \def\y{\relax}%
12176 \ifx\anchor@spot\y
12177 \chardef\x=0 %
12178 \fi
12179 \fi
12180 \fi
12181 \expandafter\endgroup
12182 \ifcase\x
12183 \literalps@out{H.S}%
12184 \literalps@out{H.R}%
12185 \else
12186 \leavevmode
12187 \Hy@SaveSpaceFactor
12188 \ifmmode
12189 \def\Hy@LinkMath{$}%
12190 \else
12191 \let\Hy@LinkMath\ltx@empty
12192 \fi
12193 \ifHy@breaklinks
12194 \Hy@setouterhbox\pdf@box{%
12195 \Hy@RestoreSpaceFactor
12196 \Hy@LinkMath
12197 \Hy@AllowHyphens#1\Hy@xspace@end
12198 \Hy@LinkMath
12199 \Hy@SaveSpaceFactor
12200 }%
12201 \else
12202 \sbox\pdf@box{%
12203 \Hy@RestoreSpaceFactor
12204 \Hy@LinkMath
12205 #1\Hy@xspace@end
12206 \Hy@LinkMath
12207 \Hy@SaveSpaceFactor
12208 }%
12209 \fi
12210 \dimen@ht\pdf@box
12211 \ifdim\dp\pdf@box=\z@
12212 \literalps@out{H.S}%
12213 \else
12214 \lower\dp\pdf@box\hbox{\literalps@out{H.S}}%
12215 \fi

```

If the text has to be horizontal mode stuff then just unbox the saved box like this, which saves executing it twice, which can mess up counters etc (thanks DPC...).

```

12216 \ifHy@breaklinks
12217 \ifhmode
12218 \Hy@breaklinksunhbox\pdf@box
12219 \else
12220 \box\pdf@box
12221 \fi
12222 \else

```



```

12223    \expandafter\box\pdf@box
12224    \fi

```

but if it can have multiple paragraphs you'd need one of these, but in that case the measured box size would be wrong anyway.

```

    \ifHy@breaklinks#1\else\box\pdf@box\fi
    \ifHy@breaklinks{#1}\else\box\pdf@box\fi

12225    \ifdim\dimen@=\z@
12226        \literalps@out{H.R.}%
12227    \else
12228        \raise\dimen@\hbox{\literalps@out{H.R.}}%
12229    \fi
12230    \Hy@RestoreSpaceFactor
12231 \fi
12232 \ifx\pdf@type\Hy@DEST
12233 \else
12234    \pdf@addtoksx{H.B}%
12235 \fi
12236 }

```

All the supplied material is stored in a token list; since I do not feel sure I quite understand these, things may not work as expected with expansion. We'll have to experiment.

```

12237 \newtoks\pdf@toks
12238 \newtoks\pdf@defaulttoks
12239 \pdf@defaulttoks={} %
12240 \def\pdf@addtoks#1#2{%
12241    \edef\@processme{\pdf@toks{\the\pdf@toks/#2 #1}}%
12242    \@processme
12243 }
12244 \def\pdf@addtoksx#1{%
12245    \edef\@processme{\pdf@toks{\the\pdf@toks\space #1}}%
12246    \@processme
12247 }
12248 \def\PDFdefaults#1{%
12249    \pdf@defaulttoks={#1}%
12250 }

```

This is the list of allowed keys. See the Acrobat manual for an explanation.

```

12251 % what is the type of pdfmark?
12252 \define@key{PDF}{pdfmark}{\def\pdf@type{#1}}
12253 % what is the link type?
12254 \define@key{PDF}{linktype}{\def\pdf@linktype{#1}}
12255 \def\pdf@linktype{link}
12256 % named object?
12257 \define@key{PDF}{objdef}{\edef\pdf@objdef{#1}}
12258 \let\pdf@objdef\ltx@empty
12259 % parameter is a stream of PDF
12260 \define@key{PDF}{Raw}{\pdf@addtoksx{#1}}
12261 % parameter is a name
12262 \define@key{PDF}{Action}{\pdf@addtoks{#1}{Action}}
12263 % parameter is a array
12264 \define@key{PDF}{Border}{%
12265    \edef\Hy@temp{#1}%
12266    \ifx\Hy@temp\@empty
12267    \else
12268        \pdf@addtoks{[#1]\Hy@BorderArrayPatch}{Border}% hash-ok

```



```

12269 \fi
12270 }
12271 \let\Hy@BorderArrayPatch\@empty
12272 % parameter is a dictionary
12273 \define@key{PDF}{BorderStyle}{%
12274 \edef\Hy@temp{#1}%
12275 \ifx\Hy@temp\@empty
12276 \else
12277 \pdf@addtoks{<<#1>>}{BS}%
12278 \fi
12279 }
12280 % parameter is a array
12281 \define@key{PDF}{Color}{%
12282 \ifx\relax#1\relax
12283 \else
12284 \pdf@addtoks{[#1]}{Color}% hash-ok
12285 \fi
12286 }
12287 % parameter is a string
12288 \define@key{PDF}{Contents}{\pdf@addtoks{(#1)}{Contents}}
12289 % parameter is a integer
12290 \define@key{PDF}{Count}{\pdf@addtoks{#1}{Count}}
12291 % parameter is a array
12292 \define@key{PDF}{CropBox}{\pdf@addtoks{[#1]}{CropBox}}% hash-ok
12293 % parameter is a string
12294 \define@key{PDF}{DOSFile}{\pdf@addtoks{(#1)}{DOSFile}}
12295 % parameter is a string or file
12296 \define@key{PDF}{DataSource}{\pdf@addtoks{(#1)}{DataSource}}
12297 % parameter is a destination
12298 \define@key{PDF}{Dest}{%
12299 \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
12300 \ifx\Hy@pstringDest\@empty
12301 \Hy@pdfmarkerrortrue
12302 \Hy@Warning{Destination with empty name ignored}%
12303 \else
12304 \pdf@addtoks{(\Hy@pstringDest) cvn}{Dest}%
12305 \fi
12306 }
12307 \define@key{PDF}{DestAnchor}{%
12308 \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
12309 \ifx\Hy@pstringDest\@empty
12310 \Hy@pdfmarkerrortrue
12311 \Hy@Warning{Destination with empty name ignored}%
12312 \else
12313 \pdf@addtoks{(\Hy@pstringDest) cvn}{Dest}%
12314 \fi
12315 }
12316 % parameter is a string
12317 \define@key{PDF}{Dir}{\pdf@addtoks{(#1)}{Dir}}
12318 % parameter is a string
12319 \define@key{PDF}{File}{\pdf@addtoks{(#1)}{File}}
12320 % parameter is a int
12321 \define@key{PDF}{Flags}{\pdf@addtoks{#1}{Flags}}
12322 \define@key{PDF}{PDFAFlags}{%
12323 \ifHy@pdfa
12324 \pdf@addtoks{#1}{F}%
12325 \fi

```



```

12326 }
12327 % parameter is a name
12328 \define@key{PDF}{AcroHighlight}{%
12329   \begingroup
12330     \edef\x{#1}%
12331     \expandafter\endgroup\ifx\x\@empty
12332     \else
12333       \pdf@addtoks{#1}{H}%
12334     \fi
12335 }
12336 % parameter is a string
12337 \define@key{PDF}{ID}{\pdf@addtoks{#1}{ID}}% hash-ok
12338 % parameter is a string
12339 \define@key{PDF}{MacFile}{\pdf@addtoks{#1}{MacFile}}
12340 % parameter is a string
12341 \define@key{PDF}{ModDate}{\pdf@addtoks{#1}{ModDate}}
12342 % parameter is a string
12343 \define@key{PDF}{Op}{\pdf@addtoks{#1}{Op}}
12344 % parameter is a Boolean
12345 \define@key{PDF}{Open}{\pdf@addtoks{#1}{Open}}
12346 % parameter is a integer or name
12347 \define@key{PDF}{Page}{\pdf@addtoks{#1}{Page}}
12348 % parameter is a name
12349 \define@key{PDF}{PageMode}{\pdf@addtoks{#1}{PageMode}}
12350 % parameter is a string
12351 \define@key{PDF}{Params}{\pdf@addtoks{#1}{Params}}
12352 % parameter is a array
12353 \define@key{PDF}{Rect}{\pdf@addtoks{#1}{Rect}}% hash-ok
12354 % parameter is a integer
12355 \define@key{PDF}{SrcPg}{\pdf@addtoks{#1}{SrcPg}}
12356 % parameter is a name
12357 \define@key{PDF}{Subtype}{\pdf@addtoks{#1}{Subtype}}
12358 % parameter is a string
12359 \define@key{PDF}{Title}{\pdf@addtoks{#1}{Title}}
12360 % parameter is a string
12361 \define@key{PDF}{Unix}{\pdf@addtoks{#1}{Unix}}
12362 % parameter is a string
12363 \define@key{PDF}{UnixFile}{\pdf@addtoks{#1}{UnixFile}}
12364 % parameter is an array
12365 \define@key{PDF}{View}{\pdf@addtoks{#1}{View}}% hash-ok
12366 % parameter is a string
12367 \define@key{PDF}{WinFile}{\pdf@addtoks{#1}{WinFile}}

```

These are the keys used in the DOCINFO section.

```

12368 \define@key{PDF}{Author}{\pdf@addtoks{#1}{Author}}
12369 \define@key{PDF}{Creator}{\pdf@addtoks{#1}{Creator}}
12370 \define@key{PDF}{CreationDate}{\pdf@addtoks{#1}{CreationDate}}
12371 \define@key{PDF}{ModDate}{\pdf@addtoks{#1}{ModDate}}
12372 \define@key{PDF}{Producer}{\pdf@addtoks{#1}{Producer}}
12373 \define@key{PDF}{Subject}{\pdf@addtoks{#1}{Subject}}
12374 \define@key{PDF}{Keywords}{\pdf@addtoks{#1}{Keywords}}
12375 \define@key{PDF}{ModDate}{\pdf@addtoks{#1}{ModDate}}
12376 \define@key{PDF}{Base}{\pdf@addtoks{#1}{Base}}
12377 \define@key{PDF}{URI}{\pdf@addtoks{#1}{URI}}
12378 \define@key{PDF}{Trapped}{%
12379   \edef\Hy@temp{#1}%
12380   \ifx\Hy@temp\@empty
12381   \else

```



```

12382 \pdf@addtoks{/#1}{Trapped}%
12383 \fi
12384 }
12385
12386 \pdfmarkbase)
12387 \pdfmark
12388 \def\Acrobatmenu#1#2{%
12389 \EdefEscapeName\Hy@temp@menu{#1}%
12390 \Hy@Acrobatmenu{#1}{#2}{%
12391 \pdfmark[{#2}]{%
12392 linktype=menu,%
12393 pdfmark=/ANN,%
12394 AcroHighlight=\pdfhighlight,%
12395 Border=\pdfborder,%
12396 BorderStyle=\pdfborderstyle,%
12397 Color=\menubordercolor,%
12398 Action={<</Subtype/Named/N/\Hy@temp@menu>>},%
12399 Subtype=/Link,%
12400 PDFAFlags=4%
12401 }%
12402 }%
12403 }

```

And now for some useful examples:

```

12404 \def\PDFNextPage{\ifnextchar{\PDFNextPage@}{\PDFNextPage@[]}}
12405 \def\PDFNextPage@[#1]#2{%
12406 \pdfmark[{#2}]{%
12407 #1,%
12408 Border=\pdfborder,%
12409 BorderStyle=\pdfborderstyle,%
12410 Color=.2 .1 .5,%
12411 pdfmark=/ANN,%
12412 Subtype=/Link,%
12413 PDFAFlags=4,%
12414 Page=/Next%
12415 }%
12416 }
12417 \def\PDFPreviousPage{%
12418 \ifnextchar{\PDFPreviousPage@}{\PDFPreviousPage@[]}%
12419 }
12420 \def\PDFPreviousPage@[#1]#2{%
12421 \pdfmark[{#2}]{%
12422 #1,%
12423 Border=\pdfborder,%
12424 BorderStyle=\pdfborderstyle,%
12425 Color=.4 .4 .1,%
12426 pdfmark=/ANN,%
12427 Subtype=/Link,%
12428 PDFAFlags=4,%
12429 Page=/Prev%
12430 }%
12431 }
12432 \def\PDFOpen#1{%
12433 \pdfmark{#1,pdfmark=/DOCVIEW}%
12434 }

```

This will only work if you use Distiller 2.1 or higher.

```

12435 \def\hyper@linkurl#1#2{%

```



```

12436 \begingroup
12437 \Hy@pstringdef\Hy@pstringURI{#2}%
12438 \hyper@chars
12439 \leavevmode
12440 \pdfmark[{#1}]{%
12441 pdfmark=/ANN,%
12442 linktype=url,%
12443 AcroHighlight=\@pdfhighlight,%
12444 Border=\@pdfborder,%
12445 BorderStyle=\@pdfborderstyle,%
12446 Color=\@urlbordercolor,%
12447 Action={<<%
12448 /Subtype/URI%
12449 /URI(\Hy@pstringURI)%
12450 \ifHy@href@ismap
12451 /IsMap true%
12452 \fi
12453 >>},%
12454 Subtype=/Link,%
12455 PDFAFlags=4%
12456 }%
12457 \endgroup
12458 }
12459 \def\hyper@linkfile#1#2#3{%
12460 \begingroup
12461 \def\Hy@pstringF{#2}%
12462 \Hy@CleanupFile\Hy@pstringF
12463 \Hy@pstringdef\Hy@pstringF\Hy@pstringF
12464 \Hy@pstringdef\Hy@pstringD{#3}%
12465 \Hy@MakeRemoteAction
12466 \leavevmode
12467 \pdfmark[{#1}]{%
12468 pdfmark=/ANN,%
12469 Subtype=/Link,%
12470 PDFAFlags=4,%
12471 AcroHighlight=\@pdfhighlight,%
12472 Border=\@pdfborder,%
12473 BorderStyle=\@pdfborderstyle,%
12474 linktype=file,%
12475 Color=\@filebordercolor,%
12476 Action={%
12477 <<%
12478 /S/GoToR%
12479 \Hy@SetNewWindow
12480 /F(\Hy@pstringF)%
12481 /D%
12482 \ifx\#3\%
12483 [\Hy@href@page\@pdfremotestartview]%
12484 \else
12485 (\Hy@pstringD)cvn%
12486 \fi
12487 \Hy@href@nextactionraw
12488 >>%
12489 }%
12490 }%
12491 \endgroup
12492 }

```



```

12493 \def\@hyper@launch run:#1\|#2#3{%
12494   \begingroup
12495     \Hy@pstringdef\Hy@pstringF{#1}%
12496     \Hy@pstringdef\Hy@pstringP{#3}%
12497     \leavevmode
12498     \pdfmark[{#2}]{%
12499       pdfmark=/ANN,%
12500       Subtype=/Link,%
12501       PDFAMFlags=4,%
12502       AcroHighlight=\@pdfhighlight,%
12503       Border=\@pdfborder,%
12504       BorderStyle=\@pdfborderstyle,%
12505       linktype=run,%
12506       Color=\@runbordercolor,%
12507       Action={%
12508         <<%
12509           /S/Launch%
12510           \Hy@SetNewWindow
12511           /F(\Hy@pstringF)%
12512           \ifx\|#3\|%
12513             \else
12514               /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
12515             \fi
12516             \Hy@href@nextactionraw
12517           >>%
12518         }%
12519       }%
12520   \endgroup
12521 }
12522 \pdfmark

```

Unfortunately, some parts of the pdfmark PostScript code depend on vagaries of the dvi driver. We isolate here all the problems.

47.9 Rokicki's dvips

dvips thinks in 10ths of a big point, its coordinate space is resolution dependent, and its *y* axis starts at the top of the page. Other drivers can and will be different!

The work is done in SDict, because we add in some header definitions in a moment.

```

12523 \def\*dvips
12524 \providecommand*\XR@ext{}{pdf}
12525 \let\Hy@raisedlink\ltx@empty
12526 \def\literalps@out#1{\special{ps:SDict begin #1 end}}%
12527 \def\headerps@out#1{\special{! #1}}%
12528 \input{pdfmark.def}%
12529 \ifx\@pdfproducer\relax
12530   \def\@pdfproducer{dvips + Distiller}%
12531 \fi
12532 \providecommand*\@pdfborder{0 0 1}
12533 \providecommand*\@pdfborderstyle{}
12534 \providecommand*\@pdfview{XYZ}
12535 \providecommand*\@pdfviewparams{ H.V}
12536 \def\Hy@BorderArrayPatch{BorderArrayPatch}
12537 \g@addto@macro\Hy@FirstPageHook{%
12538   \headerps@out{%

```


Unless I am going mad, this *appears* to be the relationship between the default coordinate system (PDF), and dvips;

```

_/DvipsToPDF_{_.01383701_div_Resolution_div_}_def
_/PDFToDvips_{_.01383701_mul_Resolution_mul_}_def
_

```

the latter's coordinates are resolution dependent, but what that .01383701 is, who knows? well, almost everyone except me, I expect...And yes, Maarten Gelderman <mgelderman@econ.vu.nl> points out that its 1/72.27 (the number of points to an inch, big points to inch is 1/72). This also suggests that the code would be more understandable (and exact) if 0.013 div would be replaced by 72.27 mul, so here we go. If this isn't right, I'll revert it.

```

12539  /DvipsToPDF{72.27 mul Resolution div} def%
12540  /PDFToDvips{72.27 div Resolution mul} def%
12541  /BPToDvips{72 div Resolution mul}def%

```

The values inside the /Boder array are not taken literally, but interpreted by ghostscript using the resolution of the dvi driver. I don't know how other distiller programs behaves in this manner.

```

12542  /BorderArrayPatch{%
12543    [exch{%
12544      dup dup type/integertype eq exch type/realtype eq or%
12545      {BPToDvips}if%
12546    }forall]%
12547  }def%

```

The rectangle around the links starts off *exactly* the size of the box; we will to make it slightly bigger, 1 point on all sides.

```

12548  /HyperBorder {1 PDFToDvips} def%
12549  /H.V {pdf@hoff pdf@voff null} def%
12550  /H.B {/Rect[pdf@llx pdf@lly pdf@urx pdf@ury]} def%

```

H.S (start of anchor, link, or rect) stores the *x* and *y* coordinates of the current point, in PDF coordinates

```

12551  /H.S {%
12552    currentpoint %
12553    HyperBorder add /pdf@lly exch def %
12554    dup DvipsToPDF 72 add /pdf@hoff exch def %
12555    HyperBorder sub /pdf@llx exch def%
12556  } def%

```

The calculation of upper left *y* is done without raising the point in T_EX, by simply adding on the current \baselineskip to the current *y*. This is usually too much, so we remove a notional 2 points.

We have to see what the current baselineskip is, and convert it to the dvips coordinate system.

Argument: baselineskip in pt. The *x* and *y* coordinates of the current point, minus the baselineskip

```

12557  /H.L {%
12558    2 sub dup%
12559    /HyperBasePt exch def %
12560    PDFToDvips /HyperBaseDvips exch def %
12561    currentpoint %
12562    HyperBaseDvips sub /pdf@ury exch def%
12563    /pdf@urx exch def%
12564  } def%
12565  /H.A {%

```



```

12566      H.L. %
12567 % | /pdf@voff| = the distance from the top of the page to a point
12568 % | \baselineskip| above the current point in PDF coordinates
12569      currentpoint exch pop %
12570      vsize 72 sub exch DvipsToPDF %
12571      HyperBasePt sub % baseline skip
12572      sub /pdf@voff exch def%
12573    } def%
12574    /H.R. {%
12575      currentpoint %
12576      HyperBorder sub /pdf@ury exch def %
12577      HyperBorder add /pdf@urx exch def %
12578 % | /pdf@voff| = the distance from the top of the page to the current point, in
12579 % PDF coordinates
12580      currentpoint exch pop vsize 72 sub %
12581      exch DvipsToPDF sub /pdf@voff exch def%
12582    } def%
12583  }%
12584 }
12585 \AtBeginShipoutFirst{%
12586   \ifHy@setpagesize
12587     \begingroup
12588       \@ifundefined{stockwidth}{%
12589         \ifdim\paperwidth>\z@
12590           \ifdim\paperheight>\z@
12591             \special{papersize=\the\paperwidth,\the\paperheight}%
12592           \fi
12593         \fi
12594       }{%
12595         \ifdim\stockwidth>\z@
12596           \ifdim\stockheight>\z@
12597             \special{papersize=\the\stockwidth,\the\stockheight}%
12598           \fi
12599         \fi
12600       }%
12601     \endgroup
12602   \fi
12603   \Hy@DisableOption{setpagesize}%
12604 }
12605 \def\setpdfinkmargin#1{%
12606   \begingroup
12607     \setlength{\dimen@}{#1}%
12608     \literalps@out{%
12609       /HyperBorder{\strip@pt\dimen@\space PDFToDvips}def%
12610     }%
12611   \endgroup
12612 }
12613 \</dvips>

```

47.10 VTeX's vtexpdfmark driver

This part is derived from the dvips (many names reflect this).

The origin seems to be the same as TeX's origin, 1 in from the left and 1 in downwards from the top. The direction of the y axis is downwards, the opposite of the dvips case. Units seems to be pt or bp.

```

12614 (*vtexpdfmark)

```



```

12615 \providecommand*\XR@ext}{pdf}
12616 \let\Hy@raisedlink\ltx@empty
12617 \def\literalps@out#1{\special{pS:#1}}%
12618 \def\headerps@out#1{\immediate\special{pS:#1}}%
12619 \input{pdfmark.def}%
12620 \ifx\@pdfproducer\relax
12621   \ifnum\OpMode=\@ne
12622     \def\@pdfproducer{VTeX}%
12623   \else
12624     \def\@pdfproducer{VTeX + Distiller}%
12625   \fi
12626 \fi
12627 \providecommand*\@pdfborder{0 0 1}
12628 \providecommand*\@pdfborderstyle{}
12629 \providecommand*\@pdfview{XYZ}
12630 \providecommand*\@pdfviewparams{ H.V}

12631 \g@addto@macro\Hy@FirstPageHook{%
12632   \headerps@out{%
12633     /vsize {\Hy@pageheight} def%

```

The rectangle around the links starts off *exactly* the size of the box; we will to make it slightly bigger, 1 point on all sides.

```

12634   /HyperBorder {1} def%
12635   /H.V {pdf@hoff pdf@voff null} def%
12636   /H.B {/Rect[pdf@llx pdf@lly pdf@urx pdf@ury]} def%

```

H.S (start of anchor, link, or rect) stores the x and y coordinates of the current point, in PDF coordinates: $\text{pdf@lly} = Y_c - \text{HyperBorder}$, $\text{pdf@hoff} = X_c + 72$, $\text{pdf@llx} = X_c - \text{HyperBorder}$

```

12637   /H.S {%
12638     currentpoint %
12639     HyperBorder sub%
12640     /pdf@lly exch def %
12641     dup 72 add /pdf@hoff exch def %
12642     HyperBorder sub%
12643     /pdf@llx exch def%
12644   } def%

```

The x and y coordinates of the current point, minus the `\baselineskip`: $\text{pdf@ury} = Y_c + \text{HyperBasePt} + \text{HyperBorder}$, $\text{pdf@urx} = X_c + \text{HyperBorder}$

```

12645   /H.L {%
12646     2 sub%
12647     /HyperBasePt exch def %
12648     currentpoint %
12649     HyperBasePt add HyperBorder add%
12650     /pdf@ury exch def %
12651     HyperBorder add%
12652     /pdf@urx exch def%
12653   } def%
12654   /H.A {%
12655     H.L %
12656     currentpoint exch pop %
12657     vsize 72 sub exch %
12658     HyperBasePt add add%
12659     /pdf@voff exch def%
12660   } def%

```

$\text{pdf@ury} = Y_c + \text{HyperBorder}$, $\text{pdf@urx} = X_c + \text{HyperBorder}$


```

12661 /H.R {%
12662   currentpoint %
12663   HyperBorder add%
12664   /pdf@ury exch def %
12665   HyperBorder add%
12666   /pdf@urx exch def %
12667   currentpoint exch pop vsize 72 sub add%
12668   /pdf@voff exch def%
12669 } def%
12670 }%
12671 }

12672 \def\setpdfinkmargin#1{%
12673   \begingroup
12674     \setlength{\dimen@}{#1}%
12675     \literalps@out{%
12676       /HyperBorder{\strip@pt\dimen@}def%
12677     }%
12678   \endgroup
12679 }

12680 </vtxpdfmark>

```

47.11 Textures

```

12681 <*textures>
12682 \providecommand*\XR@ext}{pdf}

```

At the suggestion of Jacques Distler (distler@golem.ph.utexas.edu), try to derive a suitable driver for Textures. This was initially a copy of dvips, with some guesses about Textures behaviour. Ross Moore (ross@maths.mq.edu.au) has added modifications for better compatibility, and to support use of pdfmark.

Start by defining a macro that expands to the end-of-line character. This will be used to format the appearance of PostScript code, to enhance readability, and avoid excessively long lines which might otherwise become broken to bad places.

`\Hy@ps@CR` The macro `\Hy@ps@CR` contains the end-of-line character.

```

12683 \begingroup
12684   \obeylines %
12685   \gdef\Hy@ps@CR{\noexpand
12686   }%
12687 \endgroup %

```

Textures has two types of `\special` command for inserting PostScript code directly into the dvi output. The ‘postscript’ way preserves TeX’s idea of where on the page the `\special` occurred, but it wraps the contents with a `save-restore` pair, and adjusts the user-space coordinate system for local drawing commands. The ‘rawpostscript’ way simply inserts code, without regard for the location on the page.

Thus, to put arbitrary PostScript coding at a fixed location requires using *both* `\special` constructions. It works by pushing the device-space coordinates onto the operand stack, where they can be used to transform back to the correct user-space coordinates for the whole page, within a ‘rawpostscript’ `\special`.

```

12688 \def\literalps@out#1{%
12689   \special{postscript 0 0 transform}%
12690   \special{rawpostscript itransform moveto\Hy@ps@CR #1}%
12691 }%
12692 %

```


The ‘prepostscript’ is a 3rd kind of `\special`, used for inserting definitions into the dictionaries, before page-building begins. These are to be available for use on all pages.

```

12693 \def\headerps@out#1{%
12694   \special{%
12695     prepostscript TeXdict begin\Hy@ps@CR
12696       #1\Hy@ps@CR
12697     end%
12698   }%
12699 }%
12700 %

```

To correctly support the `pdfmark` method, for embedding PDF definitions with `.ps` files in a non-intrusive way, an appropriate definition needs to be made *before* the file `pdfmark.def` is read. Other parameters are best set afterwards.

```

12701 \g@addto@macro\Hy@FirstPageHook{%
12702   \headerps@out{%
12703     /betterpdfmark {%
12704       systemdict begin %
12705         dup /BP eq%
12706         {cleartomark gsave nulldevice []%
12707           {dup /EP eq%
12708             {cleartomark cleartomark grestore}%
12709             {cleartomark}%
12710             ifelse%
12711           }ifelse %
12712         end%
12713       }def\Hy@ps@CR
12714     ___pdfmark___ not{/pdfmark /betterpdfmark load def}if%
12715   }% end of \headerps@out
12716 }% end of \AtBeginShipoutFirst
12717 %
12718 \input{pdfmark.def}%
12719 %
12720 \ifx\@pdfproducer\relax
12721   \def\@pdfproducer{Textures + Distiller}%
12722 \fi
12723 \providecommand*\@pdfborder{0 0 1}
12724 \providecommand*\@pdfborderstyle{}
12725 \providecommand*\@pdfview{XYZ}
12726 \providecommand*\@pdfviewparams{ H.V}
12727 %

```

These are called at the start and end of unboxed links; their job is to leave available PS variables called `pdf@llx` `pdf@lly` `pdf@urx` `pdf@ury`, which are the coordinates of the bounding rectangle of the link, and `pdf@hoff` `pdf@voff` which are the PDF page offsets. The `Rect` pair are called at the LL and UR corners of a box known to `TeX`.

```

12728 \Hy@AtBeginDocument{%
12729   \headerps@out{%

```

Textures lives in normal points, I think. So conversion from one coordinate system to another involves doing nothing.

```

12730     /vsize {\Hy@pageheight} def%
12731     /DvipsToPDF {} def%
12732     /PDFToDvips {} def%
12733     /BPToDvips {} def%

```



```

12734 /HyperBorder { 1 PDFToDvips } def\Hy@ps@CR
12735 /H.V {pdf@hoff pdf@voff null} def\Hy@ps@CR
12736 /H.B {/Rect[pdf@llx pdf@lly pdf@urx pdf@ury]} def\Hy@ps@CR
12737 /H.S {%
12738   currentpoint %
12739   HyperBorder add /pdf@lly exch def %
12740   dup DvipsToPDF 72 add /pdf@hoff exch def %
12741   HyperBorder sub /pdf@llx exch def%
12742 } def\Hy@ps@CR
12743 /H.L {%
12744   2 sub %
12745   PDFToDvips /HyperBase exch def %
12746   currentpoint %
12747   HyperBase sub /pdf@ury exch def%
12748   /pdf@urx exch def%
12749 } def\Hy@ps@CR
12750 /H.A {%
12751   H.L %
12752   currentpoint exch pop %
12753   vsize 72 sub exch DvipsToPDF %
12754   HyperBase sub % baseline skip
12755   sub /pdf@voff exch def%
12756 } def\Hy@ps@CR
12757 /H.R {%
12758   currentpoint %
12759   HyperBorder sub /pdf@ury exch def %
12760   HyperBorder add /pdf@urx exch def %
12761   currentpoint exch pop vsize 72 sub %
12762   exch DvipsToPDF sub /pdf@voff exch def%
12763 } def\Hy@ps@CR
12764 }%
12765 }

12766 \def\setpdfinkmargin#1{%
12767   \begingroup
12768     \setlength{\dimen@}{#1}%
12769     \literalps@out{%
12770       /HyperBorder{\strip@pt\dimen@\space PDFToDvips}def%
12771     }%
12772   \endgroup
12773 }

12774 \Hy@AtBeginDocument{%
12775   \ifHy@colorlinks
12776     \headerps@out{/PDFBorder{/Border [0 0 0]}def}%
12777   \fi
12778 }

12779 \expandafter\let\expandafter\keepPDF@SetupDoc
12780 \csname PDF@SetupDoc\endcsname
12781 \def\PDF@SetupDoc{%
12782   \ifx\@baseurl\@empty
12783   \else
12784     \special{html:<base href="\@baseurl">}%
12785   \fi
12786   \keepPDF@SetupDoc

```

Textures provides built-in support for HyperTeX specials so this part combines code from `hypertex.def` with what is established by loading `pdfmark.def`, or any other driver.


```

12787 }
12788 \Hy@WrapperDef\hyper@anchor#1{%
12789 \Hy@SaveLastskip
12790 \Hy@VerboseAnchor{#1}%
12791 \begingroup
12792 \let\protect=\string
12793 \special{html:<a name=%
12794 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
12795 \endgroup
12796 \Hy@activeanchortrue
12797 \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
12798 \special{html:</a>}%
12799 \Hy@activeanchorfalse
12800 \Hy@RestoreLastskip
12801 }
12802 \Hy@WrapperDef\hyper@anchorstart#1{%
12803 \Hy@SaveLastskip
12804 \Hy@VerboseAnchor{#1}%
12805 \begingroup
12806 \hyper@chars
12807 \special{html:<a name=%
12808 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
12809 \endgroup
12810 \Hy@activeanchortrue
12811 }
12812 \def\hyper@anchorend{%
12813 \special{html:</a>}%
12814 \Hy@activeanchorfalse
12815 \Hy@RestoreLastskip
12816 }
12817 \def\@urltype{url}
12818 \def\hyper@linkstart#1#2{%
12819 \Hy@VerboseLinkStart{#1}{#2}%
12820 \expandafter\Hy@colorlink\csname @#1color\endcsname
12821 \def\Hy@tempa{#1}%
12822 \ifx\Hy@tempa\@urltype
12823 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
12824 \else
12825 \begingroup
12826 \hyper@chars
12827 \special{%
12828 html:<a href=%
12829 \hyper@quote\#\HyperDestNameFilter{#2}\hyper@quote>%
12830 }%
12831 \endgroup
12832 \fi
12833 }
12834 \def\hyper@linkend{%
12835 \special{html:</a>}%
12836 \Hy@endcolorlink
12837 }
12838 \def\hyper@linkfile#1#2#3{%
12839 \hyper@linkurl{#1}{%
12840 \Hy@linkfileprefix#2\ifx\#3\\else\##3\fi
12841 }%
12842 }
12843 \def\hyper@linkurl#1#2{%

```



```

12844 \leavevmode
12845 \ifHy@raiselinks
12846   \Hy@SaveSpaceFactor
12847   \Hy@SaveSavedSpaceFactor
12848   \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
12849   \Hy@RestoreSavedSpaceFactor
12850   \@linkdim\dp\@tempboxa
12851   \lower\@linkdim\hbox{%
12852     \hyper@chars
12853     \special{html:<a href=\hyper@quote#2\hyper@quote>}%
12854   }%
12855   \Hy@colorlink\@urlcolor
12856   \Hy@RestoreSpaceFactor
12857   #1\Hy@xspace@end
12858   \Hy@SaveSpaceFactor
12859   \@linkdim\ht\@tempboxa
12860   \advance\@linkdim by -6.5\p@
12861   \raise\@linkdim\hbox{\special{html:</a>}}%
12862   \Hy@endcolorlink
12863   \Hy@RestoreSpaceFactor
12864 \else
12865   \begingroup
12866   \hyper@chars
12867   \special{html:<a href=\hyper@quote#2\hyper@quote>}%
12868   \Hy@colorlink\@urlcolor#1\Hy@xspace@end
12869   \special{html:</a>}%
12870   \Hy@endcolorlink
12871 \endgroup
12872 \fi
12873 }

```

Very poor implementation of \hyper@link without considering #1.

```

12874 \def\hyper@link#1#2#3{%
12875   \Hy@VerboseLinkStart{#1}{#2}%
12876   \hyper@linkurl{#3}{\# \Hy@HyperDestNameFilter{#2}}%
12877 }
12878 \def\hyper@image#1#2{%
12879   \begingroup
12880   \hyper@chars
12881   \special{html:<img src=\hyper@quote#1\hyper@quote>}%
12882 \endgroup
12883 }
12884 </textures>

```

47.12 dvipsone

```

12885 % \subsection{dvipsone driver}
12886 % Over-ride the default setup macro in pdfmark driver to use Y\&Y
12887 % |\special| commands.
12888 (*dvipsone)
12889 \providecommand*\XR@ext}{pdf}
12890 \let\Hy@raisedlink\ltx@empty
12891 \providecommand*\@pdfborder{0 0 1}
12892 \providecommand*\@pdfborderstyle{}
12893 \def\literalps@out#1{\special{ps:#1}}%
12894 \def\headerps@out#1{\special{headertext=#1}}%
12895 \input{pdfmark.def}%
12896 \HyInfo@AddonUnsupportedtrue

```



```

12897 \def\PDF@FinishDoc{%
12898   \Hy@UseMaketitleInfos
12899   \HyInfo@TrappedUnsupported
12900   \special{PDF: Keywords \@pdfkeywords}%
12901   \special{PDF: Title \@pdftitle}%
12902   \special{PDF: Creator \@pdfcreator}%
12903   \ifx\@pdfcreationdate\@empty
12904   \else
12905     \special{PDF: CreationDate \@pdfcreationdate}%
12906   \fi
12907   \ifx\@pdfmoddate\@empty
12908   \else
12909     \special{PDF: ModDate \@pdfmoddate}%
12910   \fi
12911   \special{PDF: Author \@pdfauthor}%
12912   \ifx\@pdfproducer\relax
12913   \else
12914     \special{PDF: Producer \@pdfproducer}%
12915   \fi
12916   \special{PDF: Subject \@pdfsubject}%
12917   \Hy@DisableOption{pdfauthor}%
12918   \Hy@DisableOption{pdftitle}%
12919   \Hy@DisableOption{pdfsubject}%
12920   \Hy@DisableOption{pdfcreator}%
12921   \Hy@DisableOption{addtopdfcreator}%
12922   \Hy@DisableOption{pdfcreationdate}%
12923   \Hy@DisableOption{pdfcreationdate}%
12924   \Hy@DisableOption{pdfmoddate}%
12925   \Hy@DisableOption{pdfproducer}%
12926   \Hy@DisableOption{pdfkeywords}%
12927   \Hy@DisableOption{pdftrapped}%
12928   \Hy@DisableOption{pdfinfo}%
12929 }
12930 \def\PDF@SetupDoc{%
12931   \def\Hy@temp{}%
12932   \ifx\@pdfstartpage\@empty
12933   \else
12934     \ifx\@pdfstartview\@empty
12935     \else
12936       \edef\Hy@temp{%
12937         ,Page=\@pdfstartpage
12938         ,View=\@pdfstartview
12939       }%
12940     \fi
12941   \fi
12942   \edef\Hy@temp{%
12943     \noexpand\pdfmark{%
12944       pdfmark=/DOCVIEW,%
12945       PageMode=/\@pdfpagemode
12946     }\Hy@temp
12947   }%
12948 }%
12949 \Hy@temp
12950 \ifx\@pdfpagescrop\@empty
12951 \else
12952   \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
12953 \fi

```



```

12954 \edef\Hy@temp{%
12955   \ifHy@pdftoolbar\else /HideToolbar true\fi
12956   \ifHy@pdfmenubar\else /HideMenubar true\fi
12957   \ifHy@pdfwindowui\else /HideWindowUI true\fi
12958   \ifHy@pdfwindow /FitWindow true\fi
12959   \ifHy@pdfcenterwindow /CenterWindow true\fi
12960   \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
12961   \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
12962   \Hy@UseNameKey{Direction}\@pdfdirection
12963   \Hy@UseNameKey{ViewArea}\@pdfviewarea
12964   \Hy@UseNameKey{ViewClip}\@pdfviewclip
12965   \Hy@UseNameKey{PrintArea}\@pdfprintarea
12966   \Hy@UseNameKey{PrintClip}\@pdfprintclip
12967   \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
12968   \Hy@UseNameKey{Duplex}\@pdfduplex
12969   \ifx\@pdfpicktraybypdfsize\@empty
12970   \else
12971     /PickTrayByPDFSize \@pdfpicktraybypdfsize
12972   \fi
12973   \ifx\@pdfprintpagerange\@empty
12974   \else
12975     /PrintPageRange[\@pdfprintpagerange]%
12976   \fi
12977   \ifx\@pdfnumcopies\@empty
12978   \else
12979     /NumCopies \@pdfnumcopies
12980   \fi
12981 }%
12982 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
12983 \pdfmark{%
12984   pdfmark=/PUT,%
12985   Raw={%
12986     \string{Catalog\string}<<%
12987     \ifx\Hy@temp\@empty
12988     \else
12989       /ViewerPreferences<<\Hy@temp>>%
12990     \fi
12991     \Hy@UseNameKey{PageLayout}\@pdfpagelayout
12992     \ifx\@pdflang\relax
12993     \else
12994       /Lang(\@pdflang)%
12995     \fi
12996     \ifx\@baseurl\@empty
12997     \else
12998       /URI<</Base(\Hy@pstringB)>>%
12999     \fi
13000     >>%
13001   }%
13002 }%
13003 }
13004 \providecommand*\@pdfview{XYZ}
13005 \providecommand*\@pdfviewparams{ %
13006   gsave revscl currentpoint grestore %
13007   72 add exch pop null exch null%
13008 }
13009 \def\Hy@BorderArrayPatch{BorderArrayPatch}

```

These are called at the start and end of unboxed links; their job is to leave available

PS variables called `pdf@llx pdf@lly pdf@urx pdf@ury`, which are the coordinates of the bounding rectangle of the link, and `pdf@hoff pdf@voff` which are the PDF page offsets. These latter are currently not used in the `dvipsone` setup. The `Rect` pair are called at the LL and UR corners of a box known to `TEX`.

```
13010 \g@addto@macro\Hy@FirstPageHook{%
13011 \headerps@out{%
```

`dvipsone` lives in scaled points; does this mean 65536 or 65781?

```
13012 /DvipsToPDF { 65781 div } def%
13013 /PDFToDvips { 65781 mul } def%
13014 /BPToDvips{65781 mul}def%
13015 /HyperBorder { 1 PDFToDvips } def%
13016 /H.B {/Rect[pdf@llx pdf@lly pdf@urx pdf@ury]} def%
```

The values inside the `/Boder` array are not taken literally, but interpreted by `ghostscript` using the resolution of the `dvi` driver. I don't know how other distiller programs behaves in this manner.

```
13017 /BorderArrayPatch{%
13018 [exch{%
13019     dup dup type/integertype eq exch type/realtype eq or%
13020     {BPToDvips}if%
13021 }forall]%
13022 }def%

13023 /H.S {%
13024     currentpoint %
13025     HyperBorder add /pdf@lly exch def %
13026     dup DvipsToPDF 72 add /pdf@hoff exch def %
13027     HyperBorder sub /pdf@llx exch def%
13028 } def%

13029 /H.L {%
13030     2 sub %
13031     PDFToDvips /HyperBase exch def %
13032     currentpoint %
13033     HyperBase sub /pdf@ury exch def%
13034     /pdf@urx exch def%
13035 } def%

13036 /H.A {%
13037     H.L %
13038     currentpoint exch pop %
13039     HyperBase sub % baseline skip
13040     DvipsToPDF /pdf@voff exch def%
13041 } def%

13042 /H.R {%
13043     currentpoint %
13044     HyperBorder sub /pdf@ury exch def %
13045     HyperBorder add /pdf@urx exch def %
13046     currentpoint exch pop DvipsToPDF /pdf@voff exch def%
13047 } def%

13048 }%
13049 }

13050 \def\setpdfinkmargin#1{%
13051 \begingroup
13052 \setlength{\dimen@}{#1}%
13053 \literalps@out{%
13054 /HyperBorder{\strip@pt\dimen@\space PDFToDvips}def%
13055 }%
13056 \endgroup
13057 }
```


13058 \langle /dvipsone \rangle

47.13 TeX4ht

```
13059  $\langle$ *tex4ht $\rangle$ 
13060 \providecommand*{\XR@ext}{html}
13061 \let\Hy@raisedlink\ltx@empty
13062 \@ifpackageloaded{tex4ht}{%
13063   \Hy@InfoNoLine{tex4ht is already loaded}%
13064 }{%
13065   \RequirePackage[hTeX4ht]{tex4ht}%
13066 }
13067 \hyperlinkfileprefix{}
13068 \let\PDF@FinishDoc\ltx@empty
13069 \def\PDF@SetupDoc{%
13070   \ifx\@baseurl\@empty
13071   \else
13072     \special{t4ht=<base href="\@baseurl">}%
13073   \fi
13074 }
13075 \Hy@WrapperDef\hyper@anchor#1{%
13076   \Hy@SaveLastskip
13077   \Hy@VerboseAnchor{#1}%
13078   \begingroup
13079     \let\protect=\string
13080     \special{t4ht=<a name=%
13081       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
13082   \endgroup
13083   \Hy@activeanchortrue
13084   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
13085   \special{t4ht=</a>}%
13086   \Hy@activeanchorfalse
13087   \Hy@RestoreLastskip
13088 }
13089 \Hy@WrapperDef\hyper@anchorstart#1{%
13090   \Hy@SaveLastskip
13091   \Hy@VerboseAnchor{#1}%
13092   \begingroup
13093     \hyper@chars\special{t4ht=<a name=%
13094       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
13095   \endgroup
13096   \Hy@activeanchortrue
13097 }
13098 \def\hyper@anchorend{%
13099   \special{t4ht=</a>}%
13100   \Hy@activeanchorfalse
13101   \Hy@RestoreLastskip
13102 }
13103 \def\@urltype{url}
13104 \def\hyper@linkstart#1#2{%
13105   \Hy@VerboseLinkStart{#1}{#2}%
13106   \expandafter\Hy@colorlink\csname @#1color\endcsname
13107   \def\Hy@tempa{#1}%
13108   \ifx\Hy@tempa\@urltype
13109     \special{t4ht=<a href=\hyper@quote#2\hyper@quote>}%
13110   \else
13111     \begingroup
13112     \hyper@chars
```



```

13113 \special{t4ht=<a href=%
13114 \hyper@quote\#\HyperDestNameFilter{#2}\hyper@quote>}%
13115 \endgroup
13116 \fi
13117 }
13118 \def\hyper@linkend{%
13119 \special{t4ht=</a>}%
13120 \Hy@endcolorlink
13121 }
13122 \def\hyper@linkfile#1#2#3{%
13123 \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\\else\##3\fi}%
13124 }
13125 \def\hyper@linkurl#1#2{%
13126 \leavevmode
13127 \ifHy@raiselinks
13128 \Hy@SaveSpaceFactor
13129 \Hy@SaveSavedSpaceFactor
13130 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
13131 \Hy@RestoreSavedSpaceFactor
13132 \@linkdim\dp\@tempboxa
13133 \lower\@linkdim\hbox{%
13134 \begingroup
13135 \hyper@chars
13136 \special{%
13137 t4ht=<a href=\hyper@quote#2\hyper@quote>%
13138 }%
13139 \endgroup
13140 }%
13141 \Hy@colorlink\@urlcolor
13142 \Hy@RestoreSpaceFactor
13143 #1\Hy@xspace@end
13144 \Hy@SaveSpaceFactor
13145 \Hy@endcolorlink
13146 \@linkdim\ht\@tempboxa
13147 \advance\@linkdim by -6.5\p@
13148 \raise\@linkdim\hbox{\special{t4ht=</a>}}%
13149 \Hy@RestoreSpaceFactor
13150 \else
13151 \begingroup
13152 \hyper@chars
13153 \special{t4ht=<a href=\hyper@quote#2\hyper@quote>}%
13154 \Hy@colorlink\@urlcolor
13155 #1\Hy@xspace@end
13156 \Hy@endcolorlink
13157 \special{t4ht=</a>}%
13158 \endgroup
13159 \fi
13160 }

```

Poor implementation of \hyper@link without considering #1.

```

13161 \def\hyper@link#1#2#3{%
13162 \Hy@VerboseLinkStart{#1}{#2}%
13163 \hyper@linkurl{#3}{\#\HyperDestNameFilter{#2}}%
13164 }
13165 \def\hyper@image#1#2{%
13166 \begingroup
13167 \hyper@chars
13168 \special{t4ht=<img src=\hyper@quote#1\hyper@quote>}%

```



```

13169 \endgroup
13170 }
13171 \let\autoref\ref
13172 \ifx \rEfLiNK \UnDef
13173 \def\rEfLiNK #1#2{#2}%
13174 \fi
13175 \let\backref\ltx@gobble

Fix for tex4ht.
13176 \AtBeginDocument{%
13177 \expandafter
13178 \let\expandafter\Hy@OrgMakeLabel\csname Make:Label\endcsname
13179 \expandafter\def\csname Make:Label\endcsname#1#2{%
13180 \ifhmode
13181 \Hy@SaveSpaceFactor
13182 \else
13183 \global\Hy@SavedSpaceFactor=1000 %
13184 \fi
13185 \Hy@OrgMakeLabel{#1}{%
13186 \Hy@RestoreSpaceFactor
13187 #2\Hy@xspace@end%
13188 \Hy@SaveSpaceFactor
13189 }%
13190 \Hy@RestoreSpaceFactor
13191 }%
13192 }
13193 </tex4ht>
13194 <*tex4htcfg>
13195 \IfFileExists{\jobname.cfg}{\endinput}{\}
13196 \Preamble{html}
13197 \begin{document}%
13198 \EndPreamble
13199 \def\TeX{TeX}
13200 \def\OMEGA{Omega}
13201 \def\LaTeX{LaTeX}
13202 \def\LaTeXe{LaTeX2e}
13203 \def\eTeX{e-TeX}
13204 \def\MF{Metafont}
13205 \def\MP{MetaPost}
13206 </tex4htcfg>

```

48 Driver-specific form support

48.1 pdfmarks

```

13207 <*pdfmark>
13208 \long\def\@Form[#1]{%
13209 \g@addto@macro\Hy@FirstPageHook{%
13210 \headerps@out{%
13211 [%
13212 /_objdef{pdfDocEncoding}%
13213 /type/dict%
13214 /OBJ pdfmark%
13215 [%
13216 {pdfDocEncoding}%
13217 <<%
13218 /Type/Encoding%
13219 /Differences[%

```


13220 24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek/ring%
13221 /tilde %
13222 39/quotesingle %
13223 96/grave %
13224 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
13225 /fraction/guilsinglleft/guilsinglright/minus/perthousand%
13226 /quotedblbase/quotedblleft/quotedblright/quoteleft%
13227 /quoteright/quotesinglbase/trademark/fi/fl/Lslash/OE/Scaron%
13228 /Ydieresis/Zcaron/dotlessi/lslash/oe/scaron/zcaron %
13229 164/currency %
13230 166/brokenbar %
13231 168/dieresis/copyright/ordfeminine %
13232 172/logicalnot/.notdef/registered/macron/degree/plusminus%
13233 /twosuperior/threesuperior/acute/mu %
13234 183/periodcentered/cedilla/onesuperior/ordmasculine %
13235 188/onequarter/onehalf/threequarters %
13236 192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
13237 /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave%
13238 /Iacute/Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute%
13239 /Ocircumflex/Otilde/Odieresis/multiply/Oslash/Ugrave%
13240 /Uacute/Ucircumflex/Udieresis/Yacute/Thorn/germandbls%
13241 /agrave/aacute/acircumflex/tilde/adieresis/aring/ae%
13242 /ccedilla/egrave/eacute/ecircumflex/edieresis/igrave%
13243 /iacute/icircumflex/idieresis/eth/ntilde/ograde/oacute%
13244 /ocircumflex/otilde/odieresis/divide/oslash/ugrave/uacute%
13245 /ucircumflex/udieresis/yacute/thorn/ydieresis%
13246]%
13247 >>%
13248 /PUT pdfmark%
13249 [%
13250 /_objdef{ZaDb}%
13251 /type/dict%
13252 /OBJ pdfmark%
13253 [%
13254 {ZaDb}%
13255 <<%
13256 /Type/Font%
13257 /Subtype/Type1%
13258 /Name/ZaDb%
13259 /BaseFont/ZapfDingbats%
13260 >>%
13261 /PUT pdfmark%
13262 [%
13263 /_objdef{Helv}%
13264 /type/dict%
13265 /OBJ pdfmark%
13266 [%
13267 {Helv}%
13268 <<%
13269 /Type/Font%
13270 /Subtype/Type1%
13271 /Name/Helv%
13272 /BaseFont/Helvetica%
13273 /Encoding{pdfDocEncoding}%
13274 >>%
13275 /PUT pdfmark%
13276 [%


```

13277  /__objdef{aform}%
13278  /type/dict%
13279  /OBJ pdfmark%
13280  [%
13281  /__objdef{afields}%
13282  /type/array%
13283  /OBJ pdfmark%
13284  [%
13285  /__objdef{corder}%
13286  /type/array%
13287  /OBJ pdfmark%
13288  {%
13289  [%
13290  /BBox[0 0 100 100]%
13291  /__objdef{Check}%
13292  /BP pdfmark %
13293  1 0 0 setrgbcolor%
13294  /ZapfDingbats 80 selectfont %
13295  20 20 moveto%
13296  (4)show%
13297  [/EP pdfmark%
13298  [%
13299  /BBox[0 0 100 100]%
13300  /__objdef{Cross}%
13301  /BP pdfmark %
13302  1 0 0 setrgbcolor%
13303  /ZapfDingbats 80 selectfont %
13304  20 20 moveto%
13305  (8)show%
13306  [/EP pdfmark%
13307  [%
13308  /BBox[0 0 250 100]%
13309  /__objdef{Submit}%
13310  /BP pdfmark %
13311  0.6 setgray %
13312  0 0 250 100 rectfill %
13313  1 setgray %
13314  2 2 moveto %
13315  2 98 lineto %
13316  248 98 lineto %
13317  246 96 lineto %
13318  4 96 lineto %
13319  4 4 lineto %
13320  fill %
13321  0.34 setgray %
13322  248 98 moveto %
13323  248 2 lineto %
13324  2 2 lineto %
13325  4 4 lineto %
13326  246 4 lineto %
13327  246 96 lineto %
13328  fill%
13329  /Helvetica 76 selectfont %
13330  0 setgray %
13331  8 22.5 moveto%
13332  (Submit)show%
13333  [/EP pdfmark%

```



```

13334 [%
13335   /BBox[0 0 250 100]%
13336   /_objdef{SubmitP}%
13337   /BP pdfmark %
13338   0.6 setgray %
13339   0 0 250 100 rectfill %
13340   0.34 setgray %
13341   2 2 moveto %
13342   2 98 lineto %
13343   248 98 lineto %
13344   246 96 lineto %
13345   4 96 lineto %
13346   4 4 lineto %
13347   fill %
13348   1 setgray %
13349   248 98 moveto %
13350   248 2 lineto %
13351   2 2 lineto %
13352   4 4 lineto %
13353   246 4 lineto %
13354   246 96 lineto %
13355   fill%
13356   /Helvetica 76 selectfont %
13357   0 setgray %
13358   10 20.5 moveto%
13359   (Submit)show%
13360   [/EP pdfmark%
13361   } ?pdfmark%
13362 [%
13363   {aform}%
13364   <<%
13365     /Fields{afields}%
13366     /DR<<%
13367       /Font<<%
13368         /ZaDb{ZaDb}%
13369         /Helv{Helv}%
13370       >>%
13371     >>%
13372     /DA(/Helv 10 Tf 0 g)%
13373     /CO{corder}%
13374     \ifHy@pdfa
13375     \else
13376       \ifHyField@NeedAppearances
13377         /NeedAppearances true%
13378       \fi
13379     \fi
13380   >>%
13381   /PUT pdfmark%
13382 [%
13383   {Catalog}%
13384   <<%
13385     /AcroForm{aform}%
13386   >>%
13387   /PUT pdfmark%
13388   }}%
13389   \kvsetkeys{Form}{#1}%
13390 }

```



```

13391 \let\@endForm\ltx@empty
13392 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
13393   \Hy@Message{Sorry, pdfmark drivers do not support FORM gauges}%
13394 }

13395 \newcount\HyField@AnnotCount
13396 \HyField@AnnotCount=\z@
13397 \def\HyField@AdvanceAnnotCount{%
13398   \global\advance\HyField@AnnotCount\@ne
13399 }
13400 \def\HyField@TheAnnotCount{%
13401   \the\HyField@AnnotCount
13402 }

13403 \edef\Fld@pageobjref{/P\string{ThisPage\string}}

13404 \def\HyField@AddToFields#1{%
13405   \pdfmark{%
13406     pdfmark=/APPEND,%
13407     Raw={%
13408       \string{afields\string}%
13409       \string{#1\HyField@TheAnnotCount\string}%
13410     }%
13411   }%
13412   \ifx\Fld@calculate@code\ltx@empty
13413   \else
13414     \pdfmark{%
13415       pdfmark=/APPEND,%
13416       Raw={%
13417         \string{corder\string}%
13418         \string{#1\HyField@TheAnnotCount\string}%
13419       }%
13420     }%
13421   \fi
13422 }

13423 \def\@TextField[#1]#2{% parameters, label
13424   \def\Fld@name{#2}%
13425   \let\Fld@default\ltx@empty
13426   \let\Fld@value\@empty
13427   \def\Fld@width{\DefaultWidthofText}%
13428   \def\Fld@height{%
13429     \ifFld@multiline
13430       \DefaultHeightofTextMultiline
13431     \else
13432       \DefaultHeightofText
13433     \fi
13434   }%
13435   \begingroup
13436     \expandafter\HyField@SetKeys\expandafter{%
13437       \DefaultOptionsofText,#1%
13438     }%
13439     \HyField@FlagsText
13440     \ifFld@hidden\def\Fld@width{1sp}\fi
13441     \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
13442     \HyField@AdvanceAnnotCount
13443     \LayoutTextField{#2}{%
13444       \leavevmode
13445       \Hy@escapeform\PDFForm@Text
13446       \pdfmark{\MakeTextField{\Fld@width}{\Fld@height}}{%

```



```

13447 pdfmark=/ANN,%
13448 objdef=text\HyField@TheAnnotCount,%
13449 Raw={\PDFForm@Text}%
13450 }%
13451 }%
13452 \HyField@AddToFields{text}%
13453 \endgroup
13454 }
13455 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
13456 \def\Fld@name{#2}%
13457 \let\Fld@default\relax
13458 \let\Fld@value\relax
13459 \def\Fld@width{\DefaultWidthofChoiceMenu}%
13460 \def\Fld@height{\DefaultHeightofChoiceMenu}%
13461 \begingroup
13462 \Fld@menulength=0 %
13463 \@tempdima\z@
13464 \@for\@curropt:=#3\do{%
13465 \expandafter\Fld@checkequals\@curropt==\%
13466 \Hy@StepCount\Fld@menulength
13467 \settowidth{\@tempdimb}{\@currDisplay}%
13468 \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
13469 }%
13470 \advance\@tempdima by 15\p@
13471 \begingroup
13472 \HyField@SetKeys{#1}%
13473 \edef\x{\endgroup
13474 \noexpand\expandafter
13475 \noexpand\HyField@SetKeys
13476 \noexpand\expandafter{%
13477 \expandafter\noexpand\cename DefaultOptionsof%
13478 \ifFld@radio
13479 Radio%
13480 \else
13481 \ifFld@combo
13482 \ifFld@popdown
13483 PopdownBox%
13484 \else
13485 ComboBox%
13486 \fi
13487 \else
13488 ListBox%
13489 \fi
13490 \fi
13491 \endcename
13492 }%
13493 }\x
13494 \HyField@SetKeys{#1}%
13495 \ifFld@hidden\def\Fld@width{1sp}\fi
13496 \ifx\Fld@value\relax
13497 \let\Fld@value\Fld@default
13498 \fi
13499 \LayoutChoiceField{#2}{%
13500 \ifFld@radio
13501 \HyField@FlagsRadioButton
13502 \@@Radio{#3}%
13503 \else

```



```

13504 \begingroup
13505 \HyField@FlagsChoice
13506 \ifdim\Fld@width<\@tempdima
13507 \ifdim\@tempdima<1cm\@tempdima1cm\fi
13508 \edef\Fld@width{\the\@tempdima}%
13509 \fi
13510 \ifFld@combo
13511 \else
13512 \@tempdima=\the\Fld@menulength\Fld@charsize
13513 \advance\@tempdima by \Fld@borderwidth bp %
13514 \advance\@tempdima by \Fld@borderwidth bp %
13515 \edef\Fld@height{\the\@tempdima}%
13516 \fi
13517 \@@ListBox{#3}%
13518 \endgroup
13519 \fi
13520 }%
13521 \endgroup
13522 }
13523 \def\@@Radio#1{%
13524 \Fld@listcount=0 %
13525 \EdefEscapeName\Fld@default{\Fld@default}%
13526 \@for\@curropt:=#1\do{%
13527 \expandafter\Fld@checkequals\@curropt==\%
13528 \EdefEscapeName\@currValue{\@currValue}%
13529 \Hy@StepCount\Fld@listcount
13530 \@currDisplay\space
13531 \Hy@escapeform\PDFForm@Radio
13532 \ifnum\Fld@listcount=1 %
13533 \HyField@AdvanceAnnotCount
13534 \fi
13535 \pdfmark[\MakeRadioField{\Fld@width}{\Fld@height}]{%
13536 pdfmark=/ANN,%
13537 objdef=\ifnum\Fld@listcount=1 radio\HyField@TheAnnotCount\fi,%
13538 Raw={%
13539 \PDFForm@Radio /AP <</N <</\@currValue\space {Check}>> >>%
13540 }%
13541 } % deliberate space between radio buttons
13542 \ifnum\Fld@listcount=1 %
13543 \HyField@AddToFields{radio}%
13544 \fi
13545 }%
13546 }
13547 \newcount\Fld@listcount
13548 \def\@@ListBox#1{%
13549 \HyField@PDFChoices{#1}%
13550 \Hy@escapeform\PDFForm@List
13551 \HyField@AdvanceAnnotCount
13552 \pdfmark[\MakeChoiceField{\Fld@width}{\Fld@height}]{%
13553 pdfmark=/ANN,%
13554 objdef=list\HyField@TheAnnotCount,%
13555 Raw={\PDFForm@List}%
13556 }%
13557 \HyField@AddToFields{list}%
13558 }
13559 \def\@PushButton[#1]#2{% parameters, label
13560 \def\Fld@name{#2}%

```



```

13561 \begingroup
13562 \expandafter\HyField@SetKeys\expandafter{%
13563 \DefaultOptionsofPushButton,#1%
13564 }%
13565 \ifHy@pdfa
13566 \Hy@Error{%
13567 PDF/A: Push button with JavaScript is prohibited%
13568 }\@ehc
13569 \LayoutPushButtonField{%
13570 \leavevmode
13571 \MakeButtonField{#2}%
13572 }%
13573 \else
13574 \HyField@FlagsPushButton
13575 \ifFld@hidden\def\Fld@width{1sp}\fi
13576 \HyField@AdvanceAnnotCount
13577 \LayoutPushButtonField{%
13578 \leavevmode
13579 \Hy@escapeform\PDFForm@Push
13580 \pdfmark[\MakeButtonField{#2}]{%
13581 pdfmark=/ANN,%
13582 objdef=push\HyField@TheAnnotCount,%
13583 Raw={\PDFForm@Push}%
13584 }%
13585 }%
13586 \HyField@AddToFields{push}%
13587 \fi
13588 \endgroup
13589 }
13590 \def\@Submit[#1]#2{%
13591 \def\Fld@width{\DefaultWidthofSubmit}%
13592 \def\Fld@height{\DefaultHeightofSubmit}%
13593 \begingroup
13594 \expandafter\HyField@SetKeys\expandafter{%
13595 \DefaultOptionsofSubmit,#1%
13596 }%
13597 \HyField@FlagsPushButton
13598 \HyField@FlagsSubmit
13599 \ifFld@hidden\def\Fld@width{1sp}\fi
13600 \Hy@escapeform\PDFForm@Submit
13601 \HyField@AdvanceAnnotCount
13602 \pdfmark[\MakeButtonField{#2}]{%
13603 pdfmark=/ANN,%
13604 objdef=submit\HyField@TheAnnotCount,%
13605 Raw={\PDFForm@Submit /AP<</N{Submit}/D{SubmitP}>>}%
13606 }%
13607 \HyField@AddToFields{submit}%
13608 \endgroup
13609 }
13610 \def\@Reset[#1]#2{%
13611 \def\Fld@width{\DefaultWidthofReset}%
13612 \def\Fld@height{\DefaultHeightofReset}%
13613 \begingroup
13614 \expandafter\HyField@SetKeys\expandafter{%
13615 \DefaultOptionsofReset,#1%
13616 }%
13617 \leavevmode

```



```

13618 \ifHy@pdfa
13619 \Hy@Error{%
13620   PDF/A: Reset action is prohibited%
13621 } \@ehc
13622 \MakeButtonField{#2}%
13623 \else
13624 \HyField@FlagsPushButton
13625 \ifFld@hidden\def\Fld@width{1sp}\fi
13626 \Hy@escapeform\PDFForm@Reset
13627 \HyField@AdvanceAnnotCount
13628 \pdfmark[\MakeButtonField{#2}]{%
13629   pdfmark=/ANN,%
13630   objdef=reset\HyField@TheAnnotCount,%
13631   Raw={\PDFForm@Reset}%
13632 }%
13633 \HyField@AddToFields{reset}%
13634 \fi
13635 \endgroup
13636 }%
13637 \def\@CheckBox[#1]#2{% parameters, label
13638 \def\Fld@name{#2}%
13639 \def\Fld@default{0}%
13640 \begingroup
13641 \def\Fld@width{\DefaultWidthofCheckBox}%
13642 \def\Fld@height{\DefaultHeightofCheckBox}%
13643 \expandafter\HyField@SetKeys\expandafter{%
13644   \DefaultOptionsofCheckBox,#1%
13645 }%
13646 \HyField@FlagsCheckBox
13647 \ifFld@hidden\def\Fld@width{1sp}\fi
13648 \HyField@AdvanceAnnotCount
13649 \LayoutCheckField{#2}{%
13650   \leavevmode
13651   \Hy@escapeform\PDFForm@Check
13652   \pdfmark[\MakeCheckField{\Fld@width}{\Fld@height}]{%
13653     pdfmark=/ANN,%
13654     objdef=check\HyField@TheAnnotCount,%
13655     Raw={\PDFForm@Check}%
13656   }%
13657 }%
13658 \HyField@AddToFields{check}%
13659 \endgroup
13660 }
13661 \pdfmark

```

48.2 HyperTeX

```

13662 \hypertex
13663 \def\@Form[#1]{%
13664 \Hy@Message{Sorry, HyperTeX does not support FORMs}%
13665 }
13666 \let\@endForm\ltx@empty
13667 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
13668 \Hy@Message{Sorry, HyperTeX does not support FORM gauges}%
13669 }
13670 \def\@TextField[#1]#2{% parameters, label
13671 \Hy@Message{Sorry, HyperTeX does not support FORM text fields}%
13672 }

```



```

13673 \def\@CheckBox[#1]#2{% parameters, label
13674   \Hy@Message{Sorry, HyperTeX does not support FORM checkboxes}%
13675 }
13676 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
13677   \Hy@Message{Sorry, HyperTeX does not support FORM choice menus}%
13678 }
13679 \def\@PushButton[#1]#2{% parameters, label
13680   \Hy@Message{Sorry, HyperTeX does not support FORM pushbuttons}%
13681 }
13682 \def\@Reset[#1]#2{%
13683   \Hy@Message{Sorry, HyperTeX does not support FORMs}%
13684 }
13685 \def\@Submit[#1]#2{%
13686   \Hy@Message{Sorry, HyperTeX does not support FORMs}%
13687 }
13688 \</hypertex>

```

48.3 TeX4ht

```

13689 (*tex4ht)
13690 \def\@Form[#1]{%
13691   \kvsetkeys{Form}{#1}%
13692   \HCode{<form action="\Form@action" method="\Form@method">}%
13693 }
13694 \def\@endForm{\HCode{</form>}}
13695 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
13696   \Hy@Message{Sorry, TeX4ht does not support gauges}%
13697 }
13698 \def\@TextField[#1]#2{% parameters, label
13699   \let\Hy@reserved@a\@empty
13700   \def\Fld@name{#2}%
13701   \let\Fld@default\ltx@empty
13702   \bgroup
13703     \Field@toks={ }%
13704     \kvsetkeys{Field}{#1}%
13705     \HCode{<label for="\Fld@name">#2</label>}%
13706     \ifFld@password
13707       \@@PasswordField
13708     \else
13709       \@@TextField
13710     \fi
13711   \egroup
13712 }
13713 \def\@@PasswordField{%
13714   \HCode{%
13715     <input type="password" %
13716       id="\Fld@name" %
13717       name="\Fld@name" %
13718       \ifFld@hidden type="hidden" \fi
13719       value="\Fld@default" %
13720       \the\Field@toks
13721     >%
13722   }%
13723 }
13724 \def\@@TextField{%
13725   \ifFld@multiline
13726     \HCode{<textarea %
13727       \ifFld@readonly readonly \fi

```



```

13728     id="\Fld@name" %
13729     name="\Fld@name" %
13730     \ifFld@hidden type="hidden" \fi
13731     \the\Field@toks>%
13732 }%
13733 \Fld@default
13734 \HCode{</textarea>}%
13735 \else
13736 \HCode{<input type="textbox" %
13737 \ifFld@readonly readonly \fi
13738 id="\Fld@name" %
13739 name="\Fld@name" %
13740 \ifFld@hidden type="hidden" \fi
13741 value="\Fld@default" %
13742 \the\Field@toks>%
13743 }%
13744 \fi
13745 }
13746 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
13747 \def\Fld@name{#2}%
13748 \let\Fld@default\ltx@empty
13749 \let\Hy@reserved@a\relax
13750 \begingroup
13751 \expandafter\Fld@findlength#3\\%
13752 \Field@toks={ }%
13753 \kvsetkeys{Field}{#1}%
13754 #2%
13755 \ifFld@radio
13756 \expandafter\@@Radio#3\\%
13757 \else
13758 \expandafter\@@Menu#3\\%
13759 \fi
13760 \endgroup
13761 }
13762 \def\Fld@findlength#1\\{%
13763 \Fld@menulength=0 %
13764 \@for\@curropt:=#1\do{\Hy@StepCount\Fld@menulength}%
13765 }
13766 \def\@@Menu#1\\{%
13767 \HCode{<select size="\the\Fld@menulength" %
13768 name="\Fld@name" %
13769 \the\Field@toks>%
13770 }%
13771 \@for\@curropt:=#1\do{%
13772 \expandafter\Fld@checkequals\@curropt==\\%
13773 \HCode{<option %
13774 \ifx\@curropt\Fld@default selected \fi
13775 value="\@currValue">\@currDisplay</option>%
13776 }%
13777 }%
13778 \HCode{</select>}%
13779 }
13780 \def\@@Radio#1\\{%
13781 \@for\@curropt:=#1\do{%
13782 \expandafter\Fld@checkequals\@curropt==\\%
13783 \HCode{<input type="radio" %
13784 \ifx\@curropt\Fld@default checked \fi

```



```

13785     name="\Fld@name" %
13786     value="@currValue" %
13787     \the\Fld@toks>%
13788 }%
13789 \@currDisplay
13790 }%
13791 }
13792 \def\@PushButton[#1]#2{% parameters, label
13793 \def\Fld@name{#2}%
13794 \bgroup
13795 \Fld@toks={ }%
13796 \kvsetkeys{Fld}{#1}%
13797 \HCode{<input type="button" %
13798     name="\Fld@name" %
13799     value="#2" %
13800     \the\Fld@toks>%
13801 }%
13802 \HCode{</button>}%
13803 \egroup
13804 }
13805 \def\@Submit[#1]#2{%
13806 \HCode{<button type="submit">#2</button>}%
13807 }
13808 \def\@Reset[#1]#2{%
13809 \HCode{<button type="reset">#2</button>}%
13810 }
13811 \def\@CheckBox[#1]#2{% parameters, label
13812 \let\Hy@reserved@a\@empty
13813 \def\Fld@name{#2}%
13814 \def\Fld@default{0}%
13815 \bgroup
13816 \Fld@toks={ }%
13817 \kvsetkeys{Fld}{#1}%
13818 \HCode{<input type="checkbox" %
13819     \ifFld@checked checked \fi
13820     \ifFld@disabled disabled \fi
13821     \ifFld@readonly readonly \fi
13822     name="\Fld@name" %
13823     \ifFld@hidden type="hidden" \fi
13824     value="\Fld@default" %
13825     \the\Fld@toks>%
13826     #2%
13827 }%
13828 \egroup
13829 }
13830 </tex4ht>

```

48.4 pdfTeX

```

13831 <*pdfTeX>
13832 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
13833 \Hy@Message{Sorry, pdfTeX does not support FORM gauges}%
13834 }
13835 \def\MakeFieldObject#1#2{\sbox0{#1}%
13836 \immediate\pdfxform0 %
13837 \expandafter\edef\csname #2Object\endcsname{%
13838     \the\pdfxform\space 0 R%
13839 }%

```



```

13840 % \hbox to Opt{\hskip-\maxdimen{\pdfrefxform \the\pdfastxform}}}%
13841 }%
13842 \let\HyField@afields\ltx@empty
13843 \let\HyField@cofields\ltx@empty
13844 \begingroup\expandafter\expandafter\expandafter\endgroup
13845 \expandafter\ifx\csname pdfastlink\endcsname\relax
13846 \let\HyField@AddToFields\relax
13847 \PackageInfo{hyperref}{%
13848   You need pdfTeX 1.40.0 for setting the /Fields entry.%
13849   \MessageBreak
13850   Adobe Reader/Acrobat accepts an empty /Field array,%
13851   \MessageBreak
13852   but other PDF viewers might complain%
13853 }%
13854 \else
13855 \let\HyField@AuxAddToFields\ltx@gobble
13856 \let\HyField@AuxAddToCoFields\ltx@gobbletwo
13857 \def\HyField@AfterAuxOpen{\Hy@AtBeginDocument}%

Insertion sort for calculation field list. In case of equal sort keys (for example, if
‘calculatesortkey‘ is not used at all) the keys keep document calling order.
13858 \def\HyField@ABD@AuxAddToCoFields#1#2{%
13859   \begingroup
13860     \Hy@safe@activetrue
13861     \let\ltx@secondoftwo\relax
13862     \ifx\HyField@cofields\ltx@empty
13863       \xdef\HyField@cofields{%
13864         \ltx@secondoftwo{#1}{ #2 0 R}%
13865       }%
13866     \else
13867       \let\ltx@secondoftwo\relax
13868       \def\HyField@AddCoField##1##2##3{%
13869         \ifx##1\ltx@empty
13870           \ltx@secondoftwo{#1}{ #2 0 R}%
13871           \expandafter\ltx@gobble
13872         \else
13873           \ifnum\pdfstrcmp{##2}{#1}>\ltx@zero
13874             \ltx@secondoftwo{#1}{ #2 0 R}%
13875             \ltx@secondoftwo{##2}{##3}%
13876             \expandafter\expandafter\expandafter\ltx@gobble
13877           \else
13878             \ltx@secondoftwo{##2}{##3}%
13879           \fi
13880         \fi
13881         \HyField@AddCoField
13882       }%
13883       \xdef\HyField@cofields{%
13884         \expandafter\HyField@AddCoField
13885         \HyField@cofields\ltx@empty\ltx@empty\ltx@empty
13886       }%
13887     \fi
13888   \endgroup
13889 }%
13890 \Hy@AtBeginDocument{%
13891   \if@files
13892     \immediate\write\@mainaux{%
13893       \string\providecommand\string\HyField@AuxAddToFields[1]{}%
13894     }%

```



```

13895 \immediate\write\@mainaux{%
13896 \string\providecommand\string\HyField@AuxAddToCoFields[2]{}%
13897 }%
13898 \fi
13899 \let\HyField@AfterAuxOpen\@firstofone
13900 \def\HyField@AuxAddToFields#1{%
13901 \xdef\HyField@afields{%
13902 \ifx\HyField@afields\@empty
13903 \else
13904 \HyField@afields
13905 \space
13906 \fi
13907 #1 0 R%
13908 }%
13909 }%
13910 \let\HyField@AuxAddToCoFields\HyField@ABD@AuxAddToCoFields
13911 }%
13912 \def\HyField@AddToFields{%
13913 \expandafter\HyField@@AddToFields\expandafter{%
13914 \the\pdfastlink
13915 }%
13916 \ifx\Fld@calculate@code\ltx@empty
13917 \else
13918 \begingroup
13919 \Hy@safe@activetrue
13920 \edef\Hy@temp{%
13921 \endgroup
13922 \if@filesw
13923 \write\@mainaux{%
13924 \string\HyField@AuxAddToCoFields{%
13925 \Fld@calculate@sortkey
13926 }{%
13927 \the\pdfastlink
13928 }%
13929 }%
13930 \fi
13931 }%
13932 \Hy@temp
13933 \fi
13934 }%
13935 \def\HyField@@AddToFields#1{%
13936 \HyField@AfterAuxOpen{%
13937 \if@filesw
13938 \write\@mainaux{%
13939 \string\HyField@AuxAddToFields{#1}%
13940 }%
13941 \fi
13942 }%
13943 }%
13944 \fi
13945 \def\@Form[#1]{%
13946 \@ifundefined{textcolor}{\let\textcolor\@gobble}{}%
13947 \kvsetkeys{Form}{#1}%
13948 \pdf@ifdraftmode{}{%
13949 \Hy@FormObjects
13950 \ifnum\pdfTeXversion>13 %
13951 \pdfrefobj\OBJ@pdfdocencoding

```



```

13952 \pdfrefobj\OBJ@ZaDb
13953 \pdfrefobj\OBJ@Helv
13954 \fi
13955 \AtVeryEndDocument{%
13956 \immediate\pdfobj{%
13957 <<%
13958 /Fields[\HyField@afields]%
13959 \ifx\HyField@cofields\ltx@empty
13960 \else
13961 /CO[\romannumeral-`\Q\HyField@cofields]%
13962 \fi
13963 /DR<<%
13964 /Font<<%
13965 /ZaDb \OBJ@ZaDb\space 0 R%
13966 /Helv \OBJ@Helv\space 0 R%
13967 >>%
13968 >>%
13969 /DA(/Helv 10 Tf 0 g)%
13970 \ifHy@pdfa
13971 \else
13972 \ifHyField@NeedAppearances
13973 /NeedAppearances true%
13974 \fi
13975 \fi
13976 >>%
13977 }%
13978 \edef\OBJ@acroform{\the\pdfastobj}%
13979 \pdfcatalog{/AcroForm \OBJ@acroform\space 0 R}%
13980 }%
13981 }%
13982 \MakeFieldObject{%
Same as \ding{123} of package pifont.
13983 \begingroup
13984 \fontfamily{pzd}%
13985 \fontencoding{U}%
13986 \fontseries{m}%
13987 \fontshape{n}%
13988 \selectfont
13989 \char123 %
13990 \endgroup
13991 }{Ding}%
13992 \MakeFieldObject{%
13993 \fbox{\textcolor{yellow}{\textsf{Submit}}}%
13994 }{Submit}%
13995 \MakeFieldObject{%
13996 \fbox{\textcolor{yellow}{\textsf{SubmitP}}}%
13997 }{SubmitP}%
13998 }
13999 \let\@endForm\ltx@empty
14000 \let\HyAnn@AbsPageLabel\ltx@empty
14001 \let\Fld@pageobjref\ltx@empty
14002 \ltx@ifUndefined{pdfpageref}{%
14003 }{%
14004 \ltx@ifpackageloaded{zref-abspage}{%
14005 \newcount\HyAnn@Count
14006 \HyAnn@Count=\ltx@zero
14007 \def\HyAnn@AbsPageLabel{%

```



```

14008 \global\advance\HyAnn@Count by\ltx@one
14009 \zref@labelbyprops{HyAnn@\the\HyAnn@Count}{abspage}%
14010 \zref@refused{HyAnn@\the\HyAnn@Count}%
14011 }%
14012 \def\Fld@pageobjref{%
14013 \zref@ifrefundefined{HyAnn@\the\HyAnn@Count}{%
14014 }{%
14015 \zref@ifrefcontainsprop{HyAnn@\the\HyAnn@Count}{abspage}{%
14016 /P \pdfpageref
14017 \zref@extractdefault{HyAnn@\the\HyAnn@Count}{abspage}{1} %
14018 \space 0 R%
14019 }{%
14020 }%
14021 }%
14022 }%
14023 }{%
14024 }%
14025 }

14026 \def\@TextField[#1]#2{% parameters, label
14027 \def\Fld@name{#2}%
14028 \let\Fld@default\ltx@empty
14029 \let\Fld@value\@empty
14030 \def\Fld@width{\DefaultWidthofText}%
14031 \def\Fld@height{%
14032 \ifFld@multiline
14033 \DefaultHeightofTextMultiline
14034 \else
14035 \DefaultHeightofText
14036 \fi
14037 }%
14038 \begingroup
14039 \expandafter\HyField@SetKeys\expandafter{%
14040 \DefaultOptionsofText,#1%
14041 }%
14042 \PDFForm@Name
14043 \HyField@FlagsText
14044 \ifFld@hidden\def\Fld@width{1sp}\fi
14045 \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
14046 \LayoutTextField{#2}{%
14047 \leavevmode
14048 \HyAnn@AbsPageLabel
14049 \Hy@escapeform\PDFForm@Text
14050 \pdfstartlink user {\PDFForm@Text}\relax
14051 \MakeTextField{\Fld@width}{\Fld@height}\pdfendlink
14052 \HyField@AddToFields
14053 }%
14054 \endgroup
14055 }

14056 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
14057 \def\Fld@name{#2}%
14058 \let\Fld@default\relax
14059 \let\Fld@value\relax
14060 \def\Fld@width{\DefaultWidthofChoiceMenu}%
14061 \def\Fld@height{\DefaultHeightofChoiceMenu}%
14062 \begingroup
14063 \Fld@menulength=0 %
14064 \@tempdima\z@

```



```

14065 \@for\@curropt:=#3\do{%
14066 \expandafter\Fld@checkequals\@curropt==\\%
14067 \Hy@StepCount\Fld@menulength
14068 \settowidth{\@tempdimb}{\@currDisplay}%
14069 \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
14070 }%
14071 \advance\@tempdima by 15\p@
14072 \begingroup
14073 \HyField@SetKeys{#1}%
14074 \edef\x{\endgroup
14075 \noexpand\expandafter
14076 \noexpand\HyField@SetKeys
14077 \noexpand\expandafter{%
14078 \expandafter\noexpand\csname DefaultOptionsof%
14079 \ifFld@radio
14080 Radio%
14081 \else
14082 \ifFld@combo
14083 \ifFld@popdown
14084 PopdownBox%
14085 \else
14086 ComboBox%
14087 \fi
14088 \else
14089 ListBox%
14090 \fi
14091 \fi
14092 \endcsname
14093 }%
14094 }\x
14095 \HyField@SetKeys{#1}%
14096 \PDFForm@Name
14097 \ifFld@hidden\def\Fld@width{1sp}\fi
14098 \ifx\Fld@value\relax
14099 \let\Fld@value\Fld@default
14100 \fi
14101 \LayoutChoiceField{#2}{%
14102 \ifFld@radio
14103 \HyField@FlagsRadioButton
14104 \@@Radio{#3}%
14105 \else
14106 \begingroup
14107 \HyField@FlagsChoice
14108 \ifdim\Fld@width<\@tempdima
14109 \ifdim\@tempdima<1cm\@tempdima1cm\fi
14110 \edef\Fld@width{\the\@tempdima}%
14111 \fi
14112 \ifFld@combo
14113 \else
14114 \@tempdima=\the\Fld@menulength\Fld@charsize
14115 \advance\@tempdima by \Fld@borderwidth bp %
14116 \advance\@tempdima by \Fld@borderwidth bp %
14117 \edef\Fld@height{\the\@tempdima}%
14118 \fi
14119 \@@ListBox{#3}%
14120 \endgroup
14121 \fi

```



```

14122 }%
14123 \endgroup
14124 }
14125 \def\@@Radio#1{%
14126 \Fld@listcount=0 %
14127 \EdefEscapeName\Fld@default{\Fld@default}%
14128 \@for\@curropt:=#1\do{%
14129 \expandafter\Fld@checkequals\@curropt==\\%
14130 \EdefEscapeName\@currValue{\@currValue}%
14131 \Hy@StepCount\Fld@listcount
14132 \@currDisplay\space
14133 \leavevmode
14134 \HyAnn@AbsPageLabel
14135 \Hy@escapeform\PDFForm@Radio
14136 \pdfstartlink user {%
14137 \PDFForm@Radio
14138 /AP<<%
14139 /N<<%

```

Laurent.Guillope@math.univ-nantes.fr (Laurent Guillope) persuades me that this was wrong: `/\Fld@name\the\Fld@listcount`. But I leave it here to remind me that it is untested.

```

14140 /\@currValue\space \DingObject
14141 >>%
14142 >>%
14143 }%
14144 \relax
14145 \MakeRadioField{\Fld@width}{\Fld@height}\pdfendlink
14146 \ifnum\Fld@listcount=1 %
14147 \HyField@AddToFields
14148 \fi
14149 \space % deliberate space between radio buttons
14150 }%
14151 }
14152 \newcount\Fld@listcount
14153 \def\@@Listbox#1{%
14154 \HyField@PDFChoices{#1}%
14155 \leavevmode
14156 \HyAnn@AbsPageLabel
14157 \Hy@escapeform\PDFForm@List
14158 \pdfstartlink user {\PDFForm@List}\relax
14159 \MakeChoiceField{\Fld@width}{\Fld@height}%
14160 \pdfendlink
14161 \HyField@AddToFields
14162 }
14163 \def\@PushButton[#1]#2{% parameters, label
14164 \def\Fld@name{#2}%
14165 \begingroup
14166 \expandafter\HyField@SetKeys\expandafter{%
14167 \DefaultOptionsofPushButton,#1%
14168 }%
14169 \PDFForm@Name
14170 \ifHy@pdfa
14171 \Hy@Error{%
14172 PDF/A: Push button with JavaScript is prohibited%
14173 }@ehc
14174 \LayoutPushButtonField{%
14175 \leavevmode

```



```

14176     \MakeButtonField{#2}%
14177 }%
14178 \else
14179   \HyField@FlagsPushButton
14180   \ifFld@hidden\def\Fld@width{1sp}\fi
14181   \LayoutPushButtonField{%
14182     \leavevmode
14183     \HyAnn@AbsPageLabel
14184     \Hy@escapeform\PDFForm@Push
14185     \pdfstartlink user {\PDFForm@Push}\relax
14186     \MakeButtonField{#2}%
14187     \pdfendlink
14188     \HyField@AddToFields
14189   }%
14190 \fi
14191 \endgroup
14192 }
14193 \def\@Submit[#1]#2{%
14194   \def\Fld@width{\DefaultWidthofSubmit}%
14195   \def\Fld@height{\DefaultHeightofSubmit}%
14196   \begingroup
14197     \expandafter\HyField@SetKeys\expandafter{%
14198       \DefaultOptionsofSubmit,#1%
14199     }%
14200     \HyField@FlagsPushButton
14201     \HyField@FlagsSubmit
14202     \ifFld@hidden\def\Fld@width{1sp}\fi
14203     \leavevmode
14204     \HyAnn@AbsPageLabel
14205     \Hy@escapeform\PDFForm@Submit
14206     \pdfstartlink user {%
14207       \PDFForm@Submit
14208       /AP<</N \SubmitObject/D \SubmitPObject>>%
14209     }%
14210     \relax
14211     \MakeButtonField{#2}%
14212     \pdfendlink
14213     \HyField@AddToFields
14214   \endgroup
14215 }
14216 \def\@Reset[#1]#2{%
14217   \def\Fld@width{\DefaultWidthofReset}%
14218   \def\Fld@height{\DefaultHeightofReset}%
14219   \begingroup
14220     \expandafter\HyField@SetKeys\expandafter{%
14221       \DefaultOptionsofReset,#1%
14222     }%
14223     \leavevmode
14224     \ifHy@pdfa
14225       \Hy@Error{%
14226         PDF/A: Reset action is prohibited%
14227       }\@ehc
14228       \MakeButtonField{#2}%
14229     \else
14230       \HyField@FlagsPushButton
14231       \ifFld@hidden\def\Fld@width{1sp}\fi
14232       \HyAnn@AbsPageLabel

```



```

14233 \Hy@escapeform\PDFForm@Reset
14234 \pdfstartlink user {\PDFForm@Reset}\relax
14235 \MakeButtonField{#2}%
14236 \pdfendlink
14237 \HyField@AddToFields
14238 \fi
14239 \endgroup
14240 }
14241 \def\@CheckBox[#1]#2{% parameters, label
14242 \def\Fld@name{#2}%
14243 \def\Fld@default{0}%
14244 \begingroup
14245 \def\Fld@width{\DefaultWidthofCheckBox}%
14246 \def\Fld@height{\DefaultHeightofCheckBox}%
14247 \expandafter\HyField@SetKeys\expandafter{%
14248 \DefaultOptionsofCheckBox,#1%
14249 }%
14250 \PDFForm@Name
14251 \HyField@FlagsCheckBox
14252 \ifFld@hidden\def\Fld@width{1sp}\fi
14253 \LayoutCheckField{#2}{%
14254 \leavevmode
14255 \HyAnn@AbsPageLabel
14256 \Hy@escapeform\PDFForm@Check
14257 \pdfstartlink user {\PDFForm@Check}\relax
14258 \MakeCheckField{\Fld@width}{\Fld@height}%
14259 \pdfendlink
14260 \HyField@AddToFields
14261 }%
14262 \endgroup
14263 }
14264 \def\Hy@FormObjects{%
14265 \pdfobj {%
14266 <<%
14267 /Type/Encoding%
14268 /Differences[%
14269 24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek%
14270 /ring/tilde %
14271 39/quotesingle %
14272 96/grave %
14273 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
14274 /fraction/guilsinglleft/guilsinglright/minus/perthousand%
14275 /quotedblbase/quotedblleft/quotedblright/quoteleft%
14276 /quoteright/quotesinglbase/trademark/fi/fl/Lslash/OE%
14277 /Scaron/Ydieresis/Zcaron/dotlessi/lslash/oe/scaron/zcaron %
14278 164/currency %
14279 166/brokenbar %
14280 168/dieresis/copyright/ordfeminine %
14281 172/logicalnot/.notdef/registered/macron/degree/plusminus%
14282 /twosuperior/threesuperior/acute/mu %
14283 183/periodcentered/cedilla/onesuperior/ordmasculine %
14284 188/onequarter/onehalf/threequarters %
14285 192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
14286 /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave%
14287 /Iacute/Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute%
14288 /Ocircumflex/Otilde/Odieresis/multiply/Oslash/Ugrave%
14289 /Uacute/Ucircumflex/Udieresis/Yacute/Thorn/germandbls%

```



```

14290      /grave/aacute/acircumflex/atilde/adieresis/aring/ae%
14291      /cedilla/egrave/eacute/ecircumflex/edieresis/igrave%
14292      /iacute/icircumflex/idieresis/eth/ntilde/ograde/oacute%
14293      /ocircumflex/otilde/odieresis/divide/oshlash/ugrave%
14294      /uacute/ucircumflex/udieresis/yacute/thorn/ydieresis%
14295      ]%
14296      >>%
14297      }%
14298      \xdef\OBJ@pdfdocencoding{\the\pdflastobj}%
14299      \pdfobj{%
14300      <<%
14301      /Type/Font%
14302      /Subtype/Type1%
14303      /Name/ZaDb%
14304      /BaseFont/ZapfDingbats%
14305      >>%
14306      }%
14307      \xdef\OBJ@ZaDb{\the\pdflastobj}%
14308      \pdfobj{%
14309      <<%
14310      /Type/Font%
14311      /Subtype/Type1%
14312      /Name/Helv%
14313      /BaseFont/Helvetica%
14314      /Encoding \OBJ@pdfdocencoding\space 0 R%
14315      >>%
14316      }%
14317      \xdef\OBJ@Helv{\the\pdflastobj}%
14318      \global\let\Hy@FormObjects\relax
14319      }
14320      </pdfTeX>

```

48.5 dvipdfm, xetex

D. P. Story adapted the pdf_TE_X forms part for dvipdfm, of which version 0.12.7b or higher is required because of a bug.

```

14321      (*dvipdfm | xetex)

```

\@Gauge

```

14322      \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
14323      \Hy@Message{Sorry, dvipdfm/XeTeX does not support FORM gauges}%
14324      }

```

\@Form

```

14325      \def\@Form[#1]{%
14326      \@ifundefined{textcolor}{\let\textcolor\@gobble}{}%
14327      \kvsetkeys{Form}{#1}%
14328      \Hy@FormObjects
14329      \@pdfm@mark{obj @afields []}%
14330      \@pdfm@mark{obj @corder []}%
14331      \@pdfm@mark{%
14332      obj @aform <<%
14333      /Fields @afields%
14334      /DR<<%
14335      /Font<<%
14336      /ZaDb @OBJZaDb%
14337      /Helv @OBJHelv%
14338      >>%

```



```

14339    >>%
14340    /DA(/Helv 10 Tf 0 g)%
14341    /CO @corder%
14342    \ifHy@pdfa
14343    \else
14344        \ifHyField@NeedAppearances
14345            /NeedAppearances true%
14346        \fi
14347    \fi
14348    >>%
14349    }%
14350    \@pdfm@mark{put @catalog <</AcroForm @aform>>}%
14351    }

```

\@endForm

```

14352 \let\@endForm\ltx@empty

```

\dvipdfm@setdim \dvipdfm@setdim sets dimensions for ann using \pdfm@box.

```

14353 \def\dvipdfm@setdim{%
14354   height \the\ht\pdfm@box\space
14355   width \the\wd\pdfm@box\space
14356   depth \the\dp\pdfm@box\space
14357 }

```

\HyField@AnnotCount

```

14358 \newcount\HyField@AnnotCount
14359 \HyField@AnnotCount=\z@

```

\HyField@AdvanceAnnotCount

```

14360 \def\HyField@AdvanceAnnotCount{%
14361   \global\advance\HyField@AnnotCount\@ne
14362 }

```

\HyField@TheAnnotCount

```

14363 \def\HyField@TheAnnotCount{%
14364   \the\HyField@AnnotCount
14365 }

```

\Fld@pageobjref

```

14366 \def\Fld@pageobjref{/P @thispage}%

```

\HyField@AddToFields

```

14367 \def\HyField@AddToFields#1{%
14368   \@pdfm@mark{put @afields @#1\HyField@TheAnnotCount}%
14369   \ifx\Fld@calculate@code\ltx@empty
14370   \else
14371       \@pdfm@mark{put @corder @#1\HyField@TheAnnotCount}%
14372   \fi
14373 }

```

\@TextField

```

14374 \def\@TextField[#1]#2{% parameters, label
14375   \def\Fld@name{#2}%
14376   \let\Fld@default\ltx@empty
14377   \let\Fld@value\@empty
14378   \def\Fld@width{\DefaultWidthofText}%

```



```

14379 \def\Fld@height{%
14380   \ifFld@multiline
14381     \DefaultHeightofTextMultiline
14382   \else
14383     \DefaultHeightofText
14384   \fi
14385 }%
14386 \begingroup
14387   \expandafter\HyField@SetKeys\expandafter{%
14388     \DefaultOptionsofText,#1%
14389   }%
14390   \PDFForm@Name
14391   \HyField@FlagsText
14392   \ifFld@hidden\def\Fld@width{1sp}\fi
14393   \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
14394   \setbox\pdfm@box=\hbox{%
14395     \MakeTextField{\Fld@width}{\Fld@height}%
14396   }%
14397   \HyField@AdvanceAnnotCount
14398   \LayoutTextField{#2}%
14399   \leavevmode
14400   \Hy@escapeform\PDFForm@Text
14401   \@pdfm@mark{%
14402     ann @text\HyField@TheAnnotCount\space
14403     \dvipdfm@setdim << \PDFForm@Text >>%
14404   }%
14405 }%
14406 \unhbox\pdfm@box
14407 \HyField@AddToFields{text}%
14408 % record in @afields array
14409 \endgroup
14410 }

```

\@ChoiceMenu

```

14411 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
14412   \def\Fld@name{#2}%
14413   \let\Fld@default\relax
14414   \let\Fld@value\relax
14415   \def\Fld@width{\DefaultWidthofChoiceMenu}%
14416   \def\Fld@height{\DefaultHeightofChoiceMenu}%
14417   \begingroup
14418     \Fld@menulength=0 %
14419     \@tempdima\z@
14420     \@for\@curropt:=#3\do{%
14421       \expandafter\Fld@checkequals\@curropt==\%
14422       \Hy@StepCount\Fld@menulength
14423       \settowidth{\@tempdimb}{\@currDisplay}%
14424       \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
14425     }%
14426     \advance\@tempdima by 15\p@
14427     \begingroup
14428       \HyField@SetKeys{#1}%
14429     \edef\x{\endgroup
14430       \noexpand\expandafter
14431       \noexpand\HyField@SetKeys
14432       \noexpand\expandafter{%
14433         \expandafter\noexpand\curname DefaultOptionsof%
14434         \ifFld@radio

```



```

14435         Radio%
14436     \else
14437         \ifFld@combo
14438         \ifFld@popdown
14439         PopdownBox%
14440     \else
14441         ComboBox%
14442     \fi
14443 \else
14444     ListBox%
14445 \fi
14446 \fi
14447 \endcsname
14448 }%
14449 }\x
14450 \HyField@SetKeys{#1}%
14451 \PDFForm@Name
14452 \ifFld@hidden\def\Fld@width{1sp}\fi
14453 \ifx\Fld@value\relax
14454     \let\Fld@value\Fld@default
14455 \fi
14456 \LayoutChoiceField{#2}{%
14457     \ifFld@radio
14458     \HyField@FlagsRadioButton
14459     \@@Radio{#3}%
14460 \else
14461     \begingroup
14462     \HyField@FlagsChoice
14463     \ifdim\Fld@width<\@tempdima
14464         \ifdim\@tempdima<1cm\@tempdima1cm\fi
14465     \edef\Fld@width{\the\@tempdima}%
14466 \fi
14467 \ifFld@combo
14468 \else
14469     \@tempdima=\the\Fld@menulength\Fld@charsize
14470     \advance\@tempdima by \Fld@borderwidth bp %
14471     \advance\@tempdima by \Fld@borderwidth bp %
14472     \edef\Fld@height{\the\@tempdima}%
14473 \fi
14474 \@@ListBox{#3}%
14475 \endgroup
14476 \fi
14477 }%
14478 \endgroup
14479 }

\@@Radio
14480 \def\@@Radio#1{%
14481     \Fld@listcount=0 %
14482     \EdefEscapeName\Fld@default{\Fld@default}%
14483     \setbox\pdfm@box=\hbox{%
14484         \MakeRadioField{\Fld@width}{\Fld@height}%
14485     }%
14486     \@for\@curropt:=#1\do{%
14487         \expandafter\Fld@checkequals\@curropt==\%
14488         \EdefEscapeName\currValue{\@currValue}%
14489         \Hy@StepCount\Fld@listcount
14490         \@currDisplay\space

```



```

14491 \leavevmode
14492 \Hy@escapeform\PDFForm@Radio
14493 \ifnum\Fld@listcount=1 %
14494   \HyField@AdvanceAnnotCount
14495 \fi
14496 \@pdfm@mark{%
14497   ann %
14498   \ifnum\Fld@listcount=1 %
14499     @radio\HyField@TheAnnotCount%
14500   \space
14501 \fi
14502 \dvipdfm@setdim
14503 <<%
14504   \PDFForm@Radio
14505   /AP<</N<</\@currValue /null>>>>%
14506 >>%
14507 }%
14508 \unhcopy\pdfm@box\space% deliberate space between radio buttons
14509 \ifnum\Fld@listcount=1 %
14510   \HyField@AddToFields{radio}%
14511 \fi
14512 }%
14513 }

\Fld@listcount
14514 \newcount\Fld@listcount

\@@Listbox
14515 \def\@@Listbox#1{%
14516   \HyField@PDFChoices{#1}%
14517   \setbox\pdfm@box=\hbox{%
14518     \MakeChoiceField{\Fld@width}{\Fld@height}%
14519   }%
14520   \leavevmode
14521   \Hy@escapeform\PDFForm@List
14522   \HyField@AdvanceAnnotCount
14523   \@pdfm@mark{%
14524     ann @list\HyField@TheAnnotCount\space
14525     \dvipdfm@setdim
14526     <<\PDFForm@List>>%
14527   }%
14528   \unhbox\pdfm@box
14529   \HyField@AddToFields{list}%
14530 }

\@PushButton
14531 \def\@PushButton[#1]#2{% parameters, label
14532   \def\Fld@name{#2}%
14533   \begingroup
14534     \expandafter\HyField@SetKeys\expandafter{%
14535       \DefaultOptionsofPushButton,#1%
14536     }%
14537     \PDFForm@Name
14538     \ifHy@pdfa
14539       \Hy@Error{%
14540         PDF/A: Push button with JavaScript is prohibited%
14541       }\@ehc

```



```

14542 \LayoutPushButtonField{%
14543 \leavevmode
14544 \MakeButtonField{#2}%
14545 }%
14546 \else
14547 \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
14548 \HyField@FlagsPushButton
14549 \ifFld@hidden\def\Fld@width{1sp}\fi
14550 \HyField@AdvanceAnnotCount
14551 \LayoutPushButtonField{%
14552 \leavevmode
14553 \Hy@escapeform\PDFForm@Push
14554 \@pdfm@mark{%
14555 ann @push\HyField@TheAnnotCount\space
14556 \dvipdfm@setdim
14557 <<\PDFForm@Push>>%
14558 }%
14559 }%
14560 \unhbox\pdfm@box
14561 \HyField@AddToFields{push}%
14562 \fi
14563 \endgroup
14564 }

\@Submit
14565 \def\@Submit[#1]#2{%
14566 \def\Fld@width{\DefaultWidthofSubmit}%
14567 \def\Fld@height{\DefaultHeightofSubmit}%
14568 \begingroup
14569 \expandafter\HyField@SetKeys\expandafter{%
14570 \DefaultOptionsofSubmit,#1%
14571 }%
14572 \HyField@FlagsPushButton
14573 \HyField@FlagsSubmit
14574 \ifFld@hidden\def\Fld@width{1sp}\fi
14575 \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
14576 \leavevmode
14577 \Hy@escapeform\PDFForm@Submit
14578 \HyField@AdvanceAnnotCount
14579 \@pdfm@mark{%
14580 ann @submit\HyField@TheAnnotCount\space
14581 \dvipdfm@setdim
14582 <<\PDFForm@Submit>>%
14583 }%
14584 \unhbox\pdfm@box%
14585 \HyField@AddToFields{submit}%
14586 \endgroup
14587 }

\@Reset
14588 \def\@Reset[#1]#2{%
14589 \def\Fld@width{\DefaultWidthofReset}%
14590 \def\Fld@height{\DefaultHeightofReset}%
14591 \begingroup
14592 \expandafter\HyField@SetKeys\expandafter{%
14593 \DefaultOptionsofReset,#1%
14594 }%

```



```

14595 \leavevmode
14596 \ifHy@pdfa
14597 \Hy@Error{%
14598   PDF/A: Reset action is prohibited%
14599 } \@ehc
14600 \MakeButtonField{#2}%
14601 \else
14602 \HyField@FlagsPushButton
14603 \ifFld@hidden\def\Fld@width{1sp}\fi
14604 \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
14605 \Hy@escapeform\PDFForm@Reset
14606 \HyField@AdvanceAnnotCount
14607 \@pdfm@mark{%
14608   ann @reset\HyField@TheAnnotCount\space
14609   \dvipdfm@setdim
14610   <<\PDFForm@Reset>>%
14611 }%
14612 \unhbox\pdfm@box
14613 \HyField@AddToFields{reset}%
14614 \fi
14615 \endgroup
14616 }

```

\@CheckBox

```

14617 \def\@CheckBox[#1]#2{% parameters, label
14618   \def\Fld@name{#2}%
14619   \def\Fld@default{0}%
14620   \begin{group}
14621     \def\Fld@width{\DefaultWidthofCheckBox}%
14622     \def\Fld@height{\DefaultHeightofCheckBox}%
14623     \expandafter\HyField@SetKeys\expandafter{%
14624       \DefaultOptionsofCheckBox,#1%
14625     }%
14626     \PDFForm@Name
14627     \HyField@FlagsCheckBox
14628     \ifFld@hidden\def\Fld@width{1sp}\fi
14629     \setbox\pdfm@box=\hbox{%
14630       \MakeCheckField{\Fld@width}{\Fld@height}%
14631     }%
14632     \HyField@AdvanceAnnotCount
14633     \LayoutCheckField{#2}%
14634     \leavevmode
14635     \Hy@escapeform\PDFForm@Check
14636     \@pdfm@mark{%
14637       ann @check\HyField@TheAnnotCount\space
14638       \dvipdfm@setdim
14639       <<\PDFForm@Check>>%
14640     }%
14641     \unhbox\pdfm@box
14642     \HyField@AddToFields{check}%
14643   }%
14644 \endgroup
14645 }

14646 \def\Hy@FormObjects{%
14647   \@pdfm@mark{obj @OBJpdfdocencoding%
14648     <<%
14649     /Type/Encoding%

```



```

14650 /Differences[%
14651 24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek/ring/tilde %
14652 39/quotesingle %
14653 96/grave %
14654 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
14655 /fraction/guilsinglleft/guilsinglright/minus/perthousand%
14656 /quotedblbase/quotedblleft/quotedblright/quoteleft/quoteright%
14657 /quotesinglbase/trademark/fi/fl/Lslash/OE/Scaron/Ydieresis%
14658 /Zcaron/dotlessi/lslash/oe/scaron/zcaron %
14659 164/currency %
14660 166/brokenbar %
14661 168/dieresis/copyright/ordfeminine %
14662 172/logicalnot/.notdef/registered/macron/degree/plusminus%
14663 /twosuperior/threesuperior/acute/mu %
14664 183/periodcentered/cedilla/onesuperior/ordmasculine %
14665 188/onequarter/onehalf/threequarters %
14666 192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
14667 /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave/Iacute%
14668 /Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute/Ocircumflex%
14669 /Otilde/Odieresis/multiply/Oslash/Ugrave/Uacute/Ucircumflex%
14670 /Udieresis/Yacute/Thorn/germandbls/agrave/aacute/acircumflex%
14671 /atilde/adieresis/aring/ae/ccedilla/egrave/eacute%
14672 /ecircumflex/edieresis/igrave/iacute/icircumflex/idieresis%
14673 /eth/ntilde/ograde/oacute/ocircumflex/otilde/odieresis%
14674 /divide/oslash/ugrave/uacute/ucircumflex/udieresis/yacute%
14675 /thorn/ydieresis%
14676 ]%
14677 >>%
14678 }%
14679 \@pdfmark{obj @OBJZaDb%
14680 <<%
14681 /Type/Font%
14682 /Subtype/Type1%
14683 /Name/ZaDb%
14684 /BaseFont/ZapfDingbats%
14685 >>%
14686 }%
14687 \@pdfmark{obj @OBJHelv%
14688 <<%
14689 /Type/Font%
14690 /Subtype/Type1%
14691 /Name/Helv%
14692 /BaseFont/Helvetica%
14693 /Encoding @OBJpdfdocencoding%
14694 >>%
14695 }%
14696 \global\let\Hy@FormObjects\relax
14697 }
14698 </dvipdfm | xetex>

```

48.6 Common forms part

```

14699 <*pdfform>

\Fld@pageobjref

14700 \providecommand*{\Fld@pageobjref}{}

\Hy@escapestring

```



```

14701 \begingroup\expandafter\expandafter\expandafter\endgroup
14702 \expandafter\ifx\csname pdf@escapestring\endcsname\relax
14703   \let\Hy@escapestring\@firstofone
14704   \def\Hy@escapeform#1{%
14705     \ifHy@pdfescapeform
14706       \def\Hy@escapestring##1{%
14707         \noexpand\Hy@escapestring{\noexpand##1}%
14708       }%
14709     \edef\Hy@temp{#1}%
14710     \expandafter\Hy@@@escapeform\Hy@temp\Hy@escapestring{}\@nil
14711     \def\Hy@escapestring##1{%
14712       \@ifundefined{Hy@esc@\string##1}{%
14713         ##1%
14714         \ThisShouldNotHappen
14715       }{%
14716         \csname Hy@esc@\string##1\endcsname
14717       }%
14718     }%
14719   \else
14720     \let\Hy@escapestring\@firstofone
14721   \fi
14722 }%
14723 \def\Hy@@@escapeform#1\Hy@escapestring#2#3\@nil{%
14724   \ifx\#3\%
14725     \else
14726       \expandafter
14727       \Hy@pstringdef\csname Hy@esc@\string#2\endcsname{#2}%
14728       \ltx@ReturnAfterFi{%
14729         \Hy@@@escapeform#3\@nil
14730       }%
14731     \fi
14732   }%
14733 \else
14734   \def\Hy@escapeform#1{%
14735     \ifHy@pdfescapeform
14736       \let\Hy@escapestring\pdfescapestring
14737     \else
14738       \let\Hy@escapestring\@firstofone
14739     \fi
14740   }%
14741   \Hy@escapeform{%
14742 \fi

```

\PDFForm@Name

```

14743 \def\PDFForm@Name{%
14744   \PDFForm@@Name\Fld@name
14745   \ifx\Fld@altname\relax
14746   \else
14747     \PDFForm@@Name\Fld@altname
14748   \fi
14749   \ifx\Fld@mappingname\relax
14750   \else
14751     \PDFForm@@Name\Fld@mappingname
14752   \fi
14753 }

```

\PDFForm@@Name


```

14754 \def\PDFForm@@Name#1{%
14755   \begingroup
14756   \ifnum\Hy@pdfversion<5 % implementation note 117, PDF spec 1.7
14757     \ifHy@unicode
14758       \Hy@unicodedefalse
14759     \fi
14760   \fi
14761   \HyPsd@XeTeXBigCharstrue
14762   \pdfstringdef\Hy@gtemp#1%
14763 \endgroup
14764 \let#1\Hy@gtemp
14765 }

```

\Fld@additionalactions

```

14766 \def\Fld@@additionalactions{%
K input (keystroke) format
14767   \ifx\Fld@keystroke@code\@empty
14768   \else
14769     /K<</S/JavaScript/JS(\Hy@escapestring{\Fld@keystroke@code})>>%
14770   \fi
F display format
14771   \ifx\Fld@format@code\@empty
14772   \else
14773     /F<</S/JavaScript/JS(\Hy@escapestring{\Fld@format@code})>>%
14774   \fi
V validation
14775   \ifx\Fld@validate@code\@empty
14776   \else
14777     /V<</S/JavaScript/JS(\Hy@escapestring{\Fld@validate@code})>>%
14778   \fi
C calculation
14779   \ifx\Fld@calculate@code\@empty
14780   \else
14781     /C<</S/JavaScript/JS(\Hy@escapestring{\Fld@calculate@code})>>%
14782   \fi
Fo receiving the input focus
14783   \ifx\Fld@onfocus@code\@empty
14784   \else
14785     /Fo<</S/JavaScript/JS(\Hy@escapestring{\Fld@onfocus@code})>>%
14786   \fi
Bl loosing the input focus (blurred)
14787   \ifx\Fld@onblur@code\@empty
14788   \else
14789     /Bl<</S/JavaScript/JS(\Hy@escapestring{\Fld@onblur@code})>>%
14790   \fi
D pressing the mouse button (down)
14791   \ifx\Fld@onmousedown@code\@empty
14792   \else
14793     /D<</S/JavaScript/JS(\Hy@escapestring{\Fld@onmousedown@code})>>%
14794   \fi
U releasing the mouse button (up)
14795   \ifx\Fld@onmouseup@code\@empty

```



```

14796 \else
14797   /U<</S/JavaScript/JS(\Hy@escapestring{\Fld@onmouseup@code})>>%
14798 \fi

```

E cursor enters the annotation's active area.

```

14799 \ifx\Fld@onenter@code\@empty
14800 \else
14801   /E<</S/JavaScript/JS(\Hy@escapestring{\Fld@onenter@code})>>%
14802 \fi

```

X cursor exits the annotation's active area.

```

14803 \ifx\Fld@onexit@code\@empty
14804 \else
14805   /X<</S/JavaScript/JS(\Hy@escapestring{\Fld@onexit@code})>>%
14806 \fi
14807 }
14808 \def\Fld@additionalactions{%
14809 \if\Fld@@additionalactions-%
14810 \else
14811   \ifHy@pdfa
14812   \else
14813     /AA<<\Fld@@additionalactions>>%
14814   \fi
14815 \fi
14816 }

```

\Fld@annotnames

```

14817 \def\Fld@annotnames{%
14818 /T(\Fld@name)%
14819 \ifx\Fld@altname\relax
14820 \else
14821   /TU(\Fld@altname)%
14822 \fi
14823 \ifx\Fld@mappingname\relax
14824 \else
14825   /TM(\Fld@mappingname)%
14826 \fi
14827 }

```

\PDFForm@Check

```

14828 \def\PDFForm@Check{%
14829 /Subtype/Widget%
14830 \Fld@annotflags
14831 \Fld@pageobjref
14832 \Fld@annotnames
14833 /FT/Btn%
14834 \Fld@flags
14835 /Q \Fld@align
14836 /BS<</W \Fld@borderwidth /S/\Fld@borderstyle>>%
14837 /AP<< /N <</Yes<<>>>> >> %new string /Yes is from below
14838 /MK<<%
14839   \ifnum\Fld@rotation=z@
14840   \else
14841     /R \Fld@rotation
14842   \fi
14843 \ifx\Fld@bordercolor\relax
14844 \else
14845   /BC[\Fld@bordercolor]%

```



```

14846 \fi
14847 \ifx\Fld@bcolor\relax
14848 \else
14849 /BG[\Fld@bcolor]%
14850 \fi
14851 /CA(\Hy@escapestring{\Fld@cbsymbol})%
14852 >>%
14853 /DA(/ZaDb \strip@pt\Fld@charsize\space Tf%
14854 \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
14855 /H/P%
14856 \ifFld@checked /V/Yes/AS/Yes\else /V/Off/AS/Off\fi
14857 \Fld@additionalactions
14858 }

```

\PDFForm@Push

```

14859 \ifHy@pdfa
14860 \else
14861 \def\PDFForm@Push{%
14862 /Subtype/Widget%
14863 \Fld@annotflags
14864 \Fld@pageobjref
14865 \Fld@annotnames
14866 /FT/Btn%
14867 \Fld@flags
14868 /H/P%
14869 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
14870 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
14871 \ifx\Fld@bordercolor\relax\else 1\fi
14872 \space
14873 \else
14874 /MK<<%
14875 \ifnum\Fld@rotation=\z@
14876 \else
14877 /R \Fld@rotation
14878 \fi
14879 \ifx\Fld@bordercolor\relax
14880 \else
14881 /BC[\Fld@bordercolor]%
14882 \fi
14883 >>%
14884 \fi
14885 /A<</S/JavaScript/JS(\Hy@escapestring{\Fld@onclick@code})>>%
14886 \Fld@additionalactions
14887 }%
14888 \fi

```

\PDFForm@List

```

14889 \def\PDFForm@List{%
14890 /Subtype/Widget%
14891 \Fld@annotflags
14892 \Fld@pageobjref
14893 \Fld@annotnames
14894 /FT/Ch%
14895 \Fld@flags
14896 /Q \Fld@align
14897 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
14898 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi

```



```

14899      \ifx\Fld@bordercolor\relax\else 1\fi
14900      \ifx\Fld@bcolor\relax    \else 1\fi
14901      \space
14902  \else
14903    /MK<<%
14904    \ifnum\Fld@rotation=\z@
14905    \else
14906      /R \Fld@rotation
14907    \fi
14908    \ifx\Fld@bordercolor\relax
14909    \else
14910      /BC[\Fld@bordercolor]%
14911    \fi
14912    \ifx\Fld@bcolor\relax
14913    \else
14914      /BG[\Fld@bcolor]%
14915    \fi
14916    >>%
14917  \fi
14918  /DA(/Helv \strip@pt\Fld@charsize\space Tf%
14919    \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
14920  \Fld@choices
14921  \Fld@additionalactions
14922 }

```

\PDFForm@Radio

```

14923 \def\PDFForm@Radio{%
14924   /Subtype/Widget%
14925   \Fld@annotflags
14926   \Fld@pageobjref
14927   \Fld@annotnames
14928   /FT/Btn%
14929   \Fld@flags
14930   /H/P%
14931   /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
14932   /MK<<%
14933     \ifnum\Fld@rotation=\z@
14934     \else
14935       /R \Fld@rotation
14936     \fi
14937     \ifx\Fld@bordercolor\relax
14938     \else
14939       /BC[\Fld@bordercolor]%
14940     \fi
14941     \ifx\Fld@bcolor\relax
14942     \else
14943       /BG[\Fld@bcolor]%
14944     \fi
14945     /CA(\Hy@escapestring{\Fld@radiosymbol})%
14946   >>%
14947   /DA(/ZaDb \strip@pt\Fld@charsize\space Tf%
14948     \ifx\Fld@color\@empty\else\space\Fld@color\fi)%

```

New code, the default value is used for all buttons

```

14949   \ifx\Fld@default\@empty
14950     /V/Off%
14951     /DV/Off%
14952   \else

```



```

14953 /V/\Fld@default
14954 /DV/\Fld@default
14955 \fi
14956 \Fld@additionalactions
14957 }

```

\PDFForm@Text

```

14958 \def\PDFForm@Text{%
14959 /Subtype/Widget%
14960 \Fld@annotflags
14961 \Fld@pageobjref
14962 \Fld@annotnames
14963 /FT/Tx%
14964 \Fld@flags
14965 /Q \Fld@align
14966 /BS<</W \Fld@borderwidth\space /S /\Fld@borderstyle>>%
14967 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
14968     \ifx\Fld@bordercolor\relax\else 1\fi
14969     \ifx\Fld@bcolor\relax \else 1\fi
14970     \space
14971 \else
14972 /MK<<%
14973     \ifnum\Fld@rotation=\z@
14974     \else
14975     /R \Fld@rotation
14976     \fi
14977     \ifx\Fld@bordercolor\relax
14978     \else
14979     /BC[\Fld@bordercolor]%
14980     \fi
14981     \ifx\Fld@bcolor\relax
14982     \else
14983     /BG[\Fld@bcolor]%
14984     \fi
14985     >>%
14986 \fi
14987 /DA(/Helv \strip@pt\Fld@charsize\space Tf%
14988     \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
14989 /DV(\Hy@escapestring{\Fld@default})%
14990 /V(\Hy@escapestring{\Fld@value})%
14991 \Fld@additionalactions
14992 \ifnum\Fld@maxlen>\z@/MaxLen \Fld@maxlen \fi
14993 }

```

\PDFForm@Submit

```

14994 \def\PDFForm@Submit{%
14995 /Subtype/Widget%
14996 \Fld@annotflags
14997 \Fld@pageobjref
14998 \Fld@annotnames
14999 /FT/Btn%
15000 \Fld@flags
15001 /H/P%
15002 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
15003 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
15004     \ifx\Fld@bordercolor\relax\else 1\fi
15005     \space

```



```

15006 \else
15007 /MK<<%
15008 \ifnum\Fld@rotation=\z@
15009 \else
15010 /R \Fld@rotation
15011 \fi
15012 \ifx\Fld@bordercolor\relax
15013 \else
15014 /BC[\Fld@bordercolor]%
15015 \fi
15016 >>%
15017 \fi
15018 /A<<%
15019 /S/SubmitForm%
15020 /F<<%
15021 /FS/URL%
15022 /F(\Hy@escapestring{\Form@action})%
15023 >>%
15024 \Fld@submitflags
15025 >>%
15026 \Fld@additionalactions
15027 }

```

\PDFForm@Reset

```

15028 \ifHy@pdfa
15029 \else
15030 \def\PDFForm@Reset{%
15031 /Subtype/Widget%
15032 \Fld@annotflags
15033 \Fld@pageobjref
15034 \Fld@annotnames
15035 /FT/Btn%
15036 \Fld@flags
15037 /H/P%
15038 /DA(/Helv \strip@pt\Fld@charsize\space Tf 0 0 1 rg)%
15039 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
15040 \ifx\Fld@bordercolor\relax\else 1\fi
15041 \space
15042 \else
15043 /MK<<%
15044 \ifnum\Fld@rotation=\z@
15045 \else
15046 /R \Fld@rotation
15047 \fi
15048 \ifx\Fld@bordercolor\relax
15049 \else
15050 /BC[\Fld@bordercolor]%
15051 \fi
15052 % /CA (Clear)
15053 % /AC (Done)
15054 >>%
15055 \fi
15056 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
15057 /A<</S/ResetForm>>%
15058 \Fld@additionalactions
15059 }%
15060 \fi

```



```

15061 </pdfform>
15062 <*package>

```

49 Bookmarks in the PDF file

This was originally developed by Yannis Haralambous (it was the separate `reper.sty`); it needed the `reper` or `makebook.pl` post-processor to work properly. Now redundant, as it is done entirely in \LaTeX macros.

To write out the current section title, and its rationalized number, we have to intercept the `\@sect` command, which is rather dangerous. But how else to see the information we need? We do the *same* for `\@ssect`, giving anchors to unnumbered sections. This allows things like bibliographies to get bookmarks when used with a manual `\addcontentsline`

```

15063 \def\phantomsection{%
15064   \Hy@MakeCurrentHrefAuto{section*}%
15065   \Hy@raisedlink{\hyper@anchorstart{\@currentHref}\hyper@anchorend}%
15066 }
15067 </package>

```

49.1 Bookmarks

```

15068 <*outlines>

```

This section was written by Heiko Oberdiek; the code replaces an earlier version by David Carlisle.

The first part of bookmark code is in section 6. Further documentation is available as paper and slides of the talk, that Heiko Oberdiek has given at the EuroTeX'99 meeting in Heidelberg. See `paper.pdf` and `slides.pdf` in the `doc` directory of `hyperref`.

When using the right-to-left typesetting based on $\varepsilon\text{-TeX}$, the order of the `\BOOKMARK` commands written to the `\@outlinefile` could appear wrong, because of mis-feature of $\varepsilon\text{-TeX}$'s implementation (that it processes the shipped out lines left-to-right, instead of the order in which they appear in the document). The wrong order will appear when the file contains two bookmarks on the same line typeset right-to-left.

To work around this problem, the `bookmark@seq@number` counter is used to write the bookmark's sequential number into a comment in the `\@outlinefile`, which could be used to post-process it to achieve the proper ordering of `\BOOKMARK` commands in that file.

```

15069 \def\Hy@writebookmark#1#2#3#4#5{%
15070   % section number, text, label, level, file
15071   \ifx\WriteBookmarks\relax%
15072     \else
15073     \ifnum#4>\Hy@bookmarksdepth\relax
15074     \else
15075     \@@writetorep{#1}{#2}{#3}{#4}{#5}%
15076     \fi
15077   \fi
15078 }
15079 \def\Hy@currentbookmarklevel{0}
15080 \def\Hy@numberline#1{#1 }
15081 \def\@@writetorep#1#2#3#4#5{%
15082   \begingroup
15083   \edef\Hy@tempa{#5}%
15084   \ifx\Hy@tempa\Hy@bookmarkstype

```



```

15085 \edef\Hy@level{#4}%
15086 \ifx\Hy@levelcheck Y%
15087   \@tempcnta\Hy@level\relax
15088   \advance\@tempcnta by -1 %
15089   \ifnum\Hy@currentbookmarklevel<\@tempcnta
15090     \advance\@tempcnta by -\Hy@currentbookmarklevel\relax
15091     \advance\@tempcnta by 1 %
15092     \Hy@Warning{%
15093       Difference (\the\@tempcnta) between bookmark levels is %
15094       greater \MessageBreak than one, level fixed%
15095     }%
15096     \@tempcnta\Hy@currentbookmarklevel
15097     \advance\@tempcnta by 1 %
15098     \edef\Hy@level{\the\@tempcnta}%
15099   \fi
15100 \else
15101   \global\let\Hy@levelcheck Y%
15102 \fi
15103 \global\let\Hy@currentbookmarklevel\Hy@level
15104 \@tempcnta\Hy@level\relax
15105 \expandafter\xdef\csname Parent\Hy@level\endcsname{#3}%
15106 \advance\@tempcnta by -1 %
15107 \edef\Hy@tempa{#3}%
15108 \edef\Hy@tempb{\csname Parent\the\@tempcnta\endcsname}%
15109 \ifx\Hy@tempa\Hy@tempb
15110   \Hy@Warning{%
15111     The anchor of a bookmark and its parent's must not%
15112     \MessageBreak be the same. Added a new anchor%
15113   }%
15114   \phantomsection
15115 \fi
15116 \ifHy@bookmarksnumbered
15117   \let\numberline\Hy@numberline
15118   \let\booknumberline\Hy@numberline
15119   \let\partnumberline\Hy@numberline
15120   \let\chapternumberline\Hy@numberline
15121 \else
15122   \let\numberline\@gobble
15123   \let\booknumberline\@gobble
15124   \let\partnumberline\@gobble
15125   \let\chapternumberline\@gobble
15126 \fi
15127 \HyPsd@XeTeXBigCharstrue
15128 \pdfstringdef\Hy@tempa{#2}%
15129 \HyPsd@SanitizeForOutFile\Hy@tempa
15130 \iffilesw
15131   \stepcounter{bookmark@seq@number}%
15132   \@ifundefined{@outlinefile}{%
15133     }{%
15134       \protected@write\@outlinefile{}{%
15135         \protect\BOOKMARK
15136         [\Hy@level][\@bookmarkopenstatus{\Hy@level}]{#3}%
15137         {\Hy@tempa}{\Hy@tempb}%
15138         \@percentchar\space\thebookmark@seq@number
15139       }%
15140     }%
15141 \fi

```



```

15142 \fi
15143 \endgroup
15144 }
15145 \newcounter{bookmark@seq@number}
15146 \begingroup
15147 \lccode`=(`{`%
15148 \lccode`=``}%
15149 \lccode`1=\z@
15150 \lccode`2=\z@
15151 \lccode`3=\z@
15152 \lccode`5=\z@
15153 \lccode`7=\z@
15154 \lccode`\#=\z@
15155 \lccode`\`=\z@
15156 \lccode`\{=\z@
15157 \lccode`\}= \z@
15158 \lowercase{%
15159 \endgroup
15160 \def\HyPsd@SanitizeForOutFile#1{%
15161 \@onelevel@sanitize\Hy@tempa
15162 \escapechar`\\%
15163 \edef\Hy@tempa{%
15164 \expandafter\HyPsd@SanitizeOut@BraceLeft\Hy@tempa\@nil
15165 }%
15166 \edef\Hy@tempa{%
15167 \expandafter\HyPsd@SanitizeOut@BraceRight\Hy@tempa\@nil
15168 }%
15169 }%
15170 \def\HyPsd@SanitizeOut@BraceLeft#1(#2\@nil{%
15171 #1%
15172 \ifx\\#2\\%
15173 \expandafter\ltx@gobble
15174 \else
15175 \expandafter\ltx@firstofone
15176 \fi
15177 {%
15178 \string\173%
15179 \HyPsd@SanitizeOut@BraceLeft#2\@nil
15180 }%
15181 }%
15182 \def\HyPsd@SanitizeOut@BraceRight#1)#2\@nil{%
15183 #1%
15184 \ifx\\#2\\%
15185 \expandafter\ltx@gobble
15186 \else
15187 \expandafter\ltx@firstofone
15188 \fi
15189 {%
15190 \string\175%
15191 \HyPsd@SanitizeOut@BraceRight#2\@nil
15192 }%
15193 }%
15194 }

```

In the call of \BOOKMARK the braces around #4 are omitted, because it is not likely, that the level number contains].

```

15195 \newcommand{\currentpdfbookmark}{%
15196 \pdfbookmark[\Hy@currentbookmarklevel]%

```



```

15197 }
15198 \newcommand{\subpdfbookmark}{%
15199   \@tempcnta\Hy@currentbookmarklevel
15200   \Hy@StepCount\@tempcnta
15201   \expandafter\pdfbookmark\expandafter[\the\@tempcnta]%
15202 }
15203 \newcommand{\belowpdfbookmark}[2]{%
15204   \@tempcnta\Hy@currentbookmarklevel
15205   \Hy@StepCount\@tempcnta
15206   \expandafter\pdfbookmark\expandafter[\the\@tempcnta]{#1}{#2}%
15207   \advance\@tempcnta by -1 %
15208   \xdef\Hy@currentbookmarklevel{\the\@tempcnta}%
15209 }

```

Tobias Oetiker rightly points out that we need a way to force a bookmark entry. So we introduce `\pdfbookmark`, with two parameters, the title, and a symbolic name. By default this is at level 1, but we can reset that with the optional first argument.

```

15210 \renewcommand\pdfbookmark[3][0]{%
15211   \Hy@writebookmark{}{#2}{#3.#1}{#1}{toc}%
15212   \hyper@anchorstart{#3.#1}\hyper@anchorend
15213 }
15214 \def\BOOKMARK{%
15215   \@ifnextchar{\@BOOKMARK}{\@@BOOKMARK[1][-]}%
15216 }
15217 \def\@BOOKMARK[#1]{%
15218   \@ifnextchar{\@@BOOKMARK[{#1}]}{\@@BOOKMARK[{#1}][-]}%
15219 }

```

The macros for calculating structure of outlines are derived from those by Petr Olsak used in the `texinfopdf` macros.

49.1.1 Rerun warning

`\Hy@OutlineRerunCheck`

```

15220 \RequirePackage{rerunfilecheck}[2009/12/10]
15221 \def\Hy@OutlineRerunCheck{%
15222   \RerunFileCheck{\jobname.out}{%
15223     \immediate\closeout\@outlinefile
15224   }{%
15225     Rerun to get outlines right\MessageBreak
15226     or use package `bookmark'%
15227   }%
15228 }

```

49.1.2 Driver stuff

The VTEX section was written originally by VTEX, but then amended by Denis Girou (denis.girou@idris.fr), then by Taco Hoekwater (taco.hoekwater@wkap.nl). The problem is that VTEX, with its close integration of the PDF backend, does look at the contents of bookmarks, escaping `\` and the like.

```

15229 <*vtx>
15230 \newcount\@serial@counter\@serial@counter=1\relax

```

`\hv@pdf@char` Plain octal codes doesn't work with versions below 6.50. So for early versions hex numbers have to be used. It would be possible to program this instead of the large `\ifcase`, but I'm too lazy to sort that out now.

```

15231 \begingroup

```



```

15232 \catcode\'=12 %
15233 \ifnum\Hy@VTeXversion<650 %
15234 \catcode\"=12 %
15235 \gdef\hv@pdf@char#1#2#3{%
15236 \char
15237 \ifcase'#1#2#3 %
15238 "00\or"01\or"02\or"03\or"04\or"05\or"06\or"07%
15239 \or"08\or"09\or"0A\or"0B\or"0C\or"0D\or"0E\or"0F%
15240 \or"10\or"11\or"12\or"13\or"14\or"15\or"16\or"17%
15241 \or"18\or"19\or"1A\or"1B\or"1C\or"1D\or"1E\or"1F%
15242 \or"20\or"21\or"22\or"23\or"24\or"25\or"26\or"27%
15243 \or"28\or"29\or"2A\or"2B\or"2C\or"2D\or"2E\or"2F%
15244 \or"30\or"31\or"32\or"33\or"34\or"35\or"36\or"37%
15245 \or"38\or"39\or"3A\or"3B\or"3C\or"3D\or"3E\or"3F%
15246 \or"40\or"41\or"42\or"43\or"44\or"45\or"46\or"47%
15247 \or"48\or"49\or"4A\or"4B\or"4C\or"4D\or"4E\or"4F%
15248 \or"50\or"51\or"52\or"53\or"54\or"55\or"56\or"57%
15249 \or"58\or"59\or"5A\or"5B\or"5C\or"5D\or"5E\or"5F%
15250 \or"60\or"61\or"62\or"63\or"64\or"65\or"66\or"67%
15251 \or"68\or"69\or"6A\or"6B\or"6C\or"6D\or"6E\or"6F%
15252 \or"70\or"71\or"72\or"73\or"74\or"75\or"76\or"77%
15253 \or"78\or"79\or"7A\or"7B\or"7C\or"7D\or"7E\or"7F%
15254 \or"80\or"81\or"82\or"83\or"84\or"85\or"86\or"87%
15255 \or"88\or"89\or"8A\or"8B\or"8C\or"8D\or"8E\or"8F%
15256 \or"90\or"91\or"92\or"93\or"94\or"95\or"96\or"97%
15257 \or"98\or"99\or"9A\or"9B\or"9C\or"9D\or"9E\or"9F%
15258 \or"A0\or"A1\or"A2\or"A3\or"A4\or"A5\or"A6\or"A7%
15259 \or"A8\or"A9\or"AA\or"AB\or"AC\or"AD\or"AE\or"AF%
15260 \or"B0\or"B1\or"B2\or"B3\or"B4\or"B5\or"B6\or"B7%
15261 \or"B8\or"B9\or"BA\or"BB\or"BC\or"BD\or"BE\or"BF%
15262 \or"C0\or"C1\or"C2\or"C3\or"C4\or"C5\or"C6\or"C7%
15263 \or"C8\or"C9\or"CA\or"CB\or"CC\or"CD\or"CE\or"CF%
15264 \or"D0\or"D1\or"D2\or"D3\or"D4\or"D5\or"D6\or"D7%
15265 \or"D8\or"D9\or"DA\or"DB\or"DC\or"DD\or"DE\or"DF%
15266 \or"E0\or"E1\or"E2\or"E3\or"E4\or"E5\or"E6\or"E7%
15267 \or"E8\or"E9\or"EA\or"EB\or"EC\or"ED\or"EE\or"EF%
15268 \or"F0\or"F1\or"F2\or"F3\or"F4\or"F5\or"F6\or"F7%
15269 \or"F8\or"F9\or"FA\or"FB\or"FC\or"FD\or"FE\or"FF%
15270 \fi
15271 }%
15272 \else
15273 \gdef\hv@pdf@char{\char'}%
15274 \fi
15275 \endgroup

```

\@@BOOKMARK

```

15276 \def\@@BOOKMARK[#1][#2]#3#4#5{%
15277 \expandafter\edef\csname @count@#3\endcsname{%
15278 \the\@serial@counter
15279 }%
15280 \edef\@mycount{\the\@serial@counter}%
15281 \Hy@StepCount\@serial@counter
15282 \edef\@parcount{%
15283 \expandafter\ifx\csname @count@#5\endcsname\relax
15284 0%
15285 \else
15286 \csname @count@#5\endcsname
15287 \fi

```



```

15288 }%
15289 \immediate\special{%
15290   !outline \HyperDestNameFilter{#3};p=\@parcount,i=\@mycount,%
15291   s=\ifx#2-c\else o\fi,t=#4%
15292 }%
15293 }%

```

\ReadBookmarks

```

15294 \def\ReadBookmarks{%
15295   \begingroup
15296   \def\0{\hv@pdf@char 0}%
15297   \def\1{\hv@pdf@char 1}%
15298   \def\2{\hv@pdf@char 2}%
15299   \def\3{\hv@pdf@char 3}%
15300   \def\({}%
15301   \def\)}%
15302   \def\do##1{%
15303     \ifnum\catcode`##1=\active
15304       \@makeother##1%
15305     \else
15306       \ifnum\catcode`##1=6 %
15307         \@makeother##1%
15308       \fi
15309     \fi
15310   }%
15311   \dospecials
15312   \Hy@safe@activestrue
15313   \InputIfFileExists{\jobname.out}{\{}}%
15314 \endgroup
15315 \ifx\WriteBookmarks\relax
15316 \else
15317   \if@filesw
15318     \newwrite\@outlinefile
15319     \Hy@OutlineRerunCheck
15320     \immediate\openout\@outlinefile=\jobname.out\relax
15321     \ifHy@typexml
15322       \immediate\write\@outlinefile{<relaxxml>\relax}%
15323     \fi
15324   \fi
15325 \fi
15326 }

15327 </vtex>

15328 <*\vtex>
15329 \def\ReadBookmarks{%
15330   \pdf@ifdraftmode{\}%
15331   \begingroup
15332   \def\do##1{%
15333     \ifnum\catcode`##1=\active
15334       \@makeother##1%
15335     \else
15336       \ifnum\catcode`##1=6 %
15337         \@makeother##1%
15338       \fi
15339     \fi
15340   }%
15341   \dospecials

```



```

15342 \Hy@safe@activetrue
15343 \escapechar=~\%
15344 \def\@@BOOKMARK[##1][##2]##3##4##5{%
15345   \calc@bm@number{##5}%
15346 }%
15347 \InputIfFileExists{\jobname.out}{\{}}%
15348 \ifx\WriteBookmarks\relax
15349   \global\let\WriteBookmarks\relax
15350 \fi
15351 \def\@@BOOKMARK[##1][##2]##3##4##5{%
15352   \def\Hy@temp{##4}%
15353 \*pdftex)
15354   \Hy@pstringdef\Hy@pstringName{\HyperDestNameFilter{##3}}%
15355   \Hy@OutlineName{}\Hy@pstringName{%
15356     ##2\check@bm@number{##3}%
15357   }{%
15358     \expandafter\strip@prefix\meaning\Hy@temp
15359   }%
15360 \*pdftex)
15361 \*pdfmark)
15362   \pdfmark{%
15363     pdfmark=/OUT,%
15364     Count={##2\check@bm@number{##3}},%
15365     Dest={##3},%
15366     Title=\expandafter\strip@prefix\meaning\Hy@temp
15367   }%
15368 \*pdfmark)
15369 \*dvipdfm|xetex)
15370   \Hy@pstringdef\Hy@pstringName{\HyperDestNameFilter{##3}}%
15371   \@pdfm@mark{%
15372     outline \ifHy@DvipdfmxOutlineOpen
15373       [%
15374         \ifnum##21>\z@
15375         \else
15376           -%
15377         \fi
15378       ] %
15379       \fi
15380       ##1<<%
15381       /Title(\expandafter\strip@prefix\meaning\Hy@temp)%
15382       /A<<%
15383       /S/GoTo%
15384       /D(\Hy@pstringName)%
15385       >>%
15386       >>%
15387     }%
15388 \*dvipdfm|xetex)
15389   }%
15390   \begingroup
15391     \def\WriteBookmarks{0}%
15392     \InputIfFileExists{\jobname.out}{\{}}%
15393   \endgroup
15394   %{\escapechar\m@ne\InputIfFileExists{\jobname.out}{\{}}}%
15395 \endgroup
15396 }%
15397 \ifx\WriteBookmarks\relax
15398 \else

```



```

15399 \if@filesw
15400 \newwrite\@outlinefile
15401 \Hy@OutlineRerunCheck
15402 \immediate\openout\@outlinefile=\jobname.out\relax
15403 \ifHy@typexml
15404 \immediate\write\@outlinefile{<relaxxml>\relax}%
15405 \fi
15406 \fi
15407 \fi
15408 }
15409 <*pdfTeX>
15410 \def\Hy@OutlineName#1#2#3#4{%
15411 \pdfoutline goto name{#2}count#3{#4}%
15412 }
15413 </pdfTeX>
15414 \def\check@bm@number#1{%
15415 \expandafter\ifx\csname B_#1\endcsname\relax
15416 0%
15417 \else
15418 \csname B_#1\endcsname
15419 \fi
15420 }
15421 \def\calc@bm@number#1{%
15422 \@tempcnta=\check@bm@number{#1}\relax
15423 \advance\@tempcnta by 1 %
15424 \expandafter\xdef\csname B_#1\endcsname{\the\@tempcnta}%
15425 }
15426 </!vTeX>

15427 \ifHy@implicit
15428 \else
15429 \expandafter\endinput
15430 \fi

15431 </outlines>
15432 <*outlines | hypertex>

15433 \newlength\Hy@SectionHShift
15434 \def\Hy@SectionAnchorHref#1{%
15435 \ifx\protect\@typeset@protect
15436 \Hy@@@SectionAnchor{#1}%
15437 \fi
15438 }
15439 \DeclareRobustCommand*{\Hy@@@SectionAnchor}[1]{%
15440 \leavevmode
15441 \hbox to 0pt{%
15442 \kern-\Hy@SectionHShift
15443 \Hy@raisedlink{%
15444 \hyper@anchorstart{#1}\hyper@anchorend
15445 }%
15446 \hss
15447 }%
15448 }
15449 \let\H@old@ssect\@ssect
15450 \def\@ssect#1#2#3#4#5{%
15451 \Hy@MakeCurrentHrefAuto{section*}%
15452 \setlength{\Hy@SectionHShift}{#1}%
15453 \begingroup
15454 \toks@{\H@old@ssect{#1}{#2}{#3}{#4}}%

```



```

15455 \toks\tw@\expandafter{%
15456 \expandafter\Hy@SectionAnchorHref\expandafter{\@currentHref}%
15457 #5%
15458 }%
15459 \edef\x{\endgroup
15460 \the\toks@{\the\toks\tw@}%
15461 }\x
15462 }
15463 \let\H@old@chapter\@chapter
15464 \def\@chapter#1{%
15465 \begingroup
15466 \let\@mkboth\@gobbletwo
15467 \Hy@MakeCurrentHrefAuto{\Hy@chapapp*}%
15468 \Hy@raisedlink{%
15469 \hyper@anchorstart{\@currentHref}\hyper@anchorend
15470 }%
15471 \endgroup
15472 \H@old@chapter{#1}%
15473 }

```

If there is no chapter number (`\frontmatter` or `\backmatter`) then the counting by `\refstepcounter{chapter}` is not executed, so there will be no destination for `\ddcontentsline`. So `\@chapter` is overloaded to avoid this:

```

15474 \ltx@ifundefined{chapter}{-}{%
15475 \let\Hy@org@chapter\@chapter
15476 \def\@chapter{%
15477 \def\Hy@next{%
15478 \Hy@MakeCurrentHrefAuto{\Hy@chapapp*}%
15479 \Hy@raisedlink{%
15480 \hyper@anchorstart{\@currentHref}\hyper@anchorend
15481 }%
15482 }%
15483 \ifnum\c@secnumdepth>\m@ne
15484 \ltx@ifundefined{if@mainmatter}%
15485 \iftrue{\csname if@mainmatter\endcsname}%
15486 \let\Hy@next\relax
15487 \fi
15488 \fi
15489 \Hy@next
15490 \Hy@org@chapter
15491 }%
15492 }

15493 \let\H@old@part\@part
15494 \begingroup\expandafter\expandafter\expandafter\endgroup
15495 \expandafter\ifx\csname chapter\endcsname\relax
15496 \let\Hy@secnum@part\z@
15497 \else
15498 \let\Hy@secnum@part\m@ne
15499 \fi
15500 \def\@part{%
15501 \ifnum\Hy@secnum@part>\c@secnumdepth
15502 \phantomsection
15503 \fi
15504 \H@old@part
15505 }

15506 \let\H@old@spart\@spart
15507 \def\@spart#1{%

```



```

15508 \Hy@MakeCurrentHrefAuto{part*}%
15509 \Hy@raisedlink{%
15510   \hyper@anchorstart{\@currentHref}\hyper@anchorend
15511 }%
15512 \H@old@spart{#1}%
15513 }
15514 \let\H@old@sect\@sect
15515 \def\@sect#1#2#3#4#5#6[#7]#8{%
15516   \ifnum #2>\c@secnumdepth
15517     \expandafter\@firstoftwo
15518   \else
15519     \expandafter\@secondoftwo
15520   \fi
15521   {%
15522     \Hy@MakeCurrentHrefAuto{section*}%
15523     \setlength{\Hy@SectionHShift}{#3}%
15524     \begingroup
15525     \toks@{\H@old@sect{#1}{#2}{#3}{#4}{#5}{#6}{#7}}%
15526     \toks\tw@\expandafter{%
15527       \expandafter\Hy@SectionAnchorHref\expandafter{\@currentHref}%
15528       #8%
15529     }%
15530     \edef\x{\endgroup
15531       \the\toks@\the\toks\tw@}%
15532     }\x
15533   }{%
15534     \H@old@sect{#1}{#2}{#3}{#4}{#5}{#6}{#7}{#8}%
15535   }%
15536 }

15537 </outlines | hypertex>
15538 (*outlines)

15539 \expandafter\def\csname Parent-4\endcsname{}
15540 \expandafter\def\csname Parent-3\endcsname{}
15541 \expandafter\def\csname Parent-2\endcsname{}
15542 \expandafter\def\csname Parent-1\endcsname{}
15543 \expandafter\def\csname Parent0\endcsname{}
15544 \expandafter\def\csname Parent1\endcsname{}
15545 \expandafter\def\csname Parent2\endcsname{}
15546 \expandafter\def\csname Parent3\endcsname{}
15547 \expandafter\def\csname Parent4\endcsname{}

15548 </outlines>

```

50 Compatibility with koma-script classes

```
15549 (*outlines | hypertex)
```

Hard-wire in an unpleasant over-ride of komascript ‘scrbook’ class for Tobias Isenberg (Tobias.Isenberg@gmx.de). With version 6.71b the hack is also applied to ‘scrreprt’ class and is removed for koma-script versions since 2001/01/01, because Markus Kohm supports hyperref in komascript.

```

15550 \def\Hy@tempa{%
15551   \def\@addchap[#1]##2{%
15552     \typeout{##2}%
15553     \if@twoside
15554       \@mkboth{##1}{}%
15555     \else

```



```

15556 \mkboth{}{##1}%
15557 \fi
15558 \addtocontents{lof}{\protect\addvspace{10\p@}}%
15559 \addtocontents{lot}{\protect\addvspace{10\p@}}%
15560 \Hy@MakeCurrentHrefAuto{\Hy@chapapp*}%
15561 \Hy@raisedlink{%
15562 \hyper@anchorstart{\@currentHref}\hyper@anchorend
15563 }%
15564 \if@twocolumn
15565 \@topnewpage[\@makeschapterhead{##2}]%
15566 \else
15567 \@makeschapterhead{##2}%
15568 \@afterheading
15569 \fi
15570 \addcontentsline{toc}{chapter}{##1}%
15571 }%
15572 }
15573 \ifclassloaded{scrbook}{%
15574 \ifclasslater{scrbook}{2001/01/01}{%
15575 \let\Hy@tempa\@empty
15576 }{%
15577 }{%
15578 \ifclassloaded{scrreprt}{%
15579 \ifclasslater{scrreprt}{2001/01/01}{%
15580 \let\Hy@tempa\@empty
15581 }{%
15582 }{%
15583 \let\Hy@tempa\@empty
15584 }%
15585 }%
15586 \Hy@tempa
15587 (/outlines | hypertex)

```

51 Encoding definition files for encodings of PDF strings

This was contributed by Heiko Oberdiek.

51.1 PD1 encoding

```

15588 (*pd1enc)
15589 \DeclareFontEncoding{PD1}{}{}

Accents
15590 \DeclareTextAccent{\`}{PD1}{\textasciigrave}
15591 \DeclareTextAccent{\'}{PD1}{\textacute}
15592 \DeclareTextAccent{\~}{PD1}{\textasciicircum}
15593 \DeclareTextAccent{\~}{PD1}{\texttilde}
15594 \DeclareTextAccent{\"}{PD1}{\textasciidieresis}
15595 \DeclareTextAccent{\r}{PD1}{\textring}
15596 \DeclareTextAccent{\v}{PD1}{\textasciicaron}
15597 \DeclareTextAccent{\.}{PD1}{\textdotaccent}
15598 \DeclareTextAccent{\c}{PD1}{\textcedilla}
15599 \DeclareTextAccent{\=}{PD1}{\textasciimacron}
15600 \DeclareTextAccent{\b}{PD1}{\textmacronbelow}
15601 \DeclareTextAccent{\d}{PD1}{\textdotbelow}
15602 \DeclareTextCompositeCommand{\`}{PD1}{\@empty}{\textasciigrave}

```



```

15603 \DeclareTextCompositeCommand{\'}{PD1}{\@empty}{\textacute}
15604 \DeclareTextCompositeCommand{\^}{PD1}{\@empty}{\textasciicircum}
15605 \DeclareTextCompositeCommand{\~}{PD1}{\@empty}{\texttilde}
15606 \DeclareTextCompositeCommand{\"}{PD1}{\@empty}{\textasciidieresis}
15607 \DeclareTextCompositeCommand{\r}{PD1}{\@empty}{\textring}
15608 \DeclareTextCompositeCommand{\v}{PD1}{\@empty}{\textasciicaron}
15609 \DeclareTextCompositeCommand{\.}{PD1}{\@empty}{\textdotaccent}
15610 \DeclareTextCompositeCommand{\c}{PD1}{\@empty}{\textcedilla}
15611 \DeclareTextCompositeCommand{\=}{PD1}{\@empty}{\textasciimacron}
15612 \DeclareTextCompositeCommand{\b}{PD1}{\@empty}{\textmacronbelow}
15613 \DeclareTextCompositeCommand{\d}{PD1}{\@empty}{\textdotbelow}
15614 \DeclareTextCompositeCommand{\`}{PD1}{\ }{\textasciigrave}
15615 \DeclareTextCompositeCommand{\'}{PD1}{\ }{\textacute}
15616 \DeclareTextCompositeCommand{\^}{PD1}{\ }{\textasciicircum}
15617 \DeclareTextCompositeCommand{\~}{PD1}{\ }{\texttilde}
15618 \DeclareTextCompositeCommand{\"}{PD1}{\ }{\textasciidieresis}
15619 \DeclareTextCompositeCommand{\r}{PD1}{\ }{\textring}
15620 \DeclareTextCompositeCommand{\v}{PD1}{\ }{\textasciicaron}
15621 \DeclareTextCompositeCommand{\.}{PD1}{\ }{\textdotaccent}
15622 \DeclareTextCompositeCommand{\c}{PD1}{\ }{\textcedilla}
15623 \DeclareTextCompositeCommand{\=}{PD1}{\ }{\textasciimacron}
15624 \DeclareTextCompositeCommand{\b}{PD1}{\ }{\textmacronbelow}
15625 \DeclareTextCompositeCommand{\d}{PD1}{\ }{\textdotbelow}
15626 \DeclareTextCommand{\k}{PD1}[1]{\TextSymbolUnavailable{\k{#1}}#1}
15627 \DeclareTextCommand{\t}{PD1}[1]{\TextSymbolUnavailable{\t{#1}}#1}
15628 \DeclareTextCommand{\newtie}{PD1}[1]{%
15629 \TextSymbolUnavailable{\newtie{#1}}#1%
15630 }

```

Special white space escape characters not for use in bookmarks but for other PDF strings.

```

15631 % U+0009 (CHARACTER TABULATION)
15632 \DeclareTextCommand{\textHT}{PD1}{\011}% U+0009
15633 % U+000A (LINE FEED)
15634 \DeclareTextCommand{\textLF}{PD1}{\012}% U+000A
15635 % U+000D (CARRIAGE RETURN)
15636 \DeclareTextCommand{\textCR}{PD1}{\015}% U+000D

```

Accent glyph names

```

15637 % U+02D8 BREVE; breve
15638 \DeclareTextCommand{\textasciibreve}{PD1}{\030}% U+02D8
15639 % U+02C7 CARON; caron
15640 \DeclareTextCommand{\textasciicaron}{PD1}{\031}% U+02C7
15641 % U+02C6 MODIFIER LETTER CIRCUMFLEX ACCENT; circumflex
15642 \DeclareTextCommand{\textcircumflex}{PD1}{\032}% U+02C6
15643 % U+02D9 DOT ABOVE; dotaccent
15644 \DeclareTextCommand{\textdotaccent}{PD1}{\033}% U+02D9
15645 % U+02DD DOUBLE ACUTE ACCENT; hungarumlaut
15646 \DeclareTextCommand{\texthungarumlaut}{PD1}{\034}% U+02DD
15647 % U+02DB OGONEK; ogonek
15648 \DeclareTextCommand{\textogonek}{PD1}{\035}% U+02DB
15649 % U+02DA RING ABOVE; ring
15650 \DeclareTextCommand{\textring}{PD1}{\036}% U+02DA
15651 % U+02DC SMALL TILDE; ilde, *tilde
15652 \DeclareTextCommand{\texttilde}{PD1}{\037}% U+02DC

```

\040: U+0020 SPACE; *space, spacehackarabic

\041: U+0021 EXCLAMATION MARK; exclam

15653 % U+0022 QUOTATION MARK; quotedbl

15654 \DeclareTextCommand{\textquotedbl}{PD1}{"}% \042 U+0022
 15655 % U+0023 NUMBER SIGN; numbersign
 15656 \DeclareTextCommand{\textnumbersign}{PD1}{\043}% U+0023
 15657 % U+0024 DOLLAR SIGN; dollar
 15658 \DeclareTextCommand{\textdollar}{PD1}{\044}% U+0024
 15659 % U+0025 PERCENT SIGN; percent
 15660 \DeclareTextCommand{\textpercent}{PD1}{\045}% U+0025
 15661 % U+0026 AMPERSAND; ampersand
 15662 \DeclareTextCommand{\textampersand}{PD1}{\046}% U+0026
 \047: U+0027 APOSTROPHE; quotesingle

 15663 % U+0028 LEFT PARENTHESIS; parenleft
 15664 \DeclareTextCommand{\textparenleft}{PD1}{\string\}% \050 U+0028
 15665 % U+0029 RIGHT PARENTHESIS; parenright
 15666 \DeclareTextCommand{\textparenright}{PD1}{\string\)}% \051 U+0029
 \052: U+002A ASTERISK; asterisk
 \053: U+002B PLUS SIGN; plus
 \054: U+002C COMMA; comma
 \055: U+002D HYPHEN-MINUS; hyphen
 \056: U+002E FULL STOP; period
 15667 % U+002E FULL STOP; period
 15668 \DeclareTextCommand{\textdotbelow}{PD1}{.}% \056 U+002E
 \057: U+002F SOLIDUS; slash
 \060: U+0030 DIGIT ZERO; zero
 ...
 \071: U+0039 DIGIT NINE; nine
 \072: U+003A COLON; colon
 \073: U+003B SEMICOLON; semicolon
 15669 % U+003C LESS-THAN SIGN; less
 15670 \DeclareTextCommand{\textless}{PD1}{<}% \074 U+003C
 \075: U+003D EQUALS SIGN; equal
 15671 % U+003E GREATER-THAN SIGN; greater
 15672 \DeclareTextCommand{\textgreater}{PD1}{>}% \076 U+003E
 \077: U+003F QUESTION MARK; question
 \100: U+0040 COMMERCIAL AT; at
 \101: U+0041 LATIN CAPITAL LETTER A; A
 ...
 \132: U+005A LATIN CAPITAL LETTER Z; Z
 \133: U+005B LEFT SQUARE BRACKET; bracketleft
 15673 % U+005C REVERSE SOLIDUS; backslash
 15674 \DeclareTextCommand{\textbackslash}{PD1}{\134}% U+005C
 15675 % "U+2216 SET MINUS" simulated by "U+005C REVERSE SOLIDUS"
 15676 \DeclareTextCommand{\textsetminus}{PD1}{\textbackslash}
 \135: U+005D RIGHT SQUARE BRACKET; bracketright
 15677 % U+005E CIRCUMFLEX ACCENT; asciicircum
 15678 \DeclareTextCommand{\textasciicircum}{PD1}{\136}% U+005E
 15679 % U+005F LOW LINE; underscore
 15680 \DeclareTextCommand{\textunderscore}{PD1}{\137}% U+005F
 15681 \DeclareTextCommand{\textmacronbelow}{PD1}{\137}% U+005F
 15682 % U+0060 GRAVE ACCENT; grave
 15683 \DeclareTextCommand{\textasciigrave}{PD1}{\140}% U+0060
 \141: U+0061 LATIN SMALL LETTER A; a
 ...
 \150: U+0068 LATIN SMALL LETTER H; h

15684 % U+0069 LATIN SMALL LETTER I; i
 15685 \DeclareTextCompositeCommand{\.}{PD1}{i}{i}% \151 U+0069
 \152: U+006A LATIN SMALL LETTER J; j
 ...
 \172: U+007A LATIN SMALL LETTER Z; z
 15686 % U+007B LEFT CURLY BRACKET; braceleft
 15687 \DeclareTextCommand{\textbraceleft}{PD1}{\173}% U+007B
 15688 % U+007C VERTICAL LINE; *bar, verticalbar
 15689 \DeclareTextCommand{\textbar}{PD1}{|}% U+007C
 15690 % U+007D RIGHT CURLY BRACKET; braceright
 15691 \DeclareTextCommand{\textbraceright}{PD1}{\175}% U+007D
 15692 % U+007E TILDE; asciitilde
 15693 \DeclareTextCommand{\textasciitilde}{PD1}{\176}% U+007E
 Slot \177 (0x7F) is undefined in PDFDocEncoding.
 15694 % U+2022 BULLET; bullet
 15695 \DeclareTextCommand{\textbullet}{PD1}{\200}% U+2022
 15696 % U+2020 DAGGER; dagger
 15697 \DeclareTextCommand{\textdagger}{PD1}{\201}% U+2020
 15698 % U+2021 DOUBLE DAGGER; daggerdbl; ddagger (LaTeX)
 15699 \DeclareTextCommand{\textdaggerdbl}{PD1}{\202}% U+2021
 15700 \DeclareTextCommand{\textddagger}{PD1}{\textddagger}
 15701 % U+2026 HORIZONTAL ELLIPSIS; ellipsis
 15702 \DeclareTextCommand{\textellipsis}{PD1}{\203}% U+2026
 15703 % U+2014 EM DASH; emdash
 15704 \DeclareTextCommand{\textemdash}{PD1}{\204}% U+2014
 15705 % U+2013 EN DASH; endash
 15706 \DeclareTextCommand{\textendash}{PD1}{\205}% U+2013
 15707 % U+0192 LATIN SMALL LETTER F WITH HOOK; florin
 15708 \DeclareTextCommand{\textflorin}{PD1}{\206}% U+0192
 15709 % U+2044 FRACTION SLASH; fraction
 15710 \DeclareTextCommand{\textfractionsolidus}{PD1}{\207}% U+2044
 15711 % U+2039 SINGLE LEFT-POINTING ANGLE QUOTATION MARK; guil-
 lingleft
 15712 \DeclareTextCommand{\guilsingleft}{PD1}{\210}% U+2039
 15713 % U+203A SINGLE RIGHT-POINTING ANGLE QUOTATION MARK; guils-
 inglright
 15714 \DeclareTextCommand{\guilsinglright}{PD1}{\211}% U+203A
 15715 % U+2212 MINUS SIGN; minus
 15716 \DeclareTextCommand{\textminus}{PD1}{\212}% U+2212
 15717 % U+2030 PER MILLE SIGN; perthousand
 15718 \DeclareTextCommand{\textperthousand}{PD1}{\213}% U+2030
 15719 % U+201E DOUBLE LOW-9 QUOTATION MARK; quotedblbase
 15720 \DeclareTextCommand{\quotedblbase}{PD1}{\214}% U+201E
 15721 % U+201C LEFT DOUBLE QUOTATION MARK; quotedblleft
 15722 \DeclareTextCommand{\textquotedblleft}{PD1}{\215}% U+201C
 15723 % U+201D RIGHT DOUBLE QUOTATION MARK; quotedblright
 15724 \DeclareTextCommand{\textquotedblright}{PD1}{\216}% U+201D
 15725 % U+2018 LEFT SINGLE QUOTATION MARK; quoteleft
 15726 \DeclareTextCommand{\textquoteleft}{PD1}{\217}% U+2018
 15727 % U+2019 RIGHT SINGLE QUOTATION MARK; quoteright
 15728 \DeclareTextCommand{\textquoteright}{PD1}{\220}% U+2019
 15729 % U+201A SINGLE LOW-9 QUOTATION MARK; quotesinglbase
 15730 \DeclareTextCommand{\quotesinglbase}{PD1}{\221}% U+201A
 15731 % U+2122 TRADE MARK SIGN; trademark
 15732 \DeclareTextCommand{\texttrademark}{PD1}{\222}% U+2122
 15733 % U+FB01 LATIN SMALL LIGATURE FI; fi
 15734 \DeclareTextCommand{\textfi}{PD1}{\223}% U+FB01

15735 % U+FB02 LATIN SMALL LIGATURE FL; fl
 15736 \DeclareTextCommand{\textfl}{PD1}{\224}% U+FB02
 15737 % U+0141 LATIN CAPITAL LETTER L WITH STROKE; Lslash
 15738 \DeclareTextCommand{\L}{PD1}{\225}% U+0141
 15739 % U+0152 LATIN CAPITAL LIGATURE OE; OE
 15740 \DeclareTextCommand{\OE}{PD1}{\226}% U+0152
 15741 % U+0160 LATIN CAPITAL LETTER S WITH CARON; Scaron
 15742 \DeclareTextCompositeCommand{\v}{PD1}{S}{\227}% U+0160
 15743 % U+0178 LATIN CAPITAL LETTER Y WITH DIAERESIS; Ydieresis
 15744 \DeclareTextCompositeCommand{\Y}{PD1}{Y}{\230}% U+0178
 15745 \DeclareTextCommand{\IJ}{PD1}{IJ}% ligature U+0049 U+004A
 15746 % U+017D LATIN CAPITAL LETTER Z WITH CARON; Zcaron
 15747 \DeclareTextCompositeCommand{\v}{PD1}{Z}{\231}% U+017D
 15748 % U+0131 LATIN SMALL LETTER DOTLESS I; dotlessi
 15749 \DeclareTextCommand{\i}{PD1}{\232}% U+0131
 15750 % U+0142 LATIN SMALL LETTER L WITH STROKE; lslash
 15751 \DeclareTextCommand{\l}{PD1}{\233}% U+0142
 15752 % U+0153 LATIN SMALL LIGATURE OE; oe
 15753 \DeclareTextCommand{\oe}{PD1}{\234}% U+0153
 15754 % U+0161 LATIN SMALL LETTER S WITH CARON; scaron
 15755 \DeclareTextCompositeCommand{\v}{PD1}{s}{\235}% U+0161
 15756 % U+017E LATIN SMALL LETTER Z WITH CARON; zcaron
 15757 \DeclareTextCompositeCommand{\v}{PD1}{z}{\236}% U+017E
 Slot \237 (0x9F) is not defined in PDFDocEncoding.
 The euro \240 is inserted in version 1.3 of the pdf specification.
 15758 % U+20AC EURO SIGN; *Euro, euro
 15759 \DeclareTextCommand{\texteuro}{PD1}{\240}% U+20AC
 15760 % U+00A1 INVERTED EXCLAMATION MARK; exclamdown
 15761 \DeclareTextCommand{\textexclamdown}{PD1}{\241}% U+00A1
 15762 % U+00A2 CENT SIGN; cent
 15763 \DeclareTextCommand{\textcent}{PD1}{\242}% U+00A2
 15764 % U+00A3 POUND SIGN; sterling
 15765 \DeclareTextCommand{\textsterling}{PD1}{\243}% U+00A3
 15766 % U+00A4 CURRENCY SIGN; currency
 15767 \DeclareTextCommand{\textcurrency}{PD1}{\244}% U+00A4
 15768 % U+00A5 YEN SIGN; yen
 15769 \DeclareTextCommand{\textyen}{PD1}{\245}% U+00A5
 15770 % U+00A6 BROKEN BAR; brokenbar
 15771 \DeclareTextCommand{\textbrokenbar}{PD1}{\246}% U+00A6
 15772 % U+00A7 SECTION SIGN; section
 15773 \DeclareTextCommand{\textsection}{PD1}{\247}% U+00A7
 15774 % U+00A8 DIAERESIS; dieresis
 15775 \DeclareTextCommand{\textasciidieresis}{PD1}{\250}% U+00A8
 15776 % U+00A9 COPYRIGHT SIGN; copyright
 15777 \DeclareTextCommand{\textcopyright}{PD1}{\251}% U+00A9
 15778 % U+00AA FEMININE ORDINAL INDICATOR; ordfeminine
 15779 \DeclareTextCommand{\textordfeminine}{PD1}{\252}% U+00AA
 15780 % U+00AB LEFT-POINTING DOUBLE ANGLE QUOTATION MARK; guille-
 motleft
 15781 \DeclareTextCommand{\guillemotleft}{PD1}{\253}% U+00AB
 15782 % U+00AC NOT SIGN; logicalnot
 15783 \DeclareTextCommand{\textlogicalnot}{PD1}{\254}% U+00AC
 15784 \DeclareTextCommand{\textlnot}{PD1}{\254}% logical not
 No glyph \255 in PDFDocEncoding.
 15785 % U+00AE REGISTERED SIGN; registered
 15786 \DeclareTextCommand{\textregistered}{PD1}{\256}% U+00AE
 15787 % U+00AF MACRON; *macron, overscore

15788 \DeclareTextCommand{\textasciimacron}{PD1}{\257}% U+00AF
15789 % U+00B0 DEGREE SIGN; degree
15790 \DeclareTextCommand{\textdegree}{PD1}{\260}% U+00B0
15791 % U+00B1 PLUS-MINUS SIGN; plusminus
15792 \DeclareTextCommand{\textplusminus}{PD1}{\261}% U+00B1
15793 % U+00B2 SUPERSCRIPT TWO; twosuperior
15794 \DeclareTextCommand{\texttwosuperior}{PD1}{\262}%* U+00B2
15795 % U+00B3 SUPERSCRIPT THREE; threesuperior
15796 \DeclareTextCommand{\textthreesuperior}{PD1}{\263}%* U+00B3
15797 % U+00B4 ACUTE ACCENT; acute
15798 \DeclareTextCommand{\textacute}{PD1}{\264}% U+00B4
15799 % U+00B5 MICRO SIGN; mu, mu1
15800 \DeclareTextCommand{\textmu}{PD1}{\265}% U+00B5
15801 % U+00B6 PILCROW SIGN; paragraph
15802 \DeclareTextCommand{\textparagraph}{PD1}{\266}% U+00B6
15803 % U+00B7 MIDDLE DOT; middot, *periodcentered
15804 \DeclareTextCommand{\textperiodcentered}{PD1}{\267}% U+00B7
15805 % U+00B8 CEDILLA; cedilla
15806 \DeclareTextCommand{\textcedilla}{PD1}{\270}% U+00B8
15807 % U+00B9 SUPERSCRIPT ONE; onesuperior
15808 \DeclareTextCommand{\textonesuperior}{PD1}{\271}%* U+00B9
15809 % U+00BA MASCULINE ORDINAL INDICATOR; ordmasculine
15810 \DeclareTextCommand{\textordmasculine}{PD1}{\272}% U+00BA
15811 % U+00BB RIGHT-POINTING DOUBLE ANGLE QUOTATION MARK; guille-
motright
15812 \DeclareTextCommand{\guillemotright}{PD1}{\273}% U+00BB
15813 % U+00BC VULGAR FRACTION ONE QUARTER; onequarter
15814 \DeclareTextCommand{\textonequarter}{PD1}{\274}% U+00BC
15815 % U+00BD VULGAR FRACTION ONE HALF; onehalf
15816 \DeclareTextCommand{\textonehalf}{PD1}{\275}% U+00BD
15817 % U+00BE VULGAR FRACTION THREE QUARTERS; threequarters
15818 \DeclareTextCommand{\textthreequarters}{PD1}{\276}% U+00BE
15819 % U+00BF INVERTED QUESTION MARK; questiondown
15820 \DeclareTextCommand{\textquestiondown}{PD1}{\277}% U+00BF
15821 % U+00C0 LATIN CAPITAL LETTER A WITH GRAVE; Agrave
15822 \DeclareTextCompositeCommand{\`}{PD1}{A}{\300}% U+00C0
15823 % U+00C1 LATIN CAPITAL LETTER A WITH ACUTE; Aacute
15824 \DeclareTextCompositeCommand{\'}{PD1}{A}{\301}% U+00C1
15825 % U+00C2 LATIN CAPITAL LETTER A WITH CIRCUMFLEX; Acircumflex
15826 \DeclareTextCompositeCommand{\^}{PD1}{A}{\302}% U+00C2
15827 % U+00C3 LATIN CAPITAL LETTER A WITH TILDE; Atilde
15828 \DeclareTextCompositeCommand{\~}{PD1}{A}{\303}% U+00C3
15829 % U+00C4 LATIN CAPITAL LETTER A WITH DIAERESIS; Adieresis
15830 \DeclareTextCompositeCommand{\"}{PD1}{A}{\304}% U+00C4
15831 % U+00C5 LATIN CAPITAL LETTER A WITH RING ABOVE; Aring
15832 \DeclareTextCompositeCommand{\r}{PD1}{A}{\305}% U+00C5
15833 % U+00C6 LATIN CAPITAL LETTER AE; AE
15834 \DeclareTextCommand{\AE}{PD1}{\306}% U+00C6
15835 % U+00C7 LATIN CAPITAL LETTER C WITH CEDILLA; Ccedilla
15836 \DeclareTextCompositeCommand{\c}{PD1}{C}{\307}% U+00C7
15837 % U+00C8 LATIN CAPITAL LETTER E WITH GRAVE; Egrave
15838 \DeclareTextCompositeCommand{\`}{PD1}{E}{\310}% U+00C8
15839 % U+00C9 LATIN CAPITAL LETTER E WITH ACUTE; Eacute
15840 \DeclareTextCompositeCommand{\'}{PD1}{E}{\311}% U+00C9
15841 % U+00CA LATIN CAPITAL LETTER E WITH CIRCUMFLEX; Ecircumflex
15842 \DeclareTextCompositeCommand{\^}{PD1}{E}{\312}% U+00CA
15843 % U+00CB LATIN CAPITAL LETTER E WITH DIAERESIS; Edieresis

15844 \DeclareTextCompositeCommand{"}{PD1}{E}{\313}% U+00CB
15845 % U+00CC LATIN CAPITAL LETTER I WITH GRAVE; Igrave
15846 \DeclareTextCompositeCommand{"}{PD1}{I}{\314}% U+00CC
15847 % U+00CD LATIN CAPITAL LETTER I WITH ACUTE; Iacute
15848 \DeclareTextCompositeCommand{"}{PD1}{I}{\315}% U+00CD
15849 % U+00CE LATIN CAPITAL LETTER I WITH CIRCUMFLEX; Icircumflex
15850 \DeclareTextCompositeCommand{"}{PD1}{I}{\316}% U+00CE
15851 % U+00CF LATIN CAPITAL LETTER I WITH DIAERESIS; Idieresis
15852 \DeclareTextCompositeCommand{"}{PD1}{I}{\317}% U+00CF
15853 % U+00D0 LATIN CAPITAL LETTER ETH; Eth
15854 \DeclareTextCommand{\DH}{PD1}{\320}% U+00D0
15855 \DeclareTextCommand{\DJ}{PD1}{\320}% U+00D0
15856 % U+00D1 LATIN CAPITAL LETTER N WITH TILDE; Ntilde
15857 \DeclareTextCompositeCommand{"}{PD1}{N}{\321}% U+00D1
15858 % U+00D2 LATIN CAPITAL LETTER O WITH GRAVE; Ograve
15859 \DeclareTextCompositeCommand{"}{PD1}{O}{\322}% U+00D2
15860 % U+00D3 LATIN CAPITAL LETTER O WITH ACUTE; Oacute
15861 \DeclareTextCompositeCommand{"}{PD1}{O}{\323}% U+00D3
15862 % U+00D4 LATIN CAPITAL LETTER O WITH CIRCUMFLEX; Ocircumflex
15863 \DeclareTextCompositeCommand{"}{PD1}{O}{\324}% U+00D4
15864 % U+00D5 LATIN CAPITAL LETTER O WITH TILDE; Otilde
15865 \DeclareTextCompositeCommand{"}{PD1}{O}{\325}% U+00D5
15866 % U+00D6 LATIN CAPITAL LETTER O WITH DIAERESIS; Odieresis
15867 \DeclareTextCompositeCommand{"}{PD1}{O}{\326}% U+00D6
15868 % U+00D7 MULTIPLICATION SIGN; multiply
15869 \DeclareTextCommand{\textmultiply}{PD1}{\327}% U+00D7
15870 % U+00D8 LATIN CAPITAL LETTER O WITH STROKE; Oslash
15871 \DeclareTextCommand{\O}{PD1}{\330}% U+00D8
15872 % U+00D9 LATIN CAPITAL LETTER U WITH GRAVE; Ugrave
15873 \DeclareTextCompositeCommand{"}{PD1}{U}{\331}% U+00D9
15874 % U+00DA LATIN CAPITAL LETTER U WITH ACUTE; Uacute
15875 \DeclareTextCompositeCommand{"}{PD1}{U}{\332}% U+00DA
15876 % U+00DB LATIN CAPITAL LETTER U WITH CIRCUMFLEX; Ucircumflex
15877 \DeclareTextCompositeCommand{"}{PD1}{U}{\333}% U+00DB
15878 % U+00DC LATIN CAPITAL LETTER U WITH DIAERESIS; Udieresis
15879 \DeclareTextCompositeCommand{"}{PD1}{U}{\334}% U+00DC
15880 % U+00DD LATIN CAPITAL LETTER Y WITH ACUTE; Yacute
15881 \DeclareTextCompositeCommand{"}{PD1}{Y}{\335}% U+00DD
15882 % U+00DE LATIN CAPITAL LETTER THORN; Thorn; \TH, \Thorn (wasysym)
15883 \DeclareTextCommand{\TH}{PD1}{\336}% U+00DE
15884 \DeclareTextCommand{\textThorn}{PD1}{\336}%* U+00DE
15885 % U+00DF LATIN SMALL LETTER SHARP S; germandbls
15886 \DeclareTextCommand{\ss}{PD1}{\337}% U+00DF
15887 % U+00E0 LATIN SMALL LETTER A WITH GRAVE; agrave
15888 \DeclareTextCompositeCommand{"}{PD1}{a}{\340}% U+00E0
15889 % U+00E1 LATIN SMALL LETTER A WITH ACUTE; aacute
15890 \DeclareTextCompositeCommand{"}{PD1}{a}{\341}% U+00E1
15891 % U+00E2 LATIN SMALL LETTER A WITH CIRCUMFLEX; acircumflex
15892 \DeclareTextCompositeCommand{"}{PD1}{a}{\342}% U+00E2
15893 % U+00E3 LATIN SMALL LETTER A WITH TILDE; atilde
15894 \DeclareTextCompositeCommand{"}{PD1}{a}{\343}% U+00E3
15895 % U+00E4 LATIN SMALL LETTER A WITH DIAERESIS; adieresis
15896 \DeclareTextCompositeCommand{"}{PD1}{a}{\344}% U+00E4
15897 % U+00E5 LATIN SMALL LETTER A WITH RING ABOVE; aring
15898 \DeclareTextCompositeCommand{\r}{PD1}{a}{\345}% U+00E5
15899 % U+00E6 LATIN SMALL LETTER AE; ae
15900 \DeclareTextCommand{\ae}{PD1}{\346}% U+00E6

15901 % U+00E7 LATIN SMALL LETTER C WITH CEDILLA; ccedilla
15902 \DeclareTextCompositeCommand{\c}{PD1}{c}{\347}% U+00E7
15903 % U+00E8 LATIN SMALL LETTER E WITH GRAVE; egrave
15904 \DeclareTextCompositeCommand{\`}{PD1}{e}{\350}% U+00E8
15905 % U+00E9 LATIN SMALL LETTER E WITH ACUTE; eacute
15906 \DeclareTextCompositeCommand{\'}{PD1}{e}{\351}% U+00E9
15907 % U+00EA LATIN SMALL LETTER E WITH CIRCUMFLEX; ecircumflex
15908 \DeclareTextCompositeCommand{\^}{PD1}{e}{\352}% U+00EA
15909 % U+00EB LATIN SMALL LETTER E WITH DIAERESIS; edieresis
15910 \DeclareTextCompositeCommand{\"}{PD1}{e}{\353}% U+00EB
15911 % U+00EC LATIN SMALL LETTER I WITH GRAVE; igrave
15912 \DeclareTextCompositeCommand{\`}{PD1}{i}{\354}% U+00EC
15913 \DeclareTextCompositeCommand{\`}{PD1}{i}{\354}% U+00EC
15914 % U+00ED LATIN SMALL LETTER I WITH ACUTE; iacute
15915 \DeclareTextCompositeCommand{\'}{PD1}{i}{\355}% U+00ED
15916 \DeclareTextCompositeCommand{\'}{PD1}{i}{\355}% U+00ED
15917 % U+00EE LATIN SMALL LETTER I WITH CIRCUMFLEX; icircumflex
15918 \DeclareTextCompositeCommand{\^}{PD1}{i}{\356}% U+00EE
15919 \DeclareTextCompositeCommand{\^}{PD1}{i}{\356}% U+00EE
15920 % U+00EF LATIN SMALL LETTER I WITH DIAERESIS; idieresis
15921 \DeclareTextCompositeCommand{\"}{PD1}{i}{\357}% U+00EF
15922 \DeclareTextCompositeCommand{\"}{PD1}{i}{\357}% U+00EF
15923 % U+00F0 LATIN SMALL LETTER ETH; eth
15924 \DeclareTextCommand{\dh}{PD1}{\360}% U+00F0
15925 % U+00F1 LATIN SMALL LETTER N WITH TILDE; ntilde
15926 \DeclareTextCompositeCommand{\~}{PD1}{n}{\361}% U+00F1
15927 % U+00F2 LATIN SMALL LETTER O WITH GRAVE; ograve
15928 \DeclareTextCompositeCommand{\`}{PD1}{o}{\362}% U+00F2
15929 % U+00F3 LATIN SMALL LETTER O WITH ACUTE; oacute
15930 \DeclareTextCompositeCommand{\'}{PD1}{o}{\363}% U+00F3
15931 % U+00F4 LATIN SMALL LETTER O WITH CIRCUMFLEX; ocircumflex
15932 \DeclareTextCompositeCommand{\^}{PD1}{o}{\364}% U+00F4
15933 % U+00F5 LATIN SMALL LETTER O WITH TILDE; otilde
15934 \DeclareTextCompositeCommand{\~}{PD1}{o}{\365}% U+00F5
15935 % U+00F6 LATIN SMALL LETTER O WITH DIAERESIS; odieresis
15936 \DeclareTextCompositeCommand{\"}{PD1}{o}{\366}% U+00F6
15937 % U+00F7 DIVISION SIGN; divide
15938 \DeclareTextCommand{\textdivide}{PD1}{\367}% U+00F7
15939 % U+00F8 LATIN SMALL LETTER O WITH STROKE; oslash
15940 \DeclareTextCommand{\o}{PD1}{\370}% U+00F8
15941 % U+00F9 LATIN SMALL LETTER U WITH GRAVE; ugrave
15942 \DeclareTextCompositeCommand{\`}{PD1}{u}{\371}% U+00F9
15943 % U+00FA LATIN SMALL LETTER U WITH ACUTE; uacute
15944 \DeclareTextCompositeCommand{\'}{PD1}{u}{\372}% U+00FA
15945 % U+00FB LATIN SMALL LETTER U WITH CIRCUMFLEX; ucircumflex
15946 \DeclareTextCompositeCommand{\^}{PD1}{u}{\373}% U+00FB
15947 % U+00FC LATIN SMALL LETTER U WITH DIAERESIS; udieresis
15948 \DeclareTextCompositeCommand{\"}{PD1}{u}{\374}% U+00FC
15949 % U+00FD LATIN SMALL LETTER Y WITH ACUTE; yacute
15950 \DeclareTextCompositeCommand{\'}{PD1}{y}{\375}% U+00FD
15951 % U+00FE LATIN SMALL LETTER THORN; thorn; \th, \thorn (wasysym)
15952 \DeclareTextCommand{\th}{PD1}{\376}% U+00FE
15953 \DeclareTextCommand{\textthorn}{PD1}{\376}%* U+00FE
15954 % U+00FF LATIN SMALL LETTER Y WITH DIAERESIS; ydieresis
15955 \DeclareTextCompositeCommand{\"}{PD1}{y}{\377}% U+00FF
15956 \DeclareTextCommand{\ij}{PD1}{ij}% ligature U+0069 U+006A

Glyphs that consist of several characters.


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15957 \DeclareTextCommand{\SS}{PD1}{SS}%
15958 \DeclareTextCommand{\textcelsius}{PD1}{\textdegree C}%
Aliases (german.sty)
15959 \DeclareTextCommand{\textglqq}{PD1}{\quotedblbase}%
15960 \DeclareTextCommand{\textgrqq}{PD1}{\textquotedblleft}%
15961 \DeclareTextCommand{\textglq}{PD1}{\quotesinglbase}%
15962 \DeclareTextCommand{\textgrq}{PD1}{\textquoteleft}%
15963 \DeclareTextCommand{\textflqq}{PD1}{\guillemotleft}%
15964 \DeclareTextCommand{\textfrqq}{PD1}{\guillemotright}%
15965 \DeclareTextCommand{\textflq}{PD1}{\guilsinglleft}%
15966 \DeclareTextCommand{\textfrq}{PD1}{\guilsinglright}%
Aliases (math names)
15967 \DeclareTextCommand{\textneg}{PD1}{\textlogicalnot}%
15968 \DeclareTextCommand{\texttimes}{PD1}{\textmultiply}%
15969 \DeclareTextCommand{\textdiv}{PD1}{\textdivide}%
15970 \DeclareTextCommand{\textpm}{PD1}{\textplusminus}%
15971 \DeclareTextCommand{\textcdot}{PD1}{\textperiodcentered}%
15972 \DeclareTextCommand{\textbeta}{PD1}{\ss}%
Polish aliases. PDF encoding does not have the characters, but it is useful to Poles
to have the plain letters regardless. Requested by Wojciech Myszka (W.Myszka@
immt.pwr.wroc.pl).
15973 \DeclareTextCompositeCommand{\k}{PD1}{a}{a}% aogonek
15974 \DeclareTextCompositeCommand{\'}{PD1}{c}{c}% cacute
15975 \DeclareTextCompositeCommand{\k}{PD1}{e}{e}% eogonek
15976 \DeclareTextCompositeCommand{\'}{PD1}{n}{n}% nacute
15977 \DeclareTextCompositeCommand{\'}{PD1}{s}{s}% sacute
15978 \DeclareTextCompositeCommand{\'}{PD1}{z}{z}% zacute
15979 \DeclareTextCompositeCommand{\.}{PD1}{z}{z}% zdot
15980 \DeclareTextCompositeCommand{\k}{PD1}{A}{A}% Aogonek
15981 \DeclareTextCompositeCommand{\'}{PD1}{C}{C}% Cacute
15982 \DeclareTextCompositeCommand{\k}{PD1}{E}{E}% Eogonek
15983 \DeclareTextCompositeCommand{\'}{PD1}{N}{N}% Nacute
15984 \DeclareTextCompositeCommand{\'}{PD1}{S}{S}% Sacute
15985 \DeclareTextCompositeCommand{\'}{PD1}{Z}{Z}% Zacute
15986 \DeclareTextCompositeCommand{\.}{PD1}{Z}{Z}% Zdot
15987 \end{pd1enc}

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51.2 PU encoding

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15988 (*puenc)
15989 \DeclareFontEncoding{PU}{}{}

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51.2.1 NFSS2 accents

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15990 % U+0300 COMBINING GRAVE ACCENT; gravecmb, *gravecomb
15991 \DeclareTextCommand{\`}{PU}[1]{\#1\83\000}% U+0300
15992 % U+0301 COMBINING ACUTE ACCENT; acutecmb, *acutecomb
15993 \DeclareTextCommand{\'}{PU}[1]{\#1\83\001}% U+0301
15994 % U+0302 COMBINING CIRCUMFLEX ACCENT; circumflexcmb
15995 \DeclareTextCommand{\^}{PU}[1]{\#1\83\002}% U+0302
15996 % U+0303 COMBINING TILDE; tildecmb, *tildecmb
15997 \DeclareTextCommand{\~}{PU}[1]{\#1\83\003}% U+0303
15998 % U+0304 COMBINING MACRON; macroncmb
15999 \DeclareTextCommand{\=}{PU}[1]{\#1\83\004}% U+0304
16000 % U+0306 COMBINING BREVE; brevecmb
16001 \DeclareTextCommand{\u}{PU}[1]{\#1\83\006}% U+0306
16002 \DeclareTextCommand{\U}{PU}[1]{\#1\83\006}% U+0306

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16003 % U+0307 COMBINING DOT ABOVE; dotaccentcmb
 16004 \DeclareTextCommand{\.}{PU}[1]{#1\83\007}% U+0307
 16005 % U+0308 COMBINING DIAERESIS; dieresiscmb
 16006 \DeclareTextCommand{\"}{PU}[1]{#1\83\010}% U+0308
 16007 % U+030A COMBINING RING ABOVE; ringcmb
 16008 \DeclareTextCommand{\r}{PU}[1]{#1\83\012}% U+030A
 16009 % U+030B COMBINING DOUBLE ACUTE ACCENT; hungarumlautcmb
 16010 \DeclareTextCommand{\H}{PU}[1]{#1\83\013}% U+030B
 16011 % U+030C COMBINING CARON; caroncmb
 16012 \DeclareTextCommand{\v}{PU}[1]{#1\83\014}% U+030C
 16013 % U+030F COMBINING DOUBLE GRAVE ACCENT; dblgravecmb
 16014 \DeclareTextCommand{\G}{PU}[1]{#1\83\017}% U+030F
 16015 \DeclareTextCommand{\C}{PU}[1]{#1\83\017}% U+030F
 16016 % U+0311 COMBINING INVERTED BREVE; breveinvertedcmb
 16017 \DeclareTextCommand{\textinvbreve}{PU}[1]{#1\83\021}% U+0311
 16018 \DeclareTextCommand{\newtie}{PU}[1]{#1\83\021}% U+0311
 16019 % U+0323 COMBINING DOT BELOW; dotbelowcmb, *dotbelowcmb
 16020 \DeclareTextCommand{\d}{PU}[1]{#1\83\043}% U+0323
 16021 % U+0324 COMBINING DIAERESIS BELOW; dieresisbelowcmb; \textsubum-
 laut (tipa)
 16022 \DeclareTextCommand{\textsubumlaut}{PU}[1]{#1\83\044}% U+0324
 16023 % U+0325 COMBINING RING BELOW; ringbelowcmb; \textsubring (tipa)
 16024 \DeclareTextCommand{\textsubring}{PU}[1]{#1\83\045}% U+0325
 16025 % U+0327 COMBINING CEDILLA; cedillacmb
 16026 \DeclareTextCommand{\c}{PU}[1]{#1\83\047}% U+0327
 16027 % U+0328 COMBINING OGONEK; ogonekcmb
 16028 \DeclareTextCommand{\k}{PU}[1]{#1\83\050}% U+0328
 16029 % U+032D COMBINING CIRCUMFLEX ACCENT BELOW;
 16030 % \textsubcircum (tipa)
 16031 \DeclareTextCommand{\textsubcircum}{PU}[1]{#1\83\055}% U+032D
 16032 % U+032E COMBINING BREVE BELOW; brevebelowcmb
 16033 \DeclareTextCommand{\textsubbreve}{PU}[1]{#1\83\056}% U+032E
 16034 % U+0330 COMBINING TILDE BELOW; tildebelowcmb; \textsubtilde (tipa)
 16035 \DeclareTextCommand{\textsubtilde}{PU}[1]{#1\83\060}% U+0330
 16036 % U+0331 COMBINING MACRON BELOW; macronbelowcmb
 16037 \DeclareTextCommand{\b}{PU}[1]{#1\83\061}% U+0331
 16038 % U+0361 COMBINING DOUBLE INVERTED BREVE; breveinverteddou-
 blecmb
 16039 \DeclareTextCommand{\t}{PU}[1]{#1\83\141}% U+0361
 16040 % U+20DD COMBINING ENCLOSING CIRCLE
 16041 \DeclareTextCommand{\textcircled}{PU}[1]{#1\9040\335}% U+20DD

Double accents.

16042 \DeclareTextCommand{\textacutemacron}{PU}[1]{#1\83\001\83\004}% U+0301 U+0304
 16043 \DeclareTextCommand{\textgravemacron}{PU}[1]{#1\83\000\83\004}% U+0300 U+0304

\@empty is an artefact of the NFSS2 machinery, it gets inserted for empty arguments and spaces.

16044 \DeclareTextCompositeCommand{\`}{PU}{\@empty}{\textasciigrave}%
 16045 \DeclareTextCompositeCommand{\'}{PU}{\@empty}{\textacute}%
 16046 \DeclareTextCompositeCommand{\^}{PU}{\@empty}{\textasciicircum}%
 16047 \DeclareTextCompositeCommand{\~}{PU}{\@empty}{\texttilde}%
 16048 \DeclareTextCompositeCommand{\"}{PU}{\@empty}{\textasciidieresis}%
 16049 \DeclareTextCompositeCommand{\r}{PU}{\@empty}{\textring}%
 16050 \DeclareTextCompositeCommand{\v}{PU}{\@empty}{\textasciicaron}%
 16051 \DeclareTextCompositeCommand{\.}{PU}{\@empty}{\textdotaccent}%
 16052 \DeclareTextCompositeCommand{\c}{PU}{\@empty}{\textcedilla}%
 16053 \DeclareTextCompositeCommand{\u}{PU}{\@empty}{\textasciibreve}%
 16054 \DeclareTextCompositeCommand{\G}{PU}{\@empty}{\textdoublegrave}%

16055 \DeclareTextCompositeCommand{=} {PU}{\@empty}{\textasciimacron}%
16056 \DeclareTextCompositeCommand{H} {PU}{\@empty}{\texthungarumlaut}%
16057 \DeclareTextCompositeCommand{k} {PU}{\@empty}{\textogonek}%
16058 \DeclareTextCompositeCommand{\textinvbreve} {PU}{\@empty}{\{\ \83\021\}}% U+0311
16059 \DeclareTextCompositeCommand{\textsubumlaut} {PU}{\@empty}{\{\ \83\044\}}% U+0324
16060 \DeclareTextCompositeCommand{\textsubring} {PU}{\@empty}{\textringlow}%
16061 \DeclareTextCompositeCommand{\textsubcircum} {PU}{\@empty}{\textcircum-
low}%
16062 \DeclareTextCompositeCommand{\textsubbreve} {PU}{\@empty}{\{\ \83\056\}}% U+032E
16063 \DeclareTextCompositeCommand{\textsubtilde} {PU}{\@empty}{\texttildelow}%
16064 \DeclareTextCompositeCommand{b} {PU}{\@empty}{\textmacronbelow}%
16065 \DeclareTextCompositeCommand{d} {PU}{\@empty}{\textdotbelow}%
16066 \DeclareTextCompositeCommand{t} {PU}{\@empty}{\texttie}%
16067 \DeclareTextCompositeCommand{newtie} {PU}{\@empty}{\textnewtie}%
16068 \DeclareTextCompositeCommand{\textcircled} {PU}{\@empty}{\textbigcircle}%
16069 \DeclareTextCompositeCommand{\textacutemacron} {PU}{\@empty}{\{\ \83\001\83\004\}}% U+0301 U
16070 \DeclareTextCompositeCommand{\textgravemacron} {PU}{\@empty}{\{\ \83\000\83\004\}}% U+0300 U
16071 \DeclareTextCompositeCommand{`} {PU}{\ }{\textasciigrave}%
16072 \DeclareTextCompositeCommand{'} {PU}{\ }{\textacute}%
16073 \DeclareTextCompositeCommand{^} {PU}{\ }{\textasciicircum}%
16074 \DeclareTextCompositeCommand{~} {PU}{\ }{\texttilde}%
16075 \DeclareTextCompositeCommand{"} {PU}{\ }{\textasciidieresis}%
16076 \DeclareTextCompositeCommand{r} {PU}{\ }{\textring}%
16077 \DeclareTextCompositeCommand{v} {PU}{\ }{\textasciicaron}%
16078 \DeclareTextCompositeCommand{.} {PU}{\ }{\textdotaccent}%
16079 \DeclareTextCompositeCommand{c} {PU}{\ }{\textcedilla}%
16080 \DeclareTextCompositeCommand{u} {PU}{\ }{\textasciibreve}%
16081 \DeclareTextCompositeCommand{G} {PU}{\ }{\textdoublegrave}%
16082 \DeclareTextCompositeCommand{=} {PU}{\ }{\textasciimacron}%
16083 \DeclareTextCompositeCommand{H} {PU}{\ }{\texthungarumlaut}%
16084 \DeclareTextCompositeCommand{k} {PU}{\ }{\textogonek}%
16085 \DeclareTextCompositeCommand{\textinvbreve} {PU}{\ }{\{\ \83\021\}}% U+0311
16086 \DeclareTextCompositeCommand{\textsubumlaut} {PU}{\ }{\{\ \83\044\}}% U+0324
16087 \DeclareTextCompositeCommand{\textsubring} {PU}{\ }{\textringlow}%
16088 \DeclareTextCompositeCommand{\textsubcircum} {PU}{\ }{\textcircumlow}%
16089 \DeclareTextCompositeCommand{\textsubbreve} {PU}{\ }{\{\ \83\056\}}% U+032E
16090 \DeclareTextCompositeCommand{\textsubtilde} {PU}{\ }{\texttildelow}%
16091 \DeclareTextCompositeCommand{b} {PU}{\ }{\textmacronbelow}%
16092 \DeclareTextCompositeCommand{d} {PU}{\ }{\textdotbelow}%
16093 \DeclareTextCompositeCommand{t} {PU}{\ }{\texttie}%
16094 \DeclareTextCompositeCommand{newtie} {PU}{\ }{\textnewtie}%
16095 \DeclareTextCompositeCommand{\textcircled} {PU}{\ }{\textbigcircle}%
16096 \DeclareTextCompositeCommand{\textacutemacron} {PU}{\ }{\{\ \83\001\83\004\}}% U+0301 U+0304
16097 \DeclareTextCompositeCommand{\textgravemacron} {PU}{\ }{\{\ \83\000\83\004\}}% U+0300 U+0304

Accents for capitals (see encoding TS1)

16098 \DeclareTextCommand{\capitalcedilla} {PU}[1]{\c{#1}}%
16099 \DeclareTextCommand{\capitalogonek} {PU}[1]{\k{#1}}%
16100 \DeclareTextCommand{\capitalgrave} {PU}[1]{\`{#1}}%
16101 \DeclareTextCommand{\capitalacute} {PU}[1]{\'{#1}}%
16102 \DeclareTextCommand{\capitalcircumflex} {PU}[1]{\^{#1}}%
16103 \DeclareTextCommand{\capitaltilde} {PU}[1]{\~{#1}}%
16104 \DeclareTextCommand{\capitaldieresis} {PU}[1]{\"{#1}}%
16105 \DeclareTextCommand{\capitalhungarumlaut} {PU}[1]{\H{#1}}%
16106 \DeclareTextCommand{\capitalring} {PU}[1]{\r{#1}}%
16107 \DeclareTextCommand{\capitalcaron} {PU}[1]{\v{#1}}%
16108 \DeclareTextCommand{\capitalbreve} {PU}[1]{\u{#1}}%
16109 \DeclareTextCommand{\capitalmacron} {PU}[1]{\={#1}}%


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16110 \DeclareTextCommand{\capitaldotaccent}{PU}[1]{\.{#1}}%
16111 \DeclareTextCommand{\capitaltie}{PU}[1]{\t{#1}}%
16112 \DeclareTextCommand{\capitalnewtie}{PU}[1]{\newtie{#1}}%

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51.2.2 Basic Latin: U+0000 to U+007F

Special white space escape characters.

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16113 % U+0009 (CHARACTER TABULATION)
16114 \DeclareTextCommand{\textHT}{PU}{\80\011}% U+0009
16115 % U+000A (LINE FEED)
16116 \DeclareTextCommand{\textLF}{PU}{\80\012}% U+000A
16117 % U+000D (CARRIAGE RETURN)
16118 \DeclareTextCommand{\textCR}{PU}{\80\015}% U+000D
\80\040: U+0020 SPACE; space, spacehackarabic
\80\041: U+0021 EXCLAMATION MARK; exclam
16119 % U+0022 QUOTATION MARK; quotedbl
16120 \DeclareTextCommand{\textquotedbl}{PU}{"}% \80\042 U+0022
16121 % U+0023 NUMBER SIGN; numbersign
16122 \DeclareTextCommand{\textnumbersign}{PU}{\80\043}% U+0023
16123 % U+0024 DOLLAR SIGN; dollar
16124 \DeclareTextCommand{\textdollar}{PU}{\80\044}% U+0024
16125 %* \textdollar -> \mathdollar
16126 %* \textdollar -> \EyesDollar (marvosym)
16127 % U+0025 PERCENT SIGN; percent
16128 \DeclareTextCommand{\textpercent}{PU}{\80\045}% U+0025
16129 % U+0026 AMPERSAND; ampersand
16130 \DeclareTextCommand{\textampersand}{PU}{\80\046}% U+0026
16131 %* \textampersand -> \binampersand (stmaryrd)
16132 %* \textampersand -> \with (cml)
16133 % U+0027 APOSTROPHE; quotesingle
16134 \DeclareTextCommand{\textquotesingle}{PU}{\80\047}% U+0027
16135 % U+0028 LEFT PARENTHESIS; parenleft
16136 \DeclareTextCommand{\textparenleft}{PU}{\80\050}% U+0028
16137 % U+0029 RIGHT PARENTHESIS; parenright
16138 \DeclareTextCommand{\textparenright}{PU}{\80\051}% U+0029
16139 % U+002A ASTERISK; asterisk; (?)
16140 \DeclareTextCommand{\textasteriskcentered}{PU}{\80\052}% U+002A
16141 % U+002B PLUS SIGN; plus; \MVPlus (marvosym)
16142 \DeclareTextCommand{\textMVPlus}{PU}{\80\053}%* U+002B
16143 % U+002C COMMA; comma; \MVComma (marvosym)
16144 \DeclareTextCommand{\textMVComma}{PU}{\80\054}%* U+002C
16145 % U+002D HYPHEN-MINUS; hyphen; \MVMinus (marvosym)
16146 \DeclareTextCommand{\textMVMinus}{PU}{\80\055}%* U+002D
16147 % U+002E FULL STOP; period; \MVPeriod (marvosym)
16148 \DeclareTextCommand{\textMVPeriod}{PU}{\80\056}%* U+002E
16149 % U+002F SOLIDUS; slash; \MVDivision (marvosym)
16150 \DeclareTextCommand{\textMVDivision}{PU}{\80\057}%* U+002F
16151 % U+0030 DIGIT ZERO; zero; \MVZero (marvosym)
16152 \DeclareTextCommand{\textMVZero}{PU}{\80\060}%* U+0030
16153 % U+0031 DIGIT ONE; one; \MVOne (marvosym)
16154 \DeclareTextCommand{\textMVOne}{PU}{\80\061}%* U+0031
16155 % U+0032 DIGIT TWO; two; \MVTwo (marvosym)
16156 \DeclareTextCommand{\textMVTwo}{PU}{\80\062}%* U+0032
16157 % U+0033 DIGIT THREE; three; \MVThree (marvosym)
16158 \DeclareTextCommand{\textMVThree}{PU}{\80\063}%* U+0033
16159 % U+0034 DIGIT FOUR; four; \MVFour (marvosym)
16160 \DeclareTextCommand{\textMVFour}{PU}{\80\064}%* U+0034
16161 % U+0035 DIGIT FIVE; five; \MVFive (marvosym)

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16162 \DeclareTextCommand{\textMVFive}{PU}{\80\065}%* U+0035
16163 % U+0036 DIGIT SIX; six; \MVSix (marvosym)
16164 \DeclareTextCommand{\textMVSix}{PU}{\80\066}%* U+0036
16165 % U+0037 DIGIT SEVEN; seven; \MVSeven (marvosym)
16166 \DeclareTextCommand{\textMVSeven}{PU}{\80\067}%* U+0037
16167 % U+0038 DIGIT EIGHT; eight; \MVEight (marvosym)
16168 \DeclareTextCommand{\textMVEight}{PU}{\80\070}%* U+0038
16169 % U+0039 DIGIT NINE; nine; \MVNine (marvosym)
16170 \DeclareTextCommand{\textMVNine}{PU}{\80\071}%* U+0039
\80\072: U+003A COLON; colon
\80\073: U+003B SEMICOLON; semicolon
16171 % U+003C LESS-THAN SIGN; less
16172 \DeclareTextCommand{\textless}{PU}{<}% \80\074 U+003C
\80\075: U+003D EQUALS SIGN; equal
16173 % U+003E GREATER-THAN SIGN; greater
16174 \DeclareTextCommand{\textgreater}{PU}{>}% \80\076 U+003E
\80\077: U+003F QUESTION MARK; question
16175 % U+0040 COMMERCIAL AT; at; \MVAt (marvosym)
16176 \DeclareTextCommand{\textMVAt}{PU}{\80\100}%* U+0040
\80\101: U+0041 LATIN CAPITAL LETTER A; A
...
\80\132: U+005A LATIN CAPITAL LETTER Z; Z
\80\133: U+005B LEFT SQUARE BRACKET; bracketleft
16177 % U+005C REVERSE SOLIDUS; backslash
16178 \DeclareTextCommand{\textbackslash}{PU}{\80\134}% U+005C
\80\135: U+005D RIGHT SQUARE BRACKET; bracketright
16179 % U+005E CIRCUMFLEX ACCENT; asciicircum
16180 \DeclareTextCommand{\textasciicircum}{PU}{\80\136}% U+005E
16181 % U+005F LOW LINE; underscore
16182 \DeclareTextCommand{\textunderscore}{PU}{\80\137}% U+005F
16183 %* \textunderscore -> \mathunderscore (LaTeX)
16184 % U+0060 GRAVE ACCENT; grave
16185 \DeclareTextCommand{\textasciigrave}{PU}{\80\140}% U+0060
\80\141: U+0061 LATIN SMALL LETTER A; a
...
\80\150: U+0068 LATIN SMALL LETTER H; h
16186 % U+0069 LATIN SMALL LETTER I; i
16187 \DeclareTextCompositeCommand{\.}{PU}{\i}{i}% \80\151 U+0069
16188 \DeclareTextCompositeCommand{\.}{PU}{\i}{i}% \80\151 U+0069
\80\152: U+006A LATIN SMALL LETTER J; j
...
\80\172: U+007A LATIN SMALL LETTER Z; z
16189 % U+007B LEFT CURLY BRACKET; braceleft
16190 \DeclareTextCommand{\textbraceleft}{PU}{\80\173}% U+007B
16191 % U+007C VERTICAL LINE; *bar, verticalbar
16192 \DeclareTextCommand{\textbar}{PU}{|}% \80\174 U+007C
16193 %* \textbar -> \textvertline (tipa)
16194 % U+007D RIGHT CURLY BRACKET; braceright
16195 \DeclareTextCommand{\textbraceright}{PU}{\80\175}% U+007D
16196 % U+007E TILDE; asciitilde
16197 \DeclareTextCommand{\textasciitilde}{PU}{\80\176}% U+007E

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51.2.3 Latin-1 Supplement: U+0080 to U+00FF

\80\240: U+00A0 NO-BREAK SPACE; nbspace, nonbreakingspace
16198 % U+00A1 INVERTED EXCLAMATION MARK; exclamdown
16199 \DeclareTextCommand{\textexclamdown}{PU}{\80\241}% U+00A1
16200 % U+00A2 CENT SIGN; cent
16201 \DeclareTextCommand{\textcent}{PU}{\80\242}% U+00A2
16202 % U+00A3 POUND SIGN; sterling
16203 \DeclareTextCommand{\textsterling}{PU}{\80\243}% U+00A3
16204 %* \textsterling -> \mathsterling (LaTeX)
16205 %* \textsterling -> \pounds (LaTeX)
16206 % U+00A4 CURRENCY SIGN; currency
16207 \DeclareTextCommand{\textcurrency}{PU}{\80\244}% U+00A4
16208 % U+00A5 YEN SIGN; yen
16209 \DeclareTextCommand{\textyen}{PU}{\80\245}% U+00A5
16210 % U+00A6 BROKEN BAR; brokenbar
16211 \DeclareTextCommand{\textbrokenbar}{PU}{\80\246}% U+00A6
16212 %* \textbrokenbar -> \brokenvert (wasysym)
16213 % U+00A7 SECTION SIGN; section
16214 \DeclareTextCommand{\textsection}{PU}{\80\247}% U+00A7
16215 %* \textsection -> \mathsection (LaTeX)
16216 %* \textsection -> \S (LaTeX)
16217 % U+00A8 DIAERESIS; dieresis
16218 \DeclareTextCommand{\textasciidieresis}{PU}{\80\250}% U+00A8
16219 % U+00A9 COPYRIGHT SIGN; copyright
16220 \DeclareTextCommand{\textcopyright}{PU}{\80\251}%* U+00A9
16221 % U+00AA FEMININE ORDINAL INDICATOR; ordfeminine
16222 \DeclareTextCommand{\textordfeminine}{PU}{\80\252}% U+00AA
16223 % U+00AB LEFT-POINTING DOUBLE ANGLE QUOTATION MARK; guillemotleft
16224 \DeclareTextCommand{\guillemotleft}{PU}{\80\253}% U+00AB
16225 % U+00AC NOT SIGN; logicalnot
16226 \DeclareTextCommand{\textlogicalnot}{PU}{\80\254}% U+00AC
16227 \DeclareTextCommand{\textlnot}{PU}{\80\254}% U+00AC
\\80\255: U+00AD SOFT HYPHEN; sfthyphen, softthyphen
16228 % U+00AE REGISTERED SIGN; registered
16229 \DeclareTextCommand{\textregistered}{PU}{\80\256}% U+00AE
16230 % U+00AF MACRON; *macron, overscore
16231 \DeclareTextCommand{\textasciimacron}{PU}{\80\257}% U+00AF
16232 % U+00B0 DEGREE SIGN; degree
16233 \DeclareTextCommand{\textdegree}{PU}{\80\260}% U+00B0
16234 % U+00B1 PLUS-MINUS SIGN; plusminus
16235 \DeclareTextCommand{\textplusminus}{PU}{\80\261}% U+00B1
16236 % U+00B2 SUPERSCRIPT TWO; twosuperior
16237 \DeclareTextCommand{\texttwosuperior}{PU}{\80\262}%* U+00B2
16238 % U+00B3 SUPERSCRIPT THREE; threesuperior
16239 \DeclareTextCommand{\textthreesuperior}{PU}{\80\263}%* U+00B3
16240 % U+00B4 ACUTE ACCENT; acute
16241 \DeclareTextCommand{\textacute}{PU}{\80\264}% U+00B4
16242 \DeclareTextCommand{\textasciiacute}{PU}{\80\264}% U+00B4
16243 % U+00B5 MICRO SIGN; mu, mul
16244 \DeclareTextCommand{\textmu}{PU}{\80\265}% U+00B5
16245 % U+00B6 PILCROW SIGN; paragraph
16246 \DeclareTextCommand{\textparagraph}{PU}{\80\266}% U+00B6
16247 %* \textparagraph -> \mathparagraph (LaTeX)
16248 % U+00B7 MIDDLE DOT; middot, *periodcentered
16249 \DeclareTextCommand{\textperiodcentered}{PU}{\80\267}% U+00B7

16250 %* \textperiodcentered -> \MultiplicationDot (marvosym)
 16251 %* \textperiodcentered -> \Squaredot (marvosym)
 16252 % U+00B8 CEDILLA; cedilla
 16253 \DeclareTextCommand{\textcedilla}{PU}{\80\270}% U+00B8
 16254 % U+00B9 SUPERSCRIPT ONE; onesuperior
 16255 \DeclareTextCommand{\textonesuperior}{PU}{\80\271}%* U+00B9
 16256 % U+00BA MASCULINE ORDINAL INDICATOR; ordmasculine
 16257 \DeclareTextCommand{\textordmasculine}{PU}{\80\272}% U+00BA
 16258 % U+00BB RIGHT-POINTING DOUBLE ANGLE QUOTATION MARK; guille-
 motright
 16259 \DeclareTextCommand{\guillemotright}{PU}{\80\273}% U+00BB
 16260 % U+00BC VULGAR FRACTION ONE QUARTER; onequarter
 16261 \DeclareTextCommand{\textonequarter}{PU}{\80\274}% U+00BC
 16262 % U+00BD VULGAR FRACTION ONE HALF; onehalf
 16263 \DeclareTextCommand{\textonehalf}{PU}{\80\275}% U+00BD
 16264 % U+00BE VULGAR FRACTION THREE QUARTERS; threequarters
 16265 \DeclareTextCommand{\textthreequarters}{PU}{\80\276}% U+00BE
 16266 % U+00BF INVERTED QUESTION MARK; questiondown
 16267 \DeclareTextCommand{\textquestiondown}{PU}{\80\277}% U+00BF
 16268 % U+00C0 LATIN CAPITAL LETTER A WITH GRAVE; Agrave
 16269 \DeclareTextCompositeCommand{\`}{PU}{A}{\80\300}% U+00C0
 16270 % U+00C1 LATIN CAPITAL LETTER A WITH ACUTE; Aacute
 16271 \DeclareTextCompositeCommand{\'}{PU}{A}{\80\301}% U+00C1
 16272 % U+00C2 LATIN CAPITAL LETTER A WITH CIRCUMFLEX; Acircumflex
 16273 \DeclareTextCompositeCommand{\^}{PU}{A}{\80\302}% U+00C2
 16274 % U+00C3 LATIN CAPITAL LETTER A WITH TILDE; Atilde
 16275 \DeclareTextCompositeCommand{\~}{PU}{A}{\80\303}% U+00C3
 16276 % U+00C4 LATIN CAPITAL LETTER A WITH DIAERESIS; Adieresis
 16277 \DeclareTextCompositeCommand{\"}{PU}{A}{\80\304}% U+00C4
 16278 % U+00C5 LATIN CAPITAL LETTER A WITH RING ABOVE; Aring
 16279 \DeclareTextCompositeCommand{\r}{PU}{A}{\80\305}% U+00C5
 16280 % U+00C6 LATIN CAPITAL LETTER AE; AE
 16281 \DeclareTextCommand{\AE}{PU}{\80\306}% U+00C6
 16282 % U+00C7 LATIN CAPITAL LETTER C WITH CEDILLA; Ccedilla
 16283 \DeclareTextCompositeCommand{\c}{PU}{C}{\80\307}% U+00C7
 16284 % U+00C8 LATIN CAPITAL LETTER E WITH GRAVE; Egrave
 16285 \DeclareTextCompositeCommand{\`}{PU}{E}{\80\310}% U+00C8
 16286 % U+00C9 LATIN CAPITAL LETTER E WITH ACUTE; Eacute
 16287 \DeclareTextCompositeCommand{\'}{PU}{E}{\80\311}% U+00C9
 16288 % U+00CA LATIN CAPITAL LETTER E WITH CIRCUMFLEX; Ecircumflex
 16289 \DeclareTextCompositeCommand{\^}{PU}{E}{\80\312}% U+00CA
 16290 % U+00CB LATIN CAPITAL LETTER E WITH DIAERESIS; Edieresis
 16291 \DeclareTextCompositeCommand{\"}{PU}{E}{\80\313}% U+00CB
 16292 % U+00CC LATIN CAPITAL LETTER I WITH GRAVE; Igrave
 16293 \DeclareTextCompositeCommand{\`}{PU}{I}{\80\314}% U+00CC
 16294 % U+00CD LATIN CAPITAL LETTER I WITH ACUTE; Iacute
 16295 \DeclareTextCompositeCommand{\'}{PU}{I}{\80\315}% U+00CD
 16296 % U+00CE LATIN CAPITAL LETTER I WITH CIRCUMFLEX; Icircumflex
 16297 \DeclareTextCompositeCommand{\^}{PU}{I}{\80\316}% U+00CE
 16298 % U+00CF LATIN CAPITAL LETTER I WITH DIAERESIS; Idieresis
 16299 \DeclareTextCompositeCommand{\"}{PU}{I}{\80\317}% U+00CF
 16300 % U+00D0 LATIN CAPITAL LETTER ETH; Eth
 16301 \DeclareTextCommand{\DH}{PU}{\80\320}% U+00D0
 16302 % U+00D1 LATIN CAPITAL LETTER N WITH TILDE; Ntilde
 16303 \DeclareTextCompositeCommand{\~}{PU}{N}{\80\321}% U+00D1
 16304 % U+00D2 LATIN CAPITAL LETTER O WITH GRAVE; Ograve
 16305 \DeclareTextCompositeCommand{\`}{PU}{O}{\80\322}% U+00D2

16306 % U+00D3 LATIN CAPITAL LETTER O WITH ACUTE; Oacute
16307 \DeclareTextCompositeCommand{\'}{PU}{O}{\80\323}% U+00D3
16308 % U+00D4 LATIN CAPITAL LETTER O WITH CIRCUMFLEX; Ocircumflex
16309 \DeclareTextCompositeCommand{\~}{PU}{O}{\80\324}% U+00D4
16310 % U+00D5 LATIN CAPITAL LETTER O WITH TILDE; Otilde
16311 \DeclareTextCompositeCommand{\~}{PU}{O}{\80\325}% U+00D5
16312 % U+00D6 LATIN CAPITAL LETTER O WITH DIAERESIS; Odieresis
16313 \DeclareTextCompositeCommand{\"}{PU}{O}{\80\326}% U+00D6
16314 % U+00D7 MULTIPLICATION SIGN; multiply
16315 \DeclareTextCommand{\textmultiply}{PU}{\80\327}% U+00D7
16316 %* \textmultiply -> \vartimes (stmaryrd)
16317 %* \textmultiply -> \MVMultiplication (marvosym)
16318 % U+00D8 LATIN CAPITAL LETTER O WITH STROKE; Oslash
16319 \DeclareTextCommand{\O}{PU}{\80\330}% U+00D8
16320 % U+00D9 LATIN CAPITAL LETTER U WITH GRAVE; Ugrave
16321 \DeclareTextCompositeCommand{\`}{PU}{U}{\80\331}% U+00D9
16322 % U+00DA LATIN CAPITAL LETTER U WITH ACUTE; Uacute
16323 \DeclareTextCompositeCommand{\'}{PU}{U}{\80\332}% U+00DA
16324 % U+00DB LATIN CAPITAL LETTER U WITH CIRCUMFLEX; Ucircumflex
16325 \DeclareTextCompositeCommand{\~}{PU}{U}{\80\333}% U+00DB
16326 % U+00DC LATIN CAPITAL LETTER U WITH DIAERESIS; Udieresis
16327 \DeclareTextCompositeCommand{\"}{PU}{U}{\80\334}% U+00DC
16328 % U+00DD LATIN CAPITAL LETTER Y WITH ACUTE; Yacute
16329 \DeclareTextCompositeCommand{\'}{PU}{Y}{\80\335}% U+00DD
16330 % U+00DE LATIN CAPITAL LETTER THORN; Thorn; \TH, \Thorn (wasysym)
16331 \DeclareTextCommand{\TH}{PU}{\80\336}% U+00DE
16332 \DeclareTextCommand{\textThorn}{PU}{\80\336}%* U+00DE
16333 % U+00DF LATIN SMALL LETTER SHARP S; germandbls
16334 \DeclareTextCommand{\ss}{PU}{\80\337}% U+00DF
16335 % U+00E0 LATIN SMALL LETTER A WITH GRAVE; agrave
16336 \DeclareTextCompositeCommand{\`}{PU}{a}{\80\340}% U+00E0
16337 % U+00E1 LATIN SMALL LETTER A WITH ACUTE; aacute
16338 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\341}% U+00E1
16339 % U+00E2 LATIN SMALL LETTER A WITH CIRCUMFLEX; acircumflex
16340 \DeclareTextCompositeCommand{\~}{PU}{a}{\80\342}% U+00E2
16341 % U+00E3 LATIN SMALL LETTER A WITH TILDE; atilde
16342 \DeclareTextCompositeCommand{\~}{PU}{a}{\80\343}% U+00E3
16343 % U+00E4 LATIN SMALL LETTER A WITH DIAERESIS; adieresis
16344 \DeclareTextCompositeCommand{\"}{PU}{a}{\80\344}% U+00E4
16345 % U+00E5 LATIN SMALL LETTER A WITH RING ABOVE; aring
16346 \DeclareTextCompositeCommand{\r}{PU}{a}{\80\345}% U+00E5
16347 % U+00E6 LATIN SMALL LETTER AE; ae
16348 \DeclareTextCommand{\ae}{PU}{\80\346}% U+00E6
16349 % U+00E7 LATIN SMALL LETTER C WITH CEDILLA; ccedilla
16350 \DeclareTextCompositeCommand{\c}{PU}{c}{\80\347}% U+00E7
16351 % U+00E8 LATIN SMALL LETTER E WITH GRAVE; egrave
16352 \DeclareTextCompositeCommand{\`}{PU}{e}{\80\350}% U+00E8
16353 % U+00E9 LATIN SMALL LETTER E WITH ACUTE; eacute
16354 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\351}% U+00E9
16355 % U+00EA LATIN SMALL LETTER E WITH CIRCUMFLEX; ecircumflex
16356 \DeclareTextCompositeCommand{\~}{PU}{e}{\80\352}% U+00EA
16357 % U+00EB LATIN SMALL LETTER E WITH DIAERESIS; edieresis
16358 \DeclareTextCompositeCommand{\"}{PU}{e}{\80\353}% U+00EB
16359 % U+00EC LATIN SMALL LETTER I WITH GRAVE; igrave
16360 \DeclareTextCompositeCommand{\`}{PU}{i}{\80\354}% U+00EC
16361 \DeclareTextCompositeCommand{\`}{PU}{i}{\80\354}% U+00EC
16362 % U+00ED LATIN SMALL LETTER I WITH ACUTE; iacute

16363 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}% U+00ED
16364 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}% U+00ED
16365 % U+00EE LATIN SMALL LETTER I WITH CIRCUMFLEX; icircumflex
16366 \DeclareTextCompositeCommand{\~}{PU}{i}{\80\356}% U+00EE
16367 \DeclareTextCompositeCommand{\~}{PU}{i}{\80\356}% U+00EE
16368 % U+00EF LATIN SMALL LETTER I WITH DIAERESIS; idieresis
16369 \DeclareTextCompositeCommand{\"}{PU}{i}{\80\357}% U+00EF
16370 \DeclareTextCompositeCommand{\"}{PU}{i}{\80\357}% U+00EF
16371 % U+00F0 LATIN SMALL LETTER ETH; eth
16372 \DeclareTextCommand{\dh}{PU}{\80\360}% U+00F0
16373 %* \dh -> \eth (wsuipa, phonetic)
16374 % U+00F1 LATIN SMALL LETTER N WITH TILDE; ntilde
16375 \DeclareTextCompositeCommand{\~}{PU}{n}{\80\361}% U+00F1
16376 % U+00F2 LATIN SMALL LETTER O WITH GRAVE; ograve
16377 \DeclareTextCompositeCommand{\`}{PU}{o}{\80\362}% U+00F2
16378 % U+00F3 LATIN SMALL LETTER O WITH ACUTE; oacute
16379 \DeclareTextCompositeCommand{\'}{PU}{o}{\80\363}% U+00F3
16380 % U+00F4 LATIN SMALL LETTER O WITH CIRCUMFLEX; ocircumflex
16381 \DeclareTextCompositeCommand{\~}{PU}{o}{\80\364}% U+00F4
16382 % U+00F5 LATIN SMALL LETTER O WITH TILDE; otilde
16383 \DeclareTextCompositeCommand{\~}{PU}{o}{\80\365}% U+00F5
16384 % U+00F6 LATIN SMALL LETTER O WITH DIAERESIS; odieresis
16385 \DeclareTextCompositeCommand{\"}{PU}{o}{\80\366}% U+00F6
16386 % U+00F7 DIVISION SIGN; divide
16387 \DeclareTextCommand{\textdivide}{PU}{\80\367}% U+00F7
16388 % U+00F8 LATIN SMALL LETTER O WITH STROKE; oslash
16389 \DeclareTextCommand{\o}{PU}{\80\370}% U+00F8
16390 % U+00F9 LATIN SMALL LETTER U WITH GRAVE; ugrave
16391 \DeclareTextCompositeCommand{\`}{PU}{u}{\80\371}% U+00F9
16392 % U+00FA LATIN SMALL LETTER U WITH ACUTE; uacute
16393 \DeclareTextCompositeCommand{\'}{PU}{u}{\80\372}% U+00FA
16394 % U+00FB LATIN SMALL LETTER U WITH CIRCUMFLEX; ucircumflex
16395 \DeclareTextCompositeCommand{\~}{PU}{u}{\80\373}% U+00FB
16396 % U+00FC LATIN SMALL LETTER U WITH DIAERESIS; udieresis
16397 \DeclareTextCompositeCommand{\"}{PU}{u}{\80\374}% U+00FC
16398 % U+00FD LATIN SMALL LETTER Y WITH ACUTE; yacute
16399 \DeclareTextCompositeCommand{\'}{PU}{y}{\80\375}% U+00FD
16400 % U+00FE LATIN SMALL LETTER THORN; thorn;
16401 % \th, \thorn (wasysym), \textthorn (tipa)
16402 \DeclareTextCommand{\th}{PU}{\80\376}% U+00FE
16403 \DeclareTextCommand{\textthorn}{PU}{\80\376}%* U+00FE
16404 % U+00FF LATIN SMALL LETTER Y WITH DIAERESIS; ydieresis
16405 \DeclareTextCompositeCommand{\"}{PU}{y}{\80\377}% U+00FF

51.2.4 Latin Extended-A: U+0080 to U+017F

16406 % U+0100 LATIN CAPITAL LETTER A WITH MACRON; Amacron
16407 \DeclareTextCompositeCommand{\=}{PU}{A}{\81\000}% U+0100
16408 % U+0101 LATIN SMALL LETTER A WITH MACRON; amacron
16409 \DeclareTextCompositeCommand{\=}{PU}{a}{\81\001}% U+0101
16410 % U+0102 LATIN CAPITAL LETTER A WITH BREVE; Abreve
16411 \DeclareTextCompositeCommand{\u}{PU}{A}{\81\002}% U+0102
16412 % U+0103 LATIN SMALL LETTER A WITH BREVE; abreve
16413 \DeclareTextCompositeCommand{\u}{PU}{a}{\81\003}% U+0103
16414 % U+0104 LATIN CAPITAL LETTER A WITH OGONEK; Aogonek
16415 \DeclareTextCompositeCommand{\k}{PU}{A}{\81\004}% U+0104
16416 % U+0105 LATIN SMALL LETTER A WITH OGONEK; aogonek

16417 \DeclareTextCompositeCommand{\k}{PU}{a}{\81\005}% U+0105
16418 % U+0106 LATIN CAPITAL LETTER C WITH ACUTE; Cacute
16419 \DeclareTextCompositeCommand{\'}{PU}{C}{\81\006}% U+0106
16420 % U+0107 LATIN SMALL LETTER C WITH ACUTE; cacute
16421 \DeclareTextCompositeCommand{\'}{PU}{c}{\81\007}% U+0107
16422 % U+0108 LATIN CAPITAL LETTER C WITH CIRCUMFLEX; Ccircumflex
16423 \DeclareTextCompositeCommand{\^}{PU}{C}{\81\010}% U+0108
16424 % U+0109 LATIN SMALL LETTER C WITH CIRCUMFLEX; ccircumflex
16425 \DeclareTextCompositeCommand{\^}{PU}{c}{\81\011}% U+0109
16426 % U+010A LATIN CAPITAL LETTER C WITH DOT ABOVE; Cdot, Cdotac-
cent
16427 \DeclareTextCompositeCommand{\.}{PU}{C}{\81\012}% U+010A
16428 % U+010B LATIN SMALL LETTER C WITH DOT ABOVE; cdot, cdotaccent
16429 \DeclareTextCompositeCommand{\.}{PU}{c}{\81\013}% U+010B
16430 % U+010C LATIN CAPITAL LETTER C WITH CARON; Ccaron
16431 \DeclareTextCompositeCommand{\v}{PU}{C}{\81\014}% U+010C
16432 % U+010D LATIN SMALL LETTER C WITH CARON; ccaron
16433 \DeclareTextCompositeCommand{\v}{PU}{c}{\81\015}% U+010D
16434 % U+010E LATIN CAPITAL LETTER D WITH CARON; Dcaron
16435 \DeclareTextCompositeCommand{\v}{PU}{D}{\81\016}% U+010E
16436 % U+010F LATIN SMALL LETTER D WITH CARON; dcaron
16437 \DeclareTextCompositeCommand{\v}{PU}{d}{\81\017}% U+010F
16438 % U+0110 LATIN CAPITAL LETTER D WITH STROKE; Dcroat, Dslash
16439 \DeclareTextCommand{\DJ}{PU}{\81\020}% U+0110
16440 % U+0111 LATIN SMALL LETTER D WITH STROKE; dcroat, dmacron;
16441 % \textcrd (tipa)
16442 \DeclareTextCommand{\dj}{PU}{\81\021}% U+0111
16443 \DeclareTextCommand{\textcrd}{PU}{\81\021}% U+0111
16444 %* \textcrd -> \crossd (wsuipa)
16445 % An alternate glyph with the stroke through the bowl:
16446 %* \textcrd -> \textbard (tipa)
16447 %* \textcrd -> \bard (wsuipa)
16448 % U+0112 LATIN CAPITAL LETTER E WITH MACRON; Emacron
16449 \DeclareTextCompositeCommand{\=}{PU}{E}{\81\022}% U+0112
16450 % U+0113 LATIN SMALL LETTER E WITH MACRON; emacron
16451 \DeclareTextCompositeCommand{\=}{PU}{e}{\81\023}% U+0113
16452 % U+0114 LATIN CAPITAL LETTER E WITH BREVE; Ebreve
16453 \DeclareTextCompositeCommand{\u}{PU}{E}{\81\024}% U+0114
16454 % U+0115 LATIN SMALL LETTER E WITH BREVE; ebreve
16455 \DeclareTextCompositeCommand{\u}{PU}{e}{\81\025}% U+0115
16456 % U+0116 LATIN CAPITAL LETTER E WITH DOT ABOVE; Edot, Edotaccent
16457 \DeclareTextCompositeCommand{\.}{PU}{E}{\81\026}% U+0116
16458 % U+0117 LATIN SMALL LETTER E WITH DOT ABOVE; edot, edotaccent
16459 \DeclareTextCompositeCommand{\.}{PU}{e}{\81\027}% U+0117
16460 % U+0118 LATIN CAPITAL LETTER E WITH OGONEK; Eogonek
16461 \DeclareTextCompositeCommand{\k}{PU}{E}{\81\030}% U+0118
16462 % U+0119 LATIN SMALL LETTER E WITH OGONEK; eogonek
16463 \DeclareTextCompositeCommand{\k}{PU}{e}{\81\031}% U+0119
16464 % U+011A LATIN CAPITAL LETTER E WITH CARON; Ecaron
16465 \DeclareTextCompositeCommand{\v}{PU}{E}{\81\032}% U+011A
16466 % U+011B LATIN SMALL LETTER E WITH CARON; ecaron
16467 \DeclareTextCompositeCommand{\v}{PU}{e}{\81\033}% U+011B
16468 % U+011C LATIN CAPITAL LETTER G WITH CIRCUMFLEX; Gcircumflex
16469 \DeclareTextCompositeCommand{\^}{PU}{G}{\81\034}% U+011C
16470 % U+011D LATIN SMALL LETTER G WITH CIRCUMFLEX; gcircumflex
16471 \DeclareTextCompositeCommand{\^}{PU}{g}{\81\035}% U+011D
16472 % U+011E LATIN CAPITAL LETTER G WITH BREVE; Gbreve

16473 \DeclareTextCompositeCommand{\u}{PU}{G}{\81\036}% U+011E
16474 % U+011F LATIN SMALL LETTER G WITH BREVE; gbreve
16475 \DeclareTextCompositeCommand{\u}{PU}{g}{\81\037}% U+011F
16476 % U+0120 LATIN CAPITAL LETTER G WITH DOT ABOVE; Gdot, Gdotaccent
16477 \DeclareTextCompositeCommand{\.}{PU}{G}{\81\040}% U+0120
16478 % U+0121 LATIN SMALL LETTER G WITH DOT ABOVE; gdot, gdotaccent
16479 \DeclareTextCompositeCommand{\.}{PU}{g}{\81\041}% U+0121
16480 % U+0122 LATIN CAPITAL LETTER G WITH CEDILLA; Gcedilla, Gcommaaccent
16481 \DeclareTextCompositeCommand{\c}{PU}{G}{\81\042}% U+0122
16482 % U+0123 LATIN SMALL LETTER G WITH CEDILLA; gcedilla, gcommaaccent
16483 \DeclareTextCompositeCommand{\c}{PU}{g}{\81\043}% U+0123
16484 % U+0124 LATIN CAPITAL LETTER H WITH CIRCUMFLEX; Hcircumflex
16485 \DeclareTextCompositeCommand{\^}{PU}{H}{\81\044}% U+0124
16486 % U+0125 LATIN SMALL LETTER H WITH CIRCUMFLEX; hcircumflex
16487 \DeclareTextCompositeCommand{\^}{PU}{h}{\81\045}% U+0125
16488 % U+0126 LATIN CAPITAL LETTER H WITH STROKE; Hbar
16489 \DeclareTextCommand{\textHslash}{PU}{\81\046}% U+0126
16490 % U+0127 LATIN SMALL LETTER H WITH STROKE; hbar; \hbar (AmS)
16491 \DeclareTextCommand{\texthbar}{PU}{\81\047}%* U+0127
16492 %* \texthbar -> \textcrh (tipa)
16493 %* \texthbar -> \crossh (wsuipa)
16494 %* \texthbar -> \planck (phonetic)
16495 % U+0128 LATIN CAPITAL LETTER I WITH TILDE; Itilde
16496 \DeclareTextCompositeCommand{\~}{PU}{I}{\81\050}% U+0128
16497 % U+0129 LATIN SMALL LETTER I WITH TILDE; itilde
16498 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}% U+0129
16499 \DeclareTextCompositeCommand{\~}{PU}{\i}{\81\051}% U+0129
16500 % U+012A LATIN CAPITAL LETTER I WITH MACRON; Imacron
16501 \DeclareTextCompositeCommand{\=}{PU}{I}{\81\052}% U+012A
16502 % U+012B LATIN SMALL LETTER I WITH MACRON; imacron
16503 \DeclareTextCompositeCommand{\=}{PU}{i}{\81\053}% U+012B
16504 \DeclareTextCompositeCommand{\=}{PU}{\i}{\81\053}% U+012B
16505 % U+012C LATIN CAPITAL LETTER I WITH BREVE; Ibreve
16506 \DeclareTextCompositeCommand{\u}{PU}{I}{\81\054}% U+012C
16507 % U+012D LATIN SMALL LETTER I WITH BREVE; ibreve
16508 \DeclareTextCompositeCommand{\u}{PU}{i}{\81\055}% U+012D
16509 \DeclareTextCompositeCommand{\u}{PU}{\i}{\81\055}% U+012D
16510 % U+012E LATIN CAPITAL LETTER I WITH OGONEK; Iogonek
16511 \DeclareTextCompositeCommand{\k}{PU}{I}{\81\056}% U+012E
16512 % U+012F LATIN SMALL LETTER I WITH OGONEK; iogonek
16513 \DeclareTextCompositeCommand{\k}{PU}{i}{\81\057}% U+012F
16514 \DeclareTextCompositeCommand{\k}{PU}{\i}{\81\057}% U+012F
16515 % U+0130 LATIN CAPITAL LETTER I WITH DOT ABOVE; Idot, Idotaccent
16516 \DeclareTextCompositeCommand{\.}{PU}{I}{\81\060}% U+0130
16517 % U+0131 LATIN SMALL LETTER DOTLESS I; dotlessi
16518 \DeclareTextCommand{\i}{PU}{\81\061}% U+0131
16519 % U+0132 LATIN CAPITAL LIGATURE IJ; IJ
16520 \DeclareTextCommand{\IJ}{PU}{\81\062}% U+0132
16521 % U+0133 LATIN SMALL LIGATURE IJ; ij
16522 \DeclareTextCommand{\ij}{PU}{\81\063}% U+0133
16523 % U+0134 LATIN CAPITAL LETTER J WITH CIRCUMFLEX; Jcircumflex
16524 \DeclareTextCompositeCommand{\^}{PU}{J}{\81\064}% U+0134
16525 % U+0135 LATIN SMALL LETTER J WITH CIRCUMFLEX; jcircumflex
16526 \DeclareTextCompositeCommand{\^}{PU}{j}{\81\065}% U+0135
16527 \DeclareTextCompositeCommand{\^}{PU}{\j}{\81\065}% U+0135

16528 % U+0136 LATIN CAPITAL LETTER K WITH CEDILLA; Kcedilla, Kcommaaccent
cent
16529 \DeclareTextCompositeCommand{\c}{PU}{K}{\81\066}% U+0136
16530 % U+0137 LATIN SMALL LETTER K WITH CEDILLA; kcedilla, kcommaaccent
16531 \DeclareTextCompositeCommand{\c}{PU}{k}{\81\067}% U+0137

The canonical name of U+0138, small letter kra, would be `\textkgreenlandic`, following the glyph naming convention. However `latex/base/inputenc.dtx` has choosen `\textkra`.

16532 % U+0138 LATIN SMALL LETTER KRA; kgreenlandic
16533 \DeclareTextCommand{\textkra}{PU}{\81\070}% U+0138
16534 % U+0139 LATIN CAPITAL LETTER L WITH ACUTE; Lacute
16535 \DeclareTextCompositeCommand{\'}{PU}{L}{\81\071}% U+0139
16536 % U+013A LATIN SMALL LETTER L WITH ACUTE; lacute
16537 \DeclareTextCompositeCommand{\'}{PU}{l}{\81\072}% U+013A
16538 % U+013B LATIN CAPITAL LETTER L WITH CEDILLA; Lcedilla, Lcommaaccent
cent
16539 \DeclareTextCompositeCommand{\c}{PU}{L}{\81\073}% U+013B
16540 % U+013C LATIN SMALL LETTER L WITH CEDILLA; lcedilla, lcommaaccent
16541 \DeclareTextCompositeCommand{\c}{PU}{l}{\81\074}% U+013C
16542 % U+013D LATIN CAPITAL LETTER L WITH CARON; Lcaron
16543 \DeclareTextCompositeCommand{\v}{PU}{L}{\81\075}% U+013D
16544 % U+013E LATIN SMALL LETTER L WITH CARON; lcaron
16545 \DeclareTextCompositeCommand{\v}{PU}{l}{\81\076}% U+013E

There seems to be no variants of letters ‘L’ and ‘l’ with a dot above (reasonable). Therefore the `\.` accent is reused instead of making a separate accent macro `\textmiddledot`.

16546 % U+013F LATIN CAPITAL LETTER L WITH MIDDLE DOT; Ldot, Ldotaccent
cent
16547 \DeclareTextCompositeCommand{\.}{PU}{L}{\81\077}% U+013F
16548 % U+0140 LATIN SMALL LETTER L WITH MIDDLE DOT; ldot, ldotaccent
16549 \DeclareTextCompositeCommand{\.}{PU}{l}{\81\100}% U+0140
16550 % U+0141 LATIN CAPITAL LETTER L WITH STROKE; Lslash
16551 \DeclareTextCommand{\L}{PU}{\81\101}% U+0141
16552 % U+0142 LATIN SMALL LETTER L WITH STROKE; lslash
16553 \DeclareTextCommand{\l}{PU}{\81\102}% U+0142
16554 % U+0143 LATIN CAPITAL LETTER N WITH ACUTE; Nacute
16555 \DeclareTextCompositeCommand{\'}{PU}{N}{\81\103}% U+0143
16556 % U+0144 LATIN SMALL LETTER N WITH ACUTE; nacute
16557 \DeclareTextCompositeCommand{\'}{PU}{n}{\81\104}% U+0144
16558 % U+0145 LATIN CAPITAL LETTER N WITH CEDILLA; Ncedilla, Ncommaaccent
cent
16559 \DeclareTextCompositeCommand{\c}{PU}{N}{\81\105}% U+0145
16560 % U+0146 LATIN SMALL LETTER N WITH CEDILLA; ncedilla, ncommaaccent
16561 \DeclareTextCompositeCommand{\c}{PU}{n}{\81\106}% U+0146
16562 % U+0147 LATIN CAPITAL LETTER N WITH CARON; Ncaron
16563 \DeclareTextCompositeCommand{\v}{PU}{N}{\81\107}% U+0147
16564 % U+0148 LATIN SMALL LETTER N WITH CARON; ncaron
16565 \DeclareTextCompositeCommand{\v}{PU}{n}{\81\110}% U+0148
16566 % U+0149 LATIN SMALL LETTER N PRECEDED BY APOSTROPHE; napostrophe, quoterightn
16567 \DeclareTextCommand{\textnapostrophe}{PU}{\81\111}% U+0149
16568 % U+014A LATIN CAPITAL LETTER ENG; Eng
16569 \DeclareTextCommand{\NG}{PU}{\81\112}% U+014A
16570 % U+014B LATIN SMALL LETTER ENG; eng
16571 \DeclareTextCommand{\ng}{PU}{\81\113}% U+014B
16572 %* \ng -> \eng (wsuipa)

16573 %* \ng -> \engma (phonetic)
 16574 % U+014C LATIN CAPITAL LETTER O WITH MACRON; Omacron
 16575 \DeclareTextCompositeCommand{\=}{PU}{O}{\81\114}% U+014C
 16576 % U+014D LATIN SMALL LETTER O WITH MACRON; omacron
 16577 \DeclareTextCompositeCommand{\=}{PU}{o}{\81\115}% U+014D
 16578 % U+014E LATIN CAPITAL LETTER O WITH BREVE; Obreve
 16579 \DeclareTextCompositeCommand{\u}{PU}{O}{\81\116}% U+014E
 16580 % U+014F LATIN SMALL LETTER O WITH BREVE; obreve
 16581 \DeclareTextCompositeCommand{\u}{PU}{o}{\81\117}% U+014F
 16582 % U+0150 LATIN CAPITAL LETTER O WITH DOUBLE ACUTE; Odblac-
 cute, Ohungarumlaut
 16583 \DeclareTextCompositeCommand{\H}{PU}{O}{\81\120}% U+0150
 16584 % U+0151 LATIN SMALL LETTER O WITH DOUBLE ACUTE; odbla-
 cute, ohungarumlaut
 16585 \DeclareTextCompositeCommand{\H}{PU}{o}{\81\121}% U+0151
 16586 % U+0152 LATIN CAPITAL LIGATURE OE; OE
 16587 \DeclareTextCommand{\OE}{PU}{\81\122}% U+0152
 16588 % U+0153 LATIN SMALL LIGATURE OE; oe
 16589 \DeclareTextCommand{\oe}{PU}{\81\123}% U+0153
 16590 % U+0154 LATIN CAPITAL LETTER R WITH ACUTE; Racute
 16591 \DeclareTextCompositeCommand{\'}{PU}{R}{\81\124}% U+0154
 16592 % U+0155 LATIN SMALL LETTER R WITH ACUTE; racute
 16593 \DeclareTextCompositeCommand{\'}{PU}{r}{\81\125}% U+0155
 16594 % U+0156 LATIN CAPITAL LETTER R WITH CEDILLA; Rcedilla, Rcommaac-
 cent
 16595 \DeclareTextCompositeCommand{\c}{PU}{R}{\81\126}% U+0156
 16596 % U+0157 LATIN SMALL LETTER R WITH CEDILLA; rcedilla, rcommaaccent
 16597 \DeclareTextCompositeCommand{\c}{PU}{r}{\81\127}% U+0157
 16598 % U+0158 LATIN CAPITAL LETTER R WITH CARON; Rcaron
 16599 \DeclareTextCompositeCommand{\v}{PU}{R}{\81\130}% U+0158
 16600 % U+0159 LATIN SMALL LETTER R WITH CARON; rcaron
 16601 \DeclareTextCompositeCommand{\v}{PU}{r}{\81\131}% U+0159
 16602 % U+015A LATIN CAPITAL LETTER S WITH ACUTE; Sacute
 16603 \DeclareTextCompositeCommand{\'}{PU}{S}{\81\132}% U+015A
 16604 % U+015B LATIN SMALL LETTER S WITH ACUTE; sacute
 16605 \DeclareTextCompositeCommand{\'}{PU}{s}{\81\133}% U+015B
 16606 % U+015C LATIN CAPITAL LETTER S WITH CIRCUMFLEX; Scircumflex
 16607 \DeclareTextCompositeCommand{\^}{PU}{S}{\81\134}% U+015C
 16608 % U+015D LATIN SMALL LETTER S WITH CIRCUMFLEX; scircumflex
 16609 \DeclareTextCompositeCommand{\^}{PU}{s}{\81\135}% U+015D
 16610 % U+015E LATIN CAPITAL LETTER S WITH CEDILLA; Scedilla
 16611 \DeclareTextCompositeCommand{\c}{PU}{S}{\81\136}% U+015E
 16612 % U+015F LATIN SMALL LETTER S WITH CEDILLA; scedilla
 16613 \DeclareTextCompositeCommand{\c}{PU}{s}{\81\137}% U+015F
 16614 % U+0160 LATIN CAPITAL LETTER S WITH CARON; Scaron
 16615 \DeclareTextCompositeCommand{\v}{PU}{S}{\81\140}% U+0160
 16616 % U+0161 LATIN SMALL LETTER S WITH CARON; scaron
 16617 \DeclareTextCompositeCommand{\v}{PU}{s}{\81\141}% U+0161
 16618 % U+0162 LATIN CAPITAL LETTER T WITH CEDILLA; Tcedilla, Tcommaac-
 cent
 16619 \DeclareTextCompositeCommand{\c}{PU}{T}{\81\142}% U+0162
 16620 % U+0163 LATIN SMALL LETTER T WITH CEDILLA; tcedilla, tcommaaccent
 16621 \DeclareTextCompositeCommand{\c}{PU}{t}{\81\143}% U+0163
 16622 % U+0164 LATIN CAPITAL LETTER T WITH CARON; Tcaron
 16623 \DeclareTextCompositeCommand{\v}{PU}{T}{\81\144}% U+0164
 16624 % U+0165 LATIN SMALL LETTER T WITH CARON; tcaron
 16625 \DeclareTextCompositeCommand{\v}{PU}{t}{\81\145}% U+0165

16626 % U+0166 LATIN CAPITAL LETTER T WITH STROKE; Tbar
16627 \DeclareTextCommand{\textTslash}{PU}{\81\146}% U+0166
16628 % U+0167 LATIN SMALL LETTER T WITH STROKE; tbar
16629 \DeclareTextCommand{\texttslash}{PU}{\81\147}% U+0167
16630 % U+0168 LATIN CAPITAL LETTER U WITH TILDE; Utilde
16631 \DeclareTextCompositeCommand{\~}{PU}{U}{\81\150}% U+0168
16632 % U+0169 LATIN SMALL LETTER U WITH TILDE; utilde
16633 \DeclareTextCompositeCommand{\~}{PU}{u}{\81\151}% U+0169
16634 % U+016A LATIN CAPITAL LETTER U WITH MACRON; Umacron
16635 \DeclareTextCompositeCommand{\=}{PU}{U}{\81\152}% U+016A
16636 % U+016B LATIN SMALL LETTER U WITH MACRON; umacron
16637 \DeclareTextCompositeCommand{\=}{PU}{u}{\81\153}% U+016B
16638 % U+016C LATIN CAPITAL LETTER U WITH BREVE; Ubreve
16639 \DeclareTextCompositeCommand{\u}{PU}{U}{\81\154}% U+016C
16640 % U+016D LATIN SMALL LETTER U WITH BREVE; ubreve
16641 \DeclareTextCompositeCommand{\u}{PU}{u}{\81\155}% U+016D
16642 % U+016E LATIN CAPITAL LETTER U WITH RING ABOVE; Uring
16643 \DeclareTextCompositeCommand{\r}{PU}{U}{\81\156}% U+016E
16644 % U+016F LATIN SMALL LETTER U WITH RING ABOVE; uring
16645 \DeclareTextCompositeCommand{\r}{PU}{u}{\81\157}% U+016F
16646 % U+0170 LATIN CAPITAL LETTER U WITH DOUBLE ACUTE; Udblacute, Uhungarumlaut
16647 \DeclareTextCompositeCommand{\H}{PU}{U}{\81\160}% U+0170
16648 % U+0171 LATIN SMALL LETTER U WITH DOUBLE ACUTE; udblacute, uhungarumlaut
16649 \DeclareTextCompositeCommand{\H}{PU}{u}{\81\161}% U+0171
16650 % U+0172 LATIN CAPITAL LETTER U WITH OGONEK; Uogonek
16651 \DeclareTextCompositeCommand{\k}{PU}{U}{\81\162}% U+0172
16652 % U+0173 LATIN SMALL LETTER U WITH OGONEK; uogonek
16653 \DeclareTextCompositeCommand{\k}{PU}{u}{\81\163}% U+0173
16654 % U+0174 LATIN CAPITAL LETTER W WITH CIRCUMFLEX; Wcircumflex
16655 \DeclareTextCompositeCommand{\^}{PU}{W}{\81\164}% U+0174
16656 % U+0175 LATIN SMALL LETTER W WITH CIRCUMFLEX; wcircumflex
16657 \DeclareTextCompositeCommand{\^}{PU}{w}{\81\165}% U+0175
16658 % U+0176 LATIN CAPITAL LETTER Y WITH CIRCUMFLEX; Ycircumflex
16659 \DeclareTextCompositeCommand{\^}{PU}{Y}{\81\166}% U+0176
16660 % U+0177 LATIN SMALL LETTER Y WITH CIRCUMFLEX; ycircumflex
16661 \DeclareTextCompositeCommand{\^}{PU}{y}{\81\167}% U+0177
16662 % U+0178 LATIN CAPITAL LETTER Y WITH DIAERESIS; Ydieresis
16663 \DeclareTextCompositeCommand{\"}{PU}{Y}{\81\170}% U+0178
16664 % U+0179 LATIN CAPITAL LETTER Z WITH ACUTE; Zacute
16665 \DeclareTextCompositeCommand{\'}{PU}{Z}{\81\171}% U+0179
16666 % U+017A LATIN SMALL LETTER Z WITH ACUTE; zacute
16667 \DeclareTextCompositeCommand{\'}{PU}{z}{\81\172}% U+017A
16668 % U+017B LATIN CAPITAL LETTER Z WITH DOT ABOVE; Zdot, Zdotaccent
16669 \DeclareTextCompositeCommand{\.}{PU}{Z}{\81\173}% U+017B
16670 % U+017C LATIN SMALL LETTER Z WITH DOT ABOVE; zdot, zdotaccent
16671 \DeclareTextCompositeCommand{\.}{PU}{z}{\81\174}% U+017C
16672 % U+017D LATIN CAPITAL LETTER Z WITH CARON; Zcaron
16673 \DeclareTextCompositeCommand{\v}{PU}{Z}{\81\175}% U+017D
16674 % U+017E LATIN SMALL LETTER Z WITH CARON; zcaron
16675 \DeclareTextCompositeCommand{\v}{PU}{z}{\81\176}% U+017E
16676 % U+017F LATIN SMALL LETTER LONG S; longs, slong
16677 \DeclareTextCommand{\textlongS}{PU}{\81\177}% U+017F

51.2.5 Latin Extended-B: U+0180 to U+024F

16678 % U+0180 LATIN SMALL LETTER B WITH STROKE; bstroke; \textcrb (tipa)

16679 \DeclareTextCommand{\textcrb}{PU}{\81\200}% U+0180
16680 %* \textcrb -> \crossb (wsuipa)
16681 % An alternate glyph with the stroke through the bowl:
16682 %* \textcrb -> \textbarb (tipa)
16683 %* \textcrb -> \barb (wsuipa)
16684 % U+0181 LATIN CAPITAL LETTER B WITH HOOK; Bhook; \hausab (phonetic)
16685 \DeclareTextCommand{\texthausab}{PU}{\81\201}%* U+0181
16686 % U+0188 LATIN SMALL LETTER C WITH HOOK; chook; \texthtc (tipa)
16687 \DeclareTextCommand{\texthtc}{PU}{\81\210}% U+0188
16688 % U+018A LATIN CAPITAL LETTER D WITH HOOK; Dhook; \hausad (phonetic)
16689 \DeclareTextCommand{\texthausad}{PU}{\81\212}%* U+018A
16690 % U+018E LATIN CAPITAL LETTER REVERSED E; Ereversed
16691 \DeclareTextCommand{\textEreversed}{PU}{\81\216}% U+018E
16692 \DeclareTextCommand{\textrevE}{PU}{\81\216}% U+018E
16693 % U+0192 LATIN SMALL LETTER F WITH HOOK; florin
16694 \DeclareTextCommand{\textflorin}{PU}{\81\222}% U+0192
16695 %* \textflorin -> \Florin (marvosym)
16696 % U+0195 LATIN SMALL LETTER HV; hv; \texthvlig (tipa)
16697 \DeclareTextCommand{\texthvlig}{PU}{\81\225}% U+0195
16698 %* \texthvlig -> \hv (wsuipa)
16699 % U+0198 LATIN CAPITAL LETTER K WITH HOOK; Khook; \hausak (phonetic)
16700 \DeclareTextCommand{\texthausak}{PU}{\81\230}%* U+0198
16701 % U+0199 LATIN SMALL LETTER K WITH HOOK; khook; \texthtk (tipa)
16702 \DeclareTextCommand{\texthtk}{PU}{\81\231}% U+0199
16703 %* \texthtk -> \hausak (phonetic)
16704 % U+019A LATIN SMALL LETTER L WITH BAR; lbar;
16705 % \textbarl (tipa), \barl (wsuipa)
16706 \DeclareTextCommand{\textbarl}{PU}{\81\232}%* U+019A
16707 % U+019B LATIN SMALL LETTER LAMBDA WITH STROKE/
16708 % LATIN SMALL LETTER BARRED LAMBDA; lambdastroke;
16709 % \textcrlambda (tipa)
16710 \DeclareTextCommand{\textcrlambda}{PU}{\81\233}% U+019B
16711 %* \textcrlambda -> \crossnilambda (wsuipa)
16712 %* \textcrlambda -> \barlambd (phonetic)
16713 %* \textcrlambda -> \lambdabar (txfonts/pxfonts)
16714 %* \textcrlambda -> \lambdash (txfonts/pxfonts)
16715 % U+019E LATIN SMALL LETTER N WITH LONG RIGHT LEG; nlegright-long;
16716 % \textnrleg (tipx)
16717 \DeclareTextCommand{\textPUnrleg}{PU}{\81\236}% U+019E
16718 %* \textPUnrleg -> \textnrleg (tipx)
16719 % U+01A5 LATIN SMALL LETTER P WITH HOOK; phook; \texthtp (tipa)
16720 \DeclareTextCommand{\texthtp}{PU}{\81\245}% U+01A5
16721 % U+01AB LATIN SMALL LETTER T WITH PALATAL HOOK; tpalatalhook;
16722 % \textlhookt (tipa)
16723 \DeclareTextCommand{\textlhookt}{PU}{\81\253}% U+01AB
16724 % U+01AD LATIN SMALL LETTER T WITH HOOK; thook; \texthtt (tipa)
16725 \DeclareTextCommand{\texthtt}{PU}{\81\255}% U+01AD
16726 % U+01B9 LATIN SMALL LETTER EZH REVERSED/
16727 % LATIN SMALL LETTER REVERSED YOGH; \textrevyogh (tipa)
16728 \DeclareTextCommand{\textrevyogh}{PU}{\81\271}% U+01B9
16729 % U+01BB LATIN LETTER TWO WITH STROKE; twostroke; \textcrtwo (tipa)
16730 \DeclareTextCommand{\textcrtwo}{PU}{\81\273}% U+01BB
16731 % U+01BE LATIN LETTER INVERTED GLOTTAL STOP WITH STROKE;

16732 % glottalinvertedstroke; \textcrinvglotstop (tipa)
16733 \DeclareTextCommand{\textcrinvglotstop}{PU}{\81\276}% U+01BE
16734 % U+01BF LATIN LETTER WYNN; wynn; \textwynn (tipa)
16735 \DeclareTextCommand{\textwynn}{PU}{\81\277}% U+01BF
16736 % U+01C0 LATIN LETTER DENTAL CLICK/LATIN LETTER PIPE; clickden-
tal;
16737 % \textpipe (tipa)
16738 \DeclareTextCommand{\textpipe}{PU}{\81\300}% U+01C0
16739 %* \textpipe -> \textpipevar (tipx)
16740 % U+01C1 LATIN LETTER LATERAL CLICK/LATIN LETTER
16741 % DOUBLE PIPE; clicklateral; \textdoublepipe (tipa)
16742 \DeclareTextCommand{\textdoublepipe}{PU}{\81\301}% U+01C1
16743 %* \textdoublepipe -> \textdoublepipevar (tipx)
16744 % U+01C2 LATIN LETTER ALVEOLAR CLICK/LATIN LETTER PIPE DOU-
BLE BAR;
16745 % clickalveolar; \textdoublebarpipe (tipa)
16746 \DeclareTextCommand{\textdoublebarpipe}{PU}{\81\302}% U+01C2
16747 %* \textdoublebarpipe -> \textdoublebarpipevar (tipx)
16748 % U+01CD LATIN CAPITAL LETTER A WITH CARON; Acaron
16749 \DeclareTextCompositeCommand{\v}{PU}{A}{\81\315}% U+01CD
16750 % U+01CE LATIN SMALL LETTER A WITH CARON; acarón
16751 \DeclareTextCompositeCommand{\v}{PU}{a}{\81\316}% U+01CE
16752 % U+01CF LATIN CAPITAL LETTER I WITH CARON; Icaron
16753 \DeclareTextCompositeCommand{\v}{PU}{I}{\81\317}% U+01CF
16754 % U+01D0 LATIN SMALL LETTER I WITH CARON; icarón
16755 \DeclareTextCompositeCommand{\v}{PU}{i}{\81\320}% U+01D0
16756 \DeclareTextCompositeCommand{\v}{PU}{i}{\81\320}% U+01D0
16757 % U+01D1 LATIN CAPITAL LETTER O WITH CARON; Ocaron
16758 \DeclareTextCompositeCommand{\v}{PU}{O}{\81\321}% U+01D1
16759 % U+01D2 LATIN SMALL LETTER O WITH CARON; ocarón
16760 \DeclareTextCompositeCommand{\v}{PU}{o}{\81\322}% U+01D2
16761 % U+01D3 LATIN CAPITAL LETTER U WITH CARON; Ucaron
16762 \DeclareTextCompositeCommand{\v}{PU}{U}{\81\323}% U+01D3
16763 % U+01D4 LATIN SMALL LETTER U WITH CARON; ucarón
16764 \DeclareTextCompositeCommand{\v}{PU}{u}{\81\324}% U+01D4
16765 % U+01DD LATIN SMALL LETTER TURNED E; eturned; \inve (wasysym)
16766 \DeclareTextCommand{\textinve}{PU}{\81\335}%* U+01DD
16767 % U+01E4 LATIN CAPITAL LETTER G WITH STROKE; Gstroke
16768 \DeclareTextCommand{\textGslash}{PU}{\81\344}% U+01E4
16769 % U+01E5 LATIN SMALL LETTER G WITH STROKE; gstroke
16770 \DeclareTextCommand{\textgslash}{PU}{\81\345}% U+01E5
16771 %* \textgslash -> \textcrg (tipa)
16772 % U+01E6 LATIN CAPITAL LETTER G WITH CARON; Gcaron
16773 \DeclareTextCompositeCommand{\v}{PU}{G}{\81\346}% U+01E6
16774 % U+01E7 LATIN SMALL LETTER G WITH CARON; gcarón
16775 \DeclareTextCompositeCommand{\v}{PU}{g}{\81\347}% U+01E7
16776 % U+01E8 LATIN CAPITAL LETTER K WITH CARON; Kcaron
16777 \DeclareTextCompositeCommand{\v}{PU}{K}{\81\350}% U+01E8
16778 % U+01E9 LATIN SMALL LETTER K WITH CARON; kcarón
16779 \DeclareTextCompositeCommand{\v}{PU}{k}{\81\351}% U+01E9
16780 % U+01EA LATIN CAPITAL LETTER O WITH OGONEK; Oogonek
16781 \DeclareTextCompositeCommand{\k}{PU}{O}{\81\352}% U+01EA
16782 % U+01EB LATIN SMALL LETTER O WITH OGONEK; oogonek
16783 \DeclareTextCompositeCommand{\k}{PU}{o}{\81\353}% U+01EB
16784 % U+01F0 LATIN SMALL LETTER J WITH CARON; jcarón
16785 \DeclareTextCompositeCommand{\v}{PU}{j}{\81\360}% U+01F0
16786 \DeclareTextCompositeCommand{\v}{PU}{j}{\81\360}% U+01F0

16787 % U+01F4 LATIN CAPITAL LETTER G WITH ACUTE; Gacute
16788 \DeclareTextCompositeCommand{\'}{PU}{G}{\81\364}% U+01F4
16789 % U+01F5 LATIN SMALL LETTER G WITH ACUTE; gacute
16790 \DeclareTextCompositeCommand{\'}{PU}{g}{\81\365}% U+01F5
16791 % U+01F8 LATIN CAPITAL LETTER N WITH GRAVE
16792 \DeclareTextCompositeCommand{\`}{PU}{N}{\81\370}% U+01F8
16793 % U+01F9 LATIN SMALL LETTER N WITH GRAVE
16794 \DeclareTextCompositeCommand{\`}{PU}{n}{\81\371}% U+01F9
16795 % U+01FC LATIN CAPITAL LETTER AE WITH ACUTE; AEacute
16796 \DeclareTextCompositeCommand{\'}{PU}{\AE}{\81\374}% U+01FC
16797 % U+01FD LATIN SMALL LETTER AE WITH ACUTE; aeacute
16798 \DeclareTextCompositeCommand{\'}{PU}{\ae}{\81\375}% U+01FD
16799 % U+01FE LATIN CAPITAL LETTER O WITH STROKE AND ACUTE;
16800 % *Oslashacute, Ostrokeacut
16801 \DeclareTextCompositeCommand{\'}{PU}{\O}{\81\376}% U+01FE
16802 % U+01FF LATIN SMALL LETTER O WITH STROKE AND ACUTE;
16803 % *oslashacute, ostrokeacute
16804 \DeclareTextCompositeCommand{\'}{PU}{\o}{\81\377}% U+01FF
16805 % U+0200 LATIN CAPITAL LETTER A WITH DOUBLE GRAVE; Adblgrave
16806 \DeclareTextCompositeCommand{\G}{PU}{A}{\82\000}% U+0200
16807 % U+0201 LATIN SMALL LETTER A WITH DOUBLE GRAVE; adblgrave
16808 \DeclareTextCompositeCommand{\G}{PU}{a}{\82\001}% U+0201
16809 % U+0204 LATIN CAPITAL LETTER E WITH DOUBLE GRAVE; Edblgrave
16810 \DeclareTextCompositeCommand{\G}{PU}{E}{\82\004}% U+0204
16811 % U+0205 LATIN SMALL LETTER E WITH DOUBLE GRAVE; edblgrave
16812 \DeclareTextCompositeCommand{\G}{PU}{e}{\82\005}% U+0205
16813 % U+0206 LATIN CAPITAL LETTER E WITH INVERTED BREVE; Einvert-
edbreve
16814 \DeclareTextCompositeCommand{\textinvbreve}{PU}{E}{\82\006}% U+0206
16815 % U+0207 LATIN SMALL LETTER E WITH INVERTED BREVE; einverted-
breve
16816 \DeclareTextCompositeCommand{\textinvbreve}{PU}{e}{\82\007}% U+0207
16817 % U+0208 LATIN CAPITAL LETTER I WITH DOUBLE GRAVE; Idblgrave
16818 \DeclareTextCompositeCommand{\G}{PU}{I}{\82\010}% U+0208
16819 % U+0209 LATIN SMALL LETTER I WITH DOUBLE GRAVE; idblgrave
16820 \DeclareTextCompositeCommand{\G}{PU}{i}{\82\011}% U+0209
16821 \DeclareTextCompositeCommand{\G}{PU}{i}{\82\011}% U+0209
16822 % U+020A LATIN CAPITAL LETTER I WITH INVERTED BREVE; Iinverted-
breve
16823 \DeclareTextCompositeCommand{\textinvbreve}{PU}{I}{\82\012}% U+020A
16824 % U+020B LATIN SMALL LETTER I WITH INVERTED BREVE; iinverted-
breve
16825 \DeclareTextCompositeCommand{\textinvbreve}{PU}{i}{\82\013}% U+020B
16826 \DeclareTextCompositeCommand{\textinvbreve}{PU}{i}{\82\013}% U+020B
16827 % U+020C LATIN CAPITAL LETTER O WITH DOUBLE GRAVE; Odblgrave
16828 \DeclareTextCompositeCommand{\G}{PU}{O}{\82\014}% U+020C
16829 % U+020D LATIN SMALL LETTER O WITH DOUBLE GRAVE; odblgrave
16830 \DeclareTextCompositeCommand{\G}{PU}{o}{\82\015}% U+020D
16831 % U+020E LATIN CAPITAL LETTER O WITH INVERTED BREVE; Oinvert-
edbreve
16832 \DeclareTextCompositeCommand{\textinvbreve}{PU}{O}{\82\016}% U+020E
16833 % U+020F LATIN SMALL LETTER O WITH INVERTED BREVE; oinverted-
breve
16834 \DeclareTextCompositeCommand{\textinvbreve}{PU}{o}{\82\017}% U+020F
16835 % U+0210 LATIN CAPITAL LETTER R WITH DOUBLE GRAVE; Rdblgrave
16836 \DeclareTextCompositeCommand{\G}{PU}{R}{\82\020}% U+0210
16837 % U+0211 LATIN SMALL LETTER R WITH DOUBLE GRAVE; rdblgrave

16838 \DeclareTextCompositeCommand{\G}{PU}{r}{\82\021}% U+0211
 16839 % U+0214 LATIN CAPITAL LETTER U WITH DOUBLE GRAVE; Udblgrave
 16840 \DeclareTextCompositeCommand{\G}{PU}{U}{\82\024}% U+0214
 16841 % U+0215 LATIN SMALL LETTER U WITH DOUBLE GRAVE; udblgrave
 16842 \DeclareTextCompositeCommand{\G}{PU}{u}{\82\025}% U+0215
 16843 % U+0216 LATIN CAPITAL LETTER U WITH INVERTED BREVE; Uinvert-
 edbreve
 16844 \DeclareTextCompositeCommand{\textinvbreve}{PU}{U}{\82\026}% U+0216
 16845 % U+0217 LATIN SMALL LETTER U WITH INVERTED BREVE; uinverted-
 breve
 16846 \DeclareTextCompositeCommand{\textinvbreve}{PU}{u}{\82\027}% U+0217
 16847 % U+021E LATIN CAPITAL LETTER H WITH CARON
 16848 \DeclareTextCompositeCommand{\v}{PU}{H}{\82\036}% U+021E
 16849 % U+021F LATIN SMALL LETTER H WITH CARON
 16850 \DeclareTextCompositeCommand{\v}{PU}{h}{\82\037}% U+021F
 16851 % U+0221 LATIN SMALL LETTER D WITH CURL; \textctd (tipa)
 16852 \DeclareTextCommand{\textctd}{PU}{\82\041}% U+0221
 16853 % U+0225 LATIN SMALL LETTER Z WITH HOOK; \textcommatailz (tipa)
 16854 \DeclareTextCommand{\textcommatailz}{PU}{\82\045}% U+0225
 16855 % U+0226 LATIN CAPITAL LETTER A WITH DOT ABOVE
 16856 \DeclareTextCompositeCommand{\.}{PU}{A}{\82\046}% U+0226
 16857 % U+0227 LATIN SMALL LETTER A WITH DOT ABOVE
 16858 \DeclareTextCompositeCommand{\.}{PU}{a}{\82\047}% U+0227
 16859 % U+0228 LATIN CAPITAL LETTER E WITH CEDILLA
 16860 \DeclareTextCompositeCommand{\c}{PU}{E}{\82\050}% U+0228
 16861 % U+0229 LATIN SMALL LETTER E WITH CEDILLA
 16862 \DeclareTextCompositeCommand{\c}{PU}{e}{\82\051}% U+0229
 16863 % U+022E LATIN CAPITAL LETTER O WITH DOT ABOVE
 16864 \DeclareTextCompositeCommand{\.}{PU}{O}{\82\056}% U+022E
 16865 % U+022F LATIN SMALL LETTER O WITH DOT ABOVE
 16866 \DeclareTextCompositeCommand{\.}{PU}{o}{\82\057}% U+022F
 16867 % U+0232 LATIN CAPITAL LETTER Y WITH MACRON
 16868 \DeclareTextCompositeCommand{\=}{PU}{Y}{\82\062}% U+0232
 16869 % U+0233 LATIN SMALL LETTER Y WITH MACRON
 16870 \DeclareTextCompositeCommand{\=}{PU}{y}{\82\063}% U+0233
 16871 % U+0235 LATIN SMALL LETTER N WITH CURL; \textctn (tipa)
 16872 \DeclareTextCommand{\textctn}{PU}{\82\065}% U+0235
 16873 % U+0236 LATIN SMALL LETTER T WITH CURL; \textctt (tipa)
 16874 \DeclareTextCommand{\textctt}{PU}{\82\066}% U+0236
 16875 % U+0237 LATIN SMALL LETTER DOTLESS J
 16876 \DeclareTextCommand{\j}{PU}{\82\067}% U+0237
 16877 % U+0238 LATIN SMALL LETTER DB DIGRAPH; \textdblig (tipx)
 16878 \DeclareTextCommand{\textPUdblig}{PU}{\82\070}% U+0238
 16879 %* \textPUdblig -> \textdblig (tipx)
 16880 % U+0239 LATIN SMALL LETTER QP DIGRAPH; \textqplig (tipx)
 16881 \DeclareTextCommand{\textPUqplig}{PU}{\82\071}% U+0239
 16882 %* \textPUqplig -> \textqplig (tipx)
 16883 % U+023C LATIN SMALL LETTER C WITH STROKE; \slashc (wsuipa)
 16884 \DeclareTextCommand{\textslashc}{PU}{\82\074}%* U+023C
 16885 %* \textslashc -> \textcentoldstyle (textcomp)
 16886 % With bar instead of stroke:
 16887 %* \textslashc -> \textbarc (tipa)

51.2.6 IPA Extensions: U+0250 to U+02AF

16888 % U+0250 LATIN SMALL LETTER TURNED A; aturned; \textturna (tipa)
 16889 \DeclareTextCommand{\textturna}{PU}{\82\120}% U+0250
 16890 %* \textturna -> \inva (wasysym)

16891 % U+0251 LATIN SMALL LETTER ALPHA/LATIN SMALL LETTER
16892 % SCRIPT A; ascript; \textscripta (tipa), \scripta (wsuipa)
16893 \DeclareTextCommand{\textscripta}{PU}{\82\121}%* U+0251
16894 %* \textscripta -> \vara (phonetic)
16895 % U+0252 LATIN SMALL LETTER TURNED ALPHA; ascriptturned;
16896 % \textturnscripta (tipa)
16897 \DeclareTextCommand{\textturnscripta}{PU}{\82\122}% U+0252
16898 %* \textturnscripta -> \invscripta (wsuipa)
16899 %* \textturnscripta -> \rotvara (phonetic)
16900 % U+0253 LATIN CAPITAL LETTER B WITH HOOK; bhook; \texthtb (tipa)
16901 \DeclareTextCommand{\texthtb}{PU}{\82\123}% U+0253
16902 %* \texthtb -> \hookb (wsuipa)
16903 %* \texthtb -> \hausab (phonetic)
16904 % U+0254 LATIN SMALL LETTER OPEN O; oopen;
16905 % \textopeno (tipa), \openo (wasysym)
16906 \DeclareTextCommand{\textopeno}{PU}{\82\124}%* U+0254
16907 %* \textopeno -> \varopeno (phonetic)
16908 % U+0255 LATIN SMALL LETTER C WITH CURL; ccurl; \textctc (tipa)
16909 \DeclareTextCommand{\textctc}{PU}{\82\125}% U+0255
16910 %* \textctc -> \curlyc (wsuipa)
16911 % U+0256 LATIN SMALL LETTER D WITH TAIL; dtail; \textrtaild (tipa)
16912 \DeclareTextCommand{\textrtaild}{PU}{\82\126}%* U+0256
16913 %* \textrtaild -> \taild (wsuipa)
16914 % U+0257 LATIN SMALL LETTER D WITH HOOK; dhook; \texthtd (tipa)
16915 \DeclareTextCommand{\texthtd}{PU}{\82\127}% U+0257
16916 %* \texthtd -> \hookd (wsuipa)
16917 %* \texthtd -> \hausad (phonetic)
16918 % U+0258 LATIN SMALL LETTER REVERSED E; ereversed;
16919 % \textreve (tipa), \reve (wsuipa)
16920 \DeclareTextCommand{\textreve}{PU}{\82\130}%* U+0258
16921 % U+0259 LATIN SMALL LETTER SCHWA; schwa;
16922 % \textschwa (tipa), \schwa (wsuipa, phonetic)
16923 \DeclareTextCommand{\textschwa}{PU}{\82\131}%* U+0259
16924 % U+025A LATIN SMALL LETTER SCHWA WITH HOOK; schwahook;
16925 % \textrhookschwa (tipa)
16926 \DeclareTextCommand{\textrhookschwa}{PU}{\82\132}% U+025A
16927 %* \textrhookschwa -> \er (wsuipa)
16928 % U+025B LATIN SMALL LETTER OPEN E/LATIN SMALL LETTER EP-
SILON; eopen;
16929 % \niepsilon (wsuipa)
16930 \DeclareTextCommand{\textniepsilon}{PU}{\82\133}%* U+025B
16931 %* \textniepsilon -> \epsi (phonetic)
16932 % U+025C LATIN SMALL LETTER REVERSED OPEN E; eopenreversed;
16933 % \textrevepsilon (tipa), \revepsilon (wsuipa)
16934 \DeclareTextCommand{\textrevepsilon}{PU}{\82\134}%* U+025C
16935 % U+025D LATIN SMALL LETTER REVERSED OPEN E WITH HOOK; eopen-
reversedhook;
16936 % \textrhookrevepsilon (tipa)
16937 \DeclareTextCommand{\textrhookrevepsilon}{PU}{\82\135}%* U+025D
16938 %* \textrhookrevepsilon -> \hookrevepsilon (wsuipa)
16939 % U+025E LATIN SMALL LETTER CLOSED REVERSED OPEN E; eopenre-
versedclosed;
16940 % \textcloserevepsilon (tipa)
16941 \DeclareTextCommand{\textcloserevepsilon}{PU}{\82\136}% U+025E
16942 %* \textcloserevepsilon -> \closedrevepsilon (wsuipa)
16943 % U+025F LATIN SMALL LETTER DOTLESS J WITH STROKE; jdot-
lessstroke;

16944 % \textbardotlessj (tipa)
16945 \DeclareTextCommand{\textbardotlessj}{PU}{\82\137}% U+025F
16946 %* \textbardotlessj -> \barj (phonetic)
16947 % U+0260 LATIN SMALL LETTER G WITH HOOK; ghook; \texthtg (tipa)
16948 \DeclareTextCommand{\texthtg}{PU}{\82\140}% U+0260
16949 %* \texthtg -> \hookg (wsuipa)
16950 % U+0261 LATIN SMALL LETTER SCRIPT G; gscript;
16951 % \textscriptg (tipa), \scriptg (wsuipa)
16952 \DeclareTextCommand{\textscriptg}{PU}{\82\141}%* U+0261
16953 %* \textscriptg -> \varg (phonetic)
16954 % U+0262 LATIN LETTER SMALL CAPITAL G; \textscg (tipa), \scg (wsuipa)
16955 \DeclareTextCommand{\textscg}{PU}{\82\142}%* U+0262
16956 % U+0263 LATIN SMALL LETTER GAMMA; gammalatinssmall;
16957 % \ipagamma (wsuipa), \vod (phonetic)
16958 \DeclareTextCommand{\textipagamma}{PU}{\82\143}%* U+0263
16959 %* \textipagamma -> \vod (pnonetic)
16960 % U+0264 LATIN SMALL LETTER RAMS HORN; ramshorn;
16961 % \babygamma (wsuipa)
16962 \DeclareTextCommand{\textbabygamma}{PU}{\82\144}%* U+0264
16963 % U+0265 LATIN SMALL LETTER TURNED H; hturned; \textturnh (tipa)
16964 \DeclareTextCommand{\textturnh}{PU}{\82\145}% U+0265
16965 %* \textturnh -> \invh (wsuipa)
16966 %* \textturnh -> \udesc (phonetic)
16967 % U+0266 LATIN SMALL LETTER H WITH HOOK; hhook; \texthth (tipa)
16968 \DeclareTextCommand{\texthth}{PU}{\82\146}% U+0266
16969 %* \texthth -> \hookh (wsuipa)
16970 %* \texthth -> \voicedh (phonetic)
16971 % U+0267 LATIN SMALL LETTER HENG WITH HOOK; henghook; \texththeng (tipa)
16972 \DeclareTextCommand{\texththeng}{PU}{\82\147}% U+0267
16973 %* \texththeng -> \hookheng (wsuipa)
16974 % U+0268 LATIN SMALL LETTER I WITH STROKE;
16975 % \textbari (tipa), \bari (wsuipa)
16976 \DeclareTextCommand{\textbari}{PU}{\82\150}%* U+0268
16977 %* \textbari -> \ibar (phonetic)
16978 % U+0269 LATIN SMALL LETTER IOTA; iotalatin; \nniota (wsuipa)
16979 \DeclareTextCommand{\textnniota}{PU}{\82\151}%* U+0269
16980 %* \textnniota -> \vari (phonetic)
16981 % U+026A LATIN LETTER SMALL CAPITAL I; \textsci (tipa), \sci (wsuipa)
16982 \DeclareTextCommand{\textsci}{PU}{\82\152}%* U+026A
16983 % U+026B LATIN SMALL LETTER L WITH MIDDLE TILDE; lmiddletilde;
16984 % \textltilde (tipa)
16985 \DeclareTextCommand{\textltilde}{PU}{\82\153}% U+026B
16986 %* \textltilde -> \tildel (wsuipa)
16987 % U+026C LATIN SMALL LETTER L WITH BELT; lbelt; \textbeltl (tipa)
16988 \DeclareTextCommand{\textbeltl}{PU}{\82\154}% U+026C
16989 %* \textbeltl -> \latfric (wsuipa)
16990 % U+026D LATIN SMALL LETTER L WITH RETROFLEX HOOK;
16991 % \hookretroflex; \textrtaill (tipa)
16992 \DeclareTextCommand{\textrtaill}{PU}{\82\155}% U+026D
16993 %* \textrtaill -> \taill (wsuipa)
16994 % U+026E LATIN SMALL LETTER LEZH; lezh; \textlyoghlig (tipa)
16995 \DeclareTextCommand{\textlyoghlig}{PU}{\82\156}% U+026E
16996 %* \textlyoghlig -> \lz (wsuipa)
16997 % U+026F LATIN SMALL LETTER TURNED M; mturned; \textturnm (tipa)
16998 \DeclareTextCommand{\textturnm}{PU}{\82\157}% U+026F
16999 %* \textturnm -> \invm (wsuipa)

17000 %* \textturnm -> \rotm (phonetic)
17001 % U+0270 LATIN SMALL LETTER TURNED M WITH LONG LEG; mlongleg-
turned;
17002 % \textturnmrleg (tipa)
17003 \DeclareTextCommand{\textturnmrleg}{PU}{\82\160}% U+0270
17004 %* \textturnmrleg -> \legm (wsuipa)
17005 % U+0271 LATIN SMALL LETTER M WITH HOOK; mhook; \textltailm (tipa)
17006 \DeclareTextCommand{\textltailm}{PU}{\82\161}% U+0271
17007 %* \textltailm -> \labdentalnas (wsuipa)
17008 %* \textltailm -> \emgma (phonetic)
17009 % U+0272 LATIN SMALL LETTER N WITH LEFT HOOK; nhookleft; \textl-
tailn (tipa)
17010 \DeclareTextCommand{\textltailn}{PU}{\82\162}% U+0272
17011 %* \textltailn -> \nj (wsuipa)
17012 %* \textltailn -> \enya (phonetic)
17013 % U+0273 LATIN SMALL LETTER N WITH RETROFLEX HOOK;
17014 % nhookretroflex; \textrtailn (tipa)
17015 \DeclareTextCommand{\textrtailn}{PU}{\82\163}% U+0273
17016 %* \textrtailn -> \tailn (wsuipa)
17017 % U+0274 LATIN LETTER SMALL CAPITAL N; \textscn (tipa), \scn (wsuipa)
17018 \DeclareTextCommand{\textscn}{PU}{\82\164}% U+0274
17019 % U+0275 LATIN CAPITAL LETTER O WITH MIDDLE TILDE/
17020 % LATIN CAPITAL LETTER BARRED O; obarred;
17021 % \textbaro (tipa), \baro (wsuipa)
17022 % But \baro from stmaryrd is different!
17023 \DeclareTextCommand{\textbaro}{PU}{\82\165}% U+0275
17024 % U+0276 LATIN LETTER SMALL CAPITAL OE; \textscoelig (tipa)
17025 \DeclareTextCommand{\textscoelig}{PU}{\82\166}% U+0276
17026 % U+0277 LATIN SMALL LETTER CLOSED OMEGA; omegalatinclosed;
17027 % \textcloseomega (tipa)
17028 \DeclareTextCommand{\textcloseomega}{PU}{\82\167}% U+0277
17029 %* \textcloseomega -> \closedniomega (wsuipa)
17030 %* \textcloseomega -> \varomega (phonetic)
17031 % U+0278 LATIN SMALL LETTER PHI; philatin; \nippi (wsuipa)
17032 \DeclareTextCommand{\textnippi}{PU}{\82\170}% U+0278
17033 % U+0279 LATIN SMALL LETTER TURNED R; rturned; \textturnr (tipa)
17034 \DeclareTextCommand{\textturnr}{PU}{\82\171}% U+0279
17035 %* \textturnr -> \invr (wsuipa)
17036 %* \textturnr -> \rotr (phonetic)
17037 % U+027A LATIN SMALL LETTER TURNED R WITH LONG LEG;
17038 % rlonglegturned; \textturnlongleg (tipa)
17039 \DeclareTextCommand{\textturnlongleg}{PU}{\82\172}% U+027A
17040 %* \textturnlongleg -> \invleg (wsuipa)
17041 % U+027B LATIN SMALL LETTER TURNED R WITH HOOK; rhookturned;
17042 % \textturnrrtail (tipa)
17043 \DeclareTextCommand{\textturnrrtail}{PU}{\82\173}% U+027B
17044 %* \textturnrrtail -> \tailinvr (wsuipa)
17045 % U+027C LATIN SMALL LETTER R WITH LONG LEG; rlongleg; \textlon-
glegr (tipa)
17046 \DeclareTextCommand{\textlongleg}{PU}{\82\174}% U+027C
17047 %* \textlongleg -> \leg (wsuipa)
17048 % U+027D LATIN SMALL LETTER R WITH TAIL; rhook; \textrtailr (tipa)
17049 \DeclareTextCommand{\textrtailr}{PU}{\82\175}% U+027D
17050 %* \textrtailr -> \tailr (wsuipa)
17051 % U+027E LATIN SMALL LETTER R WITH FISHHOOK; rfishhook;
17052 % \textfishhook (tipa)
17053 \DeclareTextCommand{\textfishhook}{PU}{\82\176}% U+027E

17054 %* \textfishhookr -> \flapr (wsuipa)
17055 %* \textfishhookr -> \flap (phonetic)
17056 % U+027F LATIN SMALL LETTER REVERSED R WITH FISHHOOK; rfishhookreversed;
17057 % \textlhtlongi (tipa)
17058 \DeclareTextCommand{\textlhtlongi}{PU}{\82\177}% U+027F
17059 % U+0280 LATIN LETTER SMALL CAPITAL R; \textscr (tipa), \scr (wsuipa)
17060 \DeclareTextCommand{\textscr}{PU}{\82\200}%* U+0280
17061 % U+0281 LATIN LETTER SMALL CAPITAL INVERTED R; Rsmallinverted;
17062 % \textinvscr (tipa), \invscr (wsuipa)
17063 \DeclareTextCommand{\textinvscr}{PU}{\82\201}%* U+0281
17064 % U+0282 LATIN SMALL LETTER S WITH HOOK; shook; \textrtails (tipa)
17065 \DeclareTextCommand{\textrtails}{PU}{\82\202}% U+0282
17066 %* \textrtails -> \tails (wsuipa)
17067 % U+0283 LATIN SMALL LETTER ESH; esh; \textesh (tipa), \esh (wsuipa)
17068 \DeclareTextCommand{\textesh}{PU}{\82\203}%* U+0283
17069 % U+0284 LATIN SMALL LETTER DOTLESS J WITH STROKE AND HOOK;
17070 % dotlessjstrokehook; \texthtbardotlessj (tipa)
17071 \DeclareTextCommand{\texthtbardotlessj}{PU}{\82\204}% U+0284
17072 % U+0285 LATIN SMALL LETTER SQUAT REVERSED ESH; eshsquatreversed;
17073 % \textvibyi (tipa)
17074 \DeclareTextCommand{\textvibyi}{PU}{\82\205}% U+0285
17075 % U+0286 LATIN SMALL LETTER ESH WITH CURL; eshcurl; \textctesh (tipa)
17076 \DeclareTextCommand{\textctesh}{PU}{\82\206}% U+0286
17077 %* \textctesh -> \curlyesh (wsuipa)
17078 % U+0287 LATIN SMALL LETTER TURNED T; tturned; \textturnt (tipa)
17079 \DeclareTextCommand{\textturnt}{PU}{\82\207}% U+0287
17080 %* \textturnt -> \clickt (wsuipa)
17081 % U+0288 LATIN SMALL LETTER T WITH RETROFLEX HOOK; retroflexhook;
17082 % \textrtailt (tipa)
17083 \DeclareTextCommand{\textrtailt}{PU}{\82\210}% U+0288
17084 %* \textrtailt -> \tailt (wsuipa)
17085 % U+0289 LATIN SMALL LETTER U BAR; ubar;
17086 % \textbaru (tipa), \baru (wsuipa)
17087 \DeclareTextCommand{\textbaru}{PU}{\82\211}%* U+0289
17088 %* \textbaru -> \ubar (phonetic)
17089 % U+028A LATIN SMALL LETTER UPSILON; \niupsilon (wsuipa)
17090 \DeclareTextCommand{\textniupsilon}{PU}{\82\212}%* U+028A
17091 %* \textniupsilon -> \rotOmega (phonetic)
17092 % U+028B LATIN SMALL LETTER V WITH HOOK/LATIN SMALL LETTER SCRIPT V;
17093 % vhook; \textscriptv (tipa), \scriptv (wsuipa)
17094 \DeclareTextCommand{\textscriptv}{PU}{\82\213}%* U+028B
17095 % U+028C LATIN SMALL LETTER TURNED V; vturned; \textturnv (tipa)
17096 \DeclareTextCommand{\textturnv}{PU}{\82\214}%* U+028C
17097 %* \textturnv -> \invv (wsuipa)
17098 %* \textturnv -> \pwedge (phonetic)
17099 % U+028D LATIN SMALL LETTER TURNED W; wturned; \textturnw (tipa)
17100 \DeclareTextCommand{\textturnw}{PU}{\82\215}%* U+028D
17101 %* \textturnw -> \invw (wsuipa)
17102 %* \textturnw -> \rotw (phonetic)
17103 % U+028E LATIN SMALL LETTER TURNED Y; yturned; \textturny (tipa)
17104 \DeclareTextCommand{\textturny}{PU}{\82\216}%* U+028E
17105 %* \textturny -> \invy (wsuipa)
17106 %* \textturny -> \roty (phonetic)

17107 % U+028F LATIN LETTER SMALL CAPITAL Y; \textscy (tipa), \scy (wsuipa)
17108 \DeclareTextCommand{\textscy}{PU}{\82\217}%* U+028F
17109 % U+0290 LATIN SMALL LETTER Z WITH RETROFLEX HOOK; zretroflex-hook;
17110 % \textrtailz (tipa)
17111 \DeclareTextCommand{\textrtailz}{PU}{\82\220}% U+0290
17112 %* \textrtailz -> \tailz (wsuipa)
17113 % U+0291 LATIN SMALL LETTER Z WITH CURL; zcurl; \textctz (tipa)
17114 \DeclareTextCommand{\textctz}{PU}{\82\221}% U+0291
17115 %* \textctz -> \curlyz (wsuipa)
17116 % U+0292 LATIN SMALL LETTER EZH/LATIN SMALL LETTER YOGH; ezh;
17117 % \textyogh (tipa), \yogh (wsuipa)
17118 \DeclareTextCommand{\textyogh}{PU}{\82\222}%* U+0292
17119 % U+0293 LATIN SMALL LETTER EZH WITH CURL/LATIN SMALL LETTER YOGH CURL;
17120 % ezhcurl; \textctyogh (tipa)
17121 \DeclareTextCommand{\textctyogh}{PU}{\82\223}% U+0293
17122 %* \textctyogh -> \curlyyogh (wsuipa)
17123 % U+0294 LATIN LETTER GLOTTAL STOP; glottalstop;
17124 % \textglotstop (tipa), \glotstop (wsuipa)
17125 \DeclareTextCommand{\textglotstop}{PU}{\82\224}%* U+0294
17126 %* \textglotstop -> \ejective (wsuipa)
17127 %* \textglotstop -> \glottal (phonetic)
17128 % U+0295 LATIN LETTER PHARYNGEAL VOICED FRICATIVE/
17129 % LATIN LETTER REVERSED GLOTTAL STOP; glottalstopreversed;
17130 % \textrevglotstop (tipa), \revglotstop (wsuipa)
17131 \DeclareTextCommand{\textrevglotstop}{PU}{\82\225}%* U+0295
17132 %* \textrevglotstop -> \reveject (wsuipa)
17133 % U+0296 LATIN LETTER INVERTED GLOTTAL STOP; glottalstopinverted;
17134 % \textinvglotstop (tipa), \invglotstop (wsuipa)
17135 \DeclareTextCommand{\textinvglotstop}{PU}{\82\226}%* U+0296
17136 % U+0297 LATIN LETTER STRETCHED C; cstretched; \textstretchc (tipa)
17137 \DeclareTextCommand{\textstretchc}{PU}{\82\227}% U+0297
17138 %* \textstretchc -> \clickc (wsuipa)
17139 %* \textstretchc -> \textstretchcvar (tipx)
17140 % U+0298 LATIN LETTER BILABIAL CLICK; bilabialclick;
17141 % \textbullseye (tipa)
17142 \DeclareTextCommand{\textbullseye}{PU}{\82\230}% U+0298
17143 %* \textbullseye -> \clickb (wsuipa)
17144 %* \textbullseye -> \textObullseye (tipx)
17145 % U+0299 LATIN LETTER SMALL CAPITAL B; \textscb (tipa)
17146 \DeclareTextCommand{\textscb}{PU}{\82\231}% U+0299
17147 % U+029A LATIN SMALL LETTER CLOSED OPEN E; eopenclosed;
17148 % \textcloseepsilon (tipa)
17149 \DeclareTextCommand{\textcloseepsilon}{PU}{\82\232}% U+029A
17150 % U+029B LATIN LETTER SMALL CAPITAL G WITH HOOK; Gsmallhook;
17151 % \texthtscg (tipa)
17152 \DeclareTextCommand{\texthtscg}{PU}{\82\233}% U+029B
17153 % U+029C LATIN LETTER SMALL CAPITAL H; \textsch (tipa)
17154 \DeclareTextCommand{\textsch}{PU}{\82\234}% U+029C
17155 % U+029D LATIN SMALL LETTER J WITH CROSSED-TAIL; jcrossetail;
17156 \DeclareTextCommand{\textctj}{PU}{\82\235}% U+029D
17157 %* \textctj -> \textctjvar (tipx)
17158 % U+029E LATIN SMALL LETTER TURNED K; kturned; \textturnk (tipa)
17159 \DeclareTextCommand{\textturnk}{PU}{\82\236}% U+029E
17160 %* \textturnk -> \textturnsck (tipx)

17161 % U+029F LATIN LETTER SMALL CAPITAL L; \textsc (tipa)
 17162 \DeclareTextCommand{\textsc}{PU}{\82\237}% U+029F
 17163 % U+02A0 LATIN SMALL LETTER Q WITH HOOK; qhook; \texthtq (tipa)
 17164 \DeclareTextCommand{\texthtq}{PU}{\82\240}% U+02A0
 17165 % U+02A1 LATIN LETTER GLOTTAL STOP WITH STROKE; glottalstop-stroke;
 17166 % \textbarglotstop (tipa)
 17167 \DeclareTextCommand{\textbarglotstop}{PU}{\82\241}% U+02A1
 17168 % U+02A2 LATIN LETTER REVERSED GLOTTAL STOP WITH STROKE/
 17169 % LATIN LETTER REVERSED GLOTTAL STOP BAR; glottalstopstrokereversed;
 17170 % \textbarrevglotstop (tipa)
 17171 \DeclareTextCommand{\textbarrevglotstop}{PU}{\82\242}% U+02A2
 17172 % U+02A3 LATIN SMALL LETTER DZ DIGRAPH; dzaltone; \textdzlig (tipa)
 17173 \DeclareTextCommand{\textdzlig}{PU}{\82\243}% U+02A3
 17174 %* \textdzlig -> \dz (wsupipa)
 17175 % U+02A4 LATIN SMALL LETTER DEZH DIGRAPH; dezh; \textdyoghlig (tipa)
 17176 \DeclareTextCommand{\textdyoghlig}{PU}{\82\244}% U+02A4
 17177 % U+02A5 LATIN SMALL LETTER DZ DIGRAPH WITH CURL; dzcurl;
 17178 % \textdctzlig (tipa)
 17179 \DeclareTextCommand{\textdctzlig}{PU}{\82\245}% U+02A5
 17180 % U+02A6 LATIN SMALL LETTER TS DIGRAPH; ts; \texttslig (tipa)
 17181 \DeclareTextCommand{\texttslig}{PU}{\82\246}% U+02A6
 17182 % U+02A7 LATIN SMALL LETTER TESH DIGRAPH; tesh; \textteshlig (tipa)
 17183 \DeclareTextCommand{\textteshlig}{PU}{\82\247}% U+02A7
 17184 %* \textteshlig -> \tesh (wsuipa)
 17185 % U+02A8 LATIN SMALL LETTER TC DIGRAPH WITH CURL; tccurl;
 17186 % \texttctclig (tipa)
 17187 \DeclareTextCommand{\texttctclig}{PU}{\82\250}% U+02A8
 17188 % U+02AE LATIN SMALL LETTER TURNED H WITH FISHHOOK;
 17189 % \textlhtlongy (tipa)
 17190 \DeclareTextCommand{\textlhtlongy}{PU}{\82\256}% U+02AE
 17191 % U+02AF LATIN SMALL LETTER TURNED H WITH FISHHOOK AND TAIL;
 17192 % \textvibyy (tipa)
 17193 \DeclareTextCommand{\textvibyy}{PU}{\82\257}% U+02AF

51.2.7 Spacing Modifier Letters: U+02B0 to U+02FF

17194 % U+02BD MODIFIER LETTER REVERSED COMMA;
 17195 % commareversedmod, afi64937; \textrevapostrophe (tipa)
 17196 \DeclareTextCommand{\textrevapostrophe}{PU}{\82\275}% U+02BD
 17197 % U+02C0 MODIFIER LETTER GLOTTAL STOP; glottalstopmod;
 17198 % \textraiseglotstop (tipa)
 17199 \DeclareTextCommand{\textraiseglotstop}{PU}{\82\300}% U+02C0
 17200 % U+02C2 MODIFIER LETTER LEFT ARROWHEAD; arrowheadleftmod;
 17201 % \textlptr (tipa)
 17202 \DeclareTextCommand{\textlptr}{PU}{\82\302}% U+02C2
 17203 % U+02C3 MODIFIER LETTER RIGHT ARROWHEAD; arrowheadrightmod;
 17204 % \textrptr (tipa)
 17205 \DeclareTextCommand{\textrptr}{PU}{\82\303}% U+02C3
 17206 % U+02C7 CARON; caron
 17207 \DeclareTextCommand{\textasciicaron}{PU}{\82\307}% U+02C7
 17208 % U+02C8 MODIFIER LETTER VERTICAL LINE; verticallinemod;
 17209 % \textprimstress (tipa)
 17210 \DeclareTextCommand{\textprimstress}{PU}{\82\310}% U+02C8
 17211 % U+02CC MODIFIER LETTER LOW VERTICAL LINE; verticallinelowmod;
 17212 % \textsecstress (tipa)

17213 \DeclareTextCommand{\textsecstress}{PU}{\82\314}% U+02CC
 17214 % U+02D0 MODIFIER LETTER TRIANGULAR COLON; colontriangularmod;
 17215 % \textlengthmark (tipa)
 17216 \DeclareTextCommand{\textlengthmark}{PU}{\82\320}% U+02D0
 17217 % U+02D1 MODIFIER LETTER HALF TRIANGULAR COLON; colontriangularhalfmod;
 17218 % \texthalflength (tipa)
 17219 \DeclareTextCommand{\texthalflength}{PU}{\82\321}% U+02D1
 17220 % U+02D8 BREVE; breve
 17221 \DeclareTextCommand{\textasciibreve}{PU}{\82\330}% U+02D8
 17222 % U+02D9 DOT ABOVE; dotaccent
 17223 \DeclareTextCommand{\textdotaccent}{PU}{\82\331}% U+02D9
 17224 % U+02DA RING ABOVE; ring
 17225 \DeclareTextCommand{\textring}{PU}{\82\332}% U+02DA
 17226 % U+02DB OGONEK; ogonek
 17227 \DeclareTextCommand{\textogonek}{PU}{\82\333}% U+02DB
 17228 % U+02DC SMALL TILDE; ilde, *tilde
 17229 \DeclareTextCommand{\texttilde}{PU}{\82\334}% U+02DC
 17230 % U+02DD DOUBLE ACUTE ACCENT; hungarumlaut
 17231 \DeclareTextCommand{\texthungarumlaut}{PU}{\82\335}% U+02DD
 17232 \DeclareTextCommand{\textacutedbl}{PU}{\82\335}% U+02DD
 17233 % U+02F3 MODIFIER LETTER LOW RING
 17234 \DeclareTextCommand{\textringlow}{PU}{\82\363}% U+02F3
 17235 % U+02F5 MODIFIER LETTER MIDDLE DOUBLE GRAVE ACCENT
 17236 \DeclareTextCommand{\textgravedbl}{PU}{\82\365}% U+02F5
 17237 % U+02F7 MODIFIER LETTER LOW TILDE
 17238 \DeclareTextCommand{\texttildelow}{PU}{\82\367}% U+02F7
 17239 % U+02F9 MODIFIER LETTER BEGIN HIGH TONE; \textopencorner (tipa)
 17240 \DeclareTextCommand{\textopencorner}{PU}{\82\371}% U+02F9
 17241 % U+02FA MODIFIER LETTER END HIGH TONE; \textcorner (tipa)
 17242 \DeclareTextCommand{\textcorner}{PU}{\82\372}% U+02FA

51.2.8 Combining Diacritical Marks: U+0300 to U+036F

17243 % U+030F COMBINING DOUBLE GRAVE ACCENT; dblgravecmb
 17244 \DeclareTextCommand{\textdoublegrave}{PU}{\83\017}% U+030F
 17245 % U+0311 COMBINING INVERTED BREVE; breveinvertedcmb
 17246 \DeclareTextCommand{\textnewtie}{PU}{\83\021}% U+0311
 17247 % U+0323 COMBINING DOT BELOW; dotbelowcmb, *dotbelowcmb
 17248 \DeclareTextCommand{\textdotbelow}{PU}{\83\043}% U+0323
 17249 % U+0331 COMBINING MACRON BELOW; macronbelowcmb
 17250 \DeclareTextCommand{\textmacronbelow}{PU}{\83\061}% U+0331
 17251 % U+0361 COMBINING DOUBLE INVERTED BREVE; breveinverteddoublecmb
 17252 \DeclareTextCommand{\texttie}{PU}{\83\141}% U+0361

51.2.9 Greek and Coptic: U+0370 to U+03FF

17253 % U+0374 GREEK NUMERAL SIGN; numeralsigngreek
 17254 \DeclareTextCommand{\textnumeralsigngreek}{PU}{\83\164}% U+0374
 17255 % U+0375 GREEK LOWER NUMERAL SIGN; numeralsignlowergreek
 17256 \DeclareTextCommand{\textnumeralsignlowergreek}{PU}{\83\165}% U+0375
 17257 % U+0386 GREEK CAPITAL LETTER ALPHA WITH TONOS; Alphatonos
 17258 \DeclareTextCompositeCommand{\'}{PU}{\textAlpha}{\83\206}% U+0386
 17259 % U+0388 GREEK CAPITAL LETTER EPSILON WITH TONOS; Epsilontonos
 17260 \DeclareTextCompositeCommand{\'}{PU}{\textEpsilon}{\83\210}% U+0388
 17261 % U+0389 GREEK CAPITAL LETTER ETA WITH TONOS; Etatonos
 17262 \DeclareTextCompositeCommand{\'}{PU}{\textEta}{\83\211}% U+0389
 17263 % U+038A GREEK CAPITAL LETTER IOTA WITH TONOS; Iotatonos

17264 \DeclareTextCompositeCommand{\'}{PU}{\textIota}{\83\212}% U+038A
17265 % U+038C GREEK CAPITAL LETTER OMICRON WITH TONOS; Omicrontonos
17266 \DeclareTextCompositeCommand{\'}{PU}{\textOmicron}{\83\214}% U+038C
17267 % U+038E GREEK CAPITAL LETTER UPSILON WITH TONOS; Upsilonontonos
17268 \DeclareTextCompositeCommand{\'}{PU}{\textUpsilon}{\83\216}% U+038E
17269 % U+038F GREEK CAPITAL LETTER OMEGA WITH TONOS; Omegatonos
17270 \DeclareTextCompositeCommand{\'}{PU}{\textOmega}{\83\217}% U+038F
17271 % U+0390 GREEK SMALL LETTER IOTA WITH DIALYTIKA AND TONOS;
17272 % iotadieresisistonos
17273 \DeclareTextCompositeCommand{\'}{PU}{\textIotadieresis}{\83\220}% U+0390
17274 % U+0391 GREEK CAPITAL LETTER ALPHA; Alpha
17275 \DeclareTextCommand{\textAlpha}{PU}{\83\221}% U+0391
17276 % U+0392 GREEK CAPITAL LETTER BETA; Beta
17277 \DeclareTextCommand{\textBeta}{PU}{\83\222}% U+0392
17278 % U+0393 GREEK CAPITAL LETTER GAMMA; Gamma; \Gamma (LaTeX)
17279 \DeclareTextCommand{\textGamma}{PU}{\83\223}%* U+0393
17280 % U+0394 GREEK CAPITAL LETTER DELTA; Deltagreek, *Delta; \Delta (LaTeX)
17281 \DeclareTextCommand{\textDelta}{PU}{\83\224}%* U+0394
17282 % U+0395 GREEK CAPITAL LETTER EPSILON; Epsilon
17283 \DeclareTextCommand{\textEpsilon}{PU}{\83\225}% U+0395
17284 % U+0396 GREEK CAPITAL LETTER ZETA; Zeta
17285 \DeclareTextCommand{\textZeta}{PU}{\83\226}% U+0396
17286 % U+0397 GREEK CAPITAL LETTER ETA; Eta
17287 \DeclareTextCommand{\textEta}{PU}{\83\227}% U+0397
17288 % U+0398 GREEK CAPITAL LETTER THETA; Theta; \Theta (LaTeX)
17289 \DeclareTextCommand{\textTheta}{PU}{\83\230}%* U+0398
17290 % U+0399 GREEK CAPITAL LETTER IOTA; Iota
17291 \DeclareTextCommand{\textIota}{PU}{\83\231}% U+0399
17292 % U+039A GREEK CAPITAL LETTER KAPPA; Kappa
17293 \DeclareTextCommand{\textKappa}{PU}{\83\232}% U+039A
17294 % U+039B GREEK CAPITAL LETTER LAMDA; Lambda; \Lambda (LaTeX)
17295 \DeclareTextCommand{\textLambda}{PU}{\83\233}%* U+039B
17296 % U+039C GREEK CAPITAL LETTER MU; Mu
17297 \DeclareTextCommand{\textMu}{PU}{\83\234}% U+039C
17298 % U+039D GREEK CAPITAL LETTER NU; Nu
17299 \DeclareTextCommand{\textNu}{PU}{\83\235}% U+039D
17300 % U+039E GREEK CAPITAL LETTER XI; Xi; \Xi (LaTeX)
17301 \DeclareTextCommand{\textXi}{PU}{\83\236}%* U+039E
17302 % U+039F GREEK CAPITAL LETTER OMICRON; Omicron
17303 \DeclareTextCommand{\textOmicron}{PU}{\83\237}% U+039F
17304 % U+03A0 GREEK CAPITAL LETTER PI; Pi
17305 \DeclareTextCommand{\textPi}{PU}{\83\240}%* U+03A0
17306 % U+03A1 GREEK CAPITAL LETTER RHO; Rho
17307 \DeclareTextCommand{\textRho}{PU}{\83\241}% U+03A1
17308 % U+03A3 GREEK CAPITAL LETTER SIGMA; Sigma; \Sigma (LaTeX)
17309 \DeclareTextCommand{\textSigma}{PU}{\83\243}%* U+03A3
17310 % U+03A4 GREEK CAPITAL LETTER TAU; Tau
17311 \DeclareTextCommand{\textTau}{PU}{\83\244}% U+03A4
17312 % U+03A5 GREEK CAPITAL LETTER UPSILON; Upsilon; \Upsilon (LaTeX)
17313 \DeclareTextCommand{\textUpsilon}{PU}{\83\245}%* U+03A5
17314 % U+03A6 GREEK CAPITAL LETTER PHI; Phi; \Phi (LaTeX)
17315 \DeclareTextCommand{\textPhi}{PU}{\83\246}%* U+03A6
17316 % U+03A7 GREEK CAPITAL LETTER CHI; Chi
17317 \DeclareTextCommand{\textChi}{PU}{\83\247}% U+03A7
17318 % U+03A8 GREEK CAPITAL LETTER PSI; Psi; \Psi (LaTeX)


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17319 \DeclareTextCommand{\textPsi}{PU}{\83\250}%* U+03A8
17320 % U+03A9 GREEK CAPITAL LETTER OMEGA; Omegagreek, *Omega;
17321 % \Omega (LaTeX)
17322 \DeclareTextCommand{\textOmega}{PU}{\83\251}%* U+03A9
17323 % U+03AA GREEK CAPITAL LETTER IOTA WITH DIALYTIKA; Iotadieresis
17324 \DeclareTextCommand{\textIotadieresis}{PU}{\83\252}% U+03AA
17325 \DeclareTextCompositeCommand{"}{PU}{\textIota}{\83\252}% U+03AA
17326 % U+03AB GREEK CAPITAL LETTER UPSILON WITH DIALYTIKA; Up-
silondieresis
17327 \DeclareTextCompositeCommand{"}{PU}{\textUpsilon}{\83\253}% U+03AB
17328 % U+03AC GREEK SMALL LETTER ALPHA WITH TONOS; alphanos
17329 \DeclareTextCompositeCommand{'}{PU}{\textalpha}{\83\254}%* U+03AC
17330 % U+03AD GREEK SMALL LETTER EPSILON WITH TONOS; epsilonos
17331 \DeclareTextCompositeCommand{'}{PU}{\textepsilon}{\83\255}% U+03AD
17332 % U+03AE GREEK SMALL LETTER ETA WITH TONOS; etanos
17333 \DeclareTextCompositeCommand{'}{PU}{\texteta}{\83\256}% U+03AE
17334 % U+03AF GREEK SMALL LETTER IOTA WITH TONOS; iotonos
17335 \DeclareTextCompositeCommand{'}{PU}{\textiota}{\83\257}% U+03AF
17336 % U+03B0 GREEK SMALL LETTER UPSILON WITH DIALYTIKA
17337 % AND TONOS; upsilondieresis
17338 \DeclareTextCompositeCommand{"}{PU}{\textupsilon}{\83\260}% U+03B0
17339 % U+03B1 GREEK SMALL LETTER ALPHA; alpha; \alpha (LaTeX)
17340 \DeclareTextCommand{\textalpha}{PU}{\83\261}%* U+03B1
17341 % U+03B2 GREEK SMALL LETTER BETA; beta; \beta (LaTeX)
17342 \DeclareTextCommand{\textbeta}{PU}{\83\262}%* U+03B2
17343 % U+03B3 GREEK SMALL LETTER GAMMA; gamma; \gamma (LaTeX)
17344 \DeclareTextCommand{\textgamma}{PU}{\83\263}%* U+03B3
17345 % U+03B4 GREEK SMALL LETTER DELTA; delta; \delta (LaTeX)
17346 \DeclareTextCommand{\textdelta}{PU}{\83\264}%* U+03B4
17347 % U+03B5 GREEK SMALL LETTER EPSILON; epsilon; \epsilon (LaTeX)
17348 \DeclareTextCommand{\textepsilon}{PU}{\83\265}%* U+03B5
17349 % U+03B6 GREEK SMALL LETTER ZETA; zeta; \zeta (LaTeX)
17350 \DeclareTextCommand{\textzeta}{PU}{\83\266}%* U+03B6
17351 % U+03B7 GREEK SMALL LETTER ETA; eta; \eta (LaTeX)
17352 \DeclareTextCommand{\texteta}{PU}{\83\267}%* U+03B7
17353 % U+03B8 GREEK SMALL LETTER THETA; theta; \theta (LaTeX)
17354 \DeclareTextCommand{\texttheta}{PU}{\83\270}%* U+03B8
17355 % U+03B9 GREEK SMALL LETTER IOTA; iota; \iota (LaTeX)
17356 \DeclareTextCommand{\textiota}{PU}{\83\271}%* U+03B9
17357 % U+03BA GREEK SMALL LETTER KAPPA; kappa; \kappa (LaTeX)
17358 \DeclareTextCommand{\textkappa}{PU}{\83\272}%* U+03BA
17359 % U+03BB GREEK SMALL LETTER LAMDA; lambda; \lambda (LaTeX)
17360 \DeclareTextCommand{\textlambda}{PU}{\83\273}%* U+03BB
17361 % U+03BC GREEK SMALL LETTER MU; mugreek, *mu; \mu (LaTeX)
17362 \DeclareTextCommand{\textmugreek}{PU}{\83\274}%* U+03BC
17363 % U+03BD GREEK SMALL LETTER NU; nu; \nu (LaTeX)
17364 \DeclareTextCommand{\textnu}{PU}{\83\275}%* U+03BD
17365 % U+03BE GREEK SMALL LETTER XI; xi; \xi (LaTeX)
17366 \DeclareTextCommand{\textxi}{PU}{\83\276}%* U+03BE
17367 % U+03BF GREEK SMALL LETTER OMICRON; omicron
17368 \DeclareTextCommand{\textomicron}{PU}{\83\277}% U+03BF
17369 % U+03C0 GREEK SMALL LETTER PI; pi; \pi (LaTeX)
17370 \DeclareTextCommand{\textpi}{PU}{\83\300}%* U+03C0
17371 % U+03C1 GREEK SMALL LETTER RHO; rho; \rho (LaTeX)
17372 \DeclareTextCommand{\textrho}{PU}{\83\301}%* U+03C1
17373 % U+03C2 GREEK SMALL LETTER FINAL SIGMA; *sigma1, sigmafinal
17374 \DeclareTextCommand{\textvarsigma}{PU}{\83\302}%* U+03C2

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17375 % U+03C3 GREEK SMALL LETTER SIGMA; sigma; \sigma (LaTeX)
 17376 \DeclareTextCommand{\textsigma}{PU}{\83\303}%* U+03C3
 17377 % U+03C4 GREEK SMALL LETTER TAU; tau; \tau (LaTeX)
 17378 \DeclareTextCommand{\texttau}{PU}{\83\304}%* U+03C4
 17379 % U+03C5 GREEK SMALL LETTER UPSILON; upsilon; \upsilon (LaTeX)
 17380 \DeclareTextCommand{\textupsilon}{PU}{\83\305}%* U+03C5
 17381 % U+03C6 GREEK SMALL LETTER PHI; phi; \phi (LaTeX)
 17382 \DeclareTextCommand{\textphi}{PU}{\83\306}%* U+03C6
 17383 % U+03C7 GREEK SMALL LETTER CHI; chi; \chi (LaTeX)
 17384 \DeclareTextCommand{\textchi}{PU}{\83\307}%* U+03C7
 17385 % U+03C8 GREEK SMALL LETTER PSI; psi; \psi (LaTeX)
 17386 \DeclareTextCommand{\textpsi}{PU}{\83\310}%* U+03C8
 17387 % U+03C9 GREEK SMALL LETTER OMEGA; omega; \omega (LaTeX)
 17388 \DeclareTextCommand{\textomega}{PU}{\83\311}%* U+03C9
 17389 % U+03CA GREEK SMALL LETTER IOTA WITH DIALYTIKA; iotadieresis
 17390 \DeclareTextCompositeCommand{"}{PU}{\textiota}{\83\312}% U+03CA
 17391 % U+03CB GREEK SMALL LETTER UPSILON WITH DIALYTIKA; up-
 silondieresis
 17392 \DeclareTextCompositeCommand{"}{PU}{\textupsilon}{\83\313}% U+03CB
 17393 % U+03CC GREEK SMALL LETTER OMICRON WITH TONOS; omicrontonos
 17394 \DeclareTextCompositeCommand{'}{PU}{\textomicron}{\83\314}% U+03CC
 17395 % U+03CD GREEK SMALL LETTER UPSILON WITH TONOS; upsilontonos
 17396 \DeclareTextCommand{\textupsilonacute}{PU}{\83\315}% U+03CD
 17397 \DeclareTextCompositeCommand{'}{PU}{\textupsilon}{\83\315}% U+03CD
 17398 % U+03CE GREEK SMALL LETTER OMEGA WITH TONOS; omegatonos
 17399 \DeclareTextCompositeCommand{'}{PU}{\textomega}{\83\316}% U+03CE
 17400 % U+03DA GREEK LETTER STIGMA; Stigmatagreek
 17401 \DeclareTextCommand{\textStigmatagreek}{PU}{\83\332}% U+03DA
 17402 % U+03DB GREEK SMALL LETTER STIGMA
 17403 \DeclareTextCommand{\textstigmatagreek}{PU}{\83\333}% U+03DB
 17404 % U+03DC GREEK LETTER DIGAMMA; Digammagreek
 17405 \DeclareTextCommand{\textDigammagreek}{PU}{\83\334}% U+03DC
 17406 % U+03DD GREEK SMALL LETTER DIGAMMA
 17407 \DeclareTextCommand{\textdigammagreek}{PU}{\83\335}% U+03DD
 17408 %* \textdigammagreek -> \digamma (AmS)
 17409 % U+03DE GREEK LETTER KOPPA; Koppagreek
 17410 \DeclareTextCommand{\textKoppagreek}{PU}{\83\336}% U+03DE
 17411 % U+03DF GREEK SMALL LETTER KOPPA
 17412 \DeclareTextCommand{\textkoppagreek}{PU}{\83\337}% U+03DF
 17413 % U+03E0 GREEK LETTER SAMPI; Sampigreek
 17414 \DeclareTextCommand{\textSampigreek}{PU}{\83\340}% U+03E0
 17415 % U+03E1 GREEK SMALL LETTER SAMPI
 17416 \DeclareTextCommand{\textsampigreek}{PU}{\83\341}% U+03E1
 17417 % U+03F6 GREEK REVERSED LUNATE EPSILON SYMBOL;
 17418 % \backepsilon (AmS)
 17419 \DeclareTextCommand{\textbackepsilon}{PU}{\83\366}% U+03F6

51.2.10 Cyrillic: U+0400 to U+04FF

Thanks to Vladimir Volovich (vvv@vvv.vsu.ru) for the help with the Cyrillic glyph names.

17420 % U+0400 CYRILLIC CAPITAL LETTER IE WITH GRAVE
 17421 \DeclareTextCompositeCommand{"}{PU}{\CYRE}{\84\000}% U+0400
 17422 % U+0401 CYRILLIC CAPITAL LETTER IO; Iocyrrilic, *afi10023
 17423 \DeclareTextCommand{\CYRYO}{PU}{\84\001}% U+0401
 17424 \DeclareTextCompositeCommand{"}{PU}{\CYRE}{\84\001}% U+0401
 17425 % U+0402 CYRILLIC CAPITAL LETTER DJE; Djecyrillic, *afi10051
 17426 \DeclareTextCommand{\CYRDJE}{PU}{\84\002}% U+0402

17427 % U+0403 CYRILLIC CAPITAL LETTER GJE; Gjecyrillic, *afii10052
17428 \DeclareTextCompositeCommand{\'}{PU}{\CYRG}{\84\003}% U+0403
17429 % U+0404 CYRILLIC CAPITAL LETTER UKRAINIAN IE; Ecyrillic, *afii10053
17430 \DeclareTextCommand{\CYRIE}{PU}{\84\004}% U+0404
17431 % U+0405 CYRILLIC CAPITAL LETTER DZE; Dzecyrillic, *afii10054
17432 \DeclareTextCommand{\CYRDZE}{PU}{\84\005}% U+0405
17433 % U+0406 CYRILLIC CAPITAL LETTER BYELORUSSIAN-UKRAINIAN I;
17434 % Icyrillic, *afii10055
17435 \DeclareTextCommand{\CYRII}{PU}{\84\006}% U+0406
17436 % U+0407 CYRILLIC CAPITAL LETTER YI; Yicyrillic, *afii10056
17437 \DeclareTextCommand{\CYRYI}{PU}{\84\007}% U+0407
17438 \DeclareTextCompositeCommand{\"}{PU}{\CYRII}{\84\007}% U+0407
17439 % U+0408 CYRILLIC CAPITAL LETTER JE; Jecyrillic, *afii10057
17440 \DeclareTextCommand{\CYRJE}{PU}{\84\010}% U+0408
17441 % U+0409 CYRILLIC CAPITAL LETTER LJE; Ljecyrillic, *afii10058
17442 \DeclareTextCommand{\CYRLJE}{PU}{\84\011}% U+0409
17443 % U+040A CYRILLIC CAPITAL LETTER NJE; Njecyrillic, *afii10059
17444 \DeclareTextCommand{\CYRNJE}{PU}{\84\012}% U+040A
17445 % U+040B CYRILLIC CAPITAL LETTER TSHE; Tshecyrillic, *afii10060
17446 \DeclareTextCommand{\CYRTSHE}{PU}{\84\013}% U+040B
17447 % U+040C CYRILLIC CAPITAL LETTER KJE; Kjecyrillic, *afii10061
17448 \DeclareTextCompositeCommand{\'}{PU}{\CYRK}{\84\014}% U+040C
17449 % U+040D CYRILLIC CAPITAL LETTER I WITH GRAVE
17450 \DeclareTextCompositeCommand{\`}{PU}{\CYRI}{\84\015}% U+040D
17451 % U+040E CYRILLIC CAPITAL LETTER SHORT U; Ushortcyrillic, *afii10062
17452 \DeclareTextCommand{\CYRUSHRT}{PU}{\84\016}% U+040E
17453 \DeclareTextCompositeCommand{\U}{PU}{\CYRU}{\84\016}% U+040E
17454 % U+040F CYRILLIC CAPITAL LETTER DZHE; Dzhecyrillic, *afii10145
17455 \DeclareTextCommand{\CYRDZHE}{PU}{\84\017}% U+040F
17456 % U+0410 CYRILLIC CAPITAL LETTER A; Acyrillic, *afii10017
17457 \DeclareTextCommand{\CYRA}{PU}{\84\020}% U+0410
17458 % U+0411 CYRILLIC CAPITAL LETTER BE; Becyrillic, *afii10018
17459 \DeclareTextCommand{\CYRB}{PU}{\84\021}% U+0411
17460 % U+0412 CYRILLIC CAPITAL LETTER VE; Vecyrillic, *afii10019
17461 \DeclareTextCommand{\CYRV}{PU}{\84\022}% U+0412
17462 % U+0413 CYRILLIC CAPITAL LETTER GHE; Gecyrillic, *afii10020
17463 \DeclareTextCommand{\CYRG}{PU}{\84\023}% U+0413
17464 % U+0414 CYRILLIC CAPITAL LETTER DE; Decyrillic, *afii10021
17465 \DeclareTextCommand{\CYRD}{PU}{\84\024}% U+0414
17466 % U+0415 CYRILLIC CAPITAL LETTER IE; Iecyrillic, *afii10022
17467 \DeclareTextCommand{\CYRE}{PU}{\84\025}% U+0415
17468 % U+0416 CYRILLIC CAPITAL LETTER ZHE; Zhecyrillic, *afii10024
17469 \DeclareTextCommand{\CYRZH}{PU}{\84\026}% U+0416
17470 % U+0417 CYRILLIC CAPITAL LETTER ZE; Zecyrillic, *afii10025
17471 \DeclareTextCommand{\CYRZ}{PU}{\84\027}% U+0417
17472 % U+0418 CYRILLIC CAPITAL LETTER I; Iicyrillic, *afii10026
17473 \DeclareTextCommand{\CYRI}{PU}{\84\030}% U+0418
17474 % U+0419 CYRILLIC CAPITAL LETTER SHORT I; Iishortcyrillic, *afii10027
17475 \DeclareTextCommand{\CYRISHRT}{PU}{\84\031}% U+0419
17476 \DeclareTextCompositeCommand{\U}{PU}{\CYRI}{\84\031}% U+0419
17477 % U+041A CYRILLIC CAPITAL LETTER KA; Kacyrillic, *afii10028
17478 \DeclareTextCommand{\CYRK}{PU}{\84\032}% U+041A
17479 % U+041B CYRILLIC CAPITAL LETTER EL; Elcyrillic, *afii10029
17480 \DeclareTextCommand{\CYRL}{PU}{\84\033}% U+041B
17481 % U+041C CYRILLIC CAPITAL LETTER EM; Emcyrillic, *afii10030
17482 \DeclareTextCommand{\CYRM}{PU}{\84\034}% U+041C
17483 % U+041D CYRILLIC CAPITAL LETTER EN; Encyrillic, *afii10031

17484 \DeclareTextCommand{\CYRN}{PU}{\84\035}% U+041D
17485 % U+041E CYRILLIC CAPITAL LETTER O; Ocyrillic, *afii10032
17486 \DeclareTextCommand{\CYRO}{PU}{\84\036}% U+041E
17487 % U+041F CYRILLIC CAPITAL LETTER PE; Pecyrillic, *afii10033
17488 \DeclareTextCommand{\CYRP}{PU}{\84\037}% U+041F
17489 % U+0420 CYRILLIC CAPITAL LETTER ER; Ercyrillic, *afii10034
17490 \DeclareTextCommand{\CYRR}{PU}{\84\040}% U+0420
17491 % U+0421 CYRILLIC CAPITAL LETTER ES; Escyrillic, *afii10035
17492 \DeclareTextCommand{\CYRS}{PU}{\84\041}% U+0421
17493 % U+0422 CYRILLIC CAPITAL LETTER TE; Tecyrillic, *afii10036
17494 \DeclareTextCommand{\CYRT}{PU}{\84\042}% U+0422
17495 % U+0423 CYRILLIC CAPITAL LETTER U; Ucyrillic, *afii10037
17496 \DeclareTextCommand{\CYRU}{PU}{\84\043}% U+0423
17497 % U+0424 CYRILLIC CAPITAL LETTER EF; Efcyrillic, *afii10038
17498 \DeclareTextCommand{\CYRF}{PU}{\84\044}% U+0424
17499 % U+0425 CYRILLIC CAPITAL LETTER HA; Khacyrillic, *afii10039
17500 \DeclareTextCommand{\CYRH}{PU}{\84\045}% U+0425
17501 % U+0426 CYRILLIC CAPITAL LETTER TSE; Tsecyrillic, *afii10040
17502 \DeclareTextCommand{\CYRC}{PU}{\84\046}% U+0426
17503 % U+0427 CYRILLIC CAPITAL LETTER CHE; Checyrillic, *afii10041
17504 \DeclareTextCommand{\CYRCH}{PU}{\84\047}% U+0427
17505 % U+0428 CYRILLIC CAPITAL LETTER SHA; Shacyrillic, *afii10042
17506 \DeclareTextCommand{\CYRSH}{PU}{\84\050}% U+0428
17507 % U+0429 CYRILLIC CAPITAL LETTER SHCHA; Shchacyrillic, *afii10043
17508 \DeclareTextCommand{\CYRSHCH}{PU}{\84\051}% U+0429
17509 % U+042A CYRILLIC CAPITAL LETTER HARD SIGN;
17510 % Hardsigncyrillic, *afii10044
17511 \DeclareTextCommand{\CYRHRDSN}{PU}{\84\052}% U+042A
17512 % U+042B CYRILLIC CAPITAL LETTER YERU; Yericyrillic, *afii10045
17513 \DeclareTextCommand{\CYRERY}{PU}{\84\053}% U+042B
17514 % U+042C CYRILLIC CAPITAL LETTER SOFT SIGN;
17515 % Softsigncyrillic, *afii10046
17516 \DeclareTextCommand{\CYRSFTSN}{PU}{\84\054}% U+042C
17517 % U+042D CYRILLIC CAPITAL LETTER E; Eversedcyrillic, *afii10047
17518 \DeclareTextCommand{\CYREREV}{PU}{\84\055}% U+042D
17519 % U+042E CYRILLIC CAPITAL LETTER YU; IUcyrillic, *afii10048
17520 \DeclareTextCommand{\CYRYU}{PU}{\84\056}% U+042E
17521 % U+042F CYRILLIC CAPITAL LETTER YA; IAcyrillic, *afii10049
17522 \DeclareTextCommand{\CYRYA}{PU}{\84\057}% U+042F
17523 % U+0430 CYRILLIC SMALL LETTER A; acyrillic, *afii10065
17524 \DeclareTextCommand{\cyra}{PU}{\84\060}% U+0430
17525 % U+0431 CYRILLIC SMALL LETTER BE; *afii10066, becyrillic
17526 \DeclareTextCommand{\cyrb}{PU}{\84\061}% U+0431
17527 % U+0432 CYRILLIC SMALL LETTER VE; *afii10067, vecyrillic
17528 \DeclareTextCommand{\cyrv}{PU}{\84\062}% U+0432
17529 % U+0433 CYRILLIC SMALL LETTER GHE; *afii10068, gecyrillic
17530 \DeclareTextCommand{\cyrg}{PU}{\84\063}% U+0433
17531 % U+0434 CYRILLIC SMALL LETTER DE; *afii10069, decyrillic
17532 \DeclareTextCommand{\cyrd}{PU}{\84\064}% U+0434
17533 % U+0435 CYRILLIC SMALL LETTER IE; *afii10070, iecyrillic
17534 \DeclareTextCommand{\cyre}{PU}{\84\065}% U+0435
17535 % U+0436 CYRILLIC SMALL LETTER ZHE; *afii10072, zhacyrillic
17536 \DeclareTextCommand{\cyrzh}{PU}{\84\066}% U+0436
17537 % U+0437 CYRILLIC SMALL LETTER ZE; *afii10073, zecyrillic
17538 \DeclareTextCommand{\cyrz}{PU}{\84\067}% U+0437
17539 % U+0438 CYRILLIC SMALL LETTER I; *afii10074, iicyrillic
17540 \DeclareTextCommand{\cyri}{PU}{\84\070}% U+0438

17541 % U+0439 CYRILLIC SMALL LETTER SHORT I; *afii10075, iishortcyrillic
17542 \DeclareTextCommand{\cyrishrt}{PU}{\84\071}% U+0439
17543 \DeclareTextCompositeCommand{\U}{PU}{\cyr}{\84\071}% U+0439
17544 % U+043A CYRILLIC SMALL LETTER KA; *afii10076, kacyrillic
17545 \DeclareTextCommand{\cyrk}{PU}{\84\072}% U+043A
17546 % U+043B CYRILLIC SMALL LETTER EL; *afii10077, elcyrillic
17547 \DeclareTextCommand{\cyr}{PU}{\84\073}% U+043B
17548 % U+043C CYRILLIC SMALL LETTER EM; *afii10078, emcyrillic
17549 \DeclareTextCommand{\cyr}{PU}{\84\074}% U+043C
17550 % U+043D CYRILLIC SMALL LETTER EN; *afii10079, encyrillic
17551 \DeclareTextCommand{\cyrn}{PU}{\84\075}% U+043D
17552 % U+043E CYRILLIC SMALL LETTER O; *afii10080, ocyrillic
17553 \DeclareTextCommand{\cyro}{PU}{\84\076}% U+043E
17554 % U+043F CYRILLIC SMALL LETTER PE; *afii10081, pecyrillic
17555 \DeclareTextCommand{\cyrp}{PU}{\84\077}% U+043F
17556 % U+0440 CYRILLIC SMALL LETTER ER; *afii10082, ercyrillic
17557 \DeclareTextCommand{\cyr}{PU}{\84\100}% U+0440
17558 % U+0441 CYRILLIC SMALL LETTER ES; *afii10083, escyrillic
17559 \DeclareTextCommand{\cyr}{PU}{\84\101}% U+0441
17560 % U+0442 CYRILLIC SMALL LETTER TE; *afii10084, tecyrillic
17561 \DeclareTextCommand{\cyr}{PU}{\84\102}% U+0442
17562 % U+0443 CYRILLIC SMALL LETTER U; *afii10085, ucyrillic
17563 \DeclareTextCommand{\cyr}{PU}{\84\103}% U+0443
17564 % U+0444 CYRILLIC SMALL LETTER EF; *afii10086, efcyrillic
17565 \DeclareTextCommand{\cyr}{PU}{\84\104}% U+0444
17566 % U+0445 CYRILLIC SMALL LETTER HA; *afii10087, khacyrillic
17567 \DeclareTextCommand{\cyr}{PU}{\84\105}% U+0445
17568 % U+0446 CYRILLIC SMALL LETTER TSE; *afii10088, tsecyrillic
17569 \DeclareTextCommand{\cyr}{PU}{\84\106}% U+0446
17570 % U+0447 CYRILLIC SMALL LETTER CHE; *afii10089, checyrillic
17571 \DeclareTextCommand{\cyr}{PU}{\84\107}% U+0447
17572 % U+0448 CYRILLIC SMALL LETTER SHA; *afii10090, shacyrillic
17573 \DeclareTextCommand{\cyr}{PU}{\84\110}% U+0448
17574 % U+0449 CYRILLIC SMALL LETTER SHCHA; *afii10091, shchacyrillic
17575 \DeclareTextCommand{\cyr}{PU}{\84\111}% U+0449
17576 % U+044A CYRILLIC SMALL LETTER HARD SIGN; *afii10092, hardsigncyrillic
17577 \DeclareTextCommand{\cyr}{PU}{\84\112}% U+044A
17578 %* \cyrhrdsn -> \hardsign (tipa)
17579 % U+044B CYRILLIC SMALL LETTER YERU; *afii10093, yericyrillic
17580 \DeclareTextCommand{\cyr}{PU}{\84\113}% U+044B
17581 % U+044C CYRILLIC SMALL LETTER SOFT SIGN; *afii10094, softsigncyrillic
17582 \DeclareTextCommand{\cyr}{PU}{\84\114}% U+044C
17583 %* \cyrfts -> \softsign (tipa)
17584 % U+044D CYRILLIC SMALL LETTER E; *afii10095, ereversedcyrillic
17585 \DeclareTextCommand{\cyr}{PU}{\84\115}% U+044D
17586 % U+044E CYRILLIC SMALL LETTER YU; *afii10096, iucyrillic
17587 \DeclareTextCommand{\cyr}{PU}{\84\116}% U+044E
17588 % U+044F CYRILLIC SMALL LETTER YA; *afii10097, iacyrillic
17589 \DeclareTextCommand{\cyr}{PU}{\84\117}% U+044F
17590 % U+0450 CYRILLIC SMALL LETTER IE WITH GRAVE
17591 \DeclareTextCompositeCommand{\`}{PU}{\cyr}{\84\120}% U+0450
17592 % U+0451 CYRILLIC SMALL LETTER IO; *afii10071, iocyrillic
17593 \DeclareTextCommand{\cyr}{PU}{\84\121}% U+0451
17594 \DeclareTextCompositeCommand{\"}{PU}{\cyr}{\84\121}% U+0451
17595 % U+0452 CYRILLIC SMALL LETTER DJE; *afii10099, djecyrillic
17596 \DeclareTextCommand{\cyr}{PU}{\84\122}% U+0452

17597 % U+0453 CYRILLIC SMALL LETTER GJE; *afii10100, gjecyrillic
17598 \DeclareTextCompositeCommand{\'}{PU}{\cyr}{\84\123}% U+0453
17599 % U+0454 CYRILLIC SMALL LETTER UKRAINIAN IE; *afii10101, ecyrillic
17600 \DeclareTextCommand{\cyrie}{PU}{\84\124}% U+0454
17601 % U+0455 CYRILLIC SMALL LETTER DZE; *afii10102, dzecyrillic
17602 \DeclareTextCommand{\cyrdze}{PU}{\84\125}% U+0455
17603 % U+0456 CYRILLIC SMALL LETTER BYELORUSSIAN-UKRAINIAN I;
17604 % *afii10103, icyrillic
17605 \DeclareTextCommand{\cyrii}{PU}{\84\126}% U+0456
17606 % U+0457 CYRILLIC SMALL LETTER YI; *afii10104, yicyrillic
17607 \DeclareTextCommand{\cyryi}{PU}{\84\127}% U+0457
17608 \DeclareTextCompositeCommand{\"}{PU}{\cyrii}{\84\127}% U+0457
17609 % U+0458 CYRILLIC SMALL LETTER JE; *afii10105, jecyrillic
17610 \DeclareTextCommand{\cyrje}{PU}{\84\130}% U+0458
17611 % U+0459 CYRILLIC SMALL LETTER LJE; *afii10106, ljecyrillic
17612 \DeclareTextCommand{\cyrkje}{PU}{\84\131}% U+0459
17613 % U+045A CYRILLIC SMALL LETTER NJE; *afii10107, njecyrillic
17614 \DeclareTextCommand{\cyrnje}{PU}{\84\132}% U+045A
17615 % U+045B CYRILLIC SMALL LETTER TSHE; *afii10108, tshecyrillic
17616 \DeclareTextCommand{\cyrtshe}{PU}{\84\133}% U+045B
17617 % U+045C CYRILLIC SMALL LETTER KJE; *afii10109, kjecyrillic
17618 \DeclareTextCompositeCommand{\'}{PU}{\cyrk}{\84\134}% U+045C
17619 % U+045D CYRILLIC SMALL LETTER I WITH GRAVE
17620 \DeclareTextCompositeCommand{\`}{PU}{\cyri}{\84\135}% U+045D
17621 % U+045E CYRILLIC SMALL LETTER SHORT U; *afii10110, ushortcyrillic
17622 \DeclareTextCommand{\cyrushrt}{PU}{\84\136}% U+045E
17623 \DeclareTextCompositeCommand{\U}{PU}{\curu}{\84\136}% U+045E
17624 % U+045F CYRILLIC SMALL LETTER DZHE; *afii10193, dzhecyrillic
17625 \DeclareTextCommand{\cyrdzhe}{PU}{\84\137}% U+045F
17626 % U+0460 CYRILLIC CAPITAL LETTER OMEGA; Omegacyrillic
17627 \DeclareTextCommand{\CYROMEGA}{PU}{\84\140}% U+0460
17628 % U+0461 CYRILLIC SMALL LETTER OMEGA; omegacyrillic
17629 \DeclareTextCommand{\cyromega}{PU}{\84\141}% U+0461
17630 % U+0462 CYRILLIC CAPITAL LETTER YAT; Yatcyrillic, *afii10146
17631 \DeclareTextCommand{\CYRYAT}{PU}{\84\142}% U+0462
17632 % U+0463 CYRILLIC SMALL LETTER YAT; *afii10194, yatcyrillic
17633 \DeclareTextCommand{\cyrjat}{PU}{\84\143}% U+0463
17634 % U+0464 CYRILLIC CAPITAL LETTER IOTIFIED E; Eiotifiedcyrillic
17635 \DeclareTextCommand{\CYRIOTE}{PU}{\84\144}% U+0464
17636 % U+0465 CYRILLIC SMALL LETTER IOTIFIED E; eiotifiedcyrillic
17637 \DeclareTextCommand{\cyriote}{PU}{\84\145}% U+0465
17638 % U+0466 CYRILLIC CAPITAL LETTER LITTLE YUS; Yuslitlecyrillic
17639 \DeclareTextCommand{\CYRLYUS}{PU}{\84\146}% U+0466
17640 % U+0467 CYRILLIC SMALL LETTER LITTLE YUS; yuslitlecyrillic
17641 \DeclareTextCommand{\cyrlyus}{PU}{\84\147}% U+0467
17642 % U+0468 CYRILLIC CAPITAL LETTER IOTIFIED LITTLE YUS; Yuslitlei-
otifiedcyrillic
17643 \DeclareTextCommand{\CYRIOTLYUS}{PU}{\84\150}% U+0468
17644 % U+0469 CYRILLIC SMALL LETTER IOTIFIED LITTLE YUS; yuslitlei-
otifiedcyrillic
17645 \DeclareTextCommand{\cyriotlyus}{PU}{\84\151}% U+0469
17646 % U+046A CYRILLIC CAPITAL LETTER BIG YUS; Yusbigcyrillic
17647 \DeclareTextCommand{\CYRBYUS}{PU}{\84\152}% U+046A
17648 % U+046B CYRILLIC SMALL LETTER BIG YUS; yusbigcyrillic
17649 \DeclareTextCommand{\cyrbyus}{PU}{\84\153}% U+046B
17650 % U+046C CYRILLIC CAPITAL LETTER IOTIFIED BIG YUS; Yusbigiotified-
cyrillic

17651 \DeclareTextCommand{\CYRIOTBYUS}{PU}{\84\154}% U+046C
 17652 % U+046D CYRILLIC SMALL LETTER IOTIFIED BIG YUS; yusbigiotified-cyrillic
 17653 \DeclareTextCommand{\cyriotbyus}{PU}{\84\155}% U+046D
 17654 % U+046E CYRILLIC CAPITAL LETTER KSI; Ksicyrillic
 17655 \DeclareTextCommand{\CYRKSI}{PU}{\84\156}% U+046E
 17656 % U+046F CYRILLIC SMALL LETTER KSI; ksicyrillic
 17657 \DeclareTextCommand{\cyrkxi}{PU}{\84\157}% U+046F
 17658 % U+0470 CYRILLIC CAPITAL LETTER PSI; Psicyrillic
 17659 \DeclareTextCommand{\CYRPSI}{PU}{\84\160}% U+0470
 17660 % U+0471 CYRILLIC SMALL LETTER PSI; psicyrillic
 17661 \DeclareTextCommand{\cyrpsi}{PU}{\84\161}% U+0471
 17662 % U+0472 CYRILLIC CAPITAL LETTER FITA; Fitacyrillic, *afii10147
 17663 \DeclareTextCommand{\CYRFITA}{PU}{\84\162}% U+0472
 17664 % U+0473 CYRILLIC SMALL LETTER FITA; *afii10195, fitacyrillic
 17665 \DeclareTextCommand{\cyrfita}{PU}{\84\163}% U+0473
 17666 % U+0474 CYRILLIC CAPITAL LETTER IZHITSA; Izhitsacyrillic, *afii10148
 17667 \DeclareTextCommand{\CYRIZH}{PU}{\84\164}% U+0474
 17668 % U+0475 CYRILLIC SMALL LETTER IZHITSA; *afii10196, izhitsacyrillic
 17669 \DeclareTextCommand{\cyrizh}{PU}{\84\165}% U+0475
 17670 % U+0476 CYRILLIC CAPITAL LETTER IZHITSA WITH DOUBLE
 17671 % GRAVE ACCENT; Izhitsadblgravecyrillic
 17672 \DeclareTextCompositeCommand{\C}{PU}{\CYRIZH}{\84\166}% U+0476
 17673 % U+0477 CYRILLIC SMALL LETTER IZHITSA WITH DOUBLE
 17674 % GRAVE ACCENT; izhitsadblgravecyrillic
 17675 \DeclareTextCompositeCommand{\C}{PU}{\cyrizh}{\84\167}% U+0477
 17676 % U+0478 CYRILLIC CAPITAL LETTER UK; Ukcyrillic
 17677 \DeclareTextCommand{\CYRUK}{PU}{\84\170}% U+0478
 17678 % U+0479 CYRILLIC SMALL LETTER UK; ukcyrillic
 17679 \DeclareTextCommand{\cyruk}{PU}{\84\171}% U+0479
 17680 % U+047A CYRILLIC CAPITAL LETTER ROUND OMEGA; Omegaroundcyrillic
 17681 \DeclareTextCommand{\CYROMEGARND}{PU}{\84\172}% U+047A
 17682 % U+047B CYRILLIC SMALL LETTER ROUND OMEGA; omegaroundcyrillic
 17683 \DeclareTextCommand{\cyromegarnd}{PU}{\84\173}% U+047B
 17684 % U+047C CYRILLIC CAPITAL LETTER OMEGA WITH TITLO; Omegatitlocyrillic
 17685 \DeclareTextCommand{\CYROMEGATITLO}{PU}{\84\174}% U+047C
 17686 % U+047D CYRILLIC SMALL LETTER OMEGA WITH TITLO; omegatitlocyrillic
 17687 \DeclareTextCommand{\cyromegatitlo}{PU}{\84\175}% U+047D
 17688 % U+047E CYRILLIC CAPITAL LETTER OT; Otcyrillic
 17689 \DeclareTextCommand{\CYROT}{PU}{\84\176}% U+047E
 17690 % U+047F CYRILLIC SMALL LETTER OT; otcyrillic
 17691 \DeclareTextCommand{\cyrot}{PU}{\84\177}% U+047F
 17692 % U+0480 CYRILLIC CAPITAL LETTER KOPPA; Koppacyrillic
 17693 \DeclareTextCommand{\CYRKOPPA}{PU}{\84\200}% U+0480
 17694 % U+0481 CYRILLIC SMALL LETTER KOPPA; koppacyrillic
 17695 \DeclareTextCommand{\cyrkoppa}{PU}{\84\201}% U+0481
 17696 % U+0482 CYRILLIC THOUSANDS SIGN; thousandcyrillic
 17697 \DeclareTextCommand{\cyrthousands}{PU}{\84\202}% U+0482
 \84\203: U+0483 COMBINING CYRILLIC TITLO; titlocyrilliccmb
 \84\204: U+0484 COMBINING CYRILLIC PALATALIZATION; palatalization-cyrilliccmb
 \84\205: U+0485 COMBINING CYRILLIC DASIA PNEUMATA; dasiapneumatacyrilliccmb
 \84\206: U+0486 COMBINING CYRILLIC PSILI PNEUMATA; psilipneumat-

acyrilliccmb
 \84\207: U+0487 COMBINING CYRILLIC POKRYTIE
 \84\210: U+0488 COMBINING CYRILLIC HUNDRED THOUSANDS SIGN
 \84\211: U+0489 COMBINING CYRILLIC MILLIONS SIGN
 17698 % U+048A CYRILLIC CAPITAL LETTER SHORT I WITH TAIL
 17699 \DeclareTextCommand{\CYRISHRTDSC}{PU}{\84\212}% U+048A
 17700 % U+048B CYRILLIC SMALL LETTER SHORT I WITH TAIL
 17701 \DeclareTextCommand{\cyrishrtdsc}{PU}{\84\213}% U+048B
 17702 % U+048C CYRILLIC CAPITAL LETTER SEMISOFT SIGN
 17703 \DeclareTextCommand{\CYRSEMISFTSN}{PU}{\84\214}% U+048C
 17704 % U+048D CYRILLIC SMALL LETTER SEMISOFT SIGN
 17705 \DeclareTextCommand{\cyrsemisftsn}{PU}{\84\215}% U+048D
 17706 % U+048E CYRILLIC CAPITAL LETTER ER WITH TICK
 17707 \DeclareTextCommand{\CYRRTICK}{PU}{\84\216}% U+048E
 17708 % U+048F CYRILLIC SMALL LETTER ER WITH TICK
 17709 \DeclareTextCommand{\cyrrtick}{PU}{\84\217}% U+048F
 17710 % U+0490 CYRILLIC CAPITAL LETTER GHE WITH UPTURN; Gheupturn-cyrillic, *afii10050
 17711 \DeclareTextCommand{\CYRGUP}{PU}{\84\220}% U+0490
 17712 % U+0491 CYRILLIC SMALL LETTER GHE WITH UPTURN; *afii10098, gheupturncyrillic
 17713 \DeclareTextCommand{\cyrgup}{PU}{\84\221}% U+0491
 17714 % U+0492 CYRILLIC CAPITAL LETTER GHE WITH STROKE; Ghestroke-cyrillic
 17715 \DeclareTextCommand{\CYRGHCRS}{PU}{\84\222}% U+0492
 17716 % U+0493 CYRILLIC SMALL LETTER GHE WITH STROKE; ghestrokecyrillic
 17717 \DeclareTextCommand{\cyrghcrs}{PU}{\84\223}% U+0493
 17718 % U+0494 CYRILLIC CAPITAL LETTER GHE WITH MIDDLE HOOK;
 17719 % Ghemiddlehookcyrillic
 17720 \DeclareTextCommand{\CYRGHK}{PU}{\84\224}% U+0494
 17721 % U+0495 CYRILLIC SMALL LETTER GHE WITH MIDDLE HOOK;
 17722 % ghemiddlehookcyrillic
 17723 \DeclareTextCommand{\cyrghk}{PU}{\84\225}% U+0495
 17724 % U+0496 CYRILLIC CAPITAL LETTER ZHE WITH DESCENDER;
 17725 % Zhedescendercyrillic
 17726 \DeclareTextCommand{\CYRZHDSC}{PU}{\84\226}% U+0496
 17727 % U+0497 CYRILLIC SMALL LETTER ZHE WITH DESCENDER;
 17728 % zhedescendercyrillic
 17729 \DeclareTextCommand{\cyrzhdsc}{PU}{\84\227}% U+0497
 17730 % U+0498 CYRILLIC CAPITAL LETTER ZE WITH DESCENDER; Zedescendercyrillic
 17731 \DeclareTextCommand{\CYRZDSC}{PU}{\84\230}% U+0498
 17732 \DeclareTextCompositeCommand{\c}{PU}{\CYRZ}{\84\230}% U+0498
 17733 % U+0499 CYRILLIC SMALL LETTER ZE WITH DESCENDER; zedescendercyrillic
 17734 \DeclareTextCommand{\cyrzdsc}{PU}{\84\231}% U+0499
 17735 \DeclareTextCompositeCommand{\c}{PU}{\cyrz}{\84\231}% U+0499
 17736 % U+049A CYRILLIC CAPITAL LETTER KA WITH DESCENDER; Kadescendercyrillic
 17737 \DeclareTextCommand{\CYRKDSC}{PU}{\84\232}% U+049A
 17738 % U+049B CYRILLIC SMALL LETTER KA WITH DESCENDER; kadesendercyrillic
 17739 \DeclareTextCommand{\cyrkdsc}{PU}{\84\233}% U+049B
 17740 % U+049C CYRILLIC CAPITAL LETTER KA WITH VERTICAL STROKE;
 17741 % Kavertikalstrokecyrillic
 17742 \DeclareTextCommand{\CYRKVCRS}{PU}{\84\234}% U+049C
 17743 % U+049D CYRILLIC SMALL LETTER KA WITH VERTICAL STROKE;

17744 % kavertikalstrokecyrillic
 17745 \DeclareTextCommand{\cyrkvcrs}{PU}{\84\235}% U+049D
 17746 % U+049E CYRILLIC CAPITAL LETTER KA WITH STROKE; Kastrokecyrillic
 17747 \DeclareTextCommand{\CYRKHCRS}{PU}{\84\236}% U+049E
 17748 % U+049F CYRILLIC SMALL LETTER KA WITH STROKE; kastrokecyrillic
 17749 \DeclareTextCommand{\cyrkhcrs}{PU}{\84\237}% U+049F
 17750 % U+04A0 CYRILLIC CAPITAL LETTER BASHKIR KA; Kabashkircyrillic
 17751 \DeclareTextCommand{\CYRKBEAK}{PU}{\84\240}% U+04A0
 17752 % U+04A1 CYRILLIC SMALL LETTER BASHKIR KA; kabashkircyrillic
 17753 \DeclareTextCommand{\cyrkbeak}{PU}{\84\241}% U+04A1
 17754 % U+04A2 CYRILLIC CAPITAL LETTER EN WITH DESCENDER; Endescendercyrillic
 17755 \DeclareTextCommand{\CYRNDSC}{PU}{\84\242}% U+04A2
 17756 % U+04A3 CYRILLIC SMALL LETTER EN WITH DESCENDER; endescendercyrillic
 17757 \DeclareTextCommand{\cyrndsc}{PU}{\84\243}% U+04A3
 17758 % U+04A4 CYRILLIC CAPITAL LIGATURE EN GHE; Enghecyrillic
 17759 \DeclareTextCommand{\CYRNG}{PU}{\84\244}% U+04A4
 17760 % U+04A5 CYRILLIC SMALL LIGATURE EN GHE; enghecyrillic
 17761 \DeclareTextCommand{\cyrng}{PU}{\84\245}% U+04A5
 17762 % U+04A6 CYRILLIC CAPITAL LETTER PE WITH MIDDLE HOOK; Pemiddlehookcyrillic
 17763 \DeclareTextCommand{\CYRPHK}{PU}{\84\246}% U+04A6
 17764 % U+04A7 CYRILLIC SMALL LETTER PE WITH MIDDLE HOOK; pemiddlehookcyrillic
 17765 \DeclareTextCommand{\cyrphk}{PU}{\84\247}% U+04A7
 17766 % U+04A8 CYRILLIC CAPITAL LETTER ABKHASIAN HA; Haabkhasiancyrillic
 17767 \DeclareTextCommand{\CYRABHHA}{PU}{\84\250}% U+04A8
 17768 % U+04A9 CYRILLIC SMALL LETTER ABKHASIAN HA; haabkhasiancyrillic
 17769 \DeclareTextCommand{\cyrabhha}{PU}{\84\251}% U+04A9
 17770 % U+04AA CYRILLIC CAPITAL LETTER ES WITH DESCENDER; Esdescendercyrillic
 17771 \DeclareTextCommand{\CYRSDSC}{PU}{\84\252}% U+04AA
 17772 \DeclareTextCompositeCommand{\CYRSDSC}{PU}{\CYRS}{\84\252}% U+04AA
 17773 % U+04AB CYRILLIC SMALL LETTER ES WITH DESCENDER; esdescendercyrillic
 17774 \DeclareTextCommand{\cyrsdsc}{PU}{\84\253}% U+04AB
 17775 \DeclareTextCompositeCommand{\k}{PU}{\cyr}{\84\253}% U+04AB
 17776 % U+04AC CYRILLIC CAPITAL LETTER TE WITH DESCENDER; Tedescendercyrillic
 17777 \DeclareTextCommand{\CYRTDSC}{PU}{\84\254}% U+04AC
 17778 % U+04AD CYRILLIC SMALL LETTER TE WITH DESCENDER; tedescendercyrillic
 17779 \DeclareTextCommand{\cyrtdsc}{PU}{\84\255}% U+04AD
 17780 % U+04AE CYRILLIC CAPITAL LETTER STRAIGHT U; Ustraightcyrillic
 17781 \DeclareTextCommand{\CYRY}{PU}{\84\256}% U+04AE
 17782 % U+04AF CYRILLIC SMALL LETTER STRAIGHT U; ustraightcyrillic
 17783 \DeclareTextCommand{\cyry}{PU}{\84\257}% U+04AF
 17784 % U+04B0 CYRILLIC CAPITAL LETTER STRAIGHT U WITH STROKE; Ustraightstrokecyrillic
 17785 \DeclareTextCommand{\CYRYHCRS}{PU}{\84\260}% U+04B0
 17786 % U+04B1 CYRILLIC SMALL LETTER STRAIGHT U WITH STROKE; usstraightstrokecyrillic
 17787 \DeclareTextCommand{\cyryhcrs}{PU}{\84\261}% U+04B1
 17788 % U+04B2 CYRILLIC CAPITAL LETTER HA WITH DESCENDER; Hadesendercyrillic

17789 \DeclareTextCommand{\CYRHDSC}{PU}{\84\262}% U+04B2
17790 % U+04B3 CYRILLIC SMALL LETTER HA WITH DESCENDER; hadescendercyrillic
17791 \DeclareTextCommand{\cyrhdsc}{PU}{\84\263}% U+04B3
17792 % U+04B4 CYRILLIC CAPITAL LIGATURE TE TSE; Tetsecyrillic
17793 \DeclareTextCommand{\CYRTETSE}{PU}{\84\264}% U+04B4
17794 % U+04B5 CYRILLIC SMALL LIGATURE TE TSE; tetsecyrillic
17795 \DeclareTextCommand{\cyrtetse}{PU}{\84\265}% U+04B5
17796 % U+04B6 CYRILLIC CAPITAL LETTER CHE WITH DESCENDER;
17797 % Chedescendercyrillic
17798 \DeclareTextCommand{\CYRCHRDSC}{PU}{\84\266}% U+04B6
17799 % U+04B7 CYRILLIC SMALL LETTER CHE WITH DESCENDER; chedescendercyrillic
17800 \DeclareTextCommand{\cyrchrdsc}{PU}{\84\267}% U+04B7
17801 % U+04B8 CYRILLIC CAPITAL LETTER CHE WITH VERTICAL STROKE;
17802 % Cheverticalstrokecyrillic
17803 \DeclareTextCommand{\CYRCHVCRS}{PU}{\84\270}% U+04B8
17804 % U+04B9 CYRILLIC SMALL LETTER CHE WITH VERTICAL STROKE;
17805 % cheverticalstrokecyrillic
17806 \DeclareTextCommand{\cyrchvcrs}{PU}{\84\271}% U+04B9
17807 % U+04BA CYRILLIC CAPITAL LETTER SHHA; Shhacyrillic
17808 \DeclareTextCommand{\CYRSHHA}{PU}{\84\272}% U+04BA
17809 % U+04BB CYRILLIC SMALL LETTER SHHA; shhacyrillic
17810 \DeclareTextCommand{\cyrshha}{PU}{\84\273}% U+04BB
17811 % U+04BC CYRILLIC CAPITAL LETTER ABKHASIAN CHE; Cheabkhasiancyrillic
17812 \DeclareTextCommand{\CYRABHCH}{PU}{\84\274}% U+04BC
17813 % U+04BD CYRILLIC SMALL LETTER ABKHASIAN CHE; cheabkhasiancyrillic
17814 \DeclareTextCommand{\cyrabhch}{PU}{\84\275}% U+04BD
17815 % U+04BE CYRILLIC CAPITAL LETTER ABKHASIAN CHE WITH DESCENDER; Chedescenderabkhasiancyrillic
17816 \DeclareTextCommand{\CYRABHCHDSC}{PU}{\84\276}% U+04BE
17817 \DeclareTextCompositeCommand{\k}{PU}{\CYRABHCH}{\84\276}% U+04BE
17818 % U+04BF CYRILLIC SMALL LETTER ABKHASIAN CHE WITH DESCENDER; chedescenderabkhasiancyrillic
17819 \DeclareTextCommand{\cyrabhchdsc}{PU}{\84\277}% U+04BF
17820 \DeclareTextCompositeCommand{\k}{PU}{\cyrabhch}{\84\277}% U+04BF
17821 % U+04C0 CYRILLIC LETTER PALOCHKA; palochkacyrillic
17822 \DeclareTextCommand{\CYRpalochka}{PU}{\84\300}% U+04C0
17823 % U+04C1 CYRILLIC CAPITAL LETTER ZHE WITH BREVE; Zhebrevecyrillic
17824 \DeclareTextCompositeCommand{\U}{PU}{\CYRZH}{\84\301}% U+04C1
17825 % U+04C2 CYRILLIC SMALL LETTER ZHE WITH BREVE; zhebrevecyrillic
17826 \DeclareTextCompositeCommand{\U}{PU}{\cyrzh}{\84\302}% U+04C2
17827 % U+04C3 CYRILLIC CAPITAL LETTER KA WITH HOOK; Kahookcyrillic
17828 \DeclareTextCommand{\CYRKHK}{PU}{\84\303}% U+04C3
17829 % U+04C4 CYRILLIC SMALL LETTER KA WITH HOOK; kahookcyrillic
17830 \DeclareTextCommand{\cyrkhk}{PU}{\84\304}% U+04C4
17831 % U+04C5 CYRILLIC CAPITAL LETTER EL WITH TAIL
17832 \DeclareTextCommand{\CYRLDSC}{PU}{\84\305}% U+04C5
17833 % U+04C6 CYRILLIC SMALL LETTER EL WITH TAIL
17834 \DeclareTextCommand{\cyrldsc}{PU}{\84\306}% U+04C6
17835 % U+04C7 CYRILLIC CAPITAL LETTER EN WITH HOOK; Enhookcyrillic
17836 \DeclareTextCommand{\CYRNHK}{PU}{\84\307}% U+04C7
17837 % U+04C8 CYRILLIC SMALL LETTER EN WITH HOOK; enhookcyrillic
17838 \DeclareTextCommand{\cyrnhk}{PU}{\84\310}% U+04C8
17839 % U+04CB CYRILLIC CAPITAL LETTER KHAKASSIAN CHE; Chekhakas-

siancyrillic
 17840 \DeclareTextCommand{\CYRCHLDSC}{PU}{\84\313}% U+04CB
 17841 % U+04CC CYRILLIC SMALL LETTER KHAKASSIAN CHE; chekhakassian-cyrillic
 17842 \DeclareTextCommand{\cyrchldsc}{PU}{\84\314}% U+04CC
 17843 % U+04CD CYRILLIC CAPITAL LETTER EM WITH TAIL
 17844 \DeclareTextCommand{\CYRMDSC}{PU}{\84\315}% U+04CD
 17845 % U+04CE CYRILLIC SMALL LETTER EM WITH TAIL
 17846 \DeclareTextCommand{\cyrmdsc}{PU}{\84\316}% U+04CE
 \84\317: U+04CF CYRILLIC SMALL LETTER PALOCHKA
 17847 % U+04D0 CYRILLIC CAPITAL LETTER A WITH BREVE; Abrevecyrillic
 17848 \DeclareTextCompositeCommand{\U}{PU}{\CYRA}{\84\320}% U+04D0
 17849 % U+04D1 CYRILLIC SMALL LETTER A WITH BREVE; abrevecyrillic
 17850 \DeclareTextCompositeCommand{\U}{PU}{\cyra}{\84\321}% U+04D1
 17851 % U+04D2 CYRILLIC CAPITAL LETTER A WITH DIAERESIS; Adieresiscyrillic
 17852 \DeclareTextCompositeCommand{\U}{PU}{\CYRA}{\84\322}% U+04D2
 17853 % U+04D3 CYRILLIC SMALL LETTER A WITH DIAERESIS; adieresiscyrillic
 17854 \DeclareTextCompositeCommand{\U}{PU}{\cyra}{\84\323}% U+04D3
 17855 % U+04D4 CYRILLIC CAPITAL LIGATURE A IE; Aiecyrillic
 17856 \DeclareTextCommand{\CYRAE}{PU}{\84\324}% U+04D4
 17857 % U+04D5 CYRILLIC SMALL LIGATURE A IE; aiecyrillic
 17858 \DeclareTextCommand{\cyrae}{PU}{\84\325}% U+04D5
 17859 % U+04D6 CYRILLIC CAPITAL LETTER IE WITH BREVE; Iebrevacyrillic
 17860 \DeclareTextCompositeCommand{\U}{PU}{\CYRE}{\84\326}% U+04D6
 17861 % U+04D7 CYRILLIC SMALL LETTER IE WITH BREVE; iebrevacyrillic
 17862 \DeclareTextCompositeCommand{\U}{PU}{\cyre}{\84\327}% U+04D7
 17863 % U+04D8 CYRILLIC CAPITAL LETTER SCHWA; Schwacyrillic
 17864 \DeclareTextCommand{\CYRSCHWA}{PU}{\84\330}% U+04D8
 17865 % U+04D9 CYRILLIC SMALL LETTER SCHWA; *afi10846, schwacyrillic
 17866 \DeclareTextCommand{\cyrswa}{PU}{\84\331}% U+04D9
 17867 % U+04DA CYRILLIC CAPITAL LETTER SCHWA WITH DIAERESIS;
 17868 % Schwadiesiscyrillic
 17869 \DeclareTextCompositeCommand{\U}{PU}{\CYRSCHWA}{\84\332}% U+04DA
 17870 % U+04DB CYRILLIC SMALL LETTER SCHWA WITH DIAERESIS;
 17871 % schwadiesiscyrillic
 17872 \DeclareTextCompositeCommand{\U}{PU}{\cyrswa}{\84\333}% U+04DB
 17873 % U+04DC CYRILLIC CAPITAL LETTER ZHE WITH DIAERESIS; Zhedieresiscyrillic
 17874 \DeclareTextCompositeCommand{\U}{PU}{\CYRZH}{\84\334}% U+04DC
 17875 % U+04DD CYRILLIC SMALL LETTER ZHE WITH DIAERESIS; zhedieresiscyrillic
 17876 \DeclareTextCompositeCommand{\U}{PU}{\cyrzh}{\84\335}% U+04DD
 17877 % U+04DE CYRILLIC CAPITAL LETTER ZE WITH DIAERESIS; Zedieresiscyrillic
 17878 \DeclareTextCompositeCommand{\U}{PU}{\CYRZ}{\84\336}% U+04DE
 17879 % U+04DF CYRILLIC SMALL LETTER ZE WITH DIAERESIS; zedieresiscyrillic
 17880 \DeclareTextCompositeCommand{\U}{PU}{\cyrz}{\84\337}% U+04DF
 17881 % U+04E0 CYRILLIC CAPITAL LETTER ABKHASIAN DZE; Dzeabkhasian-cyrillic
 17882 \DeclareTextCommand{\CYRABHDZE}{PU}{\84\340}% U+04E0
 17883 % U+04E1 CYRILLIC SMALL LETTER ABKHASIAN DZE; dzeabkhasiancyrillic
 17884 \DeclareTextCommand{\cyrabhdze}{PU}{\84\341}% U+04E1
 17885 % U+04E2 CYRILLIC CAPITAL LETTER I WITH MACRON; Imacroncyrillic
 17886 \DeclareTextCompositeCommand{\U}{PU}{\CYRI}{\84\342}% U+04E2

17887 % U+04E3 CYRILLIC SMALL LETTER I WITH MACRON; imacroncyrillic
17888 \DeclareTextCompositeCommand{=} {PU}{\cyri}{\84\343}% U+04E3
17889 % U+04E4 CYRILLIC CAPITAL LETTER I WITH DIAERESIS; Idieresiscyrillic
17890 \DeclareTextCompositeCommand{"} {PU}{\CYRI}{\84\344}% U+04E4
17891 % U+04E5 CYRILLIC SMALL LETTER I WITH DIAERESIS; idieresiscyrillic
17892 \DeclareTextCompositeCommand{"} {PU}{\cyri}{\84\345}% U+04E5
17893 % U+04E6 CYRILLIC CAPITAL LETTER O WITH DIAERESIS; Odieresiscyrillic
17894 \DeclareTextCompositeCommand{"} {PU}{\CYRO}{\84\346}% U+04E6
17895 % U+04E7 CYRILLIC SMALL LETTER O WITH DIAERESIS; odieresiscyrillic
17896 \DeclareTextCompositeCommand{"} {PU}{\cyro}{\84\347}% U+04E7
17897 % U+04E8 CYRILLIC CAPITAL LETTER BARRED O; Obarredcyrillic
17898 \DeclareTextCommand{\CYROTLD}{PU}{\84\350}% U+04E8
17899 % U+04E9 CYRILLIC SMALL LETTER BARRED O; obarredcyrillic
17900 \DeclareTextCommand{\cyrotld}{PU}{\84\351}% U+04E9
17901 % U+04EA CYRILLIC CAPITAL LETTER BARRED O WITH DIAERESIS;
17902 % Obarreddieresiscyrillic
17903 \DeclareTextCompositeCommand{"} {PU}{\CYROTLD}{\84\352}% U+04EA
17904 % U+04EB CYRILLIC SMALL LETTER BARRED O WITH DIAERESIS;
17905 % obarreddieresiscyrillic
17906 \DeclareTextCompositeCommand{"} {PU}{\cyrotld}{\84\353}% U+04EB
17907 % U+04EC CYRILLIC CAPITAL LETTER E WITH DIAERESIS
17908 \DeclareTextCompositeCommand{"} {PU}{\CYREREV}{\84\354}% U+04EC
17909 % U+04ED CYRILLIC SMALL LETTER E WITH DIAERESIS
17910 \DeclareTextCompositeCommand{"} {PU}{\cyreref}{\84\355}% U+04ED
17911 % U+04EE CYRILLIC CAPITAL LETTER U WITH MACRON; Umacroncyrillic
17912 \DeclareTextCompositeCommand{\=} {PU}{\CYRU}{\84\356}% U+04EE
17913 % U+04EF CYRILLIC SMALL LETTER U WITH MACRON; umacroncyrillic
17914 \DeclareTextCompositeCommand{\=} {PU}{\cyru}{\84\357}% U+04EF
17915 % U+04F0 CYRILLIC CAPITAL LETTER U WITH DIAERESIS; Udieresiscyrillic
17916 \DeclareTextCompositeCommand{"} {PU}{\CYRU}{\84\360}% U+04F0
17917 % U+04F1 CYRILLIC SMALL LETTER U WITH DIAERESIS; udieresiscyrillic
17918 \DeclareTextCompositeCommand{"} {PU}{\cyru}{\84\361}% U+04F1
17919 % U+04F2 CYRILLIC CAPITAL LETTER U WITH DOUBLE ACUTE; Uhungarumlautcyrillic
17920 \DeclareTextCompositeCommand{\H} {PU}{\CYRU}{\84\362}% U+04F2
17921 % U+04F3 CYRILLIC SMALL LETTER U WITH DOUBLE ACUTE; uhungarumlautcyrillic
17922 \DeclareTextCompositeCommand{\H} {PU}{\cyru}{\84\363}% U+04F3
17923 % U+04F4 CYRILLIC CAPITAL LETTER CHE WITH DIAERESIS; Chedieresiscyrillic
17924 \DeclareTextCompositeCommand{"} {PU}{\CYRCH}{\84\364}% U+04F4
17925 % U+04F5 CYRILLIC SMALL LETTER CHE WITH DIAERESIS; chedieresiscyrillic
17926 \DeclareTextCompositeCommand{"} {PU}{\cyrch}{\84\365}% U+04F5
17927 % U+04F6 CYRILLIC CAPITAL LETTER GHE WITH DESCENDER
17928 \DeclareTextCommand{\CYRGDSC}{PU}{\84\366}% U+04F6
17929 % U+04F7 CYRILLIC SMALL LETTER GHE WITH DESCENDER
17930 \DeclareTextCommand{\cyrgdsc}{PU}{\84\367}% U+04F7
17931 % U+04F8 CYRILLIC CAPITAL LETTER YERU WITH DIAERESIS; Yerudieresiscyrillic
17932 \DeclareTextCompositeCommand{"} {PU}{\CYRERY}{\84\370}% U+04F8
17933 % U+04F9 CYRILLIC SMALL LETTER YERU WITH DIAERESIS; yerudieresiscyrillic
17934 \DeclareTextCompositeCommand{"} {PU}{\cyrery}{\84\371}% U+04F9
\84\372: U+04FA CYRILLIC CAPITAL LETTER GHE WITH STROKE AND

HOOK

\84\373: U+04FB CYRILLIC SMALL LETTER GHE WITH STROKE AND
HOOK

17935 % U+04FC CYRILLIC CAPITAL LETTER HA WITH HOOK

17936 \DeclareTextCommand{\CYRHHK}{PU}{\84\374}% U+04FC

17937 % U+04FD CYRILLIC SMALL LETTER HA WITH HOOK

17938 \DeclareTextCommand{\cyrhhk}{PU}{\84\375}% U+04FD

\84\376: U+04FE CYRILLIC CAPITAL LETTER HA WITH STROKE

\84\377: U+04FF CYRILLIC SMALL LETTER HA WITH STROKE

51.2.11 Hebrew: U+0590 to U+05FF

Macro names are taken from `he8enc.def`.

17939 % U+05C3 HEBREW PUNCTUATION SOF PASUQ

17940 \DeclareTextCommand{\sofpasuq}{PU}{\85\303}% U+05C3

17941 % U+05D0 HEBREW LETTER ALEF

17942 \DeclareTextCommand{\hebalef}{PU}{\85\320}% U+05D0

17943 % U+05D1 HEBREW LETTER BET

17944 \DeclareTextCommand{\hebbet}{PU}{\85\321}% U+05D1

17945 % U+05D2 HEBREW LETTER GIMEL

17946 \DeclareTextCommand{\hebgimel}{PU}{\85\322}% U+05D2

17947 % U+05D3 HEBREW LETTER DALET

17948 \DeclareTextCommand{\hebdalet}{PU}{\85\323}% U+05D3

17949 % U+05D4 HEBREW LETTER HE

17950 \DeclareTextCommand{\hebhe}{PU}{\85\324}% U+05D4

17951 % U+05D5 HEBREW LETTER VAV

17952 \DeclareTextCommand{\hebvav}{PU}{\85\325}% U+05D5

17953 % U+05D6 HEBREW LETTER ZAYIN

17954 \DeclareTextCommand{\hebzayin}{PU}{\85\326}% U+05D6

17955 % U+05D7 HEBREW LETTER HET

17956 \DeclareTextCommand{\hebhet}{PU}{\85\327}% U+05D7

17957 % U+05D8 HEBREW LETTER TET

17958 \DeclareTextCommand{\hebtet}{PU}{\85\330}% U+05D8

17959 % U+05D9 HEBREW LETTER YOD

17960 \DeclareTextCommand{\hebyod}{PU}{\85\331}% U+05D9

17961 % U+05DA HEBREW LETTER FINAL KAF

17962 \DeclareTextCommand{\hebfinalkaf}{PU}{\85\332}% U+05DA

17963 % U+05DB HEBREW LETTER KAF

17964 \DeclareTextCommand{\hebkaf}{PU}{\85\333}% U+05DB

17965 % U+05DC HEBREW LETTER LAMED

17966 \DeclareTextCommand{\heblamed}{PU}{\85\334}% U+05DC

17967 % U+05DD HEBREW LETTER FINAL MEM

17968 \DeclareTextCommand{\hebfinalmem}{PU}{\85\335}% U+05DD

17969 % U+05DE HEBREW LETTER MEM

17970 \DeclareTextCommand{\hebmeme}{PU}{\85\336}% U+05DE

17971 % U+05DF HEBREW LETTER FINAL NUN

17972 \DeclareTextCommand{\hebfinalnun}{PU}{\85\337}% U+05DF

17973 % U+05E0 HEBREW LETTER NUN

17974 \DeclareTextCommand{\hebnun}{PU}{\85\340}% U+05E0

17975 % U+05E1 HEBREW LETTER SAMEKH

17976 \DeclareTextCommand{\hebsamekh}{PU}{\85\341}% U+05E1

17977 % U+05E2 HEBREW LETTER AYIN

17978 \DeclareTextCommand{\hebayin}{PU}{\85\342}% U+05E2

17979 % U+05E3 HEBREW LETTER FINAL PE

17980 \DeclareTextCommand{\hebfinalpe}{PU}{\85\343}% U+05E3

17981 % U+05E4 HEBREW LETTER PE

17982 \DeclareTextCommand{\hebpe}{PU}{\85\344}% U+05E4
 17983 % U+05E5 HEBREW LETTER FINAL TSADI
 17984 \DeclareTextCommand{\hebfinaltsadi}{PU}{\85\345}% U+05E5
 17985 % U+05E6 HEBREW LETTER TSADI
 17986 \DeclareTextCommand{\hebtsadi}{PU}{\85\346}% U+05E6
 17987 % U+05E7 HEBREW LETTER QOF
 17988 \DeclareTextCommand{\hebqof}{PU}{\85\347}% U+05E7
 17989 % U+05E8 HEBREW LETTER RESH
 17990 \DeclareTextCommand{\hebresh}{PU}{\85\350}% U+05E8
 17991 % U+05E9 HEBREW LETTER SHIN
 17992 \DeclareTextCommand{\hebshin}{PU}{\85\351}% U+05E9
 17993 %* \hebshin -> \hebsin (he8)
 17994 % U+05EA HEBREW LETTER TAV
 17995 \DeclareTextCommand{\hebtav}{PU}{\85\352}% U+05EA
 17996 % U+05F0 HEBREW LIGATURE YIDDISH DOUBLE VAV
 17997 \DeclareTextCommand{\doublevav}{PU}{\85\360}% U+05F0
 17998 % U+05F1 HEBREW LIGATURE YIDDISH VAV YOD
 17999 \DeclareTextCommand{\vavyod}{PU}{\85\361}% U+05F1
 18000 % U+05F2 HEBREW LIGATURE YIDDISH DOUBLE YOD
 18001 \DeclareTextCommand{\doubleyod}{PU}{\85\362}% U+05F2

51.2.12 Thai: U+0E00 to U+0E7F

18002 % U+0E3F THAI CURRENCY SYMBOL BAHT; bahtthai
 18003 \DeclareTextCommand{\textbaht}{PU}{\9016\077}% U+0E3F

51.2.13 Phonetic Extensions: U+1D00 to U+1D7F

18004 % U+1D00 LATIN LETTER SMALL CAPITAL A; \textsca (tipa)
 18005 \DeclareTextCommand{\textsca}{PU}{\9035\000}% U+1D00
 18006 % U+1D05 LATIN LETTER SMALL CAPITAL D; \scd (wsuipa)
 18007 \DeclareTextCommand{\textscd}{PU}{\9035\005}%* U+1D05
 18008 % U+1D07 LATIN LETTER SMALL CAPITAL E; \textsce (tipa)
 18009 \DeclareTextCommand{\textsce}{PU}{\9035\007}% U+1D07
 18010 % U+1D0A LATIN LETTER SMALL CAPITAL J; \textscj (tipa)
 18011 \DeclareTextCommand{\textscj}{PU}{\9035\012}% U+1D0A
 18012 % U+1D0B LATIN LETTER SMALL CAPITAL K; \textscK (tipx)
 18013 \DeclareTextCommand{\textPUscK}{PU}{\9035\013}% U+1D0B
 18014 %* \textPUscK -> \textscK (tipx)
 18015 % U+1D0D LATIN LETTER SMALL CAPITAL M; \textscm (tipx)
 18016 \DeclareTextCommand{\textPUscm}{PU}{\9035\015}% U+1D0D
 18017 %* \textPUscm -> \textscm (tipx)
 18018 % U+1D18 LATIN LETTER SMALL CAPITAL P; \textscP (tipx)
 18019 \DeclareTextCommand{\textPUscP}{PU}{\9035\030}% U+1D18
 18020 %* \textPUscP -> \textscP (tipx)
 18021 % U+1D19 LATIN LETTER SMALL CAPITAL REVERSED R; \textrevscr (tipx)
 18022 \DeclareTextCommand{\textPUrevscr}{PU}{\9035\031}% U+1D19
 18023 %* \textPUrevscr -> \textrevscr (tipx)
 18024 % U+1D1C LATIN LETTER SMALL CAPITAL U; \textscu (tipa), \scu (wsuipa)
 18025 \DeclareTextCommand{\textscu}{PU}{\9035\034}%* U+1D1C
 18026 % U+1D62 LATIN SUBSCRIPT SMALL LETTER I
 18027 \DeclareTextCommand{\textiinferior}{PU}{\9035\142}%* U+1D62
 18028 % U+1D63 LATIN SUBSCRIPT SMALL LETTER R
 18029 \DeclareTextCommand{\textrinferior}{PU}{\9035\143}%* U+1D63
 18030 % U+1D64 LATIN SUBSCRIPT SMALL LETTER U
 18031 \DeclareTextCommand{\textuinferior}{PU}{\9035\144}%* U+1D64
 18032 % U+1D65 LATIN SUBSCRIPT SMALL LETTER V
 18033 \DeclareTextCommand{\textvinferior}{PU}{\9035\145}%* U+1D65

18034 % U+1D66 GREEK SUBSCRIPT SMALL LETTER BETA
 18035 \DeclareTextCommand{\textbetainferior}{PU}{\9035\146}%* U+1D66
 18036 % U+1D67 GREEK SUBSCRIPT SMALL LETTER GAMMA
 18037 \DeclareTextCommand{\textgammainferior}{PU}{\9035\147}%* U+1D67
 18038 % U+1D68 GREEK SUBSCRIPT SMALL LETTER RHO
 18039 \DeclareTextCommand{\textrhoinferior}{PU}{\9035\150}%* U+1D68
 18040 % U+1D69 GREEK SUBSCRIPT SMALL LETTER PHI
 18041 \DeclareTextCommand{\textphiinferior}{PU}{\9035\151}%* U+1D69
 18042 % U+1D6A GREEK SUBSCRIPT SMALL LETTER CHI
 18043 \DeclareTextCommand{\textchiinferior}{PU}{\9035\152}%* U+1D6A
 18044 % U+1D7B LATIN SMALL CAPITAL LETTER I WITH STROKE;
 18045 % \barsci (wsuipa)
 18046 \DeclareTextCommand{\textbarsci}{PU}{\9035\173}%* U+1D7B
 18047 % U+1D7D LATIN SMALL LETTER P WITH STROKE; \barp (wsuipa)
 18048 \DeclareTextCommand{\textbarp}{PU}{\9035\175}%* U+1D7D
 18049 % U+1D7E LATIN SMALL CAPITAL LETTER U WITH STROKE;
 18050 % \barscu (wsuipa)
 18051 \DeclareTextCommand{\textbarscu}{PU}{\9035\176}%* U+1D7E

51.2.14 Phonetic Extensions Supplement: U+1D80 to U+1DBF

18052 % U+1D8F LATIN SMALL LETTER A WITH RETROFLEX HOOK; \tex-
 trhooka (tipx)
 18053 \DeclareTextCommand{\textPURhooka}{PU}{\9035\217}% U+1D8F
 18054 %* \textPURhooka -> \textrhooka (tipx)
 18055 % U+1D91 LATIN SMALL LETTER D WITH HOOK AND TAIL; \texthtr-
 taild (tipa)
 18056 \DeclareTextCommand{\texthtrtaild}{PU}{\9035\221}%* U+1D91
 18057 % U+1D92 LATIN SMALL LETTER E WITH RETROFLEX HOOK; \tex-
 trhooke (tipx)
 18058 \DeclareTextCommand{\textPURhooke}{PU}{\9035\222}% U+1D92
 18059 %* \textPURhooke -> \textrhooke (tipx)
 18060 % U+1D93 LATIN SMALL LETTER OPEN E WITH RETROFLEX HOOK;
 18061 % \textrhookepsilon (tipx)
 18062 \DeclareTextCommand{\textPURhookepsilon}{PU}{\9035\223}% U+1D93
 18063 %* \textPURhookepsilon -> \textrhookepsilon (tipx)
 18064 % U+1D97 LATIN SMALL LETTER OPEN O WITH RETROFLEX HOOK;
 18065 % \textrhookopeno (tipx)
 18066 \DeclareTextCommand{\textPURhookopeno}{PU}{\9035\227}% U+1D97
 18067 %* \textPURhookopeno -> \textrhookopeno (tipx)

51.2.15 Latin Extended Additional: U+1E00 to U+1EFF

18068 % U+1E00 LATIN CAPITAL LETTER A WITH RING BELOW; Aringbelow
 18069 \DeclareTextCompositeCommand{\textsubring}{PU}{A}{\9036\000}% U+1E00
 18070 % U+1E01 LATIN SMALL LETTER A WITH RING BELOW; aringbelow
 18071 \DeclareTextCompositeCommand{\textsubring}{PU}{a}{\9036\001}% U+1E01
 18072 % U+1E02 LATIN CAPITAL LETTER B WITH DOT ABOVE; Bdotaccent
 18073 \DeclareTextCompositeCommand{.}{PU}{B}{\9036\002}% U+1E02
 18074 % U+1E03 LATIN SMALL LETTER B WITH DOT ABOVE; bdotaccent
 18075 \DeclareTextCompositeCommand{.}{PU}{b}{\9036\003}% U+1E03
 18076 % U+1E04 LATIN CAPITAL LETTER B WITH DOT BELOW; Bdotbelow
 18077 \DeclareTextCompositeCommand{\d}{PU}{B}{\9036\004}% U+1E04
 18078 % U+1E05 LATIN SMALL LETTER B WITH DOT BELOW; bdotbelow
 18079 \DeclareTextCompositeCommand{\d}{PU}{b}{\9036\005}% U+1E05
 18080 % U+1E06 LATIN CAPITAL LETTER B WITH LINE BELOW; Blinebelow
 18081 \DeclareTextCompositeCommand{\b}{PU}{B}{\9036\006}% U+1E06
 18082 % U+1E07 LATIN SMALL LETTER B WITH LINE BELOW; blinebelow
 18083 \DeclareTextCompositeCommand{\b}{PU}{b}{\9036\007}% U+1E07

18084 % U+1E0A LATIN CAPITAL LETTER D WITH DOT ABOVE; Ddotaccent
18085 \DeclareTextCompositeCommand{\.}{PU}{D}{\9036\012}% U+1E0A
18086 % U+1E0B LATIN SMALL LETTER D WITH DOT ABOVE; ddotaccent
18087 \DeclareTextCompositeCommand{\.}{PU}{d}{\9036\013}% U+1E0B
18088 % U+1E0C LATIN CAPITAL LETTER D WITH DOT BELOW; Ddotbelow
18089 \DeclareTextCompositeCommand{\d}{PU}{D}{\9036\014}% U+1E0C
18090 % U+1E0D LATIN SMALL LETTER D WITH DOT BELOW; ddotbelow
18091 \DeclareTextCompositeCommand{\d}{PU}{d}{\9036\015}% U+1E0D
18092 % U+1E0E LATIN CAPITAL LETTER D WITH LINE BELOW; Dlinebelow
18093 \DeclareTextCompositeCommand{\b}{PU}{D}{\9036\016}% U+1E0E
18094 % U+1E0F LATIN SMALL LETTER D WITH LINE BELOW; dlinebelow
18095 \DeclareTextCompositeCommand{\b}{PU}{d}{\9036\017}% U+1E0F
18096 % U+1E10 LATIN CAPITAL LETTER D WITH CEDILLA; Dcedilla
18097 \DeclareTextCompositeCommand{\c}{PU}{D}{\9036\020}% U+1E10
18098 % U+1E11 LATIN SMALL LETTER D WITH CEDILLA; dcedilla
18099 \DeclareTextCompositeCommand{\c}{PU}{d}{\9036\021}% U+1E11
18100 % U+1E12 LATIN CAPITAL LETTER D WITH CIRCUMFLEX BELOW; Dcir-
cumflexbelow
18101 \DeclareTextCompositeCommand{\textsubcircum}{PU}{D}{\9036\022}% U+1E12
18102 % U+1E13 LATIN SMALL LETTER D WITH CIRCUMFLEX BELOW; dcir-
cumflexbelow
18103 \DeclareTextCompositeCommand{\textsubcircum}{PU}{d}{\9036\023}% U+1E13
18104 % U+1E14 LATIN CAPITAL LETTER E WITH MACRON AND GRAVE;
18105 % Emacrongrave
18106 \DeclareTextCompositeCommand{\textgravemacron}{PU}{E}{\9036\024}% U+1E14
18107 % U+1E15 LATIN SMALL LETTER E WITH MACRON AND GRAVE;
18108 % emacrongrave
18109 \DeclareTextCompositeCommand{\textgravemacron}{PU}{e}{\9036\025}% U+1E15
18110 % U+1E16 LATIN CAPITAL LETTER E WITH MACRON AND ACUTE;
18111 % Emacronacute
18112 \DeclareTextCompositeCommand{\textacutemacron}{PU}{E}{\9036\026}% U+1E16
18113 % U+1E17 LATIN SMALL LETTER E WITH MACRON AND ACUTE;
18114 % emacronacute
18115 \DeclareTextCompositeCommand{\textacutemacron}{PU}{e}{\9036\027}% U+1E17
18116 % U+1E18 LATIN CAPITAL LETTER E WITH CIRCUMFLEX BELOW; Ecir-
cumflexbelow
18117 \DeclareTextCompositeCommand{\textsubcircum}{PU}{E}{\9036\030}% U+1E18
18118 % U+1E19 LATIN SMALL LETTER E WITH CIRCUMFLEX BELOW; ecir-
cumflexbelow
18119 \DeclareTextCompositeCommand{\textsubcircum}{PU}{e}{\9036\031}% U+1E19
18120 % U+1E1A LATIN CAPITAL LETTER E WITH TILDE BELOW; Etildebelow
18121 \DeclareTextCompositeCommand{\textsubtilde}{PU}{E}{\9036\032}% U+1E1A
18122 % U+1E1B LATIN SMALL LETTER E WITH TILDE BELOW; etildebelow
18123 \DeclareTextCompositeCommand{\textsubtilde}{PU}{e}{\9036\033}% U+1E1B
18124 % U+1E1E LATIN CAPITAL LETTER F WITH DOT ABOVE; Fdotaccent
18125 \DeclareTextCompositeCommand{\.}{PU}{F}{\9036\036}% U+1E1E
18126 % U+1E1F LATIN SMALL LETTER F WITH DOT ABOVE; fdotaccent
18127 \DeclareTextCompositeCommand{\.}{PU}{f}{\9036\037}% U+1E1F
18128 % U+1E20 LATIN CAPITAL LETTER G WITH MACRON; Gmacron
18129 \DeclareTextCompositeCommand{\=}{PU}{G}{\9036\040}% U+1E20
18130 % U+1E21 LATIN SMALL LETTER G WITH MACRON; gmacron
18131 \DeclareTextCompositeCommand{\=}{PU}{g}{\9036\041}% U+1E21
18132 % U+1E22 LATIN CAPITAL LETTER H WITH DOT ABOVE; Hdotaccent
18133 \DeclareTextCompositeCommand{\.}{PU}{H}{\9036\042}% U+1E22
18134 % U+1E23 LATIN SMALL LETTER H WITH DOT ABOVE; hdotaccent
18135 \DeclareTextCompositeCommand{\.}{PU}{h}{\9036\043}% U+1E23
18136 % U+1E24 LATIN CAPITAL LETTER H WITH DOT BELOW; Hdotbelow

18137 \DeclareTextCompositeCommand{\d}{PU}{H}{\9036\044}% U+1E24
18138 % U+1E25 LATIN SMALL LETTER H WITH DOT BELOW; hdotbelow
18139 \DeclareTextCompositeCommand{\d}{PU}{h}{\9036\045}% U+1E25
18140 % U+1E26 LATIN CAPITAL LETTER H WITH DIAERESIS; Hdieresis
18141 \DeclareTextCompositeCommand{"}{PU}{H}{\9036\046}% U+1E26
18142 % U+1E27 LATIN SMALL LETTER H WITH DIAERESIS; hdieresis
18143 \DeclareTextCompositeCommand{"}{PU}{h}{\9036\047}% U+1E27
18144 % U+1E28 LATIN CAPITAL LETTER H WITH CEDILLA; Hcedilla
18145 \DeclareTextCompositeCommand{\c}{PU}{H}{\9036\050}% U+1E28
18146 % U+1E29 LATIN SMALL LETTER H WITH CEDILLA; hcedilla
18147 \DeclareTextCompositeCommand{\c}{PU}{h}{\9036\051}% U+1E29
18148 % U+1E2A LATIN CAPITAL LETTER H WITH BREVE BELOW; Hbrevebelow
18149 \DeclareTextCompositeCommand{\textsubbreve}{PU}{H}{\9036\052}% U+1E2A
18150 % U+1E2B LATIN SMALL LETTER H WITH BREVE BELOW; hbrevebelow
18151 \DeclareTextCompositeCommand{\textsubbreve}{PU}{h}{\9036\053}% U+1E2B
18152 % U+1E2C LATIN CAPITAL LETTER I WITH TILDE BELOW; Itildebelow
18153 \DeclareTextCompositeCommand{\textsubtilde}{PU}{I}{\9036\054}% U+1E2C
18154 % U+1E2D LATIN SMALL LETTER I WITH TILDE BELOW; itildebelow
18155 \DeclareTextCompositeCommand{\textsubtilde}{PU}{i}{\9036\055}% U+1E2D
18156 % U+1E30 LATIN CAPITAL LETTER K WITH ACUTE; Kacute
18157 \DeclareTextCompositeCommand{\'}{PU}{K}{\9036\060}% U+1E30
18158 % U+1E31 LATIN SMALL LETTER K WITH ACUTE; kacute
18159 \DeclareTextCompositeCommand{\'}{PU}{k}{\9036\061}% U+1E31
18160 % U+1E32 LATIN CAPITAL LETTER K WITH DOT BELOW; Kdotbelow
18161 \DeclareTextCompositeCommand{\d}{PU}{K}{\9036\062}% U+1E32
18162 % U+1E33 LATIN SMALL LETTER K WITH DOT BELOW; kdotbelow
18163 \DeclareTextCompositeCommand{\d}{PU}{k}{\9036\063}% U+1E33
18164 % U+1E34 LATIN CAPITAL LETTER K WITH LINE BELOW; Klinebelow
18165 \DeclareTextCompositeCommand{\b}{PU}{K}{\9036\064}% U+1E34
18166 % U+1E35 LATIN SMALL LETTER K WITH LINE BELOW; klinebelow
18167 \DeclareTextCompositeCommand{\b}{PU}{k}{\9036\065}% U+1E35
18168 % U+1E36 LATIN CAPITAL LETTER L WITH DOT BELOW; Ldotbelow
18169 \DeclareTextCompositeCommand{\d}{PU}{L}{\9036\066}% U+1E36
18170 % U+1E37 LATIN SMALL LETTER L WITH DOT BELOW; ldotbelow
18171 \DeclareTextCompositeCommand{\d}{PU}{l}{\9036\067}% U+1E37
18172 % U+1E3A LATIN CAPITAL LETTER L WITH LINE BELOW; Llinebelow
18173 \DeclareTextCompositeCommand{\b}{PU}{L}{\9036\072}% U+1E3A
18174 % U+1E3B LATIN SMALL LETTER L WITH LINE BELOW; llinebelow
18175 \DeclareTextCompositeCommand{\b}{PU}{l}{\9036\073}% U+1E3B
18176 % U+1E3C LATIN CAPITAL LETTER L WITH CIRCUMFLEX BELOW; Lcir-
cumflexbelow
18177 \DeclareTextCompositeCommand{\textsubcircum}{PU}{L}{\9036\074}% U+1E3C
18178 % U+1E3D LATIN SMALL LETTER L WITH CIRCUMFLEX BELOW; lcir-
cumflexbelow
18179 \DeclareTextCompositeCommand{\textsubcircum}{PU}{l}{\9036\075}% U+1E3D
18180 % U+1E3E LATIN CAPITAL LETTER M WITH ACUTE; Macute
18181 \DeclareTextCompositeCommand{\'}{PU}{M}{\9036\076}% U+1E3E
18182 % U+1E3F LATIN SMALL LETTER M WITH ACUTE; macute
18183 \DeclareTextCompositeCommand{\'}{PU}{m}{\9036\077}% U+1E3F
18184 % U+1E40 LATIN CAPITAL LETTER M WITH DOT ABOVE; Mdotaccent
18185 \DeclareTextCompositeCommand{\.}{PU}{M}{\9036\100}% U+1E40
18186 % U+1E41 LATIN SMALL LETTER M WITH DOT ABOVE; mdotaccent
18187 \DeclareTextCompositeCommand{\.}{PU}{m}{\9036\101}% U+1E41
18188 % U+1E42 LATIN CAPITAL LETTER M WITH DOT BELOW; Mdotbelow
18189 \DeclareTextCompositeCommand{\d}{PU}{M}{\9036\102}% U+1E42
18190 % U+1E43 LATIN SMALL LETTER M WITH DOT BELOW; mdotbelow
18191 \DeclareTextCompositeCommand{\d}{PU}{m}{\9036\103}% U+1E43

18192 % U+1E44 LATIN CAPITAL LETTER N WITH DOT ABOVE; Ndotaccent
 18193 \DeclareTextCompositeCommand{\.}{PU}{N}{\9036\104}% U+1E44
 18194 % U+1E45 LATIN SMALL LETTER N WITH DOT ABOVE; ndotaccent
 18195 \DeclareTextCompositeCommand{\.}{PU}{n}{\9036\105}% U+1E45
 18196 % U+1E46 LATIN CAPITAL LETTER N WITH DOT BELOW; Ndotbelow
 18197 \DeclareTextCompositeCommand{\d}{PU}{N}{\9036\106}% U+1E46
 18198 % U+1E47 LATIN SMALL LETTER N WITH DOT BELOW; ndotbelow
 18199 \DeclareTextCompositeCommand{\d}{PU}{n}{\9036\107}% U+1E47
 18200 % U+1E48 LATIN CAPITAL LETTER N WITH LINE BELOW; Nlinebelow
 18201 \DeclareTextCompositeCommand{\b}{PU}{N}{\9036\110}% U+1E48
 18202 % U+1E49 LATIN SMALL LETTER N WITH LINE BELOW; nlinebelow
 18203 \DeclareTextCompositeCommand{\b}{PU}{n}{\9036\111}% U+1E49
 18204 % U+1E4A LATIN CAPITAL LETTER N WITH CIRCUMFLEX BELOW; Ncir-
 cumflexbelow
 18205 \DeclareTextCompositeCommand{\textsubcircum}{PU}{N}{\9036\112}% U+1E4A
 18206 % U+1E4B LATIN SMALL LETTER N WITH CIRCUMFLEX BELOW; ncir-
 cumflexbelow
 18207 \DeclareTextCompositeCommand{\textsubcircum}{PU}{n}{\9036\113}% U+1E4B
 18208 % U+1E50 LATIN CAPITAL LETTER O WITH MACRON AND GRAVE;
 18209 % Omacrongrave
 18210 \DeclareTextCompositeCommand{\textgravemacron}{PU}{O}{\9036\120}% U+1E50
 18211 % U+1E51 LATIN SMALL LETTER O WITH MACRON AND GRAVE;
 18212 % omacrongrave
 18213 \DeclareTextCompositeCommand{\textgravemacron}{PU}{o}{\9036\121}% U+1E51
 18214 % U+1E52 LATIN CAPITAL LETTER O WITH MACRON AND ACUTE;
 18215 % Omacronacute
 18216 \DeclareTextCompositeCommand{\textacutemacron}{PU}{O}{\9036\122}% U+1E52
 18217 % U+1E53 LATIN SMALL LETTER O WITH MACRON AND ACUTE;
 18218 % omacronacute
 18219 \DeclareTextCompositeCommand{\textacutemacron}{PU}{o}{\9036\123}% U+1E53
 18220 % U+1E54 LATIN CAPITAL LETTER P WITH ACUTE; Pacute
 18221 \DeclareTextCompositeCommand{\'}{PU}{P}{\9036\124}% U+1E54
 18222 % U+1E55 LATIN SMALL LETTER P WITH ACUTE; pacute
 18223 \DeclareTextCompositeCommand{\'}{PU}{p}{\9036\125}% U+1E55
 18224 % U+1E56 LATIN CAPITAL LETTER P WITH DOT ABOVE; Pdotaccent
 18225 \DeclareTextCompositeCommand{\.}{PU}{P}{\9036\126}% U+1E56
 18226 % U+1E57 LATIN SMALL LETTER P WITH DOT ABOVE; pdotaccent
 18227 \DeclareTextCompositeCommand{\.}{PU}{p}{\9036\127}% U+1E57
 18228 % U+1E58 LATIN CAPITAL LETTER R WITH DOT ABOVE; Rdotaccent
 18229 \DeclareTextCompositeCommand{\.}{PU}{R}{\9036\130}% U+1E58
 18230 % U+1E59 LATIN SMALL LETTER R WITH DOT ABOVE; rdotaccent
 18231 \DeclareTextCompositeCommand{\.}{PU}{r}{\9036\131}% U+1E59
 18232 % U+1E5A LATIN CAPITAL LETTER R WITH DOT BELOW; Rdotbelow
 18233 \DeclareTextCompositeCommand{\d}{PU}{R}{\9036\132}% U+1E5A
 18234 % U+1E5B LATIN SMALL LETTER R WITH DOT BELOW; rdotbelow
 18235 \DeclareTextCompositeCommand{\d}{PU}{r}{\9036\133}% U+1E5B
 18236 % U+1E5E LATIN CAPITAL LETTER R WITH LINE BELOW; Rlinebelow
 18237 \DeclareTextCompositeCommand{\b}{PU}{R}{\9036\136}% U+1E5E
 18238 % U+1E5F LATIN SMALL LETTER R WITH LINE BELOW; rlinebelow
 18239 \DeclareTextCompositeCommand{\b}{PU}{r}{\9036\137}% U+1E5F
 18240 % U+1E60 LATIN CAPITAL LETTER S WITH DOT ABOVE; Sdotaccent
 18241 \DeclareTextCompositeCommand{\.}{PU}{S}{\9036\140}% U+1E60
 18242 % U+1E61 LATIN SMALL LETTER S WITH DOT ABOVE; sdotaccent
 18243 \DeclareTextCompositeCommand{\.}{PU}{s}{\9036\141}% U+1E61
 18244 % U+1E62 LATIN CAPITAL LETTER S WITH DOT BELOW; Sdotbelow
 18245 \DeclareTextCompositeCommand{\d}{PU}{S}{\9036\142}% U+1E62
 18246 % U+1E63 LATIN SMALL LETTER S WITH DOT BELOW; sdotbelow

18247 \DeclareTextCompositeCommand{\d}{PU}{s}{\9036\143}% U+1E63
 18248 % U+1E6A LATIN CAPITAL LETTER T WITH DOT ABOVE; Tdotaccent
 18249 \DeclareTextCompositeCommand{\.}{PU}{T}{\9036\152}% U+1E6A
 18250 % U+1E6B LATIN SMALL LETTER T WITH DOT ABOVE; tdotaccent
 18251 \DeclareTextCompositeCommand{\.}{PU}{t}{\9036\153}% U+1E6B
 18252 % U+1E6C LATIN CAPITAL LETTER T WITH DOT BELOW; Tdotbelow
 18253 \DeclareTextCompositeCommand{\d}{PU}{T}{\9036\154}% U+1E6C
 18254 % U+1E6D LATIN SMALL LETTER T WITH DOT BELOW; tdotbelow
 18255 \DeclareTextCompositeCommand{\d}{PU}{t}{\9036\155}% U+1E6D
 18256 % U+1E6E LATIN CAPITAL LETTER T WITH LINE BELOW; Tlinebelow
 18257 \DeclareTextCompositeCommand{\b}{PU}{T}{\9036\156}% U+1E6E
 18258 % U+1E6F LATIN SMALL LETTER T WITH LINE BELOW; tlinebelow
 18259 \DeclareTextCompositeCommand{\b}{PU}{t}{\9036\157}% U+1E6F
 18260 % U+1E70 LATIN CAPITAL LETTER T WITH CIRCUMFLEX BELOW; Tcir-
 cumflexbelow
 18261 \DeclareTextCompositeCommand{\textsubcircum}{PU}{T}{\9036\160}% U+1E70
 18262 % U+1E71 LATIN SMALL LETTER T WITH CIRCUMFLEX BELOW; tcir-
 cumflexbelow
 18263 \DeclareTextCompositeCommand{\textsubcircum}{PU}{t}{\9036\161}% U+1E71
 18264 % U+1E72 LATIN CAPITAL LETTER U WITH DIAERESIS BELOW; Udiere-
 sisbelow
 18265 \DeclareTextCompositeCommand{\textsubumlaut}{PU}{U}{\9036\162}% U+1E72
 18266 % U+1E73 LATIN SMALL LETTER U WITH DIAERESIS BELOW; udiere-
 sisbelow
 18267 \DeclareTextCompositeCommand{\textsubumlaut}{PU}{u}{\9036\163}% U+1E73
 18268 % U+1E74 LATIN CAPITAL LETTER U WITH TILDE BELOW; Utildebelow
 18269 \DeclareTextCompositeCommand{\textsubtilde}{PU}{U}{\9036\164}% U+1E74
 18270 % U+1E75 LATIN SMALL LETTER U WITH TILDE BELOW; utildebelow
 18271 \DeclareTextCompositeCommand{\textsubtilde}{PU}{u}{\9036\165}% U+1E75
 18272 % U+1E76 LATIN CAPITAL LETTER U WITH CIRCUMFLEX BELOW; Ucir-
 cumflexbelow
 18273 \DeclareTextCompositeCommand{\textsubcircum}{PU}{U}{\9036\166}% U+1E76
 18274 % U+1E77 LATIN SMALL LETTER U WITH CIRCUMFLEX BELOW; ucir-
 cumflexbelow
 18275 \DeclareTextCompositeCommand{\textsubcircum}{PU}{u}{\9036\167}% U+1E77
 18276 % U+1E7C LATIN CAPITAL LETTER V WITH TILDE; Vtilde
 18277 \DeclareTextCompositeCommand{\~}{PU}{V}{\9036\174}% U+1E7C
 18278 % U+1E7D LATIN SMALL LETTER V WITH TILDE; vtilde
 18279 \DeclareTextCompositeCommand{\~}{PU}{v}{\9036\175}% U+1E7D
 18280 % U+1E7E LATIN CAPITAL LETTER V WITH DOT BELOW; Vdotbelow
 18281 \DeclareTextCompositeCommand{\d}{PU}{V}{\9036\176}% U+1E7E
 18282 % U+1E7F LATIN SMALL LETTER V WITH DOT BELOW; vdotbelow
 18283 \DeclareTextCompositeCommand{\d}{PU}{v}{\9036\177}% U+1E7F
 18284 % U+1E80 LATIN CAPITAL LETTER W WITH GRAVE; Wgrave
 18285 \DeclareTextCompositeCommand{\`}{PU}{W}{\9036\200}% U+1E80
 18286 % U+1E81 LATIN SMALL LETTER W WITH GRAVE; wgrave
 18287 \DeclareTextCompositeCommand{\`}{PU}{w}{\9036\201}% U+1E81
 18288 % U+1E82 LATIN CAPITAL LETTER W WITH ACUTE; Wacute
 18289 \DeclareTextCompositeCommand{\'}{PU}{W}{\9036\202}% U+1E82
 18290 % U+1E83 LATIN SMALL LETTER W WITH ACUTE; wacute
 18291 \DeclareTextCompositeCommand{\'}{PU}{w}{\9036\203}% U+1E83
 18292 % U+1E84 LATIN CAPITAL LETTER W WITH DIAERESIS; Wdieresis
 18293 \DeclareTextCompositeCommand{\"}{PU}{W}{\9036\204}% U+1E84
 18294 % U+1E85 LATIN SMALL LETTER W WITH DIAERESIS; wdieresis
 18295 \DeclareTextCompositeCommand{\"}{PU}{w}{\9036\205}% U+1E85
 18296 % U+1E86 LATIN CAPITAL LETTER W WITH DOT ABOVE; Wdotaccent
 18297 \DeclareTextCompositeCommand{\.}{PU}{W}{\9036\206}% U+1E86

18298 % U+1E87 LATIN SMALL LETTER W WITH DOT ABOVE; wdotaccent
 18299 \DeclareTextCompositeCommand{\.}{PU}{w}{\9036\207}% U+1E87
 18300 % U+1E88 LATIN CAPITAL LETTER W WITH DOT BELOW; wdotbelow
 18301 \DeclareTextCompositeCommand{\d}{PU}{W}{\9036\210}% U+1E88
 18302 % U+1E89 LATIN SMALL LETTER W WITH DOT BELOW; wdotbelow
 18303 \DeclareTextCompositeCommand{\d}{PU}{w}{\9036\211}% U+1E89
 18304 % U+1E8A LATIN CAPITAL LETTER X WITH DOT ABOVE; Xdotaccent
 18305 \DeclareTextCompositeCommand{\.}{PU}{X}{\9036\212}% U+1E8A
 18306 % U+1E8B LATIN SMALL LETTER X WITH DOT ABOVE; xdotaccent
 18307 \DeclareTextCompositeCommand{\.}{PU}{x}{\9036\213}% U+1E8B
 18308 % U+1E8C LATIN CAPITAL LETTER X WITH DIAERESIS; Xdieresis
 18309 \DeclareTextCompositeCommand{"}{PU}{X}{\9036\214}% U+1E8C
 18310 % U+1E8D LATIN SMALL LETTER X WITH DIAERESIS; xdieresis
 18311 \DeclareTextCompositeCommand{"}{PU}{x}{\9036\215}% U+1E8D
 18312 % U+1E8E LATIN CAPITAL LETTER Y WITH DOT ABOVE; Ydotaccent
 18313 \DeclareTextCompositeCommand{\.}{PU}{Y}{\9036\216}% U+1E8E
 18314 % U+1E8F LATIN SMALL LETTER Y WITH DOT ABOVE; ydotaccent
 18315 \DeclareTextCompositeCommand{\.}{PU}{y}{\9036\217}% U+1E8F
 18316 % U+1E90 LATIN CAPITAL LETTER Z WITH CIRCUMFLEX; Zcircumflex
 18317 \DeclareTextCompositeCommand{\^}{PU}{Z}{\9036\220}% U+1E90
 18318 % U+1E91 LATIN SMALL LETTER Z WITH CIRCUMFLEX; zcircumflex
 18319 \DeclareTextCompositeCommand{\^}{PU}{z}{\9036\221}% U+1E91
 18320 % U+1E92 LATIN CAPITAL LETTER Z WITH DOT BELOW; Zdotbelow
 18321 \DeclareTextCompositeCommand{\d}{PU}{Z}{\9036\222}% U+1E92
 18322 % U+1E93 LATIN SMALL LETTER Z WITH DOT BELOW; zdotbelow
 18323 \DeclareTextCompositeCommand{\d}{PU}{z}{\9036\223}% U+1E93
 18324 % U+1E94 LATIN CAPITAL LETTER Z WITH LINE BELOW; Zlinebelow
 18325 \DeclareTextCompositeCommand{\b}{PU}{Z}{\9036\224}% U+1E94
 18326 % U+1E95 LATIN SMALL LETTER Z WITH LINE BELOW; zlinebelow
 18327 \DeclareTextCompositeCommand{\b}{PU}{z}{\9036\225}% U+1E95
 18328 % U+1E96 LATIN SMALL LETTER H WITH LINE BELOW; hlinebelow
 18329 \DeclareTextCompositeCommand{\b}{PU}{h}{\9036\226}% U+1E96
 18330 % U+1E97 LATIN SMALL LETTER T WITH DIAERESIS; tdieresis
 18331 \DeclareTextCompositeCommand{"}{PU}{t}{\9036\227}% U+1E97
 18332 % U+1E98 LATIN SMALL LETTER W WITH RING ABOVE; wring
 18333 \DeclareTextCompositeCommand{\r}{PU}{w}{\9036\230}% U+1E98
 18334 % U+1E99 LATIN SMALL LETTER Y WITH RING ABOVE; yring
 18335 \DeclareTextCompositeCommand{\r}{PU}{y}{\9036\231}% U+1E99
 18336 % U+1E9B LATIN SMALL LETTER LONG S WITH DOT ABOVE; slongdo-
 accent
 18337 \DeclareTextCompositeCommand{\.}{PU}{\textlongs}{\9036\233}% U+1E9B
 18338 % U+1EA0 LATIN CAPITAL LETTER A WITH DOT BELOW; Adotbelow
 18339 \DeclareTextCompositeCommand{\d}{PU}{A}{\9036\240}% U+1EA0
 18340 % U+1EA1 LATIN SMALL LETTER A WITH DOT BELOW; adotbelow
 18341 \DeclareTextCompositeCommand{\d}{PU}{a}{\9036\241}% U+1EA1
 18342 % U+1EB8 LATIN CAPITAL LETTER E WITH DOT BELOW; Edotbelow
 18343 \DeclareTextCompositeCommand{\d}{PU}{E}{\9036\270}% U+1EB8
 18344 % U+1EB9 LATIN SMALL LETTER E WITH DOT BELOW; edotbelow
 18345 \DeclareTextCompositeCommand{\d}{PU}{e}{\9036\271}% U+1EB9
 18346 % U+1EBC LATIN CAPITAL LETTER E WITH TILDE; Etilde
 18347 \DeclareTextCompositeCommand{\~}{PU}{E}{\9036\274}% U+1EBC
 18348 % U+1EBD LATIN SMALL LETTER E WITH TILDE; etilde
 18349 \DeclareTextCompositeCommand{\~}{PU}{e}{\9036\275}% U+1EBD
 18350 % U+1ECA LATIN CAPITAL LETTER I WITH DOT BELOW; Idotbelow
 18351 \DeclareTextCompositeCommand{\d}{PU}{I}{\9036\312}% U+1ECA
 18352 % U+1ECB LATIN SMALL LETTER I WITH DOT BELOW; idotbelow
 18353 \DeclareTextCompositeCommand{\d}{PU}{i}{\9036\313}% U+1ECB

18354 % U+1ECC LATIN CAPITAL LETTER O WITH DOT BELOW; Odotbelow
 18355 \DeclareTextCompositeCommand{\d}{PU}{O}{\9036\314}% U+1ECC
 18356 % U+1ECD LATIN SMALL LETTER O WITH DOT BELOW; odotbelow
 18357 \DeclareTextCompositeCommand{\d}{PU}{o}{\9036\315}% U+1ECD
 18358 % U+1EE4 LATIN CAPITAL LETTER U WITH DOT BELOW; Udotbelow
 18359 \DeclareTextCompositeCommand{\d}{PU}{U}{\9036\344}% U+1EE4
 18360 % U+1EE5 LATIN SMALL LETTER U WITH DOT BELOW; udotbelow
 18361 \DeclareTextCompositeCommand{\d}{PU}{u}{\9036\345}% U+1EE5
 18362 % U+1EF2 LATIN CAPITAL LETTER Y WITH GRAVE; Ygrave
 18363 \DeclareTextCompositeCommand{\`}{PU}{Y}{\9036\362}% U+1EF2
 18364 % U+1EF3 LATIN SMALL LETTER Y WITH GRAVE; ygrave
 18365 \DeclareTextCompositeCommand{\`}{PU}{y}{\9036\363}% U+1EF3
 18366 % U+1EF4 LATIN CAPITAL LETTER Y WITH DOT BELOW; Ydotbelow
 18367 \DeclareTextCompositeCommand{\d}{PU}{Y}{\9036\364}% U+1EF4
 18368 % U+1EF5 LATIN SMALL LETTER Y WITH DOT BELOW; ydotbelow
 18369 \DeclareTextCompositeCommand{\d}{PU}{y}{\9036\365}% U+1EF5
 18370 % U+1EF8 LATIN CAPITAL LETTER Y WITH TILDE; Ytilde
 18371 \DeclareTextCompositeCommand{\~}{PU}{Y}{\9036\370}% U+1EF8
 18372 % U+1EF9 LATIN SMALL LETTER Y WITH TILDE; ytilde
 18373 \DeclareTextCompositeCommand{\~}{PU}{y}{\9036\371}% U+1EF9

51.2.16 General Punctuation: U+2000 to U+206F

18374 % U+200C ZERO WIDTH NON-JOINER; *afii61664, zerowidthnonjoiner
 18375 \DeclareTextCommand{\textcompwordmark}{PU}{\9040\014}% U+200C
 18376 % U+2013 EN DASH; endash
 18377 \DeclareTextCommand{\textendash}{PU}{\9040\023}% U+2013
 18378 % U+2014 EM DASH; emdash
 18379 \DeclareTextCommand{\textemdash}{PU}{\9040\024}% U+2014
 18380 % U+2016 DOUBLE VERTICAL LINE; dblverticalbar
 18381 \DeclareTextCommand{\textbardbl}{PU}{\9040\026}% U+2016
 18382 %* \textbardbl -> \textdoublevertline (tipa)
 18383 % U+2018 LEFT SINGLE QUOTATION MARK; quoteleft
 18384 \DeclareTextCommand{\textquoteleft}{PU}{\9040\030}% U+2018
 18385 % U+2019 RIGHT SINGLE QUOTATION MARK; quoteright
 18386 \DeclareTextCommand{\textquoteright}{PU}{\9040\031}% U+2019
 18387 % U+201A SINGLE LOW-9 QUOTATION MARK; quotesinglbase
 18388 \DeclareTextCommand{\quotesinglbase}{PU}{\9040\032}% U+201A
 18389 % U+201C LEFT DOUBLE QUOTATION MARK; quotedblleft
 18390 \DeclareTextCommand{\textquotedblleft}{PU}{\9040\034}% U+201C
 18391 % U+201D RIGHT DOUBLE QUOTATION MARK; quotedblright
 18392 \DeclareTextCommand{\textquotedblright}{PU}{\9040\035}% U+201D
 18393 % U+201E DOUBLE LOW-9 QUOTATION MARK; quotedblbase
 18394 \DeclareTextCommand{\quotedblbase}{PU}{\9040\036}% U+201E
 18395 % U+2020 DAGGER; dagger
 18396 \DeclareTextCommand{\textdagger}{PU}{\9040\040}%* U+2020
 18397 %* \textdagger -> \dag (LaTeX)
 18398 % U+2021 DOUBLE DAGGER; daggerdbl; ddagger (LaTeX)
 18399 \DeclareTextCommand{\textdaggerdbl}{PU}{\9040\041}% U+2021
 18400 %* \textdaggerdbl -> \ddagger (LaTeX)
 18401 %* \textdaggerdbl -> \ddag (LaTeX)
 18402 % U+2022 BULLET; bullet
 18403 \DeclareTextCommand{\textbullet}{PU}{\9040\042}%* U+2022
 18404 % U+2025 TWO DOT LEADER; \hdotfor (MnSymbol)
 18405 \DeclareTextCommand{\texthdotfor}{PU}{\9040\045}%* U+2025
 18406 % U+2026 HORIZONTAL ELLIPSIS; ellipsis
 18407 \DeclareTextCommand{\textellipsis}{PU}{\9040\046}% U+2026
 18408 %* \textellipsis -> \mathellipsis

18409 % U+2030 PER MILLE SIGN; perthousand
 18410 \DeclareTextCommand{\textperthousand}{PU}{\9040\060}% U+2030
 18411 % U+2031 PER TEN THOUSAND SIGN
 18412 \DeclareTextCommand{\textpertenthousand}{PU}{\9040\061}% U+2031
 18413 % U+2032 PRIME; minute; \prime (MnSymbol)
 18414 \DeclareTextCommand{\textprime}{PU}{\9040\062}%* U+2032
 18415 % U+2033 DOUBLE PRIME; \second (mathabx)
 18416 \DeclareTextCommand{\textsecond}{PU}{\9040\063}%* U+2033
 18417 % U+2034 TRIPLE PRIME; \third (mathabx)
 18418 \DeclareTextCommand{\textthird}{PU}{\9040\064}%* U+2034
 18419 % U+2035 REVERSED PRIME; \backprime (AmS)
 18420 \DeclareTextCommand{\textbackprime}{PU}{\9040\065}%* U+2035
 18421 % U+2039 SINGLE LEFT-POINTING ANGLE QUOTATION MARK; guil-
 inglleft
 18422 \DeclareTextCommand{\guilsinglleft}{PU}{\9040\071}% U+2039
 18423 % U+203A SINGLE RIGHT-POINTING ANGLE QUOTATION MARK; guils-
 inglright
 18424 \DeclareTextCommand{\guilsinglright}{PU}{\9040\072}% U+203A
 18425 % U+203B REFERENCE MARK; referencemark
 18426 \DeclareTextCommand{\textreferencemark}{PU}{\9040\073}% U+203B
 18427 % U+203D INTERROBANG
 18428 \DeclareTextCommand{\textinterrobang}{PU}{\9040\075}% U+203D
 18429 % U+2044 FRACTION SLASH; fraction
 18430 \DeclareTextCommand{\textfractionsolidus}{PU}{\9040\104}% U+2044
 18431 % U+2045 LEFT SQUARE BRACKET WITH QUILL
 18432 \DeclareTextCommand{\textlquill}{PU}{\9040\105}% U+2045
 18433 % U+2046 RIGHT SQUARE BRACKET WITH QUILL
 18434 \DeclareTextCommand{\textrquill}{PU}{\9040\106}% U+2046
 18435 % U+2052 COMMERCIAL MINUS SIGN
 18436 \DeclareTextCommand{\textdiscount}{PU}{\9040\122}% U+2052
 18437 % U+2056 THREE DOT PUNCTUATION; \lefttherefore (MnSymbol)
 18438 \DeclareTextCommand{\textlefttherefore}{PU}{\9040\126}%* U+2056
 18439 % U+2057 QUADRUPLE PRIME; \fourth (mathabx)
 18440 \DeclareTextCommand{\textfourth}{PU}{\9040\127}%* U+2057
 18441 % U+2058 FOUR DOT PUNCTUATION; \diamonddots (MnSymbol)
 18442 \DeclareTextCommand{\textdiamonddots}{PU}{\9040\130}%* U+2058

51.2.17 Superscripts and Subscripts: U+2070 to U+209F

18443 % U+2070 SUPERSCRIPT ZERO; zerosuperior
 18444 \DeclareTextCommand{\textzerosuperior}{PU}{\9040\160}%* U+2070
 18445 % U+2071 SUPERSCRIPT LATIN SMALL LETTER I
 18446 \DeclareTextCommand{\textisuperior}{PU}{\9040\161}%* U+2071
 18447 % U+2074 SUPERSCRIPT FOUR; foursuperior
 18448 \DeclareTextCommand{\textfoursuperior}{PU}{\9040\164}%* U+2074
 18449 % U+2075 SUPERSCRIPT FIVE; fivesuperior
 18450 \DeclareTextCommand{\textfivesuperior}{PU}{\9040\165}%* U+2075
 18451 % U+2076 SUPERSCRIPT SIX; sixsuperior
 18452 \DeclareTextCommand{\textsixsuperior}{PU}{\9040\166}%* U+2076
 18453 % U+2077 SUPERSCRIPT SEVEN; sevensuperior
 18454 \DeclareTextCommand{\textsevensuperior}{PU}{\9040\167}%* U+2077
 18455 % U+2078 SUPERSCRIPT EIGHT; eightsuperior
 18456 \DeclareTextCommand{\texteightsuperior}{PU}{\9040\170}%* U+2078
 18457 % U+2079 SUPERSCRIPT NINE; ninesuperior
 18458 \DeclareTextCommand{\textninesuperior}{PU}{\9040\171}%* U+2079
 18459 % U+207A SUPERSCRIPT PLUS SIGN; plussuperior
 18460 \DeclareTextCommand{\textplussuperior}{PU}{\9040\172}%* U+207A
 18461 % U+207B SUPERSCRIPT MINUS

18462 \DeclareTextCommand{\textminussuperior}{PU}{\9040\173}%* U+207B
18463 % U+207C SUPERSCRIP T EQUALS SIGN; equalsuperior
18464 \DeclareTextCommand{\textequalsuperior}{PU}{\9040\174}%* U+207C
18465 % U+207D SUPERSCRIP T LEFT PARENTHESIS; parenleftsuperior
18466 \DeclareTextCommand{\textparenleftsuperior}{PU}{\9040\175}%* U+207D
18467 % U+207E SUPERSCRIP T RIGHT PARENTHESIS; parenrightsuperior
18468 \DeclareTextCommand{\textparenrightsuperior}{PU}{\9040\176}%* U+207E
18469 % U+207F SUPERSCRIP T LATIN SMALL LETTER N; nsuperior
18470 \DeclareTextCommand{\textnsuperior}{PU}{\9040\177}%* U+207F
18471 % U+2080 SUBSCRIPT ZERO; zeroinferior
18472 \DeclareTextCommand{\textzeroinferior}{PU}{\9040\200}%* U+2080
18473 % U+2081 SUBSCRIPT ONE; oneinferior
18474 \DeclareTextCommand{\textoneinferior}{PU}{\9040\201}%* U+2081
18475 % U+2082 SUBSCRIPT TWO; twoinferior
18476 \DeclareTextCommand{\texttwoinferior}{PU}{\9040\202}%* U+2082
18477 % U+2083 SUBSCRIPT THREE; threeinferior
18478 \DeclareTextCommand{\textthreeinferior}{PU}{\9040\203}%* U+2083
18479 % U+2084 SUBSCRIPT FOUR; fourinferior
18480 \DeclareTextCommand{\textfourinferior}{PU}{\9040\204}%* U+2084
18481 % U+2085 SUBSCRIPT FIVE; fiveinferior
18482 \DeclareTextCommand{\textfiveinferior}{PU}{\9040\205}%* U+2085
18483 % U+2086 SUBSCRIPT SIX; sixinferior
18484 \DeclareTextCommand{\textsixinferior}{PU}{\9040\206}%* U+2086
18485 % U+2087 SUBSCRIPT SEVEN; seveninferior
18486 \DeclareTextCommand{\textseveninferior}{PU}{\9040\207}%* U+2087
18487 % U+2088 SUBSCRIPT EIGHT; eightinferior
18488 \DeclareTextCommand{\texteightinferior}{PU}{\9040\210}%* U+2088
18489 % U+2089 SUBSCRIPT NINE; nineinferior
18490 \DeclareTextCommand{\textnineinferior}{PU}{\9040\211}%* U+2089
18491 % U+208A SUBSCRIPT PLUS SIGN
18492 \DeclareTextCommand{\textplusinferior}{PU}{\9040\212}%* U+208A
18493 % U+208B SUBSCRIPT MINUS
18494 \DeclareTextCommand{\textminusinferior}{PU}{\9040\213}%* U+208B
18495 % U+208C SUBSCRIPT EQUALS SIGN
18496 \DeclareTextCommand{\textequalsinferior}{PU}{\9040\214}%* U+208C
18497 % U+208D SUBSCRIPT LEFT PARENTHESIS; parenleftinferior
18498 \DeclareTextCommand{\textparenleftinferior}{PU}{\9040\215}%* U+208D
18499 % U+208E SUBSCRIPT RIGHT PARENTHESIS; parenrightinferior
18500 \DeclareTextCommand{\textparenrightinferior}{PU}{\9040\216}%* U+208E
18501 % U+2090 LATIN SUBSCRIPT SMALL LETTER A
18502 \DeclareTextCommand{\textainferior}{PU}{\9040\220}%* U+2090
18503 % U+2091 LATIN SUBSCRIPT SMALL LETTER E
18504 \DeclareTextCommand{\texteinferior}{PU}{\9040\221}%* U+2091
18505 % U+2092 LATIN SUBSCRIPT SMALL LETTER O
18506 \DeclareTextCommand{\textoinferior}{PU}{\9040\222}%* U+2092
18507 % U+2093 LATIN SUBSCRIPT SMALL LETTER X
18508 \DeclareTextCommand{\textxinferior}{PU}{\9040\223}%* U+2093
18509 % U+2094 LATIN SUBSCRIPT SMALL LETTER SCHWA
18510 \DeclareTextCommand{\textschwainferior}{PU}{\9040\224}%* U+2094
18511 % U+2095 LATIN SUBSCRIPT SMALL LETTER H
18512 \DeclareTextCommand{\texthinferior}{PU}{\9040\225}%* U+2095
18513 % U+2096 LATIN SUBSCRIPT SMALL LETTER K
18514 \DeclareTextCommand{\textkinferior}{PU}{\9040\226}%* U+2096
18515 % U+2097 LATIN SUBSCRIPT SMALL LETTER L
18516 \DeclareTextCommand{\textlinferior}{PU}{\9040\227}%* U+2097
18517 % U+2098 LATIN SUBSCRIPT SMALL LETTER M
18518 \DeclareTextCommand{\textminferior}{PU}{\9040\230}%* U+2098

18519 % U+2099 LATIN SUBSCRIPT SMALL LETTER N
 18520 \DeclareTextCommand{\textninferior}{PU}{\9040\231}%* U+2099
 18521 % U+209A LATIN SUBSCRIPT SMALL LETTER P
 18522 \DeclareTextCommand{\textpinferior}{PU}{\9040\232}%* U+209A
 18523 % U+209B LATIN SUBSCRIPT SMALL LETTER S
 18524 \DeclareTextCommand{\textsinferior}{PU}{\9040\233}%* U+209B
 18525 % U+209C LATIN SUBSCRIPT SMALL LETTER T
 18526 \DeclareTextCommand{\texttinferior}{PU}{\9040\234}%* U+209C

51.2.18 Currency Symbols: U+20A0 to U+20CF

18527 % U+20A1 COLON SIGN; *colonmonetary, colonsign
 18528 \DeclareTextCommand{\textcolonmonetary}{PU}{\9040\241}% U+20A1
 18529 % U+20A4 LIRA SIGN; afii08941, *lira
 18530 \DeclareTextCommand{\textlira}{PU}{\9040\244}% U+20A4
 18531 % U+20A6 NAIRA SIGN
 18532 \DeclareTextCommand{\textnaira}{PU}{\9040\246}% U+20A6
 18533 % U+20A7 PESETA SIGN; peseta
 18534 \DeclareTextCommand{\textpeseta}{PU}{\9040\247}% U+20A7
 18535 % U+20A9 WON SIGN; won
 18536 \DeclareTextCommand{\textwon}{PU}{\9040\251}% U+20A9
 18537 % U+20AB DONG SIGN; dong
 18538 \DeclareTextCommand{\textdong}{PU}{\9040\253}% U+20AB
 18539 % U+20AC EURO SIGN; *Euro, euro
 18540 \DeclareTextCommand{\texteuro}{PU}{\9040\254}% U+20AC
 18541 %* \texteuro -> \EurDig (marvosym)
 18542 %* \texteuro -> \EURdig (marvosym)
 18543 %* \texteuro -> \EurHv (marvosym)
 18544 %* \texteuro -> \EURhv (marvosym)
 18545 %* \texteuro -> \EurCr (marvosym)
 18546 %* \texteuro -> \EURcr (marvosym)
 18547 %* \texteuro -> \EurTm (marvosym)
 18548 %* \texteuro -> \EURtm (marvosym)
 18549 %* \texteuro -> \Eur (marvosym)
 18550 % U+20B0 GERMAN PENNY SIGN; \Deleatur (marvosym)
 18551 \DeclareTextCommand{\textDeleatur}{PU}{\9040\260}%* U+20B0
 18552 %* \textDeleatur -> \Denarius (marvosym)
 18553 % U+20B1 PESO SIGN
 18554 \DeclareTextCommand{\textpeso}{PU}{\9040\261}% U+20B1
 18555 % U+20B2 GUARANI SIGN
 18556 \DeclareTextCommand{\textguarani}{PU}{\9040\262}% U+20B2

51.2.19 Letterlike Symbols: U+2100 to U+214F

18557 % U+2103 DEGREE CELSIUS; centigrade
 18558 \DeclareTextCommand{\textcelsius}{PU}{\9041\003}% U+2103
 18559 % U+210F PLANCK CONSTANT OVER TWO PI; \hslash (AmS)
 18560 \DeclareTextCommand{\texthslash}{PU}{\9041\017}%* U+210F
 18561 % U+2111 BLACK-LETTER CAPITAL I (=imaginary part); Ifraktur; \Im (LaTeX)
 18562 \DeclareTextCommand{\textIm}{PU}{\9041\021}%* U+2111
 18563 % U+2113 SCRIPT SMALL L (=ell, liter); afii61289, lsquare; \ell (LaTeX)
 18564 \DeclareTextCommand{\textell}{PU}{\9041\023}%* U+2113
 18565 % U+2116 NUMERO SIGN; *afii61352, numero
 18566 \DeclareTextCommand{\textnumero}{PU}{\9041\026}% U+2116
 18567 % U+2117 SOUND RECORDING COPYRIGHT
 18568 \DeclareTextCommand{\textcircledP}{PU}{\9041\027}% U+2117
 18569 % U+2118 SCRIPT CAPITAL P (=Weierstrass elliptic function);
 18570 % weierstrass; \wp (LaTeX)

18571 \DeclareTextCommand{\textwp}{PU}{\9041\030}%* U+2118
 18572 % U+211C BLACK-LETTER CAPITAL R (=real part); Rfraktur; \Re (LaTeX)
 18573 \DeclareTextCommand{\textRe}{PU}{\9041\034}%* U+211C
 18574 % U+211E PRESCRIPTION TAKE; prescription
 18575 \DeclareTextCommand{\textrecipe}{PU}{\9041\036}% U+211E
 18576 % U+2120 SERVICE MARK
 18577 \DeclareTextCommand{\textservicemark}{PU}{\9041\040}% U+2120
 18578 % U+2122 TRADE MARK SIGN; trademark
 18579 \DeclareTextCommand{\texttrademark}{PU}{\9041\042}% U+2122
 18580 % U+2126 OHM SIGN; Ohm, Omega
 18581 \DeclareTextCommand{\textohm}{PU}{\9041\046}% U+2126
 18582 % U+2127 INVERTED OHM SIGN
 18583 \DeclareTextCommand{\textmho}{PU}{\9041\047}%* U+2127
 18584 %* \textmho -> \agemO (wasysym)
 18585 % U+2129 TURNED GREEK SMALL LETTER IOTA; \riota (phonetic)
 18586 \DeclareTextCommand{\textriota}{PU}{\9041\051}%* U+2129
 18587 % U+212B ANGSTROM SIGN; angstrom
 18588 \DeclareTextCommand{\textangstrom}{PU}{\9041\053}% U+212B
 18589 % U+212E ESTIMATED SYMBOL; estimated
 18590 \DeclareTextCommand{\textestimated}{PU}{\9041\056}% U+212E
 18591 %* \textestimated -> \EstimatedSign (marvosym)
 18592 %* \textestimated -> \Ecommerce (marvosym)
 18593 % U+2132 TURNED CAPITAL F; \Finv (AmS)
 18594 \DeclareTextCommand{\textFinv}{PU}{\9041\062}%* U+2132
 18595 % U+2135 ALEF SYMBOL; aleph; \aleph (LaTeX)
 18596 \DeclareTextCommand{\textaleph}{PU}{\9041\065}%* U+2135
 18597 % U+2136 BET SYMBOL; \beth (AmS, MnSymbol)
 18598 \DeclareTextCommand{\textbeth}{PU}{\9041\066}%* U+2136
 18599 % U+2137 GIMEL SYMBOL; \gimel (AmS, MnSymbol)
 18600 \DeclareTextCommand{\textgimel}{PU}{\9041\067}%* U+2137
 18601 % U+2138 DALET SYMBOL; \daleth (AmS, MnSymbol)
 18602 \DeclareTextCommand{\textdaleth}{PU}{\9041\070}%* U+2138
 18603 % U+213B FACSIMILE SIGN; \fax (marvosym)
 18604 \DeclareTextCommand{\textfax}{PU}{\9041\073}%* U+213B
 18605 % U+2141 TURNED SANS-SERIF CAPITAL G (=game); \Game
 18606 \DeclareTextCommand{\textGame}{PU}{\9041\101}%* U+2141
 18607 % U+214B TURNED AMPERSAND; \invamp (txfonts/pxfonts)
 18608 \DeclareTextCommand{\textinvamp}{PU}{\9041\113}% U+214B
 18609 %* \textinvamp -> \bindnasrepma (stmaryrd)
 18610 %* \textinvamp -> \parr (cml)

51.2.20 Number Forms: U+2150 to U+218F

18611 % U+2150 VULGAR FRACTION ONE SEVENTH
 18612 \DeclareTextCommand{\textoneseventh}{PU}{\9041\120}% U+2150
 18613 % U+2151 VULGAR FRACTION ONE NINTH
 18614 \DeclareTextCommand{\textoneninth}{PU}{\9041\121}% U+2151
 18615 % U+2152 VULGAR FRACTION ONE TENTH
 18616 \DeclareTextCommand{\textonetenth}{PU}{\9041\122}% U+2152
 18617 % U+2153 VULGAR FRACTION ONE THIRD; onethird
 18618 \DeclareTextCommand{\textonethird}{PU}{\9041\123}% U+2153
 18619 % U+2154 VULGAR FRACTION TWO THIRDS; twothirds
 18620 \DeclareTextCommand{\texttwothirds}{PU}{\9041\124}% U+2154
 18621 % U+2155 VULGAR FRACTION ONE FIFTH
 18622 \DeclareTextCommand{\textonefifth}{PU}{\9041\125}% U+2155
 18623 % U+2156 VULGAR FRACTION TWO FIFTHS
 18624 \DeclareTextCommand{\texttwofifths}{PU}{\9041\126}% U+2156
 18625 % U+2157 VULGAR FRACTION THREE FIFTHS

18626 \DeclareTextCommand{\textthreefifths}{PU}{\9041\127}% U+2157
 18627 % U+2158 VULGAR FRACTION FOUR FIFTHS
 18628 \DeclareTextCommand{\textfourfifths}{PU}{\9041\130}% U+2158
 18629 % U+2159 VULGAR FRACTION ONE SIXTH
 18630 \DeclareTextCommand{\textonesixth}{PU}{\9041\131}% U+2159
 18631 % U+215A VULGAR FRACTION FIVE SIXTHS
 18632 \DeclareTextCommand{\textfivesixths}{PU}{\9041\132}% U+215A
 18633 % U+215B VULGAR FRACTION ONE EIGHTH; oneeighth
 18634 \DeclareTextCommand{\textoneeighth}{PU}{\9041\133}% U+215B
 18635 % U+215C VULGAR FRACTION THREE EIGHTHS; threeeighths
 18636 \DeclareTextCommand{\textthreeeighths}{PU}{\9041\134}% U+215C
 18637 % U+215D VULGAR FRACTION FIVE EIGHTHS; fiveeighths
 18638 \DeclareTextCommand{\textfiveeighths}{PU}{\9041\135}% U+215D
 18639 % U+215E VULGAR FRACTION SEVEN EIGHTHS; seveneighths
 18640 \DeclareTextCommand{\textseveneighths}{PU}{\9041\136}% U+215E
 18641 % U+2184 LATIN SMALL LETTER REVERSED C
 18642 \DeclareTextCommand{\textrevc}{PU}{\9041\204}% U+2184
 18643 % U+2189 VULGAR FRACTION ZERO THIRDS
 18644 \DeclareTextCommand{\textzer thirds}{PU}{\9041\211}% U+2189

51.2.21 Arrows: U+2190 to U+21FF

18645 % U+2190 LEFTWARDS ARROW; arrowleft
 18646 \DeclareTextCommand{\textleftarrow}{PU}{\9041\220}%* U+2190
 18647 % U+2191 UPWARDS ARROW; arrowup
 18648 \DeclareTextCommand{\textuparrow}{PU}{\9041\221}%* U+2191
 18649 % U+2192 RIGHTWARDS ARROW; arrowright
 18650 \DeclareTextCommand{\textrightarrow}{PU}{\9041\222}%* U+2192
 18651 %* \textrightarrow -> \MVRightArrow (marvosym)
 18652 %* \textrightarrow -> \MVRightarrow (marvosym)
 18653 % U+2193 DOWNWARDS ARROW; arrowdown
 18654 \DeclareTextCommand{\textdownarrow}{PU}{\9041\223}%* U+2193
 18655 %* \textdownarrow -> \MVArrowDown (marvosym)
 18656 %* \textdownarrow -> \Force (marvosym)
 18657 % U+2194 LEFT RIGHT ARROW; arrowboth; \leftrightarrow (LaTeX)
 18658 \DeclareTextCommand{\textleftrightarrow}{PU}{\9041\224}%* U+2194
 18659 % U+2195 UP DOWN ARROW; arrowupdn; \updownarrow (LaTeX)
 18660 \DeclareTextCommand{\textupdownarrow}{PU}{\9041\225}%* U+2195
 18661 % U+2196 NORTH WEST ARROW; arrowupleft; \nwarrow (LaTeX)
 18662 \DeclareTextCommand{\textnwarrow}{PU}{\9041\226}%* U+2196
 18663 % U+2197 NORTH EAST ARROW; arrowupright; \nearrow (LaTeX)
 18664 \DeclareTextCommand{\textnearrow}{PU}{\9041\227}%* U+2197
 18665 %* \textnearrow -> \textglobrise (tipa)
 18666 % U+2198 SOUTH EAST ARROW; arrowdownright; \searrow (LaTeX)
 18667 \DeclareTextCommand{\textsearrow}{PU}{\9041\230}%* U+2198
 18668 %* \textsearrow -> \textglobfall (tipa)
 18669 % U+2199 SOUTH WEST ARROW; arrowdownleft; \swarrow (LaTeX)
 18670 \DeclareTextCommand{\textswarrow}{PU}{\9041\231}%* U+2199
 18671 % U+219A LEFTWARDS ARROW WITH STROKE; \nleftarrow (AmS)
 18672 \DeclareTextCommand{\textnleftarrow}{PU}{\9041\232}%* U+219A
 18673 % U+219B RIGHTWARDS ARROW WITH STROKE; \nrightarrow (AmS)
 18674 \DeclareTextCommand{\textnrightarrow}{PU}{\9041\233}%* U+219B
 18675 % U+219E LEFTWARDS TWO HEADED ARROW; \twoheadleftarrow (AmS)
 18676 \DeclareTextCommand{\texttwoheadleftarrow}{PU}{\9041\236}%* U+219E
 18677 % \ntwoheadleftarrow (txfonts/pxfonts)
 18678 \DeclareTextCommand{\textntwoheadleftarrow}{PU}{\9041\236\83\070}%* U+219E U+0338
 18679 % U+219F UPWARDS TWO HEADED ARROW; \twoheaduparrow (MnSymbol)
 18680 \DeclareTextCommand{\texttwoheaduparrow}{PU}{\9041\237}%* U+219F


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18681 % U+21A0 RIGHTWARDS TWO HEADED ARROW;
18682 % \twoheadrightarrow (AmS)
18683 \DeclareTextCommand{\texttwoheadrightarrow}{PU}{\9041\240}%* U+21A0
18684 % \ntwoheadrightarrow (txfonts/pxfonts)
18685 \DeclareTextCommand{\textntwoheadrightarrow}{PU}{\9041\240\83\070}%* U+21A0 U+0338
18686 % U+21A1 DOWNWARDS TWO HEADED ARROW; \twoheaddownarrow (Mn-
      Symbol)
18687 \DeclareTextCommand{\texttwoheaddownarrow}{PU}{\9041\241}%* U+21A1
18688 % U+21A2 LEFTWARDS ARROW WITH TAIL; \leftarrowtail (AmS)
18689 \DeclareTextCommand{\textleftarrowtail}{PU}{\9041\242}%* U+21A2
18690 % U+21A3 RIGHTWARDS ARROW WITH TAIL; \rightarrowtail (AmS)
18691 \DeclareTextCommand{\textrightarrowtail}{PU}{\9041\243}%* U+21A3
18692 % U+21A6 RIGHTWARDS ARROW FROM BAR; \mapsto (LaTeX)
18693 \DeclareTextCommand{\textmapsto}{PU}{\9041\246}%* U+21A6
18694 % U+21A9 LEFTWARDS ARROW WITH HOOK; \hookleftarrow (LaTeX)
18695 \DeclareTextCommand{\texthookleftarrow}{PU}{\9041\251}%* U+21A9
18696 % U+21AA RIGHTWARDS ARROW WITH HOOK; \hookrightarrow (LaTeX)
18697 \DeclareTextCommand{\texthookrightarrow}{PU}{\9041\252}%* U+21AA
18698 % U+21AB LEFTWARDS ARROW WITH LOOP; \looparrowleft (AmS)
18699 \DeclareTextCommand{\textlooparrowleft}{PU}{\9041\253}%* U+21AB
18700 % U+21AC RIGHTWARDS ARROW WITH LOOP; \looparrowright (AmS)
18701 \DeclareTextCommand{\textlooparrowright}{PU}{\9041\254}%* U+21AC
18702 % U+21AE LEFT RIGHT ARROW WITH STROKE; \leftrightharrow (AmS)
18703 \DeclareTextCommand{\textleftrightharrow}{PU}{\9041\256}%* U+21AE
18704 % U+21AF DOWNWARDS ZIGZAG ARROW; \lightning (stmaryrd)
18705 \DeclareTextCommand{\textlightning}{PU}{\9041\257}%* U+21AF
18706 %* \textlightning -> \Lightning (marvosym)
18707 % U+21B5 DOWNWARDS ARROW WITH CORNER LEFTWARDS;
18708 % \dls (mathabx)
18709 \DeclareTextCommand{\textdls}{PU}{\9041\265}%* U+21B5
18710 % U+21B6 ANTICLOCKWISE TOP SEMICIRCLE ARROW;
18711 % \curvearrowleft (AmS)
18712 \DeclareTextCommand{\textcurvearrowleft}{PU}{\9041\266}%* U+21B6
18713 % U+21B7 CLOCKWISE TOP SEMICIRCLE ARROW; \curvearrowright (AmS)
18714 \DeclareTextCommand{\textcurvearrowright}{PU}{\9041\267}%* U+21B7
18715 % U+21BC LEFTWARDS HARPOON WITH BARB UPWARDS; harpoonleft-
      barbup;
18716 % \leftharpoonup (LaTeX)
18717 \DeclareTextCommand{\textleftharpoonup}{PU}{\9041\274}%* U+21BC
18718 % U+21BD LEFTWARDS HARPOON WITH BARB DOWNWARDS;
18719 % \leftharpoondown (LaTeX)
18720 \DeclareTextCommand{\textleftharpoondown}{PU}{\9041\275}%* U+21BD
18721 % U+21BE UPWARDS HARPOON WITH BARB RIGHTWARDS;
18722 % \upharpoonright (AmS)
18723 \DeclareTextCommand{\textupharpoonright}{PU}{\9041\276}%* U+21BE
18724 % U+21BF UPWARDS HARPOON WITH BARB LEFTWARDS;
18725 % \upharpoonleft (AmS)
18726 \DeclareTextCommand{\textupharpoonleft}{PU}{\9041\277}%* U+21BF
18727 % U+21C0 RIGHTWARDS HARPOON WITH BARB UPWARDS; harpoonright-
      barbup
18728 % \rightharpoonup (LaTeX)
18729 \DeclareTextCommand{\textrightharpoonup}{PU}{\9041\300}%* U+21C0
18730 % U+21C1 RIGHTWARDS HARPOON WITH BARB DOWNWARDS;
18731 % \rightharpoondown (LaTeX)
18732 \DeclareTextCommand{\textrightharpoondown}{PU}{\9041\301}%* U+21C1
18733 % U+21C2 DOWNWARDS HARPOON WITH BARB RIGHTWARDS;
18734 % \downharpoonright (AmS)

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18735 \DeclareTextCommand{\textdownharpoonright}{PU}{\9041\302}%* U+21C2
18736 % U+21C3 DOWNWARDS HARPOON WITH BARB LEFTWARDS;
18737 % \downharpoonleft (AmS)
18738 \DeclareTextCommand{\textdownharpoonleft}{PU}{\9041\303}%* U+21C3
18739 % U+21C4 RIGHTWARDS ARROW OVER LEFTWARDS ARROW;
18740 % \arrowrightoverleft; \rightleftarrows (MnSymbol)
18741 \DeclareTextCommand{\textrightarrows}{PU}{\9041\304}%* U+21C4
18742 % U+21C5 UPWARDS ARROW LEFTWARDS OF DOWNWARDS ARROW; \ar-
rowupleftofdown;
18743 % \updownarrows (MnSymbol)
18744 \DeclareTextCommand{\textupdownarrows}{PU}{\9041\305}%* U+21C5
18745 % U+21C6 LEFTWARDS ARROW OVER RIGHTWARDS ARROW; \arrowleft-
overright;
18746 % \leftrightarrows (AmS)
18747 \DeclareTextCommand{\textleftrightarrows}{PU}{\9041\306}%* U+21C6
18748 % U+21C7 LEFTWARDS PAIRED ARROWS; \leftleftarrows (AmS)
18749 \DeclareTextCommand{\textleftleftarrows}{PU}{\9041\307}%* U+21C7
18750 % U+21C8 UPWARDS PAIRED ARROWS; \upuparrows (AmS)
18751 \DeclareTextCommand{\textupuparrows}{PU}{\9041\310}%* U+21C8
18752 % U+21C9 RIGHTWARDS PAIRED ARROWS; \rightrightarrows (AmS)
18753 \DeclareTextCommand{\textrightarrows}{PU}{\9041\311}%* U+21C9
18754 % U+21CA DOWNWARDS PAIRED ARROWS; \downdownarrows (AmS)
18755 \DeclareTextCommand{\textdowndownarrows}{PU}{\9041\312}%* U+21CA
18756 % U+21CB LEFTWARDS HARPOON OVER RIGHTWARDS HARPOON;
18757 % \leftrightharpoons (AmS);
18758 \DeclareTextCommand{\textleftrightharpoons}{PU}{\9041\313}%* U+21CB
18759 % U+21CC RIGHTWARDS HARPOON OVER LEFTWARDS HARPOON;
18760 % \rightleftharpoons (LaTeX, AmS)
18761 \DeclareTextCommand{\textrightleftharpoons}{PU}{\9041\314}%* U+21CC
18762 % U+21CD LEFTWARDS DOUBLE ARROW WITH STROKE; \arrowleftd-
blstroke;
18763 % \nLeftarrow (AmS)
18764 \DeclareTextCommand{\textnLeftarrow}{PU}{\9041\315}%* U+21CD
18765 % U+21CE LEFT RIGHT DOUBLE ARROW WITH STROKE; \nLeftrightar-
row (AmS)
18766 \DeclareTextCommand{\textnLeftrightarrow}{PU}{\9041\316}%* U+21CE
18767 % U+21CF RIGHTWARDS DOUBLE ARROW WITH STROKE; \arrowrightd-
blstroke;
18768 % \nRightarrow (AmS)
18769 \DeclareTextCommand{\textnRightarrow}{PU}{\9041\317}%* U+21CF
18770 % U+21D0 LEFTWARDS DOUBLE ARROW; \arrowdblleft, \arrowleftdbl;
18771 % \Leftarrow (LaTeX)
18772 \DeclareTextCommand{\textLeftarrow}{PU}{\9041\320}%* U+21D0
18773 % U+21D1 UPWARDS DOUBLE ARROW; \arrowdblup; \Uparrow (LaTeX)
18774 \DeclareTextCommand{\textUparrow}{PU}{\9041\321}%* U+21D1
18775 % U+21D2 RIGHTWARDS DOUBLE ARROW; \arrowdblright, \dblarrowright;
18776 % \Rightarrow (LaTeX)
18777 \DeclareTextCommand{\textRightarrow}{PU}{\9041\322}%* U+21D2
18778 %* \textRightarrow -> \Conclusion (marvosym)
18779 % U+21D3 DOWNWARDS DOUBLE ARROW; \arrowdbldown; \Downarrow (La-
TeX)
18780 \DeclareTextCommand{\textDownarrow}{PU}{\9041\323}%* U+21D3
18781 % U+21D4 LEFT RIGHT DOUBLE ARROW; \arrowdblboth;
18782 % \Leftrightarrow (LaTeX)
18783 \DeclareTextCommand{\textLeftrightarrow}{PU}{\9041\324}%* U+21D4
18784 %* \textLeftrightarrow -> \Equivalence (marvosym)
18785 % U+21D5 UP DOWN DOUBLE ARROW; \Updownarrow (LaTeX)

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18786 \DeclareTextCommand{\textUpdownarrow}{PU}{\9041\325}%* U+21D5
18787 % U+21D6 NORTH WEST DOUBLE ARROW; \Nwarrow (MnSymbol)
18788 \DeclareTextCommand{\textNwarrow}{PU}{\9041\326}%* U+21D6
18789 % U+21D7 NORTH EAST DOUBLE ARROW; \Nearrow (MnSymbol)
18790 \DeclareTextCommand{\textNearrow}{PU}{\9041\327}%* U+21D7
18791 % U+21D8 SOUTH EAST DOUBLE ARROW; \Searrow (MnSymbol)
18792 \DeclareTextCommand{\textSearrow}{PU}{\9041\330}%* U+21D8
18793 % U+21D9 SOUTH WEST DOUBLE ARROW; \Swarrow (MnSymbol)
18794 \DeclareTextCommand{\textSwarrow}{PU}{\9041\331}%* U+21D9
18795 % U+21DA LEFTWARDS TRIPLE ARROW; \Lleftarrow (AmS)
18796 \DeclareTextCommand{\textLleftarrow}{PU}{\9041\332}%* U+21DA
18797 % U+21DB RIGHTWARDS TRIPLE ARROW; \Rrightarrow (MnSymbol)
18798 \DeclareTextCommand{\textRrightarrow}{PU}{\9041\333}%* U+21DB
18799 % U+21DC LEFTWARDS SQUIGGLE ARROW; \leftsquigarrow (mathabx)
18800 \DeclareTextCommand{\textleftsquigarrow}{PU}{\9041\334}%* U+21DC
18801 % U+21DD RIGHTWARDS SQUIGGLE ARROW; \rightsquigarrow (mathabx)
18802 \DeclareTextCommand{\textrightarrow}{PU}{\9041\335}%* U+21DD
18803 % U+21E0 LEFTWARDS DASHED ARROW; arrowdashleft;
18804 % \dashleftarrow (AmS)
18805 \DeclareTextCommand{\textdashleftarrow}{PU}{\9041\340}%* U+21E0
18806 %* \textdashleftarrow -> \dashedleftarrow (MnSymbol)
18807 % U+21E1 UPWARDS DASHED ARROW; arrowdashup; \dasheduparrow (Mn-
Symbol)
18808 \DeclareTextCommand{\textdasheduparrow}{PU}{\9041\341}%* U+21E1
18809 % U+21E2 RIGHTWARDS DASHED ARROW; arrowdashright; \dashrightarrow
(AmS)
18810 \DeclareTextCommand{\textdashrightarrow}{PU}{\9041\342}%* U+21E2
18811 %* \textdashrightarrow -> \dashedrightarrow (MnSymbol)
18812 % U+21E3 DOWNWARDS DASHED ARROW; arrowdashdown; \dasheddownarrow
(MnSymbol)
18813 \DeclareTextCommand{\textdasheddownarrow}{PU}{\9041\343}%* U+21E3
18814 % U+21E8 RIGHTWARDS WHITE ARROW; \pointer (wasysym)
18815 \DeclareTextCommand{\textpointer}{PU}{\9041\350}%* U+21E8
18816 % U+21F5 DOWNWARDS ARROW LEFTWARDS OF UPWARDS ARROW;
18817 % \downuparrows (MnSymbol)
18818 \DeclareTextCommand{\textdownuparrows}{PU}{\9041\365}%* U+21F5
18819 % U+21FD LEFTWARDS OPEN-HEADED ARROW; \leftarrowtriangle (stmaryrd)
18820 \DeclareTextCommand{\textleftarrowtriangle}{PU}{\9041\375}%* U+21FD
18821 % U+21FE RIGHTWARDS OPEN-HEADED ARROW; \rightarrowtriangle (stmaryrd)
18822 \DeclareTextCommand{\textrightarrowtriangle}{PU}{\9041\376}%* U+21FE
18823 % U+21FF LEFT RIGHT OPEN-HEADED ARROW; \leftrightarrowtriangle
(stmaryrd)
18824 \DeclareTextCommand{\textleftrightarrowtriangle}{PU}{\9041\377}%* U+21FF

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51.2.22 Mathematical Operators: U+2200 to U+22FF

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18825 % U+2200 FOR ALL; forall; \forall (LaTeX)
18826 \DeclareTextCommand{\textforall}{PU}{\9042\000}%* U+2200
18827 % U+2201 COMPLEMENT; \complement (AmS)
18828 \DeclareTextCommand{\textcomplement}{PU}{\9042\001}%* U+2201
18829 % U+2202 PARTIAL DIFFERENTIAL; partialdiff; \partial (LaTeX)
18830 \DeclareTextCommand{\textpartial}{PU}{\9042\002}%* U+2202
18831 % U+2203 THERE EXISTS; existential; \exists (LaTeX)
18832 \DeclareTextCommand{\textexists}{PU}{\9042\003}%* U+2203
18833 % U+2204 THERE DOES NOT EXIST; \nexists (AmS)
18834 \DeclareTextCommand{\textnexists}{PU}{\9042\004}%* U+2204
18835 % U+2205 EMPTY SET; emptyset; \emptyset (LaTeX), \varnothing (AmS)
18836 \DeclareTextCommand{\textemptyset}{PU}{\9042\005}%* U+2205

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18837 %* \textemptyset -> \varnothing (AmS)
18838 % U+2206 INCREMENT; increment, Delta; \triangle (LaTeX)
18839 \DeclareTextCommand{\texttriangle}{PU}{\9042\006}%* U+2206
18840 % U+2207 NABLA; nabla, gradient; \nabla (LaTeX)
18841 \DeclareTextCommand{\textnabla}{PU}{\9042\007}%* U+2207
18842 % U+2208 ELEMENT OF; element; \in (LaTeX)
18843 \DeclareTextCommand{\textin}{PU}{\9042\010}%* U+2208
18844 % U+2209 NOT AN ELEMENT OF; notelement, notelementof; \notin (LaTeX)
18845 \DeclareTextCommand{\textnotin}{PU}{\9042\011}%* U+2209
18846 % U+220A SMALL ELEMENT OF; \smallin (mathdesign)
18847 \DeclareTextCommand{\textsmallin}{PU}{\9042\012}%* U+220A
18848 % U+220B CONTAINS AS MEMBER; suchthat; \ni (LaTeX)
18849 \DeclareTextCommand{\textni}{PU}{\9042\013}%* U+220B
18850 %* \textni -> \owns (mathabx)
18851 % U+220C DOES NOT CONTAIN AS MEMBER; \notowner (mathabx)
18852 \DeclareTextCommand{\textnotowner}{PU}{\9042\014}%* U+220C
18853 %* \textnotowner -> \notni (txfonts/pxfonts)
18854 % U+220D SMALL CONTAINS AS MEMBER; \smallowns (mathdesign)
18855 \DeclareTextCommand{\textsmallowns}{PU}{\9042\015}%* U+220D
18856 % U+220F N-ARY PRODUCT; \prod (LaTeX)
18857 \DeclareTextCommand{\textprod}{PU}{\9042\017}%* U+220F
18858 % U+2210 N-ARY COPRODUCT; \amalg (LaTeX)
18859 \DeclareTextCommand{\textamalg}{PU}{\9042\020}%* U+2210
18860 % U+2211 N-ARY SUMMATION; summation; \sum (LaTeX)
18861 \DeclareTextCommand{\textsum}{PU}{\9042\021}%* U+2211
18862 % U+2212 MINUS SIGN; minus
18863 \DeclareTextCommand{\textminus}{PU}{\9042\022}% U+2212
18864 % U+2213 MINUS-OR-PLUS SIGN; minusplus; \mp (LaTeX)
18865 \DeclareTextCommand{\textmp}{PU}{\9042\023}%* U+2213
18866 % U+2214 DOT PLUS; \dotplus (AmS)
18867 \DeclareTextCommand{\textdotplus}{PU}{\9042\024}%* U+2214
18868 % U+2215 DIVISION SLASH; divisionslash; \Divides (marvosym)
18869 \DeclareTextCommand{\textDivides}{PU}{\9042\025}%* U+2215
18870 % \DividesNot (marvosym)
18871 \DeclareTextCommand{\textDividesNot}{PU}{\9042\025\9040\322}%* U+2215 U+20D2
18872 % U+2216 SET MINUS; \setminus (LaTeX)
18873 \DeclareTextCommand{\textsetminus}{PU}{\9042\026}%* U+2216
18874 % U+2217 ASTERISK OPERATOR; asteriskmath; \ast (LaTeX)
18875 \DeclareTextCommand{\textast}{PU}{\9042\027}%* U+2217
18876 % U+2218 RING OPERATOR; \circ (LaTeX)
18877 \DeclareTextCommand{\textcirc}{PU}{\9042\030}%* U+2218
18878 % U+2219 BULLET OPERATOR; bulletoperator; \bullet (LaTeX)
18879 \DeclareTextCommand{\textbulletoperator}{PU}{\9042\031}% U+2219
18880 % U+221A SQUARE ROOT; radical
18881 \DeclareTextCommand{\textsqrt}{PU}{\9042\032}%* U+221A
18882 % U+221D PROPORTIONAL TO; proportional; \propto (LaTeX)
18883 \DeclareTextCommand{\textpropto}{PU}{\9042\035}%* U+221D
18884 %* \textpropto -> \varprop (wasysym)
18885 % U+221E INFINITY; infinity; \infty (LaTeX)
18886 \DeclareTextCommand{\textinfty}{PU}{\9042\036}%* U+221E
18887 % U+2220 ANGLE; angle; \angle (LaTeX)
18888 \DeclareTextCommand{\textangle}{PU}{\9042\040}%* U+2220
18889 % U+2221 MEASURED ANGLE; \measuredangle (mathabx, MnSymbol)
18890 \DeclareTextCommand{\textmeasuredangle}{PU}{\9042\041}%* U+2221
18891 % U+2222 SPHERICAL ANGLE; \sphericalangle (AmS)
18892 \DeclareTextCommand{\textsphericalangle}{PU}{\9042\042}%* U+2222
18893 %* \textsphericalangle -> \varangle (wasysym)

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18894 %* \textsphericalangle -> \Anglesign (marvosym)
18895 %* \textsphericalangle -> \AngleSign (marvosym)
18896 % U+2223 DIVIDES; divides; \mid (LaTeX)
18897 \DeclareTextCommand{\textmid}{PU}{\9042\043}%* U+2223
18898 % U+2224 DOES NOT DIVIDE; \nmid (AmS)
18899 \DeclareTextCommand{\textnmid}{PU}{\9042\044}%* U+2224
18900 %* \textnmid -> \notdivides (mathabx)
18901 % U+2225 PARALLEL TO; parallel; \parallel (LaTeX)
18902 \DeclareTextCommand{\textparallel}{PU}{\9042\045}%* U+2225
18903 % U+2226 NOT PARALLEL TO; notparallel; \nparallel (AmS)
18904 \DeclareTextCommand{\textnparallel}{PU}{\9042\046}%* U+2226
18905 %* \textnparallel -> nUpdownline (MnSymbol)
18906 % U+2227 LOGICAL AND; logicaland; \wedge (LaTeX)
18907 \DeclareTextCommand{\textwedge}{PU}{\9042\047}%* U+2227
18908 % \owedge (stmaryrd)
18909 \DeclareTextCommand{\textowedge}{PU}{\9042\047\9040\335}%* U+2227 U+20DD
18910 %* \textowedge -> \varowedge (stmaryrd)
18911 % U+2228 LOGICAL OR; logicalor; \vee (LaTeX)
18912 \DeclareTextCommand{\textvee}{PU}{\9042\050}%* U+2228
18913 % \ovee (stmaryrd)
18914 \DeclareTextCommand{\textovee}{PU}{\9042\050\9040\335}%* U+2228 U+20DD
18915 %* \textovee -> \varovee (stmaryrd)
18916 % U+2229 INTERSECTION; intersection; \cap (LaTeX)
18917 \DeclareTextCommand{\textcap}{PU}{\9042\051}%* U+2229
18918 % U+222A UNION; union; \cup (LaTeX)
18919 \DeclareTextCommand{\textcup}{PU}{\9042\052}%* U+222A
18920 % U+222B INTEGRAL; integral; \int (LaTeX)
18921 \DeclareTextCommand{\textint}{PU}{\9042\053}%* U+222B
18922 %* \textint -> \varint (wasysym)
18923 % U+222C DOUBLE INTEGRAL; dblintegral; \iint (AmS)
18924 \DeclareTextCommand{\textiint}{PU}{\9042\054}%* U+222C
18925 % U+222D TRIPLE INTEGRAL; \iiint (AmS)
18926 \DeclareTextCommand{\textiiint}{PU}{\9042\055}%* U+222D
18927 % U+222E CONTOUR INTEGRAL; contourintegral; \oint (LaTeX)
18928 \DeclareTextCommand{\textoint}{PU}{\9042\056}%* U+222E
18929 %* \textoint -> \varoint (wasysym)
18930 % U+222F SURFACE INTEGRAL; \oiint (wasysym)
18931 \DeclareTextCommand{\textoiint}{PU}{\9042\057}%* U+222F
18932 % U+2232 CLOCKWISE CONTOUR INTEGRAL;
18933 % \ointclockwise (txfonts/pxfonts)
18934 \DeclareTextCommand{\textointclockwise}{PU}{\9042\062}%* U+2232
18935 % U+2233 ANTICLOCKWISE CONTOUR INTEGRAL; \ointctrclockwise (tx-
    fonts/pxfonts)
18936 \DeclareTextCommand{\textointctrclockwise}{PU}{\9042\063}%* U+2233
18937 % U+2234 THEREFORE; therefore; \therefore (AmS)
18938 \DeclareTextCommand{\texttherefore}{PU}{\9042\064}%* U+2234
18939 %* \texttherefore -> uptherefore (MnSymbol)
18940 % U+2235 BECAUSE; because; \because (AmS)
18941 \DeclareTextCommand{\textbecause}{PU}{\9042\065}%* U+2235
18942 %* \textbecause -> \downtherefore (MnSymbol)
18943 % U+2236 RATIO; \vdotdot (MnSymbol)
18944 \DeclareTextCommand{\textvdotdot}{PU}{\9042\066}%* U+2236
18945 % U+2237 PROPORTION; \squaredots (MnSymbol)
18946 \DeclareTextCommand{\textsquaredots}{PU}{\9042\067}%* U+2237
18947 % U+2238 DOT MINUS; \dotminus (MnSymbol)
18948 \DeclareTextCommand{\textdotminus}{PU}{\9042\070}%* U+2238
18949 %* \textdotminus -> \textdotdiv (mathabx)

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18950 % U+2239 EXCESS; \eqcolon (txfonts/pxfonts)
 18951 \DeclareTextCommand{\texteqcolon}{PU}{\9042\071}%* U+2239
 18952 % U+223C TILDE OPERATOR; similar; \sim (LaTeX)
 18953 \DeclareTextCommand{\textsim}{PU}{\9042\074}%* U+223C
 18954 %* \textsim -> \AC (wasysym)
 18955 % U+223D REVERSED TILDE; reversedtilde; \backsim (AmS)
 18956 \DeclareTextCommand{\textbacksim}{PU}{\9042\075}%* U+223D
 18957 % \nbacksim (txfonts/pxfonts)
 18958 \DeclareTextCommand{\textnbacksim}{PU}{\9042\075\83\070}%* U+223D U+0338
 18959 % U+2240 WREATH PRODUCT; \wr (LaTeX)
 18960 \DeclareTextCommand{\textwr}{PU}{\9042\100}%* U+2240
 18961 %* \textwr -> \wreath (MnSymbol)
 18962 % U+2241 NOT TILDE; \nsim (AmS)
 18963 \DeclareTextCommand{\textnsim}{PU}{\9042\101}%* U+2241
 18964 % U+2242 MINUS TILDE; \eqsim (MnSymbol)
 18965 \DeclareTextCommand{\texteqsim}{PU}{\9042\102}%* U+2242
 18966 % \neqsim (MnSymbol)
 18967 \DeclareTextCommand{\textneqsim}{PU}{\9042\102\83\070}%* U+2242 U+0338
 18968 % U+2243 ASYMPTOTICALLY EQUAL TO; asymptoticallyequal; \simeq (LaTeX)
 18969 \DeclareTextCommand{\textsimeq}{PU}{\9042\103}%* U+2243
 18970 % U+2244 NOT ASYMPTOTICALLY EQUAL TO; \nsimeq (txfonts/pxfonts)
 18971 \DeclareTextCommand{\textnsimeq}{PU}{\9042\104}%* U+2244
 18972 % U+2245 APPROXIMATELY EQUAL TO; approximatelyequal; \cong (LaTeX)
 18973 \DeclareTextCommand{\textcong}{PU}{\9042\105}%* U+2245
 18974 % U+2247 NEITHER APPROXIMATELY NOR ACTUALLY EQUAL TO;
 18975 % \ncong (AmS)
 18976 \DeclareTextCommand{\textncong}{PU}{\9042\107}%* U+2247
 18977 % U+2248 ALMOST EQUAL TO; approxequal; \approx (LaTeX)
 18978 \DeclareTextCommand{\textapprox}{PU}{\9042\110}%* U+2248
 18979 % U+2249 NOT ALMOST EQUAL TO; \napprox (txfonts/pxfonts)
 18980 \DeclareTextCommand{\textnapprox}{PU}{\9042\111}%* U+2249
 18981 %* \textnapprox -> \nthickapprox (txfonts/pxfonts)
 18982 % U+224A ALMOST EQUAL OR EQUAL TO; \approxeq (AmS)
 18983 \DeclareTextCommand{\textapproxeq}{PU}{\9042\112}%* U+224A
 18984 % \napproxeq (txfonts/pxfonts)
 18985 \DeclareTextCommand{\textnapproxeq}{PU}{\9042\112\83\070}%* U+224A U+0338
 18986 % U+224B TRIPLE TILDE; \triple sim (MnSymbol)
 18987 \DeclareTextCommand{\texttriple sim}{PU}{\9042\113}%* U+224B
 18988 %* \texttriple sim -> \VHF (wasysym)
 18989 % \ntriple sim (MnSymbol)
 18990 \DeclareTextCommand{\textntriple sim}{PU}{\9042\113\83\070}%* U+224B U+0338
 18991 % U+224C ALL EQUAL TO; allequal; \backcong (MnSymbol)
 18992 \DeclareTextCommand{\textbackcong}{PU}{\9042\114}%* U+224C
 18993 % \nbackcong (MnSymbol)
 18994 \DeclareTextCommand{\textnbackcong}{PU}{\9042\114\83\070}%* U+224C U+0338
 18995 % U+224D EQUIVALENT TO; \asymp (LaTeX)
 18996 \DeclareTextCommand{\textasymp}{PU}{\9042\115}%* U+224D
 18997 % \nasymp (txfonts/pxfonts)
 18998 \DeclareTextCommand{\textnasymp}{PU}{\9042\115\83\070}%* U+224D U+0338
 18999 %* \textnasymp -> \notasymp (mathabx)
 19000 % U+224E GEOMETRICALLY EQUIVALENT TO; \Bumpeq (AmS)
 19001 \DeclareTextCommand{\textBumpeq}{PU}{\9042\116}%* U+224E
 19002 % \nBumpeq (txfonts/pxfonts)
 19003 \DeclareTextCommand{\textnBumpeq}{PU}{\9042\116\83\070}%* U+224E U+0338
 19004 % U+224F DIFFERENCE BETWEEN; \bumpeq (AmS)
 19005 \DeclareTextCommand{\textbumpeq}{PU}{\9042\117}%* U+224F

19006 % \nbumpeq (txfonts/pxfonts)
 19007 \DeclareTextCommand{\textnbumpeq}{PU}{\9042\117\83\070}%* U+224F U+0338
 19008 % U+2250 APPROACHES THE LIMIT; approaches; \doteq (LaTeX)
 19009 \DeclareTextCommand{\textdoteq}{PU}{\9042\120}%* U+2250
 19010 % \ndoteq (MnSymbol)
 19011 \DeclareTextCommand{\textndoteq}{PU}{\9042\120\83\070}%* U+2250 U+0338
 19012 % U+2251 GEOMETRICALLY EQUAL TO; geometricallyequal;
 19013 % \doteqdot (AmS)
 19014 \DeclareTextCommand{\textdoteqdot}{PU}{\9042\121}%* U+2251
 19015 %* \textdoteqdot -> \Doteq (MnSymbol)
 19016 % \nDoteq (MnSymbol)
 19017 \DeclareTextCommand{\textnDoteq}{PU}{\9042\121\83\070}%* U+2251 U+0338
 19018 % U+2252 APPROXIMATELY EQUAL TO OR THE IMAGE OF; approx-
 equalorimage;
 19019 % \fallingdotseq (AmS)
 19020 \DeclareTextCommand{\textfallingdotseq}{PU}{\9042\122}%* U+2252
 19021 % \nfallingdotseq (MnSymbol)
 19022 \DeclareTextCommand{\textnfallingdotseq}{PU}{\9042\122\83\070}%* U+2252 U+0338
 19023 % U+2253 IMAGE OF OR APPROXIMATELY EQUAL TO; imageorapproxi-
 matelyequal;
 19024 % \risingdotseq (AmS)
 19025 \DeclareTextCommand{\textrisingdotseq}{PU}{\9042\123}%* U+2253
 19026 % \nrisingdotseq (MnSymbol)
 19027 \DeclareTextCommand{\textnrisingdotseq}{PU}{\9042\123\83\070}%* U+2253 U+0338
 19028 % U+2254 COLON EQUALS; \colonequals (colonequals)
 19029 \DeclareTextCommand{\textcolonequals}{PU}{\9042\124}%* U+2254
 19030 % U+2255 EQUALS COLON; \equalscolon (colonequals)
 19031 \DeclareTextCommand{\textequalscolon}{PU}{\9042\125}%* U+2255
 19032 % U+2256 RING IN EQUAL TO; \eqcirc (AmS)
 19033 \DeclareTextCommand{\texteqcirc}{PU}{\9042\126}%* U+2256
 19034 % \neqcirc (MnSymbol)
 19035 \DeclareTextCommand{\textneqcirc}{PU}{\9042\126\83\070}%* U+2256 U+0338
 19036 % U+2257 RING EQUAL TO; \circeq (AmS)
 19037 \DeclareTextCommand{\textcirceq}{PU}{\9042\127}%* U+2257
 19038 % \ncirceq (MnSymbol)
 19039 \DeclareTextCommand{\textncirceq}{PU}{\9042\127\83\070}%* U+2257 U+0338
 19040 % U+2259 ESTIMATES; \hateq (MnSymbol)
 19041 \DeclareTextCommand{\texthateq}{PU}{\9042\131}%* U+2259
 19042 %* \texthateq -> \corresponds (mathabx)
 19043 %* \texthateq -> \Corresponds (marvosym)
 19044 % \nhateq (MnSymbol)
 19045 \DeclareTextCommand{\textnhateq}{PU}{\9042\131\83\070}%* U+2259 U+0338
 19046 % U+225C DELTA EQUAL TO; \triangleeq (AmS)
 19047 \DeclareTextCommand{\texttriangleeq}{PU}{\9042\134}%* U+225C
 19048 % U+2260 NOT EQUAL TO; notequal; \ne (LaTeX), \neq (LaTeX)
 19049 \DeclareTextCommand{\textneq}{PU}{\9042\140}%* U+2260
 19050 \DeclareTextCommand{\textne}{PU}{\9042\140}%* U+2260
 19051 %* \textneq -> \nequal (MnSymbol)
 19052 % U+2261 IDENTICAL TO; equivalence; \equiv (LaTeX)
 19053 \DeclareTextCommand{\textequiv}{PU}{\9042\141}%* U+2261
 19054 %* \textequiv -> \Congruent (marvosym)
 19055 % U+2262 NOT IDENTICAL TO; notidentical; \nequiv (txfonts/pxfonts)
 19056 \DeclareTextCommand{\textnequiv}{PU}{\9042\142}%* U+2262
 19057 %* \textnequiv -> \NotCongruent (marvosym)
 19058 %* \textnequiv -> \notequiv (mathabx)
 19059 % U+2264 LESS-THAN OR EQUAL TO; lessequal; \le (LaTeX), \leq (LaTeX)
 19060 \DeclareTextCommand{\textleq}{PU}{\9042\144}%* U+2264


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19061 \DeclareTextCommand{\textle}{PU}{\9042\144}%* U+2264
19062 %* \textleq -> \LessOrEqual (marvosym)
19063 % U+2265 GREATER-THAN OR EQUAL TO; greaterqual;
19064 % \ge (LaTeX), \geq (LaTeX)
19065 \DeclareTextCommand{\textgeq}{PU}{\9042\145}%* U+2265
19066 \DeclareTextCommand{\textge}{PU}{\9042\145}%* U+2265
19067 %* \textgeq -> \LargerOrEqual (marvosym)
19068 % U+2266 LESS-THAN OVER EQUAL TO; lessorequal; \leqq (AmS)
19069 \DeclareTextCommand{\textleqq}{PU}{\9042\146}%* U+2266
19070 % \nleqq (txfonts/pxfonts)
19071 \DeclareTextCommand{\textnleqq}{PU}{\9042\146\83\070}%* U+2266 U+0338
19072 % U+2267 GREATER-THAN OVER EQUAL TO; greateroverequal; \geqq (AmS)
19073 \DeclareTextCommand{\textgeqq}{PU}{\9042\147}%* U+2267
19074 % \ngeqq (txfonts/pxfonts)
19075 \DeclareTextCommand{\textngeqq}{PU}{\9042\147\83\070}%* U+2267 U+0338
19076 % U+2268 LESS-THAN BUT NOT EQUAL TO; \lneqq (AmS)
19077 \DeclareTextCommand{\textlneqq}{PU}{\9042\150}%* U+2268
19078 % U+2269 GREATER-THAN BUT NOT EQUAL TO; \gneqq (AmS)
19079 \DeclareTextCommand{\textgneqq}{PU}{\9042\151}%* U+2269
19080 % U+226A MUCH LESS-THAN; muchless; \ll (LaTeX)
19081 \DeclareTextCommand{\textll}{PU}{\9042\152}%* U+226A
19082 % \nll (txfonts/pxfonts)
19083 \DeclareTextCommand{\textnll}{PU}{\9042\152\83\070}%* U+226A U+0338
19084 % U+226B MUCH GREATER-THAN; muchgreater; \gg (LaTeX)
19085 \DeclareTextCommand{\textgg}{PU}{\9042\153}%* U+226B
19086 % \ngg (txfonts/pxfonts)
19087 \DeclareTextCommand{\textngg}{PU}{\9042\153\83\070}%* U+226B U+0338
19088 % U+226C BETWEEN; \between (AmS)
19089 \DeclareTextCommand{\textbetween}{PU}{\9042\154}%* U+226C
19090 % U+226E NOT LESS-THAN; notless; \nless (AmS)
19091 \DeclareTextCommand{\textnless}{PU}{\9042\156}%* U+226E
19092 % U+226F NOT GREATER-THAN; notgreater; \ngtr (AmS)
19093 \DeclareTextCommand{\textngtr}{PU}{\9042\157}%* U+226F
19094 % U+2270 NEITHER LESS-THAN NOR EQUAL TO; notlessnorequal;
19095 % \nleq (AmS)
19096 \DeclareTextCommand{\textnleq}{PU}{\9042\160}%* U+2270
19097 % U+2271 NEITHER GREATER-THAN NOR EQUAL TO; notgreaternorequal; \ngeq (AmS)
19098 \DeclareTextCommand{\textngeq}{PU}{\9042\161}%* U+2271
19099 % U+2272 LESS-THAN OR EQUIVALENT TO; lessorequivalent; \lessim (AmS)
19100 \DeclareTextCommand{\textlessim}{PU}{\9042\162}%* U+2272
19101 %* \textlessim -> \apprle (wasysym)
19102 % U+2273 GREATER-THAN OR EQUIVALENT TO; greaterorequivalent; \gtrsim (AmS)
19103 \DeclareTextCommand{\textgtrsim}{PU}{\9042\163}%* U+2273
19104 %* \textgtrsim -> \apprge (wasysym)
19105 % U+2274 NEITHER LESS-THAN NOR EQUIVALENT TO; \nlessim (txfonts/pxfonts)
19106 \DeclareTextCommand{\textnlessim}{PU}{\9042\164}%* U+2274
19107 % U+2275 NEITHER GREATER-THAN NOR EQUIVALENT TO; \ngtrsim (txfonts/pxfonts)
19108 \DeclareTextCommand{\textngtrsim}{PU}{\9042\165}%* U+2275
19109 % U+2276 LESS-THAN OR GREATER-THAN; lessorgreater; \lessgtr (AmS)
19110 \DeclareTextCommand{\textlessgtr}{PU}{\9042\166}%* U+2276
19111 % U+2277 GREATER-THAN OR LESS-THAN; greaterorless; \gtrless (AmS)
19112 \DeclareTextCommand{\textgtrless}{PU}{\9042\167}%* U+2277
19113 % U+2278 NEITHER LESS-THAN NOR GREATER-THAN; \ngtrless (tx-

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        fonts/pxfonts)
19114 \DeclareTextCommand{\textngtrless}{PU}{\9042\170}%* U+2278
19115 % U+2279 NEITHER GREATER-THAN NOR LESS-THAN; \nlessgtr (tx-
        fonts/pxfonts)
19116 \DeclareTextCommand{\textnlessgtr}{PU}{\9042\171}%* U+2279
19117 % U+227A PRECEDES; precedes; \prec (LaTeX)
19118 \DeclareTextCommand{\textprec}{PU}{\9042\172}%* U+227A
19119 % U+227B SUCCEEDS; succeeds; \succ (LaTeX)
19120 \DeclareTextCommand{\textsucc}{PU}{\9042\173}%* U+227B
19121 % U+227C PRECEDES OR EQUAL TO; \preccurlyeq (AmS)
19122 \DeclareTextCommand{\textpreccurlyeq}{PU}{\9042\174}%* U+227C
19123 % U+227D SUCCEEDS OR EQUAL TO; \succcurlyeq (AmS)
19124 \DeclareTextCommand{\textsucccurlyeq}{PU}{\9042\175}%* U+227D
19125 % U+227E PRECEDES OR EQUIVALENT TO; \precsim (AmS)
19126 \DeclareTextCommand{\textprecsim}{PU}{\9042\176}%* U+227E
19127 % \nprecsim (txfonts/pxfonts)
19128 \DeclareTextCommand{\textnprecsim}{PU}{\9042\176\83\070}%* U+227E U+0338
19129 % U+227F SUCCEEDS OR EQUIVALENT TO; \succsim (AmS)
19130 \DeclareTextCommand{\textsuccsim}{PU}{\9042\177}%* U+227F
19131 % \nsuccsim (txfonts/pxfonts)
19132 \DeclareTextCommand{\textnsuccsim}{PU}{\9042\177\83\070}%* U+227F U+0338
19133 % U+2280 DOES NOT PRECEDE; notprecedes; \nprec (AmS)
19134 \DeclareTextCommand{\textnprec}{PU}{\9042\200}%* U+2280
19135 % U+2281 DOES NOT SUCCEED; notsucceeds; \nsucc (AmS)
19136 \DeclareTextCommand{\textnsucc}{PU}{\9042\201}%* U+2281
19137 % U+2282 SUBSET OF; propersubset; \subset (LaTeX)
19138 \DeclareTextCommand{\textsubset}{PU}{\9042\202}%* U+2282
19139 % U+2283 SUPERSET OF; propersuperset; \supset (LaTeX)
19140 \DeclareTextCommand{\textsupset}{PU}{\9042\203}%* U+2283
19141 % U+2284 NOT A SUBSET OF; notsubset; \nsubset (mathabx)
19142 \DeclareTextCommand{\textnsubset}{PU}{\9042\204}%* U+2284
19143 % U+2285 NOT A SUPERSET OF; notsuperset; \nsupset (mathabx)
19144 \DeclareTextCommand{\textnsupset}{PU}{\9042\205}%* U+2285
19145 % U+2286 SUBSET OF OR EQUAL TO; reflexsubset; \subteq (LaTeX)
19146 \DeclareTextCommand{\textsubteq}{PU}{\9042\206}%* U+2286
19147 % U+2287 SUPERSET OF OR EQUAL TO; reflexsuperset; \supseteq (LaTeX)
19148 \DeclareTextCommand{\textsupseteq}{PU}{\9042\207}%* U+2287
19149 % U+2288 NEITHER A SUBSET OF NOR EQUAL TO; \nsubteq (AmS)
19150 \DeclareTextCommand{\textnsubteq}{PU}{\9042\210}%* U+2288
19151 % U+2289 NEITHER A SUPERSET OF NOR EQUAL TO; \nsupseteq (AmS)
19152 \DeclareTextCommand{\textnsupseteq}{PU}{\9042\211}%* U+2289
19153 % U+228A SUBSET OF WITH NOT EQUAL TO; subsetnotequal; \subset-
        neq (AmS)
19154 \DeclareTextCommand{\textsubsetneq}{PU}{\9042\212}%* U+228A
19155 % U+228B SUPERSET OF WITH NOT EQUAL TO; supersetnotequal; \supset-
        neq (AmS)
19156 \DeclareTextCommand{\textsupsetneq}{PU}{\9042\213}%* U+228B
19157 % U+228D MULTISSET MULTIPLICATION; \cupdot (MnSymbol)
19158 \DeclareTextCommand{\textcupdot}{PU}{\9042\215}%* U+228D
19159 % U+228E MULTISSET UNION; \cupplus (MnSymbol)
19160 \DeclareTextCommand{\textcupplus}{PU}{\9042\216}%* U+228E
19161 % U+228F SQUARE IMAGE OF; \sqsubset (latexsym, ...)
19162 \DeclareTextCommand{\textsqsubset}{PU}{\9042\217}%* U+228F
19163 % \nsqsubset (txfonts/pxfonts)
19164 \DeclareTextCommand{\textnsqsubset}{PU}{\9042\217\83\070}%* U+228F U+0338
19165 % U+2290 SQUARE ORIGINAL OF; \sqsupset (latexsym, ...)
19166 \DeclareTextCommand{\textsqsupset}{PU}{\9042\220}%* U+2290

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19167 % \nssupset (txfonts/pxfonts)
19168 \DeclareTextCommand{\textnssupset}{PU}{\9042\220\83\070}%* U+2290 U+0338
19169 % U+2291 SQUARE IMAGE OF OR EQUAL TO; \sqsubseteq (LaTeX)
19170 \DeclareTextCommand{\textsqsubseteq}{PU}{\9042\221}%* U+2291
19171 % \nssubseteq (txfonts/pxfonts)
19172 \DeclareTextCommand{\textnssubseteq}{PU}{\9042\221\83\070}%* U+2291 U+0338
19173 % U+2292 SQUARE ORIGINAL OF OR EQUAL TO; \sqsupseteq (LaTeX)
19174 \DeclareTextCommand{\textsqsupseteq}{PU}{\9042\222}%* U+2292
19175 % \nssupseteq (txfonts/pxfonts)
19176 \DeclareTextCommand{\textnssupseteq}{PU}{\9042\222\83\070}%* U+2292 U+0338
19177 % U+2293 SQUARE CAP; \sqcap (LaTeX)
19178 \DeclareTextCommand{\textsqcap}{PU}{\9042\223}%* U+2293
19179 % U+2294 SQUARE CUP; \sqcup (LaTeX)
19180 \DeclareTextCommand{\textsqcup}{PU}{\9042\224}%* U+2294
19181 % U+2295 CIRCLED PLUS; circleplus; \oplus (LaTeX)
19182 \DeclareTextCommand{\textoplus}{PU}{\9042\225}%* U+2295
19183 %* \textoplus -> \varoplus (stmaryrd)
19184 % U+2296 CIRCLED MINUS; minuscircle; \ominus (LaTeX)
19185 \DeclareTextCommand{\textominus}{PU}{\9042\226}%* U+2296
19186 %* \textominus -> \varominus (stmaryrd)
19187 % U+2297 CIRCLED TIMES; circlemultiply; \otimes (LaTeX)
19188 \DeclareTextCommand{\textotimes}{PU}{\9042\227}%* U+2297
19189 %* \textotimes -> \varotimes (stmaryrd)
19190 % U+2298 CIRCLED DIVISION SLASH; \oslash (LaTeX)
19191 \DeclareTextCommand{\textoslash}{PU}{\9042\230}%* U+2298
19192 %* \textoslash -> \varoslash (stmaryrd)
19193 % U+2299 CIRCLED DOT OPERATOR; circle(d?)ot; \odot (LaTeX)
19194 \DeclareTextCommand{\textodot}{PU}{\9042\231}%* U+2299
19195 %* \textodot -> \varodot (stmaryrd)
19196 % U+229A CIRCLED RING OPERATOR; \circledcirc (AmS)
19197 \DeclareTextCommand{\textcircledcirc}{PU}{\9042\232}%* U+229A
19198 %* \textcircledcirc -> \ocirc (mathabx)
19199 %* \textcircledcirc -> \varocircle (stmaryrd)
19200 % U+229B CIRCLED ASTERISK OPERATOR; \circledast (AmS)
19201 \DeclareTextCommand{\textcircledast}{PU}{\9042\233}%* U+229B
19202 %* \textcircledast -> \varoast (stmaryrd)
19203 %* \textcircledast -> \oasterisk (mathabx)
19204 % U+229D CIRCLED DASH; \circleddash (AmS)
19205 \DeclareTextCommand{\textcircleddash}{PU}{\9042\235}%* U+229D
19206 % U+229E SQUARED PLUS; \boxplus (AmS)
19207 \DeclareTextCommand{\textboxplus}{PU}{\9042\236}%* U+229E
19208 % U+229F SQUARED MINUS; \boxminus (AmS)
19209 \DeclareTextCommand{\textboxminus}{PU}{\9042\237}%* U+229F
19210 % U+22A0 SQUARED TIMES; \boxtimes (AmS)
19211 \DeclareTextCommand{\textboxtimes}{PU}{\9042\240}%* U+22A0
19212 % U+22A1 SQUARED DOT OPERATOR; \boxdot (AmS)
19213 \DeclareTextCommand{\textboxdot}{PU}{\9042\241}%* U+22A1
19214 % U+22A2 RIGHT TACK; \vdash (LaTeX)
19215 \DeclareTextCommand{\textvdash}{PU}{\9042\242}%* U+22A2
19216 %* \textvdash -> \rightvdash (MnSymbol)
19217 % U+22A3 LEFT TACK; tackleft; \dashv (LaTeX)
19218 \DeclareTextCommand{\textdashv}{PU}{\9042\243}%* U+22A3
19219 %* \textdashv -> \leftvdash (MnSymbol)
19220 % \ndashv (mathabx)
19221 \DeclareTextCommand{\textndashv}{PU}{\9042\243\83\070}%* U+22A3 U+0338
19222 %* \textndashv -> \nleftvdash (MnSymbol)
19223 % U+22A4 DOWN TACK (=top); tackdown; \top (LaTeX)

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19224 \DeclareTextCommand{\texttop}{PU}{\9042\244}%* U+22A4
19225 %* \texttop -> \downvdash (MnSymbol)
19226 % \ndownvdash (MnSymbol)
19227 \DeclareTextCommand{\textndownvdash}{PU}{\9042\244\83\070}%* U+22A4 U+0338
19228 % U+22A5 UP TACK (=base, bottom); \bot (LaTeX)
19229 \DeclareTextCommand{\textbot}{PU}{\9042\245}%* U+22A5
19230 %* \textbot -> \upvdash (MnSymbol)
19231 % \nupvdash (MnSymbol)
19232 \DeclareTextCommand{\textnupvdash}{PU}{\9042\245\83\070}%* U+22A5 U+0338
19233 %* \textnupvdash -> \nperp (MnSymbol)
19234 % U+22A8 TRUE; \vdash (AmS)
19235 \DeclareTextCommand{\textvDash}{PU}{\9042\250}%* U+22A8
19236 %* \textvDash -> \models (LaTeX)
19237 %* \textvDash -> \rightmodels (MnSymbol)
19238 % U+22A9 FORCES; \Vdash (AmS)
19239 \DeclareTextCommand{\textVdash}{PU}{\9042\251}%* U+22A9
19240 %* \textVdash -> \rightVdash (MnSymbol)
19241 % U+22AA TRIPLE VERTICAL BAR RIGHT TURNSTILE; \Vvdash (AmS)
19242 \DeclareTextCommand{\textVvdash}{PU}{\9042\252}%* U+22AA
19243 % \nVdash (mathabx)
19244 \DeclareTextCommand{\textnVdash}{PU}{\9042\252\83\070}%* U+22AA U+0338
19245 % U+22AB DOUBLE VERTICAL BAR DOUBLE RIGHT TURNSTILE;
19246 % \VDash (mathabx)
19247 \DeclareTextCommand{\textVDash}{PU}{\9042\253}%* U+22AB
19248 %* \textVDash -> \rightModels (MnSymbol)
19249 % U+22AC DOES NOT PROVE; \nvdash (AmS)
19250 \DeclareTextCommand{\textnvdash}{PU}{\9042\254}%* U+22AC
19251 %* \textnvdash -> \nrightvdash (MnSymbol)
19252 % U+22AD NOT TRUE; \nvDash (AmS)
19253 \DeclareTextCommand{\textnvDash}{PU}{\9042\255}%* U+22AD
19254 %* \textnvDash -> \nrightmodels (MnSymbol)
19255 %* \textnvDash -> \nmodels (MnSymbol)
19256 % U+22AE DOES NOT FORCE; \nVdash (txfonts/pxfonts)
19257 \DeclareTextCommand{\textnVdash}{PU}{\9042\256}%* U+22AE
19258 %* \textnVdash -> \nrightVdash (MnSymbol)
19259 % U+22AF NEGATED DOUBLE VERTICAL BAR DOUBLE RIGHT TURN-
    STILE; \nVDash (AmS)
19260 \DeclareTextCommand{\textnVDash}{PU}{\9042\257}%* U+22AF
19261 %* \textnVDash -> \nrightModels (MnSymbol)
19262 % U+22B2 NORMAL SUBGROUP OF; \lhd (latexsym, ...)
19263 \DeclareTextCommand{\textlhd}{PU}{\9042\262}%* U+22B2
19264 %* \textlhd -> \lessclosed (MnSymbol)
19265 % U+22B3 CONTAINS AS NORMAL SUBGROUP; \rhd (latexsym, ...)
19266 \DeclareTextCommand{\textrhd}{PU}{\9042\263}%* U+22B3
19267 %* \textrhd -> \gtrclosed (MnSymbol)
19268 % U+22B4 NORMAL SUBGROUP OF OR EQUAL TO; \unlhd (latexsym, ...)
19269 \DeclareTextCommand{\textunlhd}{PU}{\9042\264}%* U+22B4
19270 %* \textunlhd -> \leqclosed (MnSymbol)
19271 %* \textunlhd -> \trianglelefteq (MnSymbol)
19272 % U+22B5 CONTAINS AS NORMAL SUBGROUP OR EQUAL TO; \unrhd (la-
    texsym, ...)
19273 \DeclareTextCommand{\textunrhd}{PU}{\9042\265}%* U+22B5
19274 %* \textunrhd -> \geqclosed (MnSymbol)
19275 %* \textunrhd -> \trianglerighteq (MnSymbol)
19276 % U+22B6 ORIGINAL OF; \multimapdotbothA (txfonts/pxfonts)
19277 \DeclareTextCommand{\textmultimapdotbothA}{PU}{\9042\266}%* U+22B6
19278 % U+22B7 IMAGE OF; \multimapdotbothB (txfonts/pxfonts)

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19279 \DeclareTextCommand{\textmultimapdotbothB}{PU}{\9042\267}%* U+22B7
19280 % U+22B8 MULTIMAP; \multimap (AmS, txfonts/pxfonts)
19281 \DeclareTextCommand{\textmultimap}{PU}{\9042\270}%* U+22B8
19282 % U+22BB XOR; \veebar (AmS)
19283 \DeclareTextCommand{\textveebar}{PU}{\9042\273}%* U+22BB
19284 % U+22BC NAND; \barwedge (mathabx)
19285 \DeclareTextCommand{\textbarwedge}{PU}{\9042\274}%* U+22BC
19286 % U+22C6 STAR OPERATOR; \star (LaTeX)
19287 \DeclareTextCommand{\textstar}{PU}{\9042\306}%* U+22C6
19288 % U+22C7 DIVISION TIMES; \divideontimes (AmS)
19289 \DeclareTextCommand{\textdivideontimes}{PU}{\9042\307}%* U+22C7
19290 % U+22C8 BOWTIE; \bowtie (LaTeX)
19291 \DeclareTextCommand{\textbowtie}{PU}{\9042\310}%* U+22C8
19292 %* \textbowtie -> \Bowtie (wasysym)
19293 % U+22C9 LEFT NORMAL FACTOR SEMIDIRECT PRODUCT; \ltimes (AmS)
19294 \DeclareTextCommand{\textltimes}{PU}{\9042\311}%* U+22C9
19295 % U+22CA RIGHT NORMAL FACTOR SEMIDIRECT PRODUCT;
19296 % \rtimes (AmS)
19297 \DeclareTextCommand{\textrtimes}{PU}{\9042\312}%* U+22CA
19298 % U+22CB LEFT SEMIDIRECT PRODUCT; \leftthreetimes (AmS)
19299 \DeclareTextCommand{\textleftthreetimes}{PU}{\9042\313}%* U+22CB
19300 % U+22CC RIGHT SEMIDIRECT PRODUCT; \rightthreetimes (AmS)
19301 \DeclareTextCommand{\textrightthreetimes}{PU}{\9042\314}%* U+22CC
19302 % U+22CD REVERSED TILDE EQUALS; \backsimeq (AmS)
19303 \DeclareTextCommand{\textbacksimeq}{PU}{\9042\315}%* U+22CD
19304 % \nbacksimeq (txfonts/pxfonts)
19305 \DeclareTextCommand{\textnbacksimeq}{PU}{\9042\315\83\070}%* U+22CD U+0338
19306 % U+22CE CURLY LOGICAL OR; curlyor; \curlyvee (AmS)
19307 \DeclareTextCommand{\textcurlyvee}{PU}{\9042\316}%* U+22CE
19308 %* \textcurlyvee -> \varcurlyvee (stmaryrd)
19309 % U+22CF CURLY LOGICAL AND; curlyand; \curlywedge (AmS)
19310 \DeclareTextCommand{\textcurlywedge}{PU}{\9042\317}%* U+22CF
19311 %* \textcurlywedge -> \varcurlywedge (stmaryrd)
19312 % U+22D0 DOUBLE SUBSET; \Subset (AmS)
19313 \DeclareTextCommand{\textSubset}{PU}{\9042\320}%* U+22D0
19314 % \nSubset (txfonts/pxfonts)
19315 \DeclareTextCommand{\textnSubset}{PU}{\9042\320\83\070}%* U+22D0 U+0338
19316 % U+22D1 DOUBLE SUPERSET; \Supset (AmS)
19317 \DeclareTextCommand{\textSupset}{PU}{\9042\321}%* U+22D1
19318 % \nSupset (txfonts/pxfonts)
19319 \DeclareTextCommand{\textnSupset}{PU}{\9042\321\83\070}%* U+22D1 U+0338
19320 % U+22D2 DOUBLE INTERSECTION; \Cap (AmS)
19321 \DeclareTextCommand{\textCap}{PU}{\9042\322}%* U+22D2
19322 %* \textCap -> \doublecap (mathabx)
19323 % U+22D3 DOUBLE UNION; \Cup (AmS)
19324 \DeclareTextCommand{\textCup}{PU}{\9042\323}%* U+22D3
19325 %* \textCup -> \doublecup (mathabx)
19326 % U+22D4 PITCHFORK; \pitchfork (mathabx)
19327 \DeclareTextCommand{\textpitchfork}{PU}{\9042\324}%* U+22D4
19328 % U+22D6 LESS-THAN WITH DOT; \lessdot (AmS)
19329 \DeclareTextCommand{\textlessdot}{PU}{\9042\326}%* U+22D6
19330 % U+22D7 GREATER-THAN WITH DOT; \gtrdot (AmS)
19331 \DeclareTextCommand{\textgtrdot}{PU}{\9042\327}%* U+22D7
19332 % U+22D8 VERY MUCH LESS-THAN; \lll (AmS)
19333 \DeclareTextCommand{\textlll}{PU}{\9042\330}%* U+22D8
19334 % U+22D9 VERY MUCH GREATER-THAN; \ggg (AmS)
19335 \DeclareTextCommand{\textggg}{PU}{\9042\331}%* U+22D9

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19336 % U+22DA LESS-THAN EQUAL TO OR GREATER-THAN; lessequalorgreater;
 19337 % \lesseqgtr (AmS)
 19338 \DeclareTextCommand{\textlesseqgtr}{PU}{\9042\332}%* U+22DA
 19339 % U+22DB GREATER-THAN EQUAL TO OR LESS-THAN; greaterequalorless;
 19340 % \gtreqless (AmS)
 19341 \DeclareTextCommand{\textgtreqless}{PU}{\9042\333}%* U+22DB
 19342 % U+22DE EQUAL TO OR PRECEDES; \curlyeqprec (MnSymbol)
 19343 \DeclareTextCommand{\textcurlyeqprec}{PU}{\9042\336}%* U+22DE
 19344 % \ncurlyeqprec (mathabx)
 19345 \DeclareTextCommand{\textncurlyeqprec}{PU}{\9042\336\83\070}%* U+22DE U+0338
 19346 % U+22DF EQUAL TO OR SUCCEEDS; \curlyeqsucc (MnSymbol)
 19347 \DeclareTextCommand{\textcurlyeqsucc}{PU}{\9042\337}%* U+22DF
 19348 % \ncurlyeqsucc (mathabx)
 19349 \DeclareTextCommand{\textncurlyeqsucc}{PU}{\9042\337\83\070}%* U+22DF U+0338
 19350 % U+22E0 DOES NOT PRECEDE OR EQUAL; \npreccurlyeq (txfonts/pxfonts)
 19351 \DeclareTextCommand{\textnpreccurlyeq}{PU}{\9042\340}%* U+22E0
 19352 % U+22E1 DOES NOT SUCCEED OR EQUAL; \nsucccurlyeq (txfonts/pxfonts)
 19353 \DeclareTextCommand{\textnsucccurlyeq}{PU}{\9042\341}%* U+22E1
 19354 % U+22E2 NOT SQUARE IMAGE OF OR EQUAL TO; \nsqsubseteq (tx-
 fonts/pxfonts)
 19355 \DeclareTextCommand{\textnqsubseteq}{PU}{\9042\342}%* U+22E2
 19356 % U+22E3 NOT SQUARE ORIGINAL OF OR EQUAL TO; \nsqsupseteq (tx-
 fonts/pxfonts)
 19357 \DeclareTextCommand{\textnqsupseteq}{PU}{\9042\343}%* U+22E3
 19358 % U+22E4 SQUARE IMAGE OF OR NOT EQUAL TO; \sqsubsetneq (mathabx)
 19359 \DeclareTextCommand{\textsqsubsetneq}{PU}{\9042\344}%* U+22E4
 19360 %* \textsqsubsetneq -> \varsqsubsetneq (mathabx)
 19361 % U+22E5 SQUARE ORIGINAL OF OR NOT EQUAL TO; \sqsupsetneq (math-
 abx)
 19362 \DeclareTextCommand{\textsqsupsetneq}{PU}{\9042\345}%* U+22E5
 19363 %* \textsqsupsetneq -> \varsqsupsetneq (mathabx)
 19364 % U+22E6 LESS-THAN BUT NOT EQUIVALENT TO; \lnsim (AmS)
 19365 \DeclareTextCommand{\textlnsim}{PU}{\9042\346}%* U+22E6
 19366 % U+22E7 GREATER-THAN BUT NOT EQUIVALENT TO; \gnsim (AmS)
 19367 \DeclareTextCommand{\textgnsim}{PU}{\9042\347}%* U+22E7
 19368 % U+22E8 PRECEDES BUT NOT EQUIVALENT TO; \precnsim (AmS)
 19369 \DeclareTextCommand{\textprecnsim}{PU}{\9042\350}%* U+22E8
 19370 % U+22E9 SUCCEEDS BUT NOT EQUIVALENT TO; \succnsim (AmS)
 19371 \DeclareTextCommand{\textsuccnsim}{PU}{\9042\351}%* U+22E9
 19372 % U+22EA NOT NORMAL SUBGROUP OF; \ntriangleleft (AmS)
 19373 \DeclareTextCommand{\textntriangleleft}{PU}{\9042\352}%* U+22EA
 19374 %* \textntriangleleft -> \nlessclosed (MnSymbol)
 19375 % U+22EB DOES NOT CONTAIN AS NORMAL SUBGROUP; \ntriang-
 leright (AmS)
 19376 \DeclareTextCommand{\textntriangleright}{PU}{\9042\353}%* U+22EB
 19377 %* \textntriangleright -> \ngtrclosed (MnSymbol)
 19378 % U+22EC NOT NORMAL SUBGROUP OF OR EQUAL TO;
 19379 % \ntrianglelefteq (AmS)
 19380 \DeclareTextCommand{\textntrianglelefteq}{PU}{\9042\354}%* U+22EC
 19381 % U+22ED DOES NOT CONTAIN AS NORMAL SUBGROUP OR EQUAL;
 19382 % \ntrianglerighteq (AmS)
 19383 \DeclareTextCommand{\textntrianglerighteq}{PU}{\9042\355}%* U+22ED
 19384 %* \textntrianglerighteq -> \textngeqclosed
 19385 % U+22EE VERTICAL ELLIPSIS; ellipsisvertical; \vdots (LaTeX)
 19386 \DeclareTextCommand{\textvdots}{PU}{\9042\356}%* U+22EE
 19387 % U+22EF MIDLINE HORIZONTAL ELLIPSIS; \cdots (LaTeX)
 19388 \DeclareTextCommand{\textcdots}{PU}{\9042\357}%* U+22EF

19389 % U+22F0 UP RIGHT DIAGONAL ELLIPSIS; \udots (MnSymbol)
 19390 \DeclareTextCommand{\textudots}{PU}{\9042\360}%* U+22F0
 19391 % U+22F1 DOWN RIGHT DIAGONAL ELLIPSIS; \ddots (LaTeX)
 19392 \DeclareTextCommand{\textddots}{PU}{\9042\361}%* U+22F1
 19393 % U+22F6 ELEMENT OF WITH OVERBAR; \barin (mathabx)
 19394 \DeclareTextCommand{\textbarin}{PU}{\9042\366}%* U+22F6

51.2.23 Miscellaneous Technical: U+2300 to U+23FF

19395 % U+2300 DIAMETER SIGN; \diameter (mathabx,wasysym)
 19396 \DeclareTextCommand{\textdiameter}{PU}{\9043\000}%* U+2300
 19397 % U+2310 REVERSED NOT SIGN; \backneg (MnSymbol)
 19398 \DeclareTextCommand{\textbackneg}{PU}{\9043\020}%* U+2310
 19399 % U+2311 SQUARE LOZENGE; \wasylozenge (wasysym)
 19400 \DeclareTextCommand{\textwasylozenge}{PU}{\9043\021}%* U+2311
 19401 % U+2319 TURNED NOT SIGN; \invbackneg (MnSymbol)
 19402 \DeclareTextCommand{\textinvbackneg}{PU}{\9043\031}%* U+2319
 19403 % U+231A WATCH; \clock (wasysym)
 19404 \DeclareTextCommand{\textclock}{PU}{\9043\032}%* U+231A
 19405 %* \textclock -> \Clocklogo (marvosym)
 19406 %* \textclock -> \ClockLogo (marvosym)
 19407 % U+231C TOP LEFT CORNER; \ulcorner (AmS)
 19408 \DeclareTextCommand{\textulcorner}{PU}{\9043\034}%* U+231C
 19409 % U+231D TOP RIGHT CORNER; \urcorner (AmS)
 19410 \DeclareTextCommand{\texturcorner}{PU}{\9043\035}%* U+231D
 19411 % U+231E BOTTOM LEFT CORNER; \llcorner (AmS)
 19412 \DeclareTextCommand{\textllcorner}{PU}{\9043\036}%* U+231E
 19413 % U+231F BOTTOM RIGHT CORNER; \lrcorner (AmS)
 19414 \DeclareTextCommand{\textlrcorner}{PU}{\9043\037}%* U+231F
 19415 % U+2322 FROWN; \frown (LaTeX)
 19416 \DeclareTextCommand{\textfrown}{PU}{\9043\042}%* U+2322
 19417 % U+2323 SMILE; \smile (LaTeX)
 19418 \DeclareTextCommand{\textsmile}{PU}{\9043\043}%* U+2323
 19419 % U+2328 KEYBOARD; \Keyboard (marvosym)
 19420 \DeclareTextCommand{\textKeyboard}{PU}{\9043\050}%* U+2328
 19421 % U+2329 LEFT-POINTING ANGLE BRACKET; \angleleft; \angle (LaTeX)
 19422 \DeclareTextCommand{\textlangle}{PU}{\9043\051}%* U+2329
 19423 % U+232A RIGHT-POINTING ANGLE BRACKET; \angleright; \angle (LaTeX)
 19424 \DeclareTextCommand{\textrangle}{PU}{\9043\052}%* U+232A
 19425 % U+2339 APL FUNCTIONAL SYMBOL QUAD DIVIDE; \APLinv (wasysym)
 19426 \DeclareTextCommand{\textAPLinv}{PU}{\9043\071}%* U+2339
 19427 % U+233C APL FUNCTIONAL SYMBOL QUAD CIRCLE; \Tumbler (marvosym)
 19428 \DeclareTextCommand{\textTumbler}{PU}{\9043\074}%* U+233C
 19429 % U+233D APL FUNCTIONAL SYMBOL CIRCLE STILE; \baro (stmaryrd)
 19430 \DeclareTextCommand{\textstmaryrdbaro}{PU}{\9043\075}%* U+233D
 19431 %* \textstmaryrdbaro -> \baro (stmaryrd)
 19432 % U+233F APL FUNCTIONAL SYMBOL SLASH BAR; \notslash (wasysym)
 19433 \DeclareTextCommand{\textnotslash}{PU}{\9043\077}%* U+233F
 19434 % U+2340 APL FUNCTIONAL SYMBOL BACKSLASH BAR;
 19435 % \notbackslash (wasysym)
 19436 \DeclareTextCommand{\textnotbackslash}{PU}{\9043\100}%* U+2340
 19437 % U+2342 APL FUNCTIONAL SYMBOL QUAD BACKSLASH; \boxbackslash (mathabx)
 19438 \DeclareTextCommand{\textboxbackslash}{PU}{\9043\102}%* U+2342
 19439 % U+2347 APL FUNCTIONAL SYMBOL QUAD LEFTWARDS ARROW;
 19440 % \APLleftarrowbox (wasysym)
 19441 \DeclareTextCommand{\textAPLleftarrowbox}{PU}{\9043\107}%* U+2347

19442 % U+2348 APL FUNCTIONAL SYMBOL QUAD RIGHTWARDS ARROW;
 19443 % \APLrightarrowbox (wasysym)
 19444 \DeclareTextCommand{\textAPLrightarrowbox}{PU}{\9043\110}%* U+2348
 19445 % U+2350 APL FUNCTIONAL SYMBOL QUAD UPWARDS ARROW; \APLuparrowbox (wasysym)
 19446 \DeclareTextCommand{\textAPLuparrowbox}{PU}{\9043\120}%* U+2350
 19447 % U+2357 APL FUNCTIONAL SYMBOL QUAD DOWNWARDS ARROW;
 19448 % \APLdownarrowbox (wasysym)
 19449 \DeclareTextCommand{\textAPLdownarrowbox}{PU}{\9043\127}%* U+2357
 19450 % U+235E APL FUNCTIONAL SYMBOL QUOTE QUAD;
 19451 % \APLinput (wasysym)
 19452 \DeclareTextCommand{\textAPLinput}{PU}{\9043\136}%* U+235E
 19453 % U+2370 APL FUNCTIONAL SYMBOL QUAD QUESTION; \Request (china2e)
 19454 \DeclareTextCommand{\textRequest}{PU}{\9043\160}%* U+2370
 19455 % U+2393 DIRECT CURRENT SYMBOL FORM TWO; \Beam (marvosym)
 19456 \DeclareTextCommand{\textBeam}{PU}{\9043\223}%* U+2393
 19457 % U+2394 SOFTWARE-FUNCTION SYMBOL; \hexagon (wasysym)
 19458 \DeclareTextCommand{\texthexagon}{PU}{\9043\224}%* U+2394
 19459 % U+2395 APL FUNCTIONAL SYMBOL QUAD; \APLbox (wasysym)
 19460 \DeclareTextCommand{\textAPLbox}{PU}{\9043\225}%* U+2395
 19461 % U+23ED BLACK RIGHT-POINTING DOUBLE TRIANGLE WITH VERTICAL BAR;
 19462 % \ForwardToIndex (marvosym)
 19463 \DeclareTextCommand{\textForwardToIndex}{PU}{\9043\355}%* U+23ED
 19464 % U+23EE BLACK LEFT-POINTING DOUBLE TRIANGLE WITH VERTICAL BAR;
 19465 % \RewindToIndex (marvosym)
 19466 \DeclareTextCommand{\textRewindToIndex}{PU}{\9043\356}%* U+23EE

51.2.24 Control Pictures: U+2400 to U+243F

19467 % U+2422 BLANK SYMBOL
 19468 \DeclareTextCommand{\textblank}{PU}{\9044\042}% U+2422
 19469 % U+2423 OPEN BOX; blank
 19470 \DeclareTextCommand{\textvisiblespace}{PU}{\9044\043}% U+2423

51.2.25 Optical Character Recognition: U+2440 to U+245F

19471 % U+244A OCR DOUBLE BACKSLASH; \bbslash (stmaryrd)
 19472 \DeclareTextCommand{\textbbslash}{PU}{\9044\112}%* U+244A
 19473 %* \textbbslash -> \varparallelinv (txfonts/pxfonts)

51.2.26 Enclosed Alphanumerics: U+2460 to U+24FF

19474 % U+2460 CIRCLED DIGIT ONE; onecircle
 19475 \DeclareTextCompositeCommand{\textcircled}{PU}{1}{\9044\140}% U+2460
 19476 % U+2461 CIRCLED DIGIT TWO; twocircle
 19477 \DeclareTextCompositeCommand{\textcircled}{PU}{2}{\9044\141}% U+2461
 19478 % U+2462 CIRCLED DIGIT THREE; threecircle
 19479 \DeclareTextCompositeCommand{\textcircled}{PU}{3}{\9044\142}% U+2462
 19480 % U+2463 CIRCLED DIGIT FOUR; fourcircle
 19481 \DeclareTextCompositeCommand{\textcircled}{PU}{4}{\9044\143}% U+2463
 19482 % U+2464 CIRCLED DIGIT FIVE; fivecircle
 19483 \DeclareTextCompositeCommand{\textcircled}{PU}{5}{\9044\144}% U+2464
 19484 % U+2465 CIRCLED DIGIT SIX; sixcircle
 19485 \DeclareTextCompositeCommand{\textcircled}{PU}{6}{\9044\145}% U+2465
 19486 % U+2466 CIRCLED DIGIT SEVEN; sevenscircle
 19487 \DeclareTextCompositeCommand{\textcircled}{PU}{7}{\9044\146}% U+2466
 19488 % U+2467 CIRCLED DIGIT EIGHT; eightcircle
 19489 \DeclareTextCompositeCommand{\textcircled}{PU}{8}{\9044\147}% U+2467

19490 % U+2468 CIRCLED DIGIT NINE; ninecircle
 19491 \DeclareTextCompositeCommand{\textcircled}{PU}{9}{\9044\150}% U+2468
 19492 % U+2469 CIRCLED NUMBER TEN; tencircle
 19493 \DeclareTextCompositeCommand{\textcircled}{PU}{10}{\9044\151}% U+2469
 19494 % U+246A CIRCLED NUMBER ELEVEN; elevencircle
 19495 \DeclareTextCompositeCommand{\textcircled}{PU}{11}{\9044\152}% U+246A
 19496 % U+246B CIRCLED NUMBER TWELVE; twelvecircle
 19497 \DeclareTextCompositeCommand{\textcircled}{PU}{12}{\9044\153}% U+246B
 19498 % U+246C CIRCLED NUMBER THIRTEEN; thirteencircle
 19499 \DeclareTextCompositeCommand{\textcircled}{PU}{13}{\9044\154}% U+246C
 19500 % U+246D CIRCLED NUMBER FOURTEEN; fourteencircle
 19501 \DeclareTextCompositeCommand{\textcircled}{PU}{14}{\9044\155}% U+246D
 19502 % U+246E CIRCLED NUMBER FIFTEEN; fifteencircle
 19503 \DeclareTextCompositeCommand{\textcircled}{PU}{15}{\9044\156}% U+246E
 19504 % U+246F CIRCLED NUMBER SIXTEEN; sixteencircle
 19505 \DeclareTextCompositeCommand{\textcircled}{PU}{16}{\9044\157}% U+246F
 19506 % U+2470 CIRCLED NUMBER SEVENTEEN; seventeencircle
 19507 \DeclareTextCompositeCommand{\textcircled}{PU}{17}{\9044\160}% U+2470
 19508 % U+2471 CIRCLED NUMBER EIGHTEEN; eighteencircle
 19509 \DeclareTextCompositeCommand{\textcircled}{PU}{18}{\9044\161}% U+2471
 19510 % U+2472 CIRCLED NUMBER NINETEEN; nineteencircle
 19511 \DeclareTextCompositeCommand{\textcircled}{PU}{19}{\9044\162}% U+2472
 19512 % U+2473 CIRCLED NUMBER TWENTY; twentycircle
 19513 \DeclareTextCompositeCommand{\textcircled}{PU}{20}{\9044\163}% U+2473
 19514 % U+24B6 CIRCLED LATIN CAPITAL LETTER A; Acircle
 19515 \DeclareTextCompositeCommand{\textcircled}{PU}{A}{\9044\266}% U+24B6
 19516 % \CircledA (marvosym)
 19517 \DeclareTextCommand{\textCircledA}{PU}{\9044\266}%* U+24B6
 19518 %* \textCircledA -> \CleaningA
 19519 % U+24B7 CIRCLED LATIN CAPITAL LETTER B; Bcircle
 19520 \DeclareTextCompositeCommand{\textcircled}{PU}{B}{\9044\267}% U+24B7
 19521 % U+24B8 CIRCLED LATIN CAPITAL LETTER C; Ccircle
 19522 \DeclareTextCompositeCommand{\textcircled}{PU}{C}{\9044\270}% U+24B8
 19523 % U+24B9 CIRCLED LATIN CAPITAL LETTER D; Dcircle
 19524 \DeclareTextCompositeCommand{\textcircled}{PU}{D}{\9044\271}% U+24B9
 19525 % U+24BA CIRCLED LATIN CAPITAL LETTER E; Ecircle
 19526 \DeclareTextCompositeCommand{\textcircled}{PU}{E}{\9044\272}% U+24BA
 19527 % U+24BB CIRCLED LATIN CAPITAL LETTER F; Fcircle
 19528 \DeclareTextCompositeCommand{\textcircled}{PU}{F}{\9044\273}% U+24BB
 19529 % \CleaningF (marvosym)
 19530 \DeclareTextCommand{\textCleaningF}{PU}{\9044\273}%* U+24BB
 19531 % \CleaningFF (marvosym)
 19532 \DeclareTextCommand{\textCleaningFF}{PU}{\9044\273\83\062}%* U+24BB U+0332
 19533 % U+24BC CIRCLED LATIN CAPITAL LETTER G; Gcircle
 19534 \DeclareTextCompositeCommand{\textcircled}{PU}{G}{\9044\274}% U+24BC
 19535 % U+24BD CIRCLED LATIN CAPITAL LETTER H; Hcircle
 19536 \DeclareTextCompositeCommand{\textcircled}{PU}{H}{\9044\275}% U+24BD
 19537 % U+24BE CIRCLED LATIN CAPITAL LETTER I; Icircle
 19538 \DeclareTextCompositeCommand{\textcircled}{PU}{I}{\9044\276}% U+24BE
 19539 % U+24BF CIRCLED LATIN CAPITAL LETTER J; Jcircle
 19540 \DeclareTextCompositeCommand{\textcircled}{PU}{J}{\9044\277}% U+24BF
 19541 % U+24C0 CIRCLED LATIN CAPITAL LETTER K; Kcircle
 19542 \DeclareTextCompositeCommand{\textcircled}{PU}{K}{\9044\300}% U+24C0
 19543 % U+24C1 CIRCLED LATIN CAPITAL LETTER L; Lcircle
 19544 \DeclareTextCompositeCommand{\textcircled}{PU}{L}{\9044\301}% U+24C1
 19545 % U+24C2 CIRCLED LATIN CAPITAL LETTER M; Mcircle
 19546 \DeclareTextCompositeCommand{\textcircled}{PU}{M}{\9044\302}% U+24C2

19547 % U+24C3 CIRCLED LATIN CAPITAL LETTER N; Ncircle
 19548 \DeclareTextCompositeCommand{\textcircled}{PU}{N}{\9044\303}% U+24C3
 19549 % U+24C4 CIRCLED LATIN CAPITAL LETTER O; Ocircle
 19550 \DeclareTextCompositeCommand{\textcircled}{PU}{O}{\9044\304}% U+24C4
 19551 % U+24C5 CIRCLED LATIN CAPITAL LETTER P; Pcircle
 19552 \DeclareTextCompositeCommand{\textcircled}{PU}{P}{\9044\305}% U+24C5
 19553 % \CleaningP (marvosym)
 19554 \DeclareTextCommand{\textCleaningP}{PU}{\9044\305}%* U+24C5
 19555 % \CleaningPP (marvosym)
 19556 \DeclareTextCommand{\textCleaningPP}{PU}{\9044\305\83\062}%* U+24C5 U+0332
 19557 % U+24C6 CIRCLED LATIN CAPITAL LETTER Q; Qcircle
 19558 \DeclareTextCompositeCommand{\textcircled}{PU}{Q}{\9044\306}% U+24C6
 19559 % U+24C7 CIRCLED LATIN CAPITAL LETTER R; Rcircle
 19560 \DeclareTextCompositeCommand{\textcircled}{PU}{R}{\9044\307}% U+24C7
 19561 % U+24C8 CIRCLED LATIN CAPITAL LETTER S; Scircle
 19562 \DeclareTextCompositeCommand{\textcircled}{PU}{S}{\9044\310}% U+24C8
 19563 % U+24C9 CIRCLED LATIN CAPITAL LETTER T; Tcircle
 19564 \DeclareTextCompositeCommand{\textcircled}{PU}{T}{\9044\311}% U+24C9
 19565 % U+24CA CIRCLED LATIN CAPITAL LETTER U; Ucircle
 19566 \DeclareTextCompositeCommand{\textcircled}{PU}{U}{\9044\312}% U+24CA
 19567 % U+24CB CIRCLED LATIN CAPITAL LETTER V; Vcircle
 19568 \DeclareTextCompositeCommand{\textcircled}{PU}{V}{\9044\313}% U+24CB
 19569 % U+24CC CIRCLED LATIN CAPITAL LETTER W; Wcircle
 19570 \DeclareTextCompositeCommand{\textcircled}{PU}{W}{\9044\314}% U+24CC
 19571 % U+24CD CIRCLED LATIN CAPITAL LETTER X; Xcircle
 19572 \DeclareTextCompositeCommand{\textcircled}{PU}{X}{\9044\315}% U+24CD
 19573 % U+24CE CIRCLED LATIN CAPITAL LETTER Y; Ycircle
 19574 \DeclareTextCompositeCommand{\textcircled}{PU}{Y}{\9044\316}% U+24CE
 19575 % U+24CF CIRCLED LATIN CAPITAL LETTER Z; Zcircle
 19576 \DeclareTextCompositeCommand{\textcircled}{PU}{Z}{\9044\317}% U+24CF
 19577 % U+24D0 CIRCLED LATIN SMALL LETTER A; acircle
 19578 \DeclareTextCompositeCommand{\textcircled}{PU}{a}{\9044\320}% U+24D0
 19579 % U+24D1 CIRCLED LATIN SMALL LETTER B; bcircle
 19580 \DeclareTextCompositeCommand{\textcircled}{PU}{b}{\9044\321}% U+24D1
 19581 % U+24D2 CIRCLED LATIN SMALL LETTER C; ccircle
 19582 \DeclareTextCompositeCommand{\textcircled}{PU}{c}{\9044\322}% U+24D2
 19583 % U+24D3 CIRCLED LATIN SMALL LETTER D; dcircle
 19584 \DeclareTextCompositeCommand{\textcircled}{PU}{d}{\9044\323}% U+24D3
 19585 % U+24D4 CIRCLED LATIN SMALL LETTER E; ecircle
 19586 \DeclareTextCompositeCommand{\textcircled}{PU}{e}{\9044\324}% U+24D4
 19587 % U+24D5 CIRCLED LATIN SMALL LETTER F; fcircle
 19588 \DeclareTextCompositeCommand{\textcircled}{PU}{f}{\9044\325}% U+24D5
 19589 % U+24D6 CIRCLED LATIN SMALL LETTER G; gcircle
 19590 \DeclareTextCompositeCommand{\textcircled}{PU}{g}{\9044\326}% U+24D6
 19591 % U+24D7 CIRCLED LATIN SMALL LETTER H; hcircle
 19592 \DeclareTextCompositeCommand{\textcircled}{PU}{h}{\9044\327}% U+24D7
 19593 % U+24D8 CIRCLED LATIN SMALL LETTER I; icircle
 19594 \DeclareTextCompositeCommand{\textcircled}{PU}{i}{\9044\330}% U+24D8
 19595 % U+24D9 CIRCLED LATIN SMALL LETTER J; jcircle
 19596 \DeclareTextCompositeCommand{\textcircled}{PU}{j}{\9044\331}% U+24D9
 19597 % U+24DA CIRCLED LATIN SMALL LETTER K; kcircle
 19598 \DeclareTextCompositeCommand{\textcircled}{PU}{k}{\9044\332}% U+24DA
 19599 % U+24DB CIRCLED LATIN SMALL LETTER L; lcircle
 19600 \DeclareTextCompositeCommand{\textcircled}{PU}{l}{\9044\333}% U+24DB
 19601 % U+24DC CIRCLED LATIN SMALL LETTER M; mcircle
 19602 \DeclareTextCompositeCommand{\textcircled}{PU}{m}{\9044\334}% U+24DC
 19603 % U+24DD CIRCLED LATIN SMALL LETTER N; ncircle

19604 \DeclareTextCompositeCommand{\textcircled}{PU}{n}{\9044\335}% U+24DD
 19605 % U+24DE CIRCLED LATIN SMALL LETTER O; ocircle
 19606 \DeclareTextCompositeCommand{\textcircled}{PU}{o}{\9044\336}% U+24DE
 19607 % U+24DF CIRCLED LATIN SMALL LETTER P; pcircle
 19608 \DeclareTextCompositeCommand{\textcircled}{PU}{p}{\9044\337}% U+24DF
 19609 % U+24E0 CIRCLED LATIN SMALL LETTER Q; qcircle
 19610 \DeclareTextCompositeCommand{\textcircled}{PU}{q}{\9044\340}% U+24E0
 19611 % U+24E1 CIRCLED LATIN SMALL LETTER R; rcircle
 19612 \DeclareTextCompositeCommand{\textcircled}{PU}{r}{\9044\341}% U+24E1
 19613 % U+24E2 CIRCLED LATIN SMALL LETTER S; scircle
 19614 \DeclareTextCompositeCommand{\textcircled}{PU}{s}{\9044\342}% U+24E2
 19615 % U+24E3 CIRCLED LATIN SMALL LETTER T; tcircle
 19616 \DeclareTextCompositeCommand{\textcircled}{PU}{t}{\9044\343}% U+24E3
 19617 % U+24E4 CIRCLED LATIN SMALL LETTER U; ucircle
 19618 \DeclareTextCompositeCommand{\textcircled}{PU}{u}{\9044\344}% U+24E4
 19619 % U+24E5 CIRCLED LATIN SMALL LETTER V; vcircle
 19620 \DeclareTextCompositeCommand{\textcircled}{PU}{v}{\9044\345}% U+24E5
 19621 % U+24E6 CIRCLED LATIN SMALL LETTER W; wcircle
 19622 \DeclareTextCompositeCommand{\textcircled}{PU}{w}{\9044\346}% U+24E6
 19623 % U+24E7 CIRCLED LATIN SMALL LETTER X; xcircle
 19624 \DeclareTextCompositeCommand{\textcircled}{PU}{x}{\9044\347}% U+24E7
 19625 % U+24E8 CIRCLED LATIN SMALL LETTER Y; ycircle
 19626 \DeclareTextCompositeCommand{\textcircled}{PU}{y}{\9044\350}% U+24E8
 19627 % U+24E9 CIRCLED LATIN SMALL LETTER Z; zcircle
 19628 \DeclareTextCompositeCommand{\textcircled}{PU}{z}{\9044\351}% U+24E9
 19629 % U+24EA CIRCLED DIGIT ZERO
 19630 \DeclareTextCompositeCommand{\textcircled}{PU}{0}{\9044\352}% U+24EA

51.2.27 Box Drawing: U+2500 to 257F

19631 % U+2504 BOX DRAWINGS LIGHT TRIPLE DASH HORIZONTAL; \Cutting-
 Line (marvosym)
 19632 \DeclareTextCommand{\textCuttingLine}{PU}{\9045\004}%* U+2504
 19633 %* \textCuttingLine -> \Kutline (marvosym)
 19634 %* \textCuttingLine -> \CutLine (marvosym)
 19635 %* \textCuttingLine -> \Cutline (marvosym)

51.2.28 Geometric Shapes: U+25A0 to U+25FF

19636 % U+25B2 BLACK UP-POINTING TRIANGLE; \UParrow (wasysym)
 19637 \DeclareTextCommand{\textUParrow}{PU}{\9045\262}%* U+25B2
 19638 %* \textUParrow -> \MoveUp (marvosym)
 19639 % U+25B3 WHITE UP-POINTING TRIANGLE; whiteuppointingtriangle;
 19640 % \bigtriangleup (LaTeX)
 19641 \DeclareTextCommand{\textbigtriangleup}{PU}{\9045\263}%* U+25B3
 19642 %* \textbigtriangleup -> \APLup (wasysym)
 19643 %* \textbigtriangleup -> \Bleech (marvosym)
 19644 % U+25B6 BLACK RIGHT-POINTING TRIANGLE; \Forward (marvosym)
 19645 \DeclareTextCommand{\textForward}{PU}{\9045\266}%* U+25B6
 19646 % U+25B7 WHITE RIGHT-POINTING TRIANGLE (= z notation range restric-
 tion);
 19647 % whiterightpointingtriangle; \triangleright (LaTeX)
 19648 \DeclareTextCommand{\texttriangleright}{PU}{\9045\267}%* U+25B7
 19649 % U+25BA BLACK RIGHT-POINTING POINTER; \RHD (wasysym)
 19650 \DeclareTextCommand{\textRHD}{PU}{\9045\272}%* U+25BA
 19651 % U+25BC BLACK DOWN-POINTING TRIANGLE; \DOWNarrow (wasysym)
 19652 \DeclareTextCommand{\textDOWNarrow}{PU}{\9045\274}%* U+25BC
 19653 %* \textDOWNarrow -> \MoveDown (marvosym)
 19654 % U+25BD WHITE DOWN-POINTING TRIANGLE; whitedownpointingtrian-


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        gle;
19655 % \bigtriangledown (LaTeX)
19656 \DeclareTextCommand{\textbigtriangledown}{PU}{\9045\275}%* U+25BD
19657 %* \textbigtriangledown -> \APLdown (wasysym)
19658 % U+25C0 BLACK LEFT-POINTING TRIANGLE; \Rewind (marvosym)
19659 \DeclareTextCommand{\textRewind}{PU}{\9045\300}%* U+25C0
19660 % U+25C1 WHITE RIGHT-POINTING TRIANGLE (= z notation domain re-
restriction);
19661 % \whiteleftpointingtriangle; \triangleleft (LaTeX)
19662 \DeclareTextCommand{\texttriangleleft}{PU}{\9045\301}%* U+25C1
19663 % U+25C4 BLACK LEFT-POINTING POINTER; \LHD (wasysym)
19664 \DeclareTextCommand{\textLHD}{PU}{\9045\304}%* U+25C4
19665 % U+25C7 WHITE DIAMOND; \whitediamond; \diamond (LaTeX)
19666 \DeclareTextCommand{\textdiamond}{PU}{\9045\307}%* U+25C7
19667 %* \textdiamond -> \Diamond (wasysym)
19668 % U+25CA LOZENGE; \lozenge; \lozenge (AmS)
19669 \DeclareTextCommand{\textlozenge}{PU}{\9045\312}%* U+25CA
19670 % U+25D6 LEFT HALF BLACK CIRCLE; \LEFTCIRCLE (wasysym)
19671 \DeclareTextCommand{\textLEFTCIRCLE}{PU}{\9045\326}%* U+25D6
19672 % U+25D7 RIGHT HALF BLACK CIRCLE; \RIGHTCIRCLE (wasysym)
19673 \DeclareTextCommand{\textRIGHTCIRCLE}{PU}{\9045\327}%* U+25D7
19674 % U+25E6 WHITE BULLET; *openbullet, \whitebullet
19675 \DeclareTextCommand{\textopenbullet}{PU}{\9045\346}%* U+25E6
19676 % U+25EB WHITE SQUARE WITH VERTICAL BISECTING LINE;
19677 % \boxbar (stmaryrd)
19678 \DeclareTextCommand{\textboxbar}{PU}{\9045\353}%* U+25EB
19679 % U+25EF LARGE CIRCLE; \largecircle
19680 \DeclareTextCommand{\textbigcircle}{PU}{\9045\357}%* U+25EF
19681 %* \textbigcircle -> \varbigcirc (stmaryrd)
19682 %

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51.2.29 Miscellaneous Symbols: U+2600 to U+26FF

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19683 % U+2601 CLOUD; \Cloud (ifsym)
19684 \DeclareTextCommand{\textCloud}{PU}{\9046\001}%* U+2601
19685 % U+2605 BLACK STAR; \FiveStar (bding)
19686 \DeclareTextCommand{\textFiveStar}{PU}{\9046\005}%* U+2605
19687 % U+2606 WHITE STAR; \FiveStarOpen (bding)
19688 \DeclareTextCommand{\textFiveStarOpen}{PU}{\9046\006}%* U+2606
19689 % U+260E BLACK TELEPHONE; \telephoneblack; \Phone (bding)
19690 \DeclareTextCommand{\textPhone}{PU}{\9046\016}%* U+260E
19691 %* \textPhone -> \Telefon (marvosym)
19692 % U+2610 BALLOT BOX; \boxempty (stmaryrd)
19693 \DeclareTextCommand{\textboxempty}{PU}{\9046\020}%* U+2610
19694 %* \textboxempty -> \Box (wasysym)
19695 % U+2611 BALLOT BOX WITH CHECK; \Checkedbox (marvosym)
19696 \DeclareTextCommand{\textCheckedbox}{PU}{\9046\021}%* U+2611
19697 %* \textCheckedbox -> \CheckedBox (marvosym)
19698 % U+2612 BALLOT BOX WITH X; \Crossedbox (marvosym)
19699 \DeclareTextCommand{\textCrossedbox}{PU}{\9046\022}%* U+2612
19700 %* \textCrossedbox -> \XBox (wasysym)
19701 %* \textCrossedbox -> \CrossedBox (marvosym)
19702 % U+2615 HOT BEVERAGE; \Coffeecup (marvosym)
19703 \DeclareTextCommand{\textCoffeecup}{PU}{\9046\025}%* U+2615
19704 % U+261A BLACK LEFT POINTING INDEX; \HandCuffLeft (bding)
19705 \DeclareTextCommand{\textHandCuffLeft}{PU}{\9046\032}%* U+261A
19706 % U+261B BLACK RIGHT POINTING INDEX; \HandCuffRight (bding)
19707 \DeclareTextCommand{\textHandCuffRight}{PU}{\9046\033}%* U+261B

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19708 % U+261C WHITE LEFT POINTING INDEX; \HandLeft (bbding)
19709 \DeclareTextCommand{\textHandLeft}{PU}{\9046\034}%* U+261C
19710 %* \textHandLeft -> \rightpointleft (fourier)
19711 % U+261E WHITE RIGHT POINTING INDEX; \HandRight (bbding)
19712 \DeclareTextCommand{\textHandRight}{PU}{\9046\036}%* U+261E
19713 %* \textHandRight -> \leftpointright (fourier)
19714 %* \textHandRight -> \PointingHand (marvosym)
19715 %* \textHandRight -> \Pointinghand (marvosym)
19716 % U+2622 RADIOACTIVE SIGN; \Radioactivity (marvosym)
19717 \DeclareTextCommand{\textRadioactivity}{PU}{\9046\042}%* U+2622
19718 %* \textRadioactivity -> \Radiation (ifsym)
19719 % U+2623 BIOHAZARD SIGN; \Biohazard (marvosym)
19720 \DeclareTextCommand{\textBiohazard}{PU}{\9046\043}%* U+2623
19721 % U+2625 ANKH; \Ankh (marvosym)
19722 \DeclareTextCommand{\textAnkh}{PU}{\9046\045}%* U+2625
19723 % U+262F YIN YANG; \YinYang (marvosym)
19724 \DeclareTextCommand{\textYinYang}{PU}{\9046\057}%* U+262F
19725 %* \textYinYang -> \Yinyang (marvosym)
19726 %* \textYinYang -> \YingYang (marvosym)
19727 %* \textYinYang -> \Yingyang (marvosym)
19728 % U+2639 WHITE FROWNING FACE; \frownie (wasysym)
19729 \DeclareTextCommand{\textfrownie}{PU}{\9046\071}%* U+2639
19730 %* \textfrownie -> \Frowny (marvosym)
19731 % U+263A WHITE SMILING FACE; \smiley (wasysym)
19732 \DeclareTextCommand{\textsmiley}{PU}{\9046\072}%* U+263A
19733 %* \textsmiley -> \Smiley (marvosym)
19734 % U+263B BLACK SMILING FACE; \blacksmiley (wasysym)
19735 \DeclareTextCommand{\textblacksmiley}{PU}{\9046\073}%* U+263B
19736 % U+263C WHITE SUN WITH RAYS; \sun (wasysym)
19737 \DeclareTextCommand{\textsun}{PU}{\9046\074}%* U+263C
19738 %* \textsun -> \Sun (marvosym)
19739 % U+263D FIRST QUARTER MOON; \leftmoon (wasysym, mathabx)
19740 \DeclareTextCommand{\textleftmoon}{PU}{\9046\075}%* U+263D
19741 % U+263E LAST QUARTER MOON; \rightmoon (wasysym, mathabx)
19742 \DeclareTextCommand{\textrightmoon}{PU}{\9046\076}%* U+263E
19743 % U+263F MERCURY; \mercury (wasysym)
19744 \DeclareTextCommand{\textmercury}{PU}{\9046\077}%* U+263F
19745 %* \textmercury -> \Mercury (marvosym)
19746 % U+2640 FEMALE SIGN; female; \female (wasysym)
19747 \DeclareTextCommand{\textPUfemale}{PU}{\9046\100}% U+2640
19748 %* \textPUfemale -> \textfemale (tipx)
19749 %* \textPUfemale -> \female (wasysym)
19750 %* \textPUfemale -> \venus (wasysym)
19751 %* \textPUfemale -> \Venus (marvosym)
19752 %* \textPUfemale -> \Female (marvosym)
19753 % U+2641 EARTH; \earth (wasysym)
19754 \DeclareTextCommand{\textearth}{PU}{\9046\101}%* U+2641
19755 %* \textearth -> \Earth (marvosym)
19756 % U+2642 MALE SIGN; male, mars; \male (wasysym)
19757 \DeclareTextCommand{\textmale}{PU}{\9046\102}%* U+2642
19758 %* \textmale -> \mars (wasysym)
19759 %* \textmale -> \Mars (marvosym)
19760 %* \textmale -> \Male (marvosym)
19761 % U+2643 JUPITER; \jupiter (wasysym)
19762 \DeclareTextCommand{\textjupiter}{PU}{\9046\103}%* U+2643
19763 %* \textjupiter -> \Jupiter (marvosym)
19764 % U+2644 SATURN; \saturn (wasysym)


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19765 \DeclareTextCommand{\textsaturn}{PU}{\9046\104}%* U+2644
19766 %* \textsaturn -> \Saturn (marvosym)
19767 % U+2645 URANUS; \uranus (wasysym)
19768 \DeclareTextCommand{\texturanus}{PU}{\9046\105}%* U+2645
19769 %* \texturanus -> \Uranus (marvosym)
19770 % U+2646 NEPTUNE; \neptune (wasysym)
19771 \DeclareTextCommand{\textneptune}{PU}{\9046\106}%* U+2646
19772 %* \textneptune -> \Neptune (marvosym)
19773 % U+2647 PLUTO; \pluto (wasysym)
19774 \DeclareTextCommand{\textpluto}{PU}{\9046\107}%* U+2647
19775 %* \textpluto -> \Pluto (marvosym)
19776 % U+2648 ARIES; \aries (wasysym)
19777 \DeclareTextCommand{\textaries}{PU}{\9046\110}%* U+2648
19778 %* \textaries -> \Aries (marvosym)
19779 % U+2649 TAURUS; \taurus (wasysym)
19780 \DeclareTextCommand{\texttaurus}{PU}{\9046\111}%* U+2649
19781 %* \texttaurus -> \Taurus (marvosym)
19782 % U+264A GEMINI; \gemini (wasysym)
19783 \DeclareTextCommand{\textgemini}{PU}{\9046\112}%* U+264A
19784 %* \textgemini -> \Gemini (marvosym)
19785 % U+264B CANCER; \cancer (wasysym)
19786 \DeclareTextCommand{\textcancer}{PU}{\9046\113}%* U+264B
19787 %* \textcancer -> \Cancer (marvosym)
19788 % U+264C LEO; \leo (wasysym)
19789 \DeclareTextCommand{\textleo}{PU}{\9046\114}%* U+264C
19790 %* \textleo -> \Leo (marvosym)
19791 % U+264D VIRGO; \virgo (wasysym)
19792 \DeclareTextCommand{\textvirgo}{PU}{\9046\115}%* U+264D
19793 %* \textvirgo -> \Virgo (marvosym)
19794 % U+264E LIBRA; \libra (wasysym)
19795 \DeclareTextCommand{\textlibra}{PU}{\9046\116}%* U+264E
19796 %* \textlibra -> \Libra (marvosym)
19797 % U+264F SCORPIO; \scorpio (wasysym)
19798 \DeclareTextCommand{\textscorpio}{PU}{\9046\117}%* U+264F
19799 %* \textscorpio -> \Scorpio (marvosym)
19800 % U+2650 SAGITTARIUS; \sagittarius (wasysym)
19801 \DeclareTextCommand{\textsagittarius}{PU}{\9046\120}%* U+2650
19802 %* \textsagittarius -> \Sagittarius (marvosym)
19803 % U+2651 CAPRICORN; \capricornus (wasysym)
19804 \DeclareTextCommand{\textcapricornus}{PU}{\9046\121}%* U+2651
19805 %* \textcapricornus -> \Capricorn (marvosym)
19806 % U+2652 AQUARIUS; \aquarius (wasysym)
19807 \DeclareTextCommand{\textaquarius}{PU}{\9046\122}%* U+2652
19808 %* \textaquarius -> \Aquarius (marvosym)
19809 % U+2653 PISCES; \pisces (wasysym)
19810 \DeclareTextCommand{\textpisces}{PU}{\9046\123}%* U+2653
19811 %* \textpisces -> \Pisces (marvosym)
19812 % U+2660 BLACK SPADE SUIT; spade, spadesuitblack; \spadesuit (LaTeX)
19813 \DeclareTextCommand{\textspadesuitblack}{PU}{\9046\140}% U+2660
19814 %* \textspadesuitblack -> \spadesuit (MnSymbol)
19815 % U+2661 WHITE HEART SUIT; heartsuitwhite; \heartsuit (LaTeX)
19816 \DeclareTextCommand{\textheartsuitwhite}{PU}{\9046\141}% U+2661
19817 %* \textheartsuitwhite -> \Heart (marvosym)
19818 %* \textheartsuitwhite -> \heartsuit (MnSymbol)
19819 % U+2662 WHITE DIAMOND SUIT; diamondsuitwhite; \diamondsuit (LaTeX)
19820 \DeclareTextCommand{\textdiamondsuitwhite}{PU}{\9046\142}% U+2662
19821 %* \textdiamondsuitwhite -> \diamondsuit (MnSymbol)

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19822 % U+2663 BLACK CLUB SUIT; club, clubsuitblack; \clubsuit (LaTeX)
 19823 \DeclareTextCommand{\textclubsuitblack}{PU}{\9046\143}% U+2663
 19824 %* \textclubsuitblack -> \clubsuit (MnSymbol)
 19825 % U+2664 WHITE SPADE SUIT; spadesuitwhite
 19826 \DeclareTextCommand{\textspadesuitwhite}{PU}{\9046\144}% U+2664
 19827 % U+2665 BLACK HEART SUIT; heartsuitblack, heart
 19828 \DeclareTextCommand{\textheartsuitblack}{PU}{\9046\145}% U+2665
 19829 % U+2666 BLACK DIAMOND SUIT; diamond
 19830 \DeclareTextCommand{\textdiamondsuitblack}{PU}{\9046\146}% U+2666
 19831 % U+2667 WHITE CLUB SUIT; clubsuitwhite
 19832 \DeclareTextCommand{\textclubsuitwhite}{PU}{\9046\147}% U+2667
 19833 % U+2669 QUARTER NOTE; quarternote; \quarternote (wasysym, arev)
 19834 \DeclareTextCommand{\textquarternote}{PU}{\9046\151}%* U+2669
 19835 % U+266A EIGHTH NOTE; musicalnote; \textmusicalnote (textcomp)
 19836 \DeclareTextCommand{\textmusicalnote}{PU}{\9046\152}% U+266A
 19837 %* \textmusicalnote -> \eighthnote (wasysym, arev)
 19838 % U+266B BEAMED EIGHTH NOTES; eighthnotebeamed; \twonotes (wasysym)
 19839 \DeclareTextCommand{\texttwonotes}{PU}{\9046\153}%* U+266B
 19840 % U+266C BEAMED SIXTEENTH NOTES; beamedsixteenthnotes; \sixteenth-
 note (arev)
 19841 \DeclareTextCommand{\textsixteenthnote}{PU}{\9046\154}%* U+266C
 19842 % U+266D MUSIC FLAT SIGN; musicflatsign; \flat (LaTeX)
 19843 \DeclareTextCommand{\textflat}{PU}{\9046\155}%* U+266D
 19844 % U+266E MUSIC NATURAL SIGN; \natural (LaTeX)
 19845 \DeclareTextCommand{\textnatural}{PU}{\9046\156}%* U+266E
 19846 % U+266F MUSIC SHARP SIGN; musicsharpsign; \sharp (LaTeX)
 19847 \DeclareTextCommand{\textsharp}{PU}{\9046\157}%* U+266F
 19848 % U+2672 UNIVERSAL RECYCLING SYMBOL; \recycle (recycle)
 19849 \DeclareTextCommand{\textrecycle}{PU}{\9046\162}%* U+2672
 19850 %* \textrecycle -> \Recycling (marvosym)
 19851 % U+267F WHEELCHAIR SYMBOL; \Wheelchair (marvosym)
 19852 \DeclareTextCommand{\textWheelchair}{PU}{\9046\177}%* U+267F
 19853 % U+2691 BLACK FLAG; \Flag (ifsym)
 19854 \DeclareTextCommand{\textFlag}{PU}{\9046\221}%* U+2691
 19855 %* \textFlag -> \VarFlag (ifsym)
 19856 % U+2692 HAMMER AND PICK; \MineSign (marvosym)
 19857 \DeclareTextCommand{\textMineSign}{PU}{\9046\222}%* U+2692
 19858 % U+2694 CROSSED SWORDS; \dsmilitary (dictsym)
 19859 \DeclareTextCommand{\textdsmilitary}{PU}{\9046\224}%* U+2694
 19860 %* \textdsmilitary -> \textxswup (fourier)
 19861 % U+2695 STAFF OF AESCULAPIUS; \dsmedical (dictsym)
 19862 \DeclareTextCommand{\textdsmedical}{PU}{\9046\225}%* U+2695
 19863 % U+2696 SCALES; \dsjuridical (dictsym)
 19864 \DeclareTextCommand{\textdsjuridical}{PU}{\9046\226}%* U+2696
 19865 % U+2697 ALEMBIC; \dschemical (dictsym)
 19866 \DeclareTextCommand{\textdschemical}{PU}{\9046\227}%* U+2697
 19867 % U+2698 FLOWER; \dsbiological (dictsym)
 19868 \DeclareTextCommand{\textdsbiological}{PU}{\9046\230}%* U+2698
 19869 % U+269A STAFF OF HERMES; \dscommercial (dictsym)
 19870 \DeclareTextCommand{\textdscommercial}{PU}{\9046\232}%* U+269A
 19871 % U+269D OUTLINED WHITE STAR; \manstar (manfnt)
 19872 \DeclareTextCommand{\textmanstar}{PU}{\9046\235}%* U+269D
 19873 % U+26A0 WARNING SIGN; \danger (fourier)
 19874 \DeclareTextCommand{\textdanger}{PU}{\9046\240}%* U+26A0
 19875 % U+26A2 DOUBLED FEMALE SIGN; \FemaleFemale (marvosym)
 19876 \DeclareTextCommand{\textFemaleFemale}{PU}{\9046\242}%* U+26A2
 19877 % U+26A3 DOUBLED MALE SIGN; \MaleMale (marvosym)

19878 \DeclareTextCommand{\textMaleMale}{PU}{\9046\243}%* U+26A3
 19879 % U+26A4 INTERLOCKED FEMALE AND MALE SIGN; \FemaleMale (marvosym)
 19880 \DeclareTextCommand{\textFemaleMale}{PU}{\9046\244}%* U+26A4
 19881 % U+26A5 MALE AND FEMALE SIGN; \Hermaphrodite (marvosym)
 19882 \DeclareTextCommand{\textHermaphrodite}{PU}{\9046\245}%* U+26A5
 19883 % U+26AA MEDIUM WHITE CIRCLE; \Neural (marvosym)
 19884 \DeclareTextCommand{\textNeutral}{PU}{\9046\252}%* U+26AA
 19885 % U+26AD MARRIAGE SYMBOL
 19886 \DeclareTextCommand{\textmarried}{PU}{\9046\255}% U+26AD
 19887 % U+26AE DIVORCE SYMBOL
 19888 \DeclareTextCommand{\textdivorced}{PU}{\9046\256}% U+26AE
 19889 % U+26B2 NEUTER; \textuncrfemale (tipx)
 19890 \DeclareTextCommand{\textPUuncrfemale}{PU}{\9046\262}% U+26B2
 19891 %* \textPUuncrfemale -> \textuncrfemale (tipx)
 19892 % U+26B9 SEXTILE; \hexstar (wasysym)
 19893 \DeclareTextCommand{\texthexstar}{PU}{\9046\271}%* U+26B9
 19894 % U+26BD SOCCER BALL; \Football (marvosym)
 19895 \DeclareTextCommand{\textSoccerBall}{PU}{\9046\275}% U+26BD
 19896 %* \textSoccerBall -> \Football (marvosym)
 19897 % U+26C5 SUN BEHIND CLOUD; \SunCloud (ifsym)
 19898 \DeclareTextCommand{\textSunCloud}{PU}{\9046\305}%* U+26C5
 19899 % U+26C6 RAIN; \Rain (ifsym)
 19900 \DeclareTextCommand{\textRain}{PU}{\9046\306}%* U+26C6
 19901 % U+26D4 NO ENTRY; \noway (fourier)
 19902 \DeclareTextCommand{\textnoway}{PU}{\9046\324}%* U+26D4
 19903 % U+26F0 MOUNTAIN; \Mountain (ifsym)
 19904 \DeclareTextCommand{\textMountain}{PU}{\9046\360}%* U+26F0
 19905 % U+26FA TENT; \Tent (ifsym)
 19906 \DeclareTextCommand{\textTent}{PU}{\9046\372}%* U+26FA

51.2.30 Dingbats: U+2700 to U+27BF

19907 % U+2701 UPPER BLADE SCISSORS; \ScissorRightBrokenBottom (bbding)
 19908 \DeclareTextCommand{\textScissorRightBrokenBottom}{PU}{\9047\001}% U+2701
 19909 %* \textScissorRightBrokenBottom -> \CutLeft (marvosym)
 19910 %* \textScissorRightBrokenBottom -> \Cutright (marvosym)
 19911 % U+2702 BLACK SCISSORS; \ScissorRight (bbding)
 19912 \DeclareTextCommand{\textScissorRight}{PU}{\9047\002}%* U+2702
 19913 %* \textScissorRight -> \RightScissors (marvosym)
 19914 %* \textScissorRight -> \Leftscissors (marvosym)
 19915 % U+2703 LOWER BLADE SCISSORS; \ScissorRightBrokenTop (bbding)
 19916 \DeclareTextCommand{\textScissorRightBrokenTop}{PU}{\9047\003}%* U+2703
 19917 % U+2704 WHITE SCISSORS; \ScissorHollowRight (bbding)
 19918 \DeclareTextCommand{\textScissorHollowRight}{PU}{\9047\004}%* U+2704
 19919 % U+2706 TELEPHONE LOCATION SIGN; \PhoneHandset (bbding)
 19920 \DeclareTextCommand{\textPhoneHandset}{PU}{\9047\006}%* U+2706
 19921 % U+2707 TAPE DRIVE; \Tape (bbding)
 19922 \DeclareTextCommand{\textTape}{PU}{\9047\007}%* U+2707
 19923 % U+2708 AIRPLANE; \Plane (bbding)
 19924 \DeclareTextCommand{\textPlane}{PU}{\9047\010}%* U+2708
 19925 % U+2709 ENVELOPE; \Envelope (bbding),
 19926 \DeclareTextCommand{\textEnvelope}{PU}{\9047\011}%* U+2709
 19927 %* \textEnvelope -> \Letter (marvosym)
 19928 % U+270C VICTORY HAND; \Peace (bbding)
 19929 \DeclareTextCommand{\textPeace}{PU}{\9047\014}%* U+270C
 19930 % U+270D WRITING HAND; \WritingHand (marvosym)
 19931 \DeclareTextCommand{\textWritingHand}{PU}{\9047\015}%* U+270D

19932 %* \textWritingHand -> \Writinghand (marvosym)
 19933 % U+270E LOWER RIGHT PENCIL; \PencilRightDown (bding)
 19934 \DeclareTextCommand{\textPencilRightDown}{PU}{\9047\016}%* U+270E
 19935 % U+270F PENCIL; \PencilRight (bding)
 19936 \DeclareTextCommand{\textPencilRight}{PU}{\9047\017}%* U+270F
 19937 % U+2710 UPPER RIGHT PENCIL; \PencilRightUp (bding)
 19938 \DeclareTextCommand{\textPencilRightUp}{PU}{\9047\020}%* U+2710
 19939 % U+2711 WHITE NIB; \NibRight (bding)
 19940 \DeclareTextCommand{\textNibRight}{PU}{\9047\021}%* U+2711
 19941 % U+2712 BLACK NIB; \NibSolidRight (bding)
 19942 \DeclareTextCommand{\textNibSolidRight}{PU}{\9047\022}%* U+2712
 19943 % U+2713 CHECK MARK; checkmark; \Checkmark (bding)
 19944 \DeclareTextCommand{\textCheckmark}{PU}{\9047\023}%* U+2713
 19945 %* \textCheckmark -> \checkmark (MnSymbol)
 19946 % U+2714 HEAVY CHECK MARK; \CheckmarkBold (bding)
 19947 \DeclareTextCommand{\textCheckmarkBold}{PU}{\9047\024}%* U+2714
 19948 % U+2715 MULTIPLICATION X; \XSolid (bding)
 19949 \DeclareTextCommand{\textXSolid}{PU}{\9047\025}%* U+2715
 19950 % U+2716 HEAVY MULTIPLICATION X; \XSolidBold (bding)
 19951 \DeclareTextCommand{\textXSolidBold}{PU}{\9047\026}%* U+2716
 19952 % U+2717 BALLOT X; \XSolidBrush (bding)
 19953 \DeclareTextCommand{\textXSolidBrush}{PU}{\9047\027}%* U+2717
 19954 % U+2719 OUTLINED GREEK CROSS; \PlusOutline (bding)
 19955 \DeclareTextCommand{\textPlusOutline}{PU}{\9047\031}%* U+2719
 19956 % U+271A HEAVY GREEK CROSS; \Plus (bding)
 19957 \DeclareTextCommand{\textPlus}{PU}{\9047\032}%* U+271A
 19958 % U+271B OPEN CENTRE CROSS; \PlusThinCenterOpen (bding)
 19959 \DeclareTextCommand{\textPlusThinCenterOpen}{PU}{\9047\033}%* U+271B
 19960 % U+271C HEAVY OPEN CENTRE CROSS; \PlusCenterOpen (bding)
 19961 \DeclareTextCommand{\textPlusCenterOpen}{PU}{\9047\034}%* U+271C
 19962 % U+271D LATIN CROSS; \Cross (bding)
 19963 \DeclareTextCommand{\textCross}{PU}{\9047\035}%* U+271D
 19964 % U+271E SHADOWED WHITE LATIN CROSS; \CrossOpenShadow (bding)
 19965 \DeclareTextCommand{\textCrossOpenShadow}{PU}{\9047\036}%* U+271E
 19966 % U+271F OUTLINED LATIN CROSS; \CrossOutline (bding)
 19967 \DeclareTextCommand{\textCrossOutline}{PU}{\9047\037}%* U+271F
 19968 % U+2720 MALTESE CROSS; \CrossMaltese (bding)
 19969 \DeclareTextCommand{\textCrossMaltese}{PU}{\9047\040}%* U+2720
 19970 % U+2721 STAR OF DAVID; \DavidStar (bding)
 19971 \DeclareTextCommand{\textDavidStar}{PU}{\9047\041}%* U+2721
 19972 %* \textDavidStar -> \davidstar (wasysym)
 19973 % U+2722 FOUR TEARDROP-SPOKED ASTERISK; \FourAsterisk (bding)
 19974 \DeclareTextCommand{\textFourAsterisk}{PU}{\9047\042}%* U+2722
 19975 % U+2723 FOUR BALLOON-SPOKED ASTERISK; \JackStar (bding)
 19976 \DeclareTextCommand{\textJackStar}{PU}{\9047\043}%* U+2723
 19977 % U+2724 HEAVY FOUR BALLOON-SPOKED ASTERISK; \JackStarBold (bding)
 19978 \DeclareTextCommand{\textJackStarBold}{PU}{\9047\044}%* U+2724
 19979 % U+2725 FOUR CLUB-SPOKED ASTERISK; \CrossClowerTips (bding)
 19980 \DeclareTextCommand{\textClowerTips}{PU}{\9047\045}%* U+2725
 19981 % U+2726 BLACK FOUR POINTED STAR; \FourStar (bding)
 19982 \DeclareTextCommand{\textFourStar}{PU}{\9047\046}%* U+2726
 19983 % U+2727 WHITE FOUR POINTED STAR; \FourStarOpen (bding)
 19984 \DeclareTextCommand{\textFourStarOpen}{PU}{\9047\047}%* U+2727
 19985 % U+272A CIRCLED WHITE STAR; \FiveStarOpenCircled (bding)
 19986 \DeclareTextCommand{\textFiveStarOpenCircled}{PU}{\9047\052}%* U+272A
 19987 % U+272B OPEN CENTRE BLACK STAR; \FiveStarCenterOpen (bding)

19988 \DeclareTextCommand{\textFiveStarCenterOpen}{PU}{\9047\053}%* U+272B
 19989 % U+272C BLACK CENTRE WHITE STAR; \FiveStarOpenDotted (bding)
 19990 \DeclareTextCommand{\textFiveStarOpenDotted}{PU}{\9047\054}%* U+272C
 19991 % U+272D OUTLINED BLACK STAR; \FiveStarOutline (bding)
 19992 \DeclareTextCommand{\textFiveStarOutline}{PU}{\9047\055}%* U+272D
 19993 % U+272E HEAVY OUTLINED BLACK STAR; \FiveStarOutlineHeavy (bding)
 19994 \DeclareTextCommand{\textFiveStarOutlineHeavy}{PU}{\9047\056}%* U+272E
 19995 % U+272F PINWHEEL STAR; \FiveStarConvex (bding)
 19996 \DeclareTextCommand{\textFiveStarConvex}{PU}{\9047\057}%* U+272F
 19997 % U+2730 SHADOWED WHITE STAR; \FiveStarShadow (bding)
 19998 \DeclareTextCommand{\textFiveStarShadow}{PU}{\9047\060}%* U+2730
 19999 % U+2731 HEAVY ASTERISK; \AsteriskBold (bding)
 20000 \DeclareTextCommand{\textAsteriskBold}{PU}{\9047\061}%* U+2731
 20001 % U+2732 OPEN CENTRE ASTERISK; \AsteriskCenterOpen (bding)
 20002 \DeclareTextCommand{\textAsteriskCenterOpen}{PU}{\9047\062}%* U+2732
 20003 % U+2734 EIGHT POINTED BLACK STAR; \EightStarTaper (bding)
 20004 \DeclareTextCommand{\textEightStarTaper}{PU}{\9047\064}%* U+2734
 20005 % U+2735 EIGHT POINTED PINWHEEL STAR; \EightStarConvex (bding)
 20006 \DeclareTextCommand{\textEightStarConvex}{PU}{\9047\065}%* U+2735
 20007 % U+2736 SIX POINTED BLACK STAR; \SixStar (bding)
 20008 \DeclareTextCommand{\textSixStar}{PU}{\9047\066}%* U+2736
 20009 % U+2737 EIGHT POINTED RECTILINEAR BLACK STAR; \EightStar (bding)
 20010 \DeclareTextCommand{\textEightStar}{PU}{\9047\067}%* U+2737
 20011 % U+2738 HEAVY EIGHT POINTED RECTILINEAR BLACK STAR; \EightStarBold (bding)
 20012 \DeclareTextCommand{\textEightStarBold}{PU}{\9047\070}%* U+2738
 20013 % U+2739 TWELVE POINTED BLACK STAR; \TwelveStar (bding)
 20014 \DeclareTextCommand{\textTwelveStar}{PU}{\9047\071}%* U+2739
 20015 % U+273A SIXTEEN POINTED ASTERISK; \SixteenStarLight (bding)
 20016 \DeclareTextCommand{\textSixteenStarLight}{PU}{\9047\072}%* U+273A
 20017 % U+273B TEARDROP-SPOKED ASTERISK; \SixFlowerPetalRemoved (bding)
 20018 \DeclareTextCommand{\textSixFlowerPetalRemoved}{PU}{\9047\073}%* U+273B
 20019 % U+273C OPEN CENTRE TEARDROP-SPOKED ASTERISK;
 20020 % \SixFlowerOpenCenter (bding)
 20021 \DeclareTextCommand{\textSixFlowerOpenCenter}{PU}{\9047\074}%* U+273C
 20022 % U+273D HEAVY TEARDROP-SPOKED ASTERISK; \Asterisk (bding)
 20023 \DeclareTextCommand{\textAsterisk}{PU}{\9047\075}%* U+273D
 20024 % U+273E SIX PETALLED BLACK AND WHITE FLORETTE; \SixFlowerAlternate (bding)
 20025 \DeclareTextCommand{\textSixFlowerAlternate}{PU}{\9047\076}%* U+273E
 20026 % U+273F BLACK FLORETTE; \FiveFlowerPetal (bding)
 20027 \DeclareTextCommand{\textFiveFlowerPetal}{PU}{\9047\077}%* U+273F
 20028 % U+2740 WHITE FLORETTE; \FiveFlowerOpen (bding)
 20029 \DeclareTextCommand{\textFiveFlowerOpen}{PU}{\9047\100}%* U+2740
 20030 % U+2741 EIGHT PETALLED OUTLINED BLACK FLORETTE; \EightFlowerPetal (bding)
 20031 \DeclareTextCommand{\textEightFlowerPetal}{PU}{\9047\101}%* U+2741
 20032 % U+2742 CIRCLED OPEN CENTRE EIGHT POINTED STAR; \SunshineOpenCircled (bding)
 20033 \DeclareTextCommand{\textSunshineOpenCircled}{PU}{\9047\102}%* U+2742
 20034 % U+2743 HEAVY TEARDROP-SPOKED PINWHEEL ASTERISK; \SixFlowerAltPetal (bding)
 20035 \DeclareTextCommand{\textSixFlowerAltPetal}{PU}{\9047\103}%* U+2743
 20036 % U+2744 SNOWFLAKE; \SnowflakeChevron (bding)
 20037 \DeclareTextCommand{\textSnowflakeChevron}{PU}{\9047\104}%* U+2744

20038 % U+2745 TIGHT TRIFOLIATE SNOWFLAKE; \Snowflake (bding)
 20039 \DeclareTextCommand{\textSnowflake}{PU}{\9047\105}%* U+2745
 20040 % U+2746 HEAVY CHEVRON SNOWFLAKE; \SnowflakeChevronBold (bding)
 20041 \DeclareTextCommand{\textSnowflakeChevronBold}{PU}{\9047\106}%* U+2746
 20042 % U+2747 SPARKLE; \Sparkle (bding)
 20043 \DeclareTextCommand{\textSparkle}{PU}{\9047\107}%* U+2747
 20044 % U+2748 HEAVY SPARKLE; \SparkleBold (bding)
 20045 \DeclareTextCommand{\textSparkleBold}{PU}{\9047\110}%* U+2748
 20046 % U+2749 BALLOON-SPOKED ASTERISK; \AsteriskRoundedEnds (bding)
 20047 \DeclareTextCommand{\textAsteriskRoundedEnds}{PU}{\9047\111}%* U+2749
 20048 % U+274A EIGHT TEARDROP-SPOKED PROPELLER ASTERISK;
 20049 % \EightFlowerPetalRemoved (bding)
 20050 \DeclareTextCommand{\textEightFlowerPetalRemoved}{PU}{\9047\112}%* U+274A
 20051 % U+274B HEAVY EIGHT TEARDROP-SPOKED PROPELLER ASTERISK;
 20052 % \EightAsterisk (bding)
 20053 \DeclareTextCommand{\textEightAsterisk}{PU}{\9047\113}%* U+274B
 20054 % U+274D SHADOWED WHITE CIRCLE; \CircleShadow (bding)
 20055 \DeclareTextCommand{\textCircleShadow}{PU}{\9047\115}%* U+274D
 20056 % U+274F LOWER RIGHT DROP-SHADOWED WHITE SQUARE;
 20057 % \SquareShadowBottomRight (bding)
 20058 \DeclareTextCommand{\textSquareShadowBottomRight}{PU}{\9047\117}%* U+274F
 20059 % U+2750 UPPER RIGHT DROP-SHADOWED WHITE SQUARE;
 20060 % \SquareShadowTopRight (bding)
 20061 \DeclareTextCommand{\textSquareTopRight}{PU}{\9047\120}%* U+2750
 20062 % U+2751 LOWER RIGHT SHADOWED WHITE SQUARE;
 20063 % \SquareCastShadowBottomRight (bding)
 20064 \DeclareTextCommand{\textSquareCastShadowBottomRight}{PU}{\9047\121}%* U+2751
 20065 % U+2752 UPPER RIGHT SHADOWED WHITE SQUARE;
 20066 % \SquareCastShadowTopRight (bding)
 20067 \DeclareTextCommand{\textSquareCastShadowTopRight}{PU}{\9047\122}%* U+2752
 20068 % U+2756 BLACK DIAMOND MINUS WHITE X; \OrnamentDiamandSolid (b-
 ding)
 20069 \DeclareTextCommand{\textDiamandSolid}{PU}{\9047\126}%* U+2756
 20070 % U+2758 LIGHT VERTICAL BAR; \RectangleThin (bding)
 20071 \DeclareTextCommand{\textRectangleThin}{PU}{\9047\130}%* U+2758
 20072 % U+2759 MEDIUM VERTICAL BAR; \Rectangle (bding)
 20073 \DeclareTextCommand{\textRectangle}{PU}{\9047\131}%* U+2759
 20074 % U+275A HEAVY VERTICAL BAR; \RectangleBold (bding)
 20075 \DeclareTextCommand{\textRectangleBold}{PU}{\9047\132}%* U+275A

51.2.31 Miscellaneous Mathematical Symbols-A: U+27C0 to U+27EF

20076 % U+27C2 PERPENDICULAR; perpendicular; \perp (LaTeX)
 20077 \DeclareTextCommand{\textperp}{PU}{\9047\302}%* U+27C2
 20078 % \notperp (mathabx)
 20079 \DeclareTextCommand{\textnotperp}{PU}{\9047\302\83\070}%* U+27C2 U+0338
 20080 % U+27C7 OR WITH DOT INSIDE; \veedot (MnSymbol)
 20081 \DeclareTextCommand{\textveedot}{PU}{\9047\307}%* U+27C7
 20082 % U+27D1 AND WITH DOT; \wedgedot (MnSymbol)
 20083 \DeclareTextCommand{\textwedgedot}{PU}{\9047\321}%* U+27D1
 20084 % U+27DC LEFT MULTIMAP; \leftspoon (MnSymbol)
 20085 \DeclareTextCommand{\textleftspoon}{PU}{\9047\334}%* U+27DC
 20086 % U+27E6 MATHEMATICAL LEFT WHITE SQUARE BRACKET
 20087 \DeclareTextCommand{\textlbrackdbl}{PU}{\9047\346}%* U+27E6
 20088 %* \textlbrackdbl -> \lbracket (stmaryrd)
 20089 % U+27E7 MATHEMATICAL RIGHT WHITE SQUARE BRACKET
 20090 \DeclareTextCommand{\textrbrackdbl}{PU}{\9047\347}%* U+27E7
 20091 %* \textrbrackdbl -> \rrbracket (stmaryrd)

51.2.32 Supplemental Arrows-A: U+27F0 to U+27FF

20092 % U+27F2 ANTICLOCKWISE GAPPED CIRCLE ARROW;
20093 % \circlearrowleft (AmS)
20094 \DeclareTextCommand{\textcirclearrowleft}{PU}{\9047\362}%* U+27F2
20095 % U+27F3 CLOCKWISE GAPPED CIRCLE ARROW; \circlearrowright (AmS)
20096 \DeclareTextCommand{\textcirclearrowright}{PU}{\9047\363}%* U+27F3
20097 % U+27F5 LONG LEFTWARDS ARROW; \longleftarrow (AmS)
20098 \DeclareTextCommand{\textlongleftarrow}{PU}{\9047\365}%* U+27F5
20099 % U+27F6 LONG RIGHTWARDS ARROW; \longrightarrow (AmS)
20100 \DeclareTextCommand{\textlongrightarrow}{PU}{\9047\366}%* U+27F6
20101 % U+27F7 LONG LEFT RIGHT ARROW; \longleftrightarrow (AmS)
20102 \DeclareTextCommand{\textlongleftrightarrow}{PU}{\9047\367}%* U+27F7
20103 % U+27F8 LONG LEFTWARDS DOUBLE ARROW; \Longleftarrow (AmS)
20104 \DeclareTextCommand{\textLongleftarrow}{PU}{\9047\370}%* U+27F8
20105 % U+27F9 LONG RIGHTWARDS DOUBLE ARROW; \longrightarrow (AmS)
20106 \DeclareTextCommand{\textLongrightarrow}{PU}{\9047\371}%* U+27F9
20107 % U+27FA LONG LEFT RIGHT DOUBLE ARROW; \Longleftrightarrow (AmS)
20108 \DeclareTextCommand{\textLongleftrightarrow}{PU}{\9047\372}%* U+27FA
20109 % U+27FC LONG RIGHTWARDS ARROW FROM BAR; \longmapsto (AmS)
20110 \DeclareTextCommand{\textlongmapsto}{PU}{\9047\374}%* U+27FC
20111 % U+27FD LONG LEFTWARDS DOUBLE ARROW FROM BAR; \Longmaps-
from (stmaryrd)
20112 \DeclareTextCommand{\textLongmapsfrom}{PU}{\9047\375}%* U+27FD
20113 % U+27FE LONG RIGHTWARDS DOUBLE ARROW FROM BAR; \Longmap-
sto (stmaryrd)
20114 \DeclareTextCommand{\textLongmapsto}{PU}{\9047\376}%* U+27FE

51.2.33 Supplemental Arrows-B: U+2900 to U+297F

20115 % U+2921 NORTH WEST AND SOUTH EAST ARROW; \nwsearrow (MnSym-
bol)
20116 \DeclareTextCommand{\textnwsearrow}{PU}{\9051\041}%* U+2921
20117 % U+2922 NORTH EAST AND SOUTH WEST ARROW; \neswarrow (MnSym-
bol)
20118 \DeclareTextCommand{\textneswarrow}{PU}{\9051\042}%* U+2922
20119 % U+2923 NORTH WEST ARROW WITH HOOK; \hooknwarrow (MnSymbol)
20120 \DeclareTextCommand{\textlhooknwarrow}{PU}{\9051\043}%* U+2923
20121 % U+2924 NORTH EAST ARROW WITH HOOK; \rhooknearrow (MnSymbol)
20122 \DeclareTextCommand{\textrhooknearrow}{PU}{\9051\044}%* U+2924
20123 % U+2925 SOUTH EAST ARROW WITH HOOK; \hooksearrow (MnSymbol)
20124 \DeclareTextCommand{\textlhooksearrow}{PU}{\9051\045}%* U+2925
20125 % U+2926 SOUTH WEST ARROW WITH HOOK; \hookswarrow (MnSymbol)
20126 \DeclareTextCommand{\textrhookswarrow}{PU}{\9051\046}%* U+2926
20127 % U+2933 WAVE ARROW POINTING DIRECTLY RIGHT; \leadsto (wasysym)
20128 \DeclareTextCommand{\textleadsto}{PU}{\9051\063}%* U+2933
20129 % U+2934 ARROW POINTING RIGHTWARDS THEN CURVING UPWARDS;
20130 % \rcurvearrowne (MnSymbol)
20131 \DeclareTextCommand{\textrcurvearrowne}{PU}{\9051\064}%* U+2934
20132 % U+2935 ARROW POINTING RIGHTWARDS THEN CURVING DOWN-
WARDS;
20133 % \lcurvearrowse (MnSymbol)
20134 \DeclareTextCommand{\textlcurvearrowse}{PU}{\9051\065}%* U+2935
20135 % U+2936 ARROW POINTING DOWNWARDS THEN CURVING LEFT-
WARDS;
20136 % \lcurvearrowsw (MnSymbol)
20137 \DeclareTextCommand{\textlcurvearrowsw}{PU}{\9051\066}%* U+2936
20138 % U+2937 ARROW POINTING DOWNWARDS THEN CURVING RIGHT-
WARDS;

20139 % \rcurvearrowse (MnSymbol)
 20140 \DeclareTextCommand{\textrcurvearrowse}{PU}{\9051\067}%* U+2937
 20141 % U+2938 RIGHT-SIDE ARC CLOCKWISE ARROW; \lcurvearrowdown (Mn-
 Symbol)
 20142 \DeclareTextCommand{\textlcurvearrowdown}{PU}{\9051\070}%* U+2938
 20143 %* \textlcurvearrowdown -> \RightTorque (marvosym)
 20144 %* \textlcurvearrowdown -> \Righttorque (marvosym)
 20145 % U+2939 LEFT-SIDE ARC ANTICLOCKWISE ARROW;
 20146 % \rcurvearrowdown (MnSymbol)
 20147 \DeclareTextCommand{\textrcurvearrowdown}{PU}{\9051\071}%* U+2939
 20148 %* \textrcurvearrowdown -> \LeftTorque (marvosym)
 20149 %* \textrcurvearrowdown -> \Lefttorque (marvosym)
 20150 % U+293A TOP ARC ANTICLOCKWISE ARROW; \rcurvearrowleft (MnSym-
 bol)
 20151 \DeclareTextCommand{\textrcurvearrowleft}{PU}{\9051\072}%* U+293A
 20152 % U+293B BOTTOM ARC ANTICLOCKWISE ARROW;
 20153 % \rcurvearrowright (MnSymbol)
 20154 \DeclareTextCommand{\textrcurvearrowright}{PU}{\9051\073}%* U+293B
 20155 % U+294A LEFT BARB UP RIGHT BARB DOWN HARPOON; \leftrighthar-
 poon (mathabx)
 20156 \DeclareTextCommand{\textleftrightharpoon}{PU}{\9051\112}%* U+294A
 20157 % U+294B LEFT BARB DOWN RIGHT BARB UP HARPOON; \rightlefthar-
 poon (mathabx)
 20158 \DeclareTextCommand{\textrightleftharpoon}{PU}{\9051\113}%* U+294B
 20159 % U+294C UP BARB RIGHT DOWN BARB LEFT HARPOON;
 20160 % \updownharpoonrightleft (MnSymbol)
 20161 \DeclareTextCommand{\textupdownharpoonrightleft}{PU}{\9051\114}%* U+294C
 20162 % U+294D UP BARB LEFT DOWN BARB RIGHT HARPOON;
 20163 % \updownharpoonleftright (MnSymbol)
 20164 \DeclareTextCommand{\textupdownharpoonleftright}{PU}{\9051\115}%* U+294D
 20165 % U+2962 LEFTWARDS HARPOON WITH BARB UP ABOVE LEFTWARDS
 20166 % HARPOON WITH BARB DOWN; \leftleftharpoons (mathabx)
 20167 \DeclareTextCommand{\textleftleftharpoons}{PU}{\9051\142}%* U+2962
 20168 % U+2963 UPWARDS HARPOON WITH BARB LEFT BESIDE UPWARDS
 20169 % HARPOON WITH BARB RIGHT; \upupharpoons (mathabx)
 20170 \DeclareTextCommand{\textupupharpoons}{PU}{\9051\143}%* U+2963
 20171 % U+2964 RIGHTWARDS HARPOON WITH BARB UP ABOVE RIGHT-
 WARDS HARPOON
 20172 % WITH BARB DOWN; \rightrightarpoons (mathabx)
 20173 \DeclareTextCommand{\textrightarpoons}{PU}{\9051\144}%* U+2964
 20174 % U+2965 DOWNWARDS HARPOON WITH BARB LEFT BESIDE DOWN-
 WARDS HARPOON
 20175 % WITH BARB RIGHT; \downdownharpoons (mathabx)
 20176 \DeclareTextCommand{\textdowndownharpoons}{PU}{\9051\145}%* U+2965
 20177 % U+296A LEFTWARDS HARPOON WITH BARB UP ABOVE LONG DASH;
 20178 % \leftbarharpoon (mathabx)
 20179 \DeclareTextCommand{\textleftbarharpoon}{PU}{\9051\152}%* U+296A
 20180 % U+296B LEFTWARDS HARPOON WITH BARB DOWN BELOW
 20181 % LONG DASH; \barleftharpoon (mathabx)
 20182 \DeclareTextCommand{\textbarleftharpoon}{PU}{\9051\153}%* U+296B
 20183 % U+296C RIGHTWARDS HARPOON WITH BARB UP ABOVE
 20184 % LONG DASH; \rightbarharpoon (mathabx)
 20185 \DeclareTextCommand{\textrightbarharpoon}{PU}{\9051\154}%* U+296C
 20186 % U+296D RIGHTWARDS HARPOON WITH BARB DOWN BELOW
 20187 % LONG DASH; \barrightharpoon (mathabx)
 20188 \DeclareTextCommand{\textbarrightharpoon}{PU}{\9051\155}%* U+296D
 20189 % U+296E UPWARDS HARPOON WITH BARB LEFT BESIDE DOWN-

WARDS HARPOON
20190 % WITH BARB RIGHT; \updownharpoons (mathabx)
20191 \DeclareTextCommand{\textupdownharpoons}{PU}{\9051\156}%* U+296E
20192 % U+296F DOWNWARDS HARPOON WITH BARB LEFT BESIDE UP-
WARDS HARPOON
20193 % WITH BARB RIGHT; \downupharpoons (mathabx)
20194 \DeclareTextCommand{\textdownupharpoons}{PU}{\9051\157}%* U+296F
20195 % U+297F DOWN FISH TAIL
20196 \DeclareTextCommand{\textmoo}{PU}{\9051\177\83\066}%* U+297F U+0336

51.2.34 Miscellaneous Mathematical Symbols-B: U+2980 to U+29FF

20197 % U+2987 Z NOTATION LEFT IMAGE BRACKET; \lparenthesis (stmaryrd)
20198 \DeclareTextCommand{\textllparenthesis}{PU}{\9051\207}%* U+2987
20199 % U+2988 Z NOTATION RIGHT IMAGE BRACKET; \rrparenthesis (stmaryrd)
20200 \DeclareTextCommand{\textrrparenthesis}{PU}{\9051\210}%* U+2988
20201 % U+29B0 REVERSED EMPTY SET; \invdiameter (wasysym)
20202 \DeclareTextCommand{\textinvdiameter}{PU}{\9051\260}%* U+29B0
20203 % U+29B6 CIRCLED VERTICAL BAR; \obar (stmaryrd)
20204 \DeclareTextCommand{\textobar}{PU}{\9051\266}%* U+29B6
20205 %* \textobar -> \textvarobar (stmaryrd)
20206 % U+29B8 CIRCLED REVERSE SOLIDUS; \obslash (stmaryrd)
20207 \DeclareTextCommand{\textobslash}{PU}{\9051\270}%* U+29B8
20208 %* \textobslash -> \circledbslash (txfonts/pxfonts)
20209 %* \textobslash -> \obackslash (mathabx)
20210 %* \textobslash -> \varobslash (stmaryrd)
20211 % U+29BA CIRCLE DIVIDED BY HORIZONTAL BAR AND TOP HALF
20212 % DIVIDED BY VERTICAL BAR; \obot (mathabx)
20213 \DeclareTextCommand{\textobot}{PU}{\9051\272}%* U+29BA
20214 %* \textobot -> \odplus (ulsy)
20215 % U+29BB CIRCLE WITH SUPERIMPOSED X; \NoChemicalCleaning (mar-
vosym)
20216 \DeclareTextCommand{\textNoChemicalCleaning}{PU}{\9051\273}%* U+29BB
20217 % U+29C0 CIRCLED LESS-THAN; \olessthan (stmaryrd)
20218 \DeclareTextCommand{\textolessthan}{PU}{\9051\300}%* U+29C0
20219 %* \textolessthan -> \varolessthan (stmaryrd)
20220 % U+29C1 CIRCLED GREATER-THAN; \ogreaterthan (stmaryrd)
20221 \DeclareTextCommand{\textogreaterthan}{PU}{\9051\301}%* U+29C1
20222 %* \textogreaterthan -> \varogreaterthan (stmaryrd)
20223 % U+29C4 SQUARED RISING DIAGONAL SLASH; \boxslash (mathabx, stmaryrd)
20224 \DeclareTextCommand{\textboxslash}{PU}{\9051\304}%* U+29C4
20225 % U+29C5 SQUARED FALLING DIAGONAL SLASH; \boxbslash (stmaryrd)
20226 \DeclareTextCommand{\textboxbslash}{PU}{\9051\305}%* U+29C5
20227 % U+29C6 SQUARED ASTERISK; \boxast (stmaryrd)
20228 \DeclareTextCommand{\textboxast}{PU}{\9051\306}%* U+29C6
20229 % U+29C7 SQUARED SMALL CIRCLE; \boxcircle (stmaryrd)
20230 \DeclareTextCommand{\textboxcircle}{PU}{\9051\307}%* U+29C7
20231 % U+29C8 SQUARED SQUARE; \boxbox (stmaryrd)
20232 \DeclareTextCommand{\textboxbox}{PU}{\9051\310}%* U+29C8
20233 % U+29D3 BLACK BOWTIE; \Valve (marvosym)
20234 \DeclareTextCommand{\textValve}{PU}{\9051\323}%* U+29D3
20235 % U+29DF DOUBLE-ENDED MULTIMAP; \multimapboth (txfonts/pxfonts)
20236 \DeclareTextCommand{\textmultimapboth}{PU}{\9051\337}%* U+29DF
20237 % U+29E2 SHUFFLE PRODUCT; \shuffle (shuffle)
20238 \DeclareTextCommand{\textshuffle}{PU}{\9051\342}%* U+29E2

51.2.35 Supplemental Mathematical Operators: U+2A00 to U+2AFF

20239 % U+2A04 N-ARY UNION OPERATOR WITH PLUS; \uplus (LaTeX)


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20240 \DeclareTextCommand{\textuplus}{PU}{\9052\004}%* U+2A04
20241 % U+2A07 TWO LOGICAL AND OPERATOR; \bigdoublewedge (MnSymbol)
20242 \DeclareTextCommand{\textbigdoublewedge}{PU}{\9052\007}%* U+2A07
20243 % U+2A08 TWO LOGICAL OR OPERATOR; \bigdoublevee (MnSymbol)
20244 \DeclareTextCommand{\textbigdoublevee}{PU}{\9052\010}%* U+2A08
20245 % U+2A1D JOIN; \Join (latexsym, amsfonts, amssymb, mathabx, txfonts,
20246 %   pxfonts, wasysym)
20247 \DeclareTextCommand{\textJoin}{PU}{\9052\035}%* U+2A1D
20248 % U+2A1F Z NOTATION SCHEMA COMPOSITION; \fatsemi (stmaryrd)
20249 \DeclareTextCommand{\textfatsemi}{PU}{\9052\037}%* U+2A1F
20250 % U+2A22 PLUS SIGN WITH SMALL CIRCLE ABOVE; \circplus (mathabx)
20251 \DeclareTextCommand{\textcircplus}{PU}{\9052\042}%* U+2A22
20252 % U+2A2A MINUS SIGN WITH DOT BELOW; \minusdot (MnSymbol)
20253 \DeclareTextCommand{\textminusdot}{PU}{\9052\052}%* U+2A2A
20254 %* \textminusdot -> \divdot (mathabx)
20255 % U+2A30 MULTIPLICATION SIGN WITH DOT ABOVE; \dottimes (mathabx)
20256 \DeclareTextCommand{\textdottimes}{PU}{\9052\060}%* U+2A30
20257 % U+2A32 SEMIDIRECT PRODUCT WITH BOTTOM CLOSED;
20258 %   \dtimes (mathdesign)
20259 \DeclareTextCommand{\textdtimes}{PU}{\9052\062}%* U+2A32
20260 % U+2A38 CIRCLED DIVISION SIGN; \odiv (mathabx)
20261 \DeclareTextCommand{\textodiv}{PU}{\9052\070}%* U+2A38
20262 % U+2A3C INTERIOR PRODUCT; \invneg (MnSymbol)
20263 \DeclareTextCommand{\textinvneg}{PU}{\9052\074}%* U+2A3C
20264 % U+2A4E DOUBLE SQUARE INTERSECTION; \sqdoublecap (mathabx)
20265 \DeclareTextCommand{\textsqdoublecap}{PU}{\9052\116}%* U+2A4E
20266 %* \textsqdoublecap -> \doublesqcap (MnSymbol)
20267 % U+2A40 INTERSECTION WITH DOT; \capdot (MnSymbol)
20268 \DeclareTextCommand{\textcapdot}{PU}{\9052\100}%* U+2A40
20269 % U+2A4F DOUBLE SQUARE UNION; \sqdoublecup (mathabx)
20270 \DeclareTextCommand{\textsqdoublecup}{PU}{\9052\117}%* U+2A4F
20271 %* \textsqdoublecup -> \doublesqcup (MnSymbol)
20272 % U+2A55 TWO INTERSECTING LOGICAL AND; \doublewedge (MnSymbol)
20273 \DeclareTextCommand{\textdoublewedge}{PU}{\9052\125}%* U+2A55
20274 % U+2A56 TWO INTERSECTING LOGICAL OR; \doublevee (MnSymbol)
20275 \DeclareTextCommand{\textdoublevee}{PU}{\9052\126}%* U+2A56
20276 %* \textdoublevee -> \merge (stmaryrd)
20277 % U+2A5E LOGICAL AND WITH DOUBLE OVERBAR;
20278 %   \doublebarwedge (AmS)
20279 \DeclareTextCommand{\textdoublebarwedge}{PU}{\9052\136}%* U+2A5E
20280 % U+2A63 LOGICAL OR WITH DOUBLE UNDERBAR;
20281 %   \veedoublebar (mahtabx)
20282 \DeclareTextCommand{\textveedoublebar}{PU}{\9052\143}%* U+2A63
20283 % U+2A66 EQUALS SIGN WITH DOT BELOW; \eqdot (MnSymbol)
20284 \DeclareTextCommand{\texteqdot}{PU}{\9052\146}%* U+2A66
20285 % \neqdot (MnSymbol)
20286 \DeclareTextCommand{\textneqdot}{PU}{\9052\146\83\070}%* U+2A66 U+0338
20287 % U+2A74 DOUBLE COLON EQUAL; \coloncolonequals (colonequals)
20288 \DeclareTextCommand{\textcoloncolonequals}{PU}{\9052\164}%* U+2A74
20289 % U+2A7D LESS-THAN OR SLANTED EQUAL TO; \leqslant (AmS)
20290 \DeclareTextCommand{\textleqslant}{PU}{\9052\175}%* U+2A7D
20291 % \nleqslant (txfonts/pxfonts)
20292 \DeclareTextCommand{\textnleqslant}{PU}{\9052\175\83\070}%* U+2A7D U+0338
20293 % U+2A7E GREATER-THAN OR SLANTED EQUAL TO; \geqslant (AmS)
20294 \DeclareTextCommand{\textgeqslant}{PU}{\9052\176}%* U+2A7E
20295 % \ngeqslant (txfonts/pxfonts)
20296 \DeclareTextCommand{\textngeqslant}{PU}{\9052\176\83\070}%* U+2A7E U+0338

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20297 % U+2A85 LESS-THAN OR APPROXIMATE; \lessapprox (AmS)
 20298 \DeclareTextCommand{\textlessapprox}{PU}{\9052\205}%* U+2A85
 20299 % \nlessapprox (txfonts/pxfonts)
 20300 \DeclareTextCommand{\textnlessapprox}{PU}{\9052\205\83\070}%* U+2A85 U+0338
 20301 % U+2A86 GREATER-THAN OR APPROXIMATE; \gtrapprox (AmS)
 20302 \DeclareTextCommand{\textgtrapprox}{PU}{\9052\206}%* U+2A86
 20303 % \ngtrapprox (txfonts/pxfonts)
 20304 \DeclareTextCommand{\textngtrapprox}{PU}{\9052\206\83\070}%* U+2A86 U+0338
 20305 % U+2A87 LESS-THAN AND SINGLE-LINE NOT EQUAL TO; \lneq (AmS)
 20306 \DeclareTextCommand{\textlneq}{PU}{\9052\207}%* U+2A87
 20307 % U+2A88 GREATER-THAN AND SINGLE-LINE NOT EQUAL TO;
 20308 % \gneq (AmS)
 20309 \DeclareTextCommand{\textgneq}{PU}{\9052\210}%* U+2A88
 20310 % U+2A89 LESS-THAN AND NOT APPROXIMATE; \lnapprox (AmS)
 20311 \DeclareTextCommand{\textlnapprox}{PU}{\9052\211}%* U+2A89
 20312 % U+2A8A GREATER-THAN AND NOT APPROXIMATE; \gnapprox (AmS)
 20313 \DeclareTextCommand{\textgnapprox}{PU}{\9052\212}%* U+2A8A
 20314 % U+2A8B LESS-THAN ABOVE DOUBLE-LINE EQUAL ABOVE GREATER-
 THAN;
 20315 % \lesseqgtr (AmS)
 20316 \DeclareTextCommand{\textlesseqgtr}{PU}{\9052\213}%* U+2A8B
 20317 % U+2A8C GREATER-THAN ABOVE DOUBLE-LINE EQUAL ABOVE LESS-
 THAN;
 20318 % \gtreqless (AmS)
 20319 \DeclareTextCommand{\textgtreqless}{PU}{\9052\214}%* U+2A8C
 20320 % U+2A95 SLANTED EQUAL TO OR LESS-THAN; \eqslantless (AmS)
 20321 \DeclareTextCommand{\texteqslantless}{PU}{\9052\225}%* U+2A95
 20322 % U+2A96 SLANTED EQUAL TO OR GREATER-THAN; \eqslantgtr (AmS)
 20323 \DeclareTextCommand{\texteqslantgtr}{PU}{\9052\226}%* U+2A96
 20324 % U+2AA6 LESS-THAN CLOSED BY CURVE; \leftslice (stmaryrd)
 20325 \DeclareTextCommand{\textleftslice}{PU}{\9052\246}%* U+2AA6
 20326 % U+2AA7 GREATER-THAN CLOSED BY CURVE; \rightslice (stmaryrd)
 20327 \DeclareTextCommand{\textright slice}{PU}{\9052\247}%* U+2AA7
 20328 % U+2AAF PRECEDES ABOVE SINGLE-LINE EQUALS SIGN; \preceq (Mn-
 Symbol)
 20329 \DeclareTextCommand{\textpreceq}{PU}{\9052\257}%* U+2AAF
 20330 % \npreceq (txfonts/pxfonts)
 20331 \DeclareTextCommand{\textnpreceq}{PU}{\9052\257\83\070}%* U+2AAF U+0338
 20332 % U+2AB0 SUCCEEDS ABOVE SINGLE-LINE EQUALS SIGN; \succeq (Mn-
 Symbol)
 20333 \DeclareTextCommand{\textsucceq}{PU}{\9052\260}%* U+2AB0
 20334 % \nsucceq (txfonts/pxfonts)
 20335 \DeclareTextCommand{\textnsucceq}{PU}{\9052\260\83\070}%* U+2AB0 U+0338
 20336 % U+2AB1 PRECEDES ABOVE SINGLE-LINE NOT EQUAL TO; \prec-
 neq (mathabx)
 20337 \DeclareTextCommand{\textprecneq}{PU}{\9052\261}%* U+2AB1
 20338 % U+2AB2 SUCCEEDS ABOVE SINGLE-LINE NOT EQUAL TO; \succ-
 neq (mathabx)
 20339 \DeclareTextCommand{\textsuccneq}{PU}{\9052\262}%* U+2AB2
 20340 % U+2AB3 PRECEDES ABOVE EQUALS SIGN; \preceqq (txfonts/pxfonts)
 20341 \DeclareTextCommand{\textpreceqq}{PU}{\9052\263}%* U+2AB3
 20342 % \npreceqq (txfonts/pxfonts)
 20343 \DeclareTextCommand{\textnpreceqq}{PU}{\9052\263\83\070}%* U+2AB3 U+0338
 20344 % U+2AB4 SUCCEEDS ABOVE EQUALS SIGN; \succeqq (txfonts/pxfonts)
 20345 \DeclareTextCommand{\textsucceqq}{PU}{\9052\264}%* U+2AB4
 20346 % \nsucceqq (txfonts/pxfonts)
 20347 \DeclareTextCommand{\textnsucceqq}{PU}{\9052\264\83\070}%* U+2AB4 U+0338

20348 % U+2AB5 PRECEDES ABOVE NOT EQUAL TO; \precneqq (txfonts/pxfonts)
 20349 \DeclareTextCommand{\textprecneqq}{PU}{\9052\265}%* U+2AB5
 20350 % U+2AB6 SUCCEEDS ABOVE NOT EQUAL TO; \succneqq (txfonts/pxfonts)
 20351 \DeclareTextCommand{\textsuccneqq}{PU}{\9052\266}%* U+2AB6
 20352 % U+2AB7 PRECEDES ABOVE ALMOST EQUAL TO; \precapprox (AmS)
 20353 \DeclareTextCommand{\textprecapprox}{PU}{\9052\267}%* U+2AB7
 20354 % \nprecapprox (txfonts/pxfonts)
 20355 \DeclareTextCommand{\textnprecapprox}{PU}{\9052\267\83\070}%* U+2AB7 U+0338
 20356 % U+2AB8 SUCCEEDS ABOVE ALMOST EQUAL TO; \succapprox (AmS)
 20357 \DeclareTextCommand{\textsuccapprox}{PU}{\9052\270}%* U+2AB8
 20358 % \nsuccapprox (txfonts/pxfonts)
 20359 \DeclareTextCommand{\textnsuccapprox}{PU}{\9052\270\83\070}%* U+2AB8 U+0338
 20360 % U+2AB9 PRECEDES ABOVE NOT ALMOST EQUAL TO; \precnap-
 prox (AmS)
 20361 \DeclareTextCommand{\textprecnapprox}{PU}{\9052\271}%* U+2AB9
 20362 % U+2ABA SUCCEEDS ABOVE NOT ALMOST EQUAL TO; \succnap-
 prox (AmS)
 20363 \DeclareTextCommand{\textsuccnapprox}{PU}{\9052\272}%* U+2ABA
 20364 % U+2AC5 SUBSET OF ABOVE EQUALS SIGN; \subseteqq (AmS)
 20365 \DeclareTextCommand{\textsubseteqq}{PU}{\9052\305}%* U+2AC5
 20366 % \nsubseteqq (txfonts/pxfonts, mathabx)
 20367 \DeclareTextCommand{\textnsubseteqq}{PU}{\9052\305\83\070}%* U+2AC5 U+0338
 20368 % U+2AC6 SUPERSET OF ABOVE EQUALS SIGN; \supseteqq (AmS)
 20369 \DeclareTextCommand{\textsupseteqq}{PU}{\9052\306}%* U+2AC6
 20370 % \nsupseteqq (mathabx)
 20371 \DeclareTextCommand{\textnsupseteqq}{PU}{\9052\306\83\070}%* U+2AC6 U+0338
 20372 % U+2AE3 DOUBLE VERTICAL BAR LEFT TURNSTILE
 20373 \DeclareTextCommand{\textdashV}{PU}{\9052\343}%* U+2AE3
 20374 %* \textdashV -> \leftVdash (MnSymbol)
 20375 % \ndashV (mathabx)
 20376 \DeclareTextCommand{\textndashV}{PU}{\9052\343\83\070}%* U+2AE3 U+0338
 20377 %* \textndashV -> \nleftVdash (MnSymbol)
 20378 % U+2AE4 VERTICAL BAR DOUBLE LEFT TURNSTILE; \Dashv (mathabx)
 20379 \DeclareTextCommand{\textDashv}{PU}{\9052\344}%* U+2AE4
 20380 %* \textDashv -> \leftmodels (MnSymbol)
 20381 % \nDashv (mathabx)
 20382 \DeclareTextCommand{\textnDashv}{PU}{\9052\344\83\070}%* U+2AE4 U+0338
 20383 %* \textnDashv -> \nleftmodels (MnSymbol)
 20384 % U+2AE5 DOUBLE VERTICAL BAR DOUBLE LEFT TURNSTILE;
 20385 % \DashV (mathabx)
 20386 \DeclareTextCommand{\textDashV}{PU}{\9052\345}%* U+2AE5
 20387 %* \textDashV -> \leftModels (MnSymbol)
 20388 % \nDashV (mathabx)
 20389 \DeclareTextCommand{\textnDashV}{PU}{\9052\345\83\070}%* U+2AE5 U+0338
 20390 %* \textnDashV -> \nleftModels (MnSymbol)
 20391 % U+2AEA DOUBLE DOWN TACK; \downmodels (MnSymbol)
 20392 \DeclareTextCommand{\textdownmodels}{PU}{\9052\352}%* U+2AEA
 20393 % \ndownmodels (MnSymbol)
 20394 \DeclareTextCommand{\textndownmodels}{PU}{\9052\352\83\070}%* U+2AEA U+0338
 20395 % U+2AEB DOUBLE UP TACK; \upmodels (MnSymbol)
 20396 \DeclareTextCommand{\textupmodels}{PU}{\9052\353}%* U+2AEB
 20397 % \nupmodels (MnSymbol)
 20398 \DeclareTextCommand{\textnupmodels}{PU}{\9052\353\83\070}%* U+2AEB U+0338
 20399 % U+2AEF VERTICAL LINE WITH CIRCLE ABOVE; \upspoon (MnSymbol)
 20400 \DeclareTextCommand{\textupspoon}{PU}{\9052\357}%* U+2AEF
 20401 % U+2AF4 TRIPLE VERTICAL BAR BINARY RELATION;
 20402 % \interleave (stmmaryrd)

20403 \DeclareTextCommand{\textinterleave}{PU}{\9052\364}%* U+2AF4
 20404 % U+2AFD DOUBLE SOLIDUS OPERATOR; \sslash (stmaryrd)
 20405 \DeclareTextCommand{\textsslash}{PU}{\9052\375}%* U+2AFD
 20406 %* \textsslash -> \varparallel (txfonts\pxfonts)

51.2.36 Miscellaneous Symbols and Arrows: U+2B00 to U+2BFF

20407 % U+2B20 WHITE PENTAGON; \pentagon (wasysym)
 20408 \DeclareTextCommand{\textpentagon}{PU}{\9053\040}%* U+2B20
 20409 % U+2B21 WHITE HEXAGON; \varhexagon (wasysym)
 20410 \DeclareTextCommand{\textvarhexagon}{PU}{\9053\041}%* U+2B21

51.2.37 Latin Extended-C: U+2C60 to U+2C7F

20411 % U+2C7C LATIN SUBSCRIPT SMALL LETTER J
 20412 \DeclareTextCommand{\textjinferior}{PU}{\9054\174}%* U+2C7C

51.2.38 Supplemental Punctuation: U+2E00 to U+2E7F

20413 % U+2E13 DOTTED OBELOS; \slashdiv (MnSymbol)
 20414 \DeclareTextCommand{\textslashdiv}{PU}{\9056\023}%* U+2E13
 20415 % U+2E18 INVERTED INTERROBANG; \textinterrobangdown (textcomp)
 20416 \DeclareTextCommand{\textinterrobangdown}{PU}{\9056\030}% U+2E18
 20417 % U+2E2D FIVE DOT MARK; \fivedots (MnSymbol)
 20418 \DeclareTextCommand{\textfivedots}{PU}{\9056\055}%* U+2E2D

51.2.39 Modifier Tone Letters: U+A700 to U+A71F

20419 % U+A71B MODIFIER LETTER RAISED UP ARROW; \textupstep (tipa)
 20420 \DeclareTextCommand{\textupstep}{PU}{\9247\033}% U+A71B
 20421 % U+A71C MODIFIER LETTER RAISED DOWN ARROW;
 20422 % \textdownstep (tipa)
 20423 \DeclareTextCommand{\textdownstep}{PU}{\9247\034}% U+A71C

51.2.40 Latin Extended-D: U+A720 to U+A7FF

20424 % U+A727 LATIN SMALL LETTER HENG; \textheng (tipx)
 20425 \DeclareTextCommand{\textPUheng}{PU}{\9247\047}% U+A727
 20426 %* \textPUheng -> \textheng (tipx)
 20427 % U+A72C LATIN CAPITAL LETTER CUATRILLO; \textlhookfour (tipx)
 20428 \DeclareTextCommand{\textPULhookfour}{PU}{\9247\054}% U+A72C
 20429 %* \textPULhookfour -> \textlhookfour (tipx)
 20430 % U+A730 LATIN LETTER SMALL CAPITAL F; \textscf (tipx)
 20431 \DeclareTextCommand{\textPUscf}{PU}{\9247\060}% U+A730
 20432 %* \textPUscf -> \textscf (tipx)
 20433 % U+A735 LATIN SMALL LETTER AO; \textaoilig (tipx)
 20434 \DeclareTextCommand{\textPUaolig}{PU}{\9247\065}% U+A735
 20435 %* \textPUaolig -> \textaoilig (tipx)
 20436 % U+A74F LATIN SMALL LETTER OO; \oo (wsuipa)
 20437 \DeclareTextCommand{\textoo}{PU}{\9247\117}%* U+A74F
 20438 % U+A788 MODIFIER LETTER LOW CIRCUMFLEX ACCENT
 20439 \DeclareTextCommand{\textcircumlow}{PU}{\9247\210}% U+A788

51.2.41 Alphabetic Presentation Forms: U+FB00 to U+FB4F

20440 % U+FB01 LATIN SMALL LIGATURE FI; fi
 20441 \DeclareTextCommand{\textfi}{PU}{\9373\001}% U+FB01
 20442 % U+FB02 LATIN SMALL LIGATURE FL; fl
 20443 \DeclareTextCommand{\textfl}{PU}{\9373\002}% U+FB02

51.2.42 Musical Symbols: U+1D100 to U+1D1FF

20444 % U+1D13B MUSICAL SYMBOL WHOLE REST; \GaPa (harmony)
 20445 \DeclareTextCommand{\textGaPa}{PU}{\9330\064\9335\073}%* U+1D13B

20446 % U+1D13C MUSICAL SYMBOL HALF REST; \HaPa (harmony)
 20447 \DeclareTextCommand{\textHaPa}{PU}{\9330\064\9335\074}%* U+1D13C
 20448 % U+1D13D MUSICAL SYMBOL QUARTER REST; \ViPa (harmony)
 20449 \DeclareTextCommand{\textViPa}{PU}{\9330\064\9335\075}%* U+1D13D
 20450 % U+1D13E MUSICAL SYMBOL EIGHTH REST; \AcPa (harmony)
 20451 \DeclareTextCommand{\textAcPa}{PU}{\9330\064\9335\076}%* U+1D13E
 20452 % U+1D13F MUSICAL SYMBOL SIXTEENTH REST; \SePa (harmony)
 20453 \DeclareTextCommand{\textSePa}{PU}{\9330\064\9335\077}%* U+1D13F
 20454 % U+1D140 MUSICAL SYMBOL THIRTY-SECOND REST; \ZwPa (harmony)
 20455 \DeclareTextCommand{\textZwPa}{PU}{\9330\064\9335\100}%* U+1D140
 20456 % U+1D15D MUSICAL SYMBOL WHOLE NOTE; \fullnote (wasysym)
 20457 \DeclareTextCommand{\textfullnote}{PU}{\9330\064\9335\135}%* U+1D15D
 20458 %* \textfullnote -> \Ganz (harmony)
 20459 % U+1D15E MUSICAL SYMBOL HALF NOTE; \halfnote (wasysym)
 20460 \DeclareTextCommand{\texthalfnote}{PU}{\9330\064\9335\136}%* U+1D15E
 20461 %* \texthalfnote -> \Halb (harmony)
 20462 % U+1D15F MUSICAL SYMBOL QUARTER NOTE; \Vier (harmony)
 20463 \DeclareTextCommand{\textVier}{PU}{\9330\064\9335\137}%* U+1D15F
 20464 % U+1D160 MUSICAL SYMBOL EIGHTH NOTE; \Acht (harmony)
 20465 \DeclareTextCommand{\textAcht}{PU}{\9330\064\9335\140}%* U+1D160
 20466 % U+1D161 MUSICAL SYMBOL SIXTEENTH NOTE; \Sech (harmony)
 20467 \DeclareTextCommand{\textSech}{PU}{\9330\064\9335\141}%* U+1D161
 20468 % U+1D162 MUSICAL SYMBOL THIRTY-SECOND NOTE; \Zwdr (harmony)
 20469 \DeclareTextCommand{\textZwdr}{PU}{\9330\064\9335\142}%* U+1D162

51.2.43 Miscellaneous Symbols and Pictographs: U+1F300 to U+1F5FF

20470 % U+1F30D EARTH GLOBE EUROPE-AFRICA; \Mundus (marvosym)
 20471 \DeclareTextCommand{\textMundus}{PU}{\9330\074\9337\015}%* U+1F30D
 20472 % U+1F319 CRESCENT MOON; \Moon (marvosym)
 20473 \DeclareTextCommand{\textMoon}{PU}{\9330\074\9337\031}%* U+1F319
 20474 % U+1F468 MAN; \ManFace (marvosym)
 20475 \DeclareTextCommand{\textManFace}{PU}{\9330\075\9334\150}%* U+1F468
 20476 % U+1F469 WOMAN; \WomanFace (marvosym)
 20477 \DeclareTextCommand{\textWomanFace}{PU}{\9330\075\9334\151}%* U+1F469
 20478 %* \textWomanFace -> \Womanface (marvosym)
 20479 % U+1F4E0 FAX MACHINE; \Fax (marvosym)
 20480 \DeclareTextCommand{\textFax}{PU}{\9330\075\9334\340}%* U+1F4E0
 20481 %* \textFax -> \Faxmachine (marvosym)
 20482 % U+1F525 FIRE; \Fire (ifsym)
 20483 \DeclareTextCommand{\textFire}{PU}{\9330\075\9335\045}%* U+1F525

51.2.44 Transport and Map Symbols: U+1F680 to U+1F6FF

20484 % U+1F6B2 BICYCLE; \Bicycle (marvosym)
 20485 \DeclareTextCommand{\textBicycle}{PU}{\9330\075\9336\262}%* U+1F6B2
 20486 % U+1F6B9 MENS SYMBOL; \Gentsroom (marvosym)
 20487 \DeclareTextCommand{\textGentsroom}{PU}{\9330\075\9336\271}%* U+1F6B9
 20488 % U+1F6BA WOMENS SYMBOL; \Ladiesroom (marvosym)
 20489 \DeclareTextCommand{\textLadiesroom}{PU}{\9330\075\9336\272}%* U+1F6BA

51.2.45 Miscellaneous

20490 \DeclareTextCommand{\SS}{PU}{SS}%
 20491 % \textcopyleft (textcomp)
 20492 \DeclareTextCommand{\textcopyleft}{PU}{\9041\204\9040\335}% U+2184 U+20DD
 20493 % \ccnc (ccllicenses)
 20494 \DeclareTextCommand{\textccnc}{PU}{\80\044\9040\340}%* U+0024 U+20E0
 20495 % \ccnd (ccllicenses)
 20496 \DeclareTextCommand{\textccnd}{PU}{=\9040\335}%* U+003D U+20DD


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20497 % \ccsa (ccllicenses)
20498 \DeclareTextCommand{\textccsa}{PU}{\9047\362\9040\335}%* U+27F2 U+20DD
20499 % \Info (marvosym, china2e)
20500 \DeclareTextCommand{\textInfo}{PU}{\9330\065\9334\042\9040\336}%* U+1D422 U+20DE
20501 % \CESign (marvosym)
20502 \DeclareTextCommand{\textCESign}{PU}{\80\103\80\105}%* U+0043 U+0045
20503 %* \textCESign -> \CESign (marvosym)

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51.2.46 Aliases

Aliases (german.sty)

```

20504 \DeclareTextCommand{\textglqq}{PU}{\quotedblbase}%
20505 \DeclareTextCommand{\textgrqq}{PU}{\textquotedblleft}%
20506 \DeclareTextCommand{\textglq}{PU}{\quotesinglbase}%
20507 \DeclareTextCommand{\textgrq}{PU}{\textquoteleft}%
20508 \DeclareTextCommand{\textflqq}{PU}{\guillemotleft}%
20509 \DeclareTextCommand{\textfrqq}{PU}{\guillemotright}%
20510 \DeclareTextCommand{\textflq}{PU}{\guilsinglleft}%
20511 \DeclareTextCommand{\textfrq}{PU}{\guilsinglright}%

```

Aliases (math names)

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20512 \DeclareTextCommand{\textneg}{PU}{\textlogicalnot}%*
20513 \DeclareTextCommand{\texttimes}{PU}{\textmultiply}%*
20514 \DeclareTextCommand{\textdiv}{PU}{\textdivide}%*
20515 \DeclareTextCommand{\textpm}{PU}{\textplusminus}%*
20516 \DeclareTextCommand{\textcdot}{PU}{\textperiodcentered}%*
20517 </puenc>

```

51.3 PU encoding, additions for VnTeX

This file is provided by Han The Thanh.

```

20518 <*puvnenc>
20519 \DeclareTextCommand{\abreve}{PU}{\81\003}% U+0103
20520 \DeclareTextCommand{\acircumflex}{PU}{\80\342}% U+00E2
20521 \DeclareTextCommand{\ecircumflex}{PU}{\80\352}% U+00EA
20522 \DeclareTextCommand{\ocircumflex}{PU}{\80\364}% U+00F4
20523 \DeclareTextCommand{\ohorn}{PU}{\81\241}% U+01A1
20524 \DeclareTextCommand{\uhorn}{PU}{\81\260}% U+01B0
20525 \DeclareTextCommand{\ABREVE}{PU}{\81\002}% U+0102
20526 \DeclareTextCommand{\ACIRCUMFLEX}{PU}{\80\302}% U+00C2
20527 \DeclareTextCommand{\ECIRCUMFLEX}{PU}{\80\312}% U+00CA
20528 \DeclareTextCommand{\OCIRCUMFLEX}{PU}{\80\324}% U+00D4
20529 \DeclareTextCommand{\OHORN}{PU}{\81\240}% U+01A0
20530 \DeclareTextCommand{\UHORN}{PU}{\81\257}% U+01AF
20531 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\341}% U+00E1
20532 \DeclareTextCompositeCommand{\d}{PU}{a}{\9036\241}% U+1EA1
20533 \DeclareTextCompositeCommand{\`}{PU}{a}{\80\340}% U+00E0
20534 \DeclareTextCompositeCommand{\h}{PU}{a}{\9036\243}% U+1EA3
20535 \DeclareTextCompositeCommand{\~}{PU}{a}{\80\343}% U+00E3
20536 \DeclareTextCompositeCommand{\'}{PU}{\abreve}{\9036\257}% U+1EAF
20537 \DeclareTextCompositeCommand{\d}{PU}{\abreve}{\9036\267}% U+1EB7
20538 \DeclareTextCompositeCommand{\`}{PU}{\abreve}{\9036\261}% U+1EB1
20539 \DeclareTextCompositeCommand{\h}{PU}{\abreve}{\9036\263}% U+1EB3
20540 \DeclareTextCompositeCommand{\~}{PU}{\abreve}{\9036\265}% U+1EB5
20541 \DeclareTextCompositeCommand{\'}{PU}{\acircumflex}{\9036\245}% U+1EA5
20542 \DeclareTextCompositeCommand{\d}{PU}{\acircumflex}{\9036\255}% U+1EAD

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20543 \DeclareTextCompositeCommand{\`}{PU}{\acircumflex}{\9036\247}% U+1EA7
 20544 \DeclareTextCompositeCommand{\h}{PU}{\acircumflex}{\9036\251}% U+1EA9
 20545 \DeclareTextCompositeCommand{\~}{PU}{\acircumflex}{\9036\253}% U+1EAB
 20546 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\351}% U+00E9
 20547 \DeclareTextCompositeCommand{\d}{PU}{e}{\9036\271}% U+1EB9
 20548 \DeclareTextCompositeCommand{\`}{PU}{e}{\80\350}% U+00E8
 20549 \DeclareTextCompositeCommand{\h}{PU}{e}{\9036\273}% U+1EBB
 20550 \DeclareTextCompositeCommand{\~}{PU}{e}{\9036\275}% U+1EBD
 20551 \DeclareTextCompositeCommand{\'}{PU}{\ecircumflex}{\9036\277}% U+1EBF
 20552 \DeclareTextCompositeCommand{\d}{PU}{\ecircumflex}{\9036\307}% U+1EC7
 20553 \DeclareTextCompositeCommand{\`}{PU}{\ecircumflex}{\9036\301}% U+1EC1
 20554 \DeclareTextCompositeCommand{\h}{PU}{\ecircumflex}{\9036\303}% U+1EC3
 20555 \DeclareTextCompositeCommand{\~}{PU}{\ecircumflex}{\9036\305}% U+1EC5
 20556 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}% U+00ED
 20557 \DeclareTextCompositeCommand{\d}{PU}{i}{\9036\313}% U+1ECB
 20558 \DeclareTextCompositeCommand{\`}{PU}{i}{\80\354}% U+00EC
 20559 \DeclareTextCompositeCommand{\h}{PU}{i}{\9036\311}% U+1EC9
 20560 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}% U+0129
 20561 \DeclareTextCompositeCommand{\'}{PU}{o}{\80\363}% U+00F3
 20562 \DeclareTextCompositeCommand{\d}{PU}{o}{\9036\315}% U+1ECD
 20563 \DeclareTextCompositeCommand{\`}{PU}{o}{\80\362}% U+00F2
 20564 \DeclareTextCompositeCommand{\h}{PU}{o}{\9036\317}% U+1ECF
 20565 \DeclareTextCompositeCommand{\~}{PU}{o}{\80\365}% U+00F5
 20566 \DeclareTextCompositeCommand{\'}{PU}{\ocircumflex}{\9036\321}% U+1ED1
 20567 \DeclareTextCompositeCommand{\d}{PU}{\ocircumflex}{\9036\331}% U+1ED9
 20568 \DeclareTextCompositeCommand{\`}{PU}{\ocircumflex}{\9036\323}% U+1ED3
 20569 \DeclareTextCompositeCommand{\h}{PU}{\ocircumflex}{\9036\325}% U+1ED5
 20570 \DeclareTextCompositeCommand{\~}{PU}{\ocircumflex}{\9036\327}% U+1ED7
 20571 \DeclareTextCompositeCommand{\'}{PU}{\ohorn}{\9036\333}% U+1EDB
 20572 \DeclareTextCompositeCommand{\d}{PU}{\ohorn}{\9036\343}% U+1EE3
 20573 \DeclareTextCompositeCommand{\`}{PU}{\ohorn}{\9036\335}% U+1EDD
 20574 \DeclareTextCompositeCommand{\h}{PU}{\ohorn}{\9036\337}% U+1EDF
 20575 \DeclareTextCompositeCommand{\~}{PU}{\ohorn}{\9036\341}% U+1EE1
 20576 \DeclareTextCompositeCommand{\'}{PU}{u}{\80\372}% U+00FA
 20577 \DeclareTextCompositeCommand{\d}{PU}{u}{\9036\345}% U+1EE5
 20578 \DeclareTextCompositeCommand{\`}{PU}{u}{\80\371}% U+00F9
 20579 \DeclareTextCompositeCommand{\h}{PU}{u}{\9036\347}% U+1EE7
 20580 \DeclareTextCompositeCommand{\~}{PU}{u}{\81\151}% U+0169
 20581 \DeclareTextCompositeCommand{\'}{PU}{\uhorn}{\9036\351}% U+1EE9
 20582 \DeclareTextCompositeCommand{\d}{PU}{\uhorn}{\9036\361}% U+1EF1
 20583 \DeclareTextCompositeCommand{\`}{PU}{\uhorn}{\9036\353}% U+1EEB
 20584 \DeclareTextCompositeCommand{\h}{PU}{\uhorn}{\9036\355}% U+1EED
 20585 \DeclareTextCompositeCommand{\~}{PU}{\uhorn}{\9036\357}% U+1EEF
 20586 \DeclareTextCompositeCommand{\'}{PU}{y}{\80\375}% U+00FD
 20587 \DeclareTextCompositeCommand{\d}{PU}{y}{\9036\365}% U+1EF5
 20588 \DeclareTextCompositeCommand{\`}{PU}{y}{\9036\363}% U+1EF3
 20589 \DeclareTextCompositeCommand{\h}{PU}{y}{\9036\367}% U+1EF7
 20590 \DeclareTextCompositeCommand{\~}{PU}{y}{\9036\371}% U+1EF9
 20591 \DeclareTextCompositeCommand{\'}{PU}{A}{\80\301}% U+00C1
 20592 \DeclareTextCompositeCommand{\d}{PU}{A}{\9036\240}% U+1EA0
 20593 \DeclareTextCompositeCommand{\`}{PU}{A}{\80\300}% U+00C0
 20594 \DeclareTextCompositeCommand{\h}{PU}{A}{\9036\242}% U+1EA2
 20595 \DeclareTextCompositeCommand{\~}{PU}{A}{\80\303}% U+00C3
 20596 \DeclareTextCompositeCommand{\'}{PU}{\ABREVE}{\9036\256}% U+1EAE
 20597 \DeclareTextCompositeCommand{\d}{PU}{\ABREVE}{\9036\266}% U+1EB6
 20598 \DeclareTextCompositeCommand{\`}{PU}{\ABREVE}{\9036\260}% U+1EB0
 20599 \DeclareTextCompositeCommand{\h}{PU}{\ABREVE}{\9036\262}% U+1EB2

20600 \DeclareTextCompositeCommand{\~}{PU}{\ABREVE}{\9036\264}% U+1EB4
 20601 \DeclareTextCompositeCommand{\'}{PU}{\ACIRCUMFLEX}{\9036\244}% U+1EA4
 20602 \DeclareTextCompositeCommand{\d}{PU}{\ACIRCUMFLEX}{\9036\254}% U+1EAC
 20603 \DeclareTextCompositeCommand{\`}{PU}{\ACIRCUMFLEX}{\9036\246}% U+1EA6
 20604 \DeclareTextCompositeCommand{\h}{PU}{\ACIRCUMFLEX}{\9036\250}% U+1EA8
 20605 \DeclareTextCompositeCommand{\~}{PU}{\ACIRCUMFLEX}{\9036\252}% U+1EAA
 20606 \DeclareTextCompositeCommand{\'}{PU}{E}{\80\311}% U+00C9
 20607 \DeclareTextCompositeCommand{\d}{PU}{E}{\9036\270}% U+1EB8
 20608 \DeclareTextCompositeCommand{\`}{PU}{E}{\80\310}% U+00C8
 20609 \DeclareTextCompositeCommand{\h}{PU}{E}{\9036\272}% U+1EBA
 20610 \DeclareTextCompositeCommand{\~}{PU}{E}{\9036\274}% U+1EBC
 20611 \DeclareTextCompositeCommand{\'}{PU}{\ECIRCUMFLEX}{\9036\276}% U+1EBE
 20612 \DeclareTextCompositeCommand{\d}{PU}{\ECIRCUMFLEX}{\9036\306}% U+1EC6
 20613 \DeclareTextCompositeCommand{\`}{PU}{\ECIRCUMFLEX}{\9036\300}% U+1EC0
 20614 \DeclareTextCompositeCommand{\h}{PU}{\ECIRCUMFLEX}{\9036\302}% U+1EC2
 20615 \DeclareTextCompositeCommand{\~}{PU}{\ECIRCUMFLEX}{\9036\304}% U+1EC4
 20616 \DeclareTextCompositeCommand{\'}{PU}{I}{\80\315}% U+00CD
 20617 \DeclareTextCompositeCommand{\d}{PU}{I}{\9036\312}% U+1ECA
 20618 \DeclareTextCompositeCommand{\`}{PU}{I}{\80\314}% U+00CC
 20619 \DeclareTextCompositeCommand{\h}{PU}{I}{\9036\310}% U+1EC8
 20620 \DeclareTextCompositeCommand{\~}{PU}{I}{\81\050}% U+0128
 20621 \DeclareTextCompositeCommand{\'}{PU}{O}{\80\323}% U+00D3
 20622 \DeclareTextCompositeCommand{\d}{PU}{O}{\9036\314}% U+1ECC
 20623 \DeclareTextCompositeCommand{\`}{PU}{O}{\80\322}% U+00D2
 20624 \DeclareTextCompositeCommand{\h}{PU}{O}{\9036\316}% U+1ECE
 20625 \DeclareTextCompositeCommand{\~}{PU}{O}{\80\325}% U+00D5
 20626 \DeclareTextCompositeCommand{\'}{PU}{\OCIRCUMFLEX}{\9036\320}% U+1ED0
 20627 \DeclareTextCompositeCommand{\d}{PU}{\OCIRCUMFLEX}{\9036\330}% U+1ED8
 20628 \DeclareTextCompositeCommand{\`}{PU}{\OCIRCUMFLEX}{\9036\322}% U+1ED2
 20629 \DeclareTextCompositeCommand{\h}{PU}{\OCIRCUMFLEX}{\9036\324}% U+1ED4
 20630 \DeclareTextCompositeCommand{\~}{PU}{\OCIRCUMFLEX}{\9036\326}% U+1ED6
 20631 \DeclareTextCompositeCommand{\'}{PU}{\OHORN}{\9036\332}% U+1EDA
 20632 \DeclareTextCompositeCommand{\d}{PU}{\OHORN}{\9036\342}% U+1EE2
 20633 \DeclareTextCompositeCommand{\`}{PU}{\OHORN}{\9036\334}% U+1EDC
 20634 \DeclareTextCompositeCommand{\h}{PU}{\OHORN}{\9036\336}% U+1EDE
 20635 \DeclareTextCompositeCommand{\~}{PU}{\OHORN}{\9036\340}% U+1EE0
 20636 \DeclareTextCompositeCommand{\'}{PU}{U}{\80\332}% U+00DA
 20637 \DeclareTextCompositeCommand{\d}{PU}{U}{\9036\344}% U+1EE4
 20638 \DeclareTextCompositeCommand{\`}{PU}{U}{\80\331}% U+00D9
 20639 \DeclareTextCompositeCommand{\h}{PU}{U}{\9036\346}% U+1EE6
 20640 \DeclareTextCompositeCommand{\~}{PU}{U}{\81\150}% U+0168
 20641 \DeclareTextCompositeCommand{\'}{PU}{\UHORN}{\9036\350}% U+1EE8
 20642 \DeclareTextCompositeCommand{\d}{PU}{\UHORN}{\9036\360}% U+1EF0
 20643 \DeclareTextCompositeCommand{\`}{PU}{\UHORN}{\9036\352}% U+1EEA
 20644 \DeclareTextCompositeCommand{\h}{PU}{\UHORN}{\9036\354}% U+1EEC
 20645 \DeclareTextCompositeCommand{\~}{PU}{\UHORN}{\9036\356}% U+1EEE
 20646 \DeclareTextCompositeCommand{\'}{PU}{Y}{\80\335}% U+00DD
 20647 \DeclareTextCompositeCommand{\d}{PU}{Y}{\9036\364}% U+1EF4
 20648 \DeclareTextCompositeCommand{\`}{PU}{Y}{\9036\362}% U+1EF2
 20649 \DeclareTextCompositeCommand{\h}{PU}{Y}{\9036\366}% U+1EF6
 20650 \DeclareTextCompositeCommand{\~}{PU}{Y}{\9036\370}% U+1EF8
 20651 </p>

51.4 PU encoding, additions for Arabi

This file is provided and maintained by Youssef Jabri.

20652 (*puarenc)

20653 % U+0621;afii57409;ARABIC LETTER HAMZA
 20654 \DeclareTextCommand{\hamza}{PU}{\86\041}% U+0621
 20655 % U+0622;afii57410;ARABIC LETTER ALEF WITH MADDA ABOVE
 20656 \DeclareTextCommand{\alefmadda}{PU}{\86\042}% U+0622
 20657 % U+0623;afii57411;ARABIC LETTER ALEF WITH HAMZA ABOVE
 20658 \DeclareTextCommand{\alefhamza}{PU}{\86\043}% U+0623
 20659 % U+0624;afii57412;ARABIC LETTER WAW WITH HAMZA ABOVE
 20660 \DeclareTextCommand{\wawhamza}{PU}{\86\044}% U+0624
 20661 % U+0625;afii57413;ARABIC LETTER ALEF WITH HAMZA BELOW
 20662 \DeclareTextCommand{\aleflowerhamza}{PU}{\86\045}% U+0625
 20663 % U+0626;afii57414;ARABIC LETTER YEH WITH HAMZA ABOVE
 20664 \DeclareTextCommand{\yahamza}{PU}{\86\046}% U+0626
 20665 % U+0627;afii57415;ARABIC LETTER ALEF
 20666 \DeclareTextCommand{\alef}{PU}{\86\047}% U+0627
 20667 % U+0628;afii57416;ARABIC LETTER BEH
 20668 \DeclareTextCommand{\baa}{PU}{\86\050}% U+0628
 20669 % U+0629;afii57417;ARABIC LETTER TEH MARBUTA
 20670 \DeclareTextCommand{\T}{PU}{\86\051}% U+0629
 20671 % U+062A;afii57418;ARABIC LETTER TEH
 20672 \DeclareTextCommand{\taa}{PU}{\86\052}% U+062A
 20673 % U+062B;afii57419;ARABIC LETTER THEH
 20674 \DeclareTextCommand{\thaa}{PU}{\86\053}% U+062B
 20675 % U+062C;afii57420;ARABIC LETTER JEEM
 20676 \DeclareTextCommand{\jeem}{PU}{\86\054}% U+062C
 20677 % U+062D;afii57421;ARABIC LETTER HAH
 20678 \DeclareTextCommand{\Haa}{PU}{\86\055}% U+062D
 20679 % U+062E;afii57422;ARABIC LETTER KHAH
 20680 \DeclareTextCommand{\kha}{PU}{\86\056}% U+062E
 20681 % U+062F;afii57423;ARABIC LETTER DAL
 20682 \DeclareTextCommand{\dal}{PU}{\86\057}% U+062F
 20683 % U+0630;afii57424;ARABIC LETTER THAL
 20684 \DeclareTextCommand{\dhal}{PU}{\86\060}% U+0630
 20685 % U+0631;afii57425;ARABIC LETTER REH
 20686 \DeclareTextCommand{\ra}{PU}{\86\061}% U+0631
 20687 % U+0632;afii57426;ARABIC LETTER ZAIN
 20688 \DeclareTextCommand{\zay}{PU}{\86\062}% U+0632
 20689 % U+0633;afii57427;ARABIC LETTER SEEN
 20690 \DeclareTextCommand{\seen}{PU}{\86\063}% U+0633
 20691 % U+0634;afii57428;ARABIC LETTER SHEEN
 20692 \DeclareTextCommand{\sheen}{PU}{\86\064}% U+0634
 20693 % U+0635;afii57429;ARABIC LETTER SAD
 20694 \DeclareTextCommand{\sad}{PU}{\86\065}% U+0635
 20695 % U+0636;afii57430;ARABIC LETTER DAD
 20696 \DeclareTextCommand{\dad}{PU}{\86\066}% U+0636
 20697 % U+0637;afii57431;ARABIC LETTER TAH
 20698 \DeclareTextCommand{\Ta}{PU}{\86\067}% U+0637
 20699 % U+0638;afii57432;ARABIC LETTER ZAH
 20700 \DeclareTextCommand{\za}{PU}{\86\070}% U+0638
 20701 % U+0639;afii57433;ARABIC LETTER AIN
 20702 \DeclareTextCommand{\ayn}{PU}{\86\071}% U+0639
 20703 % U+063A;afii57434;ARABIC LETTER GHAIN
 20704 \DeclareTextCommand{\ghayn}{PU}{\86\072}% U+063A
 20705 % U+0640;afii57440;ARABIC TATWEEL
 20706 \DeclareTextCommand{\tatweel}{PU}{\86\100}% U+0640
 20707 % U+0641;afii57441;ARABIC LETTER FEH
 20708 \DeclareTextCommand{\fa}{PU}{\86\101}% U+0641
 20709 % U+0642;afii57442;ARABIC LETTER QAF

20710 \DeclareTextCommand{\qaf}{PU}{\86\102}% U+0642
 20711 % U+0643;afii57443;ARABIC LETTER KAF
 20712 \DeclareTextCommand{\kaf}{PU}{\86\103}% U+0643
 20713 % U+0644;afii57444;ARABIC LETTER LAM
 20714 \DeclareTextCommand{\lam}{PU}{\86\104}% U+0644
 20715 % U+0645;afii57445;ARABIC LETTER MEEM
 20716 \DeclareTextCommand{\meem}{PU}{\86\105}% U+0645
 20717 % U+0646;afii57446;ARABIC LETTER NOON
 20718 \DeclareTextCommand{\nun}{PU}{\86\106}% U+0646
 20719 % U+0647;afii57470;ARABIC LETTER HEH
 20720 \DeclareTextCommand{\ha}{PU}{\86\107}% U+0647
 20721 % U+0648;afii57448;ARABIC LETTER WAW
 20722 \DeclareTextCommand{\waw}{PU}{\86\110}% U+0648
 20723 % U+0649;afii57449;ARABIC LETTER ALEF MAKSURA
 20724 \DeclareTextCommand{\alefmaqsura}{PU}{\86\111}% U+0649
 20725 % U+064A;afii57450;ARABIC LETTER YEH
 20726 \DeclareTextCommand{\ya}{PU}{\86\112}% U+064A

 20727 % U+064B;afii57451;ARABIC FATHATAN
 20728 \DeclareTextCommand{\nasb}{PU}{\86\113}% U+064B
 20729 % U+064C;afii57452;ARABIC DAMMATAN
 20730 \DeclareTextCommand{\raff}{PU}{\86\114}% U+064C
 20731 % U+064D;afii57453;ARABIC KASRATAN
 20732 \DeclareTextCommand{\jarr}{PU}{\86\115}% U+064D
 20733 % U+064E;afii57454;ARABIC FATHA
 20734 \DeclareTextCommand{\fatha}{PU}{\86\116}% U+064E
 20735 % U+064F;afii57455;ARABIC DAMMA
 20736 \DeclareTextCommand{\damma}{PU}{\86\117}% U+064F
 20737 % U+0650;afii57456;ARABIC KASRA
 20738 \DeclareTextCommand{\kasra}{PU}{\86\120}% U+0650
 20739 % U+0651;afii57457;ARABIC SHADDA
 20740 \DeclareTextCommand{\shadda}{PU}{\86\121}% U+0651
 20741 % U+0652;afii57458;ARABIC SUKUN
 20742 \DeclareTextCommand{\sukun}{PU}{\86\122}% U+0652

 Farsi
 20743 % U+067E ARABIC LETTER PEH; afii57506
 20744 \DeclareTextCommand{\peh}{PU}{\86\176}% U+067E
 20745 % U+0686 ARABIC LETTER TCHEH; afii57507
 20746 \DeclareTextCommand{\tcheh}{PU}{\86\206}% U+0686
 20747 % U+0698 ARABIC LETTER JEH; afii57508
 20748 \DeclareTextCommand{\jeh}{PU}{\86\230}% U+0698
 20749 % U+06A9 ARABIC LETTER KEHEH
 20750 \DeclareTextCommand{\farsikaf}{PU}{\86\251}% U+06A9
 20751 % U+06AF ARABIC LETTER GAF; afii57509
 20752 \DeclareTextCommand{\gaf}{PU}{\86\257}% U+06AF
 20753 % U+06CC ARABIC LETTER FARSI YEH
 20754 \DeclareTextCommand{\farsiya}{PU}{\86\314}% U+06CC

 20755 % U+200C ZERO WIDTH NON-JOINER; afii61664
 20756 \DeclareTextCommand{\ZWJ}{PU}{\9040\014}% U+200C
 20757 % U+200D ZERO WIDTH JOINER; afii301
 20758 \DeclareTextCommand{\textEncodingNoboundary}{PU}{\9040\015}% U+200D

 20759 (/puarenc)
 20760 (*psdextra)
 20761 \Hy@VersionCheck{psdextra.def}
 20762 \newcommand*{\psdmapshortnames}{%
 20763 \let\MVPlus\textMVPlus

20764 \let\MVComma\textMVComma
 20765 \let\MVMinus\textMVMinus
 20766 \let\MVPeriod\textMVPeriod
 20767 \let\MVDivision\textMVDivision
 20768 \let\MVZero\textMVZero
 20769 \let\MVOne\textMVOne
 20770 \let\MVTwo\textMVTwo
 20771 \let\MVThree\textMVThree
 20772 \let\MVFour\textMVFour
 20773 \let\MVFive\textMVFive
 20774 \let\MVSix\textMVSix
 20775 \let\MVSeven\textMVSeven
 20776 \let\MVEight\textMVEight
 20777 \let\MVNine\textMVNine
 20778 \let\MVAt\textMVAt
 20779 \let\copyright\textcopyright
 20780 \let\twosuperior\texttwosuperior
 20781 \let\threesuperior\textthreesuperior
 20782 \let\onesuperior\textonesuperior
 20783 \let\Thorn\textThorn
 20784 \let\thorn\textthorn
 20785 \let\hbar\texthbar
 20786 \let\hausaB\texthausaB
 20787 \let\hausaD\texthausaD
 20788 \let\hausaK\texthausaK
 20789 \let\barl\textbarl
 20790 \let\inve\textinve
 20791 \let\slashc\textslashc
 20792 \let\scripta\textscripta
 20793 \let\openo\textopeno
 20794 \let\rtaild\textrtaild
 20795 \let\reve\textreve
 20796 \let\schwa\textschwa
 20797 \let\niepsilon\textniepsilon
 20798 \let\revepsilon\textrevepsilon
 20799 \let\rhookrepsilon\texthookrepsilon
 20800 \let\scriptg\textscriptg
 20801 \let\scg\textscg
 20802 \let\ipagamma\textipagamma
 20803 \let\babygamma\textbabygamma
 20804 \let\bari\textbari
 20805 \let\niiota\textniiota
 20806 \let\sci\textsci
 20807 \let\scn\textscn
 20808 \let\niphi\textniphi
 20809 \let\longleg\textlongleg
 20810 \let\scr\textscr
 20811 \let\invscr\textinvscr
 20812 \let\esh\textesh
 20813 \let\baru\textbaru
 20814 \let\niupsilon\textniupsilon
 20815 \let\scriptv\textscriptv
 20816 \let\turnv\textturnv
 20817 \let\turnw\textturnw
 20818 \let\turny\textturny
 20819 \let\scy\textscy
 20820 \let\yogh\textyogh

20821 \let\glotstop\textglotstop
 20822 \let\revglotstop\textrevglotstop
 20823 \let\invglotstop\textinvglotstop
 20824 \let\Gamma\textGamma
 20825 \let\Delta\textDelta
 20826 \let\Theta\textTheta
 20827 \let\Lambda\textLambda
 20828 \let\Xi\textXi
 20829 \let\Pi\textPi
 20830 \let\Sigma\textSigma
 20831 \let\Upsilon\textUpsilon
 20832 \let\Phi\textPhi
 20833 \let\Psi\textPsi
 20834 \let\Omega\textOmega
 20835 \let\alpha\textalpha
 20836 \let\beta\textbeta
 20837 \let\gamma\textgamma
 20838 \let\delta\textdelta
 20839 \let\epsilon\textepsilon
 20840 \let\zeta\textzeta
 20841 \let\eta\texteta
 20842 \let\theta\texttheta
 20843 \let\iota\textiota
 20844 \let\kappa\textkappa
 20845 \let\lambda\textlambda
 20846 \let\mu\textmu
 20847 \let\mugreek\textmugreek
 20848 \let\nu\textnu
 20849 \let\xi\textxi
 20850 \let\pi\textpi
 20851 \let\rho\rho
 20852 \let\varsigma\textvarsigma
 20853 \let\sigma\textsigma
 20854 \let\tau\texttau
 20855 \let\upsilon\textupsilon
 20856 \let\phi\textphi
 20857 \let\chi\textchi
 20858 \let\psi\textpsi
 20859 \let\omega\textomega
 20860 \let\scd\textscd
 20861 \let\scu\textscu
 20862 \let\iinferior\textiinferior
 20863 \let\rinferior\extrinferior
 20864 \let\uiinferior\textuiinferior
 20865 \let\vinferior\textvinferior
 20866 \let\betainferior\textbetainferior
 20867 \let\gammainferior\textgammainferior
 20868 \let\rhoinferior\extrhoinferior
 20869 \let\phiinferior\textphiinferior
 20870 \let\chiinferior\textchiinferior
 20871 \let\barsci\textbarsci
 20872 \let\barp\textbarp
 20873 \let\barscu\textbarscu
 20874 \let\htrtaild\texthtrtaild
 20875 \let\dagger\textdagger
 20876 \let\bullet\textbullet
 20877 \let\hdotfor\texthdotfor

20878 \let\prime\textprime
 20879 \let\second\textsecond
 20880 \let\third\textthird
 20881 \let\backprime\textbackprime
 20882 \let\lefttherefore\textlefttherefore
 20883 \let\fourth\textfourth
 20884 \let\diamonddots\textdiamonddots
 20885 \let\zerosuperior\textzerosuperior
 20886 \let\isuperior\textisuperior
 20887 \let\foursuperior\textfoursuperior
 20888 \let\fivesuperior\textfivesuperior
 20889 \let\sixsuperior\textsixsuperior
 20890 \let\sevensuperior\textsevensuperior
 20891 \let\eightsuperior\texteightsuperior
 20892 \let\ninesuperior\textninesuperior
 20893 \let\plussuperior\textplussuperior
 20894 \let\minussuperior\textminussuperior
 20895 \let>equalsuperior\textequalsuperior
 20896 \let\parenleftsuperior\textparenleftsuperior
 20897 \let\parenrightsuperior\textparenrightsuperior
 20898 \let\nsuperior\textnsuperior
 20899 \let\zeroinferior\textzeroinferior
 20900 \let\oneinferior\textoneinferior
 20901 \let\twoinferior\texttwoinferior
 20902 \let\threeinferior\textthreeinferior
 20903 \let\fourinferior\textfourinferior
 20904 \let\fiveinferior\textfiveinferior
 20905 \let\sixinferior\textsixinferior
 20906 \let\seveninferior\textseveninferior
 20907 \let\eightinferior\texteightinferior
 20908 \let\nineinferior\textnineinferior
 20909 \let\plusinferior\textplusinferior
 20910 \let\minusinferior\textminusinferior
 20911 \let>equalsinferior\textequalsinferior
 20912 \let\parenleftinferior\textparenleftinferior
 20913 \let\parenrightinferior\textparenrightinferior
 20914 \let\ainferior\textainferior
 20915 \let\einferior\texteinferior
 20916 \let\oinferior\textoinferior
 20917 \let\xinferior\textxinferior
 20918 \let\schwainferior\textschwainferior
 20919 \let\hinferior\texthinferior
 20920 \let\kinferior\textkinferior
 20921 \let\linferior\textlinferior
 20922 \let\mininferior\textmininferior
 20923 \let\ninferior\textninferior
 20924 \let\pinferior\textpinferior
 20925 \let\sinferior\textsinferior
 20926 \let\tinferior\texttinferior
 20927 \let\Deleatur\textDeleatur
 20928 \let\hslash\texthslash
 20929 \let\Im\textIm
 20930 \let\ell\textell
 20931 \let\wp\textwp
 20932 \let\Re\textRe
 20933 \let\mho\textmho
 20934 \let\riota\textriota

20935 \let\Finv\textFinv
 20936 \let\aleph\textaleph
 20937 \let\beth\textbeth
 20938 \let\gimel\textgimel
 20939 \let\daleth\textdaleth
 20940 \let\xfax\textfax
 20941 \let\Game\textGame
 20942 \let\leftarrow\textleftarrow
 20943 \let\uparrow\textuparrow
 20944 \let\rightarrow\textrightarrow
 20945 \let\downarrow\textdownarrow
 20946 \let\leftrightarrow\textleftrightarrow
 20947 \let\updownarrow\textupdownarrow
 20948 \let\nwarrow\textnwarrow
 20949 \let\nearrow\textnearrow
 20950 \let\searrow\textsearrow
 20951 \let\swarrow\textswarrow
 20952 \let\nleftarrow\textnleftarrow
 20953 \let\nrightarrow\textnrightarrow
 20954 \let\twoheadleftarrow\texttwoheadleftarrow
 20955 \let\ntwoheadleftarrow\textntwoheadleftarrow
 20956 \let\twoheaduparrow\texttwoheaduparrow
 20957 \let\twoheadrightarrow\texttwoheadrightarrow
 20958 \let\ntwoheadrightarrow\textntwoheadrightarrow
 20959 \let\twoheaddownarrow\texttwoheaddownarrow
 20960 \let\leftarrowtail\textleftarrowtail
 20961 \let\rightarrowtail\textrightarrowtail
 20962 \let\mapsto\textmapsto
 20963 \let\hookleftarrow\texthookleftarrow
 20964 \let\hookrightarrow\texthookrightarrow
 20965 \let\looparrowleft\textlooparrowleft
 20966 \let\looparrowright\textlooparrowright
 20967 \let\leftrightharpoonup\textleftrightharpoonup
 20968 \let\lightning\textlightning
 20969 \let\dlsh\textdlsh
 20970 \let\curvearrowleft\textcurvearrowleft
 20971 \let\curvearrowright\textcurvearrowright
 20972 \let\leftharpoonup\textleftharpoonup
 20973 \let\leftharpoondown\textleftharpoondown
 20974 \let\upharpoonright\textupharpoonright
 20975 \let\upharpoonleft\textupharpoonleft
 20976 \let\rightharpoonup\text\rightharpoonup
 20977 \let\rightharpoondown\text\rightharpoondown
 20978 \let\downharpoonright\textdownharpoonright
 20979 \let\downharpoonleft\textdownharpoonleft
 20980 \let\rightleftarrows\textrightleftarrows
 20981 \let\updownarrows\textupdownarrows
 20982 \let\leftrightarrows\textleftrightarrows
 20983 \let\leftleftarrows\textleftleftarrows
 20984 \let\upuparrows\textupuparrows
 20985 \let\righttrightarrows\textrighttrightarrows
 20986 \let\downdownarrows\textdowndownarrows
 20987 \let\leftrightharpoons\textleftrightharpoons
 20988 \let\rightleftharpoons\textrightleftharpoons
 20989 \let\NLeftarrow\textNLeftarrow
 20990 \let\NLeftarrow\textNLeftarrow
 20991 \let\Nrightarrow\textNrightarrow

20992 `\let\Leftarrow\textLeftarrow`
 20993 `\let\Uparrow\textUparrow`
 20994 `\let\Rightarrow\textRightarrow`
 20995 `\let\Downarrow\textDownarrow`
 20996 `\let\Leftrightarrow\textLeftrightarrow`
 20997 `\let\Updownarrow\textUpdownarrow`
 20998 `\let\Nwarrow\textNwarrow`
 20999 `\let\Nearrow\textNearrow`
 21000 `\let\searrow\textsearrow`
 21001 `\let\swarrow\textswarrow`
 21002 `\let\Lleftarrow\textLleftarrow`
 21003 `\let\Rrightarrow\textRrightarrow`
 21004 `\let\leftsquigarrow\textleftsquigarrow`
 21005 `\let\rightsquigarrow\textright squigarrow`
 21006 `\let\dashleftarrow\textdashleftarrow`
 21007 `\let\dasheduparrow\textdasheduparrow`
 21008 `\let\dashrightarrow\textdashrightarrow`
 21009 `\let\dasheddownarrow\textdasheddownarrow`
 21010 `\let\pointer\textpointer`
 21011 `\let\downuparrows\textdownuparrows`
 21012 `\let\leftarrowtriangle\textleftarrowtriangle`
 21013 `\let\rightarrowtriangle\textrightarrowtriangle`
 21014 `\let\leftrightarrowtriangle\textleftrightarrowtriangle`
 21015 `\let\forall\textforall`
 21016 `\let\complement\textcomplement`
 21017 `\let\partial\textpartial`
 21018 `\let\exists\textexists`
 21019 `\let\nexists\textnexists`
 21020 `\let\emptyset\textemptyset`
 21021 `\let\triangle\texttriangle`
 21022 `\let\nabla\textnabla`
 21023 `\let\in\textin`
 21024 `\let\notin\textnotin`
 21025 `\let\smallin\textsmallin`
 21026 `\let\ni\textni`
 21027 `\let\notowner\textnotowner`
 21028 `\let\smallowns\textsmallowns`
 21029 `\let\prod\textprod`
 21030 `\let\amalg\textamalg`
 21031 `\let\sum\textsum`
 21032 `\let\mp\textmp`
 21033 `\let\dotplus\textdotplus`
 21034 `\let\Divides\textDivides`
 21035 `\let\DividesNot\textDividesNot`
 21036 `\let\setminus\textsetminus`
 21037 `\let\ast\textast`
 21038 `\let\circ\textcirc`
 21039 `\let\surd\textsurd`
 21040 `\let\propto\textpropto`
 21041 `\let\infty\textinfty`
 21042 `\let\angle\textangle`
 21043 `\let\measuredangle\textmeasuredangle`
 21044 `\let\sphericalangle\textsphericalangle`
 21045 `\let\mid\textmid`
 21046 `\let\nmid\textnmid`
 21047 `\let\parallel\textparallel`
 21048 `\let\nparallel\textnparallel`

21049 $\backslash\mathrm{let}\backslash\mathrm{wedge}\backslash\mathrm{textwedge}$
 21050 $\backslash\mathrm{let}\backslash\mathrm{owedge}\backslash\mathrm{textowedge}$
 21051 $\backslash\mathrm{let}\backslash\mathrm{vee}\backslash\mathrm{textvee}$
 21052 $\backslash\mathrm{let}\backslash\mathrm{ovee}\backslash\mathrm{textovee}$
 21053 $\backslash\mathrm{let}\backslash\mathrm{cap}\backslash\mathrm{textcap}$
 21054 $\backslash\mathrm{let}\backslash\mathrm{cup}\backslash\mathrm{textcup}$
 21055 $\backslash\mathrm{let}\backslash\mathrm{int}\backslash\mathrm{textint}$
 21056 $\backslash\mathrm{let}\backslash\mathrm{iint}\backslash\mathrm{textiint}$
 21057 $\backslash\mathrm{let}\backslash\mathrm{iiint}\backslash\mathrm{textiiint}$
 21058 $\backslash\mathrm{let}\backslash\mathrm{ooint}\backslash\mathrm{textoint}$
 21059 $\backslash\mathrm{let}\backslash\mathrm{oiint}\backslash\mathrm{textoiint}$
 21060 $\backslash\mathrm{let}\backslash\mathrm{oointclockwise}\backslash\mathrm{textointclockwise}$
 21061 $\backslash\mathrm{let}\backslash\mathrm{oointctrlockwise}\backslash\mathrm{textointctrlockwise}$
 21062 $\backslash\mathrm{let}\backslash\mathrm{therefore}\backslash\mathrm{texttherefore}$
 21063 $\backslash\mathrm{let}\backslash\mathrm{because}\backslash\mathrm{textbecause}$
 21064 $\backslash\mathrm{let}\backslash\mathrm{vdotdot}\backslash\mathrm{textvdotdot}$
 21065 $\backslash\mathrm{let}\backslash\mathrm{sqaredots}\backslash\mathrm{textsqaredots}$
 21066 $\backslash\mathrm{let}\backslash\mathrm{dotminus}\backslash\mathrm{textdotminus}$
 21067 $\backslash\mathrm{let}\backslash\mathrm{eqcolon}\backslash\mathrm{texteqcolon}$
 21068 $\backslash\mathrm{let}\backslash\mathrm{sim}\backslash\mathrm{textsim}$
 21069 $\backslash\mathrm{let}\backslash\mathrm{backsim}\backslash\mathrm{textbacksim}$
 21070 $\backslash\mathrm{let}\backslash\mathrm{nbacksim}\backslash\mathrm{textnbacksim}$
 21071 $\backslash\mathrm{let}\backslash\mathrm{wr}\backslash\mathrm{textwr}$
 21072 $\backslash\mathrm{let}\backslash\mathrm{nsim}\backslash\mathrm{textnsim}$
 21073 $\backslash\mathrm{let}\backslash\mathrm{eqsim}\backslash\mathrm{texteqsim}$
 21074 $\backslash\mathrm{let}\backslash\mathrm{neqsim}\backslash\mathrm{textneqsim}$
 21075 $\backslash\mathrm{let}\backslash\mathrm{simeq}\backslash\mathrm{textsimeq}$
 21076 $\backslash\mathrm{let}\backslash\mathrm{nsimeq}\backslash\mathrm{textnsimeq}$
 21077 $\backslash\mathrm{let}\backslash\mathrm{cong}\backslash\mathrm{textcong}$
 21078 $\backslash\mathrm{let}\backslash\mathrm{ncong}\backslash\mathrm{textncong}$
 21079 $\backslash\mathrm{let}\backslash\mathrm{approx}\backslash\mathrm{textapprox}$
 21080 $\backslash\mathrm{let}\backslash\mathrm{napprox}\backslash\mathrm{textnapprox}$
 21081 $\backslash\mathrm{let}\backslash\mathrm{approxeq}\backslash\mathrm{textapproxeq}$
 21082 $\backslash\mathrm{let}\backslash\mathrm{napproxeq}\backslash\mathrm{textnapproxeq}$
 21083 $\backslash\mathrm{let}\backslash\mathrm{triplesim}\backslash\mathrm{texttriplesim}$
 21084 $\backslash\mathrm{let}\backslash\mathrm{ntriplesim}\backslash\mathrm{textntriplesim}$
 21085 $\backslash\mathrm{let}\backslash\mathrm{backcong}\backslash\mathrm{textbackcong}$
 21086 $\backslash\mathrm{let}\backslash\mathrm{nbackcong}\backslash\mathrm{textnbackcong}$
 21087 $\backslash\mathrm{let}\backslash\mathrm{asympt}\backslash\mathrm{textasympt}$
 21088 $\backslash\mathrm{let}\backslash\mathrm{nasympt}\backslash\mathrm{textnasympt}$
 21089 $\backslash\mathrm{let}\backslash\mathrm{Bumpeq}\backslash\mathrm{textBumpeq}$
 21090 $\backslash\mathrm{let}\backslash\mathrm{nBumpeq}\backslash\mathrm{textnBumpeq}$
 21091 $\backslash\mathrm{let}\backslash\mathrm{bumpeq}\backslash\mathrm{textbumpeq}$
 21092 $\backslash\mathrm{let}\backslash\mathrm{nbumpeq}\backslash\mathrm{textnbumpeq}$
 21093 $\backslash\mathrm{let}\backslash\mathrm{doteq}\backslash\mathrm{textdoteq}$
 21094 $\backslash\mathrm{let}\backslash\mathrm{ndoteq}\backslash\mathrm{textndoteq}$
 21095 $\backslash\mathrm{let}\backslash\mathrm{doteqdot}\backslash\mathrm{textdoteqdot}$
 21096 $\backslash\mathrm{let}\backslash\mathrm{nDoteq}\backslash\mathrm{textnDoteq}$
 21097 $\backslash\mathrm{let}\backslash\mathrm{fallingdoteq}\backslash\mathrm{textfallingdoteq}$
 21098 $\backslash\mathrm{let}\backslash\mathrm{nfalingdoteq}\backslash\mathrm{textnfalingdoteq}$
 21099 $\backslash\mathrm{let}\backslash\mathrm{risingdoteq}\backslash\mathrm{textrisingdoteq}$
 21100 $\backslash\mathrm{let}\backslash\mathrm{nrisingdoteq}\backslash\mathrm{textnrisingdoteq}$
 21101 $\backslash\mathrm{let}\backslash\mathrm{colonequals}\backslash\mathrm{textcolonequals}$
 21102 $\backslash\mathrm{let}\backslash\mathrm{equalscolon}\backslash\mathrm{textequalscolon}$
 21103 $\backslash\mathrm{let}\backslash\mathrm{eqcirc}\backslash\mathrm{texteqcirc}$
 21104 $\backslash\mathrm{let}\backslash\mathrm{neqcirc}\backslash\mathrm{textneqcirc}$
 21105 $\backslash\mathrm{let}\backslash\mathrm{circeq}\backslash\mathrm{textcirceq}$

21106 `\let\ncirceq\textncirceq`
 21107 `\let\hateq\texthateq`
 21108 `\let\nhateq\textnhateq`
 21109 `\let\triangleeq\texttriangleeq`
 21110 `\let\neq\textneq`
 21111 `\let\ne\textne`
 21112 `\let\equiv\textequiv`
 21113 `\let\nequiv\textnequiv`
 21114 `\let\leq\textleq`
 21115 `\let\le\textle`
 21116 `\let\geq\textgeq`
 21117 `\let\ge\textge`
 21118 `\let\leqq\textleqq`
 21119 `\let\leqq\textnleqq`
 21120 `\let\geqq\textgeqq`
 21121 `\let\geqq\textngeqq`
 21122 `\let\lneqq\textlneqq`
 21123 `\let\gneqq\textgneqq`
 21124 `\let\ll\textll`
 21125 `\let\nll\textnll`
 21126 `\let\gg\textgg`
 21127 `\let\ngg\textngg`
 21128 `\let\between\textbetween`
 21129 `\let\nless\textnless`
 21130 `\let\ngtr\textngtr`
 21131 `\let\nleq\textnleq`
 21132 `\let\ngel\textngel`
 21133 `\let\lesssim\textlesssim`
 21134 `\let\gtrsim\textgtrsim`
 21135 `\let\nlesssim\textnlesssim`
 21136 `\let\ngtrsim\textngtrsim`
 21137 `\let\lessgtr\textlessgtr`
 21138 `\let\gtrless\textgtrless`
 21139 `\let\ngtrless\textngtrless`
 21140 `\let\nlessgtr\textnlessgtr`
 21141 `\let\prec\textprec`
 21142 `\let\succ\textsucc`
 21143 `\let\preccurlyeq\textpreccurlyeq`
 21144 `\let\succcurlyeq\textsucccurlyeq`
 21145 `\let\prec\textprec`
 21146 `\let\prec\textprec`
 21147 `\let\succsim\textsuccsim`
 21148 `\let\nsuccsim\textnsuccsim`
 21149 `\let\prec\textprec`
 21150 `\let\succ\textsucc`
 21151 `\let\subset\textsubset`
 21152 `\let\supset\textsupset`
 21153 `\let\nsubset\textnsubset`
 21154 `\let\nsupset\textnsupset`
 21155 `\let\subseteq\textsubseteq`
 21156 `\let\supseteq\textsupseteq`
 21157 `\let\nsubseteq\textnsubseteq`
 21158 `\let\nsupseteq\textnsupseteq`
 21159 `\let\subsetneq\textsubsetneq`
 21160 `\let\supsetneq\textsupsetneq`
 21161 `\let\cupdot\textcupdot`
 21162 `\let\cupplus\textcupplus`

21163 $\backslash\text{let}\backslash\text{sqsubset}\backslash\text{textsqssubset}$
 21164 $\backslash\text{let}\backslash\text{nsqsubset}\backslash\text{textnsqsubset}$
 21165 $\backslash\text{let}\backslash\text{sqsupset}\backslash\text{textsqsupset}$
 21166 $\backslash\text{let}\backslash\text{nsqsupset}\backslash\text{textnsqsupset}$
 21167 $\backslash\text{let}\backslash\text{sqsubseteq}\backslash\text{textsqssubseq}$
 21168 $\backslash\text{let}\backslash\text{nsqsubseteq}\backslash\text{textnsqsubseq}$
 21169 $\backslash\text{let}\backslash\text{sqsupseteq}\backslash\text{textsqsupseq}$
 21170 $\backslash\text{let}\backslash\text{nsqsupseteq}\backslash\text{textnsqsupseq}$
 21171 $\backslash\text{let}\backslash\text{sqcap}\backslash\text{textsqqcap}$
 21172 $\backslash\text{let}\backslash\text{sqcup}\backslash\text{textsqqcup}$
 21173 $\backslash\text{let}\backslash\text{oplus}\backslash\text{textoplus}$
 21174 $\backslash\text{let}\backslash\text{ominus}\backslash\text{textominus}$
 21175 $\backslash\text{let}\backslash\text{otimes}\backslash\text{textotimes}$
 21176 $\backslash\text{let}\backslash\text{oslash}\backslash\text{textoslash}$
 21177 $\backslash\text{let}\backslash\text{odot}\backslash\text{textodot}$
 21178 $\backslash\text{let}\backslash\text{circledcirc}\backslash\text{textcircledcirc}$
 21179 $\backslash\text{let}\backslash\text{circledast}\backslash\text{textcircledast}$
 21180 $\backslash\text{let}\backslash\text{circleddash}\backslash\text{textcircleddash}$
 21181 $\backslash\text{let}\backslash\text{boxplus}\backslash\text{textboxplus}$
 21182 $\backslash\text{let}\backslash\text{boxminus}\backslash\text{textboxminus}$
 21183 $\backslash\text{let}\backslash\text{boxtimes}\backslash\text{textboxtimes}$
 21184 $\backslash\text{let}\backslash\text{boxdot}\backslash\text{textboxdot}$
 21185 $\backslash\text{let}\backslash\text{vdash}\backslash\text{textvdash}$
 21186 $\backslash\text{let}\backslash\text{dashv}\backslash\text{texdashv}$
 21187 $\backslash\text{let}\backslash\text{ndashv}\backslash\text{textndashv}$
 21188 $\backslash\text{let}\backslash\text{top}\backslash\text{texttop}$
 21189 $\backslash\text{let}\backslash\text{ndownvdash}\backslash\text{textndownvdash}$
 21190 $\backslash\text{let}\backslash\text{bot}\backslash\text{textbot}$
 21191 $\backslash\text{let}\backslash\text{nupvdash}\backslash\text{textnupvdash}$
 21192 $\backslash\text{let}\backslash\text{vDash}\backslash\text{textvDash}$
 21193 $\backslash\text{let}\backslash\text{VDash}\backslash\text{textVDash}$
 21194 $\backslash\text{let}\backslash\text{Vvdash}\backslash\text{textVvdash}$
 21195 $\backslash\text{let}\backslash\text{nVdash}\backslash\text{textnVdash}$
 21196 $\backslash\text{let}\backslash\text{VDash}\backslash\text{textVDash}$
 21197 $\backslash\text{let}\backslash\text{nvdash}\backslash\text{textnvdash}$
 21198 $\backslash\text{let}\backslash\text{nvDash}\backslash\text{textnvDash}$
 21199 $\backslash\text{let}\backslash\text{nVdash}\backslash\text{textnVdash}$
 21200 $\backslash\text{let}\backslash\text{nVDash}\backslash\text{textnVDash}$
 21201 $\backslash\text{let}\backslash\text{lhs}\backslash\text{textrhs}$
 21202 $\backslash\text{let}\backslash\text{rhd}\backslash\text{textrhd}$
 21203 $\backslash\text{let}\backslash\text{unlhd}\backslash\text{textunlhd}$
 21204 $\backslash\text{let}\backslash\text{unrhd}\backslash\text{textunrhd}$
 21205 $\backslash\text{let}\backslash\text{multimapdotbothA}\backslash\text{textmultimapdotbothA}$
 21206 $\backslash\text{let}\backslash\text{multimapdotbothB}\backslash\text{textmultimapdotbothB}$
 21207 $\backslash\text{let}\backslash\text{multimap}\backslash\text{textmultimap}$
 21208 $\backslash\text{let}\backslash\text{veebar}\backslash\text{textveebar}$
 21209 $\backslash\text{let}\backslash\text{barwedge}\backslash\text{textbarwedge}$
 21210 $\backslash\text{let}\backslash\text{star}\backslash\text{textstar}$
 21211 $\backslash\text{let}\backslash\text{divideontimes}\backslash\text{textdivideontimes}$
 21212 $\backslash\text{let}\backslash\text{bowtie}\backslash\text{textbowtie}$
 21213 $\backslash\text{let}\backslash\text{ltimes}\backslash\text{textrimes}$
 21214 $\backslash\text{let}\backslash\text{rtimes}\backslash\text{textrimes}$
 21215 $\backslash\text{let}\backslash\text{leftthreetimes}\backslash\text{textleftthreetimes}$
 21216 $\backslash\text{let}\backslash\text{rightthreetimes}\backslash\text{textrightthreetimes}$
 21217 $\backslash\text{let}\backslash\text{backsimeq}\backslash\text{textbacksimeq}$
 21218 $\backslash\text{let}\backslash\text{nbacksimeq}\backslash\text{textnbacksimeq}$
 21219 $\backslash\text{let}\backslash\text{curlyvee}\backslash\text{textcurlyvee}$

21220 `\let\curlywedge\textcurlywedge`
21221 `\let\Subset\textSubset`
21222 `\let\NSubset\textNSubset`
21223 `\let\Supset\textSupset`
21224 `\let\NSupset\textNSupset`
21225 `\let\Cap\textCap`
21226 `\let\Cup\textCup`
21227 `\let\pitchfork\textpitchfork`
21228 `\let\lessdot\textlessdot`
21229 `\let\gtrdot\textgtrdot`
21230 `\let\lll\textlll`
21231 `\let\ggg\textggg`
21232 `\let\lesseqgtr\textlesseqgtr`
21233 `\let\gtreqless\textgtreqless`
21234 `\let\curlyeqprec\textcurlyeqprec`
21235 `\let\ncurlyeqprec\textncurlyeqprec`
21236 `\let\curlyeqsucc\textcurlyeqsucc`
21237 `\let\ncurlyeqsucc\textncurlyeqsucc`
21238 `\let\preccurlyeq\textpreccurlyeq`
21239 `\let\nsucccurlyeq\textnsucccurlyeq`
21240 `\let\sqsubseteq\textsqsubseteq`
21241 `\let\sqsupseteq\textsqsupseteq`
21242 `\let\sqsubsetneq\textsqsubsetneq`
21243 `\let\sqsupsetneq\textsqsupsetneq`
21244 `\let\lnsim\textlnsim`
21245 `\let\gnsim\textgnsim`
21246 `\let\precnsim\textprecnsim`
21247 `\let\succnsim\textsuccnsim`
21248 `\let\triangleleft\texttriangleleft`
21249 `\let\triangleright\texttriangleright`
21250 `\let\trianglelefteq\texttrianglelefteq`
21251 `\let\trianglerighteq\texttrianglerighteq`
21252 `\let\vdots\textvdots`
21253 `\let\cdots\textcdots`
21254 `\let\udots\textudots`
21255 `\let\ddots\textddots`
21256 `\let\barin\textbarin`
21257 `\let\diameter\textdiameter`
21258 `\let\backneg\textbackneg`
21259 `\let\wasylozenge\textwasylozenge`
21260 `\let\invbackneg\textinvbackneg`
21261 `\let\clock\textclock`
21262 `\let\ulcorner\textulcorner`
21263 `\let\urcorner\texturcorner`
21264 `\let\llcorner\textllcorner`
21265 `\let\lrcorner\textlrcorner`
21266 `\let\frown\textfrown`
21267 `\let\smile\textsmile`
21268 `\let\Keyboard\textKeyboard`
21269 `\let\langle\textlangle`
21270 `\let\rangle\textrangle`
21271 `\let\APLinv\textAPLinv`
21272 `\let\Tumbler\textTumbler`
21273 `\let\notslash\textnotslash`
21274 `\let\notbackslash\textnotbackslash`
21275 `\let\boxbackslash\textboxbackslash`
21276 `\let\APLleftarrowbox\textAPLleftarrowbox`

21277 \let\APLrightarrowbox\textAPLrightarrowbox
 21278 \let\APLuparrowbox\textAPLuparrowbox
 21279 \let\APLdownarrowbox\textAPLdownarrowbox
 21280 \let\APLinput\textAPLinput
 21281 \let\Request\textRequest
 21282 \let\Beam\textBeam
 21283 \let\hexagon\texthexagon
 21284 \let\APLbox\textAPLbox
 21285 \let\ForwardToIndex\textForwardToIndex
 21286 \let\RewindToIndex\textRewindToIndex
 21287 \let\bbslash\textbbslash
 21288 \let\CircledA\textCircledA
 21289 \let\CleaningF\textCleaningF
 21290 \let\CleaningFF\textCleaningFF
 21291 \let\CleaningP\textCleaningP
 21292 \let\CleaningPP\textCleaningPP
 21293 \let\CuttingLine\textCuttingLine
 21294 \let\UParrow\textUParrow
 21295 \let\bigtriangleup\textbigtriangleup
 21296 \let\Forward\textForward
 21297 \let\triangleright\texttriangleright
 21298 \let\RHD\textRHD
 21299 \let\DOWNarrow\textDOWNarrow
 21300 \let\bigtriangledown\textbigtriangledown
 21301 \let\Rewind\textRewind
 21302 \let\triangleleft\texttriangleleft
 21303 \let\LHD\textLHD
 21304 \let\diamond\textdiamond
 21305 \let\lozenge\textlozenge
 21306 \let\LEFTCIRCLE\textLEFTCIRCLE
 21307 \let\RIGHTCIRCLE\textRIGHTCIRCLE
 21308 \let\openbullet\textopenbullet
 21309 \let\boxbar\textboxbar
 21310 \let\bigcircle\textbigcircle
 21311 \let\Cloud\textCloud
 21312 \let\FiveStar\textFiveStar
 21313 \let\FiveStarOpen\textFiveStarOpen
 21314 \let\Phone\textPhone
 21315 \let\boxempty\textboxempty
 21316 \let\Checkedbox\textCheckedbox
 21317 \let\Crossedbox\textCrossedbox
 21318 \let\Coffeecup\textCoffeecup
 21319 \let\HandCuffLeft\textHandCuffLeft
 21320 \let\HandCuffRight\textHandCuffRight
 21321 \let\HandLeft\textHandLeft
 21322 \let\HandRight\textHandRight
 21323 \let\Radioactivity\textRadioactivity
 21324 \let\Biohazard\textBiohazard
 21325 \let\Ankh\textAnkh
 21326 \let\YinYang\textYinYang
 21327 \let\frownie\textfrownie
 21328 \let\smiley\textsmiley
 21329 \let\blacksmiley\textblacksmiley
 21330 \let\sun\textsun
 21331 \let\leftmoon\textleftmoon
 21332 \let\rightmoon\textrightmoon
 21333 \let\mercury\textmercury

21334 \let\earth\textearth
 21335 \let\male\textmale
 21336 \let\jupiter\textjupiter
 21337 \let\saturn\textsaturn
 21338 \let\uranus\texturanus
 21339 \let\neptune\textneptune
 21340 \let\pluto\textpluto
 21341 \let\aries\textaries
 21342 \let\taurus\texttaurus
 21343 \let\gemini\textgemini
 21344 \let\cancer\textcancer
 21345 \let\leo\textleo
 21346 \let\virgo\textvirgo
 21347 \let\libra\textlibra
 21348 \let\scorpio\textscorpio
 21349 \let\sagittarius\textsagittarius
 21350 \let\capricornus\textcapricornus
 21351 \let\aquarius\textaquarius
 21352 \let\pisces\textpisces
 21353 \let\quarternote\textquarternote
 21354 \let\twonotes\texttwonotes
 21355 \let\sixteenthnote\textsixteenthnote
 21356 \let\flat\textflat
 21357 \let\natural\textnatural
 21358 \let\sharp\textsharp
 21359 \let\recycle\textrecycle
 21360 \let\Wheelchair\textWheelchair
 21361 \let\Flag\textFlag
 21362 \let\MineSign\textMineSign
 21363 \let\ds\military\textds\military
 21364 \let\ds\medical\textds\medical
 21365 \let\ds\juridical\textds\juridical
 21366 \let\ds\chemical\textds\chemical
 21367 \let\ds\biological\textds\biological
 21368 \let\ds\commercial\textds\commercial
 21369 \let\manstar\textmanstar
 21370 \let\danger\textdanger
 21371 \let\FemaleFemale\textFemaleFemale
 21372 \let\MaleMale\textMaleMale
 21373 \let\FemaleMale\textFemaleMale
 21374 \let\Hermaphrodite\textHermaphrodite
 21375 \let\Neutral\textNeutral
 21376 \let\hexstar\texthexstar
 21377 \let\SunCload\textSunCload
 21378 \let\Rain\textRain
 21379 \let\noway\textnoway
 21380 \let\Mountain\textMountain
 21381 \let\Tent\textTent
 21382 \let\ScissorRight\textScissorRight
 21383 \let\ScissorRightBrokenTop\textScissorRightBrokenTop
 21384 \let\ScissorHollowRight\textScissorHollowRight
 21385 \let\PhoneHandset\textPhoneHandset
 21386 \let\Tape\textTape
 21387 \let\Plane\textPlane
 21388 \let\Envelope\textEnvelope
 21389 \let\Peace\textPeace
 21390 \let\WritingHand\textWritingHand

21391 \let\PencilRightDown\textPencilRightDown
 21392 \let\PencilRight\textPencilRight
 21393 \let\PencilRightUp\textPencilRightUp
 21394 \let\NibRight\textNibRight
 21395 \let\NibSolidRight\textNibSolidRight
 21396 \let\Checkmark\textCheckmark
 21397 \let\CheckmarkBold\textCheckmarkBold
 21398 \let\XSolid\textXSolid
 21399 \let\XSolidBold\textXSolidBold
 21400 \let\XSolidBrush\textXSolidBrush
 21401 \let\PlusOutline\textPlusOutline
 21402 \let\Plus\textPlus
 21403 \let\PlusThinCenterOpen\textPlusThinCenterOpen
 21404 \let\PlusCenterOpen\textPlusCenterOpen
 21405 \let\Cross\textCross
 21406 \let\CrossOpenShadow\textCrossOpenShadow
 21407 \let\CrossOutline\textCrossOutline
 21408 \let\CrossMaltese\textCrossMaltese
 21409 \let\DavidStar\textDavidStar
 21410 \let\FourAsterisk\textFourAsterisk
 21411 \let\JackStar\textJackStar
 21412 \let\JackStarBold\textJackStarBold
 21413 \let\ClowerTips\textClowerTips
 21414 \let\FourStar\textFourStar
 21415 \let\FourStarOpen\textFourStarOpen
 21416 \let\FiveStarOpenCircled\textFiveStarOpenCircled
 21417 \let\FiveStarCenterOpen\textFiveStarCenterOpen
 21418 \let\FiveStarOpenDotted\textFiveStarOpenDotted
 21419 \let\FiveStarOutline\textFiveStarOutline
 21420 \let\FiveStarOutlineHeavy\textFiveStarOutlineHeavy
 21421 \let\FiveStarConvex\textFiveStarConvex
 21422 \let\FiveStarShadow\textFiveStarShadow
 21423 \let\AsteriskBold\textAsteriskBold
 21424 \let\AsteriskCenterOpen\textAsteriskCenterOpen
 21425 \let\EightStarTaper\textEightStarTaper
 21426 \let\EightStarConvex\textEightStarConvex
 21427 \let\SixStar\textSixStar
 21428 \let\EightStar\textEightStar
 21429 \let\EightStarBold\textEightStarBold
 21430 \let\TwelveStar\textTwelveStar
 21431 \let\SixteenStarLight\textSixteenStarLight
 21432 \let\SixFlowerPetalRemoved\textSixFlowerPetalRemoved
 21433 \let\SixFlowerOpenCenter\textSixFlowerOpenCenter
 21434 \let\Asterisk\textAsterisk
 21435 \let\SixFlowerAlternate\textSixFlowerAlternate
 21436 \let\FiveFlowerPetal\textFiveFlowerPetal
 21437 \let\FiveFlowerOpen\textFiveFlowerOpen
 21438 \let\EightFlowerPetal\textEightFlowerPetal
 21439 \let\SunshineOpenCircled\textSunshineOpenCircled
 21440 \let\SixFlowerAltPetal\textSixFlowerAltPetal
 21441 \let\SnowflakeChevron\textSnowflakeChevron
 21442 \let\Snowflake\textSnowflake
 21443 \let\SnowflakeChevronBold\textSnowflakeChevronBold
 21444 \let\Sparkle\textSparkle
 21445 \let\SparkleBold\textSparkleBold
 21446 \let\AsteriskRoundedEnds\textAsteriskRoundedEnds
 21447 \let\EightFlowerPetalRemoved\textEightFlowerPetalRemoved

21448 \let\EightAsterisk\textEightAsterisk
 21449 \let\CircleShadow\textCircleShadow
 21450 \let\SquareShadowBottomRight\textSquareShadowBottomRight
 21451 \let\SquareTopRight\textSquareTopRight
 21452 \let\SquareCastShadowBottomRight\textSquareCastShadowBottomRight
 21453 \let\SquareCastShadowTopRight\textSquareCastShadowTopRight
 21454 \let\DiamandSolid\textDiamandSolid
 21455 \let\RectangleThin\textRectangleThin
 21456 \let\Rectangle\textRectangle
 21457 \let\RectangleBold\textRectangleBold
 21458 \let\perp\textperp
 21459 \let\notperp\textnotperp
 21460 \let\veedot\textveedot
 21461 \let\wedgedot\textwedgedot
 21462 \let\leftspoon\textleftspoon
 21463 \let\lbrackdbl\textlbrackdbl
 21464 \let\rbrackdbl\textrbrackdbl
 21465 \let\circlearrowleft\textcirclearrowleft
 21466 \let\circlearrowright\textcirclearrowright
 21467 \let\longleftarrow\textlongleftarrow
 21468 \let\longrightarrow\textlongrightarrow
 21469 \let\longleftrightarrow\textlongleftrightarrow
 21470 \let\Longleftarrow\textLongleftarrow
 21471 \let\Longrightarrow\textLongrightarrow
 21472 \let\Longleftrightarrow\textLongleftrightarrow
 21473 \let\longmapsto\textlongmapsto
 21474 \let\Longmapsfrom\textLongmapsfrom
 21475 \let\Longmapsto\textLongmapsto
 21476 \let\nwsearrow\textnwsearrow
 21477 \let\neswarrow\textneswarrow
 21478 \let\hookrightarrow\texthookrightarrow
 21479 \let\rhookrightarrow\text\rhookrightarrow
 21480 \let\hooksearrow\texthooksearrow
 21481 \let\rhookswarrow\text\rhookswarrow
 21482 \let\leadsto\textleadsto
 21483 \let\rcurvearrowne\textrcurvearrowne
 21484 \let\lcurvearrowse\textlcurvearrowse
 21485 \let\lcurvearrowsw\textlcurvearrowsw
 21486 \let\rcurvearrowse\textrcurvearrowse
 21487 \let\lcurvearrowdown\textlcurvearrowdown
 21488 \let\rcurvearrowdown\textrcurvearrowdown
 21489 \let\rcurvearrowleft\textrcurvearrowleft
 21490 \let\rcurvearrowright\textrcurvearrowright
 21491 \let\leftrightharpoon\textleftrightharpoon
 21492 \let\rightleftharpoon\textrightleftharpoon
 21493 \let\updownharpoonrightleft\textupdownharpoonrightleft
 21494 \let\updownharpoonleftright\textupdownharpoonleftright
 21495 \let\leftleftharpoons\textleftleftharpoons
 21496 \let\upupharpoons\textupupharpoons
 21497 \let\righttrightharpoons\textrighttrightharpoons
 21498 \let\downdownharpoons\textdowndownharpoons
 21499 \let\leftbarharpoon\textleftbarharpoon
 21500 \let\barleftharpoon\textbarleftharpoon
 21501 \let\rightbarharpoon\textrightbarharpoon
 21502 \let\barriightharpoon\textbarriightharpoon
 21503 \let\updownharpoons\textupdownharpoons
 21504 \let\downupharpoons\textdownupharpoons

21505 $\backslash\mathrm{moo}\text{moo}$
 21506 $\backslash\mathrm{llparenthesis}\text{llparenthesis}$
 21507 $\backslash\mathrm{rrparenthesis}\text{rrparenthesis}$
 21508 $\backslash\mathrm{invdiameter}\text{invdiameter}$
 21509 $\backslash\mathrm{obar}\text{obar}$
 21510 $\backslash\mathrm{obslash}\text{obslash}$
 21511 $\backslash\mathrm{obot}\text{obot}$
 21512 $\backslash\mathrm{NoChemicalCleaning}\text{NoChemicalCleaning}$
 21513 $\backslash\mathrm{olessthan}\text{olessthan}$
 21514 $\backslash\mathrm{ogreaterthan}\text{ogreaterthan}$
 21515 $\backslash\mathrm{boxslash}\text{boxslash}$
 21516 $\backslash\mathrm{boxbslash}\text{boxbslash}$
 21517 $\backslash\mathrm{boxast}\text{boxast}$
 21518 $\backslash\mathrm{boxcircle}\text{boxcircle}$
 21519 $\backslash\mathrm{boxbox}\text{boxbox}$
 21520 $\backslash\mathrm{Valve}\text{Valve}$
 21521 $\backslash\mathrm{multimapboth}\text{multimapboth}$
 21522 $\backslash\mathrm{shuffle}\text{shuffle}$
 21523 $\backslash\mathrm{uplus}\text{uplus}$
 21524 $\backslash\mathrm{bigdoublewedge}\text{bigdoublewedge}$
 21525 $\backslash\mathrm{bigdoublevee}\text{bigdoublevee}$
 21526 $\backslash\mathrm{Join}\text{Join}$
 21527 $\backslash\mathrm{fatsemi}\text{fatsemi}$
 21528 $\backslash\mathrm{circplus}\text{circplus}$
 21529 $\backslash\mathrm{minusdot}\text{minusdot}$
 21530 $\backslash\mathrm{dotimes}\text{dotimes}$
 21531 $\backslash\mathrm{dtimes}\text{dtimes}$
 21532 $\backslash\mathrm{odiv}\text{odiv}$
 21533 $\backslash\mathrm{invneg}\text{invneg}$
 21534 $\backslash\mathrm{sqdoublecap}\text{sqdoublecap}$
 21535 $\backslash\mathrm{capdot}\text{capdot}$
 21536 $\backslash\mathrm{sqdoublecup}\text{sqdoublecup}$
 21537 $\backslash\mathrm{doublewedge}\text{doublewedge}$
 21538 $\backslash\mathrm{doublevee}\text{doublevee}$
 21539 $\backslash\mathrm{doublebarwedge}\text{doublebarwedge}$
 21540 $\backslash\mathrm{veedoublebar}\text{veedoublebar}$
 21541 $\backslash\mathrm{eqdot}\text{eqdot}$
 21542 $\backslash\mathrm{neqdot}\text{neqdot}$
 21543 $\backslash\mathrm{coloncolonequals}\text{coloncolonequals}$
 21544 $\backslash\mathrm{leqslant}\text{leqslant}$
 21545 $\backslash\mathrm{nleqslant}\text{nleqslant}$
 21546 $\backslash\mathrm{geqslant}\text{geqslant}$
 21547 $\backslash\mathrm{ngeqslant}\text{ngeqslant}$
 21548 $\backslash\mathrm{lessapprox}\text{lessapprox}$
 21549 $\backslash\mathrm{nlessapprox}\text{nlessapprox}$
 21550 $\backslash\mathrm{gtrapprox}\text{gtrapprox}$
 21551 $\backslash\mathrm{ngtrapprox}\text{ngtrapprox}$
 21552 $\backslash\mathrm{lneq}\text{lneq}$
 21553 $\backslash\mathrm{gneq}\text{gneq}$
 21554 $\backslash\mathrm{lnapprox}\text{lnapprox}$
 21555 $\backslash\mathrm{gnapprox}\text{gnapprox}$
 21556 $\backslash\mathrm{lesseqqgtr}\text{lesseqqgtr}$
 21557 $\backslash\mathrm{gtreqqlless}\text{gtreqqlless}$
 21558 $\backslash\mathrm{eqslantless}\text{eqslantless}$
 21559 $\backslash\mathrm{eqslantgtr}\text{eqslantgtr}$
 21560 $\backslash\mathrm{leftslice}\text{leftslice}$
 21561 $\backslash\mathrm{rightslice}\text{rightslice}$

21562 \let\preceq\textpreceq
 21563 \let\npreceq\textnpreceq
 21564 \let\succeq\textsucceq
 21565 \let\nsucceq\textnsucceq
 21566 \let\precneq\textprecneq
 21567 \let\succneq\textsuccneq
 21568 \let\preceqq\textpreceqq
 21569 \let\npreceqq\textnpreceqq
 21570 \let\succeqq\textsucceqq
 21571 \let\nsucceqq\textnsucceqq
 21572 \let\precneqq\textprecneqq
 21573 \let\succneqq\textsuccneqq
 21574 \let\precapprox\textprecapprox
 21575 \let\nprecapprox\textnprecapprox
 21576 \let\succapprox\textsuccapprox
 21577 \let\nsuccapprox\textnsuccapprox
 21578 \let\precnapprox\textprecnapprox
 21579 \let\succnapprox\textsuccnapprox
 21580 \let\subseteqq\textsubseteqq
 21581 \let\nsubseteqq\textnsubseteqq
 21582 \let\supseteqq\textsupseteqq
 21583 \let\nsupseteqq\textnsupseteqq
 21584 \let\dashV\textdashV
 21585 \let\ndashV\textndashV
 21586 \let\Dashv\textDashv
 21587 \let\ndashv\textndashv
 21588 \let\DashV\textDashV
 21589 \let\ndashV\textndashV
 21590 \let\downmodels\textdownmodels
 21591 \let\ndownmodels\textndownmodels
 21592 \let\upmodels\textupmodels
 21593 \let\nupmodels\textnupmodels
 21594 \let\upspoon\textupspoon
 21595 \let\interleave\textinterleave
 21596 \let\slash\textslash
 21597 \let\pentagon\textpentagon
 21598 \let\varhexagon\textvarhexagon
 21599 \let\jinferior\textjinferior
 21600 \let\slashdiv\textslashdiv
 21601 \let\fivedots\textfivedots
 21602 \let\oo\textoo
 21603 \let\GaPa\textGaPa
 21604 \let\HaPa\textHaPa
 21605 \let\ViPa\textViPa
 21606 \let\AcPa\textAcPa
 21607 \let\SePa\textSePa
 21608 \let\ZwPa\textZwPa
 21609 \let\fullnote\textfullnote
 21610 \let\halfnote\texthalfnote
 21611 \let\Vier\textVier
 21612 \let\Acht\textAcht
 21613 \let\Sech\textSech
 21614 \let\Zwdr\textZwdr
 21615 \let\Mundus\textMundus
 21616 \let\Moon\textMoon
 21617 \let\ManFace\textManFace
 21618 \let\WomanFace\textWomanFace


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21619 \let\Fax\textFax
21620 \let\Fire\textFire
21621 \let\Bicycle\textBicycle
21622 \let\Gentsroom\textGentsroom
21623 \let\Ladiesroom\textLadiesroom
21624 \let\ccnc\textccnc
21625 \let\ccsa\textccsa
21626 \let\Info\textInfo
21627 \let\CESign\textCESign
21628 \let\neg\textneg
21629 \let\times\texttimes
21630 \let\div\textdiv
21631 \let\pm\textpm
21632 \let\cdot\textcdot
21633 }% \psdmapshortnames
21634 \newcommand*{\psdaliasnames}{%
21635 \let\epsdice\HyPsd@DieFace
21636 \let\fcdice\HyPsd@DieFace
21637 \let\MoonPha\HyPsd@MoonPha
21638 \let\mathdollar\textdollar
21639 \let\EyesDollar\textdollar
21640 \let\binampersand\textampersand
21641 \let\with\textampersand
21642 \let\mathunderscore\textunderscore
21643 \let\textvertline\textbar
21644 \let\mathsterling\textsterling
21645 \let\pounds\textsterling
21646 \let\brokenvert\textbrokenbar
21647 \let\mathsection\textsection
21648 \let\S\textsection
21649 \let\mathparagraph\textparagraph
21650 \let\MultiplicationDot\textperiodcentered
21651 \let\Squaredot\textperiodcentered
21652 \let\vartimes\textmultiply
21653 \let\MVMultiplication\textmultiply
21654 \let\eth\dh
21655 \let\crossd\textcrd
21656 \let\textbard\textcrd
21657 \let\bard\textcrd
21658 \let\textcrh\texthbar
21659 \let\crossh\texthbar
21660 \let\planck\texthbar
21661 \let\eng\ng
21662 \let\engma\ng
21663 \let\crossb\textcrb
21664 \let\textbarb\textcrb
21665 \let\barb\textcrb
21666 \let\Florin\textflorin
21667 \let\hv\texthvlig
21668 \let\hausak\texthtk
21669 \let\crossnilambda\textcrlambda
21670 \let\barlambda\textcrlambda
21671 \let\lambdabar\textcrlambda
21672 \let\lambdaslash\textcrlambda
21673 \let\textnrleg\textPUnrleg
21674 \let\textpipevar\textpipe
21675 \let\textdoublepipevar\textdoublepipe

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21676 \let\textdoublebarpipevar\textdoublebarpipe
 21677 \let\textcrg\textgslash
 21678 \let\textdblig\textPUdblig
 21679 \let\textqplig\textPUqplig
 21680 \let\textcentoldstyle\textslashc
 21681 \let\textbarc\textslashc
 21682 \let\inva\textturna
 21683 \let\vara\textscripta
 21684 \let\invscripta\textturnscripta
 21685 \let\rotvara\textturnscripta
 21686 \let\hookb\texthtb
 21687 \let\hausab\texthtb
 21688 \let\varopeno\textopeno
 21689 \let\curlyc\textctc
 21690 \let\taild\textrtaild
 21691 \let\hookd\texthtd
 21692 \let\hausad\texthtd
 21693 \let\er\textrhooschwa
 21694 \let\epsi\textniepsilon
 21695 \let\hookrevespsilon\textrhoosrevespsilon
 21696 \let\closedrevespsilon\textcloserevespsilon
 21697 \let\barj\textbardotlessj
 21698 \let\hookg\texthtg
 21699 \let\varg\textscriptg
 21700 \let\vod\textipagamma
 21701 \let\invh\textturnh
 21702 \let\udesc\textturnh
 21703 \let\hookh\texthth
 21704 \let\voicedh\texthth
 21705 \let\hookheng\texththeng
 21706 \let\ibar\textbari
 21707 \let\vari\textniota
 21708 \let\tildel\textltilde
 21709 \let\latfric\textbeltl
 21710 \let\tail\textrtail
 21711 \let\lz\textlyoghlig
 21712 \let\invm\textturnm
 21713 \let\rotr\textturnm
 21714 \let\legm\textturnmrleg
 21715 \let\labdentalnas\textltailm
 21716 \let\emgma\textltailm
 21717 \let\nj\textltailn
 21718 \let\enya\textltailn
 21719 \let\tailn\textrtailn
 21720 \let\closedniomega\textcloseomega
 21721 \let\varomega\textcloseomega
 21722 \let\invr\textturnr
 21723 \let\rotr\textturnr
 21724 \let\invlegr\textturnlonglegr
 21725 \let\tailinvr\textturnrrtail
 21726 \let\legr\textlonglegr
 21727 \let\tailr\textrtailr
 21728 \let\flapr\textfishhookr
 21729 \let\flap\textfishhookr
 21730 \let\tails\textrtails
 21731 \let\curlyesh\textctesh
 21732 \let\clickt\textturnt

21733 \let\tail\texttail
 21734 \let\ubar\textbaru
 21735 \let\rotOmega\textniupsilon
 21736 \let\invv\textturnv
 21737 \let\pwedge\textturnv
 21738 \let\invw\textturnw
 21739 \let\rotw\textturnw
 21740 \let\invy\textturny
 21741 \let\roty\textturny
 21742 \let\tailz\texttailz
 21743 \let\curlyz\textctz
 21744 \let\curlyyogh\textctyogh
 21745 \let\ejective\textglotstop
 21746 \let\glottal\textglotstop
 21747 \let\reveject\textrevglotstop
 21748 \let\clickc\textstretchc
 21749 \let\textstretchcvar\textstretchc
 21750 \let\clickb\textbullseye
 21751 \let\textObullseye\textbullseye
 21752 \let\textctjvar\textctj
 21753 \let\textturnsck\textturnk
 21754 \let\dz\textdzlig
 21755 \let\tesh\textteshlig
 21756 \let\digamma\textdigammagreek
 21757 \let\hardsign\cyrhrdsn
 21758 \let\softsign\cyrsoftsn
 21759 \let\hebsin\hebshin
 21760 \let\textsck\textPUsc
 21761 \let\textscm\textPUscm
 21762 \let\textscp\textPUscp
 21763 \let\textrevscr\textPUrevscr
 21764 \let\textrhooca\textPUrhooca
 21765 \let\textrhooke\textPUrhooke
 21766 \let\textrhookepsilon\textPUrhookepsilon
 21767 \let\texthookopeno\textPUhookopeno
 21768 \let\textdoublevertline\textbardbl
 21769 \let\dag\textdagger
 21770 \let\ddagger\textdaggerdbl
 21771 \let\ddag\textdaggerdbl
 21772 \let\mathellipsis\textellipsis
 21773 \let\EurDig\texteuro
 21774 \let\EURdig\texteuro
 21775 \let\EurHv\texteuro
 21776 \let\EURhv\texteuro
 21777 \let\EurCr\texteuro
 21778 \let\EURcr\texteuro
 21779 \let\EurTm\texteuro
 21780 \let\EURtm\texteuro
 21781 \let\Eur\texteuro
 21782 \let\Denarius\textDeleatur
 21783 \let\agemO\textmho
 21784 \let\EstimatedSign\textestimated
 21785 \let\Ecommerce\textestimated
 21786 \let\bindnasrepma\textinvamp
 21787 \let\parr\textinvamp
 21788 \let\MVRightArrow\textrightarrow
 21789 \let\MVRightarrow\textrightarrow

21790 \let\MVArrowDown\textdownarrow
 21791 \let\Force\textdownarrow
 21792 \let\textglobrise\textnearrow
 21793 \let\textglobfall\textsearrow
 21794 \let\Lightning\textlightning
 21795 \let\Conclusion\textRightarrow
 21796 \let\dashedleftarrow\textdashleftarrow
 21797 \let\dashedrightarrow\textdashrightarrow
 21798 \let\varnothing\textemptyset
 21799 \let\owns\textni
 21800 \let\notni\textnotowner
 21801 \let\varprop\textpropto
 21802 \let\varangle\textsphericalangle
 21803 \let\Anglesign\textsphericalangle
 21804 \let\AngleSign\textsphericalangle
 21805 \let\notdivides\textnmid
 21806 \let\varowedge\textowedge
 21807 \let\varovee\textovee
 21808 \let\varint\textint
 21809 \let\varoint\textoint
 21810 \let\downtherefore\textbecause
 21811 \let\textdotdiv\textdotminus
 21812 \let\AC\textsim
 21813 \let\wreath\textwr
 21814 \let\nthickapprox\textnapprox
 21815 \let\VHF\texttriplesim
 21816 \let\notasymp\textnasymp
 21817 \let\Doteq\textdoteqdot
 21818 \let\corresponds\texthateq
 21819 \let\Corresponds\texthateq
 21820 \let\nequal\textneq
 21821 \let\Congruent\textequiv
 21822 \let\NotCongruent\textnequiv
 21823 \let\notequiv\textnequiv
 21824 \let\LessOrEqual\textleq
 21825 \let\LargerOrEqual\textgeq
 21826 \let\apprle\textlesssim
 21827 \let\apprge\textgtrsim
 21828 \let\varoplus\textoplus
 21829 \let\varominus\textominus
 21830 \let\varotimes\textotimes
 21831 \let\varoslash\textoslash
 21832 \let\varodot\textodot
 21833 \let\ocirc\textcircledcirc
 21834 \let\varocircle\textcircledcirc
 21835 \let\varoast\textcircledast
 21836 \let\oasterisk\textcircledast
 21837 \let\rightvdash\textvdash
 21838 \let\leftvdash\textdashv
 21839 \let\nleftvdash\textndashv
 21840 \let\downvdash\texttop
 21841 \let\upvdash\textbot
 21842 \let\nperp\textnupvdash
 21843 \let\models\textvDash
 21844 \let\rightmodels\textvDash
 21845 \let\rightVdash\textVdash
 21846 \let\rightModels\textVDash

21847 \let\nrightvdash\textnvdash
 21848 \let\nrightmodels\textnvDash
 21849 \let\nmodels\textnvDash
 21850 \let\nrightVdash\textnVdash
 21851 \let\nrightModels\textnVDash
 21852 \let\lessclosed\textlhd
 21853 \let\gtrclosed\textrhd
 21854 \let\leqclosed\textunlhd
 21855 \let\trianglelefteq\textunlhd
 21856 \let\geqclosed\textunrhd
 21857 \let\trianglerighteq\textunrhd
 21858 \let\Bowtie\textbowtie
 21859 \let\varcurlyvee\textcurlyvee
 21860 \let\varcurlywedge\textcurlywedge
 21861 \let\doublecap\textCap
 21862 \let\doublecup\textCup
 21863 \let\varsqsubsetneq\textsqssubsetneq
 21864 \let\varsqsupsetneq\textsqsupsetneq
 21865 \let\nlessclosed\textntriangleleft
 21866 \let\ngtrclosed\textntriangleright
 21867 \let\Clocklogo\textclock
 21868 \let\ClockLogo\textclock
 21869 \let\baro\textstmaryrdbaro
 21870 \let\varparallelinv\textbbslash
 21871 \let\CleaningA\textCircledA
 21872 \let\Kutline\textCuttingLine
 21873 \let\CutLine\textCuttingLine
 21874 \let\Cutline\textCuttingLine
 21875 \let\MoveUp\textUParrow
 21876 \let\APLup\textbigtriangleup
 21877 \let\Bleech\textbigtriangleup
 21878 \let\MoveDown\textDOWNarrow
 21879 \let\APLdown\textbigtriangledown
 21880 \let\Diamond\textdiamond
 21881 \let\varbigcirc\textbigcircle
 21882 \let\Telefon\textPhone
 21883 \let\Box\textboxempty
 21884 \let\CheckedBox\textCheckedbox
 21885 \let\XBox\textCrossedbox
 21886 \let\CrossedBox\textCrossedbox
 21887 \let\rightpointleft\textHandLeft
 21888 \let\leftpointright\textHandRight
 21889 \let\PointingHand\textHandRight
 21890 \let\Pointinghand\textHandRight
 21891 \let\Radiation\textRadioactivity
 21892 \let\Yinyang\textYinYang
 21893 \let\YingYang\textYinYang
 21894 \let\Yingyang\textYinYang
 21895 \let\Frowny\textfrownie
 21896 \let\Smiley\textsmiley
 21897 \let\Sun\textsun
 21898 \let\Mercury\textmercury
 21899 \let\textfemale\textPUfemale
 21900 \let\female\textPUfemale
 21901 \let\venus\textPUfemale
 21902 \let\Venus\textPUfemale
 21903 \let\Female\textPUfemale

21904 \let\Earth\textearth
 21905 \let\mars\textmale
 21906 \let\Mars\textmale
 21907 \let\Male\textmale
 21908 \let\Jupiter\textjupiter
 21909 \let\Saturn\textsaturn
 21910 \let\Uranus\texturanus
 21911 \let\Neptune\textneptune
 21912 \let\Pluto\textpluto
 21913 \let\Aries\textaries
 21914 \let\Taurus\texttaurus
 21915 \let\Gemini\textgemini
 21916 \let\Cancer\textcancer
 21917 \let\Leo\textleo
 21918 \let\Virgo\textvirgo
 21919 \let\Libra\textlibra
 21920 \let\Scorpio\textscorpio
 21921 \let\Sagittarius\textsagittarius
 21922 \let\Capricorn\textcapricornus
 21923 \let\Aquarius\textaquarius
 21924 \let\Pisces\textpisces
 21925 \let\spadesuit\textspadesuitblack
 21926 \let\Heart\textheartsuitwhite
 21927 \let\heartsuit\textheartsuitwhite
 21928 \let\diamondsuit\textdiamondsuitwhite
 21929 \let\clubsuit\textclubsuitblack
 21930 \let\eighthnote\textmusicalnote
 21931 \let\Recycling\textrecycle
 21932 \let\VarFlag\textFlag
 21933 \let\textxswup\textdsmilitary
 21934 \let\textuncrfemale\textPUuncrfemale
 21935 \let\Football\textSoccerBall
 21936 \let\CutLeft\textScissorRightBrokenBottom
 21937 \let\Cutright\textScissorRightBrokenBottom
 21938 \let\RightScissors\textScissorRight
 21939 \let\Leftscissors\textScissorRight
 21940 \let\Letter\textEnvelope
 21941 \let\Writinghand\textWritingHand
 21942 \let\checkmark\textCheckmark
 21943 \let\davidstar\textDavidStar
 21944 \let\llbracket\textlbrackdbl
 21945 \let\rrbracket\textrrbrackdbl
 21946 \let\RightTorque\textlcurvearrowdown
 21947 \let\Righttorque\textlcurvearrowdown
 21948 \let\LeftTorque\textrcurvearrowdown
 21949 \let\Lefttorque\textrcurvearrowdown
 21950 \let\textvarobar\textobar
 21951 \let\circledbslash\textobslash
 21952 \let\obackslash\textobslash
 21953 \let\varobslash\textobslash
 21954 \let\odplus\textobot
 21955 \let\varolessthan\textolessthan
 21956 \let\varogreaterthan\textogreaterthan
 21957 \let\divdot\textminusdot
 21958 \let\doublesqcap\textsdoublecap
 21959 \let\doublesqcup\textsdoublecup
 21960 \let\merge\textdoublevee


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21961 \let\leftVdash\textdashV
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21981 \begin{document}
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