

Hypertext marks in L^AT_EX

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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.

Bookmark talk, slides Slides for the talk “PDF information and navigation elements with hyperref, pdfTeX and thumbpdf” at EuroT_EX 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 L^AT_EX”

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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   \csname ver@\'HyC@package.sty\endcsname
39   }%
40 }%
41 }

```

`\checkcommand` The macro `\checkcommand` parses the next tokens as a L^AT_EX 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 L^AT_EX'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 `\cmdl` 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#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

```

4.2 Disable patches

If new latex interfaces are used with \DocumentMetadata various patches are unneeded or do harm, so we disable them. Not handled yet: \hyper@nopatch@amsmath@tag, \hyper@nopatch@mathenv

```

232 \IfFormatAtLeastT{2025-11-01}
233 {
234   \IfDocumentMetadataT
235   {
236     \def\hyper@nopatch@counter{} % disabled since 2024-11-01 anyway
237     \def\hyper@nopatch@bib{}
238     \def\hyper@nopatch@thm{}
239     \def\hyper@nopatch@caption{}
240     \def\hyper@nopatch@footnote{}
241     \def\hyper@nopatch@sectioning{}

```

```

242 \def\hyper@nopatch@toc{}
243 \def\hyper@nopatch@longtable{}
244 }
245 }

```

change 2020-07-24: require newer pdftexcmds and remove fallback code for version older than 2010. change 2021-08-14: require expl3 change 2023-11-26: no longer require pdftexcmds change 2023-11-26: no longer require expl3, we assume kernel is new enough. change 2024-05-23: load stringenc always (for pdfx)

```

246 \RequirePackage{iftex}[2019/10/24]
247 \RequirePackage{keyval}[1997/11/10]
248 \RequirePackage{kvsetkeys}[2007/09/29]
249 \RequirePackage{kvdefinekeys}[2011/04/07]
250 \RequirePackage{pdfescape}[2007/11/11]
251 \RequirePackage{hycolor}
252 \RequirePackage{nameref}[2012/07/28]
253 \RequirePackage{etoolbox}
254 \RequirePackage{stringenc}[2009/12/15]%
255 \def\Hy@Error{\PackageError{hyperref}}
256 \def\Hy@Warning{\PackageWarning{hyperref}}
257 \def\Hy@WarningNoLine{\PackageWarningNoLine{hyperref}}
258 \def\Hy@Info{\PackageInfo{hyperref}}
259 \def\Hy@InfoNoLine#1{\PackageInfo{hyperref}{#1\@gobble}}
260 \def\Hy@Message#1{%
261   \GenericWarning{%
262     (hyperref)\@spaces\@spaces\@spaces\@spaces
263   }{%
264     Package hyperref Message: #1\@gobble
265   }%
266 }

```

4.3 Version check

\Hy@VersionChecked

```
267 \chardef\Hy@VersionChecked=0 %
```

\Hy@VersionCheck

```

268 \def\Hy@VersionCheck#1{%
269   \begingroup
270   \@ifundefined{ver@hyperref.sty}{%
271     \Hy@Error{%
272       This should not happen!\MessageBreak
273       Missing hyperref version%
274     }\@ehd
275   }{%
276     \@ifundefined{ver@#1}{%
277       \Hy@Error{%
278         This should not happen!\MessageBreak
279         Missing version of `#1'%
280       }\@ehd
281     }{%
282       \def\x##1##2##3{%
283         \expandafter\expandafter\expandafter\Hy@@VersionCheck
284         \expandafter\expandafter\expandafter##2%

```

```

285     \csname ver@##3\endcsname##1##1\@nil
286   }%
287   \x{ } \y{hyperref.sty}%
288   \x{ } \z{#1}%
289   \ifx \y \z
290   \else
291     \edef \a{#1}%
292     \edef \b{\HyOpt@CustomDriver.def}%
293     \ifx \a \b
294       \Hy@WarningNoLine{%
295         Version mismatch (custom driver)! \MessageBreak
296         * \y: hyperref.sty \MessageBreak
297         * \z: \a
298       }%
299     \else
300       \Hy@Error{%
301         Version mismatch! \MessageBreak
302         * \y: hyperref.sty \MessageBreak
303         * \z: \a
304       } \@ehd
305     \fi
306   \fi
307 }%
308 }%
309 \endgroup
310 \chardef \Hy@VersionChecked=1 %
311 }

```

\Hy@@VersionCheck

```

312 \def \Hy@@VersionCheck #1#2 #3 #4 \@nil{%
313   \def #1{#2 #3}%
314 }

```

4.4 Checks with regular expressions

```

315 \edef \Hy@leftbracechar{\string{ }
316 \edef \Hy@rightbracechar{\string} }
317 \@ifundefined{pdfmatch}{%
318   \def \Hy@Match#1#2#3#4#5{ }%
319 }{%
320   \def \Hy@Match#1#2#3{%
321     \begingroup
322     \edef \^{\@backslashchar\string^}%
323     \edef \.{\@backslashchar.}%
324     \edef \[{\@backslashchar[ ]}%
325     \edef \$ {\@backslashchar$}%
326     \edef \({\@backslashchar( )}%
327     \edef \){\@backslashchar)}%
328     \edef \|{\@backslashchar|}%
329     \edef *{\@backslashchar*}%
330     \edef +{\@backslashchar+}%
331     \edef ?{\@backslashchar?}%
332     \edef \{ {\@backslashchar\Hy@leftbracechar}%
333     \edef \} {\Hy@rightbracechar}%

```

```

334 \edef\{\@backslashchar\@backslashchar}%
335 \let\ \Hy@space
336 \ifcase\pdfmatch#2{#3}{#1} %
337 \endgroup
338 \expandafter\@secondoftwo
339 \or
340 \endgroup
341 \expandafter\@firstoftwo
342 \else
343 \Hy@Warning{%
344   Internal error: Wrong pattern!\MessageBreak
345   --> #3 <--\MessageBreak
346   Pattern check ignored%
347 }%
348 \endgroup
349 \expandafter\@firstoftwo
350 \fi
351 }%
352 }

```

4.5 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`.

```

353 \@ifundefined{AfterBeginDocument}{%
354   \def\AfterBeginDocument{\AtBeginDocument}%
355 }{}%

```

`\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.

```

356 \ExplSyntaxOn
357 \let\Hy@LocalAppendToMacro\tl_put_right:Nn
358 \let\Hy@GlobalAppendToMacro\tl_gput_right:Nn
359 \let\Hy@ifempty\tl_if_empty:nTF
360 \ExplSyntaxOff
361 \def\Hy@AtBeginDocument{%
362   \Hy@LocalAppendToMacro\Hy@AtBeginDocumentHook
363 }

```

`\Hy@AtEndOfPackage`

```

364 \def\Hy@AtEndOfPackage{%
365   \Hy@LocalAppendToMacro\Hy@AtEndOfPackageHook
366 }

```

`\Hy@AtBeginDocumentHook`

```

367 \let\Hy@AtBeginDocumentHook\@empty

```

`\Hy@AtEndOfPackageHook`

```
368 \let\Hy@AtEndOfPackageHook\@empty
```

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

```
369 \AtEndOfPackage{%
370   \Hy@AtEndOfPackageHook
371   \let\Hy@AtEndOfPackageHook\@undefined
372   \AfterBeginDocument{%
373     \Hy@AtBeginDocumentHook{}}%
374   \let\Hy@AtBeginDocumentHook\@undefined
375 }%
376 }
```

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

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

4.6 Switches

```
378 \newif\ifHy@stoppeadearly
379 \newif\ifHy@typexml
380 \newif\ifHy@activeanchor
381 \newif\ifHy@backref
382 \newif\ifHy@bookmarks
383 \newif\ifHy@bookmarksnumbered
384 \newif\ifHy@bookmarksopen
385 \newif\ifHy@breaklinks
386 \newif\ifHy@pdfcenterwindow
387 \newif\ifHy@CJKbookmarks
388 \newif\ifHy@colorlinks
389 \newif\ifHy@destlabel
390 \newif\ifHy@draft
391 \let\Hy@finaltrue\Hy@draftfalse
392 \let\Hy@finalfalse\Hy@drafttrue
393 \newif\ifHy@pdfescapeform
394 \newif\ifHy@hyperfigures
395 \newif\ifHy@pdffitwindow
396 \newif\ifHy@frenchlinks
397 \newif\ifHy@hyperfootnotes
398 \newif\ifHy@hyperindex
399 \newif\ifHy@hypertextnames
400 \newif\ifHy@implicit
401 \newif\ifHy@linktopage
402 \newif\ifHy@localanchorname
403 \newif\ifHy@pdfmenubar
404 \newif\ifHy@naturalnames
405 \newif\ifHy@nesting
406 \newif\ifHy@pdfnewwindowset
407 \newif\ifHy@pdfnewwindow
408 \newif\ifHy@ocgcolorlinks
409 \newif\ifHy@pageanchor
410 \newif\ifHy@pdfpagelabels
411 \newif\ifHy@pdfstring
```



```

412 \newif\ifHy@plainpages
413 \newif\ifHy@psize
414 \newif\ifHy@raiselinks
415 \newif\ifHy@seminarslides
416 \newif\ifHy@setpagesize
417 \newif\ifHy@texht
418 \newif\ifHy@psdextra
419 \newif\ifHy@pdftoolbar
420 \newif\ifHy@unicode
421 \newif\ifHy@pdfusetitle
422 \newif\ifHy@verbose
423 \let\Hy@debugtrue\Hy@verbosetrue
424 \let\Hy@debugfalse\Hy@verbosefalse
425 \newif\ifHy@pdfwindowui
426 \newif\ifHy@pdfdisplaydoctitle
427 \newif\ifHy@pdfa

```

Defaults for the switches are now set.

```

428 \Hy@backreffalse
429 \Hy@bookmarksnumberedfalse
430 \Hy@bookmarksopenfalse
431 \Hy@bookmarkstrue
432 \Hy@breaklinksfalse
433 \Hy@pdfcenterwindowfalse
434 \Hy@CJKbookmarksfalse
435 \Hy@destlabelfalse
436 \Hy@pdfescapeformfalse
437 \Hy@hyperfiguresfalse
438 \Hy@pdffitwindowfalse
439 \Hy@hyperfootnotesttrue
440 \Hy@hyperindextrue
441 \Hy@hypertextnamestrue
442 \Hy@implicittrue
443 \Hy@linktocpagefalse
444 \Hy@localanchornamefalse
445 \Hy@pdfmenubartrue
446 \Hy@naturalnamesfalse
447 \Hy@nestingfalse
448 \Hy@pdfnewwindowsetfalse
449 \Hy@pdfnewwindowfalse
450 \Hy@pageanchortrue
451 \Hy@pdfpagelabelstrue
452 \Hy@pdfstringfalse
453 \Hy@plainpagesfalse
454 \Hy@raiselinksfalse
455 \Hy@setpagesizetrue
456 \Hy@texhtfalse
457 \Hy@psdextrafalse
458 \Hy@pdftoolbartrue
459 \Hy@unicodetrue
460 \ifx\kanjiskip\@undefined
461 \else
462 \ifx\forcecjktoken\@undefined
463 \Hy@unicodefalse
464 \fi

```

```

465 \fi
466 \Hy@pdfusetitlefalse
467 \Hy@verbosefalse
468 \Hy@pdfwindowittrue
469 \Hy@pdfdisplaydoctitlefalse
470 \Hy@pdfafalse

```

5 Common help macros

`\Hy@StepCount`

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

`\Hy@GlobalStepCount`

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

```

473 \newdimen\@linkdim
474 \let\Hy@driver\@empty
475 \let\MaybeStopEarly\relax
476 \newcount\Hy@linkcounter
477 \newcount\Hy@pagecounter
478 \Hy@linkcounter0
479 \Hy@pagecounter0
480 \def\Hy@space{ }

```

5.1 Macros for recursions

```

481 \let\Hy@ReturnEnd\@empty
482 \long\def\Hy@ReturnAfterFi#1\fi{\fi#1}
483 \long\def\Hy@ReturnAfterElseFi#1\else#2\fi{\fi#1}
484 \long\def\Hy@ReturnAfterFiFiEnd#1\fi#2\Hy@ReturnEnd{\fi\fi#1}
485 \long\def\Hy@ReturnAfterElseFiFiEnd#1\else#2\Hy@ReturnEnd{\fi\fi#1}

```

5.2 Babel's protection of shorthand characters

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

```

486 \def\Hy@safe@activestru{\csname @safe@activestru\endcsname}
487 \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).

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

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

- It cannot be used inside `\usepackage`, because LaTeX expands the options before package `hyperref` is loaded and `\hypercalsbp` is defined.
- With the now required e-TeX extensions an expandable implementation is very easy; `\hypercalsbp` can be used everywhere and is expanded at use.

Example (T_EX):

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

`\hypercalcbp`

```
488 \def\hypercalcbp#1{%
489   \strip@pt\dimexpr 0.99626401\dimexpr(#1)\relax\relax
490 }%
491 \def\hypercalcbpdef{\def}%
```

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 T_EX'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 T_EX 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.

`\MakeUppercase` and `\MakeLowercase` do not work by expansion in legacy code but if the `expl3` code is available we can handle them. If a current babel or polyglossia is used we can also make use of the language.

`\ppercaseUnsupportedInPdfStrings`
`\lowercaseUnsupportedInPdfStrings`

```

492 \providecommand*\BCPdata[1]{}
493 \ExplSyntaxOn
494 \@ifundefined{text_uppercase:n}{}
495 {
496   \def\MakeUppercaseUnsupportedInPdfStrings#1
497     {\use:e
498       {\exp_args:Ne
499         \text_uppercase:nn{\BCPdata { casing }}{#1}
500       }
501     }
502   \def\MakeLowercaseUnsupportedInPdfStrings#1
503     {\use:e
504       {\exp_args:Ne
505         \text_lowercase:nn{\BCPdata { casing }}{#1}
506       }
507     }
508 }
509 \ExplSyntaxOff

```

`\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 processed by \TeX , because the tokens have only cat-codes 10 until 12.

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

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

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

```
511 \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.

```
512 \escapechar`\\%
```

From the view of \TeX a 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.

```
513 \edef\0{\string\0}%
514 \edef\1{\string\1}%
515 \edef\2{\string\2}%
516 \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.

```
517 \ifHy@unicode
518 \edef\8{\string\8}%
519 \edef\9{\string\9}%
520 \fontencoding{PU}%
521 \HyPsd@UTFviii
522 \def\ifpdfstringunicode###1##2{##1}%
523 \else
524 \fontencoding{PD1}%
525 \def\ifpdfstringunicode###1##2{##2}%
526 \fi
527 \let\utf@viii@undeferr\HyPsd@utf@viii@undeferr
528 \enc@update
```

Internal encoding commands. `\pdfstringdef` interprets 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).

```
529 \@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).

```
530 \let\@inmathwarn\HyPsd@inmathwarn
```

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

```
531 \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.

```
532 \let\{\textbraceleft
533 \let\}\textbraceright
534 \let\\\textbackslash
535 \let#\textnumbersign
536 \let$\textdollar
537 \let%\textpercent
538 \let&\textampersand
539 % \let~\textasciitilde
540 \let_\textunderscore
541 \let\P\textparagraph
542 \let\ldots\textellipsis
543 \let\dots\textellipsis
544 \@ifundefined{textEncodingNoboundary}%
545 {}{\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.

```
546 \def\{\pdfstringdefWarn\\}%
547 \def\newline{\pdfstringdefWarn\newline}%
```

Logos. Because the box shifting used in the $\text{T}_{\text{E}}\text{X}$ logo does not work while writing to a file, the standard $\text{T}_{\text{E}}\text{X}$ logos are redefined. We use the direct PU code to avoid problems if `\textepsilon` is not defined.

```
548 \def\TeX{\TeX}%
549 \def\LaTeX{\LaTeX}%
550 \def\LaTeXe{%
551 \LaTeX2%
552 \ifHy@unicode\83\265\else e\fi
553 }%
554 \def\eTeX{%
555 \ifHy@unicode\83\265\else e\fi
556 -\TeX%
```

```

557 }%
558 \def\SliTeX{Sli\TeX}%
559 \def\MF{Metafont}%
560 \def\MP{Metapost}%

```

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

```

561 \let\fontencoding@gobble
562 \let\fontfamily@gobble
563 \let\fontseries@gobble
564 \let\fontshape@gobble
565 \let\fontsize@gobbletwo
566 \let\selectfont@empty
567 \let\usefont@gobblefour
568 \let\emph@firstofone
569 \let\textnormal@firstofone
570 \let\textrm@firstofone
571 \let\textsf@firstofone
572 \let\texttt@firstofone
573 \let\textbf@firstofone
574 \let\textmd@firstofone
575 \let\textit@firstofone
576 \let\textsc@firstofone
577 \let\textsl@firstofone
578 \let\textup@firstofone
579 \let\normalfont@empty
580 \let\rmfamily@empty
581 \let\sffamily@empty
582 \let\ttfamily@empty
583 \let\bfseries@empty
584 \let\mdseries@empty
585 \let\itshape@empty
586 \let\scshape@empty
587 \let\slshape@empty
588 \let\upshape@empty
589 \let\em@empty
590 \let\rm@empty
591 \let\Huge@empty
592 \let\LARGE@empty
593 \let\Large@empty
594 \let\footnotesize@empty
595 \let\huge@empty
596 \let\large@empty
597 \let\normalsize@empty
598 \let\scriptsize@empty
599 \let\small@empty
600 \let\tiny@empty
601 \let\mathversion@gobble
602 \let\phantom@gobble
603 \let\vphantom@gobble
604 \let\hphantom@gobble

```

Package pifont.

```

605 \let\ding\HyPsd@ding
606 \let\Cube\HyPsd@DieFace
607 %* \HyPsd@DieFace -> \epsdice (epsdice)
608 %* \HyPsd@DieFace -> \fcdice (hhcount)

```

Environments.

```

609 \def\begin###1{\csname###1\endcsname}%
610 \def\end###1{\csname end###1\endcsname}%

```

Package color.

```

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

```

Upper- and lowercase.

```

612 \def\MakeUppercase{\MakeUppercaseUnsupportedInPdfStrings}%
613 \def\MakeLowercase{\MakeLowercaseUnsupportedInPdfStrings}%

```

TextOrMath The `\TextOrMath` command is protected in a current \LaTeX and so can not be processed.

```

614 \def\TextOrMath{\ifmmode\expandafter\@secondoftwo\else\expandafter\@firstoftwo\fi}%

```

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

```

615 \ifHy@psdextra
616 \ifHy@unicode
617 \csname psdmapshortnames\endcsname
618 \csname psdaliasnames\endcsname
619 \fi
620 \fi

```

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

```

621 \let\foreignlanguage\@secondoftwo
622 \let\textlatin\@firstofone
623 \@ifundefined{language@group}{}{}%
624 \let\bbl@info\@gobble
625 \csname HyPsd@babel@\language@group\endcsname
626 }%
627 \let\@safe@activetrue\relax
628 \let\@safe@activesfalse\relax

```

Disable `\cyr`, used in `russianb.ldf`.

```

629 \let\cyr\relax

```

Package german.

```

630 \let\glqq\textglqq
631 \let\grqq\textgrqq
632 \let\glq\textglq
633 \let\grq\textgrq
634 \let\flqq\textflqq

```



```

635 \let\frqq\textfrqq
636 \let\flq\textflq
637 \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}
638 \let\if@mid@expandable\@firstoftwo

```

AMS classes.

```

639 \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.

```

640 \let\hspace\HyPsd@hspace

```

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

```

641 \let\label\@gobble
642 \let\index\@gobble
643 \let\glossary\@gobble
644 \let\href\HyPsd@href
645 \let\@mkboth\@gobbletwo

```

The `\ref` and `\pageref` is much more complicate because of their star form.

```

646 \let\ref\HyPsd@ref
647 \let\pageref\HyPsd@pageref
648 \let\nameref\HyPsd@nameref
649 \let\autoref\HyPsd@autoref

```

Miscellaneous commands.

```

650 \let\leavevmode\@empty
651 \let\mbox\@empty

```

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

```

652 \def\halign{\pdfstringdef\Warn\halign\@gobble}%
653 \let\ignorespaces\HyPsd@ignorespaces
654 \let\Hy@SectionAnchorHref\@gobble
655 \let\ensuremath\@firstofone

```

Patch for cjk bookmarks.

```

656 \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 `\pdfstringdefPreHook`.

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`).

```
657 \Hy@pdfstringtrue
658 \pdfstringdefPreHook
```

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

```
659 \HyPsd@LetUnexpandableSpace\space
660 \HyPsd@LetUnexpandableSpace\ %
661 \HyPsd@LetUnexpandableSpace~%
662 \HyPsd@LetUnexpandableSpace\nobreakspace
```

Package `xspace`.

```
663 \@ifundefined{@xspace}{%
664 \let\xspace\HyPsd@ITALCORR
665 }{%
666 \let\xspace\HyPsd@XSPACE
667 }%
668 \let\/\HyPsd@ITALCORR
669 \let\bgroup\/%
670 \let\egroup\/%
```

Redefinitions of miscellaneous commands. Hyphenation does not make sense.

```
671 \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:

```
672 \def\@ifnextchar{\HyPsd@ifnextchar\@ifnextchar}%
673 \def\kernel@ifnextchar{\HyPsd@ifnextchar\kernel@ifnextchar}%
674 \def\new@ifnextchar{\HyPsd@ifnextchar\new@ifnextchar}%
675 \let\@protected@testopt\HyPsd@protected@testopt
```

Support for package 'xargs':

```
676 \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 $\Generic\dots$ 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).

```
677 \begingroup
678 \let\GenericError\@gobblefour
679 \let\GenericWarning\@gobbletwo
680 \let\GenericInfo\@gobbletwo
```

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

```
681 \ifx\nofrenchguillemets\@undefined
682 \else
683 \nofrenchguillemets
684 \fi
```

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

```

685 \let\Hy@temp\xdef
686 \let\def\HyPsd@DefCommand
687 \let\gdef\HyPsd@DefCommand
688 \let\edef\HyPsd@DefCommand
689 \let\xdef\HyPsd@DefCommand
690 \let\futurelet\HyPsd@LetCommand
691 \let\let\HyPsd@LetCommand
692 \Hy@temp#1{#2}%
693 \endgroup

```

6.2.3 Postprocessing

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

```

694 \ifx#1\@empty
695 \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 the following item takes into account, that makes makes things a little more complicated:

- \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 find 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.

```

696 \HyPsd@ProtectSpaces#1%
697 \let\HyPsd@String\@empty
698 \expandafter\HyPsd@RemoveBraces\expandafter{#1|}%
699 \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.

```

700 \let\HyPsd@SPACEOPTI\relax
701 {%
702 \let\HyPsd@String\@empty
703 \expandafter\HyPsd@CheckCatcodes#1\HyPsd@End
704 \global\let#1\HyPsd@String
705 }%
706 \expandafter\HyPsd@RemoveMask\expandafter
707 |\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.

```

708 \expandafter
709 \HyPsd@Subst\expandafter{\HyPsd@GLYPHERR}{\relax}#1%
710 \let\HyPsd@String\@empty
711 \expandafter\HyPsd@GlyphProcess#1\relax\@empty
712 \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.

```
713 \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 `\guillemetright`, because `\lastskip` and `\unskip` do not work. Therefore it is removed here.

```

714 \ifHy@unicode
715 \expandafter\HyPsd@StringSubst\csname 80\040\endcsname
716 \HyPsd@SPACEOPTI#1%
717 \edef\Hy@temp@A{\HyPsd@SPACEOPTI\HyPsd@SPACEOPTI\80\273}%
718 \expandafter\HyPsd@Subst\expandafter{\Hy@temp@A}%
719 {\HyPsd@SPACEOPTI\80\273}#1%
720 \else
721 \HyPsd@StringSubst{\040}\HyPsd@SPACEOPTI#1%
722 \expandafter\HyPsd@Subst\expandafter{%
723 \expandafter\HyPsd@SPACEOPTI\expandafter\HyPsd@SPACEOPTI
724 \string\273}\HyPsd@SPACEOPTI\273}#1%
725 \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 removed later.

```

726 \ifHy@unicode
727 \HyPsd@StringSubst{\}){\80\051}#1%
728 \HyPsd@Subst){\80\051}#1%
729 \let\HyPsd@empty\relax
730 \expandafter\HyPsd@StringSubst\csname 80\051\endcsname
731 {\HyPsd@empty\80\051}#1%
732 \else
733 \HyPsd@StringSubst{\}){\051}#1%
734 \HyPsd@Subst){\051}#1%
735 \let\HyPsd@empty\relax
736 \HyPsd@StringSubst{\051}{\HyPsd@empty\string\})}#1%
737 \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`.

```

738 \expandafter\HyPsd@Subst\expandafter{\}/\HyPsd@empty#1%
739 \@ifundefined{@xspace}{%
740 }{%
741 \let\HyPsd@xspace\relax
742 \expandafter\HyPsd@Subst\expandafter
743 {\HyPsd@XSPACE}\HyPsd@xspace#1%
744 \let\HyPsd@xspace\HyPsd@doxspace
745 }%
746 \xdef#1{#1\HyPsd@empty}%

```

Ligatures. T_EX forms ligatures in its stomach, but the PDF strings are treated only by T_EX'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.

```

747 \HyPsd@Subst{---}\textemdash#1%
748 \HyPsd@Subst{--}\textendash#1%
749 % \HyPsd@Subst{fi}\textfi#1%
750 % \HyPsd@Subst{fl}\textfl#1%
751 \HyPsd@Subst{!}\textexclamdown#1%
752 \HyPsd@Subst{?}\textquestiondown#1%
```

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

```

753 \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 T_EX memory and time.

```

754 \ifHy@unicode
755 \HyPsd@StringSubst\(\textparenleft#1%
756 \HyPsd@Subst(\textparenleft#1%
757 \else
758 \HyPsd@StringSubst\({\050}#1%
759 \HyPsd@Subst({\050}#1%
760 \HyPsd@StringSubst{\050}{\string\{ }#1%
761 \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.

```

762 \ifHy@unicode
763 \edef\HyPsd@SPACEOPTI{\80\040}%
764 \else
765 \let\HyPsd@SPACEOPTI\HyPsd@spaceopti
766 \fi
767 \xdef#1{#1\@empty}%
768 \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.

```

769 \endgroup
770 \begingroup
771 \ifHy@unicode
772 \HyPsd@ConvertToUnicode#1%

```

Try conversion back to PDFDocEncoding.

```

773 \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
774 \EdefUnescapeString\HyPsd@temp#1%
775 \iftutex
776 \let\HyPsd@UnescapedString\HyPsd@temp
777 \StringEncodingConvertTest\HyPsd@temp\HyPsd@temp
778 {utf16be}{ascii-print}{%
779 \EdefEscapeString\HyPsd@temp\HyPsd@temp
780 \global\let#1\HyPsd@temp
781 \HyPsd@EscapeTeX#1%
782 \Hy@unicodedefalse
783 }{%
784 \HyPsd@EscapeTeX#1%
785 }%
786 \else
787 \StringEncodingConvertTest\HyPsd@temp\HyPsd@temp
788 {utf16be}{pdfdoc}{%
789 \EdefEscapeString\HyPsd@temp\HyPsd@temp
790 \global\let#1\HyPsd@temp
791 \HyPsd@EscapeTeX#1%
792 \Hy@unicodedefalse
793 }{%}%
794 \fi
795 \fi
796 \fi

```

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

```

797 \pdfstringdefPostHook#1%
798 \endgroup
799 }

```

`\Hy@pdfstringdef`

```

800 \def\Hy@pdfstringdef#1#2{%
801 \pdfstringdef\Hy@gtemp{#2}%
802 \let#1\Hy@gtemp
803 }

```

6.3 Encodings

6.3.1 XeTeX

change 2020-05-13: the special code for XeTeX big chars has been removed as no longer needed.

6.3.2 Workaround for package linguex

```
804 \@ifpackageloaded{linguex}{%
805   \let\HyLinguex@OrgB\b
806   \let\HyLinguex@OrgC\c
807   \let\HyLinguex@OrgD\d
808   \def\HyLinguex@Restore{%
809     \let\b\HyLinguex@OrgB
810     \let\c\HyLinguex@OrgC
811     \let\d\HyLinguex@OrgD
812   }%
813   \Hy@AtEndOfPackage{%
814     \pdfstringdefDisableCommands{%
815       \@ifundefined{oldb}{-}{\let\b\oldb}%
816       \@ifundefined{oldc}{-}{\let\c\oldc}%
817       \@ifundefined{oldd}{-}{\let\d\oldd}%
818     }%
819   }%
820 }{%
821   \let\HyLinguex@Restore\relax
822 }%
```

6.3.3 Catcodes saving and restoring for .def files

\Hy@SaveCatcodeSettings

```
823 \def\Hy@SaveCatcodeSettings#1{%
824   \expandafter\edef\csname Hy@cat@#1\endcsname{%
825     \endlinechar=\the\endlinechar\relax
826     \catcode32 \the\catcode32\relax % (space)
827     \catcode34 \the\catcode34\relax % "
828     \catcode35 \the\catcode35\relax % #
829     \catcode37 \the\catcode37\relax % (percent)
830     \catcode40 \the\catcode40\relax % (
831     \catcode41 \the\catcode41\relax % )
832     \catcode42 \the\catcode42\relax % *
833     \catcode46 \the\catcode46\relax % .
834     \catcode58 \the\catcode58\relax % :
835     \catcode60 \the\catcode60\relax % <
836     \catcode61 \the\catcode61\relax % =
837     \catcode62 \the\catcode62\relax % >
838     \catcode64 \the\catcode64\relax % @
839     \catcode91 \the\catcode91\relax % [
840     \catcode92 \the\catcode92\relax % (backslash)
841     \catcode93 \the\catcode93\relax % ]
842     \catcode123 \the\catcode123\relax % {
843     \catcode124 \the\catcode124\relax % |
844     \catcode125 \the\catcode125\relax % }
845   }%
846   \endlinechar=-1 %
847   \catcode32 10 % (space)
848   \catcode34 12 % "
849   \catcode35 6 % #
850   \catcode37 14 % (percent)
851   \catcode40 12 % (
852   \catcode41 12 % )
```

```

853 \catcode42 12 % *
854 \catcode46 12 % .
855 \catcode58 12 % :
856 \catcode60 12 % <
857 \catcode61 12 % =
858 \catcode62 12 % >
859 \catcode91 12 % [
860 \catcode92 0 % (backslash)
861 \catcode93 12 % ]
862 \catcode123 1 % {
863 \catcode124 12 % |
864 \catcode125 2 % }
865 \makeatletter
866 }

```

`\Hy@RestoreCatcodeSettings`

```

867 \def\Hy@RestoreCatcodeSettings#1{%
868   \csname Hy@cat@#1\endcsname
869   \expandafter\let\csname Hy@cat@#1\endcsname\relax
870 }

```

6.3.4 PD1 encoding

The PD1 encoding implements the PDFDocEncoding for use with L^AT_EX 2_ε's NFSS. Because the informational strings are not set by T_EX'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 T_EX does not process it anyway. So use CM.

```

871 \@ifundefined{T@PD1}{%
872   \Hy@SaveCatcodeSettings{pd1}%
873   \input{pd1enc.def}%
874   \Hy@RestoreCatcodeSettings{pd1}%
875   \HyLinguex@Restore
876 }-{}
877 \DeclareFontFamily{PD1}{pdf}{}
878 \DeclareFontShape{PD1}{pdf}{m}{n}{ <-> cmr10 }-{}
879 \DeclareFontSubstitution{PD1}{pdf}{m}{n}

```

6.3.5 PU encoding

The PU encoding implements the Unicode encoding for use with L^AT_EX's NFSS. Because of large memory requirements the encoding file for Unicode support is only loaded, if option `unicode` is specified as package option. change 2020-08-14: Starting with version v7.00f the file is always loaded and `unicode` is the default 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`.

```

880 \def\HyPsd@LoadUnicode{%
881   \@ifundefined{T@PU}{%
882     \Hy@SaveCatcodeSettings{pu}%

```

```

883 \input{puenc.def}%
884 \Hy@RestoreCatcodeSettings{pu}%
885 \HyLinguex@Restore
886 }{}%
887 \DeclareFontFamily{PU}{pdf}{}%
888 \DeclareFontShape{PU}{pdf}{m}{n}{ <-> cmr10 }{}%
889 \DeclareFontSubstitution{PU}{pdf}{m}{n}%
890 \HyPsd@LoadExtra
891 \let\HyPsd@LoadUnicode\relax
892 }

```

\HyPsd@LoadExtra

```

893 \def\Hy@iffileloaded#1{%
894 \ifundefined{ver@#1}\@secondoftwo\@firstoftwo
895 }
896 \def\HyPsd@LoadExtra{%
897 \ifHy@psdextra
898 \Hy@iffileloaded{puenc.def}{}%
899 \Hy@SaveCatcodeSettings{psdextra}%
900 \input{psdextra.def}%
901 \Hy@RestoreCatcodeSettings{psdextra}%
902 \let\HyPsd@LoadExtra\relax
903 }{}%
904 \fi
905 }

```

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 T_EX's stomach, the second contains the replacement for PDF strings.

```

906 \def\texorpdfstring{%
907 \ifHy@pdfstring
908 \expandafter\@secondoftwo
909 \else
910 \expandafter\@firstoftwo
911 \fi
912 }

```

6.4.2 Hooks for \pdfstringdef

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

```

913 \@ifundefined{pdfstringdefPreHook}{}%
914 \let\pdfstringdefPreHook\@empty
915 }{}
916 \@ifundefined{pdfstringdefPostHook}{}%
917 \let\pdfstringdefPostHook\@gobble
918 }{}

```

`\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`.

```
919 \def\pdfstringdefDisableCommands{%
920   \begingroup
921     \makeatletter
922     \HyPsd@DisableCommands
923 }
```

`\HyPsd@DisableCommands`

```
924 \long\def\HyPsd@DisableCommands#1{%
925   \Hy@GlobalAppendToMacro\pdfstringdefPreHook{#1}%
926   \endgroup
927 }
```

`\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`.

```
928 \def\pdfstringdefWarn#1{%
929   \expandafter\noexpand\csname<>\string#1\endcsname
930 }
```

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.

```
931 \begingroup
```

```

932 \catcode0=12 %
933 \def\x{\endgroup
934   \def\HyPsd@ignorespaces{%
935     \romannumeral\expandafter`\expandafter^^@%
936     \romannumeral^^@%
937   }%
938 }%
939 \x

```

6.5.2 Babel languages

change 2020-10-10: moved language patches to its own file as a first step toward removing them completely.

```

940 \newif\ifHy@next
941 </package>

```

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

```

\pdfstringdefDisableCommands{%
\languageshorthands{system}%
}

```

As consequence the shorthands were shown in the bookmarks, and required a hyperref patch. In version 3.48 babel removed this unneeded code and so the patch could be removed.

Nothing to do for english. change 2020/07/16: removed patch for french. No longer needed. change 2020/07/21: removed patches for german, ngerman. Will be done by the language package. <https://github.com/jspitz/babel-german/issues/4> change 2020/10/10: removed patches for danish, dutch, finnish, portugues, swedish, usorbian, slovene see <https://github.com/latex3/babel/issues/84> change 2020/10/10: removed patch for macedonian, ukrainian; maintainers notified. change 2020/10/11: removed patch for russian, has been merged into babel-russian see <https://github.com/kia999/babel-russian/pull/3> change 2021/02/04: removed patches for greek numerals, code is now in babel-greek. spanish: Nested quoting environments are not supported (<<, >>). change 2021/07/19: removed patches for spanish, code is now in babel-spanish.

```

942 (*package)

```

6.5.3 CJK patch

```

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

```

`\HyPsd@CJKhook`

```

944 \def\HyPsd@CJKhook{%
945   \@ifpackageloaded{CJK}{%
946     \let\CJK@kern\relax
947     \let\CJKkern\relax
948     \let\CJK@CJK\relax
949     \ifHy@CJKbookmarks
950       \HyPsd@CJKhook@bookmarks
951     \fi
952     \HyPsd@CJKhook@unicode
953   }-}%
954 }

```

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 ($\geq 0x40$).

```
955 \begingroup
956 \catcode"7F=\active
957 \toks@{%
958 \let\CJK@ignorespaces\empty
959 \def\CJK@char#1{\@gobbletwo}%
960 \let\CJK@charx\@gobblefour
961 \let\CJK@punctchar\@gobblefour
962 \def\CJK@punctcharx#1{\@gobblefour}%
963 \catcode"7F=\active
964 \def^^7f#1^^7f#2^^7f{%
965 \string #1\HyPsd@DecimalToOctal{#2}%
966 }%
967 % ... ?
968 \ifHy@unicode
969 \def\Hy@cjkpu{\80}%
970 \else
971 \let\Hy@cjkpu\@empty
972 \fi
973 \HyPsd@CJKActiveChars
974 }%
975 \count@=127 %
976 \@whilenum\count@<255 \do{%
977 \advance\count@ by 1 %
978 \lccode`\~=\count@
979 \lowercase{%
980 \toks@\expandafter{\the\toks@ ~}%
981 }%
982 }%
983 \toks@\expandafter{\the\toks@ !}%
984 \xdef\HyPsd@CJKhook@bookmarks{%
985 \the\toks@
986 }%
987 \endgroup
```

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

```
988 \def\HyPsd@CJKActiveChars#1{%
989 \ifx#1!%
990 \let\HyPsd@CJKActiveChars\relax
991 \else
992 \edef#1{\noexpand\Hy@cjkpu\string#1}%
993 \fi
```

```

994 \HyPsd@CJKActiveChars
995 }

```

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

```

996 \def\HyPsd@DecimalToOctal#1{%
997 \ifcase #1 %
998 \000\or \001\or \002\or \003\or \004\or \005\or \006\or \007%
999 \or \010\or \011\or \012\or \013\or \014\or \015\or \016\or \017%
1000 \or \020\or \021\or \022\or \023\or \024\or \025\or \026\or \027%
1001 \or \030\or \031\or \032\or \033\or \034\or \035\or \036\or \037%
1002 \or \040\or \041\or \042\or \043\or \044\or \045\or \046\or \047%
1003 \or \050\or \051\or \052\or \053\or \054\or \055\or \056\or \057%
1004 \or 0\or 1\or 2\or 3\or 4\or 5\or 6\or 7%
1005 \or 8\or 9\or \072\or \073\or \074\or \075\or \076\or \077%
1006 \or @\or A\or B\or C\or D\or E\or F\or G%
1007 \or H\or I\or J\or K\or L\or M\or N\or O%
1008 \or P\or Q\or R\or S\or T\or U\or V\or W%
1009 \or X\or Y\or Z\or \133\or \134\or \135\or \136\or \137%
1010 \or \140\or a\or b\or c\or d\or e\or f\or g%
1011 \or h\or i\or j\or k\or l\or m\or n\or o%
1012 \or p\or q\or r\or s\or t\or u\or v\or w%
1013 \or x\or y\or z\or \173\or \174\or \175\or \176\or \177%
1014 \or \200\or \201\or \202\or \203\or \204\or \205\or \206\or \207%
1015 \or \210\or \211\or \212\or \213\or \214\or \215\or \216\or \217%
1016 \or \220\or \221\or \222\or \223\or \224\or \225\or \226\or \227%
1017 \or \230\or \231\or \232\or \233\or \234\or \235\or \236\or \237%
1018 \or \240\or \241\or \242\or \243\or \244\or \245\or \246\or \247%
1019 \or \250\or \251\or \252\or \253\or \254\or \255\or \256\or \257%
1020 \or \260\or \261\or \262\or \263\or \264\or \265\or \266\or \267%
1021 \or \270\or \271\or \272\or \273\or \274\or \275\or \276\or \277%
1022 \or \300\or \301\or \302\or \303\or \304\or \305\or \306\or \307%
1023 \or \310\or \311\or \312\or \313\or \314\or \315\or \316\or \317%
1024 \or \320\or \321\or \322\or \323\or \324\or \325\or \326\or \327%
1025 \or \330\or \331\or \332\or \333\or \334\or \335\or \336\or \337%
1026 \or \340\or \341\or \342\or \343\or \344\or \345\or \346\or \347%
1027 \or \350\or \351\or \352\or \353\or \354\or \355\or \356\or \357%
1028 \or \360\or \361\or \362\or \363\or \364\or \365\or \366\or \367%
1029 \or \370\or \371\or \372\or \373\or \374\or \375\or \376\or \377%
1030 \fi
1031 }

```

6.5.5 CJK unicode

\HyPsd@CJKhook@unicode

```

1032 \def\HyPsd@CJKhook@unicode{%
1033 \let\Unicode\HyPsd@CJK@Unicode
1034 \let\CJKnumber\HyPsd@CJKnumber
1035 \let\CJKdigits\HyPsd@CJKdigits
1036 }

```

\HyPsd@CJK@Unicode

```

1037 \def\HyPsd@CJK@Unicode#1#2{%
1038 \ifnum#1<256 %
1039 \HyPsd@DecimalToOctalFirst{#1}%

```

```

1040 \HyPsd@DecimalToOctalSecond{#2}%
1041 \else
1042 \933%
1043 \expandafter\expandafter\expandafter\HyPsd@HighA
1044 \intcalcDiv{#1}{4}!%
1045 \933%
1046 \ifcase\intcalcMod{#1}{4} %
1047 4\or 5\or 6\or 7%
1048 \fi
1049 \HyPsd@DecimalToOctalSecond{#2}%
1050 \fi
1051 }

1052 \def\HyPsd@HighA#1!{%
1053 \expandafter\expandafter\expandafter\HyPsd@HighB
1054 \IntCalcDiv#1!64!!%
1055 \expandafter\expandafter\expandafter\HyPsd@HighD
1056 \IntCalcMod#1!64!!%
1057 }
1058 \def\HyPsd@HighB#1!{%
1059 \expandafter\expandafter\expandafter\HyPsd@HighC
1060 \IntCalcDec#1!!%
1061 }
1062 \def\HyPsd@HighC#1!{%
1063 \IntCalcDiv#1!4!%
1064 \@backslashchar
1065 \IntCalcMod#1!4!%
1066 }
1067 \def\HyPsd@HighD#1!{%
1068 \ifcase\IntCalcDiv#1!8! %
1069 0\or 1\or 2\or 3\or 4\or 5\or 6\or 7%
1070 \fi
1071 \ifcase\IntCalcMod#1!8! %
1072 0\or 1\or 2\or 3\or 4\or 5\or 6\or 7%
1073 \fi
1074 }
1075 \def\HyPsd@DecimalToOctalFirst#1{%
1076 \9%
1077 \ifcase#1 %
1078 000\or 001\or 002\or 003\or 004\or 005\or 006\or 007%
1079 \or 010\or 011\or 012\or 013\or 014\or 015\or 016\or 017%
1080 \or 020\or 021\or 022\or 023\or 024\or 025\or 026\or 027%
1081 \or 030\or 031\or 032\or 033\or 034\or 035\or 036\or 037%
1082 \or 040\or 041\or 042\or 043\or 044\or 045\or 046\or 047%
1083 \or 050\or 051\or 052\or 053\or 054\or 055\or 056\or 057%
1084 \or 060\or 061\or 062\or 063\or 064\or 065\or 066\or 067%
1085 \or 070\or 071\or 072\or 073\or 074\or 075\or 076\or 077%
1086 \or 100\or 101\or 102\or 103\or 104\or 105\or 106\or 107%
1087 \or 120\or 111\or 112\or 113\or 114\or 115\or 116\or 117%
1088 \or 120\or 121\or 122\or 123\or 124\or 125\or 126\or 127%
1089 \or 130\or 131\or 132\or 133\or 134\or 135\or 136\or 137%
1090 \or 140\or 141\or 142\or 143\or 144\or 145\or 146\or 147%
1091 \or 150\or 151\or 152\or 153\or 154\or 155\or 156\or 157%
1092 \or 160\or 161\or 162\or 163\or 164\or 165\or 166\or 167%

```



```

1093 \or 170\or 171\or 172\or 173\or 174\or 175\or 176\or 177%
1094 \or 200\or 201\or 202\or 203\or 204\or 205\or 206\or 207%
1095 \or 210\or 211\or 212\or 213\or 214\or 215\or 216\or 217%
1096 \or 220\or 221\or 222\or 223\or 224\or 225\or 226\or 227%
1097 \or 230\or 231\or 232\or 233\or 234\or 235\or 236\or 237%
1098 \or 240\or 241\or 242\or 243\or 244\or 245\or 246\or 247%
1099 \or 250\or 251\or 252\or 253\or 254\or 255\or 256\or 257%
1100 \or 260\or 261\or 262\or 263\or 264\or 265\or 266\or 267%
1101 \or 270\or 271\or 272\or 273\or 274\or 275\or 276\or 277%
1102 \or 300\or 301\or 302\or 303\or 304\or 305\or 306\or 307%
1103 \or 310\or 311\or 312\or 313\or 314\or 315\or 316\or 317%
1104 \or 320\or 321\or 322\or 323\or 324\or 325\or 326\or 327%
1105 \or 330\or 331\or 332\or 333\or 334\or 335\or 336\or 337%
1106 \or 340\or 341\or 342\or 343\or 344\or 345\or 346\or 347%
1107 \or 350\or 351\or 352\or 353\or 354\or 355\or 356\or 357%
1108 \or 360\or 361\or 362\or 363\or 364\or 365\or 366\or 367%
1109 \or 370\or 371\or 372\or 373\or 374\or 375\or 376\or 377%
1110 \fi
1111 }
1112 \def\HyPsd@DecimalToOctalSecond#1{%
1113 \ifcase #1 %
1114 \000\or \001\or \002\or \003\or \004\or \005\or \006\or \007%
1115 \or \010\or \011\or \012\or \013\or \014\or \015\or \016\or \017%
1116 \or \020\or \021\or \022\or \023\or \024\or \025\or \026\or \027%
1117 \or \030\or \031\or \032\or \033\or \034\or \035\or \036\or \037%
1118 \or \040\or \041\or \042\or \043\or \044\or \045\or \046\or \047%
1119 \or \050\or \051\or \052\or \053\or \054\or \055\or \056\or \057%
1120 \or \060\or \061\or \062\or \063\or \064\or \065\or \066\or \067%
1121 \or \070\or \071\or \072\or \073\or \074\or \075\or \076\or \077%
1122 \or \100\or \101\or \102\or \103\or \104\or \105\or \106\or \107%
1123 \or \110\or \111\or \112\or \113\or \114\or \115\or \116\or \117%
1124 \or \120\or \121\or \122\or \123\or \124\or \125\or \126\or \127%
1125 \or \130\or \131\or \132\or \133\or \134\or \135\or \136\or \137%
1126 \or \140\or \141\or \142\or \143\or \144\or \145\or \146\or \147%
1127 \or \150\or \151\or \152\or \153\or \154\or \155\or \156\or \157%
1128 \or \160\or \161\or \162\or \163\or \164\or \165\or \166\or \167%
1129 \or \170\or \171\or \172\or \173\or \174\or \175\or \176\or \177%
1130 \or \200\or \201\or \202\or \203\or \204\or \205\or \206\or \207%
1131 \or \210\or \211\or \212\or \213\or \214\or \215\or \216\or \217%
1132 \or \220\or \221\or \222\or \223\or \224\or \225\or \226\or \227%
1133 \or \230\or \231\or \232\or \233\or \234\or \235\or \236\or \237%
1134 \or \240\or \241\or \242\or \243\or \244\or \245\or \246\or \247%
1135 \or \250\or \251\or \252\or \253\or \254\or \255\or \256\or \257%
1136 \or \260\or \261\or \262\or \263\or \264\or \265\or \266\or \267%
1137 \or \270\or \271\or \272\or \273\or \274\or \275\or \276\or \277%
1138 \or \300\or \301\or \302\or \303\or \304\or \305\or \306\or \307%
1139 \or \310\or \311\or \312\or \313\or \314\or \315\or \316\or \317%
1140 \or \320\or \321\or \322\or \323\or \324\or \325\or \326\or \327%
1141 \or \330\or \331\or \332\or \333\or \334\or \335\or \336\or \337%
1142 \or \340\or \341\or \342\or \343\or \344\or \345\or \346\or \347%
1143 \or \350\or \351\or \352\or \353\or \354\or \355\or \356\or \357%
1144 \or \360\or \361\or \362\or \363\or \364\or \365\or \366\or \367%
1145 \or \370\or \371\or \372\or \373\or \374\or \375\or \376\or \377%
1146 \fi

```

```

1147 }
1148 \def\HyPsd@CJKnumber#1{%
1149   \ifnum#1<\z@
1150     \CJK@minus
1151     \expandafter\HyPsd@@CJKnumber\expandafter{\number-\number#1}%
1152   \else
1153     \expandafter\HyPsd@@CJKnumber\expandafter{\number#1}%
1154   \fi
1155 }
1156 \def\HyPsd@@CJKnumber#1{%
1157   \ifcase#1 %
1158     \CJK@zero\or\CJK@one\or\CJK@two\or\CJK@three\or\CJK@four\or
1159     \CJK@five\or\CJK@six\or\CJK@seven\or\CJK@eight\or\CJK@nine\or
1160     \CJK@ten\or\CJK@ten\CJK@one\or\CJK@ten\CJK@two\or
1161     \CJK@ten\CJK@three\or\CJK@ten\CJK@four\or\CJK@ten\CJK@five\or
1162     \CJK@ten\CJK@six\or\CJK@ten\CJK@seven\or\CJK@ten\CJK@eight\or
1163     \CJK@ten\CJK@nine
1164   \else
1165     \ifnum#1<10000 %
1166       \HyPsd@CJKnumberFour#1!\@empty{20}%
1167       \@empty
1168     \else
1169       \ifnum#1<100000000 %
1170         \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1171         \IntCalcDiv#1!10000!%
1172         !{}{20}%
1173         \CJK@tenthousand
1174         \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1175         \IntCalcMod#1!10000!%
1176         !\CJK@zero{10}%
1177         \@empty
1178       \else
1179         \expandafter\HyPsd@CJKnumberLarge
1180         \number\IntCalcDiv#1!100000000!\expandafter!%
1181         \number\IntCalcMod#1!100000000!!%
1182       \fi
1183     \fi
1184   \fi
1185 }
1186 \def\HyPsd@CJKnumberLarge#1!#2!{%
1187   \HyPsd@CJKnumberFour#1!{}{20}%
1188   \CJK@hundredmillion
1189   \ifnum#2=\z@
1190   \else
1191     \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1192     \IntCalcDiv#2!10000!%
1193     !\CJK@zero{10}%
1194     \CJK@tenthousand
1195     \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1196     \IntCalcMod#2!10000!%
1197     !\CJK@zero{10}%
1198     \@empty
1199   \fi
1200 }

```

```

1201 \def\HyPsd@CJKnumberFour#1!#2#3{%
1202   \ifnum#1=\z@
1203     \expandafter\@gobble
1204   \else
1205     \ifnum#1<1000 %
1206       #2%
1207       \HyPsd@CJKnumberThree#1!{#{#3}%
1208     \else
1209       \HyPsd@@CJKnumber{\IntCalcDiv#1!1000!}%
1210       \CJK@thousand
1211       \expandafter\expandafter\expandafter\HyPsd@CJKnumberThree
1212         \IntCalcMod#1!1000!%
1213       !\CJK@zero{10}%
1214     \fi
1215   \fi
1216 }
1217 \def\HyPsd@CJKnumberThree#1!#2#3{%
1218   \ifnum#1=\z@
1219   \else
1220     \ifnum#1<100 %
1221       #2%
1222       \HyPsd@CJKnumberTwo#1!{#{#3}%
1223     \else
1224       \HyPsd@@CJKnumber{\IntCalcDiv#1!100!}%
1225       \CJK@hundred
1226       \expandafter\expandafter\expandafter\HyPsd@CJKnumberTwo
1227         \IntCalcMod#1!100!%
1228       !\CJK@zero{10}%
1229     \fi
1230   \fi
1231 }
1232 \def\HyPsd@CJKnumberTwo#1!#2#3{%
1233   \ifnum#1=\z@
1234   \else
1235     \ifnum#1<#3 %
1236       #2%
1237       \HyPsd@@CJKnumber{#1}%
1238     \else
1239       \HyPsd@@CJKnumber{\IntCalcDiv#1!10!}%
1240       \CJK@ten
1241       \ifnum\IntCalcMod#1!10!=\z@
1242         \else
1243           \HyPsd@@CJKnumber{\IntCalcMod#1!10!}%
1244         \fi
1245       \fi
1246     \fi
1247 }
1248 \def\HyPsd@CJKdigits#1{%
1249   \ifx*#1\relax
1250     \expandafter\HyPsd@@CJKdigits\expandafter\CJK@zero
1251   \else
1252     \HyPsd@@CJKdigits\CJK@null{#1}%
1253   \fi
1254 }

```

```

1255 \def\HyPsd@@CJKdigits#1#2{%
1256   \ifx\|#2\|
1257   \else
1258     \HyPsd@@@CJKdigits#1#2\@nil
1259   \fi
1260 }%
1261 \def\HyPsd@@@CJKdigits#1#2#3\@nil{%
1262   \HyPsd@CJKdigit#1{#2}%
1263   \ifx\|#3\|
1264     \expandafter\@gobble
1265   \else
1266     \expandafter\@firstofone
1267   \fi
1268   {%
1269     \HyPsd@@@CJKdigits#1#3\@nil
1270   }%
1271 }
1272 \def\HyPsd@CJKdigit#1#2{%
1273   \ifcase#2 %
1274     #1\or
1275     \CJK@one\or\CJK@two\or\CJK@three\or\CJK@four\or
1276     \CJK@five\or\CJK@six\or\CJK@seven\or\CJK@eight\or\CJK@nine
1277   \fi
1278 }

```

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 $\text{\LaTeX} 2_{\epsilon}$ 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 ($\text{\LaTeX} 2_{\epsilon}$ 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
    \@inmathwarn#1%
  \else
    \noexpand#1\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\endcsname

```

```

        \csname ?\string#1\endcsname
    \fi
    \csname\cf@encoding\string#1%
        \expandafter\endcsname
    \else
        \noexpand#1%
    \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}

1279 \def\HyPsd@inmathwarn#1#2{%
1280     \ifx#2\expandafter
1281         \expandafter\ifx\csname\cf@encoding\string#1\endcsname\relax
1282             \HyPsd@GLYPHERR
1283         \expandafter\@gobble\string#1%
1284         >%
1285         \expandafter\expandafter\expandafter\HyPsd@EndWithElse
1286     \else
1287         \expandafter\expandafter\expandafter\HyPsd@GobbleFiFi
1288     \fi
1289 \else
1290     \expandafter#2%
1291 \fi
1292 }
1293 \def\HyPsd@GobbleFiFi#1\fi#2\fi{}
1294 \def\HyPsd@EndWithElse#1\else\else}

```

`\HyPsd@add@accent`

```

1295 \def\HyPsd@add@accent#1#2{%
1296     \HyPsd@GLYPHERR\expandafter\@gobble\string#1+\string#2>%
1297     #2%
1298 }%

```

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, `dimen`, and skip assignments.

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

```

1299 \def\HyPsd@LetUnexpandableSpace#1{%
1300     \expandafter\futurelet\expandafter#1\expandafter\@gobble\space\relax
1301 }

```

`\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.

```
1302 \HyPsd@LetUnexpandableSpace\HyPsd@UnexpandableSpace
```

6.5.8 Marker for commands

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

```
1303 \edef\HyPsd@XSPACE{\string#\string X}
1304 \edef\HyPsd@ITALCORR{\string#\string I}
1305 \edef\HyPsd@GLYPHERR{\string#\string G}
```

6.5.9 `\hspace` fix

`\HyPsd@hspace`

```
1306 \def\HyPsd@hspace#1{\HyPsd@@hspace#1*END}
```

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

```
1307 \def\HyPsd@@hspace#1*#2END{%
1308   \ifx\#2\%
1309     \HyPsd@hspacetest{#1}%
1310   \else
1311     \expandafter\HyPsd@hspacetest
1312   \fi
1313 }
```

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

```
1314 \def\HyPsd@hspacetest#1{\ifdim\dimexpr#1\relax>\z@\space\fi}
```

6.5.10 Fix for AMS classes

```
1315 \@ifundefined{tocsection}{%
1316   \let\HyPsd@AMSclassfix\relax
1317 }{%
1318   \def\HyPsd@AMSclassfix{%
1319     \let\tocpart\HyPsd@tocsection
1320     \let\tocchapter\HyPsd@tocsection
1321     \let\tocappendix\HyPsd@tocsection
1322     \let\tocsection\HyPsd@tocsection
1323     \let\tocsubsection\HyPsd@tocsection
1324     \let\tocsubsubsection\HyPsd@tocsection
1325     \let\tocparagraph\HyPsd@tocsection
1326   }%
1327   \def\HyPsd@tocsection#1#2#3{%
1328     \if @#2\else\if @#1\else#1 \fi#2. \fi
1329     #3%
1330   }%
1331 }
```

6.5.11 Reference commands

`\HyPsd@href`

```
1332 \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.

```
1333 \def\HyPsd@ref#1{\HyPsd@@ref#1*\END}%
```

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

```
1334 \def\HyPsd@@ref#1*#2\END{%
1335   \ifx\#2\%
1336     \HyPsd@@@ref{#1}%
1337   \else
1338     \expandafter\HyPsd@@@ref
1339   \fi
1340 }%
```

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

```
1341 \def\HyPsd@@@ref#1{%
1342   \expandafter\ifx\csname r@#1\endcsname\relax
1343     ??%
1344   \else
1345     \expandafter\expandafter\expandafter
1346     \@car\csname r@#1\endcsname\@nil
1347   \fi
1348 }
```

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

```
1349 \def\HyPsd@pageref#1{\HyPsd@@pageref#1*\END}
```

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

```
1350 \def\HyPsd@@pageref#1*#2\END{%
1351   \ifx\#2\%
1352     \HyPsd@@@pageref{#1}%
1353   \else
1354     \expandafter\HyPsd@@@pageref
1355   \fi
1356 }
```

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

```
1357 \def\HyPsd@@@pageref#1{%
1358   \expandafter\ifx\csname r@#1\endcsname\relax
1359     ??%
1360   \else
1361     \expandafter\expandafter\expandafter\expandafter
1362     \expandafter\expandafter\expandafter\@car
1363     \expandafter\expandafter\expandafter\@gobble
1364     \csname r@#1\endcsname{\}\@nil
1365   \fi
1366 }
```

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

```
1367 \def\HyPsd@nameref#1{\HyPsd@@nameref#1*\END}
```

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

```
1368 \def\HyPsd@@nameref#1*#2\END{%
1369   \ifx\#2\%
1370     \HyPsd@@@nameref{#1}%
1371   \else
1372     \expandafter\HyPsd@@@nameref
1373   \fi
1374 }
```

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

```
1375 \def\HyPsd@@@nameref#1{%
1376   \expandafter\ifx\csname r@#1\endcsname\relax
1377     ??%
1378   \else
1379     \expandafter\expandafter\expandafter\expandafter
1380     \expandafter\expandafter\expandafter\@car
1381     \expandafter\expandafter\expandafter\@gobbletwo
1382     \csname r@#1\endcsname{}{}\@nil
1383   \fi
1384 }
```

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

```
1385 \def\HyPsd@autoref#1{\HyPsd@@autoref#1*\END}
```

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

```
1386 \def\HyPsd@@autoref#1*#2\END{%
1387   \ifx\#2\%
1388     \HyPsd@@@autoref{#1}%
1389   \else
1390     \expandafter\HyPsd@@@autoref
1391   \fi
1392 }
```

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

```
1393 \def\HyPsd@@@autoref#1{%
1394   \expandafter\ifx\csname r@#1\endcsname\relax
1395     ??%
1396   \else
1397     \expandafter\expandafter\expandafter\HyPsd@autorefname
1398     \csname r@#1\endcsname{}{}{}{}\@nil
1399     \expandafter\expandafter\expandafter
1400     \@car\csname r@#1\endcsname\@nil
1401   \fi
1402 }
```

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

```
1403 \def\HyPsd@autorefname#1#2#3#4#5\@nil{%
1404   \ifx\#4\%
1405     \else
1406     \HyPsd@@@autorefname#4.\@nil
1407   \fi
1408 }
```


`\HyPsd@@autorefname`

```
1409 \def\HyPsd@@autorefname#1.#2\@nil{%
1410 \@ifundefined{#1autorefname}{%
1411 \@ifundefined{#1name}{%
1412 }{%
1413 \csname#1name\endcsname\space
1414 }%
1415 }{%
1416 \csname#1autorefname\endcsname\space
1417 }%
1418 }
```

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 cause 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 unmached `\if...` tokens, the cases `\let\if...\iftrue` and `\let\if...\iffalse` are checked and ignored.

`\HyPsd@DefCommand`
`\HyPsd@LetCommand`

```
1419 \begingroup
1420 \def\x#1#2{%
1421 \endgroup
1422 \let#1\def
1423 \def\HyPsd@DefCommand##1##2###{%
1424 #1%
1425 \expandafter\noexpand
1426 \csname\expandafter\@gobble\string##1\@empty\endcsname
1427 \@gobble
```

```

1428 }%
1429 \let#2\let
1430 \def\HyPsd@@LetCommand##1{%
1431   \expandafter\ifx\csname##1\expandafter\endcsname
1432     \csname iftrue\endcsname
1433   \pdfstringdefWarn\let
1434   \expandafter\@gobble
1435   \else
1436   \expandafter\ifx\csname##1\expandafter\endcsname
1437     \csname iffalse\endcsname
1438   \pdfstringdefWarn\let
1439   \expandafter\expandafter\expandafter\@gobble
1440   \else
1441     #2%
1442     \expandafter\noexpand
1443     \csname##1\expandafter\expandafter\expandafter\endcsname
1444   \fi
1445   \fi
1446 }%
1447 }%
1448 \expandafter\x\csname <def>-command\expandafter\endcsname
1449   \csname <let>-command\endcsname
1450 \def\HyPsd@LetCommand#1{%
1451   \expandafter\expandafter\expandafter\HyPsd@@LetCommand
1452   \expandafter\expandafter\expandafter{%
1453     \expandafter\@gobble\string#1\@empty
1454   }%
1455 }

```

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).

```

1456 \def\HyPsd@ifnextchar#1{%
1457   \pdfstringdefWarn#1%
1458   \expandafter\@gobbletwo\@gobble
1459 }

```

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`.

```
1460 \def\HyPsd@protected@testopt#1{%
1461   \pdfstringdefWarn#1%
1462   \@gobbletwo
1463 }
```

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:

```
1464 \def\HyPsd@Warning#1{%
1465   \begingroup
1466   \let\space\Hy@space
1467   \Hy@Warning{#1}%
1468   \endgroup
1469 }
```

6.6.2 Protecting spaces

`\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`.

```
1470 \let\HyPsd@fi\fi
1471 \def\HyPsd@ProtectSpaces#1{%
1472   \xdef#1{%
1473     \iftrue
1474       \expandafter\HyPsd@@ProtectSpacesFi
1475       \expandafter|\expandafter\@empty#1| %
1476       \HyPsd@fi
1477   }%
1478   \expandafter\HyPsd@RemoveMask#1\HyPsd@End#1%
1479 }
```

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

```
1480 \def\HyPsd@@ProtectSpacesFi#1 #2\HyPsd@fi{%
1481   \fi
1482   \unexpanded{#1}%
1483   \ifx\scrollmode#2\scrollmode
1484   \else
1485     \HyPsd@@ProtectSpacesFi\HyPsd@UnexpandableSpace#2%
1486   \HyPsd@fi
1487 }
```

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.

```
1488 \def\HyPsd@RemoveMask|#1|\HyPsd@End#2{%
1489 \xdef#2{\unexpanded\expandafter{#1}}%
1490 }%
```

6.6.3 Remove grouping braces

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

```
1491 \def\HyPsd@RemoveBraces#1{%
1492 \ifx\scrollmode#1\scrollmode
1493 \else
1494 \HyPsd@@RemoveBracesFi#1\HyPsd@End{#1}%
1495 \fi
1496 }
```

`\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 `\Hy@ReturnAfterFi`.

```
1497 \def\HyPsd@@RemoveBracesFi#1#2\HyPsd@End#3\fi{%
1498 \fi
1499 \def\Hy@temp@A{#1#2}%
1500 \def\Hy@temp@B{#3}%
1501 \ifx\Hy@temp@A\Hy@temp@B
1502 \expandafter\def\expandafter\HyPsd@String\expandafter{%
1503 \HyPsd@String#1%
1504 }%
1505 \ifx\scrollmode#2\scrollmode
1506 \else
1507 \Hy@ReturnAfterFiFiEnd{%
1508 \HyPsd@RemoveBraces{#2}%
1509 }%
1510 \fi
1511 \else
1512 \def\Hy@temp@A{#1}%
1513 \HyPsd@AppendItalcorr\HyPsd@String
1514 \ifx\Hy@temp@A\@empty
1515 \Hy@ReturnAfterElseFiFiEnd{%
1516 \HyPsd@RemoveBraces{#2}%
1517 }%
1518 \else
1519 \HyPsd@ProtectSpaces\Hy@temp@A
1520 \HyPsd@AppendItalcorr\Hy@temp@A
```

```

1521 \Hy@ReturnAfterFiFiEnd{%
1522 \expandafter\HyPsd@RemoveBraces\expandafter
1523 {\Hy@temp@A#2}%
1524 }%
1525 \fi
1526 \fi
1527 \Hy@ReturnEnd
1528 }

```

`\HyPsd@AppendItalcrr` 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`.

```

1529 \def\HyPsd@AppendItalcrr#1{%
1530 \expandafter\HyPsd@@AppendItalcrr\expandafter{\}\#1%
1531 }
1532 \def\HyPsd@@AppendItalcrr#1#2{%
1533 \expandafter\def\expandafter#2\expandafter{#2#1}%
1534 }

```

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>.

```

1535 \@ifundefined{directlua}{%
1536 }{%
1537 \expandafter\ifx\csname\endcsname\relax\fi
1538 }

```

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`.

```

1539 \begingroup
1540 \catcode`\Q=\active
1541 \let Q\@empty
1542 \gdef\HyPsd@CheckCatcodes#1#2\HyPsd@End{%
1543 \global\let\HyPsd@Rest\relax
1544 \ifcat\relax\noexpand#1\relax
1545 \ifx#1\protect
1546 \else
1547 \ifx#1\penalty
1548 \setbox\z@=\hbox{%

```

```

1549     \afterassignment\HyPsd@AfterCountRemove
1550     \count@=#2\HyPsd@End
1551   }%
1552 \else
1553   \ifx#1\kern
1554     \setbox\z@=\hbox{%
1555       \afterassignment\HyPsd@AfterDimenRemove
1556       \dimen@=#2\HyPsd@End
1557     }%
1558   \else
1559     \ifx#1\hskip
1560       \setbox\z@=\hbox{%
1561         \afterassignment\HyPsd@AfterSkipRemove
1562         \skip@=#2\HyPsd@End
1563       }%
1564     \else
1565       \HyPsd@CatcodeWarning{#1}%
1566     \fi
1567   \fi
1568 \fi
1569 \fi
1570 \else
1571   \ifcat\noexpand#1\noexpandQ% active character
1572     \expandafter\expandafter\expandafter\def
1573     \expandafter\expandafter\expandafter\HyPsd@String
1574     \expandafter\expandafter\expandafter{%
1575       \expandafter\HyPsd@String\string#1%
1576     }%
1577   \else
1578     \ifcat#1A% letter
1579       \expandafter\def\expandafter\HyPsd@String\expandafter{%
1580         \HyPsd@String#1%
1581       }%
1582     \else
1583       \ifcat#1 % SPACE
1584         \expandafter\def\expandafter\HyPsd@String\expandafter{%
1585           \HyPsd@String\HyPsd@SPACEOPTI
1586         }%
1587       \else
1588         \ifcat$#1%
1589           \HyPsd@CatcodeWarning{math shift}%
1590         \else
1591           \ifcat&#1%
1592             \HyPsd@CatcodeWarning{alignment tab}%
1593           \else
1594             \ifcat^#1%
1595               \HyPsd@CatcodeWarning{superscript}%
1596             \else
1597               \ifcat_#1%
1598                 \HyPsd@CatcodeWarning{subscript}%
1599               \else
1600                 \expandafter\def\expandafter\HyPsd@String\expandafter{%
1601                   \HyPsd@String#1%
1602                 }%

```

```

1603         \fi
1604     \fi
1605     \fi
1606     \fi
1607     \fi
1608     \fi
1609     \fi
1610     \fi
1611     \ifx\HyPsd@Rest\relax
1612     \ifx\scrollmode#2\scrollmode
1613     \else
1614     \Hy@ReturnAfterFiFiEnd{%
1615     \HyPsd@CheckCatcodes#2\HyPsd@End
1616     }%
1617     \fi
1618     \else
1619     \ifx\HyPsd@Rest\@empty
1620     \else
1621     \Hy@ReturnAfterFiFiEnd{%
1622     \expandafter\HyPsd@CheckCatcodes\HyPsd@Rest\HyPsd@End
1623     }%
1624     \fi
1625     \fi
1626     \Hy@ReturnEnd
1627 }%
1628 \endgroup

```

Remove counts, dimens, skips.

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

```

1629 \def\HyPsd@AfterCountRemove#1\HyPsd@End{%
1630 \gdef\HyPsd@Rest{#1}%
1631 }

```

`\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.

```

1632 \def\HyPsd@AfterDimenRemove#1\HyPsd@End{%
1633 \ifdim\ifx\HyPsd@String\@empty\z@\else\dimen@\fi>1ex %
1634 \HyPsd@ReplaceSpaceWarning{\string\kern\space\the\dimen@}%
1635 \gdef\HyPsd@Rest{\HyPsd@UnexpandableSpace #1}%
1636 \else
1637 \ifdim\dimen@=\z@
1638 \else
1639 \HyPsd@RemoveSpaceWarning{\string\kern\space\the\dimen@}%
1640 \fi
1641 \gdef\HyPsd@Rest{#1}%
1642 \fi
1643 }

```

`\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).

```

1644 \def\HyPsd@AfterSkipRemove#1\HyPsd@end{%
1645 \ifdim\ifx\HyPsd@String@empty\z@\else\skip@>\fi>lex %
1646 \HyPsd@ReplaceSpaceWarning{\string\hskip\space\the\skip@}%
1647 \gdef\HyPsd@Rest{\HyPsd@UnexpandableSpace #1}%
1648 \else
1649 \ifdim\skip@=\z@
1650 \else
1651 \HyPsd@RemoveSpaceWarning{\string\kern\space\the\skip@}%
1652 \fi
1653 \gdef\HyPsd@Rest{#1}%
1654 \fi
1655 }

```

Catcode warnings.

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

```

1656 \def\HyPsd@CatcodeWarning#1{%
1657 \HyPsd@Warning{%
1658 Token not allowed in a PDF string (%
1659 \ifHy@unicode
1660 Unicode%
1661 \else
1662 PDFDocEncoding%
1663 \fi
1664 ):%
1665 \MessageBreak removing ` \HyPsd@RemoveCmdPrefix#1'%
1666 }%
1667 }
1668 \begingroup
1669 \catcode`\|=0 %
1670 \catcode`\|=12 %
1671 |gdef|HyPsd@RemoveCmdPrefix#1{%
1672 |expandafter|HyPsd@@RemoveCmdPrefix
1673 |string#1|@empty\<>-|@empty|@empty
1674 }%
1675 |gdef|HyPsd@@RemoveCmdPrefix#1\<>-#2|@empty#3|@empty{#1#2}%
1676 |endgroup

```

\HyPsd@RemoveSpaceWarning

```

1677 \def\HyPsd@RemoveSpaceWarning#1{%
1678 \HyPsd@Warning{%
1679 Token not allowed in a PDF string (%
1680 \ifHy@unicode
1681 Unicode%
1682 \else
1683 PDFDocEncoding%
1684 \fi
1685 ):%
1686 \MessageBreak #1\MessageBreak
1687 removed%
1688 }%
1689 }

```

\HyPsd@ReplaceSpaceWarning


```

1690 \def\HyPsd@ReplaceSpaceWarning#1{%
1691   \HyPsd@Warning{%
1692     Token not allowed in a PDF string (%
1693     \ifHy@unicode
1694       Unicode%
1695     \else
1696       PDFDocEncoding%
1697     \fi
1698   ):%
1699   \MessageBreak #1\MessageBreak
1700   replaced by space%
1701 }%
1702 }

```

6.6.5 Check for wrong glyphs

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

```

1703 \def\HyPsd@GlyphProcess#1\relax#2\@empty{%
1704   \expandafter\def\expandafter\HyPsd@String\expandafter{%
1705     \HyPsd@String#1%
1706   }%
1707   \ifx\#2\%
1708   \else
1709     \Hy@ReturnAfterFi{%
1710       \HyPsd@GlyphProcessWarning#2\@empty
1711     }%
1712   \fi
1713 }
1714 \def\HyPsd@GlyphProcessWarning#1>#2\@empty{%
1715   \HyPsd@@@GlyphProcessWarning#1++>%
1716   \HyPsd@GlyphProcess#2\@empty
1717 }
1718 \def\HyPsd@@@GlyphProcessWarning#1+#2+#3>{%
1719   \ifx\#2\%
1720     \HyPsd@Warning{%
1721       Glyph not defined in %
1722       P\ifHy@unicode U\else D1\fi\space encoding,\MessageBreak
1723       removing ` \@backslashchar#1'%
1724     }%
1725   \else
1726     \HyPsd@Warning{%
1727       Composite letter ` \@backslashchar#1+#2'\MessageBreak
1728       not defined in P\ifHy@unicode U\else D1\fi\space encoding,%
1729       \MessageBreak
1730       removing ` \@backslashchar#1'%
1731     }%
1732   \fi
1733 }

```

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`.

```

1734 \def\HyPsd@spaceopti#1{ % first space
1735   \ifx\HyPsd@spaceopti#1%
1736     \040%
1737   \else
1738     #1%
1739   \fi
1740 }%

```

6.6.6 Replacing tokens

`\HyPsd@Subst` To save tokens `\HyPsd@StringSubst` is a 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.

```

1741 \def\HyPsd@Subst#1#2#3{%
1742   \def\HyPsd@@@ReplaceFi##1#1##2\END\fi{%
1743     \fi
1744     ##1%
1745     \ifx\scrollmode##2\scrollmode
1746     \else
1747       #2%
1748     \HyPsd@@@ReplaceFi##2\END
1749     \fi
1750   }%
1751   \xdef#3{%
1752     \iftrue
1753       \expandafter\HyPsd@@@ReplaceFi#3#1\END
1754     \fi
1755   }%
1756 }

```

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

```

1757 \def\HyPsd@StringSubst#1{%
1758   \expandafter\HyPsd@Subst\expandafter{\string#1}%
1759 }

```

`\HyPsd@EscapeTeX`

```

1760 \begingroup
1761   \lccode`!\=``\%%
1762   \lccode`|\=``\%
1763   \lccode`\<=``\{
1764   \lccode`\)=``\}%
1765   \lccode`0=\z@
1766   \lccode`1=\z@
1767   \lccode`3=\z@
1768   \lccode`4=\z@
1769   \lccode`5=\z@
1770   \lccode`7=\z@

```

```

1771 \lowercase{\endgroup
1772 \def\HyPsd@EscapeTeX#1{%
1773   \HyPsd@Subst!{|045}#1%
1774   \HyPsd@Subst({|173}#1%
1775   \HyPsd@Subst){|175}#1%
1776 }%
1777 }

```

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.

```

1778 \def\HyPsd@doxspace#1{%
1779   \ifx#1\relax\else
1780   \ifx#1.\else
1781   \ifx#1:\else
1782   \ifx#1,\else
1783   \ifx#1;\else
1784   \ifx#1!\else
1785   \ifx#1?\else
1786   \ifx#1/\else
1787   \ifx#1-\else
1788   \ifx#1'\else
1789     \HyPsd@SPACEOPTI
1790     \fi
1791     \fi
1792     \fi
1793     \fi
1794     \fi
1795     \fi
1796     \fi
1797     \fi
1798     \fi
1799     \fi
1800   #1%
1801 }%

```

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.

```

1802 \begingroup
1803 \catcode`\|=0 %
1804 \catcode`\|=12 %

```

`\HyPsd@ConvertToUnicode`

```

1805 |gdef|HyPsd@ConvertToUnicode#1{%
1806   |xdef#1{%
1807     |expandafter|HyPsd@DoConvert#1|@empty|@empty|@empty
1808   }%

```

```

1809 |ifx#1|@empty
1810 |else
1811 |xdef#1{%
1812 \376\377%
1813 #1%
1814 }%
1815 |fi
1816 }%

```

\HyPsd@DoConvert

```

1817 |gdef|HyPsd@DoConvert#1{%
1818 |ifx#1|@empty
1819 |else
1820 |Hy@ReturnAfterFi{%
1821 |ifx#1\%%
1822 \%%
1823 |expandafter|HyPsd@DoEscape
1824 |else
1825 |HyPsd@Char{#1}%
1826 |expandafter|HyPsd@DoConvert
1827 |fi
1828 }%
1829 |fi
1830 }%

```

\HyPsd@DoEscape

```

1831 |gdef|HyPsd@DoEscape#1{%
1832 |ifx#19%
1833 |expandafter|HyPsd@GetTwoBytes
1834 |else
1835 |Hy@ReturnAfterFi{%
1836 |ifx#18%
1837 00%
1838 |expandafter|HyPsd@GetTwoBytes
1839 |else
1840 #1%
1841 |expandafter|HyPsd@GetOneByte
1842 |fi
1843 }%
1844 |fi
1845 }%

```

\HyPsd@GetTwoBytes

```

1846 |gdef|HyPsd@GetTwoBytes#1\#2#3#4{%
1847 #1\#2#3#4%
1848 |HyPsd@DoConvert
1849 }%

```

\HyPsd@GetOneByte

```

1850 |gdef|HyPsd@GetOneByte#1#2{%
1851 #1#2%
1852 |HyPsd@DoConvert
1853 }%
1854 |endgroup

```

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

```
1855 \def\HyPsd@GetNextTwoTokens#1#2#3\END#4{%
1856 \xdef#4{#4#1#2}%
1857 \HyPsd@@ConvertToUnicode#3\END#4%
1858 }
```

`\HyPsd@Char`

```
1859 \begingroup
1860 \catcode0=9 %
1861 \catcode`\^=7 %
1862 \catcode`\^^=12 %
1863 \def\x{^^^0000}%
1864 \expandafter\endgroup
1865 \ifx\x\@empty
1866 \def\HyPsd@Char#1{%
1867 \ifnum`#1<128 %
1868 \@backslashchar 000#1%
1869 \else
1870 \ifnum`#1<65536 %
1871 \expandafter\HyPsd@CharTwoByte\number`#1!%
1872 \else
1873 \expandafter\expandafter\expandafter\HyPsd@CharSurrogate
1874 \intcalcSub{`#1}{65536}!%
1875 \fi
1876 \fi
1877 }%
1878 \def\HyPsd@CharTwoByte#1!{%
1879 \expandafter\expandafter\expandafter\HyPsd@CharOctByte
1880 \IntCalcDiv#1!256!%
1881 \expandafter\expandafter\expandafter\HyPsd@CharOctByte
1882 \IntCalcMod#1!256!%
1883 }%
1884 \def\HyPsd@CharOctByte#1!{%
1885 \@backslashchar
1886 \IntCalcDiv#1!64!%
1887 \intcalcDiv{\IntCalcMod#1!64!}{8}%
1888 \IntCalcMod#1!8!%
1889 }%
1890 \def\HyPsd@CharSurrogate#1!{%
1891 \@backslashchar 33%
1892 \IntCalcDiv#1!262144!%
1893 \expandafter\expandafter\expandafter\HyPsd@CharOctByte
1894 \intcalcDiv{\IntCalcMod#1!262144!}{1024}!%
1895 \@backslashchar 33%
1896 \expandafter\expandafter\expandafter\IntCalcAdd
1897 \intcalcDiv{\IntCalcMod#1!1024!}{256}!4!%
1898 \expandafter\expandafter\expandafter\HyPsd@CharOctByte
1899 \IntCalcMod#1!256!%
1900 }%
1901 \else
1902 \def\HyPsd@Char#1{%
1903 \@backslashchar 000#1%
1904 }%
```

```

1905 \fi
change 2022-02-21 For the case that utf8 chars are protected we need to expand
them. This works only is \UTFviii@loop is not defined in a group, which will be
the case in the new latex code, so we test for it.
1906 \ifcsname UTFviii@loop\endcsname
1907 \def\HyPsd@expand@utfviii {%
1908   \count@"C2
1909   \@tempcnta"F5
1910   \def\UTFviii@tmp{\expandafter\def\expandafter~\expandafter{~}}%
1911   \UTFviii@loop
1912 }
1913 \else
1914 \def\HyPsd@expand@utfviii {}
1915 \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

1916 \begingroup
1917 \lccode\~=\^^f4\relax
1918 \lowercase{\endgroup
1919 \def\HyPsd@UTFviii{%
1920   \HyPsd@expand@utfviii
1921   \let\UTFviii@two@octets\HyPsd@UTFviii@two
1922   \let\UTFviii@three@octets\HyPsd@UTFviii@three
1923   \let\UTFviii@four@octets\HyPsd@UTFviii@four
1924   \ifx~\HyPsd@UTFviii@cccxliv@undef
1925     \let~\HyPsd@UTFviii@cccxliv@def
1926   \fi
1927   \let\unichar\HyPsd@unichar
1928 }%
1929 }%
1930 \def\HyPsd@UTFviii@cccxliv@undef{\@inpenc@undefined@{utf8}}%
1931 \edef\HyPsd@UTFviii@cccxliv@def{%
1932   \noexpand\UTFviii@four@octets\string ^^f4%
1933 }%

```

The two octet form of UTF-8 110aaabb (A) and 10ccddd (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.

$$\begin{aligned}
 a & := A/4 - 48 & (1) \\
 b & := A - 4 * (A/4) & (2)
 \end{aligned}$$

$$c := B/8 - 8 * ((8 * (B/8))/8) \tag{3}$$

$$d := B - 8 * (B/8) \tag{4}$$

$$\tag{5}$$

```

1934 \def\HyPsd@UTFviii@two#1#2{%
1935 \expandafter\HyPsd@UTFviii@@two
1936 \number\dimexpr.25\dimexpr`#1sp\expandafter\relax\expandafter|
1937 \number`#1\expandafter|
1938 \number\dimexpr.125\dimexpr`#2sp\expandafter\relax\expandafter|
1939 \number`#2 \@nil
1940 }%
1941 \def\HyPsd@UTFviii@@two#1|#2|#3|#4\@nil{%
1942 \expandafter\8
1943 \number\numexpr #1-48\expandafter\relax
1944 \csname\number\numexpr #2-4*#1\relax\expandafter\endcsname
1945 \number\numexpr #3-8*
1946 \number\dimexpr.125\dimexpr#3sp\relax\relax\expandafter\relax
1947 \number\numexpr #4-8*#3\relax
1948 }%
```

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

$$a := A/4 - 56 \tag{6}$$

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

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

$$d := B - 4 * (B/4) \tag{9}$$

$$e := C/8 - 16 \tag{10}$$

$$f := C - 8 * (C/8) \tag{11}$$

$$\tag{12}$$

```

1949 \def\HyPsd@UTFviii@three#1#2#3{%
1950 \expandafter\HyPsd@UTFviii@@three
1951 \number\dimexpr.25\dimexpr`#1sp\expandafter\relax\expandafter|
1952 \number`#1\expandafter|
1953 \number\ifnum\numexpr`#2-128\relax <32 0\else 1\fi\expandafter|
1954 \number\dimexpr.25\dimexpr`#2sp\expandafter\relax\expandafter|
1955 \number`#2\expandafter|
1956 \number\dimexpr.125\dimexpr`#3sp\expandafter\relax\expandafter|
1957 \number`#3 \@nil
1958 }%
1959 \def\HyPsd@UTFviii@@three#1|#2|#3|#4|#5|#6|#7\@nil{%
1960 \expandafter\9
1961 \number\numexpr #1-56\expandafter\relax
1962 \number\numexpr 2*(#2-4*#1)+#3\expandafter\relax
1963 \number\numexpr #4 - 32 -\ifcase#3 0\else 8\fi\expandafter\relax
1964 \csname\number\numexpr #5-4*#4\relax\expandafter\endcsname
1965 \number\numexpr #6-16\expandafter\relax
1966 \number\numexpr #7-8*#6\relax
1967 }%
```

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: 11110uuu 10uuzzzz 10yyyyyy 10xxxxxx
www = uuuu - 1
UTF-16: 110110ww wwzzzzyy 110111yy yyxxxxxx
octal: 011 011 0ww 0ww zzz zyy 011 011 1yy 0yy xxx xxx

```

```

1968 \def\HyPsd@UTFviii@four#1#2{%
1969 \expandafter\HyPsd@@UTFviii@four\number
1970 \numexpr-1+(\`#1-240)*4+\dimexpr.0625\dimexpr`#2sp-128sp%
1971 \expandafter|\number
1972 \numexpr`#2-16*\dimexpr.0625\dimexpr`#2sp| %
1973 }%
1974 \def\HyPsd@@UTFviii@four#1|#2|#3{%
1975 \933\number\dimexpr.25\dimexpr#1sp\relax\relax
1976 \csname\number\dimexpr#1-4*\dimexpr.25\dimexpr#1sp\endcsname
1977 \ifodd#2 %
1978 \number\dimexpr(#2-1)/2\relax
1979 \else
1980 \number\dimexpr#2/2\relax
1981 \fi
1982 \number\dimexpr\ifodd#2 4+\fi
1983 \dimexpr.0625\dimexpr`#3sp-128sp\relax\relax\relax
1984 \933%
1985 \expandafter\HyPsd@@@UTFviii@four\number
1986 \numexpr`#3-16*\dimexpr.0625\dimexpr`#3sp| %
1987 }%
1988 \def\HyPsd@@@UTFviii@four#1|#2{%
1989 \number\dimexpr4+\dimexpr.25\dimexpr#1sp\relax\relax\relax
1990 \csname\number\dimexpr#1-4*\dimexpr.25\dimexpr#1sp\endcsname
1991 \number\dimexpr.125\dimexpr`#2sp-128sp\relax\relax
1992 \number\dimexpr`#2-8*\dimexpr.125\dimexpr`#2sp\relax\relax\relax
1993 }%

```

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

```

1994 \def\HyPsd@unichar#1{%
1995 \ifHy@unicode
1996 \ifnum#1>"10FFFF %
1997 \HyPsd@UnicodeReplacementCharacter % illegal
1998 \else
1999 \ifnum#1>"FFFF %

```

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

```

2000 \expandafter\HyPsd@unichar\expandafter{%
2001 \number\dimexpr 55296+%
2002 \dimexpr.0009765625\dimexpr\number#1sp-\p@
2003 \relax\relax\relax
2004 }%

```

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

```

2005 \expandafter\HyPsd@unichar\expandafter{%
2006 \number\dimexpr#1-9216%
2007 -1024*\dimexpr.0009765625\dimexpr\number#1sp-\p@
2008 \relax\relax\relax
2009 }%
2010 \else

```



```

2011 \ifnum#1>"7FF %
2012 \9%
2013 \expandafter\HyPsd@unichar@first@byte\expandafter{%
2014 \number
2015 \dimexpr.00390625\dimexpr\number#1sp\relax\relax
2016 }%
2017 \else
2018 \8%
2019 \number\dimexpr.00390625\dimexpr\number#1sp\relax\relax
2020 \fi
2021 \expandafter\HyPsd@unichar@second@byte\expandafter{%
2022 \number
2023 \numexpr#1-256*\number
2024 \dimexpr.00390625\dimexpr\number#1sp\relax\relax\relax
2025 }%
2026 \fi
2027 \fi
2028 \else
2029 .% unsupported (Unicode -> PDF Doc Encoding)
2030 \fi
2031 }%
2032 \def\HyPsd@UnicodeReplacementCharacter{\9377\375}%
2033 \def\HyPsd@unichar@first@byte#1{%
2034 \number\dimexpr.015625\dimexpr#1sp\relax\relax
2035 \expandafter\HyPsd@unichar@octtwo\expandafter{%
2036 \number
2037 \numexpr#1-64*\number\dimexpr.015625\dimexpr#1sp%
2038 \relax\relax\relax
2039 }%
2040 }%
2041 \def\HyPsd@unichar@second@byte#1{%
2042 \curname\number\dimexpr.015625\dimexpr#1sp\relax\relax\endcsname
2043 \expandafter\HyPsd@unichar@octtwo\expandafter{%
2044 \number
2045 \numexpr#1-64*\number\dimexpr.015625\dimexpr#1sp%
2046 \relax\relax\relax
2047 }%
2048 }%
2049 \def\HyPsd@unichar@octtwo#1{%
2050 \number\dimexpr.125\dimexpr#1sp\relax\relax
2051 \number\numexpr#1-8*\number\dimexpr.125\dimexpr#1sp%
2052 \relax\relax\relax
2053 }%

```

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

```

2054 \def\HyPsd@utf@viii@undeferr#1#2#3#4#5#6{%
2055 \ifx@gobble#1%
2056 \else
2057 [Please insert \textbackslash PrerenderUnicode%
2058 \textbraceleft#1\textbraceright\space
2059 into preamble]%
2060 \fi
2061 }%

```

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`.

```
2062 \def\HyPsd@DieFace#1{%
2063   \ifHy@unicode
2064     \ifnum#1<1 %
2065       \HyPsd@UnicodeReplacementCharacter
2066     \else
2067       \ifnum#1>6 %
2068         \9046\205%
2069         \expandafter\expandafter\expandafter
2070         \HyPsd@DieFaceLarge\intcalcSub{#1}{6}!%
2071       \else
2072         \9046\20\intcalcDec{#1}%
2073       \fi
2074     \fi
2075   \else
2076     .% Die faces are not part of PDFDocEncoding
2077   \fi
2078 }
```

`\HyPsd@DieFaceLarge`

```
2079 \def\HyPsd@DieFaceLarge#1!{%
2080   \ifnum#1>6 %
2081     \expandafter\@firstoftwo
2082   \else
2083     \expandafter\@secondoftwo
2084   \fi
2085   {%
2086     \9046\205%
2087     \expandafter\expandafter\expandafter
2088     \HyPsd@DieFaceLarge\IntCalcSub#1!6!!%
2089   }{%
2090     \9046\20\IntCalcDec#1!%
2091   }%
2092 }
```

6.6.11 Support for moon phases of package china2e

```
2093 \def\HyPsd@MoonPha#1{%
2094   \ifcase\intcalcNum{#1} %
2095     \HyPsd@UnicodeReplacementCharacter
2096   \or % 1
2097   % U+1F31A NEW MOON WITH FACE; \MoonPha{1} (china2e)
2098   \9330\074\9337\032%
```

```

2099 \or % 2
2100 \HyPsd@UnicodeReplacementCharacter
2101 \or % 3
2102 % U+1F31D FULL MOON WITH FACE; \MoonPha{3} (china2e)
2103 \9330\074\9337\035%
2104 \or % 4
2105 % U+1F31C LAST QUARTER MOON WITH FACE; \MoonPha{4} (china2e)
2106 \9330\074\9337\034%
2107 \else
2108 \HyPsd@UnicodeReplacementCharacter
2109 \fi
2110 }
2111 %* \HyPsd@MoonPha -> \MoonPha

```

6.6.12 Support for package pifont

\HyPsd@ding

```

2112 \def\HyPsd@ding#1{%
2113 \ifHy@unicode
2114 \ifnum#1<32 %
2115 \HyPsd@UnicodeReplacementCharacter
2116 \else
2117 \ifnum#1>254 %
2118 \HyPsd@UnicodeReplacementCharacter
2119 \else
2120 \ifnum#1<127 %
2121 \expandafter\expandafter\expandafter
2122 \HyPsd@@ding\intcalcNum{#1}!%
2123 \else
2124 \ifnum#1>160 %
2125 \expandafter\expandafter\expandafter
2126 \HyPsd@@ding\intcalcNum{#1}!%
2127 \else
2128 \HyPsd@UnicodeReplacementCharacter
2129 \fi
2130 \fi
2131 \fi
2132 \fi
2133 \else
2134 .% Dingbats are not part of PDFDocEncoding
2135 \fi
2136 }

```

\HyPsd@@ding

```

2137 \def\HyPsd@@ding#1!{%
2138 \@ifundefined{HyPsd@ding@#1}{%
2139 \ifnum#1<127 %
2140 \9047%
2141 \HyPsd@DecimalToOctalSecond{\IntCalcSub#1!32!}%
2142 \else
2143 \ifnum#1<168 %
2144 \9047\14\IntCalcSub#1!160!%
2145 \else
2146 \ifnum#1>181 %
2147 \9047\HyPsd@DecimalToOctalSecond{\IntCalcSub#1!64!}%

```

```

2148     \else
2149     % 172..181 -> U+2460..U+2469
2150     \9044\HyPsd@DecimalToOctalSecond{\IntCalcSub#1!76!}%
2151     \fi
2152     \fi
2153     \fi
2154   }{%
2155     \csname HyPsd@ding@#1\endcsname
2156   }%
2157 }

2158 \@namedef{HyPsd@ding@32}{\space}
2159 % U+260E BLACK TELEPHONE
2160 \@namedef{HyPsd@ding@37}{\9046\016}% U+260E
2161 % U+261B BLACK RIGHT POINTING INDEX
2162 \@namedef{HyPsd@ding@42}{\9046\033}% U+261B
2163 % U+261E WHITE RIGHT POINTING INDEX
2164 \@namedef{HyPsd@ding@43}{\9046\036}% U+261E
2165 % U+2605 BLACK STAR
2166 \@namedef{HyPsd@ding@72}{\9046\005}% U+2605
2167 % U+25CF BLACK CIRCLE
2168 \@namedef{HyPsd@ding@108}{\9045\317}% U+25CF
2169 % U+25A0 BLACK SQUARE
2170 \@namedef{HyPsd@ding@110}{\9045\240}% U+25A0
2171 % U+25B2 BLACK UP-POINTING TRIANGLE
2172 \@namedef{HyPsd@ding@115}{\9045\262}% U+25B2
2173 % U+25BC BLACK DOWN-POINTING TRIANGLE
2174 \@namedef{HyPsd@ding@116}{\9045\274}% U+25BC
2175 % U+25C6 BLACK DIAMOND
2176 \@namedef{HyPsd@ding@117}{\9045\306}% U+25C6
2177 % U+25D7 RIGHT HALF BLACK CIRCLE
2178 \@namedef{HyPsd@ding@119}{\9045\327}% U+25D7
2179 \@namedef{HyPsd@ding@168}{\textclubsuitblack}%
2180 \@namedef{HyPsd@ding@169}{\textdiamondsuitblack}%
2181 \@namedef{HyPsd@ding@170}{\textheartsuitblack}%
2182 \@namedef{HyPsd@ding@171}{\textspadesuitblack}%
2183 \@namedef{HyPsd@ding@213}{\textrightarrow}%
2184 \@namedef{HyPsd@ding@214}{\textleftarrow}%
2185 \@namedef{HyPsd@ding@215}{\textupdownarrow}%
2186 \@namedef{HyPsd@ding@240}{\HyPsd@UnicodeReplacementCharacter}

```

7 Support of other packages

7.1 Package subfigure

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

```

2187 \@ifpackageloaded{subfigure}{%
2188   \@ifundefined{sub@label}{%
2189     \Hy@hypertextnamesfalse
2190   }{%
2191     \renewcommand*{\sub@label}[1]{%
2192       \@bsphack
2193       \subfig@oldlabel{#1}%

```

```

2194 \if@filesw
2195 \begingroup
2196 \edef\@currentlabstr{%
2197   \expandafter\strip@prefix\meaning\@currentlabelname
2198 }%
2199 \protected@write\@auxout{}{%
2200   \string\newlabel{sub@#1}{%
2201     {\@nameuse{@@thesub\@capttype}}%
2202     {\thepage}%
2203     {%
2204       \expandafter\strip@period\@currentlabstr
2205       \relax.\relax\@@@%
2206     }%
2207     {\@currentHref}%
2208     {}%
2209   }%
2210 }%
2211 \endgroup
2212 \fi
2213 \@esphack
2214 }%
2215 }%
2216 }{}

```

7.2 Package xr and xr-hyper

The beta version of xr that supports `\XR@addURL` is called `xr-hyper`. 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. Change 2023-05-14: `xr-hyper` adds the field.

```

2217 \def\Hy@true{true}
2218 \def\Hy@false{false}

    Providing dummy definitions.
2219 \let\literalps@out\@gobble
2220 \newcommand\pdfbookmark[3][]{ }
2221 \def\Acrobatmenu#1#2{\leavevmode#2}
2222 \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

```

2223 \let\HyperRaiseLinkHook\@empty
2224 \def\HyperRaiseLinkDefault{\baselineskip}

\HyperRaiseLinkHook allows the user to reassign \HyperRaiseLinkLength.
2225 \newcount\Hy@SavedSpaceFactor
2226 \def\Hy@SaveSpaceFactor{%
2227   \global\Hy@SavedSpaceFactor=\ifhmode\spacefactor\else\z@\fi
2228 }
2229 \def\Hy@RestoreSpaceFactor{%
2230   \relax
2231   \ifhmode
2232     \ifnum\Hy@SavedSpaceFactor>\z@
2233       \spacefactor=\Hy@SavedSpaceFactor
2234     \fi
2235   \fi
2236 }
2237 \def\Hy@SaveSavedSpaceFactor{%
2238   \edef\Hy@RestoreSavedSpaceFactor{%
2239     \global\Hy@SavedSpaceFactor=\the\Hy@SavedSpaceFactor\relax
2240   }%
2241 }

```

Packages like `varwidth` need an option to change the handling in `vmode`. (Issue #204). With a new format we therefore insert a socket.

```

2242 \@if@t@r\fmtversion{2023-11-01}
2243 {\NewSocket{hyp/raisedlink}{1}}
2244 {\providecommand\UseSocket[2]{#2}}
2245 \def\Hy@raisedlink#1{%
2246   \ifvmode
2247     \UseSocket{hyp/raisedlink}{#1}%
2248   \else
2249     \Hy@SaveSpaceFactor
2250     \penalty\@M
2251     \smash{%
2252       \begingroup
2253         \let\HyperRaiseLinkLength\@tempdima
2254         \setlength\HyperRaiseLinkLength\HyperRaiseLinkDefault
2255         \HyperRaiseLinkHook
2256       \expandafter\endgroup
2257       \expandafter\raise\the\HyperRaiseLinkLength\hbox{%
2258         \Hy@RestoreSpaceFactor
2259         #1%
2260         \Hy@SaveSpaceFactor
2261       }%
2262     }%
2263     \Hy@RestoreSpaceFactor
2264   \fi
2265 }

```

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

```

2266 \def\Hy@SaveLastskip{%
2267   \let\Hy@RestoreLastskip\relax
2268   \ifvmode
2269     \ifdim\lastskip=\z@

```

```

2270 \ifnum\lastnodetype=1 %
2271 \let\Hy@RestoreLastskip\relax
2272 \else
2273 \let\Hy@RestoreLastskip\nobreak
2274 \fi
2275 \else
2276 \begingroup
2277 \skip@=-\lastskip
2278 \edef\x{%
2279 \endgroup
2280 \def\noexpand\Hy@RestoreLastskip{%
2281 \noexpand\ifvmode
2282 \noexpand\nobreak
2283 \vskip\the\skip@
2284 \vskip\the\lastskip\relax
2285 \noexpand\fi
2286 }%
2287 }%
2288 \x
2289 \fi
2290 \else
2291 \ifhmode
2292 \ifdim\lastskip=\z@
2293 \let\Hy@RestoreLastskip\nobreak
2294 \else
2295 \begingroup
2296 \skip@=-\lastskip
2297 \edef\x{%
2298 \endgroup
2299 \def\noexpand\Hy@RestoreLastskip{%
2300 \noexpand\ifhmode
2301 \noexpand\nobreak
2302 \hskip\the\skip@
2303 \hskip\the\lastskip\relax
2304 \noexpand\fi
2305 }%
2306 }%
2307 \x
2308 \fi
2309 \fi
2310 \fi
2311 }%

```

9 Options

```

2312 \SetupKeyvalOptions{%
2313 family=Hyp,%
2314 prefix=HyOpt%
2315 }

```

9.1 Help macros

Package like hyperxmp want to retrieve the value of keys like `pdfauthor`. To avoid that we have two parallel interfaces we provide the interface from the `pdfmanage-`

ment/ltdocinit if it doesn't exist.

```
\AddToDocumentProperties
\GetDocumentProperties 2316 \ExplSyntaxOn
2317 \@ifundefined{AddToDocumentProperties}
2318 {
2319   \prop_new:N \g__hyp_documentproperties_prop
2320   \NewDocumentCommand\AddToDocumentProperties{O{\@currname}mm}
2321   {
2322     \exp_args:NNx
2323     \prop_gput:Nnn \g__hyp_documentproperties_prop
2324     {
2325       \tl_if_blank:eTF {#1}{top-level/}{#1/} #2
2326     }
2327     { #3}
2328   }
2329   \NewExpandableDocumentCommand\GetDocumentProperties{m}
2330   {
2331     \prop_item:Nn \g__hyp_documentproperties_prop {#1}
2332   }
2333 }{}
2334 \ExplSyntaxOff

\IfHyperBooleanExists

2335 \def\IfHyperBooleanExists#1{%
2336   \@ifundefined{Hy@#1false}\@secondoftwo{%
2337     \@ifundefined{KV@Hyp@#1@default}\@secondoftwo\@firstoftwo
2338   }%
2339 }

2340 \@namedef{KV@Hyp@stoppedearly@default}{}

\IfHyperBoolean

2341 \def\IfHyperBoolean#1{%
2342   \IfHyperBooleanExists{#1}{%
2343     \csname ifHy@#1\endcsname
2344     \expandafter\@firstoftwo
2345     \else
2346     \expandafter\@secondoftwo
2347     \fi
2348   }\@secondoftwo
2349 }

\Hy@boolkey

2350 \def\Hy@boolkey#1#2{%
2351   \edef\Hy@tempa{#2}%
2352   \lowercase\expandafter{%
2353     \expandafter\def\expandafter\Hy@tempa\expandafter{\Hy@tempa}%
2354   }%
2355   \ifx\Hy@tempa\@empty
2356     \let\Hy@tempa\Hy@true
2357   \fi
2358   \ifx\Hy@tempa\Hy@true
2359     \else
```



```

2360 \ifx\Hy@tempa\Hy@false
2361 \else
2362 \let\Hy@tempa\relax
2363 \fi
2364 \fi
2365 \ifx\Hy@tempa\relax
2366 \Hy@WarnOptionValue{#2}{#1}{`true' or 'false'}%
2367 \else
2368 \Hy@Info{Option `#1' set ``\Hy@tempa'}%
2369 \csname Hy@#1\Hy@tempa\endcsname
2370 \fi
2371 }

```

\Hy@WarnOptionValue

```

2372 \def\Hy@WarnOptionValue#1#2#3{%
2373 \Hy@Warning{%
2374 Unexpected value `#1'\MessageBreak
2375 of option `#2' instead of\MessageBreak
2376 #3%
2377 }%
2378 }

```

\Hy@DisableOption

```

2379 \def\Hy@DisableOption#1{%
2380 \@ifundefined{KV@Hyp@#1@default}{%
2381 \define@key{Hyp}{#1}%
2382 }{%
2383 \define@key{Hyp}{#1}[]%
2384 }%
2385 {\Hy@WarnOptionDisabled{#1}}%
2386 }
2387

```

\Hy@WarnOptionDisabled

```

2388 \def\Hy@WarnOptionDisabled#1{%
2389 \Hy@Warning{%
2390 Option `#1' has already been used,\MessageBreak
2391 setting the option has no effect%
2392 }%
2393 }

```

\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.

```

2394 \def\Hy@CheckOptionValue#1#2#3{%
2395 \begingroup
2396 \edef\x{#1}%
2397 \@onelevel@sanitize\x
2398 \let\y=y%
2399 \def\do##1##2{%
2400 \def\z{##1}%
2401 \@onelevel@sanitize\z
2402 \ifx\x\z

```

```

2403     \let\y=n%
2404     \let\do\@gobbletwo
2405     \fi
2406   }%
2407   #3%
2408   \ifx\y y%
2409     \def\do##1##2{%
2410       * `##1'%
2411       \ifx\##2\\\else\space(##2)\fi
2412       \MessageBreak
2413     }%
2414     \Hy@Warning{%
2415       Values of option `#2':\MessageBreak
2416       #3%
2417       * An empty value disables the option.\MessageBreak
2418       Unknown value `x'%
2419     }%
2420   \fi
2421 \endgroup
2422 }

```

`\Hy@DefNameKey` #1: option name
#2: `\do` list with known values, first argument of `\do` is value, second argument is a comment.

```

2423 \def\Hy@DefNameKey#1{%
2424   \expandafter\Hy@@DefNameKey\csname @#1\endcsname{#1}%
2425 }

```

`\Hy@@DefNameKey` #1: macro for value storage
#2: option name
#3: `\do` list with known values.

```

2426 \def\Hy@@DefNameKey#1#2#3{%
2427   \define@key{Hyp}{#2}{%
2428     \edef#1{##1}%
2429     \ifx#1\@empty
2430     \else
2431       \Hy@CheckOptionValue{##1}{#2}{#3}%
2432     \fi
2433   }%
2434   \let#1\@empty
2435 }

```

`\Hy@UseNameKey`

```

2436 \def\Hy@UseNameKey#1#2{%
2437   \ifx#2\@empty
2438   \else
2439     /#1/#2%
2440   \fi
2441 }

```

9.2 Defining the options

```

2442 \define@key{Hyp}{implicit}[true]{%

```

```

2443 \Hy@boolkey{implicit}{#1}%
2444 }
2445 \define@key{Hyp}{draft}[true]{%
2446 \Hy@boolkey{draft}{#1}%
2447 }
2448 \define@key{Hyp}{final}[true]{%
2449 \Hy@boolkey{final}{#1}%
2450 }
2451 \let\KV@Hyp@nolinks\KV@Hyp@draft

2452 \def\Hy@ObsoletePaperOption#1{%
2453 \Hy@WarningNoLine{%
2454   Option `#1' is no longer used%
2455 }%
2456 \define@key{Hyp}{#1}[true]{}%
2457 }
2458 \def\Hy@temp#1{%
2459 \define@key{Hyp}{#1}[true]{%
2460 \Hy@ObsoletePaperOption{#1}%
2461 }%
2462 }
2463 \Hy@temp{a4paper}
2464 \Hy@temp{a5paper}
2465 \Hy@temp{b5paper}
2466 \Hy@temp{letterpaper}
2467 \Hy@temp{legalpaper}
2468 \Hy@temp{executivepaper}

2469 \define@key{Hyp}{setpagesize}[true]{%
2470 \Hy@boolkey{setpagesize}{#1}%
2471 }
2472 \define@key{Hyp}{debug}[true]{%
2473 \Hy@boolkey{debug}{#1}%
2474 }
2475 \define@key{Hyp}{linktocpage}[true]{%
2476 \Hy@boolkey{linktocpage}{#1}%
2477 \ifHy@linktocpage
2478 \let\Hy@linktoc\Hy@linktoc@page
2479 \else
2480 \let\Hy@linktoc\Hy@linktoc@section
2481 \fi
2482 }
2483 \chardef\Hy@linktoc@none=0 %
2484 \chardef\Hy@linktoc@section=1 %
2485 \chardef\Hy@linktoc@page=2 %
2486 \chardef\Hy@linktoc@all=3 %
2487 \ifHy@linktocpage
2488 \let\Hy@linktoc\Hy@linktoc@page
2489 \else
2490 \let\Hy@linktoc\Hy@linktoc@section
2491 \fi
2492 \define@key{Hyp}{linktoc}{%
2493 \@ifundefined{Hy@linktoc@#1}{%
2494 \Hy@Warning{%
2495   Unexpected value `#1' of\MessageBreak

```

```

2496     option `linktoc' instead of `none',\MessageBreak
2497     `section', `page' or `all'%
2498   }%
2499 }{%
2500   \expandafter\let\expandafter\Hy@linktoc
2501   \csname Hy@linktoc@#1\endcsname
2502 }%
2503 }
2504 \define@key{Hyp}{extension}{\def\XR@ext{#1}}
2505 \let\XR@ext\relax
2506 \define@key{Hyp}{verbose}[true]{%
2507   \Hy@boolkey{verbose}{#1}%
2508 }

```

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.

```

2509 \define@key{Hyp}{raiselinks}[true]{%
2510   \Hy@boolkey{raiselinks}{#1}%
2511 }

```

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

```

2512 \def\Hy@setbreaklinks#1{%
2513   \csname breaklinks#1\endcsname
2514 }
2515 \def\Hy@breaklinks@unsupported{%
2516   \ifx\Hy@setbreaklinks@gobble
2517     \ifHy@breaklinks
2518       \Hy@WarningNoLine{%
2519         You have enabled option `breaklinks'.\MessageBreak
2520         But driver ``\Hy@driver.def' does not support this.\MessageBreak
2521         Expect trouble with the link areas of broken links%
2522       }%
2523     \fi
2524   \fi
2525 }
2526 \define@key{Hyp}{breaklinks}[true]{%
2527   \Hy@boolkey{breaklinks}{#1}%
2528   \let\Hy@setbreaklinks@gobble
2529 }

```

```

2530 \define@key{Hyp}{localanchorname}[true]{%
2531   \Hy@WarningNoLine{%
2532     Option `localanchorname' is deprecated%
2533   }%
2534   \Hy@boolkey{localanchorname}{#1}%
2535 }

```

Determines whether an automatic anchor is put on each page

```

2536 \define@key{Hyp}{pageanchor}[true]{%
2537   \Hy@boolkey{pageanchor}{#1}%
2538 }

```

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.

```

2539 \define@key{Hyp}{plainpages}[true]{%
2540 \Hy@boolkey{plainpages}{#1}%
2541 }

```

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

```

2542 \define@key{Hyp}{naturalnames}[true]{%
2543 \Hy@boolkey{naturalnames}{#1}%
2544 }

```

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

```

2545 \define@key{Hyp}{hypertextnames}[true]{%
2546 \Hy@boolkey{hypertextnames}{#1}%
2547 }

```

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

```

2548 \define@key{Hyp}{nesting}[true]{%
2549 \Hy@boolkey{nesting}{#1}%
2550 }

```

```

2551 \define@key{Hyp}{destlabel}[true]{%
2552 \Hy@boolkey{destlabel}{#1}%
2553 }

```

```

2554 \define@key{Hyp}{unicode}[true]{%
2555 \Hy@boolkey{unicode}{#1}%
2556 \ifHy@unicode
2557 \def\HyPsd@pdfencoding{unicode}%
2558 \HyPsd@LoadUnicode
2559 \else
2560 \def\HyPsd@pdfencoding{pdfdoc}%
2561 \fi
2562 }

```

```

2563 \Hy@AtBeginDocument{%
2564 \ifx\HyPsd@LoadUnicode\relax
2565 \else
2566 \def\HyPsd@LoadUnicode{%
2567 \Hy@Error{%
2568 Unicode support for bookmarks is not available.\MessageBreak
2569 Activate unicode support by using one of the options\MessageBreak
2570 `unicode', `pdfencoding=unicode', `pdfencoding=auto'\MessageBreak
2571 in the preamble%
2572 } \@ehc
2573 \global\let\HyPsd@LoadUnicode\relax
2574 \global\Hy@unicodetrue
2575 \global\let\Hy@unicodetrue\Hy@unicodetrue\Hy@unicodetrue
2576 }%
2577 \fi
2578 }

```

```

2579 \define@key{Hyp}{pdfencoding}{%
2580 \edef\HyPsd@temp{#1}%
2581 \ifx\HyPsd@temp\HyPsd@pdfencoding@pdfdoc
2582 \let\HyPsd@pdfencoding\HyPsd@temp
2583 \Hy@unicodetrue
2584 \else

```

```

2585 \ifcase\ifx\HyPsd@temp\HyPsd@pdfencoding@unicode
2586     \z@
2587     \else
2588         \ifx\HyPsd@temp\HyPsd@pdfencoding@auto
2589             \z@
2590             \else
2591                 \@ne
2592             \fi
2593         \fi
2594     \let\HyPsd@pdfencoding\HyPsd@temp
2595     \hypersetup{unicode}%
2596     \ifHy@unicode
2597         \def\HyPsd@pdfencoding{#1}%
2598     \else
2599         \Hy@Warning{Cannot switch to unicode bookmarks}%
2600         \let\HyPsd@pdfencoding\HyPsd@pdfencoding@pdfdoc
2601     \fi
2602 \else
2603     \@onelevel@sanitize\HyPsd@temp
2604     \Hy@Warning{%
2605         Values of option `pdfencoding':\MessageBreak
2606         `pdfdoc', `unicode', `auto'.\MessageBreak
2607         Ignoring unknown value `\HyPsd@temp'%
2608     }%
2609 \fi
2610 \fi
2611 }
2612 \def\HyPsd@pdfencoding@auto{auto}
2613 \def\HyPsd@pdfencoding@pdfdoc{pdfdoc}
2614 \def\HyPsd@pdfencoding@unicode{unicode}

```

change 2020-08-14, use unicode by default:

```

2615 \let\HyPsd@pdfencoding\HyPsd@pdfencoding@unicode
2616 \HyPsd@LoadUnicode
2617 \define@key{Hyp}{psdextra}[true]{%
2618     \Hy@boolkey{psdextra}{#1}%
2619     \HyPsd@LoadExtra
2620 }
2621 \def\hypersetup{\kvsetkeys{Hyp}}
2622 \newif\ifHy@setpdfversion
2623 \define@key{Hyp}{pdfversion}{%
2624     \@ifundefined{Hy@pdfversion@#1}{%
2625         \PackageWarning{hyperref}{%
2626             Unsupported PDF version `#1'.\MessageBreak
2627             Valid values: 1.2-1.7, 2.0%
2628         }%
2629     }{%
2630         \Hy@setpdfversiontrue
2631         \@nameuse{Hy@pdfversion@#1}%
2632     }%
2633 }

```

\Hy@pdfminorversion already used elsewhere to denote \pdfminorversion or \pdfvariable majorversion} so introduce new names here.

```

2634 \@namedef{Hy@pdfversion@1.2}{\def\Hy@pdf@majorversion{1}\def\Hy@pdf@mi-
    norversion{2}}%
2635 \@namedef{Hy@pdfversion@1.3}{\def\Hy@pdf@majorversion{1}\def\Hy@pdf@mi-
    norversion{3}}%
2636 \@namedef{Hy@pdfversion@1.4}{\def\Hy@pdf@majorversion{1}\def\Hy@pdf@mi-
    norversion{4}}%
2637 \@namedef{Hy@pdfversion@1.5}{\def\Hy@pdf@majorversion{1}\def\Hy@pdf@mi-
    norversion{5}}%
2638 \@namedef{Hy@pdfversion@1.6}{\def\Hy@pdf@majorversion{1}\def\Hy@pdf@mi-
    norversion{6}}%
2639 \@namedef{Hy@pdfversion@1.7}{\def\Hy@pdf@majorversion{1}\def\Hy@pdf@mi-
    norversion{7}}%
2640 \@namedef{Hy@pdfversion@2.0}{\def\Hy@pdf@majorversion{2}\def\Hy@pdf@mi-
    norversion{0}}%
2641 \def\Hy@pdf@majorversion{1}\def\Hy@pdf@minorversion{7}
Legacy name, earlier releases assumed 1.x
2642 \let\Hy@pdfversion\Hy@pdf@minorversion
2643 \def\Hy@pdf@majorminor@version{\numexpr100*\Hy@pdf@majorversion+\Hy@pdf@mi-
    norversion\relax}
2644 \def\Hy@pdf@majorminor@version{\numexpr100*\Hy@pdf@majorversion+\Hy@pdf@mi-
    norversion\relax}
if pdfminorversion is defined, make sure pdfmajorversion is too.
2645 \@ifundefined{pdfminorversion}{}{%
2646 \@ifundefined{pdfmajorversion}{}%
2647 \newcount\pdfmajorversion
2648 \pdfmajorversion=1
2649 }{}%
2650 }
2651 \ifx\pdfmajorversion\undefined\else
2652 \def\Hy@pdf@majorversion{\pdfmajorversion}
2653 \fi

```

10 Options for different drivers

```

2654 \newif\ifHy@DviMode
2655 \let\Hy@DviErrMsg\@empty
2656 \ifpdf
2657 \def\Hy@DviErrMsg{pdfTeX or LuaTeX is running in PDF mode}%
2658 \else
2659 \ifxetex
2660 \def\Hy@DviErrMsg{XeTeX is running}%
2661 \else
2662 \ifvtex
2663 \ifnum\OpMode=\z@
2664 \Hy@DviModetrue
2665 \else
2666 \def\Hy@DviErrMsg{VTeX is running, but not in DVI mode}%
2667 \fi
2668 \else
2669 \Hy@DviModetrue
2670 \fi
2671 \fi
2672 \fi
2673 \def\HyOpt@CheckDvi#1{%

```

```

2674 \ifHy@DviMode
2675   \expandafter\@firstofone
2676 \else
2677   \Hy@Error{%
2678     Wrong DVI mode driver option `#1',\MessageBreak
2679     because \Hy@DviErrMsg
2680   }\@ehc
2681   \expandafter\@gobble
2682 \fi
2683 }

2684 \DeclareVoidOption{tex4ht}{%
2685   \Hy@texhttrue
2686   \kvsetkeys{Hyp}{colorlinks=true}%
2687   \def\BeforeTeXIVht{\RequirePackage{color}}%
2688   \def\Hy@driver{htex4ht}%
2689   \def\MaybeStopEarly{%
2690     \Hy@Message{Stopped early}%
2691     \Hy@AtBeginDocument{%
2692       \PDF@FinishDoc
2693       \gdef\PDF@FinishDoc{}%
2694     }%
2695     \endinput
2696   }%
2697 }

2698 \DeclareVoidOption{pdftex}{%
2699   \ifpdf
2700     \def\Hy@driver{hpdftex}%
2701     \PassOptionsToPackage{pdftex}{color}%
2702   \else
2703     \Hy@Error{%
2704       Wrong driver option `pdftex',\MessageBreak
2705       because pdfTeX in PDF mode is not detected%
2706     }\@ehc
2707   \fi
2708 }

2709 \DeclareVoidOption{luatex}{%
2710   \ifpdf
2711     \ifx\pdfextension\@undefined
2712       \def\Hy@driver{hpdftex}%
2713       \PassOptionsToPackage{pdftex}{color}%
2714     \else
2715       \def\Hy@driver{hluatex}%
2716       \PassOptionsToPackage{luatex}{color}%
2717     \fi
2718   \else
2719     \Hy@Error{%
2720       Wrong driver option `luatex',\MessageBreak
2721       because luaTeX in PDF mode is not detected%
2722     }\@ehc
2723   \fi
2724 }

2725 \DeclareVoidOption{nativepdf}{%
2726   \HyOpt@CheckDvi{nativepdf}{%
2727     \def\Hy@driver{hdvips}%

```



```

2728 \PassOptionsToPackage{dvips}{color}%
2729 }%
2730 }
2731 \DeclareVoidOption{dvipdfm}{%
2732 \HyOpt@CheckDvi{dvipdfm}{%
2733 \def\Hy@driver{hdvipdfm}%
2734 }%
2735 }
2736 \DeclareVoidOption{dvipdfmx}{%
2737 \HyOpt@CheckDvi{dvipdfmx}{%
2738 \def\Hy@driver{hdvipdfm}%
2739 \PassOptionsToPackage{dvipdfmx}{color}%
2740 }%
2741 }
2742 \define@key{Hyp}{dvipdfmx-outline-open}[true]{%
2743 \expandafter\ifx\csname if#1\expandafter\endcsname
2744 \csname iftrue\endcsname
2745 \chardef\SpecialDvipdfmxOutlineOpen\@ne
2746 \else
2747 \chardef\SpecialDvipdfmxOutlineOpen\z@
2748 \fi
2749 }
2750 \DeclareVoidOption{xetex}{%
2751 \ifxetex
2752 \def\Hy@driver{hxetex}%
2753 \else
2754 \Hy@Error{%
2755 Wrong driver option `xetex',\MessageBreak
2756 because XeTeX is not detected%
2757 } \@ehc
2758 \fi
2759 }
2760 \DeclareVoidOption{pdfmark}{%
2761 \HyOpt@CheckDvi{pdfmark}{%
2762 \def\Hy@driver{hdvips}%
2763 }%
2764 }
2765 \DeclareVoidOption{dvips}{%
2766 \HyOpt@CheckDvi{dvips}{%
2767 \def\Hy@driver{hdvips}%
2768 \PassOptionsToPackage{dvips}{color}%
2769 }%
2770 }
2771 \DeclareVoidOption{hypertex}{%
2772 \HyOpt@CheckDvi{hypertex}{%
2773 \def\Hy@driver{hypertex}%
2774 }%
2775 }
2776 \let\Hy@MaybeStopNow\relax
2777 \DeclareVoidOption{vtex}{%
2778 \ifvtex
2779 \ifnum 0\ifnum\OpMode<1 1\fi \ifnum\OpMode>3 1\fi =0 %
2780 \def\Hy@driver{hvtex}%
2781 \else

```

```

2782 \ifnum\OpMode=10\relax
2783 \def\Hy@driver{hvtexhtm}%
2784 \def\MaybeStopEarly{%
2785 \Hy@Message{Stopped early}%
2786 \Hy@AtBeginDocument{%
2787 \PDF@FinishDoc
2788 \gdef\PDF@FinishDoc{}}%
2789 }%
2790 \endinput
2791 }%
2792 \else
2793 \Hy@Error{%
2794 Wrong driver option `vtex',\MessageBreak
2795 because of wrong OpMode (\the\OpMode)%
2796 }\@ehc
2797 \fi
2798 \fi
2799 \else
2800 \Hy@Error{%
2801 Wrong driver option `vtex',\MessageBreak
2802 because VTeX is not running%
2803 }\@ehc
2804 \fi
2805 }
2806 \DeclareVoidOption{vtexpdfmark}{%
2807 \ifvtex
2808 \ifnum 0\ifnum\OpMode<1 1\fi \ifnum\OpMode>3 1\fi =0 %
2809 \def\Hy@driver{hvtexmrk}%
2810 \else
2811 \Hy@Error{%
2812 Wrong driver option `vtexpdfmark',\MessageBreak
2813 because of wrong OpMode (\the\OpMode)%
2814 }\@ehc
2815 \fi
2816 \else
2817 \Hy@Error{%
2818 Wrong driver option `vtexpdfmark,\MessageBreak
2819 because VTeX is not running%
2820 }\@ehc
2821 \fi
2822 }
2823 \DeclareVoidOption{dviwindo}{%
2824 \HyOpt@CheckDvi{dviwindo}{%
2825 \def\Hy@driver{hdviwind}%
2826 \kvsetkeys{Hyp}{colorlinks}%
2827 \PassOptionsToPackage{dviwindo}{color}%
2828 }%
2829 }
2830 \DeclareVoidOption{dvipsone}{%
2831 \HyOpt@CheckDvi{dvipsone}{%
2832 \def\Hy@driver{hdvipson}%
2833 \PassOptionsToPackage{dvipsone}{color}%
2834 }%
2835 }

```

```

2836 \DeclareVoidOption{textures}{%
2837   \HyOpt@CheckDvi{textures}{%
2838     \def\Hy@driver{htexture}%
2839   }%
2840 }
2841 \DeclareVoidOption{latex2html}{%
2842   \Hy@Warning{Option `latex2html` is obsolete. \MessageBreak
2843     A current html.sty will do all necessary (re)definitions%
2844   }%
2845 }
2846 \DeclareVoidOption{hitex}{%
2847   \ifhint
2848     \IfFileExists{hhitex.def}
2849       {\def\Hy@driver{hhitex}}%
2850     {\Hy@Warning{%
2851       Missing driver file `hhitex.def',\MessageBreak
2852       ignoring hitex driver%
2853     }}%
2854   \else
2855     \Hy@Error{%
2856       Wrong driver option `hitex',\MessageBreak
2857       because HiTeX is not detected%
2858     }\@ehc
2859   \fi
2860 }

```

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

```

2861 \DeclareVoidOption{ps2pdf}{%
2862   \HyOpt@CheckDvi{ps2pdf}{%
2863     \def\Hy@driver{hdvips}%
2864     \PassOptionsToPackage{dvips}{color}%
2865   }%
2866 }
2867 \let\HyOpt@DriverFallback\@empty
2868 \define@key{Hyp}{driverfallback}{%
2869   \ifHy@DviMode
2870     \def\HyOpt@DriverFallback{#1}%
2871     \Hy@Match\HyOpt@DriverFallback}{%
2872       ^(|dvipdfm|dvipdfmx|dvips|dvipsone|dviwindo|hypertex|ps2pdf|
2873       latex2html|tex4ht)$%
2874     }-}{%
2875       \Hy@Warning{%
2876         Invalid driver `#1' for option \MessageBreak
2877         `driverfallback'%
2878       }%
2879       \let\HyOpt@DriverFallback\@empty
2880     }%
2881   \fi
2882 }
2883 \IfPDFManagementActiveTF
2884   {\def\HyOpt@CustomDriver{hgeneric-testphase}}
2885   {\let\HyOpt@CustomDriver\@empty}
2886
2887 \define@key{Hyp}{customdriver}{%

```

```

2888 \IfFileExists{#1.def}{%
2889 \def\HyOpt@CustomDriver{#1}%
2890 }{%
2891 \Hy@Warning{%
2892 Missing driver file `#1.def',\MessageBreak
2893 ignoring custom driver%
2894 }%
2895 }%
2896 }

```

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.

```

2897 \define@key{Hyp}{hyperfigures}[true]{%
2898 \Hy@boolkey{hyperfigures}{#1}%
2899 }

```

The automatic footnote linking can be disabled by option hyperfootnotes.

```

2900 \define@key{Hyp}{hyperfootnotes}[true]{%
2901 \Hy@boolkey{hyperfootnotes}{#1}%
2902 }

```

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

```

2903 \def\back@none{none}
2904 \def\back@section{section}
2905 \def\back@page{page}
2906 \def\back@slide{slide}
2907 \define@key{Hyp}{backref}[section]{%
2908 \lowercase{\def\Hy@tempa{#1}}%
2909 \ifx\Hy@tempa\@empty
2910 \let\Hy@tempa\back@section
2911 \fi
2912 \ifx\Hy@tempa\Hy@false
2913 \let\Hy@tempa\back@none
2914 \fi
2915 \ifx\Hy@tempa\back@slide
2916 \let\Hy@tempa\back@section
2917 \fi
2918 \ifx\Hy@tempa\back@page
2919 \PassOptionsToPackage{hyperpageref}{backref}%
2920 \Hy@backreftrue
2921 \else
2922 \ifx\Hy@tempa\back@section
2923 \PassOptionsToPackage{hyperref}{backref}%
2924 \Hy@backreftrue
2925 \else
2926 \ifx\Hy@tempa\back@none
2927 \Hy@backreffalse
2928 \else
2929 \Hy@WarnOptionValue{#1}{backref}{%
2930 `section', `slide', `page', `none',\MessageBreak
2931 or `false'}%
2932 \fi
2933 \fi

```

```

2934 \fi
2935 }
2936 \define@key{Hyp}{pagebackref}[true]{%
2937 \edef\Hy@tempa{#1}%
2938 \lowercase\expandafter{%
2939 \expandafter\def\expandafter\Hy@tempa\expandafter{\Hy@tempa}%
2940 }%
2941 \ifx\Hy@tempa\@empty
2942 \let\Hy@tempa\Hy@true
2943 \fi
2944 \ifx\Hy@tempa\Hy@true
2945 \PassOptionsToPackage{hyperpageref}{backref}%
2946 \Hy@backreftrue
2947 \else
2948 \ifx\Hy@tempa\Hy@false
2949 \Hy@backreffalse
2950 \else
2951 \Hy@WarnOptionValue{#1}{pagebackref}{`true' or `false'}%
2952 \fi
2953 \fi
2954 }

```

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

```

2955 \define@key{Hyp}{hyperindex}[true]{%
2956 \Hy@boolkey{hyperindex}{#1}%
2957 }

```

Configuration of encap char.

```

2958 \define@key{Hyp}{encap}[|]{%
2959 \def\HyInd@EncapChar{#1}%
2960 }

```

12 Language options

The `\autoref` feature depends on the language.

```

2961 \def\HyLang@afrikaans{%
2962 \def\equationautorefname{Vergelyking}%
2963 \def\footnoteautorefname{Voetnota}%
2964 \def\itemautorefname{Item}%
2965 \def\figureautorefname{Figuur}%
2966 \def\tableautorefname{Tabel}%
2967 \def\partautorefname{Deel}%
2968 \def\appendixautorefname{Bylae}%
2969 \def\chapterautorefname{Hoofstuk}%
2970 \def\sectionautorefname{Afdeling}%
2971 \def\subsectionautorefname{Subafdeling}%
2972 \def\subsubsectionautorefname{Subsubafdeling}%
2973 \def\paragraphautorefname{Paragraaf}%
2974 \def\subparagraphautorefname{Subparagraaf}%
2975 \def\FancyVerbLineautorefname{Lyn}%
2976 \def\theoremautorefname{Teorema}%
2977 \def\pageautorefname{Bladsy}%
2978 }

```

```

2979 \def\HyLang@english{%
2980 \def\equationautorefname{Equation}%
2981 \def\footnoteautorefname{footnote}%
2982 \def\itemautorefname{item}%
2983 \def\figureautorefname{Figure}%
2984 \def\tableautorefname{Table}%
2985 \def\partautorefname{Part}%
2986 \def\appendixautorefname{Appendix}%
2987 \def\chapterautorefname{chapter}%
2988 \def\sectionautorefname{section}%
2989 \def\subsectionautorefname{subsection}%
2990 \def\subsubsectionautorefname{subsubsection}%
2991 \def\paragraphautorefname{paragraph}%
2992 \def\subparagraphautorefname{subparagraph}%
2993 \def\FancyVerbLineautorefname{line}%
2994 \def\theoremautorefname{Theorem}%
2995 \def\pageautorefname{page}%
2996 }
2997 \def\HyLang@french{%
2998 \def\equationautorefname{'equation}%
2999 \def\footnoteautorefname{note}%
3000 \def\itemautorefname{item}%
3001 \def\figureautorefname{figure}%
3002 \def\tableautorefname{tableau}%
3003 \def\partautorefname{partie}%
3004 \def\appendixautorefname{annexe}%
3005 \def\chapterautorefname{chapitre}%
3006 \def\sectionautorefname{section}%
3007 \def\subsectionautorefname{sous-section}%
3008 \def\subsubsectionautorefname{sous-sous-section}%
3009 \def\paragraphautorefname{paragraphe}%
3010 \def\subparagraphautorefname{sous-paragraphe}%
3011 \def\FancyVerbLineautorefname{ligne}%
3012 \def\theoremautorefname{th'eor\`eme}%
3013 \def\pageautorefname{page}%
3014 }
3015 \def\HyLang@german{%
3016 \def\equationautorefname{Gleichung}%
3017 \def\footnoteautorefname{Fu\ss note}%
3018 \def\itemautorefname{Punkt}%
3019 \def\figureautorefname{Abbildung}%
3020 \def\tableautorefname{Tabelle}%
3021 \def\partautorefname{Teil}%
3022 \def\appendixautorefname{Anhang}%
3023 \def\chapterautorefname{Kapitel}%
3024 \def\sectionautorefname{Abschnitt}%
3025 \def\subsectionautorefname{Unterabschnitt}%
3026 \def\subsubsectionautorefname{Unterunterabschnitt}%
3027 \def\paragraphautorefname{Absatz}%
3028 \def\subparagraphautorefname{Unterabsatz}%
3029 \def\FancyVerbLineautorefname{Zeile}%
3030 \def\theoremautorefname{Theorem}%
3031 \def\pageautorefname{Seite}%
3032 }

```

```

3033 \def\HyLang@italian{%
3034 \def\equationautorefname{Equazione}%
3035 \def\footnoteautorefname{nota}%
3036 \def\itemautorefname{punto}%
3037 \def\figureautorefname{Figura}%
3038 \def\tableautorefname{Tabella}%
3039 \def\partautorefname{Parte}%
3040 \def\appendixautorefname{Appendice}%
3041 \def\chapterautorefname{Capitolo}%
3042 \def\sectionautorefname{sezione}%
3043 \def\subsectionautorefname{sottosezione}%
3044 \def\subsubsectionautorefname{sottosottosezione}%
3045 \def\paragraphautorefname{paragrafo}%
3046 \def\subparagraphautorefname{sottoparagrafo}%
3047 \def\FancyVerbLineautorefname{linea}%
3048 \def\theoremautorefname{Teorema}%
3049 \def\pageautorefname{Pag.\@}%
3050 }
3051 \def\HyLang@magyar{%
3052 \def\equationautorefname{Egyenlet}%
3053 \def\footnoteautorefname{l'abjegyzet}%
3054 \def\itemautorefname{Elem}%
3055 \def\figureautorefname{'Abra}%
3056 \def\tableautorefname{T'abl'azat}%
3057 \def\partautorefname{R'esz}%
3058 \def\appendixautorefname{F"uggel'ek}%
3059 \def\chapterautorefname{fejezet}%
3060 \def\sectionautorefname{szakasz}%
3061 \def\subsectionautorefname{alszakasz}%
3062 \def\subsubsectionautorefname{alalszakasz}%
3063 \def\paragraphautorefname{bekezd'es}%
3064 \def\subparagraphautorefname{albekezd'es}%
3065 \def\FancyVerbLineautorefname{sor}%
3066 \def\theoremautorefname{T'etel}%
3067 \def\pageautorefname{oldal}%
3068 }
3069 \def\HyLang@portuges{%
3070 \def\equationautorefname{Equa\c c\~ao}%
3071 \def\footnoteautorefname{Nota de rodap'e}%
3072 \def\itemautorefname{Item}%
3073 \def\figureautorefname{Figura}%
3074 \def\tableautorefname{Tabela}%
3075 \def\partautorefname{Parte}%
3076 \def\appendixautorefname{Ap\~endice}%
3077 \def\chapterautorefname{Cap\itulo}%
3078 \def\sectionautorefname{Se\c c\~ao}%
3079 \def\subsectionautorefname{Subse\c c\~ao}%
3080 \def\subsubsectionautorefname{Subsubse\c c\~ao}%
3081 \def\paragraphautorefname{par'agrafo}%
3082 \def\subparagraphautorefname{subpar'agrafo}%
3083 \def\FancyVerbLineautorefname{linha}%
3084 \def\theoremautorefname{Teorema}%
3085 \def\pageautorefname{P'agina}%
3086 }

```

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`.

```
3087 \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`?

```
3088 \def\equationautorefname{\cyr\cyrv\cyry\cyrr.}%
```

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`.

```
3089 % \def\equationautorefname{%
```

```
3090 % \cyr\cyrv\cyry\cyrr\cyra\cyzh\cyre\cyrn\cyri\cyre
```

```
3091 % }%
```

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

```
3092 \def\footnoteautorefname{%
```

```
3093 \cyr\cyrp\cyro\cyrd\cyrs\cyrt\cyrr.\ \cyrp\cyrr\cyri\cyrm.%
```

```
3094 }%
```

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}`”

```
3095 % \def\footnoteautorefname{%
```

```
3096 % \cyr\cyrp\cyro\cyrd\cyrs\cyrt\cyrr\cyro\cyrch\cyrn\cyro\cyre\ %
```

```
3097 % \cyrp\cyrr\cyri\cyrm\cyre\cyrch\cyra\cyrn\cyri\cyre
```

```
3098 % }%
```

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

```
3099 % \def\Nomfootnoteautorefname{\cyr\cyrs\cyrn\cyro\cyrs\cyrk\cyra}%
```

```
3100 % \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.

```
3101 \def\itemautorefname{\cyr\cyrp.}%
```

```
3102 % \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.

```
3103 \def\figureautorefname{\cyr\cyrr\cyri\cyrs.}%
```

```
3104 \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.

```
3105 \def\partautorefname{\cyr\cyrch.}%
```



```

3106 \def\chapterautorefname{\cyr\cyrg\cyrl.}%
3107 \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.

```

3108 \def\appendixautorefname{\cyr\cyrp\cyrr\cyri\cyrl.}%
3109 % \def\appendixautorefname{%
3110 %   \cyr\cyrp\cyrr\cyri\cyrl\cyro\cyrz\cyre\cyrn\cyri\cyre
3111 % }%

```

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.

```

3112 \def\subsectionautorefname{\cyr\cyrr\cyra\cyrz\cyrd.}%
3113 \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.

```

3114 \def\paragraphautorefname{\cyr\cyrp.}%
3115 \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.

```

3116 % \def\paragraphautorefname{\cyr\cyrp\cyru\cyrn\cyrk\cyrt}%
3117 % \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.

```

3118 \def\FancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr.}%

```

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

```

3119 % \def\NomFancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr\cyro\cyrk\cyra}%
3120 % \def\AccFancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr\cyro\cyrk\cyru}%

```

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

```

3121 % \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 ...

```

3122 \def\theoremautorefname{\cyr\cyrt\cyre\cyro\cyrr.}%

```

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

```

3123 % \def\Nomtheoremautorefname{\cyr\cyrt\cyre\cyro\cyrr\cyre\cyrm\cyra}%
3124 % \def\Acctheoremautorefname{\cyr\cyrt\cyre\cyro\cyrr\cyre\cyrm\cyru}%

```

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

```

3125 \def\pageautorefname{\cyr\cyrs.}%
3126 }

```

```

3127 \def\HyLang@spanish{%
3128 \def\equationautorefname{Ecuaci'on}%
3129 \def\footnoteautorefname{Nota a pie de p'agina}%
3130 \def\itemautorefname{Elemento}%
3131 \def\figureautorefname{Figura}%
3132 \def\tableautorefname{Tabla}%
3133 \def\partautorefname{Parte}%
3134 \def\appendixautorefname{Ap'endice}%
3135 \def\chapterautorefname{Cap'itulo}%
3136 \def\sectionautorefname{Secci'on}%
3137 \def\subsectionautorefname{Subsecci'on}%
3138 \def\subsubsectionautorefname{Subsubsecci'on}%
3139 \def\paragraphautorefname{P'arrafo}%
3140 \def\subparagraphautorefname{Subp'arrafo}%
3141 \def\FancyVerbLineautorefname{L'inea}%
3142 \def\theoremautorefname{Teorema}%
3143 \def\pageautorefname{P'agina}%
3144 }

3145 \def\HyLang@catalan{%
3146 \def\equationautorefname{Equaci'o}%
3147 \def\footnoteautorefname{Nota al peu de p`agina}%
3148 \def\itemautorefname{Element}%
3149 \def\figureautorefname{Figura}%
3150 \def\tableautorefname{Taula}%
3151 \def\partautorefname{Part}%
3152 \def\appendixautorefname{Ap`endix}%
3153 \def\chapterautorefname{Cap`itol}%
3154 \def\sectionautorefname{Secci'o}%
3155 \def\subsectionautorefname{Subsecci'o}%
3156 \def\subsubsectionautorefname{Subsubsecci'o}%
3157 \def\paragraphautorefname{Par`agraf}%
3158 \def\subparagraphautorefname{Subpar`agraf}%
3159 \def\FancyVerbLineautorefname{L'inia}%
3160 \def\theoremautorefname{Teorema}%
3161 \def\pageautorefname{P`agina}%
3162 }

3163 \def\HyLang@vietnamese{%
3164 \def\equationautorefname{Ph\uhorn{ }\ohorn{ }ng tr`inh}%
3165 \def\footnoteautorefname{Ch`u th`ich}%
3166 \def\itemautorefname{m\d{u}c}%
3167 \def\figureautorefname{H`inh}%
3168 \def\tableautorefname{B`h{a}ng}%
3169 \def\partautorefname{Ph`acircumflex{n}}%
3170 \def\appendixautorefname{Ph\d{u} l\d{u}c}%
3171 \def\chapterautorefname{ch\uhorn{ }\ohorn{ }ng}%
3172 \def\sectionautorefname{m\d{u}c}%
3173 \def\subsectionautorefname{m\d{u}c}%
3174 \def\subsubsectionautorefname{m\d{u}c}%
3175 \def\paragraphautorefname{\dj{ }o\d{a}n}%
3176 \def\subparagraphautorefname{\dj{ }o\d{a}n}%
3177 \def\FancyVerbLineautorefname{d`ong}%
3178 \def\theoremautorefname{DJ{ }d{i}nh l`y}%
3179 \def\pageautorefname{Trang}%

```

```

3180 }
Greek, see github issue 52
3181 \def\HyLang@greek{%
3182   \def\equationautorefname{\textEpsilon\textxi\acconos\textiota\textsigma\textomega\textsigma\texteta}%
3183   \def\footnoteautorefname{\textupsilon\textpi\textomicron\textsigma\texteta\textmu\textepsilon\acconos\textiota\textomega\textsigma\texteta}%
3184   \def\itemautorefname{\textalpha\textnu\texttau\textiota\textkappa\textepsilon\acconos\textiota\textmu\textepsilon\textnu\textomicron}%
3185   \def\figureautorefname{\textSigma\textchi\acconos\texteta\textmu\textalpha}%
3186   \def\tableautorefname{\textPi\acconos\textiota\textnu\textalpha\textkappa\textalpha}%
3187   \def\partautorefname{\textMu\acconos\textepsilon\textrho\textomicron\textvarsigma}%
3188   \def\appendixautorefname{\textPi\textalpha\textrho\acconos\textalpha\textrho\texttau\texteta\textmu\textalpha}%
3189   \def\chapterautorefname{\textkappa\textepsilon\textphi\acconos\textalpha\textlambda\textalpha\textiota\textomicron}%
3190   \def\sectionautorefname{\textepsilon\textnu\acconos\textomicron\texttau\texteta\texttau\textalpha}%
3191   \def\subsectionautorefname{\textupsilon\textpi\textomicron\textepsilon\textnu\acconos\textomicron\texttau\texteta\texttau\textalpha}%
3192   \def\subsubsectionautorefname{\textupsilon\textpi\textomicron-\textupsilon\textpi\textomicron\texttau\texteta\texttau\textalpha}%
3193   \def\paragraphautorefname{\textpi\textalpha\textrho\acconos\textalpha\textgamma\textrho\textalpha\textphi\textomicron\textvarsigma}%
3194   \def\subparagraphautorefname{\textupsilon\textpi\textomicron\textpi\textalpha\textrho\acconos\textalpha\textgamma\textrho\textalpha\textphi\textomicron\textvarsigma}%
3195   \def\FancyVerbLineautorefname{\textgamma\textrho\textalpha\textmu\textmu\acconos\texteta}%
3196   \def\theoremautorefname{\textTheta\textepsilon\acconos\textomega\textrho\texteta\textmu\textalpha}%
3197   \def\pageautorefname{\textsigma\textepsilon\textlambda\acconos\textiota\textdelta\textalpha}%
3198 }

3199 \def\HyLang@dutch{%
3200   \def\equationautorefname{Vergelijking}%
3201   \def\footnoteautorefname{voetnoot}%
3202   \def\itemautorefname{punt}%
3203   \def\figureautorefname{Figuur}%
3204   \def\tableautorefname{Tabel}%
3205   \def\partautorefname{Deel}%
3206   \def\appendixautorefname{Bijlage}%
3207   \def\chapterautorefname{hoofdstuk}%
3208   \def\sectionautorefname{paragraaf}%
3209   \def\subsectionautorefname{deelparagraaf}%
3210   \def\subsubsectionautorefname{deel-deelparagraaf}%
3211   \def\paragraphautorefname{alinea}%
3212   \def\subparagraphautorefname{deelalinea}%
3213   \def\FancyVerbLineautorefname{regel}%
3214   \def\theoremautorefname{Stelling}%
3215   \def\pageautorefname{pagina}%

```

```

3216 }
3217 \def\HyLang@norsk{%
3218   \def\equationautorefname{Ligning}%
3219   \def\footnoteautorefname{fotnote}%
3220   \def\itemautorefname{element}%
3221   \def\figureautorefname{Figur}%
3222   \def\tableautorefname{Tabell}%
3223   \def\partautorefname{Del}%
3224   \def\appendixautorefname{Tillegg}%
3225   \def\chapterautorefname{kapittel}%
3226   \def\sectionautorefname{seksjon}%
3227   \def\subsectionautorefname{underseksjon}%
3228   \def\subsubsectionautorefname{under-underseksjon}%
3229   \def\paragraphautorefname{avsnitt}%
3230   \def\subparagraphautorefname{underavsnitt}%
3231   \def\FancyVerbLineautorefname{Linje}%
3232   \def\theoremautorefname{Teorem}%
3233   \def\pageautorefname{side}%
3234 }
3235 \def\HyLang@danish{%
3236   \def\equationautorefname{Ligning}%
3237   \def\footnoteautorefname{fodnote}%
3238   \def\itemautorefname{element}%
3239   \def\figureautorefname{Figur}%
3240   \def\tableautorefname{Tabel}%
3241   \def\partautorefname{Del}%
3242   \def\appendixautorefname{Bilag}%
3243   \def\chapterautorefname{kapitel}%
3244   \def\sectionautorefname{sektion}%
3245   \def\subsectionautorefname{under-sektion}%
3246   \def\subsubsectionautorefname{under-under-sektion}%
3247   \def\paragraphautorefname{afsnit}%
3248   \def\subparagraphautorefname{underafsnit}%
3249   \def\FancyVerbLineautorefname{linje}%
3250   \def\theoremautorefname{Teorem}%
3251   \def\pageautorefname{side}%
3252 }
3253 \def\HyLang@swedish{%
3254   \def\equationautorefname{Ekvation}%
3255   \def\footnoteautorefname{fotnot}%
3256   \def\itemautorefname{punkt}%
3257   \def\figureautorefname{Figur}%
3258   \def\tableautorefname{Tabell}%
3259   \def\partautorefname{Del}%
3260   \def\appendixautorefname{Bilaga}%
3261   \def\chapterautorefname{kapitel}%
3262   \def\sectionautorefname{avsnitt}%
3263   \def\subsectionautorefname{underavsnitt}%
3264   \def\subsubsectionautorefname{under-underavsnitt}%
3265   \def\paragraphautorefname{paragraf}%
3266   \def\subparagraphautorefname{underparagraf}%
3267   \def\FancyVerbLineautorefname{linje}%
3268   \def\theoremautorefname{Teorem}%
3269   \def\pageautorefname{sida}%

```

3270 }

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

```
3271 \def\HyLang@addto#1#2{%
3272   #2%
3273   \@temptokena{#2}%
3274   \ifx#1\relax
3275     \let#1\@empty
3276   \fi
3277   \ifx#1\@undefined
3278     \edef#1{\the\@temptokena}%
3279   \else
3280     \toks@\expandafter{#1}%
3281     \edef#1{\the\toks@\the\@temptokena}%
3282   \fi
3283   \@temptokena{\}\toks@\@temptokena
3284 }

3285 \def\HyLang@DeclareLang#1#2#3{%
3286   \ifcsname extras#1\endcsname
3287     \expandafter\HyLang@addto
3288       \csname extras#1\expandafter\endcsname
3289       \csname HyLang@#2\endcsname
3290   \begingroup
3291     \edef\x{\endgroup
3292       #3%
3293     }%
3294     \x
3295     \@namedef{HyLang@#1@done}{}%
3296   \fi
3297   \begingroup
3298     \edef\x##1##2{%
3299       \noexpand\ifx##2\relax
3300         \errmessage{No definitions for language #2' found!}%
3301       \noexpand\fi
3302     \endgroup
3303     \noexpand\define@key{Hyp}{#1}[]{%
3304       \noexpand\@ifundefined{HyLang@#1@done}{%
3305         \noexpand\HyLang@addto{\noexpand##1}{\noexpand##2}%
3306         #3%
3307         \noexpand\@namedef{HyLang@#1@done}{}%
3308       }{}%
3309     }%
3310   }%
3311   \expandafter\x\csname extras#1\expandafter\endcsname
3312     \csname HyLang@#2\endcsname
3313 }

3314 \HyLang@DeclareLang{english}{english}{}
3315 \HyLang@DeclareLang{UKenglish}{english}{}
3316 \HyLang@DeclareLang{british}{english}{}
3317 \HyLang@DeclareLang{USenglish}{english}{}
3318 \HyLang@DeclareLang{american}{english}{}
3319 \HyLang@DeclareLang{german}{german}{}
3320 \HyLang@DeclareLang{austrian}{german}{}

```

```

3321 \HyLang@DeclareLang{ngerman}{german}{}
3322 \HyLang@DeclareLang{naustrian}{german}{}
3323 \HyLang@DeclareLang{nswissgerman}{german}{}
3324 \HyLang@DeclareLang{swissgerman}{german}{}
3325 \HyLang@DeclareLang{russian}{russian}{\noexpand\hypersetup{unicode}}
3326 \HyLang@DeclareLang{brazil}{portuges}{}
3327 \HyLang@DeclareLang{brazilian}{portuges}{}
3328 \HyLang@DeclareLang{portuguese}{portuges}{}
3329 \HyLang@DeclareLang{spanish}{spanish}{}
3330 \HyLang@DeclareLang{catalan}{catalan}{}
3331 \HyLang@DeclareLang{afrikaans}{afrikaans}{}
3332 \HyLang@DeclareLang{french}{french}{}
3333 \HyLang@DeclareLang{frenchb}{french}{}
3334 \HyLang@DeclareLang{français}{french}{}
3335 \HyLang@DeclareLang{acadian}{french}{}
3336 \HyLang@DeclareLang{canadien}{french}{}
3337 \HyLang@DeclareLang{italian}{italian}{}
3338 \HyLang@DeclareLang{magyar}{magyar}{}
3339 \HyLang@DeclareLang{hungarian}{magyar}{}
3340 \HyLang@DeclareLang{greek}{greek}{}
3341 \HyLang@DeclareLang{dutch}{dutch}{}
3342 \HyLang@DeclareLang{norsk}{norsk}{}
3343 \HyLang@DeclareLang{norwegian}{norsk}{}
3344 \HyLang@DeclareLang{danish}{danish}{}
3345 \HyLang@DeclareLang{swedish}{swedish}{}

```

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

```

3346 \DeclareVoidOption{vietnamese}{%
3347 \HyLang@addto\extravietnamese\HyLang@vietnamese
3348 \Hy@AtEndOfPackage{%
3349 \ifundefined{T@PU}{}{}%
3350 \input{pvnenc.def}%
3351 }%
3352 }%
3353 }
3354 \DeclareVoidOption{vietnam}{%
3355 \HyLang@addto\extravietnam\HyLang@vietnamese
3356 \Hy@AtEndOfPackage{%
3357 \ifundefined{T@PU}{}{}%
3358 \input{pvnenc.def}%
3359 }%
3360 }%
3361 }

```

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

```

3362 \DeclareVoidOption{arabic}{%
3363 \Hy@AtEndOfPackage{%
3364 \ifundefined{T@PU}{}{}%
3365 \input{puarenc.def}%
3366 }%
3367 }%
3368 }

```

13 Options to change appearance of links

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

```
3369 \define@key{Hyp}{colorlinks}[true]{%
3370   \Hy@boolkey{colorlinks}{#1}%
3371 }
3372 \DeclareVoidOption{hidelinks}{%
3373   \Hy@colorlinksfalse
3374   \Hy@ocgcolorlinksfalse
3375   \Hy@frenchlinksfalse
3376   \def\Hy@colorlink##1{\begingroup}%
3377   \def\Hy@endcolorlink{\endgroup}%
3378   \def\@pdfborder{0 0 0}%
3379   \let\@pdfborderstyle\@empty
3380 }
3381 \define@key{Hyp}{ocgcolorlinks}[true]{%
3382   \Hy@boolkey{ocgcolorlinks}{#1}%
3383 }
3384 \Hy@AtBeginDocument{%
3385   \begingroup
3386   \@ifundefined{OBJ@OCG@view}{%
3387     \ifHy@ocgcolorlinks
3388       \Hy@Warning{%
3389         Driver does not support `ocgcolorlinks',\MessageBreak
3390         using `colorlinks' instead%
3391       }%
3392     \fi
3393   }-%
3394 \endgroup
3395 }
3396 \define@key{Hyp}{frenchlinks}[true]{%
3397   \Hy@boolkey{frenchlinks}{#1}%
3398 }
```

14 Bookmarking

```
3399 \begingroup\expandafter\expandafter\expandafter\endgroup
3400 \expandafter\ifx\csname chapter\endcsname\relax
3401   \def\toclevel@part{0}%
3402 \else
3403   \def\toclevel@part{-1}%
3404 \fi
3405 \def\toclevel@chapter{0}
3406 \def\toclevel@section{1}
3407 \def\toclevel@subsection{2}
3408 \def\toclevel@subsubsection{3}
3409 \def\toclevel@paragraph{4}
3410 \def\toclevel@subparagraph{5}
3411 \def\toclevel@figure{0}
3412 \def\toclevel@table{0}
3413 \define@key{Hyp}{bookmarks}[true]{%
3414   \Hy@boolkey{bookmarks}{#1}%
3415 }
```

```

3416 \define@key{Hyp}{bookmarksopen}[true]{%
3417 \Hy@boolkey{bookmarksopen}{#1}%
3418 }

```

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.

```

3419 \let\Hy@bookmarksdepth\c@tocdepth
3420 \define@key{Hyp}{bookmarksdepth}[]{%
3421 \begingroup
3422 \edef\x{#1}%
3423 \ifx\x\empty
3424 \global\let\Hy@bookmarksdepth\c@tocdepth
3425 \else
3426 \@ifundefined{toclevel@\x}{%
3427 \@onelevel@sanitize\x
3428 \edef\y{\expandafter\@car\x\@nil}%
3429 \ifcase 0\expandafter\ifx\y-1\fi
3430 \expandafter\ifnum\expandafter`y>47 %
3431 \expandafter\ifnum\expandafter`y<58 1\fi\fi\relax
3432 \Hy@Warning{Unknown document division name (\x)}%
3433 \else
3434 \setbox\z@=\hbox{%
3435 \count@=\x
3436 \xdef\Hy@bookmarksdepth{\the\count@}%
3437 }%
3438 \fi
3439 }{%
3440 \setbox\z@=\hbox{%
3441 \count@=\csname toclevel@\x\endcsname
3442 \xdef\Hy@bookmarksdepth{\the\count@}%
3443 }%
3444 }%
3445 \fi
3446 \endgroup
3447 }

```

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

```

3448 \define@key{Hyp}{bookmarksopenlevel}{%
3449 \def\@bookmarksopenlevel{#1}%
3450 }
3451 \def\@bookmarksopenlevel{\maxdimen}
3452 % `bookmarkstype' to specify which `toc' file to mimic
3453 \define@key{Hyp}{bookmarkstype}{%
3454 \def\Hy@bookmarkstype{#1}%
3455 }
3456 \def\Hy@bookmarkstype{toc}

```


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

```
3457 \define@key{Hyp}{bookmarksnumbered}[true]{%
3458 \Hy@boolkey{bookmarksnumbered}{#1}%
3459 }
```

Option CJKbookmarks enables the patch for CJK bookmarks.

```
3460 \define@key{Hyp}{CJKbookmarks}[true]{%
3461 \Hy@boolkey{CJKbookmarks}{#1}%
3462 }

3463 \def\Hy@temp#1{%
3464 \expandafter\Hy@@temp\csname @#1color\endcsname{#1}%
3465 }

3466 \def\Hy@@temp#1#2#3{%
3467 \define@key{Hyp}{#2color}{%
3468 \HyColor@HyperrefColor{##1}#1%
3469 }%
3470 \def#1{#3}%
3471 }

3472 \Hy@temp{link}{red}
3473 \Hy@temp{anchor}{black}
3474 \Hy@temp{cite}{green}
3475 \Hy@temp{file}{cyan}
3476 \Hy@temp{url}{magenta}
3477 \Hy@temp{menu}{red}
3478 \Hy@temp{run}{\@filecolor}
3479 \define@key{Hyp}{pagecolor}{%
3480 \Hy@WarningPageColor
3481 }
3482 \def\Hy@WarningPageColor{%
3483 \Hy@WarningNoLine{Option `pagecolor' is not available anymore}%
3484 \global\let\Hy@WarningPageColor\relax
3485 }

3486 \define@key{Hyp}{allcolors}{%
3487 \HyColor@HyperrefColor{#1}\@linkcolor
3488 \HyColor@HyperrefColor{#1}\@anchorcolor
3489 \HyColor@HyperrefColor{#1}\@citecolor
3490 \HyColor@HyperrefColor{#1}\@filecolor
3491 \HyColor@HyperrefColor{#1}\@urlcolor
3492 \HyColor@HyperrefColor{#1}\@menucolor
3493 \HyColor@HyperrefColor{#1}\@runcolor
3494 }

3495 \def\hyperbaseurl#1{\def\@baseurl{#1}}
3496 \define@key{Hyp}{baseurl}{\hyperbaseurl{#1}}
3497 \let\@baseurl\@empty
3498 \def\hyperlinkfileprefix#1{\def\Hy@linkfileprefix{#1}}
3499 \define@key{Hyp}{linkfileprefix}{\hyperlinkfileprefix{#1}}
3500 \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.

```
3501 \let\@pdfpagetransition\relax
3502 \define@key{Hyp}{pdfpagetransition}{%
3503   \def\@pdfpagetransition{#1}%
3504 }
```

`\@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.

```
3505 \let\@pdfpageduration\relax
3506 \define@key{Hyp}{pdfpageduration}{%
3507   \def\@pdfpageduration{#1}%
3508   \Hy@Match\@pdfpageduration{}{%
3509     ^(|[0-9]+\.[0-9]*|[0-9]*\.[0-9]+)$%
3510   }{}{%
3511     \Hy@Warning{%
3512       Invalid value '\@pdfpageduration'\MessageBreak
3513       of option `pdfpageduration'\MessageBreak
3514       is replaced by an empty value%
3515     }%
3516     \let\@pdfpageduration\@empty
3517   }%
3518 }
```

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).

```
3519 \def\Hy@ColorList{cite,file,link,menu,run,url}
3520 \@for\Hy@temp:=\Hy@ColorList\do{%
3521   \edef\Hy@temp{%
3522     \noexpand\define@key{Hyp}{\Hy@temp bordercolor}{%
3523       \noexpand\HyColor@HyperrefBorderColor
3524         {#1}%
3525       \expandafter\noexpand\csname @\Hy@temp bordercolor\endcsname
3526       {hyperref}%
3527     }\Hy@temp bordercolor}%
3528   }%
3529 }%
3530 \Hy@temp
3531 }
3532 \define@key{Hyp}{pagebordercolor}{%
3533   \Hy@WarningPageBorderColor
3534 }
3535 \def\Hy@WarningPageBorderColor{%
3536   \Hy@WarningNoLine{Option `pagebordercolor' is not available anymore}%
3537   \global\let\Hy@WarningPageBorderColor\relax
3538 }
3539 \define@key{Hyp}{allbordercolors}{%
```

```

3540 \def\Hy@temp##1##2{%
3541   \HyColor@HyperrefBorderColor{#1}##1{hyperref}{##2bordercolor}%
3542 }%
3543 \Hy@temp\@citebordercolor{cite}%
3544 \Hy@temp\@filebordercolor{file}%
3545 \Hy@temp\@linkbordercolor{link}%
3546 \Hy@temp\@menubordercolor{menu}%
3547 \Hy@temp\@runbordercolor{run}%
3548 \Hy@temp\@urlbordercolor{url}%
3549 }

3550 \define@key{Hyp}{pdfhighlight}{\def\@pdfhighlight{#1}}
3551 \Hy@DefNameKey{pdfhighlight}{%
3552   \do{/I}{Invert}%
3553   \do{/N}{None}%
3554   \do{/O}{Outline}%
3555   \do{/P}{Push}%
3556 }
3557 \def\Hy@setpdfhighlight{%
3558   \ifx\@pdfhighlight\@empty
3559   \else
3560     /H\@pdfhighlight
3561   \fi
3562 }
3563 \define@key{Hyp}{pdfborder}{%
3564   \let\Hy@temp\@pdfborder
3565   \def\@pdfborder{#1}%
3566   \Hy@Match\@pdfborder}{-%
3567   ^\HyPat@NonNegativeReal/ %
3568   \HyPat@NonNegativeReal/ %
3569   \HyPat@NonNegativeReal/%
3570   ( ?\[\HyPat@NonNegativeReal/( \HyPat@NonNegativeReal/)*]?$%
3571   }-}{-%
3572   \Hy@Warning{%
3573     Invalid value ` \@pdfborder'\MessageBreak
3574     for option `pdfborder'.\MessageBreak
3575     Option setting is ignored%
3576   }%
3577   \let\@pdfborder\Hy@temp
3578 }%
3579 }
3580 \define@key{Hyp}{pdfborderstyle}{%
3581   \let\Hy@temp\@pdfborderstyle
3582   \def\@pdfborderstyle{#1}%
3583   \Hy@Match\@pdfborderstyle}{-%
3584   ^%
3585   ( */Type */Border%
3586   | */W +\HyPat@NonNegativeReal/%
3587   | */S */[SDBIU]%
3588   | */D *[\ ( \HyPat@NonNegativeReal/( \HyPat@NonNegativeReal/)?)?]?%
3589   )* *$%
3590 }-}{-%
3591   \Hy@Warning{%
3592     Invalid value ` \@pdfborderstyle'\MessageBreak
3593     for option `pdfborderstyle'.\MessageBreak

```

```

3594     Option setting is ignored%
3595   }%
3596   \let\@pdfborderstyle\Hy@temp
3597 }%
3598 }
3599 \def\Hy@setpdfborder{%
3600 \ifx\@pdfborder\@empty
3601 \else
3602   /Border[\@pdfborder]%
3603 \fi
3604 \ifx\@pdfborderstyle\@empty
3605 \else
3606   /BS<<\@pdfborderstyle>>%
3607 \fi
3608 }
3609 \Hy@DefNameKey{pdfpagemode}{%
3610 \do{UseNone}{}%
3611 \do{UseOutlines}{}%
3612 \do{UseThumbs}{}%
3613 \do{FullScreen}{}%
3614 \do{UseOC}{PDF 1.5}%
3615 \do{UseAttachments}{PDF 1.6}%
3616 }
3617 \Hy@DefNameKey{pdfnonfullscreenpagemode}{%
3618 \do{UseNone}{}%
3619 \do{UseOutlines}{}%
3620 \do{UseThumbs}{}%
3621 \do{FullScreen}{}%
3622 \do{UseOC}{PDF 1.5}%
3623 \do{UseAttachments}{PDF 1.6}%
3624 }
3625 \Hy@DefNameKey{pdfdirection}{%
3626 \do{L2R}{Left to right}%
3627 \do{R2L}{Right to left}%
3628 }
3629 \Hy@DefNameKey{pdfviewarea}{%
3630 \do{MediaBox}{}%
3631 \do{CropBox}{}%
3632 \do{BleedBox}{}%
3633 \do{TrimBox}{}%
3634 \do{ArtBox}{}%
3635 }
3636 \Hy@DefNameKey{pdfviewclip}{%
3637 \do{MediaBox}{}%
3638 \do{CropBox}{}%
3639 \do{BleedBox}{}%
3640 \do{TrimBox}{}%
3641 \do{ArtBox}{}%
3642 }
3643 \Hy@DefNameKey{pdfprintarea}{%
3644 \do{MediaBox}{}%
3645 \do{CropBox}{}%
3646 \do{BleedBox}{}%
3647 \do{TrimBox}{}%

```

```

3648 \do{ArtBox}{}%
3649 }
3650 \Hy@DefNameKey{pdfprintclip}{%
3651 \do{MediaBox}{}%
3652 \do{CropBox}{}%
3653 \do{BleedBox}{}%
3654 \do{TrimBox}{}%
3655 \do{ArtBox}{}%
3656 }
3657 \Hy@DefNameKey{pdfprintsclaling}{%
3658 \do{AppDefault}{}%
3659 \do{None}{}%
3660 }
3661 \Hy@DefNameKey{pdfduplex}{%
3662 \do{Simplex}{}%
3663 \do{DuplexFlipShortEdge}{}%
3664 \do{DuplexFlipLongEdge}{}%
3665 }
3666 \Hy@DefNameKey{pdfpicktraybypdfsize}{%
3667 \do{true}{}%
3668 \do{false}{}%
3669 }
3670 \define@key{Hyp}{pdfprintpagerange}{%
3671 \def\@pdfprintpagerange{#1}%
3672 }
3673 \Hy@DefNameKey{pdfnumcopies}{%
3674 \do{2}{two copies}%
3675 \do{3}{three copies}%
3676 \do{4}{four copies}%
3677 \do{5}{five copies}%
3678 }

3679 \define@key{Hyp}{pdfusetitle}[true]{%
3680 \Hy@boolkey{pdfusetitle}{#1}%
3681 }
3682 \def\HyXeTeX@CheckUnicode{%
3683 \ifxetex
3684 \ifHy@unicode
3685 \else
3686 \Hy@WarningNoLine{%
3687 XeTeX driver only supports unicode.\MessageBreak
3688 Enabling option `unicode'%
3689 }%
3690 \kvsetkeys{Hyp}{unicode}%
3691 \fi
3692 \else
3693 \let\HyXeTeX@CheckUnicode\relax
3694 \fi
3695 }
3696 \def\HyPsd@PrerenderUnicode#1{%
3697 \begingroup
3698 \expandafter\ifx\curname PrerenderUnicode\endcurname\relax
3699 \else
3700 \sbox0{%
3701 \let\GenericInfo\@gobbletwo

```

```

3702     \let\GenericWarning\@gobbletwo
3703     \let\GenericError\@gobblefour
3704     \PrerenderUnicode{#1}%
3705     }%
3706     \fi
3707 \endgroup
3708 }
3709 \define@key{Hyp}{pdftitle}{%
3710 \AddToDocumentProperties[hyperref]{pdftitle}{#1}%
3711 \HyXeTeX@CheckUnicode
3712 \HyPsd@PrerenderUnicode{#1}%
3713 \pdfstringdef\@pdftitle{#1}%
3714 }
3715 \define@key{Hyp}{pdfauthor}{%
3716 \AddToDocumentProperties[hyperref]{pdfauthor}{#1}%
3717 \HyXeTeX@CheckUnicode
3718 \HyPsd@PrerenderUnicode{#1}%
3719 \pdfstringdef\@pdfauthor{#1}%
3720 }
3721 \define@key{Hyp}{pdfproducer}{%
3722 \AddToDocumentProperties[hyperref]{pdfproducer}{#1}%
3723 \HyXeTeX@CheckUnicode
3724 \HyPsd@PrerenderUnicode{#1}%
3725 \pdfstringdef\@pdfproducer{#1}%
3726 }
3727 \define@key{Hyp}{pdfcreator}{%
3728 \AddToDocumentProperties[hyperref]{pdfcreator}{#1}%
3729 \HyXeTeX@CheckUnicode
3730 \HyPsd@PrerenderUnicode{#1}%
3731 \pdfstringdef\@pdfcreator{#1}%
3732 }
3733 \define@key{Hyp}{addtopdfcreator}{%
3734 \HyXeTeX@CheckUnicode
3735 \HyPsd@PrerenderUnicode{#1}%
3736 \pdfstringdef\@pdfcreator{\@pdfcreator, #1}%
3737 }
3738 \define@key{Hyp}{pdfcreationdate}{%
3739 \begingroup
3740 \Hy@unicodedefalse
3741 \pdfstringdef\@pdfcreationdate{#1}%
3742 \endgroup
3743 }
3744 \define@key{Hyp}{pdfmoddate}{%
3745 \begingroup
3746 \Hy@unicodedefalse
3747 \pdfstringdef\@pdfmoddate{#1}%
3748 \endgroup
3749 }
3750 \define@key{Hyp}{pdfsubject}{%
3751 \AddToDocumentProperties[hyperref]{pdfsubject}{#1}%
3752 \HyXeTeX@CheckUnicode
3753 \HyPsd@PrerenderUnicode{#1}%
3754 \pdfstringdef\@pdfsubject{#1}%
3755 }

```

```

3756 \define@key{Hyp}{pdfkeywords}{%
3757   \AddToDocumentProperties[hyperref]{pdfkeywords}{#1}%
3758   \HyXeTeX@CheckUnicode
3759   \HyPsd@PrerenderUnicode{#1}%
3760   \pdfstringdef\@pdfkeywords{#1}%
3761 }
3762 \define@key{Hyp}{pdftrapped}{%
3763   \lowercase{\edef\Hy@temp{#1}}%
3764   \ifx\Hy@temp\HyInfo@trapped@true
3765     \def\@pdftrapped{True}%
3766   \else
3767     \ifx\Hy@temp\HyInfo@trapped@false
3768       \def\@pdftrapped{False}%
3769     \else
3770       \ifx\Hy@temp\HyInfo@trapped@unknown
3771         \def\@pdftrapped{Unknown}%
3772       \else
3773         \ifx\Hy@temp\@empty
3774           \else
3775             \Hy@Warning{%
3776               Unsupported value `#1'\MessageBreak
3777               for option `pdftrapped'%
3778             }%
3779           \fi
3780         \def\@pdftrapped{}%
3781       \fi
3782     \fi
3783   \fi
3784 }
3785 \def\HyInfo@trapped@true{true}
3786 \def\HyInfo@trapped@false{false}
3787 \def\HyInfo@trapped@unknown{unknown}
3788 \def\HyInfo@TrappedUnsupported{%
3789   \ifx\@pdftrapped\@empty
3790   \else
3791     \Hy@WarningNoLine{`pdftrapped' is not supported by this driver}%
3792   \gdef\HyInfo@TrappedUnsupported{}%
3793   \fi
3794 }
3795 \define@key{Hyp}{pdfinfo}{%
3796   \kvsetkeys{pdfinfo}{#1}%
3797 }
3798 \def\Hy@temp#1{%
3799   \lowercase{\Hy@temp@A{#1}}{#1}%
3800 }
3801 \def\Hy@temp@A#1#2{%
3802   \define@key{pdfinfo}{#2}{%
3803     \hypersetup{pdf#1={##1}}%
3804   }%
3805 }
3806 \Hy@temp{Title}
3807 \Hy@temp{Author}
3808 \Hy@temp{Keywords}
3809 \Hy@temp{Subject}

```

```

3810 \Hy@temp{Creator}
3811 \Hy@temp{Producer}
3812 \Hy@temp{CreationDate}
3813 \Hy@temp{ModDate}
3814 \Hy@temp{Trapped}
3815 \newif\ifHyInfo@AddonUnsupported
3816 \kv@set@family@handler{pdfinfo}{%
3817   \HyInfo@AddonHandler{#1}{#2}%
3818 }
3819 \let\HyInfo@do\relax
3820 \def\HyInfo@AddonHandler#1#2{%
3821   \ifx\kv@value\relax
3822     \Hy@Warning{%
3823       Option `pdfinfo': ignoring key `\'kv@key' without value%
3824     }%
3825   \else
3826     \EdefEscapeName\HyInfo@KeyEscaped{\'kv@key}%
3827     \EdefUnescapeName\HyInfo@Key{\HyInfo@KeyEscaped}%
3828     \expandafter\ifx\csname KV@pdfinfo@\HyInfo@Key\endcsname\relax
3829     \ifHyInfo@AddonUnsupported
3830       \Hy@Warning{%
3831         This driver does not support additional\MessageBreak
3832         information entries, therefore\MessageBreak
3833         `\'kv@key' is ignored%
3834       }%
3835     \else
3836       \def\HyInfo@tmp###1{%
3837         \kv@define@key{pdfinfo}{##1}{%
3838           \HyXeTeX@CheckUnicode
3839           \HyPsd@PrerenderUnicode{###1}%
3840           \pdfstringdef\HyInfo@Value{###1}%
3841           \global\expandafter
3842           \let\csname HyInfo@Value@##1\endcsname
3843             \HyInfo@Value
3844         }%
3845       }%
3846       \expandafter\HyInfo@tmp\expandafter{\HyInfo@Key}%
3847       \global\expandafter
3848       \let\csname KV@pdfinfo@\HyInfo@Key\expandafter\endcsname
3849         \csname KV@pdfinfo@\HyInfo@Key\endcsname
3850       \xdef\HyInfo@AddonList{%
3851         \HyInfo@AddonList
3852         \HyInfo@do{\HyInfo@Key}%
3853       }%
3854       \expandafter\kv@parse@normalized\expandafter{%
3855         \HyInfo@Key={#2}%
3856       }{%
3857         \kv@processor@default{pdfinfo}%
3858       }%
3859     \fi
3860   \else
3861     \expandafter\kv@parse@normalized\expandafter{%
3862       \HyInfo@Key={#2}%
3863     }{%

```



```

3864     \kv@processor@default{pdfinfo}%
3865   }%
3866   \fi
3867 \fi
3868 }
3869 \def\HyInfo@GenerateAddons{%
3870 \ifHyInfo@AddonUnsupported
3871   \def\HyInfo@Addons{}%
3872 \else
3873   \begingroup
3874     \toks@{}%
3875     \def\HyInfo@do##1{%
3876       \EdefEscapeName\HyInfo@Key{##1}%
3877       \edef\x{%
3878         \the\toks@
3879         /\HyInfo@Key(\csname HyInfo@Value@##1\endcsname)%
3880       }%
3881     }%
3882   }%
3883   \x
3884 }%
3885 \HyInfo@AddonList
3886 \edef\x{\endgroup
3887   \def\noexpand\HyInfo@Addons{\the\toks@}%
3888 }%
3889 \x
3890 \fi
3891 }
3892 \global\let\HyInfo@AddonList\@empty
3893 \define@key{Hyp}{pdfview}{\calculate@pdfview#1 \}
3894 \define@key{Hyp}{pdfinkmargin}{\setpdfinkmargin{#1}}
3895 \let\setpdfinkmargin\@gobble
3896 \def\calculate@pdfview#1 #2\{\%
3897   \def\@pdfview{#1}%
3898   \ifx\#2\%
3899     \def\@pdfviewparams{ -32768}%
3900   \else
3901     \def\@pdfviewparams{ #2}%
3902   \fi
3903 }
3904 \def\Hy@number#1{%
3905   \the\numexpr#1\relax
3906 }%
3907 \define@key{Hyp}{pdfstartpage}{%
3908   \ifx\#1\%
3909     \let\@pdfstartpage\@empty
3910   \else
3911     \edef\@pdfstartpage{\Hy@number{#1}}%
3912   \fi
3913 }%
3914 \define@key{Hyp}{pdfstartview}{%
3915   \ifx\#1\%
3916     \let\@pdfstartview\@empty
3917   \else

```

```

3918 \def\@pdfstartview{/#1}%
3919 \fi
3920 }
3921 \def\HyPat@NonNegativeReal/{%
3922 \ *([0-9]+\.[0-9]*|0-9*\.[0-9]+) *%
3923 }
3924 \define@key{Hyp}{pdfremotestartview}{%
3925 \ifx\#1\%
3926 \def\@pdfremotestartview{/Fit}%
3927 \else
3928 \edef\@pdfremotestartview{#1}%
3929 \Hy@Match\@pdfremotestartview{%
3930 ^XYZ(%
3931 ()| %
3932 (null|-\HyPat@NonNegativeReal/) %
3933 (null|-\HyPat@NonNegativeReal/) %
3934 (null|\HyPat@NonNegativeReal/)%
3935 )| % end of "XYZ"
3936 Fit(%
3937 ()| %
3938 B| %
3939 (H|V|BH|BV)(%
3940 ()| %
3941 (null|\HyPat@NonNegativeReal/)%
3942 )| %
3943 R %
3944 \HyPat@NonNegativeReal/ %
3945 \HyPat@NonNegativeReal/ %
3946 \HyPat@NonNegativeReal/ %
3947 \HyPat@NonNegativeReal/%
3948 ) % end of "Fit"
3949 )$%
3950 }%
3951 \Hy@Warning{%
3952 Invalid value \@pdfremotestartview'\MessageBreak
3953 of `pdfremotestartview'\MessageBreak
3954 is replaced by `Fit'%
3955 }%
3956 \let\@pdfremotestartview\@empty
3957 }%
3958 \ifx\@pdfremotestartview\@empty
3959 \def\@pdfremotestartview{/Fit}%
3960 \else
3961 \edef\@pdfremotestartview{/ \@pdfremotestartview}%
3962 \fi
3963 \fi
3964 }
3965 \define@key{Hyp}{pdfpagescrop}{\edef\@pdfpagescrop{#1}}
3966 \define@key{Hyp}{pdftoolbar}[true]{%
3967 \Hy@boolkey{pdftoolbar}{#1}%
3968 }
3969 \define@key{Hyp}{pdfmenubar}[true]{%
3970 \Hy@boolkey{pdfmenubar}{#1}%
3971 }

```

```

3972 \define@key{Hyp}{pdfwindowui}[true]{%
3973 \Hy@boolkey{pdfwindowui}{#1}%
3974 }
3975 \define@key{Hyp}{pdffitwindow}[true]{%
3976 \Hy@boolkey{pdffitwindow}{#1}%
3977 }
3978 \define@key{Hyp}{pdfcenterwindow}[true]{%
3979 \Hy@boolkey{pdfcenterwindow}{#1}%
3980 }
3981 \define@key{Hyp}{pdfdisplaydoctitle}[true]{%
3982 \Hy@boolkey{pdfdisplaydoctitle}{#1}%
3983 }
3984 \define@key{Hyp}{pdfa}[true]{%
3985 \IfDocumentMetadataTF
3986 {
3987 \PackageWarning{hyperref}{%
3988 \string\DocumentMetadata\space detected.\MessageBreak
3989 The 'pdfa' key will be ignored.\MessageBreak
3990 Please set the PDF/A standard in \string\DocumentMetadata\MessageBreak
3991 with the 'pdfstandard' key.}
3992 }
3993 {\Hy@boolkey{pdfa}{#1}}%
3994 }
3995
3996 \define@key{Hyp}{pdfnewwindow}[true]{%
3997 \def\Hy@temp{#1}%
3998 \ifx\Hy@temp\@empty
3999 \Hy@pdfnewwindowsetfalse
4000 \else
4001 \Hy@pdfnewwindowsettrue
4002 \Hy@boolkey{pdfnewwindow}{#1}%
4003 \fi
4004 }
4005 \def\Hy@SetNewWindow{%
4006 \ifHy@pdfnewwindowset
4007 /NewWindow %
4008 \ifHy@pdfnewwindow true\else false\fi
4009 \fi
4010 }
4011 \Hy@DefNameKey{pdfpagelayout}{%
4012 \do{SinglePage}{}%
4013 \do{OneColumn}{}%
4014 \do{TwoColumnLeft}{}%
4015 \do{TwoColumnRight}{}%
4016 \do{TwoPageLeft}{PDF 1.5}%
4017 \do{TwoPageRight}{PDF 1.5}%
4018 }
4019 \define@key{Hyp}{pdflang}{%
4020 \edef\@pdflang{#1}%
4021 \def\Hy@temp{\relax}%
4022 \ifx\@pdflang\Hy@temp
4023 \let\@pdflang\relax
4024 \fi
4025 \ifx\@pdflang\relax

```

```

4026 \else
4027 \ifx\@pdflang\@empty
4028 \else

```

Test according to ABNF of RFC 3066.

```

4029 \Hy@Match\@pdflang{icase}{%
4030 ~%
4031 [a-z]{1,8}%
4032 (-[a-z0-9]{1,8})*%
4033 $%
4034 }{%

```

Test according to ABNF of RFC 5646.

```

4035 \Hy@Match\@pdflang{icase}{%
4036 ~%
4037 (%
4038 % langtag
4039 (% language
4040 [a-z]{2,3}%
4041 ([a-z]{3}(-[a-z]{3}){0,2})?% extlang
4042 |[a-z]{4}% reserved for future use
4043 |[a-z]{5,8}% registered language subtag
4044 )%
4045 (-[a-z]{4})?% script
4046 (-([a-z]{2}|[0-9]{3}))?% region
4047 (-([a-z]{5,8}|[0-9][a-z0-9]{3}))?% variant
4048 (-[0-9a-wyz](-[a-z0-9]{2,8})+)*% extension
4049 (-x(-[a-z0-9]{1,8})+)?% privateuse
4050 % privateuse
4051 |x(-[a-z0-9]{1,8})+%
4052 % grandfathered/irregular
4053 |en-GB-oed%
4054 |i-(ami|bnn|default|enochian|hak|klinton|lux|%
4055 mingo|navajo|pwn|tao|tay|tsu)%
4056 |sgn-(BE-FR|BE-NL|CH-DE)%
4057 % grandfathered/regular
4058 |art-lojban%
4059 |cel-gaulish%
4060 |no-(bok|nyn)%
4061 |zh-(guoyu|hakka|min|min-nan|xiang)%
4062 )%
4063 $%
4064 }{%

```

Test for unique extensions.

```

4065 \Hy@Match{-\@pdflang}{icase}{-[a-wyz0-9]-}{%
4066 \Hy@Match\@pdflang{icase}{~x-}{-}{%
4067 % remove privateuse
4068 \edef\Hy@temp{-\@pdflang}%
4069 \Hy@Match\Hy@temp{icase}{%
4070 ~%
4071 (%
4072 (-[a-wyz0-9]|-[a-z0-9]{2,8})*%
4073 )%
4074 -x-%

```

```

4075     }{%
4076         \edef\Hy@temp{%
4077             \expandafter\strip@prefix\pdfastmatch1%
4078         }%
4079     }{%}
4080     \Hy@Match\Hy@temp{icase}{%
4081         (-[a-wyz0-9]-).*\@backslashchar1%
4082     }{%
4083         \Hy@Warning{%
4084             Invalid language identifier `#1'\MessageBreak
4085             for option `pdflang', because it violates\MessageBreak
4086             well-formedness defined in RFC 4646\MessageBreak
4087             by duplicate singleton subtags%
4088         }%
4089         \let\@pdflang\relax
4090     }{%}
4091 }%
4092 }{%}

```

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

```

4093     \ifx\@pdflang\relax
4094     \else
4095         \Hy@Match\@pdflang{icase}{%
4096             ~%
4097             [a-zA-Z]{2}-%
4098             (%
4099                 aa|AA|%
4100                 [qQ][m-zA-Z]|%
4101                 [xX][a-zA-Z]|%
4102                 zz|ZZ%
4103             )%
4104             (-|)$)%
4105     }{%
4106         \Hy@Warning{%
4107             Invalid language identifier `#1'\MessageBreak
4108             for option `pdflang' because of invalid country code%
4109             \MessageBreak
4110             in second subtag (RFC 3066)%
4111         }%
4112         \let\@pdflang\relax
4113     }{%}
4114     \fi
4115 }{%
4116     \Hy@Warning{%
4117         Invalid language identifier `#1'\MessageBreak
4118         for option `pdflang', because it violates\MessageBreak
4119         well-formedness defined in RFC 5646%
4120     }%
4121     \let\@pdflang\relax
4122 }%
4123 }{%
4124     \Hy@Warning{%
4125         Invalid language identifier `#1'\MessageBreak
4126         for option `pdflang' (RFC 3066)%
4127     }%

```

```

4128     \let\@pdflang\relax
4129   }%
4130   \fi
4131 \fi
4132 }
4133 \define@key{Hyp}{pdfpagelabels}[true]{%
4134   \Hy@boolkey{pdfpagelabels}{#1}%
4135 }
4136 \define@key{Hyp}{pdfescapeform}[true]{%
4137   \Hy@boolkey{pdfescapeform}{#1}%
4138 }

Default values:
4139 \def\@linkbordercolor{1 0 0}
4140 \def\@urlbordercolor{0 1 1}
4141 \def\@menubordercolor{1 0 0}
4142 \def\@filebordercolor{0 .5 .5}
4143 \def\@runbordercolor{0 .7 .7}
4144 \def\@citebordercolor{0 1 0}
4145 \def\@pdfhighlight{/I}
4146 \let\@pdftitle\@empty
4147 \let\@pdfauthor\@empty
4148 \let\@pdfproducer\relax
4149 \def\@pdfcreator{LaTeX with hyperref}
4150 \let\@pdfcreationdate\@empty
4151 \let\@pdfmoddate\@empty
4152 \let\@pdfsubject\@empty
4153 \let\@pdfkeywords\@empty
4154 \let\@pdftrapped\@empty
4155 \let\@pdfpagescrop\@empty
4156 \def\@pdfstartview{/Fit}
4157 \def\@pdfremotestartview{/Fit}
4158 \def\@pdfstartpage{1}
4159 \let\@pdfprintpagerange\@empty
4160 \let\@pdflang\relax
4161 \let\PDF@SetupDoc\@empty
4162 \let\PDF@FinishDoc\@empty
4163 \let\phantomsection\@empty
4164 \let\special@paper\@empty
4165 \def\HyperDestNameFilter#1{#1}
4166 \Hy@AtBeginDocument{%
4167   \begingroup
4168     \edef\x{\ifdim\stockheight>z@ \stockheight\else\paperheight\fi}%
4169     \dimen@=\x\relax
4170     \ifdim\dimen@>z@
4171       \else
4172         \dimen@=11in\relax
4173         \Hy@WarningNoLine{%
4174           Height of page (\expandafter\string\x) %
4175           is invalid (\the\x),\MessageBreak
4176           using 11in%
4177         }%
4178       \fi
4179       \dimen@=0.99626401\dimen@
4180       \xdef\Hy@pageheight{\strip@pt\dimen@}%

```

```

4181 \endgroup
4182 }
4183 \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.

```

4184 \let\hyper@normalise\ExecuteOptions
4185 \let\ExecuteOptions\hypersetup
4186 \Hy@RestoreCatcodes
4187 \InputIfFileExists{hyperref.cfg}{}{}
4188 \Hy@SetCatcodes
4189 \let\ExecuteOptions\hyper@normalise
4190 \ifx\Hy@MaybeStopNow\relax
4191 \else
4192 \Hy@stoppedearlytrue
4193 \expandafter\Hy@MaybeStopNow
4194 \fi
4195 \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.

```

4196 \SetupKeyvalOptions{family=Hyp}
4197 \DeclareLocalOptions{%
4198 a4paper,a5paper,b5paper,letterpaper,legalpaper,executivepaper%
4199 }

```

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

```

4200 \@ifpackagewith{hyperref}{tex4ht}{%
4201 }{%
4202 \@ifpackageloaded{tex4ht}{%
4203 \PassOptionsToPackage{tex4ht}{hyperref}%
4204 }{%
4205 \@ifundefined{HCode}{%
4206 }{%
4207 \begingroup
4208 \def\Hy@pkg{tex4ht}%
4209 \def\Hy@temp@A#1\RequirePackage[#2]#3#4\Hy@NIL{%
4210 \def\Hy@param{#2#3}%
4211 \ifx\Hy@param\@empty
4212 \expandafter\@gobble
4213 \else
4214 \def\Hy@param{#3}%
4215 \ifx\Hy@param\Hy@pkg
4216 \PassOptionsToPackage{#2}{tex4ht}%
4217 \expandafter\expandafter\expandafter\@gobble
4218 \else
4219 \expandafter\expandafter\expandafter\@firstofone
4220 \fi
4221 \fi
4222 {\Hy@temp@A#4\Hy@NIL}%
4223 }%
4224 \expandafter
4225 \Hy@temp@A\@documentclasshook\RequirePackage[]{}\Hy@NIL
4226 \endgroup

```

```

4227 \PassOptionsToPackage{tex4ht}{hyperref}%
4228 }%
4229 }%
4230 }

4231 \let\ReadBookmarks\relax
4232 \ProcessKeyvalOptions{Hyp}

```

After processing options.

15.1 Package xspace support

```

4233 \def\Hy@xspace@end{}
4234 \@ifundefined{xspaceaddexceptions}{%
4235 \Hy@AtBeginDocument{%
4236 \@ifundefined{xspaceaddexceptions}{%
4237 }{%
4238 \def\Hy@xspace@end{%
4239 \gobble{end for xspace}%
4240 }%
4241 \xspaceaddexceptions{%
4242 \Hy@xspace@end,\hyper@linkend,\hyper@anchorend
4243 }%
4244 }%
4245 }%
4246 }{%
4247 \def\Hy@xspace@end{%
4248 \gobble{end for xspace}%
4249 }%
4250 \xspaceaddexceptions{\Hy@xspace@end,\hyper@linkend,\hyper@anchorend}%
4251 }

```

15.2 Option draft

```

4252 \Hy@AtBeginDocument{%
4253 \ifHy@draft
4254 \let\hyper@@anchor@gobble
4255 \gdef\hyper@link#1#2#3{#3\Hy@xspace@end}%
4256 \def\hyper@anchorstart#1#2{#2\Hy@xspace@end}%
4257 \def\hyper@anchorend{\Hy@xspace@end}%
4258 \let\hyper@linkstart@gobbletwo
4259 \def\hyper@linkend{\Hy@xspace@end}%
4260 \def\hyper@linkurl#1#2{#1\Hy@xspace@end}%
4261 \def\hyper@linkfile#1#2#3{#1\Hy@xspace@end}%
4262 \def\hyper@link@[#1]#2#3#4{#4\Hy@xspace@end}%
4263 \def\Acrobatmenu#1#2{\leavevmode#2\Hy@xspace@end}%
4264 \let\PDF@SetupDoc@empty
4265 \let\PDF@FinishDoc@empty
4266 \let\ReadBookmarks\relax
4267 \let\WriteBookmarks\relax
4268 \Hy@WarningNoLine{Draft mode on}%
4269 \fi
4270 \Hy@DisableOption{draft}%
4271 \Hy@DisableOption{nolinks}%
4272 \Hy@DisableOption{final}%
4273 }

```


15.3 PDF/A

If an A-standard has been set in `\DocumentMetadata` `hyperref` should set the `pdfa` key too.

```
4274 \ExplSyntaxOn
4275 \IfDocumentMetadataT
4276 {
4277   \tl_if_empty:eTF{\GetDocumentProperties{document/pdfstandard}}
4278   {
4279     \Hy@pdfafalse
4280   }
4281   {
4282     \Hy@pdfatrue
4283   }
4284 }
4285 \ExplSyntaxOff
4286 \Hy@DisableOption{pdfa}
4287 \ifHy@pdfa
4288   \ifnum \Hy@pdf@majorminor@version < 104
4289     \kvsetkeys{Hyp}{pdfversion=1.4}%
4290     \fi
4291     \Hy@DisableOption{pdfversion}%
4292     \def\Hy@Acrobatmenu#1#2{%
4293       \leavevmode
4294       \begingroup
4295         \edef\x{#1}%
4296         \@onelevel@sanitize\x
4297         \ifx\x\Hy@NextPage
4298           \let\y=Y%
4299         \else
4300           \ifx\x\Hy@PrevPage
4301             \let\y=Y%
4302           \else
4303             \ifx\x\Hy@FirstPage
4304               \let\y=Y%
4305             \else
4306               \ifx\x\Hy@LastPage
4307                 \let\y=Y%
4308               \else
4309                 \let\y=N%
4310             \fi
4311           \fi
4312         \fi
4313       \endgroup
4314     \expandafter\endgroup
4315     \ifx\y Y%
4316     \else
4317       \Hy@Error{%
4318         PDF/A: Named action `#1' is not permitted%
4319       } \@ehc
4320     {#2}%
4321     \expandafter\@gobble
4322   \fi
4323 }%
```

```

4324 \def\Hy@temp#1{%
4325   \expandafter\def\csname Hy@#1\endcsname{#1}%
4326   \expandafter\@onelevel@sanitize\csname Hy@#1\endcsname
4327 }%
4328 \Hy@temp{NextPage}%
4329 \Hy@temp{PrevPage}%
4330 \Hy@temp{FirstPage}%
4331 \Hy@temp{LastPage}%
4332 \else
4333 \def\Hy@Acrobatmenu#1#2{\leavevmode}%
4334 \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.

change 2020-10-10: no trace of `\texttilde` can be found in the three languages spanish, galician and estonian so the patch has been removed as outdated.

```

4335 \def\Hy@wrapper@babel#1#2{%
4336   \begingroup
4337   \Hy@safe@activestrue
4338   \set@display@protect
4339   \edef\x{#2}%
4340   \@onelevel@sanitize\x
4341   \toks@{#1}%
4342   \edef\x{\endgroup\the\toks@{\x}}%
4343   \x
4344 }
4345 \def\Hy@WrapperDef#1{%
4346   \begingroup
4347   \escapechar=\m@ne
4348   \xdef\Hy@gtemp{%
4349     \expandafter\noexpand\csname HyWrap@string#1\endcsname
4350   }%
4351   \endgroup
4352   \edef#1{%
4353     \noexpand\Hy@wrapper@babel
4354     \expandafter\noexpand\Hy@gtemp
4355   }%
4356   \expandafter\def\Hy@gtemp
4357 }

4358 \ifHy@hyperfigures
4359   \Hy@Info{Hyper figures ON}%
4360 \else
4361   \Hy@Info{Hyper figures OFF}%
4362 \fi

4363 \ifHy@nesting
4364   \Hy@Info{Link nesting ON}%
4365 \else
4366   \Hy@Info{Link nesting OFF}%
4367 \fi

4368 \ifHy@hyperindex

```

```

4369 \Hy@Info{Hyper index ON}%
4370 \else
4371 \Hy@Info{Hyper index OFF}%
4372 \fi
4373 \ifHy@plainpages
4374 \Hy@Info{Plain pages ON}%
4375 \else
4376 \Hy@Info{Plain pages OFF}%
4377 \fi
4378 \ifHy@backref
4379 \Hy@Info{Backreferencing ON}%
4380 \else
4381 \Hy@Info{Backreferencing OFF}%
4382 \fi
4383 \ifHy@implicit
4384 \Hy@InfoNoLine{Implicit mode ON; LaTeX internals redefined}%
4385 \else
4386 \Hy@InfoNoLine{Implicit mode OFF; no redefinition of LaTeX internals}%
4387 \def\MaybeStopEarly{%
4388 \Hy@Message{Stopped early}%
4389 \Hy@AtBeginDocument{%
4390 \PDF@FinishDoc
4391 \gdef\PDF@FinishDoc{}}%
4392 }%
4393 \endinput
4394 }%
4395 \Hy@AtBeginDocument{%
4396 \let\autoref\ref
4397 \let\autopageref\pageref
4398 \ifx\@pdfpagemode\@empty
4399 \gdef\@pdfpagemode{UseNone}%
4400 \fi
4401 \global\Hy@backreffalse
4402 }%
4403 \Hy@AtEndOfPackage{%
4404 \global\let\ReadBookmarks\relax
4405 \global\let\WriteBookmarks\relax
4406 }%
4407 \fi
4408 \Hy@DisableOption{implicit}

```

15.4.1 Driver loading

Ensure that `\stockwidth` and `\stockheight` are defined

```

4409 \@ifundefined{stockwidth}{\newdimen\stockwidth}{}
4410 \@ifundefined{stockheight}{\newdimen\stockheight}{}
4411 \Hy@AtEndOfPackage{%
4412 \@ifpackageloaded{tex4ht}{%
4413 \def\Hy@driver{htex4ht}%
4414 \Hy@texhttrue
4415 }{}%

```

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.

```

4416 \ifx\Hy@driver\@empty
4417 \else
4418   \ifx\pdfextension\@undefined
4419     \def\Hy@temp{hpdfTeX}%
4420   \else
4421     \def\Hy@temp{hluatex}%
4422   \fi
4423 \ifpdf
4424   \ifx\Hy@driver\Hy@temp
4425   \else
4426     \Hy@WarningNoLine{%
4427       Wrong driver `\'Hy@driver.def';\MessageBreak
4428       pdfTeX is running in PDF mode.\MessageBreak
4429       Forcing driver `\'Hy@temp.def'%
4430     }%
4431     \let\Hy@driver\Hy@temp
4432   \fi
4433 \else
4434   \ifx\Hy@driver\Hy@temp
4435     \Hy@WarningNoLine{%
4436       Wrong driver `\'Hy@driver.def';\MessageBreak
4437       pdfTeX is not running in PDF mode.\MessageBreak
4438       Using default driver%
4439     }%
4440     \let\Hy@driver\@empty
4441   \fi
4442 \fi
4443 \fi
4444 \ifHy@texht
4445 \else
4446   \ifx\Hy@driver\@empty
4447   \else
4448     \def\Hy@temp{hXetex}%
4449     \ifxetex
4450       \ifx\Hy@driver\Hy@temp
4451       \else
4452         \Hy@WarningNoLine{%
4453           Wrong driver `\'Hy@driver.def';\MessageBreak
4454           XeTeX is running.\MessageBreak
4455           Forcing driver `\'Hy@temp.def' for XeTeX%
4456         }%
4457         \let\Hy@driver\Hy@temp
4458       \fi
4459     \fi
4460   \fi
4461 \fi
4462 \ifx\Hy@driver\@empty
4463 \else
4464   \def\Hy@temp{hhitex}%
4465   \ifhint
4466     \ifx\Hy@driver\Hy@temp
4467     \else
4468       \Hy@WarningNoLine{%
4469         Wrong driver `\'Hy@driver.def';\MessageBreak

```

```

4470     hitex is running.\MessageBreak
4471     Forcing driver `\

```

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

```

4501 \let\

```

```

4523     }%
4524     \endinput
4525     }%
4526     \else
4527     \ifhint
4528     \def\Hy@driver{hhitex}
4529     \else
4530     \ifnum\ifvtex\OpMode\else\m@ne\fi=\@ne
4531     \def\Hy@driver{hvtex}%
4532     \else
4533     \ifnum\ifvtex\OpMode\else\m@ne\fi=\tw@
4534     \def\Hy@driver{hvtex}%
4535     \else
4536     \ifx\HyOpt@DriverFallback\@empty
4537     \let\Hy@driver\Hy@defaultdriver
4538     \def\HyOpt@DriverType{ (default)}%
4539     \else
4540     \begingroup
4541     \toks@\expandafter{\HyOpt@DriverFallback}%
4542     \edef\x{\endgroup
4543     \noexpand\kvsetkeys{Hyp}{\the\toks@}}%
4544     }%
4545     \x
4546     \ifx\Hy@driver\@empty
4547     \let\Hy@driver\Hy@defaultdriver
4548     \def\HyOpt@DriverType{ (default)}%
4549     \else
4550     \def\HyOpt@DriverType{ (fallback)}%
4551     \fi
4552     \fi
4553     \fi
4554     \fi
4555     \fi
4556     \fi
4557     \fi
4558     \fi
4559     \ifx\Hy@driver\Hy@defaultdriver
4560     \def\Hy@temp{hdwind}%
4561     \ifx\Hy@temp\Hy@driver
4562     \kvsetkeys{Hyp}{colorlinks}%
4563     \PassOptionsToPackage{dwindo}{color}%
4564     \fi
4565     \fi
4566     \fi
4567     \else
4568     \def\HyOpt@DriverType{ (custom)}%
4569     \let\Hy@driver\HyOpt@CustomDriver
4570     \fi
4571     \Hy@InfoNoLine{Driver\HyOpt@DriverType: \Hy@driver}%
4572     \chardef\Hy@VersionChecked=0 %
4573     \input{\Hy@driver.def}%
4574     \ifcase\Hy@VersionChecked
4575     \Hy@VersionCheck{\Hy@driver.def}%
4576     \fi

```

```

4577 \let\@unprocessedoptions\relax
4578 \Hy@RestoreCatcodes
4579 \Hy@DisableOption{tex4ht}%
4580 \Hy@DisableOption{pdftex}%
4581 \Hy@DisableOption{nativepdf}%
4582 \Hy@DisableOption{dvipdfm}%
4583 \Hy@DisableOption{dvipdfmx}%
4584 \Hy@DisableOption{dvipdfmx-outline-open}%
4585 \Hy@DisableOption{pdfmark}%
4586 \Hy@DisableOption{dvips}%
4587 \Hy@DisableOption{hypertext}%
4588 \Hy@DisableOption{vtex}%
4589 \Hy@DisableOption{vtexpdfmark}%
4590 \Hy@DisableOption{dviwindo}%
4591 \Hy@DisableOption{dvipsone}%
4592 \Hy@DisableOption{textures}%
4593 \Hy@DisableOption{latex2html}%
4594 \Hy@DisableOption{ps2pdf}%
4595 \Hy@DisableOption{xetex}%
4596 \Hy@DisableOption{driverfallback}%
4597 \Hy@DisableOption{customdriver}%
4598 \Hy@DisableOption{pdfversion}%
4599 }

```

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.

```

4600 \newif\ifHy@DvipdfmxOutlineOpen
4601 \ifxetex
4602   \ifdim\number\XeTeXversion\XeTeXrevision in<0.9995in %
4603   \else
4604     \chardef\SpecialDvipdfmxOutlineOpen\@ne
4605     \Hy@DvipdfmxOutlineOpenttrue
4606   \fi
4607 \fi
4608 \begingroup\expandafter\expandafter\expandafter\endgroup
4609 \expandafter\ifx\csname SpecialDvipdfmxOutlineOpen\endcsname\relax
4610 \else
4611   \ifnum\SpecialDvipdfmxOutlineOpen>\z@
4612     \Hy@DvipdfmxOutlineOpenttrue
4613   \fi
4614 \fi

```

15.4.2 Bookmarks

```

4615 \def\WriteBookmarks{0}
4616 \def\@bookmarkopenstatus#1{%
4617   \ifHy@bookmarksopen

```

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

```

4618   \ifnum#1<\expandafter\@firstofone\expandafter
4619     {\number\@bookmarkopenlevel} % explicit space
4620   \else
4621     -%

```

```

4622 \fi
4623 \else
4624 -%
4625 \fi
4626 }
4627 \ifHy@bookmarks
4628 \Hy@Info{Bookmarks ON}%
4629 \ifx\@pdfpagemode\@empty
4630 \def\@pdfpagemode{UseOutlines}%
4631 \fi
4632 \else
4633 \let\@bookmarkopenstatus\@gobble
4634 \Hy@Info{Bookmarks OFF}%
4635 \Hy@AtEndOfPackage{%
4636 \global\let\ReadBookmarks\relax
4637 \global\let\WriteBookmarks\relax
4638 }%
4639 \ifx\@pdfpagemode\@empty
4640 \def\@pdfpagemode{UseNone}%
4641 \fi
4642 \fi
4643 \Hy@DisableOption{bookmarks}

Add wrapper for setting standard catcodes (babel's shorthands).
4644 \def\Hy@CatcodeWrapper#1{%
4645 \let\Hy@endWrap\@empty
4646 \def\TMP@EnsureCode##1##2{%
4647 \edef\Hy@endWrap{%
4648 \Hy@endWrap
4649 \catcode##1 \the\catcode##1\relax
4650 }%
4651 \catcode##1 ##2\relax
4652 }%
4653 \TMP@EnsureCode{10}{12}% ^^J
4654 \TMP@EnsureCode{33}{12}% !
4655 \TMP@EnsureCode{34}{12}% "
4656 \TMP@EnsureCode{36}{3}% $ (math)
4657 \TMP@EnsureCode{38}{4}% & (alignment)
4658 \TMP@EnsureCode{39}{12}% '
4659 \TMP@EnsureCode{40}{12}% (
4660 \TMP@EnsureCode{41}{12}% )
4661 \TMP@EnsureCode{42}{12}% *
4662 \TMP@EnsureCode{43}{12}% +
4663 \TMP@EnsureCode{44}{12}% ,
4664 \TMP@EnsureCode{45}{12}% -
4665 \TMP@EnsureCode{46}{12}% .
4666 \TMP@EnsureCode{47}{12}% /
4667 \TMP@EnsureCode{58}{12}% :
4668 \TMP@EnsureCode{59}{12}% ;
4669 \TMP@EnsureCode{60}{12}% <
4670 \TMP@EnsureCode{61}{12}% =
4671 \TMP@EnsureCode{62}{12}% >
4672 \TMP@EnsureCode{63}{12}% ?
4673 \TMP@EnsureCode{91}{12}% [
4674 \TMP@EnsureCode{93}{12}% ]

```



```

4675 \TMP@EnsureCode{94}{7}% ^ (superscript)
4676 \TMP@EnsureCode{95}{8}% _ (subscript)
4677 \TMP@EnsureCode{96}{12}% `
4678 \TMP@EnsureCode{124}{12}% |
4679 \TMP@EnsureCode{126}{13}% ~ (active)
4680 #1\relax
4681 \Hy@EndWrap
4682 }

```

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

```

4683 \Hy@AtBeginDocument{%
4684 \ifHy@ocgcolorlinks
4685 \kvsetkeys{Hyp}{colorlinks}%
4686 \ifHy@pdfa
4687 \Hy@Warning{%
4688 PDF/A: Optional Content Groups are prohibited,\MessageBreak
4689 using `colorlinks' instead of `ocgcolorlinks'%
4690 }%
4691 \Hy@ocgcolorlinksfalse
4692 \fi
4693 \fi
4694 \ifHy@ocgcolorlinks
4695 \else
4696 \Hy@DisableOption{ocgcolorlinks}%
4697 \fi
4698 \ifHy@colorlinks
4699 \def\@pdfborder{0 0 0}%
4700 \let\@pdfborderstyle\@empty
4701 \Hy@CatcodeWrapper{%
4702 \RequirePackage{color}%
4703 }%
4704 \def\Hy@colorlink#1{%
4705 \begingroup
4706 \HyColor@UseColor#1%
4707 }%
4708 \def\Hy@endcolorlink{\endgroup}%
4709 \Hy@Info{Link coloring ON}%
4710 \else
4711 \ifHy@frenchlinks
4712 \def\Hy@colorlink#1{\begingroup\fontshape{\scdefault}\selectfont}%
4713 \def\Hy@endcolorlink{\endgroup}%
4714 \Hy@Info{French linking ON}%
4715 \else

```

for grouping consistency:

```

4716 \def\Hy@colorlink#1{\begingroup}%
4717 \def\Hy@endcolorlink{\endgroup}%
4718 \Hy@Info{Link coloring OFF}%
4719 \fi
4720 \fi
4721 \Hy@DisableOption{colorlinks}%
4722 \Hy@DisableOption{frenchlinks}%
4723 \ifHy@texht
4724 \else

```

With active links we have to redefine the starred versions to avoid that they get links from the include \@setref:

```

4725 \ifHy@implicit
4726 \let \T@Ref\HyRef@Ref
4727 \def \@refstar#1{%
4728 \NR@ref@showkeys{#1}%
4729 \HyRef@StarSetRef{#1}\@firstoffive
4730 }
4731 \def \@pagerefstar#1{%
4732 \NR@ref@showkeys{#1}%
4733 \HyRef@StarSetRef{#1}\@secondoffive
4734 }
4735 \def \@namerefstar#1{%
4736 \NR@ref@showkeys{#1}%
4737 \HyRef@StarSetRef{#1}\@thirdoffive
4738 }
4739 \def \@Refstar#1{%
4740 \NR@ref@showkeys{#1}%
4741 \HyRef@StarSetRef{#1}\HyRef@MakeUppercaseFirstOfFive
4742 }%
4743 \else
4744 \fi
4745 \fi
4746 }
4747 \Hy@AtBeginDocument{%
4748 \ifx\ReadBookmarks\relax
4749 \else
4750 \Hy@CatcodeWrapper\ReadBookmarks
4751 \fi
4752 }
4753 \ifHy@backref
4754 \RequirePackage{backref}%
4755 \else
4756 \let\Hy@backout\@gobble
4757 \fi
4758 \Hy@DisableOption{backref}
4759 \Hy@DisableOption{pagebackref}
4760 \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. The catcode : is set to other to avoid problems with expl3 syntax.

```

4761 \begingroup
4762 \endlinechar=-1 %
4763 \catcode`\^^A=14 %
4764 \catcode`\^^M\active
4765 \catcode`\%\active

```

```

4766 \catcode`\#\active
4767 \catcode`\_\active
4768 \catcode`\$\active
4769 \catcode`\&\active
4770 \gdef\hyper@normalise{^^A
4771 \begingroup
4772 \@makeother{:}^^A
4773 \catcode`\^M\active
4774 \def^^M{ }^^A
4775 \catcode`\%\active
4776 \let%\@percentchar
4777 \let%\@percentchar
4778 \catcode`\#\active
4779 \def#{\hyper@hash}^^A
4780 \def#{\hyper@hash}^^A
4781 \@makeother\&^^A
4782 \edef&{\string&}^^A
4783 \edef&{\string&}^^A
4784 \edef\textunderscore{\string_}^^A
4785 \let_\textunderscore
4786 \catcode`\_\active
4787 \let_\textunderscore
4788 \let~\hyper@tilde
4789 \let~\hyper@tilde
4790 \let\textasciitilde\hyper@tilde
4791 \let\\\@backslashchar
4792 \edef$\string$}^^A
4793 \Hy@safe@activestruer
4794 \hyper@n@ormalise
4795 }^^A
4796 \catcode`\#=6 ^^A
4797 \gdef\Hy@ActiveCarriageReturn{^^M}^^A
4798 \gdef\hyper@n@ormalise#1#2{^^A
4799 \def\Hy@tempa{#2}^^A
4800 \ifx\Hy@tempa\Hy@ActiveCarriageReturn
4801 \Hy@ReturnAfterElseFi{^^A
4802 \hyper@@normalise{#1}^^A
4803 }^^A
4804 \else
4805 \Hy@ReturnAfterFi{^^A
4806 \hyper@@normalise{#1}{#2}^^A
4807 }^^A
4808 \fi
4809 }^^A
4810 \gdef\hyper@@normalise#1#2{^^A
4811 \edef\Hy@tempa{^^A
4812 \endgroup
4813 \noexpand#1{\Hy@RemovePercentCr#2%\^M\@nil}^^A
4814 }^^A
4815 \Hy@tempa
4816 }^^A
4817 \gdef\Hy@RemovePercentCr#1%\^M#2\@nil{^^A
4818 #1^^A
4819 \ifx\limits#2\limits

```

```

4820 \else
4821 \Hy@ReturnAfterFi{^^A
4822 \Hy@RemovePercentCr #2\@nil
4823 }^^A
4824 \fi
4825 }^^A
4826 \endgroup
4827 \providecommand*\hyper@chars{%
4828 \let\#\hyper@hash
4829 \let\%\@percentchar
4830 \Hy@safe@activestrue
4831 }

4832 \def\hyperlink#1#2{%
4833 \hyper@@link{#1}{#2}%
4834 }

4835 \def\Hy@VerboseLinkStart#1#2{%
4836 \ifHy@verbose
4837 \begingroup
4838 \Hy@safe@activestrue
4839 \xdef\Hy@VerboseGlobalTemp{(#1) `#2'}%
4840 \Hy@Info{Reference \Hy@VerboseGlobalTemp}%
4841 \xdef\Hy@VerboseGlobalTemp{%
4842 \Hy@VerboseGlobalTemp, %
4843 line \the\inputlineno
4844 }%
4845 \endgroup
4846 \let\Hy@VerboseLinkInfo\Hy@VerboseGlobalTemp
4847 \@onelevel@sanitize\Hy@VerboseLinkInfo
4848 \fi
4849 }

4850 \def\Hy@VerboseLinkInfo{<VerboseLinkInfo>}
4851 \def\Hy@VerboseLinkStop{%
4852 \ifHy@verbose
4853 \begingroup
4854 \edef\x{\endgroup
4855 \write\m@ne{%
4856 Package `hyperref' Info: %
4857 End of reference \Hy@VerboseLinkInfo.%
4858 }%
4859 }%
4860 \x
4861 \fi
4862 }

4863 \def\Hy@VerboseAnchor#1{%
4864 \ifHy@verbose
4865 \begingroup
4866 \Hy@safe@activestrue
4867 \Hy@Info{Anchor ``HyperDestNameFilter{#1}''}%
4868 \endgroup
4869 \fi
4870 }

4871 \def\Hy@AllowHyphens{%

```

```

4872 \relax
4873 \ifhmode
4874   \penalty\@M
4875   \hskip\z@skip
4876 \fi
4877 }

4878 \DeclareRobustCommand*\href}[1][]{%
4879   \begingroup
4880   \setkeys{href}{#1}%
4881   \@ifnextchar\bgroup\Hy@href{\hyper@normalise\href@}%
4882 }
4883 \def\Hy@href#{%
4884   \hyper@normalise\href@
4885 }
4886 \begingroup
4887   \catcode`\$=6 %
4888   \catcode`\#=12 %
4889   \gdef\href@\$1{\expandafter\href@split$1##\}%
4890   \gdef\href@split$1##$3\$\$4{%
4891     \hyper@link{$1}{$2}{$4}%
4892   \endgroup
4893 }%
4894 \endgroup

```

Option ‘page’.

```

4895 \define@key{href}{page}{%
4896   \def\Hy@href@page{#1}%
4897 }
4898 \let\Hy@href@page\@empty
4899 \newcount\c@Hy@tempcnt
4900 \def\theHy@tempcnt{\the\c@Hy@tempcnt}
4901 \def\Hy@MakeRemoteAction{%
4902   \ifx\Hy@href@page\@empty
4903     \def\Hy@href@page{0}%
4904   \else
4905     \setcounter{Hy@tempcnt}{\Hy@href@page}%
4906     \ifnum\c@Hy@tempcnt<\@ne
4907       \Hy@Warning{%
4908         Invalid page number (\theHy@tempcnt)\MessageBreak
4909         for remote PDF file.\MessageBreak
4910         Using page 1%
4911       }%
4912     \def\Hy@href@page{0}%
4913   \else
4914     \global\advance\c@Hy@tempcnt\m@ne
4915     \edef\Hy@href@page{\theHy@tempcnt}%
4916   \fi
4917 \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.

```

4918 \ifx\Hy@href@nextactionraw\@empty
4919 \else
4920   \Hy@pdfnewwindowsettrue

```

```

4921 \Hy@pdfnewwindowtrue
4922 \fi
4923 }

```

Option ‘pdfremotestartview’.

```

4924 \define@key{href}{pdfremotestartview}{%
4925 \setkeys{Hyp}{pdfremotestartview={#1}}%
4926 }

```

Option ‘pdfnewwindow’.

```

4927 \let\KV@href@pdfnewwindow\KV@Hyp@pdfnewwindow
4928 \let\KV@href@pdfnewwindow@default\KV@Hyp@pdfnewwindow@default

```

Option ‘ismap’.

```

4929 \newif\ifHy@href@ismap
4930 \define@key{href}{ismap}[true]{%
4931 \@ifundefined{Hy@href@ismap#1}{%
4932 \Hy@Error{%
4933 Invalid value (#1) for key `ismap'.\MessageBreak
4934 Permitted values are `true' or `false'.\MessageBreak
4935 Ignoring `ismap'%
4936 }\@ehc
4937 }{%
4938 \csname Hy@href@ismap#1\endcsname
4939 }%
4940 }

```

Option ‘nextactionraw’.

```

4941 \let\Hy@href@nextactionraw\@empty
4942 \define@key{href}{nextactionraw}{%
4943 \edef\Hy@href@nextactionraw{#1}%
4944 \ifx\Hy@href@nextactionraw\@empty
4945 \else
4946 \Hy@Match\Hy@href@nextactionraw{%
4947 ~(\HyPat@ObjRef/|<<.*[/S| /].+>>|%
4948 \[( ?\HyPat@ObjRef/|<<.*[/S| /].+>>)+ ?)]$%
4949 }-}{%
4950 \Hy@Warning{Invalid value for `nextactionraw':\MessageBreak
4951 \Hy@href@nextactionraw\MessageBreak
4952 The action is discarded%
4953 }%
4954 }%
4955 \ifx\Hy@href@nextactionraw\@empty
4956 \else
4957 \edef\Hy@href@nextactionraw{/Next \Hy@href@nextactionraw}%
4958 \fi
4959 \fi
4960 }
4961 \def\HyPat@ObjRef/{.+}

```

Load package url.sty and save the meaning of the original \url in \HyOrg@url.

```

4962 \RequirePackage{url}
4963 \let\HyOrg@url\url
4964 \def\Hurl{\begingroup \Url}
4965 \DeclareRobustCommand*{\nolinkurl}{\hyper@normalise\nolinkurl@}
4966 \def\nolinkurl@#1{\Hurl{#1}}

```

```

4967 \DeclareRobustCommand*\url{\hyper@normalise\url@}
4968 \def\url@#1{\hyper@linkurl{\Hurl{#1}}{#1}}

4969 \DeclareRobustCommand*\hyperimage{\hyper@normalise\hyper@image}
4970 \providecommand\hyper@image[2]{#2}

4971 \def\hypertarget#1#2{%
4972   \ifHy@nesting
4973     \hyper@@anchor{#1}{#2}%
4974   \else
4975     \hyper@@anchor{#1}{\relax}#2%
4976   \fi
4977 }

```

`\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 \LaTeX label which can be used in a short form of `\hyperref` later, to avoid remembering the name and category.

```

4978 \DeclareRobustCommand*\hyperref{%-
4979   \@ifnextchar{\Hy@babelnormalise\label@hyperref}\@hyperref
4980 }
4981 \def\Hy@babelnormalise#1[#2]{%-
4982   \begingroup
4983     \Hy@safe@activestruer
4984     \let\protect\@unexpandable@protect
4985     \edef\Hy@tempa{%
4986       \endgroup
4987       \noexpand#1[#2]}%
4988   }%
4989   \Hy@tempa
4990 }
4991 \def\@hyperref{\hyper@normalise\@hyperref}
4992 \def\@hyperref#1#2#3%-
4993   \edef\ref@one{\ifx\#2\#1\else#2.\fi#3}%
4994   \expandafter\tryhyper@link\ref@one\{#1}%
4995 }
4996 \def\tryhyper@link#1\#2%-
4997   \hyper@@link{#2}{#1}%
4998 }

4999 \def\hyperdef{\@ifnextchar{\label@hyperdef}\@hyperdef}
5000 \def\@hyperdef#1#2#3{%-, category, name, text
5001   \ifx\#1\%
5002     \def\Hy@AnchorName{#2}%
5003   \else
5004     \def\Hy@AnchorName{#1.#2}%
5005   \fi
5006   \ifHy@nesting
5007     \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{#3}%
5008   \else
5009     \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{\relax}#3%
5010   \fi
5011 }

```

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.

```

5012 \let\hyperrefundefinedlink\@firstofone
5013 \def\label@hyperref[#1]{%
5014   \expandafter\label@@hyperref\cename r@#1\endcsname{#1}%
5015 }%
5016 \def\label@@hyperref#1#2#3{%
5017   \ifx#1\relax
5018     \protect\G@refundefinedtrue
5019     \@latex@warning{%
5020       Hyper reference `#2' on page \thepage \space undefined%
5021     }%
5022     \begingroup
5023     \hyperrefundefinedlink{#3}%
5024     \endgroup
5025   \else
5026     \hyper@@link{\expandafter\@fifthoffive#1}%
5027     {\expandafter\@fourthoffive#1\@empty\@empty}{#3}%
5028   \fi
5029 }
5030 \def\label@hyperdef[#1]#2#3#4{% label name, category, name,
5031                               % anchor text
5032   \@bsphack
5033   \ifx\#2\%
5034     \def\Hy@AnchorName{#3}%
5035   \else
5036     \def\Hy@AnchorName{#2.#3}%
5037   \fi
5038   \if@filesw
5039     \protected@write\@auxout{}{%
5040       \string\newlabel{#1}{\Hy@AnchorName}{#3}}%
5041   }%
5042   \fi
5043   \@esphack
5044   \ifHy@nesting
5045     \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{#4}%
5046   \else
5047     \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{\relax}#4%
5048   \fi
5049 }

```

`\hyperget` To create manually bookmarks one need the destination name. If there is a label, the name can be retrieved with commands from `refcount`. Such a destination name must take `\HyperDestNameFilter` into account

```
\HyperDestNameFilter{\getrefbykeydefault{label}{anchor}{Doc-Start}}
```

To make this easier, we define `\hyperget`

```

5050 \ExplSyntaxOn
5051 \cs_new:Npn \hyperget #1 #2
5052 {
5053   \use:c { __hyp_get_#1:n } { #2}

```



```

5054 }
5055
5056 \cs_new:Npn \__hyp_get_anchor:n #1
5057 {
5058   \HyperDestNameFilter
5059   {
5060     \cs_if_exist:cTF {r@#1}
5061     {
5062       \tl_item:cn {r@#1}{4}
5063     }
5064     {
5065       Doc-Start
5066     }
5067   }
5068 }
5069 \cs_new:Npn \__hyp_get_pageanchor:n #1
5070 {
5071   \HyperDestNameFilter
5072   {
5073     \cs_if_exist:cTF {r@#1}
5074     {
5075       page. \tl_item:cn {r@#1}{2}
5076     }
5077     {
5078       Doc-Start
5079     }
5080   }
5081 }
5082 \cs_new:Npn \__hyp_get_currentanchor:n #1
5083 {
5084   \HyperDestNameFilter { \@currentHref }
5085 }
5086 \ExplSyntaxOff

```

16.1 Link box support for XeTeX

```

5087 \newdimen\XeTeXLinkMargin
5088 \setlength{\XeTeXLinkMargin}{2pt}
5089 \ifxetex
5090   \font\XeTeXLink@font=pzdr at 1sp\relax
5091   \newcommand*{\XeTeXLink@space}{%
5092     \begingroup
5093       \XeTeXLink@font
5094       \@xxxii
5095     \endgroup
5096   }%
5097   \newcommand{\XeTeXLinkBox}[1]{%
5098     \begingroup
5099       \leavevmode
5100       \sbox\z@{#1}%
5101     \begingroup
5102       \dimen@=\dp\z@
5103       \advance\dimen@\XeTeXLinkMargin
5104       \setbox\tw@=\llap{%

```

```

5105     \hb@xt@\XeTeXLinkMargin{%
5106       \lower\dimen@\hbox{\XeTeXLink@space}%
5107       \hss
5108     }%
5109   }%
5110   \dp\tw@=\dp\z@
5111   \ht\tw@=\ht\z@
5112   \copy\tw@
5113 \endgroup
5114 \copy\z@
5115 \dimen@=\ht\z@
5116 \advance\dimen@\XeTeXLinkMargin
5117 \setbox\tw@=\rlap{%
5118   \hb@xt@\XeTeXLinkMargin{%
5119     \hss
5120     \raise\dimen@\hbox{\XeTeXLink@space}%
5121   }%
5122 }%
5123 \dp\tw@=\dp\z@
5124 \ht\tw@=\ht\z@
5125 \copy\tw@
5126 \endgroup
5127 }%
5128 \else
5129 \newcommand*\XeTeXLinkBox}[1]{%
5130   \begingroup
5131   \leavevmode
5132   \sbox\z@{#1}%
5133   \copy\z@
5134 \endgroup
5135 }%
5136 \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.

```

5137 \def\hyper@@link{\let\Hy@reserved@a\relax
5138   \@ifnextchar{\hyper@link@}{\hyper@link@[link]}%
5139 }
5140 % #1: type
5141 % #2: URL
5142 % #3: destination name
5143 % #4: text
5144 \def\hyper@link@[#1]#2#3#4{%
5145   \Hy@ifempty{#4}{% link text
5146     \Hy@Warning{Suppressing empty link}%
5147   }{%
5148     \begingroup
5149     \protected@edef\Hy@tempa{#2}%
5150     \edef\Hy@tempb{#3}%
5151     \ifx\Hy@tempa\@empty

```

```

5152 \ifx\Hy@tempb\@empty
5153 \Hy@Warning{Suppressing link with empty target}%
5154 \toks@{%
5155 \endgroup
5156 \@secondoftwo
5157 }%
5158 \else
5159 \toks@{%
5160 \endgroup
5161 \hyper@link{#1}%
5162 }%
5163 \fi
5164 \else
5165 \toks@{%
5166 \endgroup
5167 \expandafter\hyper@readexternallink#2\{\#1}%
5168 }%
5169 \fi
5170 \Hy@safe@activesfalse
5171 \toks@\expandafter{%
5172 \the\expandafter\toks@
5173 \expandafter{\Hy@tempb}{#4}%
5174 }%
5175 \the\toks@
5176 }%
5177 }

```

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.

```

5178 \def\hyper@readexternallink#1\#2#3#4{%
5179 \begingroup
5180 \let\relax
5181 \expandafter\endgroup
5182 \expandafter\@hyper@\@readexternallink#1\#{2}\#{3}\#{4}%
5183 }
5184 \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.

```

5185 \@hyper@readexternallink{#2}\#{3}\#{4}\#1::\{#1}%
5186 }

```

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

```
5187 \def\@pdftempwordfile{file}%
5188 \def\@pdftempwordrun{run}%
5189 \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:

```
5190 \ifx\#6\%
5191 \@hyper@linkfile file:#7\#{#3}{#2}{#7}%
5192 \else
5193 \ifx\#4\%
5194 \@hyper@linkfile file:#7\#{#3}{#2}{#7}%
5195 \else
```

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

```
5196 \def\@pdftempa{#4}%
5197 \ifx\@pdftempa\@pdftempwordfile
5198 \@hyper@linkfile#7\#{#3}{#2}{#7}%
5199 \else
```

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

```
5200 \ifx\@pdftempa\@pdftempwordrun
5201 \ifHy@pdfa
5202 \Hy@Error{%
5203 PDF/A: Launch action is prohibited%
5204 }\@ehc
5205 \begingroup
5206 \leavevmode
5207 #2%
5208 \endgroup
5209 \else
5210 \@hyper@launch#7\#{#3}{#2}%
5211 \fi
5212 \else
```

otherwise its a URL

```
5213 \hyper@linkurl{#3}{#7\ifx\#2\% \else\hyper@hash#2\fi}%
5214 \fi
5215 \fi
5216 \fi
5217 \fi
5218 }
```

By default, turn run: into file:

```
5219 \def\@hyper@launch run:#1\#2#3{% filename, anchor text, linkname
5220 \hyper@linkurl{#2}{%
5221 \Hy@linkfileprefix
5222 #1%
5223 \ifx\#3\%
5224 \else
5225 \hyper@hash
```

```

5226     #3%
5227     \fi
5228 }%
5229 }

```

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

```

5230 \def\@hyper@linkfile file:#1\|#2#3#4{%
5231     %file url,link string, name, original uri
5232     \filename@parse{#1}%
5233     \ifx\filename@ext\relax
5234         \edef\filename@ext{\XR@ext}%
5235     \fi
5236     \def\use@file{\filename@area\filename@base.\filename@ext}%
5237     \Hy@ifStringEndsWith\filename@ext\XR@ext{%
5238         \hyper@linkfile{#2}{\use@file}{#3}%
5239     }{%
5240         \ifx\@baseurl\@empty
5241             \hyper@linkurl{#2}{%
5242                 #4\ifx\|#3\\\else\hyper@hash#3\fi
5243             }%
5244         \else
5245             \hyper@linkurl{#2}{\use@file\ifx\|#3\\\else\hyper@hash#3\fi}%
5246         \fi
5247     }%
5248 }

5249 \def\Hy@ifStringEndsWith#1#2{%
5250     \begingroup
5251     \edef\x{#1}%
5252     \@onelevel@sanitize\x
5253     \edef\x{.\x}%
5254     \edef\y{#2}%
5255     \@onelevel@sanitize\y
5256     \edef\y{.\y}%
5257     \expandafter\def\expandafter\z\expandafter##\expandafter1\y##2\@nil{%
5258         \endgroup
5259         \ifx\relax##2\relax
5260             \expandafter\@secondoftwo
5261         \else
5262             \expandafter\@firstoftwo
5263         \fi
5264     }%
5265     \expandafter\expandafter\expandafter\z\expandafter\x\y\@nil
5266 }

5267 \def\Hy@StringLocalhost{localhost}
5268 \@onelevel@sanitize\Hy@StringLocalhost
5269 \def\Hy@CleanupFile#1{%
5270     \edef#1{#1}%
5271     \expandafter\Hy@@CleanupFile#1\hbox{//\hbox\@nil{#1}%
5272 }
5273 \def\Hy@@CleanupFile#1//#2/#3\hbox#4\@nil#5{%
5274     \begingroup
5275     \toks@{\endgroup}%
5276     \def\x{#1}%

```

```

5277 \ifx\x\@empty
5278 \def\x{#2}%
5279 \ifx\x\@empty
5280 \toks@{\endgroup\def#5{/#3}}%
5281 \else
5282 \@onelevel@sanitize\x
5283 \ifx\x\Hy@StringLocalhost
5284 \toks@{\endgroup\def#5{/#3}}%
5285 \fi
5286 \fi
5287 \fi
5288 \the\toks@
5289 }

```

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.

```

5290 \long\def\hyper@@anchor#1#2{\@hyper@@anchor#1\relax#2\relax}
5291 \long\def\@hyper@@anchor#1\relax#2#3\relax{%
5292 \ifx\#1\%
5293 #2\Hy@Warning{Ignoring empty anchor}%
5294 \else
5295 \def\anchor@spot{#2#3}%
5296 \let\put@me@back\@empty
5297 \ifx\relax#2\relax
5298 \else
5299 \ifHy@nesting
5300 \else
5301 \ifcat a\noexpand#2\relax
5302 \else
5303 \ifcat 0\noexpand#2 \relax
5304 \else
5305 % \typeout{Anchor start is not alphanumeric %
5306 % on input line\the\inputlineno%
5307 % }%
5308 \let\anchor@spot\@empty
5309 \def\put@me@back{#2#3}%
5310 \fi
5311 \fi
5312 \fi
5313 \fi
5314 \ifHy@activeanchor
5315 \anchor@spot
5316 \else
5317 \hyper@anchor{#1}%
5318 \fi
5319 \expandafter\put@me@back
5320 \fi
5321 \let\anchor@spot\@empty
5322 }

```

```
5323 \let\anchor@spot\@empty
```

18 Option ‘destlabel’

```
5324 \ifHy@destlabel
```

```
\hyper@newdestlabel
```

```
5325 \def\hyper@newdestlabel#1#2{%
5326   \begingroup
5327   \Hy@safe@activestruel
5328   \edef\x{\endgroup
5329     \noexpand\@newl@bel{HyDL}{#1}{#2}%
5330   }%
5331   \x
5332 }%
```

```
\hyper@destlabel@hook
```

```
5333 \providecommand*\hyper@destlabel@hook{}
```

```
\Hy@DestRename
```

```
5334 \newcommand*\Hy@DestRename[2]{%
5335   \@ifundefined{HyDL!#1}{%
5336     \begingroup
5337     \Hy@safe@activestruel
5338     \edef\dest@name{#1}%
5339     \edef\label@name{#2}%
5340     \hyper@destlabel@hook
5341     \Hy@IsNotEmpty{dest@name}{%
5342       \Hy@IsNotEmpty{label@name}{%
5343         \global\expandafter
5344         \let\csname HyDL!#1\endcsname\@empty
5345         \if@filesw
5346           \protected@write\@auxout{ }{%
5347             \string\hyper@newdestlabel
5348             {#1}%
5349             {\label@name}%
5350           }%
5351         \fi
5352       }%
5353     }%
5354   \endgroup
5355 }{ }%
5356 }%
```

```
\HyperDestRename
```

```
5357 \newcommand*\HyperDestRename[2]{%
5358   \AtBeginDocument{%
5359     \Hy@DestRename{#1}{#2}%
5360   }%
5361 }%
5362 \AtBeginDocument{%
5363   \let\HyperDestRename\Hy@DestRename
5364 }%
```

\Hy@IsNotEmpty

```
5365 \def\Hy@IsNotEmpty#1{%
5366   \@ifundefined{#1}\@gobble{%
5367     \expandafter\ifx\csname#1\endcsname\@empty
5368     \expandafter\@gobble
5369   \else
5370     \expandafter\@firstofone
5371   \fi
5372 }%
5373 }%

5374 \Hy@GlobalAppendToMacro\label@hook{%
5375   \HyperDestRename\@currentHref\label@name
5376 }%
```

\HyperDestLabelReplace

```
5377 \def\HyperDestLabelReplace#1{%
5378   \@ifundefined{HyDL@#1}{%
5379     #1%
5380   }{%
5381     \csname HyDL@#1\endcsname
5382   }%
5383 }%
```

\HyperDestNameFilter

```
5384 \let\HyperDestNameFilter\HyperDestLabelReplace
5385 \else
```

\hyper@newdestlabel

```
5386 \let\hyper@newdestlabel\@gobbletwo
```

\HyperDestLabelReplace

```
5387 \let\HyperDestLabelReplace\@firstofone
```

\HyperDestRename

```
5388 \let\HyperDestRename\@gobbletwo
5389 \fi
5390 \Hy@DisableOption{destlabel}
```

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

```
5391 \AddToHook{include/before}
5392 {\immediate\write\@partaux{\string\providecommand\string\hyper@newdest-
5393   label[2]{}}
5393 \AddToHook{begindocument}
5394 {\immediate\write\@mainaux{\string\providecommand\string\hyper@newdest-
5395   label[2]{}}}
```


19 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.

19.1 Field flags

The field flags are organized in a bit set.

```
5395 \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
5396 \def\HyField@NewFlag#1#2{%
5397   \lowercase{\HyField@NewOption{#2}}%
5398   \lowercase{\HyField@NewBitsetFlag{#2}}{#2}{#1}%
5399 }
```

```
\HyField@NewFlagOnly
5400 \def\HyField@NewFlagOnly#1#2{%
5401   \lowercase{\HyField@NewBitsetFlag{#2}}{#2}{#1}%
5402 }
```

```
\HyField@NewOption #1: option name
5403 \def\HyField@NewOption#1{%
5404   \expandafter\newif\csname ifFld@#1\endcsname
5405   \define@key{Field}{#1}[true]{%
5406     \lowercase{\Field@boolkey{##1}}{#1}%
5407   }%
5408 }
```

```
\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
5409 \def\HyField@NewBitsetFlag#1#2#3#4{%
5410   \begingroup
5411     \count@=#4\relax
5412     \advance\count@\m@ne
5413     \def\x###1{%
5414       \endgroup
5415       \expandafter\def\csname HyField@#3@#1\endcsname{##1}%
5416       \expandafter\ifx\csname HyField@#3@##1\endcsname\relax
```

```

5417     \expandafter\edef\csname HyField@#3@##1\endcsname{%
5418         (\number#4) #2%
5419     }%
5420 \else
5421     \expandafter\edef\csname HyField@#3@##1\endcsname{%
5422         \csname HyField@#3@##1\endcsname
5423         /#2%
5424     }%
5425     \fi
5426 }%
5427 \expandafter\x\expandafter{\the\count@}%
5428 }

```

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

```

5429 \def\HyField@UseFlag#1#2{%
5430     \lowercase{\HyField@@UseFlag{#2}}{#1}%
5431 }

```

\HyField@@UseFlag

```

5432 \def\HyField@@UseFlag#1#2{%
5433     \bitsetSetValue{HyField@#2}{%
5434         \csname HyField@#2@#1\endcsname
5435     }{%
5436         \csname ifFld@#1\endcsname 1\else 0\fi
5437     }%
5438 }

```

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

```

5439 \def\HyField@SetFlag#1#2{%
5440     \lowercase{\HyField@@SetFlag{#2}}{#1}%
5441 }

```

\HyField@@SetFlag

```

5442 \def\HyField@@SetFlag#1#2{%
5443     \bitsetSetValue{HyField@#2}{%
5444         \csname HyField@#2@#1\endcsname
5445     }{1}%
5446 }

```

\HyField@PrintFlags

```

5447 \def\HyField@PrintFlags#1#2{%
5448     \ifHy@verbose
5449     \begingroup
5450         \let\Hy@temp\@empty
5451         \let\MessageBreak\relax
5452         \expandafter\@for\expandafter\x\expandafter:\expandafter=%
5453         \bitsetGetSetBitList{HyField@#1}\do{%
5454             \edef\Hy@temp{%
5455                 \Hy@temp
5456                 \csname HyField@#1@\x\endcsname\MessageBreak
5457             }%
5458         }%
5459     \edef\x{\endgroup

```

```

5460 \noexpand\Hy@Info{%
5461   Field flags: %
5462   \expandafter\ifx\@car#1\@nil S\else/\fi
5463   #1 %
5464   \bitsetGetDec{HyField@#1} %
5465   (0x\bitsetGetHex{HyField@#1}{32})\MessageBreak
5466   \Hy@temp
5467   for #2%
5468   }%
5469 } \x
5470 \fi
5471 }

```

19.1.1 Declarations of field flags

“Table 8.70 Field flags common to all field types”

```

5472 \HyField@NewFlag{Ff}{ReadOnly}{1}
5473 \HyField@NewFlag{Ff}{Required}{2}
5474 \HyField@NewFlag{Ff}{NoExport}{3}

```

“Table 8.75 Field flags specific to button fields”

```

5475 \HyField@NewFlag{Ff}{NoToggleToOff}{15}
5476 \HyField@NewFlag{Ff}{Radio}{16}
5477 \HyField@NewFlag{Ff}{Pushbutton}{17}
5478 \HyField@NewFlag{Ff}{RadiosInUnison}{26}

```

“Table 8.77 Field flags specific to text fields”

```

5479 \HyField@NewFlag{Ff}{Multiline}{13}
5480 \HyField@NewFlag{Ff}{Password}{14}
5481 \HyField@NewFlag{Ff}{FileSelect}{21}% PDF 1.4
5482 \HyField@NewFlag{Ff}{DoNotSpellCheck}{23}% PDF 1.4
5483 \HyField@NewFlag{Ff}{DoNotScroll}{24}% PDF 1.4
5484 \HyField@NewFlag{Ff}{Comb}{25}% PDF 1.4
5485 \HyField@NewFlag{Ff}{RichText}{26}% PDF 1.5

```

“Table 8.79 field flags specific to choice fields”

```

5486 \HyField@NewFlag{Ff}{Combo}{18}
5487 \HyField@NewFlag{Ff}{Edit}{19}
5488 \HyField@NewFlag{Ff}{Sort}{20}
5489 \HyField@NewFlag{Ff}{MultiSelect}{22}% PDF 1.4
5490 % \HyField@NewFlag{Ff}{DoNotSpellCheck}{23}% PDF 1.4
5491 \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.

```

5492 \newif\ifFld@popdown
5493 \define@key{Field}{popdown}{true}{%
5494   \lowercase{\Field@boolkey{#1}}{popdown}%
5495 }

```

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.

```

5496 \HyField@NewFlag{F}{Invisible}{1}
5497 \HyField@NewFlag{F}{Hidden}{2}% PDF 1.2
5498 \HyField@NewFlag{F}{Print}{3}% PDF 1.2
5499 \HyField@NewFlag{F}{NoZoom}{4}% PDF 1.2
5500 \HyField@NewFlag{F}{NoRotate}{5}% PDF 1.3
5501 \HyField@NewFlag{F}{NoView}{6}% PDF 1.3
5502 \HyField@NewFlag{F}{Locked}{8}% PDF 1.4
5503 \HyField@NewFlag{F}{ToggleNoView}{9}% PDF 1.5
5504 \HyField@NewFlag{F}{LockedContents}{10}% PDF 1.7
5505 \ifHy@pdfa
5506 \def\HyField@PDFAFIWarning#1#2{%
5507   \Hy@Warning{%
5508     PDF/A: Annotation flag `#1' must\MessageBreak
5509     be set to `#2'%
5510   }%
5511 }%
5512 \Fld@invisiblefalse
5513 \def\Fld@invisibletrue{%
5514   \HyField@PDFAFIWarning{invisible}{false}%
5515 }%
5516 \Fld@hiddenfalse
5517 \def\Fld@hiddentrue{%
5518   \HyField@PDFAFIWarning{hidden}{false}%
5519 }%
5520 \Fld@printtrue
5521 \def\Fld@printfalse{%
5522   \HyField@PDFAFIWarning{print}{true}%
5523 }%
5524 \Fld@nozoomtrue
5525 \def\Fld@nozoomfalse{%
5526   \HyField@PDFAFIWarning{nozoom}{true}%
5527 }%
5528 \Fld@norotatetrue
5529 \def\Fld@norotatefalse{%
5530   \HyField@PDFAFIWarning{norotate}{true}%
5531 }%
5532 \Fld@noviewfalse
5533 \def\Fld@noviewtrue{%
5534   \HyField@PDFAFIWarning{noview}{false}%
5535 }%
5536 \fi

```

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

```

5537 \HyField@NewFlag{Submit}{IncludeNoValueFields}{2}
5538 \HyField@NewFlagOnly{Submit}{ExportFormat}{3}
5539 \HyField@NewFlag{Submit}{GetMethod}{4}
5540 \HyField@NewFlag{Submit}{SubmitCoordinates}{5}
5541 \HyField@NewFlagOnly{Submit}{XFDF}{6}
5542 \HyField@NewFlag{Submit}{IncludeAppendSaves}{7}
5543 \HyField@NewFlag{Submit}{IncludeAnnotations}{8}
5544 \HyField@NewFlagOnly{Submit}{SubmitPDF}{9}

```

```

5545 \HyField@NewFlag{Submit}{CanonicalFormat}{10}
5546 \HyField@NewFlag{Submit}{ExclNonUserAnnots}{11}
5547 \HyField@NewFlag{Submit}{ExclFKKey}{12}
5548 \HyField@NewFlag{Submit}{EmbedForm}{14}

5549 \define@key{Field}{export}{%
5550   \lowercase{\def\Hy@temp{#1}}%
5551   \@ifundefined{Fld@export@\Hy@temp}{%
5552     \@onelevel@sanitize\Hy@temp
5553     \Hy@Error{%
5554       Unknown export format `'\Hy@temp'.\MessageBreak
5555       Known formats are `FDF', `HTML', `XFDF', and `PDF'%
5556     } \@ehc
5557   }{%
5558     \let\Fld@export\Hy@temp
5559   }%
5560 }
5561 \def\Fld@export{fdf}
5562 \@namedef{Fld@export@fdf}{0}%
5563 \@namedef{Fld@export@html}{1}%
5564 \@namedef{Fld@export@xfdf}{2}%
5565 \@namedef{Fld@export@pdf}{3}%

```

19.1.2 Set submit flags

\HyField@FlagsSubmit

```

5566 \def\HyField@FlagsSubmit{%
5567   \bitsetReset{HyField@Submit}%
5568   \ifcase\@nameuse{Fld@export@\Fld@export} %
5569     % FDF
5570     \HyField@UseFlag{Submit}{IncludeNoValueFields}%
5571     \HyField@UseFlag{Submit}{SubmitCoordinates}%
5572     \HyField@UseFlag{Submit}{IncludeAppendSaves}%
5573     \HyField@UseFlag{Submit}{IncludeAnnotations}%
5574     \HyField@UseFlag{Submit}{CanonicalFormat}%
5575     \HyField@UseFlag{Submit}{ExclNonUserAnnots}%
5576     \HyField@UseFlag{Submit}{ExclFKKey}%
5577     \HyField@UseFlag{Submit}{EmbedForm}%
5578   \or % HTML
5579     \HyField@SetFlag{Submit}{ExportFormat}%
5580     \HyField@UseFlag{Submit}{IncludeNoValueFields}%
5581     \HyField@UseFlag{Submit}{GetMethod}%
5582     \HyField@UseFlag{Submit}{SubmitCoordinates}%
5583     \HyField@UseFlag{Submit}{CanonicalFormat}%
5584   \or % XFDF
5585     \HyField@SetFlag{Submit}{XFDF}%
5586     \HyField@UseFlag{Submit}{IncludeNoValueFields}%
5587     \HyField@UseFlag{Submit}{SubmitCoordinates}%
5588     \HyField@UseFlag{Submit}{CanonicalFormat}%
5589   \or % PDF
5590     \HyField@SetFlag{Submit}{SubmitPDF}%
5591     \HyField@UseFlag{Submit}{GetMethod}%
5592   \fi
5593   \HyField@PrintFlags{Submit}{submit button field}%

```

```

5594 \bitsetIsEmpty{HyField@Submit}{%
5595   \let\Fld@submitflags\@empty
5596 }{%
5597   \edef\Fld@submitflags{/Flags \bitsetGetDec{HyField@Submit}}%
5598 }%
5599 }

```

19.1.3 Set annot flags in fields

\HyField@FlagsAnnot

```

5600 \def\HyField@FlagsAnnot#1{%
5601   \bitsetReset{HyField@F}%
5602   \HyField@UseFlag{F}{Invisible}%
5603   \HyField@UseFlag{F}{Hidden}%
5604   \HyField@UseFlag{F}{Print}%
5605   \HyField@UseFlag{F}{NoZoom}%
5606   \HyField@UseFlag{F}{NoRotate}%
5607   \HyField@UseFlag{F}{NoView}%
5608   \HyField@UseFlag{F}{Locked}%
5609   \HyField@UseFlag{F}{ToggleNoView}%
5610   \HyField@UseFlag{F}{LockedContents}%
5611   \HyField@PrintFlags{F}{#1}%
5612   \bitsetIsEmpty{HyField@F}{%
5613     \let\Fld@annotflags\@empty
5614   }{%
5615     \edef\Fld@annotflags{/F \bitsetGetDec{HyField@F}}%
5616   }%
5617 }

```

19.1.4 Pushbutton field

\HyField@FlagsPushButton

```

5618 \def\HyField@FlagsPushButton{%
5619   \HyField@FlagsAnnot{push button field}%
5620   \bitsetReset{HyField@Ff}%
5621   \HyField@UseFlag{Ff}{ReadOnly}%
5622   \HyField@UseFlag{Ff}{Required}%
5623   \HyField@UseFlag{Ff}{NoExport}%
5624   \HyField@SetFlag{Ff}{PushButton}%
5625   \HyField@PrintFlags{Ff}{push button field}%
5626   \bitsetIsEmpty{HyField@Ff}{%
5627     \let\Fld@flags\@empty
5628   }{%
5629     \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
5630   }%
5631 }

```

19.1.5 Check box field

\HyField@FlagsCheckBox

```

5632 \def\HyField@FlagsCheckBox{%
5633   \HyField@FlagsAnnot{check box field}%
5634   \bitsetReset{HyField@Ff}%

```

```

5635 \HyField@UseFlag{Ff}{ReadOnly}%
5636 \HyField@UseFlag{Ff}{Required}%
5637 \HyField@UseFlag{Ff}{NoExport}%
5638 \HyField@PrintFlags{Ff}{checkbox field}%
5639 \bitsetIsEmpty{HyField@Ff}{%
5640   \let\Fld@flags\@empty
5641 }{%
5642   \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
5643 }%
5644 }

```

19.1.6 Radio button field

\HyField@FlagsRadioButton

```

5645 \def\HyField@FlagsRadioButton{%
5646   \HyField@FlagsAnnot{radio button field}%
5647   \bitsetReset{HyField@Ff}%
5648   \HyField@UseFlag{Ff}{ReadOnly}%
5649   \HyField@UseFlag{Ff}{Required}%
5650   \HyField@UseFlag{Ff}{NoExport}%
5651   \HyField@UseFlag{Ff}{NoToggleToOff}%
5652   \HyField@SetFlag{Ff}{Radio}%
5653   \HyField@UseFlag{Ff}{RadiosInUnison}%
5654   \HyField@PrintFlags{Ff}{radio button field}%
5655   \bitsetIsEmpty{HyField@Ff}{%
5656     \let\Fld@flags\@empty
5657   }{%
5658     \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
5659   }%
5660 }

```

19.1.7 Text fields

\HyField@FlagsText

```

5661 \def\HyField@FlagsText{%
5662   \HyField@FlagsAnnot{text field}%
5663   \bitsetReset{HyField@Ff}%
5664   \HyField@UseFlag{Ff}{ReadOnly}%
5665   \HyField@UseFlag{Ff}{Required}%
5666   \HyField@UseFlag{Ff}{NoExport}%
5667   \HyField@UseFlag{Ff}{Multiline}%
5668   \HyField@UseFlag{Ff}{Password}%
5669   \HyField@UseFlag{Ff}{FileSelect}%
5670   \HyField@UseFlag{Ff}{DoNotSpellCheck}%
5671   \HyField@UseFlag{Ff}{DoNotScroll}%
5672   \ifFld@comb
5673     \ifcase0\ifFld@multiline
5674       \else\ifFld@password
5675       \else\ifFld@fileselect
5676       \else 1\fi\fi\fi\relax
5677   \Hy@Error{%
5678     Field option `comb' cannot be used together with\MessageBreak
5679     `multiline', `password', or `fileselect'%

```

```

5680     }\@ehc
5681     \else
5682     \HyField@UseFlag{Ff}{Comb}%
5683     \fi
5684 \fi
5685 \HyField@UseFlag{Ff}{RichText}%
5686 \HyField@PrintFlags{Ff}{text field}%
5687 \bitsetIsEmpty{HyField@Ff}{%
5688   \let\Fld@flags\@empty
5689 }{%
5690   \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
5691 }%
5692 }

```

19.1.8 Choice fields

\HyField@FlagsChoice

```

5693 \def\HyField@FlagsChoice{%
5694   \HyField@FlagsAnnot{choice field}%
5695   \bitsetReset{HyField@Ff}%
5696   \HyField@UseFlag{Ff}{ReadOnly}%
5697   \HyField@UseFlag{Ff}{Required}%
5698   \HyField@UseFlag{Ff}{NoExport}%
5699   \HyField@UseFlag{Ff}{Combo}%
5700   \ifFld@combo
5701     \HyField@UseFlag{Ff}{Edit}%
5702   \fi
5703   \HyField@UseFlag{Ff}{Sort}%
5704   \HyField@UseFlag{Ff}{MultiSelect}%
5705   \ifFld@combo
5706     \ifFld@edit
5707       \HyField@UseFlag{Ff}{DoNotSpellCheck}%
5708     \fi
5709   \fi
5710   \HyField@UseFlag{Ff}{CommitOnSelChange}%
5711   \HyField@PrintFlags{Ff}{choice field}%
5712   \bitsetIsEmpty{HyField@Ff}{%
5713     \let\Fld@flags\@empty
5714   }{%
5715     \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
5716   }%
5717 }

```

19.2 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.

```

5718 \def\HyField@PDFChoices#1{%
5719   \begingroup
5720   \global\let\Fld@choices\@empty
5721   \let\HyTmp@optlist\@empty

```



```

5722 \let\HyTmp@optitem\relax
5723 \count@=0 %
5724 \kv@parse{#1}{%
5725   \Hy@pdfstringdef\kv@key\kv@key
5726   \ifx\kv@value\relax
5727   \ifnum\Hy@pdf@majorminor@version<103 % implementation note 122, PDF spec 1.7
5728     \xdef\Fld@choices{\Fld@choices(\kv@key)(\kv@key)}%
5729   \else
5730     \xdef\Fld@choices{\Fld@choices(\kv@key)}%
5731   \fi
5732 \else
5733   \Hy@pdfstringdef\kv@value\kv@value
5734   \xdef\Fld@choices{\Fld@choices(\kv@value)(\kv@key)}%
5735 \fi
5736 \edef\HyTmp@optlist{%
5737   \HyTmp@optlist
5738   \HyTmp@optitem{\the\count@}{\kv@key}0%
5739 }%
5740 \advance\count@ by 1 %
5741 \@gobbletwo
5742 }%
5743 \xdef\Fld@choices{/Opt[\Fld@choices]}%
5744 \ifFld@multiselect
5745   \HyField@@PDFChoices{DV}\Fld@default
5746   \HyField@@PDFChoices{V}\Fld@value
5747 \else
5748   \ifx\Fld@default\relax
5749   \else
5750     \xdef\Fld@choices{\Fld@choices/DV(\Fld@default)}%
5751   \fi
5752   \ifx\Fld@value\relax
5753   \else
5754     \xdef\Fld@choices{\Fld@choices/V(\Fld@value)}%
5755   \fi
5756 \fi
5757 \endgroup
5758 }

```

\HyField@@PDFChoices

```

5759 \def\HyField@@PDFChoices#1#2{%
5760   \ifx#2\relax
5761   \else
5762     \count@=0 %
5763     \def\HyTmp@optitem##1##2##3{%
5764       \def\HyTmp@key{##2}%
5765       \ifx\HyTmp@key\Hy@gttemp
5766         \expandafter\def\expandafter\HyTmp@optlist\expandafter{%
5767           \HyTmp@optlist
5768           \HyTmp@optitem{##1}{##2}1%
5769         }%
5770       \let\HyTmp@found=Y%
5771     \else
5772       \expandafter\def\expandafter\HyTmp@optlist\expandafter{%
5773         \HyTmp@optlist

```

```

5774     \HyTmp@optitem{##1}{##2}##3%
5775     }%
5776     \fi
5777 }%
5778 \expandafter\comma@parse\expandafter{#2}{%
5779   \pdfstringdef\Hy@gtemp\comma@entry
5780   \let\HyTmp@found=N %
5781   \expandafter\let\expandafter\HyTmp@optlist\expandafter\@empty
5782   \HyTmp@optlist
5783   \ifx\HyTmp@found Y%
5784     \advance\count@ by 1 %
5785   \else
5786     \@onelevel@sanitize\comma@entry
5787     \PackageWarning{hyperref}{%
5788       \string\ChoiceBox: Ignoring value `\'comma@entry',%
5789       \MessageBreak
5790       it cannot be found in the choices%
5791     }%
5792     \fi
5793     \@gobble
5794 }%
5795 \def\HyTmp@optitem##1##2##3{%
5796   \ifnum##3=1 %
5797     (##2)%
5798   \fi
5799 }%
5800 \ifcase\count@
5801 \or
5802   \xdef\Fld@choices{\Fld@choices/#1\HyTmp@optlist}%
5803 \else
5804   \xdef\Fld@choices{\Fld@choices/#1[\HyTmp@optlist]}%
5805   \ifx#1V%
5806     \def\HyTmp@optitem##1##2##3{%
5807       \ifnum##3=1 %
5808         \@firstofone{ ##1}%
5809       \fi
5810     }%
5811     \edef\HyTmp@optlist{\HyTmp@optlist}%
5812     \xdef\Fld@choices{%
5813       \Fld@choices
5814       /I[\expandafter\@firstofone\HyTmp@optlist]}%
5815     }%
5816   \fi
5817 \fi
5818 \fi
5819 }

```

19.3 Forms

\HyField@SetKeys

```

5820 \def\HyField@SetKeys{%
5821   \kvsetkeys{Field}%
5822 }

```

```

5823 \newif\ifFld@checked
5824 \newif\ifFld@disabled
5825 \Fld@checkedfalse
5826 \Fld@disabledfalse
5827 \newcount\Fld@menulength
5828 \newdimen\Field@Width
5829 \newdimen\Fld@charsize
5830 \Fld@charsize=10\p@
5831 \def\Fld@maxlen{0}
5832 \def\Fld@align{0}
5833 \def\Fld@color{0 0 0 rg}
5834 \def\Fld@bcolor{1 1 1}
5835 \def\Fld@bordercolor{1 0 0}
5836 \def\Fld@bordersep{1\p@}
5837 \def\Fld@borderwidth{1}
5838 \def\Fld@borderstyle{S}
5839 \def\Fld@cbsymbol{4}
5840 \def\Fld@radiosymbol{H}
5841 \def\Fld@rotation{0}
5842 \def\Form{\@ifnextchar{\@Form}{\@Form[]}}
5843 \def\endForm{\@endForm}
5844 \newif\ifForm@html
5845 \Form@htmlfalse
5846 \def\Form@boolkey#1#2{%
5847   \csname Form@#2\ifx\relax#1\relax true\else#1\fi\endcsname
5848 }
5849 \define@key{Form}{action}{%
5850   \hyper@normalise\Hy@DefFormAction{#1}%
5851 }
5852 \def\Hy@DefFormAction{\def\Form@action}
5853 \def\enc@@html{html}
5854 \define@key{Form}{encoding}{%
5855   \def\Hy@tempa{#1}%
5856   \ifx\Hy@tempa\enc@@html
5857     \Form@htmltrue
5858     \def\Fld@export{html}%
5859   \else
5860     \Hy@Warning{%
5861       Form `encoding' key with \MessageBreak
5862       unknown value `#1'%
5863     }%
5864     \Form@htmlfalse
5865   \fi
5866 }
5867 \define@key{Form}{method}{%
5868   \lowercase{\def\Hy@temp{#1}}%
5869   \@ifundefined{Form@method@\Hy@temp}{%
5870     \@onelevel@sanitize\Hy@temp
5871     \Hy@Error{%
5872       Unknown method ``\Hy@temp'.\MessageBreak
5873       Known values are `post' and `get'%
5874     } \@ehc
5875   }{%
5876     \let\Form@method\Hy@temp

```

```

5877 \ifcase\@nameuse{Form@method@\Hy@temp} %
5878 \Fld@getmethodfalse
5879 \else
5880 \Fld@getmethodtrue
5881 \fi
5882 }%
5883 }
5884 \def\Fld@method{}
5885 \@namedef{Form@method@post}{0}
5886 \@namedef{Form@method@get}{1}

5887 \newif\ifHyField@NeedAppearances
5888 \def\HyField@NeedAppearancesfalse{%
5889 \global\let\ifHyField@NeedAppearances\iffalse
5890 }
5891 \def\HyField@NeedAppearancetrue{%
5892 \global\let\ifHyField@NeedAppearances\iftrue
5893 }
5894 \HyField@NeedAppearancetrue
5895 \define@key{Form}{NeedAppearances}[true]{%
5896 \edef\Hy@tempa{#1}%
5897 \ifx\Hy@tempa\Hy@true
5898 \HyField@NeedAppearancetrue
5899 \else
5900 \ifx\Hy@tempa\Hy@false
5901 \HyField@NeedAppearancesfalse
5902 \else
5903 \Hy@Error{%
5904 Unexpected value ``\Hy@tempa'\MessageBreak
5905 of option `NeedAppearances' instead of\MessageBreak
5906 `true' or `false'%
5907 }\@ehc
5908 \fi
5909 \fi
5910 }
5911 \def\Fld@boolkey#1#2{%
5912 \csname Fld@#2\ifx\relax#1\relax true\else#1\fi\endcsname
5913 }
5914 \ifHy@text
5915 \newtoks\Fld@toks
5916 \Fld@toks={ }%
5917 \def\Fld@addtoks#1#2{%
5918 \edef\@processme{\Fld@toks{\the\Fld@toks\space #1="#2"}}%
5919 \@processme
5920 }%
5921 \else
5922 \def\Hy@WarnHTMLFieldOption#1{%
5923 \Hy@Warning{%
5924 HTML field option `#1'\MessageBreak
5925 is ignored%
5926 }%
5927 }%
5928 \fi
5929 \def\Fld@checkequals#1=#2=#3\\{%
5930 \def\@currDisplay{#1}%

```

```

5931 \ifx\#2\%
5932   \def\@currValue{#1}%
5933 \else
5934   \def\@currValue{#2}%
5935 \fi
5936 \expandafter\Hy@pdfstringdef\expandafter\@currValue\expandafter{\@currValue}%
5937 }
5938 \define@key{Field}{loc}{%
5939   \def\Fld@loc{#1}%
5940 }
5941 \define@key{Field}{checked}[true]{%
5942   \lowercase{\Field@boolkey{#1}}{checked}%
5943 }
5944 \define@key{Field}{disabled}[true]{%
5945   \lowercase{\Field@boolkey{#1}}{disabled}%
5946 }
5947 \ifHy@texht
5948   \define@key{Field}{accesskey}{%
5949     \Field@addtoks{accesskey}{#1}%
5950   }%
5951   \define@key{Field}{tabkey}{%
5952     \Field@addtoks{tabkey}{#1}%
5953   }%
5954 \else
5955   \define@key{Field}{accesskey}{%
5956     \Hy@WarnHTMLFieldOption{accesskey}%
5957   }%
5958   \define@key{Field}{tabkey}{%
5959     \Hy@WarnHTMLFieldOption{tabkey}%
5960   }%
5961 \fi
5962 \define@key{Field}{name}{%
5963   \def\Fld@name{#1}%
5964 }
5965 \let\Fld@altname\relax
5966 \define@key{Field}{altname}{%
5967   \def\Fld@altname{#1}%
5968 }
5969 \let\Fld@mappingname\relax
5970 \define@key{Field}{mappingname}{%
5971   \def\Fld@mappingname{#1}%
5972 }
5973 \define@key{Field}{width}{%
5974   \def\Fld@width{#1}%
5975   \Field@Width#1\setbox0=\hbox{m}%
5976 }
5977 \define@key{Field}{maxlen}{%
5978   \def\Fld@maxlen{#1}%
5979 }
5980 \define@key{Field}{menulength}{%
5981   \Fld@menulength=#1\relax
5982 }
5983 \define@key{Field}{height}{%
5984   \def\Fld@height{#1}%

```

```

5985 }
5986 \define@key{Field}{charsize}{%
5987   \setlength{\Fld@charsize}{#1}%
5988 }
5989 \define@key{Field}{borderwidth}{%
5990   \Hy@defaultbp\Fld@borderwidth{#1}%
5991 }
5992 \def\Hy@defaultbp#1#2{%
5993   \begingroup
5994   \afterassignment\Hy@defaultbpAux
5995   \dimen@=#2bp\relax{#1}{#2}%
5996 }
5997 \def\Hy@defaultbpAux#1\relax#2#3{%
5998   \ifx!#1!%
5999     \endgroup
6000     \def#2{#3}%
6001   \else
6002     \edef\x{\endgroup
6003       \def\noexpand#2{%
6004         \strip@pt\dimexpr\dimen@*800/803\relax
6005       }%
6006     }\x
6007   \fi
6008 }%
6009 \define@key{Field}{borderstyle}{%
6010   \let\Hy@temp\Fld@borderstyle
6011   \def\Fld@borderstyle{#1}%
6012   \Hy@Match\Fld@borderstyle{}{%
6013     ~[SDBIU]$%
6014   }{}{%
6015     \Hy@Warning{%
6016       Invalid value `@\pdfborderstyle'\MessageBreak
6017       for option `pdfborderstyle'. Valid values:\MessageBreak
6018       \space\space S (Solid), D (Dashed), B (Beveled),\MessageBreak
6019       \space\space I (Inset), U (Underline)\MessageBreak
6020       Option setting is ignored%
6021     }%
6022     \let\Fld@borderstyle\Hy@temp
6023   }%
6024 }
6025 \define@key{Field}{bordersep}{%
6026   \def\Fld@bordersep{#1}%
6027 }
6028 \define@key{Field}{default}{%
6029   \Hy@pdfstringdef\Fld@default{#1}%
6030 }
6031 \define@key{Field}{align}{%
6032   \def\Fld@align{#1}%
6033 }
6034 \define@key{Field}{value}{%
6035   \Hy@pdfstringdef\Fld@value{#1}%
6036 }
6037 \define@key{Field}{checkboxsymbol}{%
6038   \Fld@DingDef\Fld@cbsymbol{#1}%

```

```

6039 }
6040 \define@key{Field}{radiosymbol}{%
6041 \Fld@DingDef\Fld@radiosymbol{#1}%
6042 }
6043 \def\Fld@DingDef#1#2{%
6044 \let\Fld@temp\@empty
6045 \Fld@@@DingDef#2\ding{ }\@nil
6046 \let#1\Fld@temp
6047 }
6048 \def\Fld@@@DingDef#1\ding#2#3\@nil{%
6049 \expandafter\def\expandafter\Fld@temp\expandafter{%
6050 \Fld@temp
6051 #1%
6052 }%
6053 \ifx\#3\%
6054 \expandafter\@gobble
6055 \else
6056 \begingroup
6057 \lccode`0=#2\relax
6058 \lowercase{\endgroup
6059 \expandafter\def\expandafter\Fld@temp\expandafter{%
6060 \Fld@temp
6061 0%
6062 }%
6063 }%
6064 \expandafter\@firstofone
6065 \fi
6066 {%
6067 \Fld@@@DingDef#3\@nil
6068 }%
6069 }

6070 \define@key{Field}{rotation}{%
6071 \def\Fld@rotation{#1}%
6072 }

6073 \define@key{Field}{backgroundcolor}{%
6074 \HyColor@FieldBColor{#1}\Fld@bcolor{hyperref}{backgroundcolor}%
6075 }
6076 \define@key{Field}{bordercolor}{%
6077 \HyColor@FieldBColor{#1}\Fld@bordercolor{hyperref}{bordercolor}%
6078 }
6079 \define@key{Field}{color}{%
6080 \HyColor@FieldColor{#1}\Fld@color{hyperref}{color}%
6081 }

6082 \let\Fld@onclick@code\@empty
6083 \let\Fld@format@code\@empty
6084 \let\Fld@validate@code\@empty
6085 \let\Fld@calculate@code\@empty
6086 \let\Fld@keystroke@code\@empty
6087 \let\Fld@onfocus@code\@empty
6088 \let\Fld@onblur@code\@empty
6089 \let\Fld@onmousedown@code\@empty
6090 \let\Fld@onmouseup@code\@empty
6091 \let\Fld@onenter@code\@empty

```

```

6092 \let\Fld@onexit@code\@empty
6093 \def\Hy@temp#1{%
6094 \expandafter\Hy@@temp\csname Fld@#1@code\endcsname{#1}%
6095 }
6096 \def\Hy@@temp#1#2{%
6097 \ifHy@pdfa
6098 \define@key{Field}{#2}{%
6099 \Hy@Error{%
6100 PDF/A: Additional action `#2' is prohibited%
6101 } \@ehc
6102 }%
6103 \else
6104 \define@key{Field}{#2}{%
6105 \def#1{##1}%
6106 }%
6107 \fi
6108 }
6109 \Hy@temp{keystroke}
6110 \Hy@temp{format}
6111 \Hy@temp{validate}
6112 \Hy@temp{calculate}
6113 \Hy@temp{onfocus}
6114 \Hy@temp{onblur}
6115 \Hy@temp{onmousedown}
6116 \Hy@temp{onmouseup}
6117 \Hy@temp{onenter}
6118 \Hy@temp{onexit}

6119 \let\Fld@calculate@sortkey\@empty
6120 \define@key{Field}{calculatesortkey}[1]{%
6121 \def\Fld@calculate@sortkey{#1}%
6122 }

6123 \ifHy@texht
6124 \def\Hy@temp#1{%
6125 \define@key{Field}{#1}{%
6126 \Field@addtoks{#1}{##1}%
6127 }%
6128 }%
6129 \else
6130 \def\Hy@temp#1{%
6131 \define@key{Field}{#1}{%
6132 \Hy@WarnHTMLFieldOption{#1}%
6133 }%
6134 }%
6135 \fi
6136 \Hy@temp{ondblclick}
6137 \Hy@temp{onmouseover}
6138 \Hy@temp{onmousemove}
6139 \Hy@temp{onmouseout}
6140 \Hy@temp{onkeydown}
6141 \Hy@temp{onkeyup}
6142 \Hy@temp{onselect}
6143 \Hy@temp{onchange}
6144 \Hy@temp{onkeypress}

```



```

6145 \ifHy@texht
6146 \define@key{Field}{onclick}{%
6147 \Field@addtoks{onclick}{#1}%
6148 }%
6149 \else
6150 \ifHy@pdfa
6151 \define@key{Field}{onclick}{%
6152 \Hy@Error{%
6153 PDF/A: Action `onclick' is prohibited%
6154 } \@ehc
6155 }%
6156 \else
6157 \define@key{Field}{onclick}{%
6158 \def\Fld@onclick@code{#1}%
6159 }%
6160 \fi
6161 \fi

6162 \DeclareRobustCommand\TextField{%
6163 \@ifnextchar{\@TextField}{\@TextField[]}%
6164 }
6165 \DeclareRobustCommand\ChoiceMenu{%
6166 \@ifnextchar{\@ChoiceMenu}{\@ChoiceMenu[]}%
6167 }
6168 \DeclareRobustCommand\CheckBox{%
6169 \@ifnextchar{\@CheckBox}{\@CheckBox[]}%
6170 }
6171 \DeclareRobustCommand\PushButton{%
6172 \@ifnextchar{\@PushButton}{\@PushButton[]}%
6173 }
6174 \DeclareRobustCommand\Gauge{%
6175 \@ifnextchar{\@Gauge}{\@Gauge[]}%
6176 }
6177 \DeclareRobustCommand\Submit{%
6178 \@ifnextchar{\@Submit}{\@Submit[]}%
6179 }
6180 \DeclareRobustCommand\Reset{%
6181 \@ifnextchar{\@Reset}{\@Reset[]}%
6182 }
6183 \def\LayoutTextField#1#2{% label, field
6184 \def\Hy@temp{#1}%
6185 \ifx\Hy@temp\@empty
6186 #2%
6187 \else
6188 #1 #2%
6189 \fi
6190 }
6191 \def\LayoutChoiceField#1#2{% label, field
6192 \def\Hy@temp{#1}%
6193 \ifx\Hy@temp\@empty
6194 #2%
6195 \else
6196 #1 #2%
6197 \fi
6198 }

```

```

6199 \def\LayoutCheckField#1#2{% label, field
6200 \def\Hy@temp{#1}%
6201 \ifx\Hy@temp\@empty
6202   #2%
6203 \else
6204   #1 #2%
6205 \fi
6206 }
6207 \def\LayoutPushButtonField#1{% button
6208   #1%
6209 }
6210 \def\MakeRadioField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
6211 \def\MakeCheckField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
6212 \def\MakeTextField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
6213 \def\MakeChoiceField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
6214 \def\MakeButtonField#1{%
6215   \sbox0{%
6216     \hskip\Fld@borderwidth bp#1\hskip\Fld@borderwidth bp%
6217   }%
6218   \@tempdima\ht0 %
6219   \advance\@tempdima by \Fld@borderwidth bp %
6220   \advance\@tempdima by \Fld@borderwidth bp %
6221   \ht0\@tempdima
6222   \@tempdima\dp0 %
6223   \advance\@tempdima by \Fld@borderwidth bp %
6224   \advance\@tempdima by \Fld@borderwidth bp %
6225   \dp0\@tempdima
6226   \box0\relax
6227 }
6228 \def\DefaultHeightofSubmit{14pt}
6229 \def\DefaultWidthofSubmit{2cm}
6230 \def\DefaultHeightofReset{14pt}
6231 \def\DefaultWidthofReset{2cm}
6232 \def\DefaultHeightofCheckBox{\normalbaselineskip}
6233 \def\DefaultWidthofCheckBox{\normalbaselineskip}
6234 \def\DefaultHeightofChoiceMenu{\normalbaselineskip}
6235 \def\DefaultWidthofChoiceMenu{\normalbaselineskip}
6236 \def\DefaultHeightofText{\normalbaselineskip}
6237 \def\DefaultHeightofTextMultiline{4\normalbaselineskip}
6238 \def\DefaultWidthofText{3cm}
6239 \def\DefaultOptionsofSubmit{print,name=Submit,noexport}
6240 \def\DefaultOptionsofReset{print,name=Reset,noexport}
6241 \def\DefaultOptionsofPushButton{print}
6242 \def\DefaultOptionsofCheckBox{print}
6243 \def\DefaultOptionsofText{print}

Default options for the types of \ChoiceMenu.
6244 \def\DefaultOptionsofListBox{print}
6245 \def\DefaultOptionsofComboBox{print,edit,sort}
6246 \def\DefaultOptionsofPopdownBox{print}
6247 \def\DefaultOptionsofRadio{print,notoggletooff}

```

20 Setup

```
6248 \ifHy@hyperfigures
6249 \Hy@Info{Hyper figures ON}%
6250 \else
6251 \Hy@Info{Hyper figures OFF}%
6252 \fi
6253 \ifHy@nesting
6254 \Hy@Info{Link nesting ON}%
6255 \else
6256 \Hy@Info{Link nesting OFF}%
6257 \fi
6258 \ifHy@hyperindex
6259 \Hy@Info{Hyper index ON}%
6260 \else
6261 \Hy@Info{Hyper index OFF}%
6262 \fi
6263 \ifHy@backref
6264 \Hy@Info{backreferencing ON}%
6265 \else
6266 \Hy@Info{backreferencing OFF}%
6267 \fi
6268 \ifHy@colorlinks
6269 \Hy@Info{Link coloring ON}%
6270 \else
6271 \Hy@Info{Link coloring OFF}%
6272 \fi
6273 \ifHy@ocgcolorlinks
6274 \Hy@Info{Link coloring with OCG ON}%
6275 \else
6276 \Hy@Info{Link coloring with OCG OFF}%
6277 \fi
6278 \ifHy@pdfa
6279 \Hy@Info{PDF/A mode ON}%
6280 \else
6281 \Hy@Info{PDF/A mode OFF}%
6282 \fi
```

21 Low-level utility macros

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

```
6283 \edef\hyper@hash{\string#}
6284 \edef\hyper@tilde{\string~}
6285 \edef\hyper@quote{\string"}
```

Support \label before \begin{document}.

```
6286 \def\@currentHref{Doc-Start}
6287 \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.

```
6288 \Hy@AtBeginDocument{%
6289 \Hy@pdfstringtrue
6290 \PDF@SetupDoc
```

```

6291 \let\PDF@SetupDoc\@empty
6292 \Hy@DisableOption{pdfpagescrop}%
6293 \Hy@DisableOption{pdfpagemode}%
6294 \Hy@DisableOption{pdfnonfullscreenpagemode}%
6295 \Hy@DisableOption{pdfdirection}%
6296 \Hy@DisableOption{pdfviewarea}%
6297 \Hy@DisableOption{pdfviewclip}%
6298 \Hy@DisableOption{pdfprintarea}%
6299 \Hy@DisableOption{pdfprintclip}%
6300 \Hy@DisableOption{pdfprintscaling}%
6301 \Hy@DisableOption{pdfduplex}%
6302 \Hy@DisableOption{pdfpicktraybypdfsize}%
6303 \Hy@DisableOption{pdfprintpagerange}%
6304 \Hy@DisableOption{pdfnumcopies}%
6305 \Hy@DisableOption{pdfstartview}%
6306 \Hy@DisableOption{pdfstartpage}%
6307 \Hy@DisableOption{pdftoolbar}%
6308 \Hy@DisableOption{pdfmenubar}%
6309 \Hy@DisableOption{pdfwindowui}%
6310 \Hy@DisableOption{pdfitwindow}%
6311 \Hy@DisableOption{pdfcenterwindow}%
6312 \Hy@DisableOption{pdfdisplaydoctitle}%
6313 \Hy@DisableOption{pdfpagelayout}%
6314 \Hy@DisableOption{pdflang}%
6315 \Hy@DisableOption{baseurl}%
6316 \ifHy@texht\else\hyper@anchorstart{Doc-Start}\hyper@anchorend\fi
6317 \Hy@pdfstringfalse
6318 }

```

22 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.

```

6319 \def\NoHyper{%
6320 \def\hyper@link@[##1]##2##3##4{##4\Hy@xspace@end}%
6321 \def\hyper@@anchor##1##2{##2\Hy@xspace@end}%
6322 \global\let\hyper@livelink\hyper@link
6323 \gdef\hyper@link##1##2##3{##3\Hy@xspace@end}%
6324 \let\hyper@anchor\@gobble
6325 \let\hyper@anchorstart\@gobble
6326 \def\hyper@anchorend{\Hy@xspace@end}%
6327 \let\hyper@linkstart\@gobbletwo
6328 \def\hyper@linkend{\Hy@xspace@end}%
6329 \def\hyper@linkurl##1##2{##1\Hy@xspace@end}%
6330 \def\hyper@linkfile##1##2##3{##1\Hy@xspace@end}%
6331 \let\Hy@backout\@gobble
6332 }
6333 \def\stop@hyper{%
6334 \def\hyper@link@[##1]##2##3##4{##4\Hy@xspace@end}%
6335 \let\Hy@backout\@gobble
6336 \let\hyper@@anchor\@gobble

```

```

6337 \def\hyper@link##1##2##3{##3\Hy@xspace@end}%
6338 \let\hyper@anchor@gobble
6339 \let\hyper@anchorstart@gobble
6340 \def\hyper@anchorend{\Hy@xspace@end}%
6341 \let\hyper@linkstart@gobbletwo
6342 \def\hyper@linkend{\Hy@xspace@end}%
6343 \def\hyper@linkurl##1##2{##1\Hy@xspace@end}%
6344 \def\hyper@linkfile##1##2##3{##1\Hy@xspace@end}%
6345 }
6346 \def\endNoHyper{%
6347 \global\let\hyper@link\hyper@livelink
6348 }
6349 \endpackage

```

23 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:

```

6350 (*nohyperref)
6351 \let\hyper@@anchor@gobble
6352 \def\hyper@link#1#2#3{#3}%
6353 \let\hyper@anchorstart@gobble
6354 \let\hyper@anchorend@empty
6355 \let\hyper@linkstart@gobbletwo
6356 \let\hyper@linkend@empty
6357 \def\hyper@linkurl#1#2{#1}%
6358 \def\hyper@linkfile#1#2#3{#1}%
6359 \def\hyper@link@[#1]#2#3{#1}%
6360 \let\PDF@SetupDoc@empty
6361 \let\PDF@FinishDoc@empty
6362 \def\nohyperpage#1{#1}

```

Some top-level commands:

```

6363 \def\Acrobatmenu#1#2{\leavevmode#2}
6364 \let\pdfstringdefDisableCommands@gobbletwo
6365 \let\texorpdfstring@firstoftwo
6366 \let\pdfbookmark@undefined
6367 \newcommand\pdfbookmark[3]{}
6368 \let\phantomsection@empty
6369 \let\hypersetup@gobble
6370 \let\hyperbaseurl@gobble
6371 \newcommand*{\href}[3]{}
6372 \let\hyperdef@gobbletwo
6373 \let\hyperlink@gobble
6374 \let\hypertarget@gobble
6375 \protected\def\hyperref{%
6376 \ifnextchar\@gobbleopt{\expandafter\@gobbletwo\@gobble}%
6377 }
6378 \long\def\@gobbleopt[#1]{}

```

```
6379 \let\hyperpage\@empty
6380 \</nohyperref>
```

24 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}` change 2023-08-13: with a new format it is no longer needed to handle different `\newlabel` definitions. The code can be removed completely later.

```
6381 (*package)
6382 \@if@t@r\fmtversion{2023-06-01}{-}
6383 {
6384   \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 `\newlabel` is defined to cope with the extra arguments. change 2022-03-28: removed the code for `\contentsline`, it is no longer needed as `\contentsline` has now always four arguments.

```
6385   \if@filesw
6386     \immediate\write\@auxout{%
6387       \string\providecommand\string\HyperFirstAtBeginDocument{%
6388         \string\AtBeginDocument}^^J%
6389       \string\HyperFirstAtBeginDocument{%
6390         \string\ifx\string\hyper@anchor\string\@undefined^^J%
6391         \string\global\string\let\string\oldnewlabel\string\newlabel^^J%
6392         \string\gdef\string\newlabel\string#1\string#2{%
6393           \string\newlabelxx{\string#1}\string#2}^^J%
6394         \string\gdef\string\newlabelxx%
6395           \string#1\string#2\string#3\string#4\string#5\string#6{%
6396           \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.

```
6397       \string\AtEndDocument{%
6398         \string\ifx\string\hyper@anchor\string\@undefined^^J%
6399         \string\let\string\newlabel\string\oldnewlabel^^J%
6400         \string\fi%
6401       }^^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.

```
6402       \string\fi%
6403     }^^J%
6404     \string\global\string\let\string\hyper@last\relax^^J%
6405     \string\gdef\string\HyperFirstAtBeginDocument\string#1{\string#1}%
6406   }%
6407 \fi
6408 \let\HyperFirstAtBeginDocument\@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. change 2022-03-28: removed the test for an old toc. \contentsline has now always four arguments.

```

6409     \ifx\hyper@last\@undefined
6410     \def\newlabel#1#2{\@newlabel r{#1}{#2}{-}{-}}%
6411     \fi
6412   }
6413 }

```

25 Title strings

If options pdftitle and pdfauthor are not used, these data for the pdf information dictionary can be extracted by the \title and \author.

```

6414 \ifHy@pdfusetitle
6415   \let\HyOrg@title\title
6416   \let\HyOrg@author\author
6417   \def\title{\@ifnextchar{\Hy@scanopttitle}{\Hy@scantitle}}%
6418   \def\Hy@scanopttitle[#1]{%
6419     \gdef\Hy@title{#1}%
6420     \HyOrg@title{#1}%
6421   }%
6422   \def\Hy@scantitle#1{%
6423     \gdef\Hy@title{#1}%
6424     \HyOrg@title{#1}%
6425   }%
6426   \def\author{\@ifnextchar{\Hy@scanoptauthor}{\Hy@scanauthor}}%
6427   \def\Hy@scanoptauthor[#1]{%
6428     \gdef\Hy@author{#1}%
6429     \HyOrg@author{#1}%
6430   }%
6431   \def\Hy@scanauthor#1{%
6432     \gdef\Hy@author{#1}%
6433     \HyOrg@author{#1}%
6434   }%

```

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.

```

6435 \begingroup
6436   \def\process@me#1\@nil#2{%
6437     \expandafter\let\expandafter\x\csname @#2\endcsname
6438     \edef\y{\expandafter\strip@prefix\meaning\x}%
6439     \def\c##1##2\@nil{%
6440       \ifx\##1\%
6441         \else
6442           \expandafter\gdef\csname Hy@#2\expandafter\endcsname
6443             \expandafter{\x}%
6444         \fi
6445       }%
6446     \expandafter\c\y\relax#1\@nil
6447   }%
6448   \expandafter\process@me\string\@latex@\@nil{title}%
6449   \expandafter\process@me\string\@latex@\@nil{author}%
6450 \endgroup

```

```
6451 \fi
6452 \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 ¹removes its argument.

```
6453 \def\Hy@UseMaketitleString#1{%
6454   \@ifundefined{Hy@#1}{}{}%
6455   \begingroup
6456     \let\Hy@saved@hook\pdfstringdefPreHook
6457     \pdfstringdefDisableCommands{%
6458       \expandafter\let\expandafter\\\csname Hy@newline@#1\endcsname
6459       \let\newline\\%
6460       \def\and{; }%
6461       \let\thanks\@gobble%
6462     }%
6463     \expandafter\ifx\csname @pdf#1\endcsname\@empty
6464       \expandafter\pdfstringdef\csname @pdf#1\endcsname{%
6465         \csname Hy@#1\endcsname\@empty
6466       }%
6467     \fi
6468     \global\let\pdfstringdefPreHook\Hy@saved@hook
6469   \endgroup
6470 }%
6471 }
6472 \def\Hy@newline@title#1{ #1}
6473 \def\Hy@newline@author#1{, #1}
6474 \def\Hy@UseMaketitleInfos{%
6475   \Hy@UseMaketitleString{title}%
6476   \Hy@UseMaketitleString{author}%
6477 }
```

26 Page numbers

This stuff is done by Heiko Oberdiek.

27 Every page

```
6478 \let\Hy@EveryPageHook\@empty
6479 \let\Hy@EveryPageBoxHook\@empty
6480 \let\Hy@FirstPageHook\@empty
6481 \AddToHook{shipout/before}{%
6482   \Hy@EveryPageHook
6483   \ifx\Hy@EveryPageBoxHook\@empty
6484     \else
```



```

6485 \setbox\ShipoutBox=\vbox{%
6486 \offinterlineskip
6487 \Hy@EveryPageBoxHook
6488 \box\ShipoutBox
6489 }%
6490 \fi
6491 }
6492 \Hy@iffileloaded{hpdftex.def}{%
6493 \AddToHook{shipout/before}{%
6494 \Hy@FirstPageHook
6495 \global\let\Hy@FirstPageHook\@empty
6496 }%
6497 }{%
6498 \AddToHook{shipout/firstpage}{%
6499 \Hy@FirstPageHook
6500 }%
6501 }
6502 \g@addto@macro\Hy@FirstPageHook{%
6503 \PDF@FinishDoc
6504 \global\let\PDF@FinishDoc\@empty
6505 }

```

27.1 PDF /PageLabels

Internal macros of this module are marked with `\HyPL@`.

```

6506 \ifHy@pdfpagelabels
6507 \begingroup\expandafter\expandafter\expandafter\endgroup
6508 \expandafter\ifx\csname thepage\endcsname\relax
6509 \Hy@pdfpagelabelsfalse
6510 \Hy@WarningNoLine{%
6511 Option `pdfpagelabels' is turned off\MessageBreak
6512 because \string\thepage\space is undefined%
6513 }%
6514 \csname fi\endcsname
6515 \csname iffalse\expandafter\endcsname
6516 \fi

```

`\thispdfpagelabel` The command `\thispdfpagelabel` allows to label a special page without the redefinition of `\thepage` for the page.

```

6517 \def\thispdfpagelabel#1{%
6518 \gdef\HyPL@thisLabel{#1}%
6519 }%
6520 \global\let\HyPL@thisLabel\relax

```

`\HyPL@Labels` The page labels are collected in `\HyPL@Labels` and set at the end of the document.

```

6521 \let\HyPL@Labels\@empty

```

`\Hy@abspage` We have to know the the absolute page number and introduce a new counter for that.

```

6522 \newcount\Hy@abspage
6523 \Hy@abspage=0 %

```

For comparisons with the values of the previous page, some variables are needed:

```

6524 \def\HyPL@LastType{init}%
6525 \def\HyPL@LastNumber{0}%
6526 \let\HyPL@LastPrefix\@empty

```

Definitions for the PDF names of the L^AT_EX pendants.

```

6527 \def\HyPL@arabic{D}%
6528 \def\HyPL@Roman{R}%
6529 \def\HyPL@roman{r}%
6530 \def\HyPL@Alph{A}%
6531 \def\HyPL@alph{a}%

6532 \let\HyPL@SlidesSetPage\@empty
6533 \ifclassloaded{slides}{%
6534 \def\HyPL@SlidesSetPage{%
6535 \advance\c@page\@ne
6536 \ifnum\value{page}>\@ne
6537 \protected@edef\HyPL@SlidesOptionalPage{%
6538 \Hy@SlidesFormatOptionalPage{\thepage}%
6539 }%
6540 \else
6541 \let\HyPL@SlidesOptionalPage\@empty
6542 \fi
6543 \advance\c@page-\@ne
6544 \def\HyPL@page{%
6545 \csname the\Hy@SlidesPage\endcsname
6546 \HyPL@SlidesOptionalPage
6547 }%
6548 }%
6549 }%

```

`\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.

```

6550 \def\HyPL@EveryPage{%
6551 \begingroup
6552 \ifx\HyPL@thisLabel\relax
6553 \let\HyPL@page\thepage
6554 \HyPL@SlidesSetPage
6555 \else
6556 \let\HyPL@page\HyPL@thisLabel
6557 \global\let\HyPL@thisLabel\relax
6558 \fi
6559 \let\HyPL@Type\relax
6560 \ifnum\c@page>0 %
6561 \ifx\HyPL@SlidesSetPage\@empty
6562 \expandafter\HyPL@CheckThePage\HyPL@page\@nil
6563 \fi
6564 \fi
6565 \let\Hy@temp Y%
6566 \ifx\HyPL@Type\HyPL@LastType
6567 \else
6568 \let\Hy@temp N%
6569 \fi
6570 \ifx\HyPL@Type\relax
6571 \pdfstringdef\HyPL@Prefix{\HyPL@page}%
6572 \else

```

```

6573     \pdfstringdef\HyPL@Prefix\HyPL@Prefix
6574     \fi
6575     \ifx\HyPL@Prefix\HyPL@LastPrefix
6576     \else
6577       \let\Hy@temp N%
6578     \fi
6579     \if Y\Hy@temp
6580       \advance\c@page by -1 %
6581       \ifnum\HyPL@LastNumber=\the\c@page\relax
6582       \else
6583         \let\Hy@temp N%
6584       \fi
6585       \Hy@StepCount\c@page
6586     \fi
6587     \if N\Hy@temp
6588       \ifx\HyPL@Type\relax
6589         \HyPL@StorePageLabel{/P(\HyPL@Prefix)}%
6590       \else
6591         \HyPL@StorePageLabel{%
6592           \ifx\HyPL@Prefix\@empty
6593             \else
6594               /P(\HyPL@Prefix)%
6595             \fi
6596           /S/\csname HyPL\HyPL@Type\endcsname
6597           \ifnum\the\c@page=1 %
6598             \else
6599               \space/St \the\c@page
6600             \fi
6601           }%
6602         \fi
6603       \fi
6604       \xdef\HyPL@LastNumber{\the\c@page}%
6605       \global\let\HyPL@LastType\HyPL@Type
6606       \global\let\HyPL@LastPrefix\HyPL@Prefix
6607     \endgroup
6608     \Hy@GlobalStepCount\Hy@abspage
6609   }%

```

`\HyPL@CheckThePage` Macro `\HyPL@CheckThePage` calls `\HyPL@@CheckThePage` that does the job.

```

6610 \def\HyPL@CheckThePage#1\@nil{%
6611   \HyPL@@CheckThePage{#1}#1\csname\endcsname\c@page\@nil
6612 }%

```

`\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 implement ation 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`.

```

6613 \def\HyPL@@CheckThePage#1#2\csname#3\endcsname\c@page#4\@nil{%
6614   \def\Hy@tempa{#4}%
6615   \def\Hy@tempb{\csname\endcsname\c@page}%
6616   \ifx\Hy@tempa\Hy@tempb
6617     \expandafter\ifx\csname HyPL#3\endcsname\relax
6618     \else
6619       \def\HyPL@Type{#3}%

```

```

6620     \def\HyPL@Prefix{#2}%
6621     \fi
6622   \else
6623     \begingroup
6624     \let\Hy@next\endgroup
6625     \let\HyPL@found\@undefined
6626     \def\arabic{\HyPL@Format{arabic}}%
6627     \def\Roman{\HyPL@Format{Roman}}%
6628     \def\roman{\HyPL@Format{roman}}%
6629     \def\Alph{\HyPL@Format{Alph}}%
6630     \def\alph{\HyPL@Format{alph}}%
6631     \protected@edef\Hy@temp{#1}%
6632     \ifx\HyPL@found\relax
6633       \toks@\expandafter{\Hy@temp}%
6634       \edef\Hy@next{\endgroup
6635         \noexpand\HyPL@@@CheckThePage\the\toks@
6636         \noexpand\HyPL@found\relax\noexpand\@nil
6637       }%
6638     \fi
6639     \Hy@next
6640   \fi
6641 }%

```

`\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`.

```

6642 \def\HyPL@Format#1#2{%
6643   \ifx\HyPL@found\@undefined
6644     \expandafter\ifx\csname c@#2\endcsname\c@page
6645       \expandafter\noexpand\csname HyPL@found\endcsname{#1}%
6646     \else
6647       \expandafter\noexpand\csname#1\endcsname{#2}%
6648     \fi
6649   \else
6650     \expandafter\noexpand\csname#1\endcsname{#2}%
6651   \fi
6652 }%

```

`\HyPL@@@CheckThePage` If the second check method is successful, `\HyPL@@@CheckThePage` scans the result of `\HyPL@Format` and stores the found values.

```

6653 \def\HyPL@@@CheckThePage#1\HyPL@found#2#3\@nil{%
6654   \def\Hy@tempa{#3}%
6655   \def\Hy@tempb{\HyPL@found\relax}%
6656   \ifx\Hy@tempa\Hy@tempb
6657     \def\HyPL@Type{#2}%
6658     \def\HyPL@Prefix{#1}%
6659   \fi
6660 }%

```

`\HyPL@StorePageLabel` Dummy for drivers that does not support `/PageLabel`.

```

6661 \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`.

```
6662 \def\HyPL@Useless{0<</S/D>>}%
6663 \@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.

```
6664 \def\HyPL@SetPageLabels{%
6665   \@onelevel@sanitize\HyPL@Labels
6666   \ifx\HyPL@Labels\@empty
6667   \else
6668     \ifx\HyPL@Labels\HyPL@Useless
6669     \else
6670       \Hy@PutCatalog{/PageLabels<</Nums\HyPL@Labels>>}%
6671     \fi
6672   \fi
6673 }%

6674 \g@addto@macro\Hy@EveryPageHook{\HyPL@EveryPage}%
6675 \fi
```

Option ‘pdfpagelabels’ has been used and is now disabled.

```
6676 \Hy@DisableOption{pdfpagelabels}
6677 </package>
```

27.1.1 pdfTeX and VTeX

Because of pdfTeX’s `\pdfcatalog` command the `/PageLabels` entry can set at end of document in the first run.

`\Hy@PutCatalog`

```
6678 <*pdfTeX>
6679 \pdf@ifdraftmode{%
6680   \let\Hy@PutCatalog\@gobble
6681 }{%
6682   \let\Hy@PutCatalog\pdfcatalog
6683 }
6684 </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.

```
6685 <*vTeX>
6686 \providecommand*\XR@ext}{pdf}
6687 \edef\Hy@VTeXversion{%
6688   \ifx\VTeXversion\@undefined
6689     \z@
6690   \else
6691     \ifx\VTeXversion\relax
6692     \z@
6693   \else
```

```

6694   \VTeXversion
6695   \fi
6696 \fi
6697 }
6698 \begingroup
6699 \ifnum\Hy@VTeXversion<660 %
6700   \gdef\Hy@PutCatalog#1{%
6701     \Hy@WarningNoLine{%
6702       VTeX 6.59g or above required for pdfpagelabels%
6703     }%
6704   }%
6705 \else
6706   \gdef\Hy@PutCatalog#1{%
6707     \Hy@vt@PutCatalog#1/PageLabels<<>>\@nil
6708   }%
6709   \gdef\Hy@vt@PutCatalog#1/PageLabels<<#2>>#3\@nil{%
6710     \ifx\#2\%
6711       \else
6712         \immediate\special{!pdfpagelabels #2}%
6713       \fi
6714     }%
6715   \fi
6716 \endgroup
6717 </vtex>

6718 (*pdfTeX | vtex)

```

`\HyPL@StorePageLabel` This macro adds the entry #1 to `\HyPL@Labels`.

```

6719 \ifHy@pdfpagelabels
6720   \def\HyPL@StorePageLabel#1{%
6721     \toks@\expandafter{\HyPL@Labels}%
6722     \xdef\HyPL@Labels{%
6723       \the\toks@
6724       \the\Hy@abspage<<#1>>%
6725     }%
6726   }%

```

The `enddocument/afteraux` hook is used to get behind the final `\clearpage` and to avoid a `\clearpage` in `\AtEndDocument`. Then the PDF catalog entry for `\PageLabels` is set.

```

6727 \AddToHook{enddocument/afteraux}{%
6728   \HyPL@SetPageLabels
6729 }%

6730 \fi
6731 </pdfTeX | vtex>

```

27.1.2 xetex

```

6732 (*xetex)
6733 \HyPsd@LoadUnicode
6734 \Hy@unicodetrue
6735 \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@unicode
6736 \else
6737   \let\HyPsd@pdfencoding\HyPsd@pdfencoding@auto

```

```

6738 \fi
6739 \define@key{Hyp}{unicode}[true]{%
6740 \Hy@boolkey{unicode}{#1}%
6741 \ifHy@unicode
6742 \else
6743 \Hy@Warning{%
6744 XeTeX driver only supports `unicode=true'. Ignoring\MessageBreak
6745 option setting `unicode=false'%
6746 }%
6747 \Hy@unicodetrue
6748 \fi
6749 }
6750 \define@key{Hyp}{pdfencoding}{%
6751 \edef\HyPsd@temp{#1}%
6752 \ifx\HyPsd@temp\HyPsd@pdfencoding@unicode
6753 \let\HyPsd@pdfencoding\HyPsd@temp
6754 \else
6755 \ifx\HyPsd@temp\HyPsd@pdfencoding@auto
6756 \let\HyPsd@pdfencoding\HyPsd@temp
6757 \else
6758 \Hy@Warning{%
6759 XeTeX driver only supports\MessageBreak
6760 `pdfencoding=unicode|auto'. Ignoring option\MessageBreak
6761 setting `pdfencoding=\HyPsd@temp'%
6762 }%
6763 \fi
6764 \fi
6765 }
6766 \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:

```

6767 \def\setpdfinkmargin#1{%
6768 \begingroup
6769 \setlength{\dimen@}{#1}%
6770 \special{dvipdfmx:config g \strip@pt\dimen@}%
6771 \endgroup}
6772 </xetex>

```

set the pdf version

```

6773 <*dvipdfm | xetex>
6774 \special{pdf:majorversion \Hy@pdf@majorversion}
6775 \special{pdf:minorversion \Hy@pdf@minorversion}
6776 </dvipdfm | xetex>

```

27.1.3 pdfmarkbase, dvipdfm, xetex

```

6777 <*pdfmarkbase>
6778 \begingroup
6779 \@ifundefined{headerps@out}{-}{%
6780 \toks@\expandafter{\Hy@FirstPageHook}%
6781 \xdef\Hy@FirstPageHook{%
6782 \noexpand\headerps@out{%
6783 systemdict /pdfmark known%
6784 }%
6785 userdict /?pdfmark systemdict /exec get put%

```

```

6786     }{%
6787     userdict /?pdfmark systemdict /pop get put %
6788     userdict /pdfmark systemdict /cleartomark get put%
6789     }%
6790     ifelse%
6791     }%
6792     \the\toks@
6793     }%
6794     }%
6795 \endgroup
6796 </pdfmarkbase>

```

\Hy@PutCatalog

```

6797 <dvipdfm | xetex>\def\Hy@PutCatalog#1{\@pdfm@mark{docview <<#1>>}}
6798 (*pdfmarkbase)
6799 \def\Hy@PutCatalog#1{%
6800   \pdfmark{pdfmark=/PUT,Raw={\string{Catalog\string} <<#1>>}}%
6801 }
6802 </pdfmarkbase>

6803 (*pdfmarkbase | dvipdfm | xetex)
6804 \ifHy@pdfpagelabels

```

\HyPL@StorePageLabel This macro writes a string to the .aux file.

```

6805 \def\HyPL@StorePageLabel#1{%
6806   \if@filesw
6807     \begingroup
6808     \edef\Hy@tempa{\the\Hy@abspage<<#1>>}%
6809     \immediate\write\@mainaux{%
6810       \string\HyPL@Entry{\Hy@tempa}%
6811     }%
6812   \endgroup
6813   \fi
6814 }%

```

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.

```

6815 \Hy@AtBeginDocument{%
6816   \if@filesw
6817     \immediate\write\@mainaux{%
6818       \string\providecommand\string*\string\HyPL@Entry[1]{}%
6819     }%
6820   \fi
6821   \ifx\HyPL@Labels\@empty
6822     \Hy@WarningNoLine{Rerun to get /PageLabels entry}%
6823   \else
6824     \HyPL@SetPageLabels
6825   \fi
6826   \let\HyPL@Entry\@gobble
6827 }%

```

\HyPL@Entry

```

6828 \def\HyPL@Entry#1{%

```



```

6829 \expandafter\gdef\expandafter\HyPL@Labels\expandafter{%
6830 \HyPL@Labels
6831 #1%
6832 }%
6833 }%

6834 \fi
6835 </pdfmarkbase | dvipdfm | xetex>
6836 *packageEnd)

6837 \ifx\MaybeStopEarly\relax
6838 \else
6839 \Hy@stoppedearlytrue
6840 \expandafter\MaybeStopEarly
6841 \fi
6842 \Hy@stoppedearlyfalse

```

28 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 ‘natural-names’ option uses whatever L^AT_EX provides, which may be usable. But then its up to you to make sure these are legal PDF and HTML names. The ‘hypertext-names=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

```

6843 \def\Hy@CounterExists#1{%
6844 \begingroup\expandafter\expandafter\expandafter\endgroup
6845 \expandafter\ifx\csname c@#1\endcsname\relax
6846 \expandafter\@gobble
6847 \else
6848 \begingroup\expandafter\expandafter\expandafter\endgroup
6849 \expandafter\ifx\csname the#1\endcsname\relax
6850 \expandafter\expandafter\expandafter\@gobble
6851 \else
6852 \expandafter\expandafter\expandafter\@firstofone
6853 \fi
6854 \fi
6855 }

```

change 2024-10-13: do not define if format is new enough.

```

6856 \IfFormatAtLeastTF{2024-11-01}{-}
6857 {
6858   \Hy@CounterExists{section}{%
6859     \providecommand\theHequation{\theHsection.\arabic{equation}}%
6860   }
6861   \providecommand\theHequation{\arabic{equation}}%
6862   \Hy@CounterExists{part}{%
6863     \providecommand\theHpart{\arabic{part}}%
6864   }
6865   \@ifundefined{thechapter}{%
6866     \providecommand\theHsection  {\arabic{section}}%
6867     \providecommand\theHfigure   {\arabic{figure}}%
6868     \providecommand\theHtable    {\arabic{table}}%
6869   }{%
6870     \providecommand\theHchapter  {\arabic{chapter}}%
6871     \providecommand\theHfigure   {\theHchapter.\arabic{figure}}%
6872     \providecommand\theHtable    {\theHchapter.\arabic{table}}%
6873     \providecommand\theHsection  {\theHchapter.\arabic{section}}%
6874   }
6875   \providecommand\theHsubsection {\theHsection.\arabic{subsection}}
6876   \providecommand\theHsubsubsection{\theHsubsection.\arabic{subsubsec-
tion}}
6877   \providecommand\theHparagraph  {\theHsubsubsection.\arabic{paragraph}}
6878   \providecommand\theHsubparagraph {\theHparagraph.\arabic{subparagraph}}
6879   \providecommand\theHtheorem    {\theHsection.\arabic{theorem}}
6880   \providecommand\theHthm        {\theHsection.\arabic{thm}}
6881 }

```

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.

```

6882 \let\H@item\item
6883 \newcounter{Item}
6884 \IfFormatAtLeastTF{2024-11-01}{-}
6885 {\def\theHItem{\arabic{Item}}}
6886 \def\item{%
6887   \@hyper@itemfalse
6888   \if@nmbrrlist\@hyper@itemtrue\fi
6889   \H@item
6890 }

6891 \IfFormatAtLeastTF{2024-11-01}{-}
6892 {
6893   \providecommand\theHenumi  {\theHItem}
6894   \providecommand\theHenumii {\theHItem}
6895   \providecommand\theHenumiii {\theHItem}
6896   \providecommand\theHenumiv {\theHItem}
6897   \providecommand\theHHfootnote {\arabic{Hfootnote}}
6898   \providecommand\theHmpfootnote{\arabic{mpfootnote}}
6899 }

```

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.

```

6900 \let\H@refstepcounter\@kernel@refstepcounter
6901 \edef\name@of@eq{equation}%

```

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. change 2022-04-22: removed test for the slide counter and for the equation name. change 2022-05-02: added the new boolean set by `\LinkTargetOn/\LinkTargetOff`

```

6902 \newif\if@hyper@item
6903 \newif\if@skiphyperref
6904 \@hyper@itemfalse
6905 \@skiphyperreffalse
6906 \ExplSyntaxOn
6907 \IfFormatAtLeastTF{2024-11-01}
6908 {
6909   \NewSocketPlug{refstepcounter}{hyperref}{\ifHy@pdfstring\else#1\fi}
6910   \AssignSocketPlug{refstepcounter}{hyperref}

```

change 2024-11-05: `cleveref` relies on `refstepcounter` to update its data.

```

6911 \AddToHook{package/cleveref/after}
6912 {
6913   \@ifpackagelater{cleveref}{2018/03/28}{ }
6914   {
6915     \NewSocketPlug{refstepcounter}{hyperref/fixcleveref}
6916     {\ifHy@pdfstring\else
6917      #1%
6918      {\firstaid@cref@updatelabeldata{\@currentcounter}}}%
6919     \fi}
6920     \AssignSocketPlug{refstepcounter}{hyperref/fixcleveref}
6921   }
6922 }
6923 \NewSocketPlug{refstepcounter/target}{hyperref}
6924 {
6925   \bool_lazy_and:nnT
6926   { \l__hyp_target_create_bool }
6927   { ! \legacy_if_p:n{@skiphyperref} }
6928   {
6929     \legacy_if:nTF {@hyper@item}
6930     {
6931       \stepcounter{Item}%
6932       \hyper@refstepcounter{Item}%
6933       \@hyper@itemfalse
6934     }
6935     {
6936       \hyper@refstepcounter{\@currentcounter}%
6937     }
6938   }
6939 }
6940 \AssignSocketPlug{refstepcounter/target}{hyperref}
6941 }
6942 {
6943   \def\refstepcounter#1{%
6944     \legacy_if:nF {Hy@pdfstring}
6945     {
6946       \H@refstepcounter{#1}%

```

```

6947 \bool_lazy_and:nnT
6948 { \l__hyp_target_create_bool }
6949 { ! \legacy_if_p:n{@skiphyperref} }
6950 {
6951 \legacy_if:nTF {@hyper@item}
6952 {
6953 \stepcounter{Item}%
6954 \hyper@refstepcounter{Item}%
6955 \@hyper@itemfalse
6956 }
6957 {
6958 \hyper@refstepcounter{#1}%
6959 }
6960 }
6961 }
6962 }
6963 }
6964 \ExplSyntaxOff
6965 \let\Hy@saved@refstepcounter\refstepcounter

```

AMS \LaTeX 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. change 2025-06-20: test if the switch already exist, see tagging-project issue 920.

```

6966 \ifcsname ifmeasuring@\endcsname
6967 \else
6968 \expandafter\newif\csname ifmeasuring@\endcsname\measuring@false
6969 \fi
6970 \newcommand\Hy@ifnotmeasuring[1]{#1}
6971 \AddToHook{package/amsmath/after}
6972 {
6973 \renewcommand\Hy@ifnotmeasuring[1]
6974 {\ifmeasuring@ \else #1\fi}
6975 }

```

`\hyper@refstepcounter`

```

6976 \def\hyper@refstepcounter#1{%
6977 \HyCnt@ProvideTheHCounter{#1}%
6978 \hyper@makecurrent{#1}%
6979 \Hy@ifnotmeasuring
6980 {\Hy@raisedlink{%
6981 \hyper@anchorstart{\@currentHref}\hyper@anchorend
6982 }}%
6983 }

```

`\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`, \LaTeX 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 \LaTeX , substring search `\in@` can be used.

```

6984 \def\HyCnt@ProvideTheHCounter#1{%
6985 \@ifundefined{theH#1}{%

```

```

6986 \expandafter\def\csname theH#1\endcsname{}%
6987 \def\Hy@temp{\@elt{#1}}%
6988 \@onelevel@sanitize\Hy@temp
6989 \let\HyOrg@elt\@elt
6990 \edef\@elt{%
6991 \noexpand\HyCnt@LookForParentCounter
6992 \expandafter\noexpand\csname theH#1\endcsname
6993 }%
6994 \cl@ckpt
6995 \let\@elt\HyOrg@elt
6996 \expandafter
6997 \Hy@LocalAppendToMacro\csname theH#1\endcsname\expandafter\endcsname
6998 \expandafter{%
6999 \expandafter\@arabic\csname c@#1\endcsname
7000 }%
7001 }{}%
7002 }

```

\Hy@LookForParentCounter

```

7003 \def\HyCnt@LookForParentCounter#1#2{%
7004 \expandafter\let\expandafter\Hy@temp@A\csname cl@#2\endcsname
7005 \@ifundefined{cl@#2}{%
7006 }{%
7007 \@onelevel@sanitize\Hy@temp@A
7008 \edef\Hy@temp@A{%
7009 \noexpand\in@{\Hy@temp}{\Hy@temp@A}%
7010 }\Hy@temp@A
7011 \ifin@
7012 \@ifundefined{theH#2}{%
7013 \expandafter\Hy@LocalAppendToMacro\expandafter#1%
7014 \expandafter{%
7015 \expandafter\@arabic\csname c@#2\endcsname.%
7016 }%
7017 }{}%
7018 \expandafter\Hy@LocalAppendToMacro\expandafter#1%
7019 \expandafter{%
7020 \csname theH#2\endcsname.%
7021 }%
7022 }%
7023 \fi
7024 }%
7025 }

```

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`.

```

7026 \begingroup\expandafter\expandafter\expandafter\endgroup
7027 \expandafter\ifx\csname chapter\endcsname\relax
7028 \def\Hy@chapterstring{section}%
7029 \else
7030 \def\Hy@chapterstring{chapter}%

```

```

7031 \fi
7032 \def\Hy@appendixstring{appendix}
7033 \def\Hy@chapapp{\Hy@chapterstring}
7034 \@ifundefined{appendix}{%
7035 }{%
7036 \let\HyOrg@appendix\appendix
7037 \def\Hy@AlphNoErr#1{%
7038   \ifnum\value{#1}>26 %
7039     Alph\number\value{#1}%
7040   \else
7041     \ifnum\value{#1}<1 %
7042       Alph\number\value{#1}%
7043     \else
7044       \Alph{#1}%
7045     \fi
7046   \fi
7047 }%
7048 \def\appendix{%
7049   \@ifundefined{chapter}{%
7050     \gdef\theHsection{\Hy@AlphNoErr{section}}%
7051   }{%
7052     \gdef\theHchapter{\Hy@AlphNoErr{chapter}}%
7053   }%
7054   \xdef\Hy@chapapp{\Hy@appendixstring}%
7055   \HyOrg@appendix
7056 }%
7057 }

```

\Hy@Test@alph

```

7058 \def\Hy@Test@alph#1{%
7059   \ifcase#1\or
7060     a\or b\or c\or d\or e\or f\or g\or h\or i\or j\or
7061     k\or l\or m\or n\or o\or p\or q\or r\or s\or t\or
7062     u\or v\or w\or x\or y\or z%
7063   \else
7064     \@ctrerr
7065   \fi
7066 }

```

\Hy@Test@Alph

```

7067 \def\Hy@Test@Alph#1{%
7068   \ifcase#1\or
7069     A\or B\or C\or D\or E\or F\or G\or H\or I\or J\or
7070     K\or L\or M\or N\or O\or P\or Q\or R\or S\or T\or
7071     U\or V\or W\or X\or Y\or Z%
7072   \else
7073     \@ctrerr
7074   \fi
7075 }

```

We define a hook to allow to overwrite the next destination name.

```

7076 \NewHook{__hyp/target/setname }
7077 \define@key{Hyp}{next-anchor}{%
7078   \AddToHookNext{__hyp/target/setname}%

```

```

7079     {\Hy@MakeCurrentHref{#1}}%
7080  }

```

`\hyper@makecurrent` Because of Babel mucking around, nullify `\textlatin` when making names. And `\@number` because of babel's `lrbabel.def`. change 2021-08-15: For new formats we add a hook which allows to overwrite the name of the next destination.

```

7081 \def\hyper@makecurrent#1{%
7082  \begingroup
7083   \Hy@safe@activestruer
7084   \edef\Hy@param{#1}%
7085   \ifx\Hy@param\Hy@chapterstring
7086     \let\Hy@param\Hy@chapapp
7087   \fi
7088   \ifHy@hypertextnames
7089     \let\@number\@firstofone
7090     \def\@fnsymbol##1{fnsymbol\number##1}%
7091     \def\@arabic##1{\number##1}%
7092     \ifx\@alph\Hy@Test@alph
7093       \else
7094         \def\@alph{alph\number}%
7095       \fi
7096     \ifx\@Alph\Hy@Test@Alph
7097       \else
7098         \def\@Alph{Alph\number}%
7099       \fi
7100     \ifHy@naturalnames
7101       \let\textlatin\@firstofone
7102       \xdef\HyperGlobalCurrentHref{\csname the#1\endcsname}%
7103     \else
7104       \xdef\HyperGlobalCurrentHref{%
7105         \csname
7106           the%
7107           \expandafter\ifx\csname theH#1\endcsname\relax\else H\fi
7108           #1%
7109         \endcsname
7110       }%
7111     \fi
7112     \xdef\HyperGlobalCurrentHref{%
7113       \Hy@param.\expandafter\strip@prefix\meaning\HyperGlobalCurrentHref
7114     }%
7115   \else
7116     \Hy@GlobalStepCount\Hy@linkcounter
7117     \xdef\HyperGlobalCurrentHref{\Hy@param.the\Hy@linkcounter}%
7118   \fi
7119 \endgroup
7120 \let\HyperLocalCurrentHref\HyperGlobalCurrentHref
7121 \ifHy@localanchorname
7122   \let\@currentHref\HyperLocalCurrentHref
7123 \else
7124   \global\let\@currentHref\HyperGlobalCurrentHref
7125 \fi
7126 \UseHook{__hyp/target/setname}%
7127 }

```

`\Hy@MakeCurrentHref`

```
7128 \def\Hy@MakeCurrentHref#1{%
7129   \edef\HyperLocalCurrentHref{#1}%
7130   \@onelevel@sanitize\HyperLocalCurrentHref
7131   \global\let\HyperGlobalCurrentHref\HyperLocalCurrentHref
7132   \let\HyperLocalCurrentHref\HyperGlobalCurrentHref
7133   \ifHy@localanchorname
7134     \let\@currentHref\HyperLocalCurrentHref
7135   \else
7136     \global\let\@currentHref\HyperGlobalCurrentHref
7137   \fi
7138 }
```

`\Hy@MakeCurrentHrefAuto` This command is e.g. used to create destinations for unnumbered sections and chapters. For new formats we add a hook which allows to overwrite the name of the next destination.

```
7139 \def\Hy@MakeCurrentHrefAuto#1{%
7140   \Hy@GlobalStepCount\Hy@linkcounter
7141   \Hy@MakeCurrentHref{#1.\the\Hy@linkcounter}%
7142   \UseHook{__hyp/target/setname}}
```

`\@currentHlabel` `\@currentHlabel` is only defined for compatibility with package ‘hypdvips’.

```
7143 \def\@currentHlabel{\@currentHref}
```

29 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.

```
7144 \def\hypergetref#1{\getrefbykeydefault{#1}{}{??}}
7145 \def\hypergetpageref#1{\getrefbykeydefault{#1}{page}{0}}
```

30 Package varwidth support

2023-11-07: `varwidth` needs a special configuration point to insert its handler. We use a socket for this.

```
7146 \@if@t@r\fmtversion{2023-11-01}
7147 {
7148   \AddToHook{package/varwidth/after}
7149   {
7150     \NewSocketPlug{hyp/raisedlink}{varwidth}{\@vwid@wrap{#1}}
7151     \appto\@vwid@setup{\AssignSocketPlug{hyp/raisedlink}{varwidth}}
7152   }
7153 }
```

31 Package titlesec and titletoc support

This code is contributed by Javier Bezos (Email: jbezos@arrakis.es).

Package titlesec support:


```

7154 \@ifpackageloaded{titlesec}{%
7155   \def\ttl@Hy@steplink#1{%
7156     \Hy@MakeCurrentHrefAuto{#1*}%
7157     \edef\ttl@Hy@saveanchor{%
7158       \noexpand\Hy@raisedlink{%
7159         \noexpand\hyper@anchorstart{\@currentHref}%
7160         \noexpand\hyper@anchorend
7161         \def\noexpand\ttl@Hy@SavedCurrentHref{\@currentHref}%
7162         \noexpand\ttl@Hy@PatchSaveWrite
7163       }%
7164     }%
7165   }%
7166   \def\ttl@Hy@PatchSaveWrite{%
7167     \begingroup
7168     \toks@\expandafter{\ttl@savewrite}%
7169     \edef\x{\endgroup
7170       \def\noexpand\ttl@savewrite{%
7171         \let\noexpand\@currentHref
7172           \noexpand\ttl@Hy@SavedCurrentHref
7173         \the\toks@
7174       }%
7175     }%
7176     \x
7177   }%
7178   \def\ttl@Hy@refstepcounter#1{%
7179     \let\ttl@b\Hy@raisedlink
7180     \def\Hy@raisedlink##1{%
7181       \def\ttl@Hy@saveanchor{\Hy@raisedlink{##1}}%
7182     }%
7183     \refstepcounter{#1}%
7184     \let\Hy@raisedlink\ttl@b
7185   }%
7186 }{}

```

32 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

```

7187 \@ifpackageloaded{longtable}{%
7188   \@ifundefined{hyper@nopatch@longtable}{%
7189     \begingroup
7190     \def\y{\LT@array}%
7191     \@ifundefined{scr@LT@array}{%
7192       \@ifundefined{adl@LT@array}{\def\y{\adl@LT@array}}%
7193     }{\def\y{\scr@LT@array}}%
7194     \long\def\x\refstepcounter#1#2\@sharp#3#4\@nil{%
7195       \expandafter\endgroup
7196       \expandafter\def\y[##1]##2{%
7197         \H@refstepcounter{#1}%

```

```

7198 \hyper@makecurrent{table}%
7199 \let\Hy@LT@currentHref\@currentHref
7200 #2\@sharp####4%
7201 }%
7202 }%
7203 \expandafter\expandafter\expandafter\x\y[#{1}]{#2}\@nil

```

Patch of `\LT@start`: add anchor before first line after `\vskip\LTpre`

```

7204 \begingroup
7205 \def\x#1\ifvoid\LT@foot#2\fi#3\@nil{%
7206 \endgroup
7207 \def\LT@start{%
7208 #1%
7209 \ifvoid\LT@foot#2\fi
7210 \let\@currentHref\Hy@LT@currentHref
7211 \Hy@raisedlink{%
7212 \hyper@anchorstart{\@currentHref}\hyper@anchorend
7213 }%
7214 #3%
7215 }%
7216 }%
7217 \expandafter\x\LT@start\@nil
7218 }{}
7219 }{}

```

33 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 41). change 2023-06-14: previously `hyperref` contained code that moved the equation incrementation inside the `math` environment to avoid specials outside and a wrong vertical spacing of equation environments. Since 2021/08/24 this code is now in `amsmath` directly and so has been removed here.

This and more math related patches can be suppressed with `\hyper@nopatch@mathenv`

```

7220 \let\new@refstepcounter\refstepcounter
7221 \let\H@equation\equation
7222 \let\H@endequation\endequation
7223 \@ifundefined{hyper@nopatch@mathenv}{%

```

If `amsmath` was loaded before the following does nothing. If `amsmath` is loaded later it will overwrite the definition again, which is what is wanted here. If it is not loaded the new definition of `equation` will be used.

```

7224 \@ifpackageloaded{amsmath}{}{%
7225 \def\equation{%
7226 \let\refstepcounter\H@refstepcounter
7227 \H@equation
7228 \hyper@makecurrent{equation}%

```

`\mathopen` is needed in case the equation starts with an unary minus, for example.

```

7229 \mathopen{%
7230 \Hy@raisedlink{\hyper@anchorstart{\@currentHref}}%
7231 }%

```

```

7232 \let\refstepcounter\new@refstepcounter
7233 }%
7234 \def\endequation{%
7235 \ifx\Hy@raisedlink\@empty
7236 \hyper@anchorend
7237 \else
7238 \mathclose{\Hy@raisedlink{\hyper@anchorend}}%
7239 \fi
7240 \H@endequation
7241 }%
7242 }
7243 }-{}

```

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.

```

7244 \newif\if@eqnstar
7245 \@eqnstarfalse
7246 \let\H@eqnarray\eqnarray
7247 \let\H@endeqnarray\endeqnarray
7248 \@ifundefined{hyper@nopatch@mathenv}{%
7249 \def\eqnarray{%
7250 \let\Hy@reserved@a\relax
7251 \def\@currentHref{}%
7252 \H@eqnarray
7253 \if@eqnstar
7254 \else
7255 \ifx\\\@currentHref\\%
7256 \else
7257 \hyper@makecurrent{equation}%
7258 \mathopen{%
7259 \Hy@raisedlink{%
7260 \hyper@anchorstart{\@currentHref}\hyper@anchorend
7261 }%
7262 }%
7263 \fi
7264 \fi
7265 }
7266 \def\endeqnarray{%
7267 \H@endeqnarray
7268 }
7269 }-{}

```

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.

```

7270 \@namedef{eqnarray*}{%
7271 \protected\def\@eqnrc{\nonumber\@seqnrc}\@eqnstartrue\eqnarray
7272 }
7273 \@namedef{endeqnarray*}{%
7274 \nonumber\endeqnarray\@eqnstarfalse
7275 }

```

Then again, we have the *subeqnarray* package. Tanmoy provided some code for this:

```

7276 \@ifundefined{subeqnarray}{}{%
7277 \let\H@subeqnarray\subeqnarray
7278 \let\H@endsubeqnarray\endsubeqnarray
7279 \def\subeqnarray{%
7280 \let\Hy@reserved@a\relax
7281 \H@subeqnarray
7282 \hyper@makecurrent{equation}%
7283 \hyper@anchorstart{\@currentHref}{\hyper@anchorend
7284 }%
7285 \def\endsubeqnarray{%
7286 \H@endsubeqnarray
7287 }%
7288 \providecommand\theHsubequation{\theHequation\alph{subequation}}%
7289 }

```

The aim of this macro is to produce a sanitized version of its argument, to make it a safe label.

```

7290 \def\make@stripped@name#1{%
7291 \begingroup
7292 \escapechar\m@ne
7293 \global\let\newname\@empty
7294 \protected@edef\Hy@tempa{#1}%
7295 \edef\@tempb{%
7296 \noexpand\@tfor\noexpand\Hy@tempa:=%
7297 \expandafter\strip@prefix\meaning\Hy@tempa
7298 }%
7299 \@tempb\do{%
7300 \if\Hy@tempa\else
7301 \if\Hy@tempa\else
7302 \xdef\newname{\newname\Hy@tempa}%
7303 \fi
7304 \fi
7305 }%
7306 \endgroup
7307 }

```

Support for amsmath's subequations: change 2023-06-14: we use hooks to no longer depend on amsmath being loaded before hyperref. Once amsmath sets the theH-representation itself this can go completely.

```

7308 \AddToHook{cmd/subequations/before}
7309 {%
7310 \stepcounter{equation}%
7311 \protected@edef\theHparentequation{\theHequation}%
7312 \addtocounter{equation}{-1}%
7313 }
7314
7315 \AddToHook{cmd/subequations/after}
7316 {%
7317 \def\theHequation{\theHparentequation\alph{equation}}%
7318 \ignorespaces
7319 }

```

34 Support for theorems

Hyperlink support in theorems has to resolve typically three problems:

- The `\refstepcounter` can be issued too early. The target it produces can be separated from the theorem and then the link is wrong (see testfiles thm-005-xx). It can also affect spacing. This means that it is better if this `\refstepcounter` doesn't produce a target.
- The natural place for the target (before the theorem label) is normally not printed directly but delayed to the next paragraph begin (through the `\item` code or by other means). and `\label` commands used directly at the begin of the environment are perhaps processed *before* the target is created and so do not know the correct `\@currentHref` value. That means that if `\refstepcounter` does not produce a target, it should nevertheless update the target name.
- The target should be placed (in horizontal mode) before the theorem label to avoid side effects on spacing. For this a suitable place must be found depending on the actual theorem definition.

Theorems typically issue the `\refstepcounter` in `\@thm`. The first two points can therefore be resolved by patching this command and replacing the `\refstepcounter`.

The last point is the most complicated. Simply moving at the point `\refstepcounter` is encountered into the next para hook doesn't work, as this can be in a header if there is a page break. The next item hook doesn't work for the same reason, also not every theorem environment actually uses `\item` (e.g. `amsthm` and `ams-classes`). Patching (or using a hook) `\@begintheorem` doesn't work either as `ntheorem` redefines this on the fly.

For now we move the target creation into the item hook. This is not perfect, as it can end up in header or be too much to the right, but there is not really a better place.

The patch will not apply to `cleveref`, this means that with `cleveref` there can be a page break between target and theorem but beside this it hopefully does the right thing. `\@currentHref` is updated directly for labels set before the actual start of the paragraph. The target can be behind a target created from a following list, so we restore `\@currentHref` just in case. Later we could use sockets here (or hope that the packages take this over).

```
7320 \newcommand\Hy@theorem@refstepcounter[1]
7321  {%
7322   \H@refstepcounter{#1}%
7323   \hyper@makecurrent{#1}%
7324   \global\let\Hy@dth@currentHref\@currentHref
7325   \Hy@theorem@makelinktarget{\Hy@dth@currentHref}%
7326  }
7327 \newcommand\Hy@theorem@makelinktarget[1]
7328  {
7329   \AddToHookNext{cmd/item/before}
7330   {\AddToHookNext{para/begin}
7331    {\let\Hy@tempa\@currentHref
7332     \MakeLinkTarget*{#1}% \Hy@dth@currentHref
```

```

7333     \global\let\@currentHref\Hy@tempa
7334     }%
7335     }%
7336 }

```

amsthm doesn't issue an item in the theorem, we delay the target into `\deferred@thm@head` and hope that it always begins a paragraph.

```

7337 \AddToHook{begindocument}
7338 {%
7339   \ifundefined{deferred@thm@head}{}
7340   {%
7341     \let\Hy@deferred@thm@head\deferred@thm@head
7342     \def\deferred@thm@head#1{\Hy@deferred@thm@head{#1}}%
7343     \renewcommand\Hy@theorem@makelinktarget[1]
7344     {%
7345       \AddToHookNext{cmd/deferred@thm@head/before}
7346       {\AddToHookNext{para/begin}
7347        {\let\Hy@tempa\@currentHref
7348         \MakeLinkTarget*{#1}}%
7349        \global\let\@currentHref\Hy@tempa
7350        }%
7351        }%
7352        }%
7353        }%
7354 }
7355 \ifundefined{hyper@nopatch@thm}{}%
7356 \AtBeginDocument{%
7357   \ifpackageloaded{cleveref}
7358   {\AddToHook{cmd/@thm/before}{\ifhmode\unskip\fi}}
7359   {%
7360     \ifpatchable\@thm{\refstepcounter}
7361     {\patchcmd\@thm{\refstepcounter}{\Hy@theorem@refstepcounter}{}{}}
7362     {}%
7363     }}{}

```

35 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. If `\hyper@nopatch@footnote` is defined we don't patch but assume that addings links to footnotes is handled elsewhere.

```

7364 \ifundefined{hyper@nopatch@footnote}{}%
7365 \ifHy@hyperfootnotes
7366 \ifundefined{theHfootnote}
7367 {\newcounter{Hfootnote}}
7368 {\let\H@@theHfootnote\theHfootnote
7369 \let\theHfootnote\undefined
7370 \newcounter{Hfootnote}
7371 \let\theHfootnote\H@@theHfootnote
7372 }%

```

where is this used?

```
7373 \@ifundefined{theHHmpfootnote}{%
7374 \let\theHHmpfootnote\theHHfootnote
7375 }{}
7376 \let\H@@footnotetext\@footnotetext
7377 \let\H@@footnotemark\@footnotemark
7378 \def\@xfootnotenext[#1]{%
7379 \begingroup
7380 \csname c@\@mpfn\endcsname #1\relax
7381 \unrestored@protected@xdef\@thefnmark{\thempfn}%
7382 \endgroup
7383 \ifx\@footnotetext\@mpfootnotetext
7384 \expandafter\H@@mpfootnotetext
7385 \else
7386 \expandafter\H@@footnotetext
7387 \fi
7388 }%
7389 \def\@xfootnotemark[#1]{%
7390 \begingroup
7391 \c@footnote #1\relax
7392 \unrestored@protected@xdef\@thefnmark{\thefootnote}%
7393 \endgroup
7394 \H@@footnotemark
7395 }%
7396 \let\H@@mpfootnotetext\@mpfootnotetext
7397 \long\def\@mpfootnotetext#1{%
7398 \H@@mpfootnotetext{%
7399 \ifHy@nesting
7400 \expandafter\@firstoftwo
7401 \else
7402 \expandafter\@secondoftwo
7403 \fi
7404 {%
7405 \expandafter\hyper@@anchor\expandafter{%
7406 \Hy@footnote@currentHref
7407 }{\ignorespaces #1}%
7408 }{%
7409 \Hy@raisedlink{%
7410 \expandafter\hyper@@anchor\expandafter{%
7411 \Hy@footnote@currentHref
7412 }{\relax}%
7413 }\ignorespaces #1%
7414 }%
7415 }%
7416 }%
7417 \long\def\@footnotetext#1{%
7418 \H@@footnotetext{%
7419 \ifHy@nesting
7420 \expandafter\@firstoftwo
7421 \else
7422 \expandafter\@secondoftwo
7423 \fi
7424 {%
7425 \expandafter\hyper@@anchor\expandafter{%
```

```

7426     \Hy@footnote@currentHref
7427     }{\ignorespaces #1}%
7428   }{%
7429     \Hy@raisedlink{%
7430       \expandafter\hyper@@anchor\expandafter{%
7431         \Hy@footnote@currentHref
7432       }{\relax}%
7433     }%
7434     \let\@currentHref\Hy@footnote@currentHref
7435     \let\@currentlabelname\@empty
7436     \ignorespaces #1%
7437   }%
7438 }%
7439 }%

```

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.

```

7440 \def\@footnotemark{%
7441   \leavevmode
7442   \ifhmode\edef\@x@sf{\the\spacefactor}\nobreak\fi
7443   \stepcounter{Hfootnote}%
7444   \global\let\Hy@saved@currentHref\@currentHref
7445   \hyper@makecurrent{Hfootnote}%
7446   \global\let\Hy@footnote@currentHref\@currentHref
7447   \global\let\@currentHref\Hy@saved@currentHref
7448   \hyper@linkstart{link}{\Hy@footnote@currentHref}%
7449   \@makefnmark
7450   \hyper@linkend
7451   \ifhmode\spacefactor\@x@sf\fi
7452   \relax
7453 }%

```

`Tabularx` causes footnote problems, disable the linking if that is loaded. Since v6.82i footnotes are only disabled inside the environment ‘`tabularx`’.

```

7454 \@ifpackageloaded{tabularx}{%
7455   \let\HyOrg@TX@endtabularx\TX@endtabularx
7456   \def\Hy@tabularx@hook{%
7457     \let\@footnotetext\H@\@footnotetext
7458     \let\@footnotemark\H@\@footnotemark
7459     \let\@mpfootnotetext\H@\@mpfootnotetext
7460   }%
7461   \begingroup
7462     \toks@\expandafter{\TX@endtabularx}%
7463     \xdef\Hy@gtemp{%
7464       \noexpand\Hy@tabularx@hook
7465       \the\toks@
7466     }%
7467   \endgroup
7468   \let\TX@endtabularx\Hy@gtemp
7469 }{}%

```

Support for footnotes in `p` columns of `longtable`. Here `\footnote` commands are

split 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

```

7470 \ifpackageloaded{longtable}{%
7471   \CheckCommand{\LT@p@ftntext}[1]{%
7472     \edef\@tempa{%
7473       \the\LT@p@ftn
7474       \noexpand\footnotetext[\the\c@footnote]%
7475     }%
7476     \global\LT@p@ftn\expandafter{\@tempa{#1}}%
7477   }%
7478   \long\def\LT@p@ftntext#1{%
7479     \edef\@tempa{%
7480       \the\LT@p@ftn
7481       \begingroup
7482         \noexpand\c@footnote=\the\c@footnote\relax
7483         \noexpand\protected@xdef\noexpand\@thefnmark{%
7484           \noexpand\thempfn
7485         }%
7486         \noexpand\Hy@LT@footnotetext{%
7487           \Hy@footnote@currentHref
7488         }%
7489       }%
7490       \global\LT@p@ftn\expandafter{%
7491         \@tempa{#1}%
7492       \endgroup
7493     }%
7494   }%
7495   \long\def\Hy@LT@footnotetext#1#2{%
7496     \H@@footnotetext{%
7497       \ifHy@nesting
7498         \hyper@@anchor{#1}{#2}%
7499       \else
7500         \Hy@raisedlink{%
7501           \hyper@@anchor{#1}{\relax}%
7502         }%
7503       \def\@currentHref{#1}%
7504       \let\@currentlabelname\@empty
7505       #2%
7506     \fi
7507   }%
7508 }%
7509 }-}%

```

Footnotes for `fancyvrb` (Fix by Manuel Pégourié-Gonnard).

```

7510 \ifpackageloaded{fancyvrb}{%
7511   \def\V@@footnotetext{%
7512     \insert\footins\bgroup
7513     \csname reset@font\endcsname
7514     \footnotesize
7515     \interlinepenalty\interfootnotelinepenalty
7516     \splittopskip\footnotesep
7517     \splitmaxdepth\dp\strutbox
7518     \floatingpenalty \@MM

```

```

7519 \hsize\columnwidth
7520 \@parboxrestore
7521 \def\@currentcounter{footnote}%
7522 \protected@edef\@currentlabel{\csname p@footnote\endcsname\@thefn-
mark}%
7523 \@makefn-text{}%
7524 \rule{\z@}{\footnotesep}%
7525 \bgroup
7526 \aftergroup\V@@@footnotetext
7527 \Hy@raisedlink{%
7528 \expandafter\hyper@@anchor\expandafter{%
7529 \Hy@footnote@currentHref
7530 }{\relax}}%
7531 }%
7532 \let\@currentHref\Hy@footnote@currentHref
7533 \let\@currentlabelname\@empty
7534 \ignorespaces
7535 }%
7536 }{}%

```

KOMA-Script or newer LaTeX defines `\footref` that uses both `\ref` and `\@footnotemark` resulting in two links, one of them wrong.

```

7537 \def\Hy@temp#1{%
7538 \begingroup
7539 \unrestored@protected@xdef\@thefnmark{\ref{#1}}%
7540 \endgroup
7541 \@footnotemark
7542 }%
7543 \ifx\Hy@temp\footref
7544 \def\footref#1{%
7545 \begingroup
7546 \unrestored@protected@xdef\@thefnmark{\ref{#1}}%
7547 \endgroup
7548 \H@@@footnotemark
7549 }%
7550 \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.

```

7551 \let\HyOrg@maketitle\maketitle
7552 \def\maketitle{%
7553 \let\Hy@saved@footnotemark\@footnotemark
7554 \let\Hy@saved@footnotetext\@footnotetext
7555 \let\@footnotemark\H@@@footnotemark
7556 \let\@footnotetext\H@@@footnotetext
7557 \@ifnextchar[\Hy@maketitle@optarg{% ]
7558 \HyOrg@maketitle
7559 \Hy@maketitle@end
7560 }%
7561 }%
7562 \def\Hy@maketitle@optarg[#1]{%
7563 \HyOrg@maketitle[#{#1}]%
7564 \Hy@maketitle@end
7565 }%

```

```

7566 \def\Hy@maketitle@end{%
7567   \ifx\@footnotemark\H@@footnotemark
7568     \let\@footnotemark\Hy@saved@footnotemark
7569   \fi
7570   \ifx\@footnotetext\H@@footnotetext
7571     \let\@footnotetext\Hy@saved@footnotetext
7572   \fi
7573 }%

```

`\realfootnote` Does anyone remember the function and purpose of `\realfootnote`?

```

7574 \def\realfootnote{%
7575   \ifnextchar[\@xfootnote%]
7576     {\stepcounter{\@mpfn}%
7577     \protected@xdef\@thefnmark{\thempfn}%
7578     \H@@footnotemark\H@@footnotetext
7579   }%
7580 }%

7581 \fi
7582 }{}
7583 \Hy@DisableOption{hyperfootnotes}

7584 \</packageEnd>
7585 \< *check>
7586 \checklatex
7587 \checkcommand\def\@xfootnotenext[#1]{%
7588   \begingroup
7589     \csname c@\@mpfn\endcsname #1\relax
7590     \unrestored@protected@xdef\@thefnmark{\thempfn}%
7591   \endgroup
7592   \@footnotetext
7593 }
7594 \checkcommand\def\@xfootnotemark[#1]{%
7595   \begingroup
7596     \c@footnote #1\relax
7597     \unrestored@protected@xdef\@thefnmark{\thefootnote}%
7598   \endgroup
7599   \@footnotemark
7600 }
7601 \checkcommand\def\@footnotemark{%
7602   \leavevmode
7603   \ifhmode\edef\@x@sf{\the\spacefactor}\nobreak\fi
7604   \@makefnmark
7605   \ifhmode\spacefactor\@x@sf\fi
7606   \relax
7607 }
7608 \</check>
7609 \< *packageEnd>

```

36 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.

```

7610 \@ifundefined{hyper@nopatch@caption}{%
7611 \def\caption{%
7612 \ifx\@capttype\@undefined
7613 \@latex@error{\noexpand\caption outside float}\@ehd
7614 \expandafter\@gobble
7615 \else
7616 \H@refstepcounter\@capttype
7617 \let\Hy@tempa\@caption
7618 \@ifundefined{float@caption}{%
7619 }{%
7620 \expandafter\ifx\csname @float@c@\@capttype\endcsname
7621 \float@caption
7622 \let\Hy@tempa\Hy@float@caption
7623 \fi
7624 }%
7625 \expandafter\@firstofone
7626 \fi
7627 {\@dblarg{\Hy@tempa\@capttype}}}%
7628 }
7629 \long\def\@caption#1[#2]#3{%
7630 \expandafter\ifx\csname if@capstart\expandafter\endcsname
7631 \csname iftrue\endcsname
7632 \global\let\@currentHref\hc@currentHref
7633 \else
7634 \hyper@makecurrent{\@capttype}%
7635 \fi
7636 \@ifundefined{NR@gettitle}{%
7637 \def\@currentlabelname{#2}%
7638 }{%
7639 \NR@gettitle{#2}%
7640 }%
7641 \par\addcontentsline{\csname ext@#1\endcsname}{#1}{%
7642 \protect\numberline{\csname the#1\endcsname}{\ignorespaces #2}%
7643 }%
7644 \begingroup
7645 \@parboxrestore
7646 \if@minipage
7647 \setminipage
7648 \fi
7649 \normalsize
7650 \expandafter\ifx\csname if@capstart\expandafter\endcsname
7651 \csname iftrue\endcsname
7652 \global\@capstartfalse
7653 \@makecaption{\csname fnum@#1\endcsname}{\ignorespaces#3}%
7654 \else
7655 \@makecaption{\csname fnum@#1\endcsname}{%
7656 \ignorespaces

```

If we cannot have nesting, the anchor is empty.

```

7657 \ifHy@nesting
7658 \expandafter\hyper@@anchor\expandafter{\@currentHref}{#3}%
7659 \else
7660 \Hy@raisedlink{%
7661 \expandafter\hyper@@anchor\expandafter{%
7662 \@currentHref

```

```

7663     }{\relax}%
7664     }%
7665     #3%
7666     \fi

```

as the anchor are set manually here, we have to update the tagging info. For now we test for the format but this should go again in 2025.

```

7667     \IfFormatAtLeastTF{2024-11-01}{\UseTaggingSocket{recordtarget}}{}%
7668     }%
7669     \fi
7670     \par
7671     \endgroup
7672 }}{}%end no patch

```

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’.

```

7673 \let\Hy@float@caption\@caption
7674 \newcommand{\HyNew@float@makebox}[1]{%
7675   \HyOrg@float@makebox{%
7676     #1\relax
7677     \ifx\Hy@float@currentHref\@undefined
7678     \else
7679       \expandafter\hyper@@anchor\expandafter{%
7680         \Hy@float@currentHref
7681         }{\relax}%
7682       \global\let\Hy@float@currentHref\@undefined
7683     \fi
7684   }%
7685 }%
7686 \@ifpackageloaded{float}{%
7687   \def\Hy@float@caption{%
7688     \ifx\Hy@float@currentHref\@undefined
7689       \hyper@makecurrent{\@capttype}%
7690       \global\let\Hy@float@currentHref\@currentHref
7691     \else
7692       \let\@currentHref\Hy@float@currentHref
7693     \fi
7694     \float@caption
7695   }%
7696   \let\HyOrg@float@makebox\float@makebox
7697   \let\float@makebox\HyNew@float@makebox
7698 }{}

7699 </packageEnd>
7700 <*check>
7701 \checklatex[1999/06/01 - 2000/06/01]
7702 \checkcommand\def\caption{%
7703   \ifx\@capttype\@undefined
7704     \@latex@error{\noexpand\caption outside float}\@ehd
7705     \expandafter\@gobble
7706   \else
7707     \refstepcounter\@capttype

```

```

7708 \expandafter\@firstofone
7709 \fi
7710 {\@dblarg{\@caption\@capye}}%
7711 }
7712 \checkcommand\long\def\@caption#1[#2]#3{%
7713 \par
7714 \addcontentsline{\csname ext@#1\endcsname}{#1}{%
7715 \protect\numberline{\csname the#1\endcsname}{\ignorespaces #2}%
7716 }%
7717 \begingroup
7718 \@parboxrestore
7719 \if@minipage
7720 \setminipage
7721 \fi
7722 \normalsize
7723 \@makecaption{\csname fnum@#1\endcsname}{\ignorespaces #3}\par
7724 \endgroup
7725 }
7726 \</check>
7727 \*packageEnd

```

37 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 `\bibtex`; 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 that's a powerful, important package. Patrick Daly (daly@linmpi.mpg.de) has provided hooks for us, so all we need to do is activate them.

```

7728 \def\hyper@natlinkstart#1{%
7729 \Hy@backout{#1}%
7730 \hyper@linkstart{cite}{cite.#1}%
7731 \def\hyper@nat@current{#1}%
7732 }
7733 \def\hyper@natlinkend{%
7734 \hyper@linkend
7735 }
7736 \def\hyper@natlinkbreak#1#2{%
7737 \hyper@linkend#1\hyper@linkstart{cite}{cite.#2}%
7738 }
7739 \def\hyper@natanchorstart#1{%
7740 \Hy@raisedlink{\hyper@anchorstart{cite.#1}}%
7741 }
7742 \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.

```

7743 \@ifundefined{hyper@nopath@bib}

```

```

7744 {%
7745 \ifundefined{NAT@parse}{%
7746 \providecommand*{@extra@binfo}{%
7747 \providecommand*{@extra@b@citeb}{%
7748 \def\bibcite#1#2{%
7749 \@newl@bel{b}{#1\@extra@binfo}{%
7750 \hyper@link[cite]{cite.#1\@extra@b@citeb}{#2}%
7751 }%
7752 }%
7753 \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.”.

```

7754 \let\Hy@bibcite\bibcite
7755 \begingroup
7756 \ifundefined{bbl@cite@choice}{%
7757 \g@addto@macro\bbl@cite@choice{%
7758 \let\bibcite\Hy@bibcite
7759 }%
7760 }%
7761 \endgroup

```

`\@BIBLABEL` is working around a ‘feature’ of RevTeX.

```

7762 \providecommand*{\@BIBLABEL}{\@biblabel}%
7763 \def\@bibitem[#1]#2{%
7764 \@skiphyperreftrue
7765 \H@item{%
7766 \ifx\Hy@raisedlink\@empty
7767 \hyper@anchorstart{cite.#2\@extra@b@citeb}%
7768 \@BIBLABEL{#1}%
7769 \hyper@anchorend
7770 \else
7771 \Hy@raisedlink{%
7772 \hyper@anchorstart{cite.#2\@extra@b@citeb}\hyper@anchorend
7773 }%
7774 \@BIBLABEL{#1}%
7775 \fi
7776 \hfill
7777 }%
7778 \@skiphyperreffalse
7779 \if@filesw
7780 \begingroup
7781 \let\protect\noexpand
7782 \immediate\write\@auxout{%
7783 \string\bibcite{#2}{#1}%
7784 }%
7785 \endgroup
7786 \fi
7787 \ignorespaces
7788 }%

```

Since `\bibitem` is doing its own labelling, call the raw version of `\item`, to avoid extra spurious labels

```

7789 \def\@bibitem#1{%
7790 \@skiphyperreftrue\H@item\@skiphyperreffalse

```

```

7791 \Hy@raisedlink{%
7792 \hyper@anchorstart{cite.#1\@extra@b@citeb}\relax\hyper@anchorend
7793 }%
7794 \if@filesw
7795 \begingroup
7796 \let\protect\noexpand
7797 \immediate\write\@auxout{%
7798 \string\bibcite{#1}{\the\value{\@listctr}}%
7799 }%
7800 \endgroup
7801 \fi
7802 \ignorespaces
7803 }%
7804 }{}%
7805 }{}

7806 \</packageEnd>
7807 \< *check>
7808 \checklatex
7809 \checkcommand\def\@bibitem[#1]#2{%
7810 \item[\@biblabel{#1}\hfill]%
7811 \if@filesw
7812 {%
7813 \let\protect\noexpand
7814 \immediate\write\@auxout{%
7815 \string\bibcite{#2}{#1}%
7816 }%
7817 }%
7818 \fi
7819 \ignorespaces
7820 }
7821 \checkcommand\def\@bibitem#1{%
7822 \item
7823 \if@filesw
7824 \immediate\write\@auxout{%
7825 \string\bibcite{#1}{\the\value{\@listctr}}%
7826 }%
7827 \fi
7828 \ignorespaces
7829 }
7830 \</check>
7831 \< *packageEnd>

```

37.1 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.

```

7832 \@ifpackageloaded{harvard}{%
7833 \Hy@AtBeginDocument{%

```



```

7834 \Hy@Info{*** compatibility with harvard *** }%
7835 \Hy@raiselinksfalse
7836 \def\harvardcite#1#2#3#4{%
7837   \global\@namedef{HAR@fn@#1}{\hyper@@link[cite]{}{cite.#1}{#2}}%
7838   \global\@namedef{HAR@an@#1}{\hyper@@link[cite]{}{cite.#1}{#3}}%
7839   \global\@namedef{HAR@yr@#1}{\hyper@@link[cite]{}{cite.#1}{#4}}%
7840   \global\@namedef{HAR@df@#1}{\csname HAR@fn@#1\endcsname}%
7841 }%
7842 \def\HAR@citetoaux#1{%
7843   \if@filesw\immediate\write\@auxout{\string\citation{#1}}\fi%
7844   \ifHy@backref
7845     \ifx\@empty\@currentlabel
7846       \else
7847         \@sphack
7848         \if@filesw
7849           \protected@write\@auxout{}{%
7850             \string\@writefile{brf}{%
7851               \string\backcite{#1}{%
7852                 {\thepage}{\@currentlabel}{\@currentHref}%
7853               }%
7854             }%
7855           }%
7856         \fi
7857         \@esphack
7858       \fi
7859     \fi
7860 }%
7861 \def\harvarditem{%
7862   \@ifnextchar[{\@harvarditem}{\@harvarditem[\null]}%
7863 }%
7864 \def\@harvarditem[#1]#2#3#4#5\par{%
7865   \item[]%
7866   \hyper@anchorstart{cite.#4}\relax\hyper@anchorend
7867   \if@filesw
7868     \begingroup
7869     \def\protect##1{\string ##1\space}%
7870     \ifthenelse{equal{#1}{\null}}%
7871       {\def\next{{#4}{#2}{#2}{#3}}}%
7872       {\def\next{{#4}{#2}{#1}{#3}}}%
7873     \immediate\write\@auxout{\string\harvardcite\codeof\next}%
7874   \endgroup
7875   \fi
7876   \protect\hspace*{-\labelwidth}%
7877   \protect\hspace*{-\labelsep}%
7878   \ignorespaces
7879   #5%
7880   \ifHy@backref
7881     \newblock
7882     \backref{\csname br@#4\endcsname}%
7883   \fi
7884   \par
7885 }%

```

\HAR@checkcitations Package hyperref has added \hyper@@link, so the original test \HAR@checkci-

tations will fail every time and always will appear the “Changed labels” warning. So we have to redefine `\Har@checkcitations`:

```

7886 \long\def\HAR@checkcitations#1#2#3#4{%
7887 \def\HAR@tempa{\hyper@link[cite]{}{cite.#1}{#2}}%
7888 \expandafter\ifx\csname HAR@fn@#1\endcsname\HAR@tempa
7889 \def\HAR@tempa{\hyper@link[cite]{}{cite.#1}{#3}}%
7890 \expandafter\ifx\csname HAR@an@#1\endcsname\HAR@tempa
7891 \def\HAR@tempa{\hyper@link[cite]{}{cite.#1}{#4}}%
7892 \expandafter\ifx\csname HAR@yr@#1\endcsname\HAR@tempa
7893 \else
7894 \@tempswatruue
7895 \fi
7896 \else
7897 \@tempswatruue
7898 \fi
7899 \else
7900 \@tempswatruue
7901 \fi
7902 }%
7903 }%

7904 }-{}

```

37.2 Package chicago

The links by `\citeN` and `\shortciteN` should include the closing parentheses.

```

7905 \@ifpackageloaded{chicago}{%

\citeN
7906 \def\citeN{%
7907 \def\@citeseppen{-1000}%
7908 \def\@cite##1##2{##1}%
7909 \def\citeauthoryear##1##2##3{##1 (##3\@cite@opt)}%
7910 \@citedata@opt
7911 }%

\shortciteN
7912 \def\shortciteN{%
7913 \def\@citeseppen{-1000}%
7914 \def\@cite##1##2{##1}%
7915 \def\citeauthoryear##1##2##3{##2 (##3\@cite@opt)}%
7916 \@citedata@opt
7917 }%

\@citedata@opt
7918 \def\@citedata@opt{%
7919 \let\@cite@opt\@empty
7920 \@ifnextchar [{%
7921 \@tempswatruue
7922 \@citedatax@opt
7923 }{%
7924 \@tempswafalse
7925 \@citedatax[]%

```

```
7926 }%
7927 }%
```

`\@citedatax@opt`

```
7928 \def\@citedatax@opt[#1]{%
7929   \def\@cite@opt{, #1}%
7930   \@citedatax[#1]}%
7931 }%

7932 }{}
```

38 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{pdfpageduration={}}`. 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`.

Experimental!

This where we supply a destination for each page.

The name of destination is stored in the global command `\@currentHpage`, this allows it to retrieve it with an extended reference system like `zref` or the new property code from L^AT_EX 2023-11-01.

```
7933 \def\@currentHpage{Doc-Start}

7934 \ifclassloaded{slides}{%
7935   \def\Hy@SlidesFormatOptionalPage#1{(#1)}%
7936   \def\Hy@PageAnchorSlidesPlain{%
7937     \advance\c@page\@ne
7938     \xdef\@currentHpage{page.\the\c@slide.\the\c@overlay.\the\c@note%
7939       \ifnum\c@page=\@ne
7940         \else
7941         .\the\c@page
7942       \fi}%
7943   \edef\Hy@TempPageAnchor{%
7944     \noexpand\hyper@@anchor{%
7945       \@currentHpage
7946     }%
7947   }%
7948   \advance\c@page-\@ne
7949 }%
7950 \def\Hy@PageAnchorSlide{%
7951   \advance\c@page\@ne
7952   \ifnum\c@page>\@ne
7953     \@ifundefined{theHpage}{%
7954       \protected@edef\Hy@TheSlideOptionalPage{%
7955         \Hy@SlidesFormatOptionalPage{theHpage}%
7956       }%
7957     }{%
7958       \protected@edef\Hy@TheSlideOptionalPage{%
7959         \Hy@SlidesFormatOptionalPage{theHpage}%
7960       }%
7961     }%
7962   \else
```

```

7963   \def\Hy@TheSlideOptionalPage{}%
7964   \fi
7965   \advance\c@page-\@ne
7966   \pdfstringdef\@the@H@page{%
7967     \csname
7968       the%
7969       \@ifundefined{theH\Hy@SlidesPage}{H}%
7970       \Hy@SlidesPage
7971     \endcsname
7972     \Hy@TheSlideOptionalPage
7973   }%
7974   \@gobblethree
7975 }%
7976 \def\Hy@SlidesPage{slide}%
7977 \g@addto@macro\slide{%
7978   \def\Hy@SlidesPage{slide}%
7979 }%
7980 \g@addto@macro\overlay{%
7981   \def\Hy@SlidesPage{overlay}%
7982 }%
7983 \g@addto@macro\note{%
7984   \def\Hy@SlidesPage{note}%
7985 }%
7986 }{%
7987 \def\Hy@PageAnchorSlidesPlain{}%
7988 \def\Hy@PageAnchorSlide{}%
7989 }
7990 \def\Hy@EveryPageAnchor{%
7991   \Hy@DistillerDestFix
7992   \ifHy@pageanchor
7993     \ifHy@hypertextnames
7994       \ifHy@plainpages
7995         \def\Hy@TempPageAnchor{\hyper@@anchor{page.\the\c@page}}%
7996         \xdef\@currentHpage{page.\the\c@page}%
7997         \Hy@PageAnchorSlidesPlain
7998       \else
7999         \begingroup
8000           \let\@number\@firstofone
8001           \Hy@unicodefalse
8002           \Hy@PageAnchorSlide
8003           \pdfstringdef\@the@H@page{\thepage}%
8004         \endgroup
8005         \EdefUnescapeString\@the@H@page{\@the@H@page}%
8006         \def\Hy@TempPageAnchor{\hyper@@anchor{page.\@the@H@page}}%
8007         \xdef\@currentHpage{page.\@the@H@page}%
8008       \fi
8009     \else
8010       \Hy@GlobalStepCount\Hy@pagecounter
8011       \def\Hy@TempPageAnchor{%
8012         \hyper@@anchor{page.\the\Hy@pagecounter}%
8013       }%
8014       \xdef\@currentHpage{page.\the\Hy@pagecounter}%
8015     \fi
8016   \vbox to 0pt{%

```

```

8017 \kern\voffset
8018 \kern\topmargin
8019 \kern-1bp\relax
8020 \hbox to 0pt{%
8021   \kern\hoffset
8022   \kern\ifodd\value{page}%
8023     \oddsidemargin
8024   \else
8025     \evensidemargin
8026   \fi
8027 \kern-1bp\relax
8028 \Hy@TempPageAnchor\relax
8029 \hss
8030 }%
8031 \vss
8032 }%
8033 \fi
8034 }
8035 \g@addto@macro\Hy@EveryPageBoxHook{%
8036 \Hy@EveryPageAnchor
8037 }

```

39 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. In newer L^AT_EX releases this is defined to put a % at the end of the line in the tocfile.

```

8038 \providecommand\protected@file@percent{}
8039 \@ifundefined{hyper@nopatch@toc}{%
8040 \def\addcontentsline#1#2#3{% toc extension, type, tag
8041 \begingroup
8042 \let\label@gobble
8043 \ifx\@currentHref\@empty
8044 \Hy@Warning{%
8045   No destination for bookmark of \string\addcontentsline,%
8046 \MessageBreak destination is added%
8047 }%
8048 \phantomsection
8049 \fi
8050 \expandafter\ifx\c@toclevel@#2\endcsname\relax
8051 \begingroup
8052 \def\Hy@tempa{#1}%
8053 \ifx\Hy@tempa\Hy@bookmarkstype
8054 \Hy@WarningNoLine{%
8055   bookmark level for unknown #2 defaults to 0%
8056 }%
8057 \else
8058 \Hy@Info{bookmark level for unknown #2 defaults to 0}%
8059 \fi
8060 \endgroup

```

```

8061 \expandafter\gdef\csname toplevel@#2\endcsname{0}%
8062 \fi
8063 \edef\Hy@toclevel{\csname toplevel@#2\endcsname}%
8064 \Hy@writebookmark{\csname the#2\endcsname}%
8065   {#3}%
8066   {\@currentHref}%
8067   {\Hy@toclevel}%
8068   {#1}%
8069 \ifHy@verbose
8070 \begingroup
8071 \def\Hy@tempa{#3}%
8072 \@onelevel@sanitize\Hy@tempa
8073 \let\temp@online\on@line
8074 \let\on@line\@empty
8075 \Hy@Info{%
8076   bookmark\temp@online:\MessageBreak
8077   thecounter {\csname the#2\endcsname}\MessageBreak
8078   text {\Hy@tempa}\MessageBreak
8079   reference {\@currentHref}\MessageBreak
8080   toplevel {\Hy@toclevel}\MessageBreak
8081   type {#1}%
8082 }%
8083 \endgroup
8084 \fi
8085 \addtocontents{#1}{%
8086 \protect\contentsline{#2}{#3}{\thepage}{\@currentHref}\protected@file@per-
cent
8087 }%
8088 \endgroup
8089 }
8090 }-}

```

`\contentsline` The page number might be empty. In this case the link for the page number is suppressed to avoid little link boxes.

change 2022-11-13: To avoid problems if `MakeUppercase` is used around the entry we use special protected commands:

```

8091 \protected\def\Hy@toclinkstart{\hyper@linkstart{link}{\Hy@tocdestname}}
8092 \protected\def\Hy@toclinkend{\hyper@linkend}
8093
8094 \@ifundefined{hyper@nopatch@toc}{%
8095 \def\contentsline#1#2#3#4{%
8096 \begingroup
8097 \Hy@safe@activestruer
8098 \edef\x{\endgroup
8099 \def\noexpand\Hy@tocdestname{#4}%
8100 }\x
8101 \ifx\Hy@tocdestname\@empty
8102 \csname l@#1\endcsname{#2}{#3}%
8103 \else
8104 \ifcase\Hy@linktoc % none
8105 \csname l@#1\endcsname{#2}{#3}%
8106 \or % section
8107 \csname l@#1\endcsname{%
8108 \Hy@toclinkstart{#2}\Hy@toclinkend

```

```

8109     }{#3}%
8110 \or % page
8111   \def\Hy@temp{#3}%
8112   \ifx\Hy@temp\@empty
8113     \csname l@#1\endcsname{#2}{#3}%
8114   \else
8115     \csname l@#1\endcsname{{#2}}{%
8116     \Hy@toclinkstart{#3}\Hy@toclinkend
8117     }%
8118   \fi
8119 \else % all
8120   \def\Hy@temp{#3}%
8121   \ifx\Hy@temp\@empty
8122     \csname l@#1\endcsname{%
8123     \Hy@toclinkstart{#2}\Hy@toclinkend
8124     }{}%
8125   \else
8126     \csname l@#1\endcsname{%
8127     \Hy@toclinkstart{#2}\Hy@toclinkend
8128     }{%
8129     \Hy@toclinkstart{#3}\Hy@toclinkend
8130     }%
8131   \fi
8132 \fi
8133 \fi
8134 }
8135 }{}

8136 </packageEnd>
8137 (*check)
8138 \checklatex
8139 \checkcommand\def\addcontentsline#1#2#3{%
8140 \addtocontents{#1}{\protect\contentsline{#2}{#3}{\thepage}}%
8141 }
8142 \checkcommand\def\contentsline#1{\csname l@#1\endcsname}
8143 </check>
8144 (*packageEnd)

```

40 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. change 2024-02-14: use a csname to handle counter names with commands, see issue #330 change 2024-10-13: disable patches in new format 2024-11-01.

```

8145 \IfFormatAtLeastTF{2024-11-01}{\def\hyper@nopatch@counter{}}{}
8146 \ifundefined{hyper@nopatch@counter}
8147 {
8148   \let\H@definecounter\@definecounter
8149   \def\@definecounter#1{%
8150     \H@definecounter{#1}%
8151     \expandafter
8152     \gdef\csname theH#1\expandafter\endcsname\expandafter
8153     {\expandafter\@arabic\csname c@#1\endcsname}}%

```

```
8154 }{}
```

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.

```
8155 \@ifundefined{hyper@nopatch@counter}
8156 {
8157   \let\H@newctr\@newctr
8158   \def\@newctr#1[#2]{%
8159     \H@newctr#1[#2]}%
8160   \expandafter\gdef\csname theH#1\endcsname{%
8161     \csname the\@ifundefined{theH#2}{-}{H}#2\endcsname.\arabic{#1}%
8162   }%
8163 }
8164 }{}
```

41 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.

If `\hyper@nopatch@amsmath@tag` is defined we don't patch but assume that kernel code adds anchors to equations. change 2023-06-14: use a hook to make it independent of loading order.

```
8165 \@ifundefined{hyper@nopatch@amsmath@tag}
8166 {%
8167   \AddToHook{package/amsmath/after}{%
8168     \def\Hy@make@anchor{%
8169       \Hy@MakeCurrentHrefAuto{AMS}%
8170       \Hy@raisedlink{\hyper@anchorstart{\@currentHref}\hyper@anchorend}%
8171     }%
8172     \def\Hy@make@df@tag@@#1{%
8173       \gdef\df@tag{%
8174         \maketag@@@{\Hy@make@anchor#1}%
8175         \def\@currentlabel{#1}%
8176       }%
8177     }%
8178     \def\Hy@make@df@tag@@@#1{%
8179       \gdef\df@tag{%
8180         \tagform@{\Hy@make@anchor#1}%
8181         \toks@\@xp{\p@equation{#1}}%
8182         \edef\@currentlabel{\the\toks@}%
8183       }%
8184     }%
8185     \let\HyOrg@make@df@tag@@\make@df@tag@@
8186     \let\HyOrg@make@df@tag@@@\make@df@tag@@@
8187     \let\make@df@tag@@\Hy@make@df@tag@@
8188     \let\make@df@tag@@@\Hy@make@df@tag@@@
8189   }{ }
8190 }{}
```


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}}}
```

41.1 \@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. change 2024-07-10: define \HyOrg@addtoreset always for cleveref compability with tagging code, see <https://github.com/latex3/tagging-project/issues/2>

```

8191 \def\HyOrg@addtoreset#1#2{\expandafter\@cons\csname cl@#2\endcsname {{#1}}}
8192 \@ifundefined{hyper@nopatch@counter}
8193 {
8194   \let\HyOrg@addtoreset\@addtoreset
8195   \def\@addtoreset#1#2{%
8196     \HyOrg@addtoreset{#1}{#2}%
8197     \expandafter\xdef\csname theH#1\endcsname{%
8198       \expandafter\noexpand
8199         \csname the\@ifundefined{theH#2}{H#2}\endcsname
8200       .\noexpand\the\noexpand\value{#1}%
8201     }%
8202   }
8203 }{}
```

\numberwithin A appropriate definition of hyperref’s companion counter (\theH...) is added for correct link names.

```

8204 </packageEnd>
8205 <*check>
8206 \checkpackage{amsmath}[1999/12/14 - 2000/06/06]
8207 \checkcommand\newcommand{\numberwithin}[3][\arabic]{%
8208   \@ifundefined{c@#2}{\@nocounterr{#2}}{%
8209     \@ifundefined{c@#3}{\@nocnterr{#3}}{%
8210       \@addtoreset{#2}{#3}%
8211       \@xp\xdef\csname the#2\endcsname{%
8212         \@xp\@nx\csname the#3\endcsname .\@nx#1{#2}%
8213       }%
8214     }%
8215   }%
8216 }%
8217 </check>
```

change 2023-06-14: use hook to make independent of loading order

```

8218 <*packageEnd>
8219 \@ifundefined{hyper@nopatch@counter}
8220 {
8221   \AddToHook{package/amsmath/after}{%
```

```

8222 \renewcommand*{\numberwithin}[3][\arabic]{%
8223 \@ifundefined{c@#2}{\@nocounterr{#2}}{%
8224 \@ifundefined{c@#3}{\@nocnterr{#3}}{%
8225 \HyOrg@addtoreset{#2}{#3}%
8226 \@xp\xdef\csname the#2\endcsname{%
8227 \@xp\@nx\csname the#3\endcsname .\@nx#1{#2}%
8228 }%
8229 \@xp\xdef\csname theH#2\endcsname{%
8230 \@xp\@nx
8231 \csname the\@ifundefined{theH#3}{}H#3\endcsname
8232 .\@nx#1{#2}%
8233 }%
8234 }%
8235 }%
8236 }%
8237 }{}
8238 }{}

```

42 Included figures

Simply intercept the low level graphics package macro.

```

8239 \ifHy@hyperfigures
8240 \let\Hy@Gin@setfile\Gin@setfile
8241 \def\Gin@setfile#1#2#3{%
8242 \hyperimage{#3}{\Hy@Gin@setfile{#1}{#2}{#3}}%
8243 }%
8244 \fi
8245 \Hy@DisableOption{hyperfigures}

```

43 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.

```

8246 \ifHy@hyperindex
8247 \def\HyInd@ParenLeft{()}%
8248 \def\HyInd@ParenRight{)}%
8249 \def\hyperindexformat#1#2{%
8250 \let\HyOrg@hyperpage\hyperpage
8251 \let\hyperpage\@firstofone
8252 #1{\HyOrg@hyperpage{#2}}%
8253 \let\hyperpage\HyOrg@hyperpage
8254 }%

```

keep the old name for compability.

```

8255 \let\hyperindexformat\hyperxindexformat
8256 \Hy@nextfalse
8257 \@ifpackageloaded{multind}{\Hy@nexttrue}{}%
8258 \@ifpackageloaded{index}{\Hy@nexttrue}{}%
8259 \@ifpackageloaded{amsidx}{\Hy@nexttrue}{}%
8260 \begingroup
8261 \lccode`|= \expandafter` \HyInd@EncapChar\relax
8262 \lccode`/= ` \relax
8263 \lowercase{\endgroup
8264 \ifHy@next
8265 \let\HyInd@org@wrindex\@wrindex
8266 \def\@wrindex#1#2{\HyInd@@wrindex{#1}#2||\}%
8267 \def\HyInd@wrindex#1#2|#3|#4\{\%
8268 \ifx\|#3\%
8269 \HyInd@org@wrindex{#1}{#2|hyperpage}%
8270 \else
8271 \HyInd@@@wrindex{#1}{#2}#3\%
8272 \fi
8273 }%
8274 \def\HyInd@@@wrindex#1#2#3#4\{\%
8275 \def\Hy@temp@A{#3}%
8276 \ifcase0\ifx\Hy@temp@A\HyInd@ParenLeft 1\fi
8277 \ifx\Hy@temp@A\HyInd@ParenRight 1\fi
8278 \relax
8279 \HyInd@org@wrindex{#1}{%
8280 #2|hyperindexformat{/#3#4}%
8281 }%
8282 \else
8283 \ifx\|#4\%
8284 \ifx\Hy@temp@A\HyInd@ParenRight
8285 \HyInd@org@wrindex{#1}{#2|#3}%
8286 \else
8287 \HyInd@org@wrindex{#1}{#2|#3hyperpage}%
8288 \fi
8289 \else
8290 \HyInd@org@wrindex{#1}{%
8291 #2|#3hyperindexformat{/#4}%
8292 }%
8293 \fi
8294 \fi
8295 }%
8296 \else
8297 \def\@wrindex#1{\@wrindex#1||\}%
8298 \def\@wrindex#1|#2|#3\{\%
8299 \if@filesw
8300 \ifx\|#2\%
8301 \protected@write\@indexfile{}{\%
8302 \string\indexentry{#1|hyperpage}{\thepage}%
8303 }%
8304 \else
8305 \HyInd@@@wrindex{#1}#2\%
8306 \fi
8307 \fi
8308 \endgroup

```

```

8309     \@esphack
8310 }%
8311 \def\HyInd@@@wrindex#1#2#3\{\%
8312 \def\Hy@temp@A{#2}%
8313 \ifcase0\ifx\Hy@temp@A\HyInd@ParenLeft 1\fi
8314     \ifx\Hy@temp@A\HyInd@ParenRight 1\fi
8315     \relax
8316 \protected@write\@indexfile{\%
8317 \string\indexentry{\%
8318 #1|hyperindexformat{/#2#3}%
8319 }\the page}%
8320 }%
8321 \else
8322 \ifx\#3\%
8323 \ifx\Hy@temp@A\HyInd@ParenRight
8324 \HyInd@DefKey{#1}%
8325 \@ifundefined{HyInd@(\HyInd@key)}{\%
8326 \let\Hy@temp\@empty
8327 }{\%
8328 \expandafter\let\expandafter\Hy@temp
8329 \csname HyInd@(\HyInd@key)\endcsname
8330 }%
8331 \protected@write\@indexfile{\%
8332 \string\indexentry{#1|#2\Hy@temp}\the page}%
8333 }%
8334 \else
8335 \protected@write\@indexfile{\%
8336 \string\indexentry{#1|#2hyperpage}\the page}%
8337 }%
8338 \HyInd@DefKey{#1}%
8339 \expandafter
8340 \gdef\csname HyInd@(\HyInd@key)\endcsname{\%
8341 hyperpage%
8342 }%
8343 \fi
8344 \else
8345 \protected@write\@indexfile{\%
8346 \string\indexentry{\%
8347 #1|#2hyperindexformat{/#3}%
8348 }\the page}%
8349 }%
8350 \ifx\Hy@temp@A\HyInd@ParenLeft
8351 \HyInd@DefKey{#1}%
8352 \expandafter
8353 \gdef\csname HyInd@(\HyInd@key)\endcsname{\%
8354 hyperindexformat{/#3}%
8355 }%
8356 \fi
8357 \fi
8358 \fi
8359 }%
8360 \def\HyInd@DefKey#1{\%
8361 \begingroup
8362 \let\protect\@unexpandable@protect

```

```

8363     \edef\Hy@temp{#1}%
8364     \@onelevel@sanitize\Hy@temp
8365     \global\let\HyInd@key\Hy@temp
8366     \endgroup
8367   }%
8368   \fi
8369 }%
8370 \fi
8371 \Hy@DisableOption{hyperindex}
8372 \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.

```
8373 \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.

```

8374 \def\hyperpage#1{%
8375   \HyInd@hyperpage#1\nohyperpage{}\@nil
8376 }
8377 \def\HyInd@hyperpage#1\nohyperpage#2#3\@nil{%
8378   \HyInd@@hyperpage{#1}%
8379   #2%
8380   \def\Hy@temp{#3}%
8381   \ifx\Hy@temp\@empty
8382     \else
8383     \Hy@ReturnAfterFi{%
8384       \HyInd@hyperpage#3\@nil
8385     }%
8386     \fi
8387 }
8388 \def\HyInd@@hyperpage#1{\@hyperpage#1----\}
8389 \def\@hyperpage#1--#2--#3\{\%
8390   \ifx\#2\%
8391     \@commahyperpage{#1}%
8392   \else
8393     \HyInd@pagelink{#1}--\HyInd@pagelink{#2}%
8394   \fi
8395 }
8396 \def\@commahyperpage#1{\@commahyperpage#1, \}
8397 \def\@commahyperpage#1, #2,#3\{\%
8398   \ifx\#2\%
8399     \HyInd@pagelink{#1}%
8400   \else
8401     \HyInd@pagelink{#1}, \HyInd@pagelink{#2}%
8402   \fi
8403 }

```

The argument of `\hyperpage` can be empty. And the line breaking algorithm of `Makeindex` can introduce spaces. So we have to remove them.

```

8404 \def\HyInd@pagelink#1{%
8405   \begingroup
8406   \toks@={}%
8407   \HyInd@removespaces#1 \@nil

```

```

8408 \endgroup
8409 }
8410 \def\HyInd@removespaces#1 #2\@nil{%
8411 \toks@=\expandafter{\the\toks@#1}%
8412 \ifx\#2\%
8413 \edef\x{\the\toks@}%
8414 \ifx\x\@empty
8415 \else
8416 \hyperlink{page.\the\toks@}{\the\toks@}%
8417 \fi
8418 \else
8419 \Hy@ReturnAfterFi{%
8420 \HyInd@removespaces#2\@nil
8421 }%
8422 \fi
8423 }

```

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.)

change 2022-11-13: added an `\@empty` for issue#261.

```

8424 \ifHy@texht
8425 \expandafter\endinput
8426 \fi
8427 \let\real@setref\@setref
8428 \def\@setref#1#2#3{% csname, extract group, refname
8429 \ifx#1\relax
8430 \protect\G@refundefinedtrue
8431 \nfss@text{\reset@font\bfseries ??}%
8432 \@latex@warning{%
8433 Reference `#3' on page \thepage \space undefined%
8434 }%
8435 \else
8436 \expandafter\Hy@setref@link#1\@empty\@empty\@empty\@nil{#2}%
8437 \fi
8438 }

```

`\Hy@setref@link` extracts the reference information entries, because `\hyper@link` does not expand arguments for the automatic link type detection.

```

8439 \def\Hy@setref@link#1#2#3#4#5#6\@nil#7{%
8440 \begingroup
8441 \toks0={\hyper@link{#5}{#4}}%
8442 \toks1=\expandafter{#7{#1}{#2}{#3}{#4}{#5}}%
8443 \edef\x{\endgroup
8444 \the\toks0 {\the\toks1 }%
8445 }%
8446 \x
8447 }
8448 \def\@pagesetref#1#2#3{% csname, extract macro, ref
8449 \ifx#1\relax
8450 \protect\G@refundefinedtrue
8451 \nfss@text{\reset@font\bfseries ??}%
8452 \@latex@warning{%
8453 Reference `#3' on page \thepage \space undefined%
8454 }%

```

```

8455 \else
8456   \protect\hyper@@link
8457     {\expandafter\@fifthoffive#1}%
8458     {page.\expandafter\@secondoffive#1}%
8459     {\expandafter\@secondoffive#1}%
8460 \fi
8461 }

8462 </packageEnd>
8463 <*check>
8464 \checklatex
8465 \checkcommand\def\@setref#1#2#3{%
8466   \ifx#1\relax
8467     \protect\G@refundefinedtrue
8468     \nfss@text{\reset@font\bfseries ??}%
8469     \@latex@warning{%
8470       Reference `#3' on page \thepage\space undefined%
8471     }%
8472   \else
8473     \expandafter#2#1\null
8474   \fi
8475 }
8476 </check>
8477 <*packageEnd>

```

Now some extended referencing. `\ref*` and `\pageref*` are not linked, and `\autoref` prefixes with a tag based on the type.

```

8478 \def\HyRef@StarSetRef#1{%
8479   \begingroup
8480   \Hy@safe@activestru
8481   \let\protect\@unexpandable@protect
8482   \edef\x{#1}%
8483   \@onelevel@sanitize\x
8484   \edef\x{\endgroup
8485     \noexpand\HyRef@@StarSetRef
8486     \expandafter\noexpand\cname r@\x\endcname{\x}%
8487   }%
8488   \x
8489 }
8490 \def\HyRef@@StarSetRef#1#2#3{%
8491   \ifx#1\@undefined
8492     \let#1\relax
8493   \fi
8494   \real@setref#1#3{#2}%
8495 }
8496 \def\@refstar#1{%
8497   \HyRef@StarSetRef{#1}\@firstoffive
8498 }
8499 \def\@pagerefstar#1{%
8500   \HyRef@StarSetRef{#1}\@secondoffive
8501 }
8502 \def\@namerefstar#1{%
8503   \HyRef@StarSetRef{#1}\@thirdoffive
8504 }
8505 \def\@Refstar#1{%

```

```

8506 \HyRef@StarSetRef{#1}\HyRef@MakeUppercaseFirstOfFive
8507 }%
8508 \def\HyRef@MakeUppercaseFirstOfFive#1#2#3#4#5{%
8509 \MakeUppercase#1%
8510 }%
8511 \def\HyRef@Ref#1{%
8512 \hyperref[#{#1}]{\Ref*{#1}}%
8513 }%
8514 \Hy@AtBeginDocument{%
8515 \@ifpackageloaded{varioref}{%

```

This are the patches for a varioref newer after 2019-09 Older versions are no longer supported. If `\hyper@nopatch@varioref` is defined we don't patch but assume that varioref handles the hyperlinks.

```

8516 \@ifundefined{hyper@nopatch@varioref}
8517 {
8518 \renewcommand\Vref@star[2][]{%
8519 \begingroup
8520 \let\T@pageref\@pagerefstar
8521 \Ref*{#2}
8522 \vpageref[#{#1}]{#2}%
8523 \endgroup
8524 }%
8525 \renewcommand\Vr@f[2][]{%
8526 \begingroup
8527 \let\T@pageref\@pagerefstar
8528 \hyperref[#{#2}]{%
8529 \Ref*{#2}
8530 \vpageref[#{#1}]{#2}%
8531 }%
8532 \endgroup
8533 }%
8534 \renewcommand\vr@f[2][]{%
8535 \begingroup
8536 \let\T@pageref\@pagerefstar
8537 \hyperref[#{#2}]{%
8538 \ref*{#2}
8539 \vpageref[#{#1}]{#2}%
8540 }%
8541 \endgroup
8542 }%
8543 \renewcommand\vref@star[2][]{%
8544 \begingroup
8545 \let\T@pageref\@pagerefstar
8546 \ref*{#2}
8547 \vpageref[#{#1}]{#2}%
8548 \endgroup
8549 }%
8550 }-{}%
8551 }-{}%
8552 }
8553 \DeclareRobustCommand*\autopageref}{%
8554 \@ifstar{%
8555 \HyRef@autopagerefname\pageref*%

```



```

8556 } \HyRef@autopageref
8557 }
8558 \def \HyRef@autopageref#1{%
8559 \hyperref[#{1}]{\HyRef@autopagerefname\pageref*{#{1}}}%
8560 }
8561 \def \HyRef@autopagerefname{%
8562 \@ifundefined{pageautorefname}{%
8563 \@ifundefined{pagename}{%
8564 \Hy@Warning{No autoref name for `page'}%
8565 }{%
8566 \pagename\nobreakspace
8567 }%
8568 }{%
8569 \pageautorefname\nobreakspace
8570 }%
8571 }

```

\leavevmode is added to make package wrapfigure happy, if \autoref starts a paragraph.

```

8572 \NewDocumentCommand \autoref{s}
8573 { \leavevmode
8574 \IfBooleanTF{#{1}}{\HyRef@autoref@gobbletwo}{\HyRef@autoref@hyper@@@link}}
8575 \def \HyRef@autoref#1#2#3{%
8576 \begingroup
8577 \Hy@safe@activestrue
8578 \expandafter \HyRef@autosetref\csname r@#2\endcsname{#2}{#1}%
8579 \endgroup
8580 }
8581 \def \HyRef@autosetref#1#2#3{% link command, csname, refname
8582 \HyRef@ShowKeysRef{#2}%
8583 \ifcase 0\ifx#1\relax 1\fi\ifx#1\Hy@varioref@undefined 1\fi\relax
8584 \edef \HyRef@thisref{%
8585 \expandafter \@fourthoffive#1 \@empty \@empty \@empty
8586 }%
8587 \expandafter \HyRef@testreftype \HyRef@thisref. \ \ %
8588 \Hy@safe@activesfalse
8589 #3{%
8590 \expandafter \@fifthoffive#1 \@empty \@empty \@empty
8591 }{%
8592 \expandafter \@fourthoffive#1 \@empty \@empty \@empty
8593 }{%
8594 \HyRef@currentHtag
8595 \expandafter \@firstoffive#1 \@empty \@empty \@empty
8596 \null
8597 }%
8598 \else
8599 \protect \G@refundefinedtrue
8600 \nfss@text{\reset@font\bfseries ??}%
8601 \@latex@warning{%
8602 Reference `#2' on page \thepage\space undefined%
8603 }%
8604 \fi
8605 }
8606 \def \HyRef@testreftype#1.#2\ \ \ {%

```

```

8607 \@ifundefined{#1autorefname}{%
8608   \@ifundefined{#1name}{%
8609     \HyRef@StripStar#1*\*\@nil{#1}%
8610     \@ifundefined{\HyRef@name autorefname}{%
8611       \@ifundefined{\HyRef@name name}{%
8612         \def\HyRef@currentHtag{}%
8613         \Hy@Warning{No autoref name for `#1'}%
8614       }%
8615       \edef\HyRef@currentHtag{%
8616         \expandafter\noexpand\csname\HyRef@name name\endcsname
8617         \noexpand~%
8618       }%
8619     }%
8620   }%
8621   \edef\HyRef@currentHtag{%
8622     \expandafter\noexpand
8623     \csname\HyRef@name autorefname\endcsname
8624     \noexpand~%
8625   }%
8626 }%
8627 }%
8628 \edef\HyRef@currentHtag{%
8629   \expandafter\noexpand\csname#1name\endcsname
8630   \noexpand~%
8631 }%
8632 }%
8633 }%
8634 \edef\HyRef@currentHtag{%
8635   \expandafter\noexpand\csname#1autorefname\endcsname
8636   \noexpand~%
8637 }%
8638 }%
8639 }
8640 \def\HyRef@StripStar#1*\#\2\@nil#3{%
8641   \def\HyRef@name{#2}%
8642   \ifx\HyRef@name\HyRef@CaseStar
8643     \def\HyRef@name{#1}%
8644   \else
8645     \def\HyRef@name{#3}%
8646   \fi
8647 }
8648 \def\HyRef@CaseStar{*\\}
8649 \def\HyRef@currentHtag{}

```

Support for package showkeys.

\HyRef@ShowKeysRef

```

8650 \let\HyRef@ShowKeysRef@gobble
8651 \def\HyRef@ShowKeysInit{%
8652   \@ifundefined{SK@@label}{%
8653     {%
8654       \ifx\SK@ref\@empty
8655         \else
8656         \def\HyRef@ShowKeysRef{%
8657           \SK@\SK@\@ref

```

```

8658   }%
8659   \fi
8660   }%
8661 }
8662 \AddToHook{package/showkeys/after}{\HyRef@ShowKeysInit}

```

Defaults for the names that `\autoref` uses.

```

8663 \providecommand* \AMSautorefname{\equationautorefname}
8664 \providecommand* \Hfootnoteautorefname{\footnoteautorefname}
8665 \providecommand* \Itemautorefname{\itemautorefname}
8666 \providecommand* \itemautorefname{item}
8667 \providecommand* \equationautorefname{Equation}
8668 \providecommand* \footnoteautorefname{footnote}
8669 \providecommand* \itemautorefname{item}
8670 \providecommand* \figureautorefname{Figure}
8671 \providecommand* \tableautorefname{Table}
8672 \providecommand* \partautorefname{Part}
8673 \providecommand* \appendixautorefname{Appendix}
8674 \providecommand* \chapterautorefname{chapter}
8675 \providecommand* \sectionautorefname{section}
8676 \providecommand* \subsectionautorefname{subsection}
8677 \providecommand* \subsubsectionautorefname{subsubsection}
8678 \providecommand* \paragraphautorefname{paragraph}
8679 \providecommand* \subparagraphautorefname{subparagraph}
8680 \providecommand* \FancyVerbLineautorefname{line}
8681 \providecommand* \theoremautorefname{Theorem}
8682 \providecommand* \pageautorefname{page}
8683 </packageEnd>

```

44 Configuration files

44.1 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_TE_X offers `\pdfescapestring`.

```

8684 (*pdfTEX | dvipdfm | xetex | vtex | pdfmarkbase | dviwindo)
8685 \begingroup\expandafter\expandafter\expandafter\endgroup
8686 \expandafter\ifx\csname pdf@escapestring\endcsname\relax
8687   \begingroup
8688     \catcode\|=0 %
8689     \@makeother\|%
8690     |@firstofone{|endgroup
8691     |def|Hy@pstringdef#1#2{%
8692       |begingroup
8693       |edef~{|string~}%
8694       |xdef|Hy@gtemp{#2}%
8695       |endgroup

```

```

8696 |let#1|Hy@gtemp
8697 |@onelevel@sanitize#1%
8698 |edef#1{|expandafter|Hy@ExchangeBackslash#1\|@nil}%
8699 |edef#1{|expandafter|Hy@ExchangeLeftParenthesis#1(|@nil}%
8700 |edef#1{|expandafter|Hy@ExchangeRightParenthesis#1)|@nil}%
8701 }%
8702 |def|Hy@ExchangeBackslash#1\#2|@nil{%
8703 #1%
8704 |ifx|\#2|\%%
8705 |else
8706 \\\%
8707 |Hy@ReturnAfterFi{%
8708 |Hy@ExchangeBackslash#2|@nil
8709 }%
8710 |fi
8711 }%
8712 }%
8713 \def\Hy@ExchangeLeftParenthesis#1(#2\@nil{%
8714 #1%
8715 \ifx\#2\%%
8716 \else
8717 \@backslashchar(%
8718 \Hy@ReturnAfterFi{%
8719 \Hy@ExchangeLeftParenthesis#2\@nil
8720 }%
8721 \fi
8722 }%
8723 \def\Hy@ExchangeRightParenthesis#1)#2\@nil{%
8724 #1%
8725 \ifx\#2\%%
8726 \else
8727 \@backslashchar)%
8728 \Hy@ReturnAfterFi{%
8729 \Hy@ExchangeRightParenthesis#2\@nil
8730 }%
8731 \fi
8732 }%
8733 \else
8734 \def\Hy@pstringdef#1#2{%
8735 \begingroup
8736 \edef~{\string~}%
8737 \xdef\Hy@gtemp{\pdf@escapestring{#2}}%
8738 \endgroup
8739 \let#1\Hy@gtemp
8740 }%
8741 \fi
8742 </pdfTeX | dvipdfm | xetex | vtex | pdfmarkbase | dviwindo>

```

44.2 pdftex

```

8743 (*pdfTeX)
8744 \providecommand*\XR@ext}{pdf}
8745 \Hy@setbreaklinks{true}
8746 \def\HyPat@ObjRef%

```

```

8747 [0-9]*[1-9][0-9]* 0 R%
8748 }

```

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

```

8749 \def\Hy@pdfminorversion{\pdfoptionpdfminorversion}%
8750 \def\Hy@pdfminorversion{\pdfminorversion}%
8751 \ifHy@ocgcolorlinks
8752 \ifnum\Hy@pdfmajorminor@version<105 %
8753 \kvsetkeys{Hyp}{pdfversion=1.5}%
8754 \fi
8755 \fi
8756 \ifHy@setpdfversion
8757 \ifnum\Hy@pdf@majorminor@version<105 %
8758 \@ifundefined{pdfobjcompresslevel}{%
8759 }{%
8760 \ifHy@verbose
8761 \Hy@InfoNoLine{%
8762 PDF object streams are disabled, because they are%
8763 \MessageBreak
8764 not supported in requested PDF version %
8765 \Hy@pdf@majorversion.\Hy@pdf@minorversion
8766 }%
8767 \fi
8768 \pdfobjcompresslevel=\z@
8769 }%
8770 \fi
8771 \ifnum\Hy@pdfmajorminor@version=\Hy@pdf@majorminor@version\relax
8772 \else
8773 \let\Hy@temp\@empty
8774 \def\Hy@temp@A#1#2{%
8775 \ifnum#1>\z@
8776 \edef\Hy@temp{%
8777 \Hy@temp
8778 \space\space
8779 \the#1\space #2%
8780 \ifnum#1=\@ne\else s\fi
8781 \MessageBreak
8782 }%
8783 \fi
8784 }%
8785 \Hy@temp@A\pdflastobj{PDF object}%
8786 \Hy@temp@A\pdflastxform{formXObject}%
8787 \Hy@temp@A\pdflastximage{imageXObject}%
8788 \Hy@temp@A\pdflastannot{annotation}%
8789 \@ifundefined{pdflastlink}{%
8790 }{%
8791 \Hy@temp@A\pdflastlink{link}%
8792 }%

```

```

8793 \ifx\Hy@temp\@empty
8794 \Hy@pdfmajorversion=\Hy@pdf@majorversion\relax
8795 \Hy@pdfminorversion=\Hy@pdf@minorversion\relax
8796 \else
8797 \let\Hy@temp@A\@empty
8798 \ifnum\Hy@pdf@majorminor@version=104 %
8799 \IfFileExists{pdf14.sty}{%
8800 \def\Hy@temp@A{%
8801 \MessageBreak
8802 Or \string\RequirePackage{pdf14} can be used%
8803 \MessageBreak
8804 before \string\documentclass\space as shortcut%
8805 }%
8806 }{}%
8807 \fi
8808 \Hy@WarningNoLine{%
8809 The PDF version number could not be set,\MessageBreak
8810 because some PDF objects are already written:%
8811 \MessageBreak
8812 \Hy@temp
8813 The version should be set as early as possible:%
8814 \MessageBreak
8815 \space\space
8816 \expandafter\string\Hy@pdfmajorversion=\Hy@pdf@majorversion, %
8817 \expandafter\string\Hy@pdfminorversion=\Hy@pdf@minorversion
8818 \string\relax
8819 \ifnum\Hy@pdf@majorminor@version<105 %
8820 \@ifundefined{pdfobjcompresslevel}{%
8821 }{%
8822 \MessageBreak
8823 \space\space
8824 \string\pdfobjcompresslevel=0\string\relax
8825 }%
8826 \fi
8827 \Hy@temp@A
8828 }%
8829 \fi
8830 \fi
8831 \PackageInfo{hyperref}{%
8832 \expandafter\string\Hy@pdfmajorversion.%
8833 \expandafter\string\Hy@pdfminorversion
8834 :=\number\Hy@pdf@majorversion.\number\Hy@pdf@minorversion\space
8835 }%
8836 \fi
8837 \edef\Hy@pdf@majorversion{\number\Hy@pdfmajorversion}%
8838 \edef\Hy@pdf@minorversion{\number\Hy@pdfminorversion}%
8839 \Hy@DisableOption{pdfversion}%

8840 \ifHy@ocgcolorlinks
8841 \pdf@ifdraftmode{}{%
8842 \immediate\pdfobj{%
8843 <<%
8844 /Type/OCG%
8845 /Name(View)%
8846 /Usage<<%

```

```

8847     /Print<<%
8848     /PrintState/OFF%
8849     >>%
8850     /View<<%
8851     /ViewState/ON%
8852     >>%
8853     >>%
8854     >>%
8855     }%
8856     \edef\OBJ@OCG@view{\the\pdfastobj\space 0 R}%
8857     \immediate\pdfobj{%
8858     <<%
8859     /Type/OCG%
8860     /Name(Print)%
8861     /Usage<<%
8862     /Print<<%
8863     /PrintState/ON%
8864     >>%
8865     /View<<%
8866     /ViewState/OFF%
8867     >>%
8868     >>%
8869     >>%
8870     }%
8871     \edef\OBJ@OCG@print{\the\pdfastobj\space 0 R}%
8872     \immediate\pdfobj{%
8873     [%
8874     \OBJ@OCG@view\space\OBJ@OCG@print
8875     ]%
8876     }%
8877     \edef\OBJ@OCGs{\the\pdfastobj\space 0 R}%
8878     \pdfcatalog{%
8879     /OCProperties<<%
8880     /OCGs \OBJ@OCGs
8881     /D<<%
8882     /OFF[\OBJ@OCG@print]%
8883     /AS[%
8884     <<%
8885     /Event/View%
8886     /OCGs \OBJ@OCGs
8887     /Category[/View]%
8888     >>%
8889     <<%
8890     /Event/Print%
8891     /OCGs \OBJ@OCGs
8892     /Category[/Print]%
8893     >>%
8894     <<%
8895     /Event/Export%
8896     /OCGs \OBJ@OCGs
8897     /Category[/Print]%
8898     >>%
8899     ]%
8900     >>%

```

```

8901   >>%
8902   }%
8903   \begingroup
8904   \edef\x{\endgroup
8905   \pdfpageresources{%
8906   \the\pdfpageresources
8907   /Properties<<%
8908   /OCView \OBJ@OCG@view
8909   /OCPrint \OBJ@OCG@print
8910   >>%
8911   }%
8912   }%
8913   \x
8914   }%
8915   \Hy@AtBeginDocument{%
8916   \def\Hy@colorlink#1{%
8917     \begingroup
8918     \ifHy@ocgcolorlinks
8919     \def\Hy@ocgcolor{#1}%
8920     \setbox0=\hbox\bgroup\color@begingroup
8921     \else
8922     \HyColor@UseColor#1%
8923     \fi
8924   }%
8925   \def\Hy@endcolorlink{%
8926     \ifHy@ocgcolorlinks
8927     \color@endgroup\egroup
8928     \mbox{%
8929     \pdfliteral page{/OC/OCPrint BDC}%
8930     \rlap{\copy0}%
8931     \pdfliteral page{EMC/OC/OCView BDC}%
8932     \begingroup
8933     \expandafter\HyColor@UseColor\Hy@ocgcolor
8934     \box0 %
8935     \endgroup
8936     \pdfliteral page{EMC}%
8937   }%
8938   \fi
8939   \endgroup
8940   }%
8941   }%
8942   \else
8943   \Hy@DisableOption{ocgcolorlinks}%
8944   \fi

```

First, allow for some changes and additions to pdftex syntax:

```

8945 \def\setpdfinkmargin#1{%
8946   \begingroup
8947   \setlength{\dimen@}{#1}%
8948   \expandafter\endgroup
8949   \expandafter\pdfinkmargin\the\dimen@\relax
8950 }
8951 \pdfinkmargin1pt %

```

First set up the default linking


```
8952 \providecommand*\@pdfview{XYZ}
```

First define the anchors:

```
8953 \Hy@WrapperDef\new@pdfink#1{%
8954   \ifhmode
8955     \@savsf\spacefactor
8956   \fi
8957   \Hy@SaveLastskip
8958   \Hy@VerboseAnchor{#1}%
8959   \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
8960   \Hy@DestName\Hy@pstringDest\@pdfview
8961   \Hy@RestoreLastskip
8962   \ifhmode
8963     \spacefactor\@savsf
8964   \fi
8965 }
8966 \let\pdf@endanchor\@empty
```

`\Hy@DestName` Wrap the call of `\pdfdest` name in `\Hy@DestName`. Then it can easier be caught by package `hypdestopt`.

```
8967 \def\Hy@DestName#1#2{%
8968   \pdfdest name{#1}#2\relax
8969 }
```

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.

```
8970 \providecommand*\@pdfborder{0 0 1}
8971 \providecommand*\@pdfborderstyle{}
8972 \def\Hy@undefinedname{UNDEFINED}
8973 \def\find@pdfink#1#2{%
8974   \leavevmode
8975   \protected@edef\Hy@testname{#2}%
8976   \ifx\Hy@testname\@empty
8977     \Hy@Warning{%
8978       Empty destination name,\MessageBreak
8979       using '\Hy@undefinedname'%
8980     }%
8981     \let\Hy@testname\Hy@undefinedname
8982   \else
8983     \Hy@pstringdef\Hy@testname{%
8984       \expandafter\HyperDestNameFilter\expandafter{\Hy@testname}%
8985     }%
8986   \fi
8987   \Hy@StartlinkName{%
8988     \ifHy@pdfa /F 4\fi
8989     \Hy@setpdfborder
8990     \Hy@setpdfhighlight
8991     \ifx\CurrentBorderColor\relax
8992       \else
8993         /C[\CurrentBorderColor]%
8994     \fi
8995   }\Hy@testname
```

```

8996 \expandafter\Hy@colorlink\csname @#1color\endcsname
8997 }
8998 \def\Hy@StartlinkName#1#2{%
8999 \pdfstartlink attr{#1}goto name{#2}\relax
9000 }
9001 \def\close@pdfink{%
9002 \Hy@endcolorlink
9003 \Hy@VerboseLinkStop
9004 \pdfendlink
9005 }
9006 \def\hyper@anchor#1{%
9007 \new@pdfink{#1}\anchor@spot\pdf@endanchor
9008 }
9009 \def\hyper@anchorstart#1{%
9010 \new@pdfink{#1}%
9011 \Hy@activeanchortrue
9012 }
9013 \def\hyper@anchorend{%
9014 \pdf@endanchor
9015 \Hy@activeanchorfalse
9016 }
9017 \def\hyper@linkstart#1#2{%
9018 \Hy@VerboseLinkStart{#1}{#2}%
9019 \@ifundefined{@#1bordercolor}{%
9020 \let\CurrentBorderColor\relax
9021 }{%
9022 \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
9023 }%
9024 \find@pdfink{#1}{#2}%
9025 }
9026 \def\hyper@linkend{\close@pdfink}
9027 \def\hyper@link#1#2#3{%
9028 \Hy@VerboseLinkStart{#1}{#2}%
9029 \@ifundefined{@#1bordercolor}{%
9030 \let\CurrentBorderColor\relax
9031 }{%
9032 \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
9033 }%
9034 \find@pdfink{#1}{#2}#3\Hy@xspace@end
9035 \close@pdfink
9036 }
9037 \let\CurrentBorderColor\@linkbordercolor
9038 \def\hyper@linkurl#1#2{%
9039 \begingroup
9040 \Hy@pstringdef\Hy@pstringURI{#2}%
9041 \hyper@chars
9042 \leavevmode
9043 \pdfstartlink
9044 attr{%
9045 \Hy@setpdfborder
9046 \Hy@setpdfhighlight
9047 \ifx\@urlbordercolor\relax
9048 \else
9049 /C[\@urlbordercolor]%

```

```

9050     \fi
9051   }%
9052   user{%
9053     /Subtype/Link%
9054     \ifHy@pdfa /F 4\fi
9055     /A<<%
9056     /Type/Action%
9057     /S/URI%
9058     /URI(\Hy@pstringURI)%
9059     \ifHy@href@ismap
9060     /IsMap true%
9061     \fi
9062     \Hy@href@nextactionraw
9063     >>%
9064   }%
9065   \relax
9066   \Hy@colorlink\@urlcolor#1\Hy@xspace@end
9067   \close@pdfink
9068   \endgroup
9069 }
9070 \def\hyper@linkfile#1#2#3{% anchor text, filename, linkname
9071   \begingroup
9072   \def\Hy@pstringF{#2}%
9073   \Hy@CleanupFile\Hy@pstringF
9074   \Hy@pstringdef\Hy@pstringF\Hy@pstringF
9075   \Hy@pstringdef\Hy@pstringD{#3}%
9076   \Hy@MakeRemoteAction
9077   \leavevmode
9078   \pdfstartlink
9079   attr{%
9080     \Hy@setpdfborder
9081     \Hy@setpdfhighlight
9082     \ifx\@filebordercolor\relax
9083     \else
9084     /C[\@filebordercolor]%
9085     \fi
9086   }%
9087   user {%
9088     /Subtype/Link%
9089     \ifHy@pdfa /F 4\fi
9090     /A<<%
9091     /F(\Hy@pstringF)%
9092     /S/GoToR%
9093     \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}

9094     \ifx\#3\%
9095       /D[\Hy@href@page\@pdfremotestartview]%
9096     \else
9097       /D(\Hy@pstringD)%
9098     \fi
9099     \Hy@href@nextactionraw
9100   >>%
9101 }%
9102 \relax
9103 \Hy@colorlink\@filecolor#1\Hy@xspace@end
9104 \close@pdfink
9105 \endgroup
9106 }
9107 \def\@hyper@launch run:#1\#2#3{% filename, anchor text linkname
9108 \begingroup
9109   \Hy@pstringdef\Hy@pstringF{#1}%
9110   \Hy@pstringdef\Hy@pstringP{#3}%
9111   \leavevmode
9112   \pdfstartlink
9113   attr{%
9114     \Hy@setpdfborder
9115     \Hy@setpdfhighlight
9116     \ifx\@runbordercolor\relax
9117     \else
9118       /C[\@runbordercolor]%
9119     \fi
9120   }%
9121   user {%
9122     /Subtype/Link%
9123     \ifHy@pdfa /F 4\fi
9124     /A<<%
9125     /F(\Hy@pstringF)%
9126     /S/Launch%
9127     \Hy@SetNewWindow
9128     \ifx\#3\%
9129     \else
9130       /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
9131     \fi
9132     \Hy@href@nextactionraw
9133   >>%
9134 }%
9135 \relax
9136 \Hy@colorlink\@runcolor#2\Hy@xspace@end
9137 \close@pdfink
9138 \endgroup
9139 }

\PDF@SetupDoc
9140 \def\PDF@SetupDoc{%
9141   \ifx\@pdfpagescrop\@empty
9142   \else
9143     \edef\process@me{%

```

```

9144 \pdfpagesattr={%
9145 /CropBox[\@pdfpagescrop]%
9146 \expandafter\ifx\expandafter\\\the\pdfpagesattr\\%
9147 \else
9148   ^^J\the\pdfpagesattr
9149 \fi
9150 }%
9151 }%
9152 \process@me
9153 \fi
9154 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
9155 \pdfcatalog{%
9156 /PageMode/\@pdfpagemode
9157 \ifx\@baseurl\@empty
9158 \else
9159 /URI<</Base(\Hy@pstringB)>>%
9160 \fi
9161 }%
9162 \ifx\@pdfstartpage\@empty
9163 \else
9164 \ifx\@pdfstartview\@empty
9165 \else
9166 openaction goto page\@pdfstartpage{\@pdfstartview}%
9167 \fi
9168 \fi
9169 \edef\Hy@temp{%
9170 \ifHy@pdftoolbar\else /HideToolbar true\fi
9171 \ifHy@pdfmenubar\else /HideMenubar true\fi
9172 \ifHy@pdfwindowui\else /HideWindowUI true\fi
9173 \ifHy@pdffitwindow /FitWindow true\fi
9174 \ifHy@pdfcenterwindow /CenterWindow true\fi
9175 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
9176 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
9177 \Hy@UseNameKey{Direction}\@pdfdirection
9178 \Hy@UseNameKey{ViewArea}\@pdfviewarea
9179 \Hy@UseNameKey{ViewClip}\@pdfviewclip
9180 \Hy@UseNameKey{PrintArea}\@pdfprintarea
9181 \Hy@UseNameKey{PrintClip}\@pdfprintclip
9182 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
9183 \Hy@UseNameKey{Duplex}\@pdfduplex
9184 \ifx\@pdfpicktraybypdfsize\@empty
9185 \else
9186 /PickTrayByPDFSize \@pdfpicktraybypdfsize
9187 \fi
9188 \ifx\@pdfprintpagerange\@empty
9189 \else
9190 /PrintPageRange[\@pdfprintpagerange]%
9191 \fi
9192 \ifx\@pdfnumcopies\@empty
9193 \else
9194 /NumCopies \@pdfnumcopies
9195 \fi
9196 }%
9197 \pdfcatalog{%

```

```

9198 \ifx\Hy@temp\@empty
9199 \else
9200 /ViewerPreferences<<\Hy@temp>>%
9201 \fi
9202 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
9203 \ifx\@pdflang\relax
9204 \else
9205 /Lang(\@pdflang)%
9206 \fi
9207 }%
9208 }

```

\PDF@FinishDoc

```

9209 \def\PDF@FinishDoc{%
9210 \pdf@ifdraftmode{}{%
9211 \Hy@UseMaketitleInfos
9212 \HyInfo@GenerateAddons
9213 \pdfinfo{%
9214 /Author(\@pdfauthor)%
9215 /Title(\@pdftitle)%
9216 /Subject(\@pdfsubject)%
9217 /Creator(\@pdfcreator)%
9218 \ifx\@pdfcreationdate\@empty
9219 \else
9220 /CreationDate(\@pdfcreationdate)%
9221 \fi
9222 \ifx\@pdfmoddate\@empty
9223 \else
9224 /ModDate(\@pdfmoddate)%
9225 \fi
9226 \ifx\@pdfproducer\relax
9227 \else
9228 /Producer(\@pdfproducer)%
9229 \fi
9230 /Keywords(\@pdfkeywords)%
9231 \ifx\@pdftrapped\@empty
9232 \else
9233 /Trapped/\@pdftrapped
9234 \fi
9235 \HyInfo@Addons
9236 }%
9237 }%
9238 \Hy@DisableOption{pdfauthor}%
9239 \Hy@DisableOption{pdftitle}%
9240 \Hy@DisableOption{pdfsubject}%
9241 \Hy@DisableOption{pdfcreator}%
9242 \Hy@DisableOption{addtopdfcreator}%
9243 \Hy@DisableOption{pdfcreationdate}%
9244 \Hy@DisableOption{pdfmoddate}%
9245 \Hy@DisableOption{pdfproducer}%
9246 \Hy@DisableOption{pdfkeywords}%
9247 \Hy@DisableOption{pdftrapped}%
9248 \Hy@DisableOption{pdfinfo}%
9249 }

```

`\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`.

```

9250 \def\hyper@pagetransition{%
9251   \ifx\@pdfpagetransition\relax
9252   \else
9253     \expandafter\Hy@RemoveTransPageAttr
9254     \the\pdfpageattr^^J/Trans{}>>\END
9255     \ifx\@pdfpagetransition\@empty
9256     \else
9257       \edef\@processme{%
9258         \global\pdfpageattr{%
9259           \the\pdfpageattr
9260             ^^J/Trans << /S /\@pdfpagetransition\space >>%
9261         }%
9262       }%
9263       \@processme
9264     \fi
9265   \fi
9266 }

```

`\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.

```

9267 \gdef\Hy@RemoveTransPageAttr#1^^J/Trans#2#3>>#4\END{%
9268   \ifx\#2\%
9269     \global\pdfpageattr{#1}%
9270   \else
9271     \Hy@RemoveTransPageAttr#1#4\END
9272   \fi
9273 }

```

`\hyper@pageduration` `\@pdfpageduration` is initialized with `\relax`. So it indicates, if option `pdfpageduration` is used. First previous `/Dur` entries are removed. If a new `/Dur` key exists, it is appended to `\pdfpageattr`.

```

9274 \def\hyper@pageduration{%
9275   \ifx\@pdfpageduration\relax
9276   \else
9277     \expandafter
9278     \Hy@RemoveDurPageAttr\the\pdfpageattr^^J/Dur{} \END
9279     \ifx\@pdfpageduration\@empty
9280     \else
9281       \edef\@processme{%
9282         \global\pdfpageattr{%
9283           \the\pdfpageattr
9284             ^^J/Dur \@pdfpageduration\space
9285         }%
9286       }%
9287       \@processme
9288     \fi
9289   \fi

```

9290 }

`\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.

```
9291 \gdef\Hy@RemoveDurPageAttr#1^^J/Dur#2#3 #4\END{%
9292   \ifx\#2\%
9293     \global\pdfpageattr{#1}%
9294   \else
9295     \Hy@RemoveDurPageAttr#1#4\END
9296   \fi
9297 }
```

```
9298 \pdf@ifdraftmode{}{%
9299   \g@addto@macro\Hy@EveryPageHook{%
9300     \hyper@pagetransition
9301     \hyper@pageduration
9302   }%
9303 }
```

Also XeTeX support `\pdfpagewidth` and `\pdfpageheight`, but it does not provide `\pdfhorigin` and `\pdfvorigin`.

```
9304 </pdfTeX>
9305 <*pdfTeX | xetex>
9306 \Hy@AtBeginDocument{%
9307   \ifHy@setpagesize
9308     \expandafter\@firstofone
9309   \else
9310     \expandafter\@gobble
9311   \fi
9312 }%
9313 \@ifclassloaded{seminar}{%
9314 *pdfTeX)
9315   \setlength{\pdfhorigin}{1truein}%
9316   \setlength{\pdfvorigin}{1truein}%
9317 </pdfTeX>
9318 \ifportrait
9319   \ifdim\paperwidth=\z@
9320   \else
9321     \setlength{\pdfpagewidth}{\strip@pt\paperwidth truept}%
9322   \fi
9323   \ifdim\paperheight=\z@
9324   \else
9325     \setlength{\pdfpageheight}{\strip@pt\paperheight truept}%
9326   \fi
9327 \else
9328   \ifdim\paperheight=\z@
9329   \else
9330     \setlength{\pdfpagewidth}{\strip@pt\paperheight truept}%
9331   \fi
9332   \ifdim\paperwidth=\z@
9333   \else
9334     \setlength{\pdfpageheight}{\strip@pt\paperwidth truept}%
```



```

9335     \fi
9336     \fi
9337   }{%
9338     \ifnum\mag=\@m
9339       \ifdim\stockwidth>\z@
9340         \ifdim\stockheight>\z@
9341           \setlength{\pdfpagewidth}{\stockwidth}%
9342           \setlength{\pdfpageheight}{\stockheight}%
9343         \else
9344           \ifdim\paperwidth>\z@
9345             \ifdim\paperheight>\z@
9346               \setlength{\pdfpagewidth}{\paperwidth}%
9347               \setlength{\pdfpageheight}{\paperheight}%
9348             \fi
9349           \fi
9350         \fi
9351       \else
9352         \ifdim\stockwidth=\z@
9353           \ifdim\paperwidth>\z@
9354             \ifdim\paperheight>\z@
9355               \setlength{\pdfpagewidth}{\paperwidth}%
9356               \setlength{\pdfpageheight}{\paperheight}%
9357             \fi
9358           \fi
9359         \fi
9360       \fi
9361     \fi
9362   }%
9363 }%
9364 \Hy@DisableOption{setpagesize}%
9365 }
9366 </pdfTeX | xetex>
9367 < *pdfTeX>
9368 \def\Acrobatmenu#1#2{%
9369   \Hy@Acrobatmenu{#1}{#2}{%
9370     \leavevmode
9371     \EdefEscapeName\Hy@temp@menu{#1}%
9372     \pdfstartlink
9373     attr{%
9374       \Hy@setpdfborder
9375       \Hy@setpdfhighlight
9376       \ifx\@menubordercolor\relax
9377         \else
9378         /C[\@menubordercolor]%
9379       \fi
9380     }%
9381     user{%
9382       /Subtype/Link%
9383       \ifHy@pdfa /F 4\fi
9384       /A<<%
9385       /S/Named%
9386       /N/\Hy@temp@menu
9387       \Hy@href@nextactionraw
9388     >>%

```

```

9389   }%
9390   \relax
9391   \Hy@colorlink\@menucolor#2%
9392   \close@pdfink
9393 }%
9394 }
9395 </pdfTeX>

```

44.3 hypertext

The Hyper \TeX specification (this is borrowed from an article by Arthur Smith) says that conformant viewers/translators must recognize the following set of \backslash 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 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 (\backslash), and if it looks like a URL name it may cause problems.

```

9396 (*hypertext)
9397 \providecommand*\XR@ext}{dvi}
9398 \let\PDF@FinishDoc\@empty
9399 \def\PDF@SetupDoc{%
9400   \ifx\@baseurl\@empty
9401   \else
9402     \special{html:<base href="\@baseurl">}%
9403   \fi
9404 }
9405 \Hy@WrapperDef\hyper@anchor#1{%
9406   \Hy@SaveLastskip

```

```

9407 \Hy@VerboseAnchor{#1}%
9408 \begingroup
9409   \let\protect=\string
9410   \hyper@chars
9411   \special{html:<a name=%
9412     \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
9413 \endgroup
9414 \Hy@activeanchortrue
9415 \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
9416 \special{html:</a>}%
9417 \Hy@activeanchorfalse
9418 \Hy@RestoreLastskip
9419 }
9420 \Hy@WrapperDef\hyper@anchorstart#1{%
9421   \Hy@SaveLastskip
9422   \Hy@VerboseAnchor{#1}%
9423   \begingroup
9424     \hyper@chars
9425     \special{html:<a name=%
9426       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
9427   \endgroup
9428   \Hy@activeanchortrue
9429 }
9430 \def\hyper@anchorend{%
9431   \special{html:</a>}%
9432   \Hy@activeanchorfalse
9433   \Hy@RestoreLastskip
9434 }
9435 \def\@urltype{url}
9436 \def\hyper@linkstart#1#2{%
9437   \Hy@VerboseLinkStart{#1}{#2}%
9438   \expandafter\Hy@colorlink\csname @#1color\endcsname
9439   \def\Hy@tempa{#1}%
9440   \ifx\Hy@tempa\@urltype
9441     \special{html:<a href=\hyper@quote#2\hyper@quote>}%
9442   \else
9443     \begingroup
9444       \hyper@chars
9445       \special{html:<a href=%
9446         \hyper@quote\#\HyperDestNameFilter{#2}\hyper@quote>}%
9447     \endgroup
9448   \fi
9449 }
9450 \def\hyper@linkend{%
9451   \special{html:</a>}%
9452   \Hy@endcolorlink
9453 }
9454 \def\hyper@linkfile#1#2#3{%
9455   \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\\else\##3\fi}%
9456 }
9457 \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.

```
9458 \leavevmode
9459 \ifHy@raiselinks
9460 \Hy@SaveSpaceFactor
9461 \Hy@SaveSavedSpaceFactor
9462 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
9463 \Hy@RestoreSavedSpaceFactor
9464 \@linkdim\dp\@tempboxa
9465 \lower\@linkdim\hbox{%
9466 \hyper@chars
9467 \special{html:<a href=\hyper@quote#2\hyper@quote>}}%
9468 }%
9469 \Hy@colorlink\@urlcolor
9470 \Hy@RestoreSpaceFactor
9471 #1%
9472 \Hy@SaveSpaceFactor
9473 \@linkdim\ht\@tempboxa
```

Because of the interaction with the dvilips 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).

```
9474 \advance\@linkdim by -6.5\p@
9475 \raise\@linkdim\hbox{\special{html:</a>}}%
9476 \Hy@endcolorlink
9477 \Hy@RestoreSpaceFactor
9478 \else
9479 \begingroup
9480 \hyper@chars
9481 \special{html:<a href=\hyper@quote#2\hyper@quote>}}%
9482 \Hy@colorlink\@urlcolor#1\Hy@xspace@end
9483 \special{html:</a>}}%
9484 \Hy@endcolorlink
9485 \endgroup
9486 \fi
9487 }
```

Very poor implementation of \hyper@link without considering #1.

```
9488 \def\hyper@link#1#2#3{%
9489 \Hy@VerboseLinkStart{#1}{#2}%
9490 \hyper@linkurl{#3}{\#\Hy@HyperDestNameFilter{#2}}%
9491 }

9492 \def\hyper@image#1#2{%
9493 \begingroup
9494 \hyper@chars
9495 \special{html:<img src=\hyper@quote#1\hyper@quote>}}%
9496 \endgroup
9497 }
9498 </hypertex>
9499 <*\dviwindo>
```

44.4 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 de-

fine 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.

```

9500 \providecommand*\XR@ext}{dvi}
9501 \providecommand*\wwwbrowser{c:\string\netscape\string\netscape}
9502 \Hy@WrapperDef\hyper@anchor#1{%
9503   \Hy@SaveLastskip
9504   \Hy@VerboseAnchor{#1}%
9505   \begingroup
9506     \let\protect=\string
9507     \special{mark: #1}%
9508   \endgroup
9509   \Hy@activeanchortrue
9510   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
9511   \Hy@activeanchorfalse
9512   \Hy@RestoreLastskip
9513 }
9514 \Hy@WrapperDef\hyper@anchorstart#1{%
9515   \Hy@SaveLastskip
9516   \Hy@VerboseAnchor{#1}%
9517   \special{mark: #1}%
9518   \Hy@activeanchortrue
9519 }
9520 \def\hyper@anchorend{%
9521   \Hy@activeanchorfalse
9522   \Hy@RestoreLastskip
9523 }
9524 \def\hyper@linkstart#1#2{%
9525   \Hy@VerboseLinkStart{#1}{#2}%
9526   \expandafter\Hy@colorlink\csname @#1color\endcsname
9527   \special{button: %
9528     10000000 %
9529     \number\baselineskip\space
9530     #2%
9531   }%
9532 }
9533 \def\hyper@linkend{%
9534   \Hy@endcolorlink
9535 }
9536 \def\hyper@link#1#2#3{%
9537   \Hy@VerboseLinkStart{#1}{#2}%
9538   \leavevmode
9539   \ifHy@raiselinks
9540     \Hy@SaveSpaceFactor
9541     \Hy@SaveSavedSpaceFactor
9542     \sbox\@tempboxa{\Hy@RestoreSpaceFactor#3}%
9543     \Hy@RestoreSavedSpaceFactor

```

```

9544 \@linkdim\dp\@tempboxa
9545 \lower\@linkdim\hbox{%
9546 \special{button: %
9547 \number\wd\@tempboxa\space
9548 \number\ht\@tempboxa\space
9549 #2%
9550 }%
9551 \expandafter\Hy@colorlink\csname @#1color\endcsname
9552 \Hy@RestoreSpaceFactor
9553 #3\Hy@xspace@end
9554 \Hy@SaveSpaceFactor
9555 \Hy@endcolorlink
9556 }%
9557 \@linkdim\ht\@tempboxa
9558 \advance\@linkdim by -6.5\p@
9559 \raise\@linkdim\hbox{}%
9560 \Hy@RestoreSpaceFactor
9561 \else
9562 \special{button: %
9563 \number\wd\@tempboxa\space
9564 \number\ht\@tempboxa\space
9565 #2%
9566 }%
9567 \expandafter\Hy@colorlink\csname @#1color\endcsname
9568 #3\Hy@xspace@end
9569 \Hy@endcolorlink
9570 \fi
9571 }
9572 \def\hyper@linkurl#1#2{%
9573 \begingroup
9574 \hyper@chars
9575 \leavevmode
9576 \ifHy@raiselinks
9577 \Hy@SaveSpaceFactor
9578 \Hy@SaveSavedSpaceFactor
9579 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
9580 \Hy@RestoreSavedSpaceFactor
9581 \@linkdim\dp\@tempboxa
9582 \lower\@linkdim\hbox{%
9583 \special{button: %
9584 \number\wd\@tempboxa\space
9585 \number\ht\@tempboxa\space
9586 launch: \wwwbrowser\space
9587 #2%
9588 }%
9589 \Hy@colorlink\@urlcolor
9590 \Hy@RestoreSpaceFactor
9591 #1\Hy@xspace@end
9592 \Hy@SaveSpaceFactor
9593 \Hy@endcolorlink
9594 }%
9595 \@linkdim\ht\@tempboxa
9596 \advance\@linkdim by -6.5\p@
9597 \raise\@linkdim\hbox{}%

```

```

9598 \Hy@RestoreSpaceFactor
9599 \else
9600 \special{button: %
9601 \number\wd\@tempboxa\space
9602 \number\ht\@tempboxa\space
9603 launch: \wwwbrowser\space
9604 #2%
9605 }%
9606 \Hy@colorlink\@urlcolor
9607 #1\Hy@xspace@end
9608 \Hy@endcolorlink
9609 \fi
9610 \endgroup
9611 }
9612 \def\hyper@linkfile#1#2#3{%
9613 \begingroup
9614 \hyper@chars
9615 \leavevmode
9616 \ifHy@raiselinks
9617 \Hy@SaveSpaceFactor
9618 \Hy@SaveSavedSpaceFactor
9619 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
9620 \Hy@RestoreSavedSpaceFactor
9621 \@linkdim\dp\@tempboxa
9622 \lower\@linkdim\hbox{%
9623 \special{button: %
9624 \number\wd\@tempboxa\space
9625 \number\ht\@tempboxa\space
9626 #3,%
9627 file: #2%
9628 }%
9629 \Hy@colorlink\@filecolor
9630 \Hy@RestoreSpaceFactor
9631 #1\Hy@xspace@end
9632 \Hy@SaveSpaceFactor
9633 \Hy@endcolorlink
9634 }%
9635 \@linkdim\ht\@tempboxa
9636 \advance\@linkdim by -6.5\p@
9637 \raise\@linkdim\hbox{}}%
9638 \Hy@RestoreSpaceFactor
9639 \else
9640 \special{button: %
9641 \number\wd\@tempboxa\space
9642 \number\ht\@tempboxa\space
9643 #3,%
9644 file: #2%
9645 }%
9646 \Hy@colorlink\@filecolor
9647 #1\Hy@xspace@end
9648 \Hy@endcolorlink
9649 \fi
9650 \endgroup
9651 }

```

```

9652 \HyInfo@AddonUnsupportedtrue
9653 \def\PDF@FinishDoc{%
9654   \Hy@UseMaketitleInfos
9655   \HyInfo@TrappedUnsupported
9656   \special{PDF: Keywords \@pdfkeywords}%
9657   \special{PDF: Title \@pdftitle}%
9658   \special{PDF: Creator \@pdfcreator}%
9659   \ifx\@pdfcreationdate\@empty
9660   \else
9661     \special{PDF: CreationDate \@pdfcreationdate}%
9662   \fi
9663   \ifx\@pdfmoddate\@empty
9664   \else
9665     \special{PDF: ModDate \@pdfmoddate}%
9666   \fi
9667   \special{PDF: Author \@pdfauthor}%
9668   \ifx\@pdfproducer\relax
9669   \else
9670     \special{PDF: Producer \@pdfproducer}%
9671   \fi
9672   \special{PDF: Subject \@pdfsubject}%
9673   \Hy@DisableOption{pdfauthor}%
9674   \Hy@DisableOption{pdftitle}%
9675   \Hy@DisableOption{pdfsubject}%
9676   \Hy@DisableOption{pdfcreator}%
9677   \Hy@DisableOption{addtopdfcreator}%
9678   \Hy@DisableOption{pdfcreationdate}%
9679   \Hy@DisableOption{pdfcreationdate}%
9680   \Hy@DisableOption{pdfmoddate}%
9681   \Hy@DisableOption{pdfproducer}%
9682   \Hy@DisableOption{pdfkeywords}%
9683   \Hy@DisableOption{pdftrapped}%
9684   \Hy@DisableOption{pdfinfo}%
9685 }
9686 \def\PDF@SetupDoc{%
9687   \ifx\@baseurl\@empty
9688   \else
9689     \special{PDF: Base \@baseurl}%
9690   \fi
9691   \ifx\@pdfpagescrop\@empty\else
9692     \special{PDF: BBox \@pdfpagescrop}%
9693   \fi
9694   \def\Hy@temp{}%
9695   \ifx\@pdfstartpage\@empty
9696   \else
9697     \ifx\@pdfstartview\@empty
9698     \else
9699       \edef\Hy@temp{%
9700         ,Page=\@pdfstartpage
9701         ,View=\@pdfstartview
9702       }%
9703     \fi
9704   \fi
9705   \edef\Hy@temp{%

```



```

9706 \noexpand\pdfmark{%
9707   pdfmark=/DOCVIEW,%
9708   PageMode=/\@pdfpagemode
9709   \Hy@temp
9710 }%
9711 }%
9712 \Hy@temp
9713 \ifx\@pdfpagescrop\@empty
9714 \else
9715   \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
9716 \fi
9717 \edef\Hy@temp{%
9718   \ifHy@pdftoolbar\else /HideToolbar true\fi
9719   \ifHy@pdfmenubar\else /HideMenubar true\fi
9720   \ifHy@pdfwindowui\else /HideWindowUI true\fi
9721   \ifHy@pdffitwindow /FitWindow true\fi
9722   \ifHy@pdfcenterwindow /CenterWindow true\fi
9723   \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
9724   \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
9725   \Hy@UseNameKey{Direction}\@pdfdirection
9726   \Hy@UseNameKey{ViewArea}\@pdfviewarea
9727   \Hy@UseNameKey{ViewClip}\@pdfviewclip
9728   \Hy@UseNameKey{PrintArea}\@pdfprintarea
9729   \Hy@UseNameKey{PrintClip}\@pdfprintclip
9730   \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
9731   \Hy@UseNameKey{Duplex}\@pdfduplex
9732   \ifx\@pdfpicktraybypdfsize\@empty
9733   \else
9734     /PickTrayByPDFSize \@pdfpicktraybypdfsize
9735   \fi
9736   \ifx\@pdfprintpagerange\@empty
9737   \else
9738     /PrintPageRange[\@pdfprintpagerange]%
9739   \fi
9740   \ifx\@pdfnumcopies\@empty
9741   \else
9742     /NumCopies \@pdfnumcopies
9743   \fi
9744 }%
9745 \pdfmark{pdfmark=/PUT,%
9746   Raw={%
9747     \string{Catalog\string}<<%
9748     \ifx\Hy@temp\@empty
9749     \else
9750       /ViewerPreferences<<\Hy@temp>>%
9751     \fi
9752     \Hy@UseNameKey{PageLayout}\@pdfpagelayout
9753     \ifx\@pdflang\relax
9754     \else
9755       /Lang(\@pdflang)%
9756     \fi
9757     >>%
9758   }%
9759 }%

```

```

9760 }
9761 </dviwindo>
9762 < *dvipdfm | xetex >

```

44.5 dvipdfm/xetex dvi to PDF converter

Provided by Mark Wicks (mwicks@kettering.edu)

(x)dvipdfmx replaces destination names by numbers. This makes it impossible to link from an external document with xr-hyper, so from version 7.00j on this is suppressed with a config special.

```

9763 \special{dvipdfmx:config C 0x0010}
9764 \providecommand*{\XR@ext}{pdf}
9765 \Hy@setbreaklinks{true}
9766 \def\HyPat@ObjRef{%
9767   @[^ ]+}%
9768 }
9769 \newsavebox{\pdfm@box}
9770 \def\@pdfm@mark#1{\special{pdf:#1}}
9771 \Hy@WrapperDef\@pdfm@dest#1{%
9772   \Hy@SaveLastskip
9773   \Hy@VerboseAnchor{#1}%
9774   \begingroup
9775     \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
9776     \def\x{XYZ}%
9777     \ifx\x\@pdfview
9778       \def\x{XYZ @xpos @ypos null}%
9779     \else
9780       \def\x{FitH}%
9781       \ifx\x\@pdfview
9782         \def\x{FitH @ypos}%
9783       \else
9784         \def\x{FitBH}%
9785         \ifx\x\@pdfview
9786           \def\x{FitBH @ypos}%
9787         \else
9788           \def\x{FitV}%
9789           \ifx\x\@pdfview
9790             \def\x{FitV @xpos}%
9791           \else
9792             \def\x{FitBV}%
9793             \ifx\x\@pdfview
9794               \def\x{FitBV @xpos}%
9795             \else
9796               \def\x{Fit}%
9797               \ifx\x\@pdfview
9798                 \let\x\@pdfview
9799               \else
9800                 \def\x{FitB}%
9801                 \ifx\x\@pdfview
9802                   \let\x\@pdfview
9803                 \else
9804                   \def\x{FitR}%
9805                   \ifx\x\@pdfview

```

```

9806         \Hy@Warning{\pdfview=FitR' is not supported}%
9807         \def\x{XYZ @xpos @ypos null}%
9808     \else
9809         \@onelevel@sanitize\@pdfview
9810         \Hy@Warning{%
9811             Unknown value `\'@pdfview' for pdfview%
9812         }%
9813         \def\x{XYZ @xpos @ypos null}%
9814     \fi
9815 \fi
9816 \fi
9817 \fi
9818 \fi
9819 \fi
9820 \fi
9821 \fi
9822 \pdfm@mark{dest (\Hy@pstringDest) [@thispage /\x]}%
9823 \endgroup
9824 \Hy@RestoreLastskip
9825 }
9826 \providecommand*\@pdfview{XYZ}
9827 \providecommand*\@pdfborder{0 0 1}
9828 \providecommand*\@pdfborderstyle{}
9829 \def\hyper@anchor#1{%
9830     \pdfm@dest{#1}%
9831 }
9832 \def\hyper@anchorstart#1{%
9833     \Hy@activeanchortrue
9834     \pdfm@dest{#1}%
9835 }
9836 \def\hyper@anchorend{%
9837     \Hy@activeanchorfalse
9838 }
9839 \newcounter{Hy@AnnotLevel}
9840 \ifHy@ocgcolorlinks
9841     \def\OBJ@OCG@view{@OCG@view}%
9842     \pdfm@mark{%
9843         obj \OBJ@OCG@view <<%
9844         /Type/OCG%
9845         /Name(View)%
9846         /Usage<<%
9847         /Print<<%
9848         /PrintState/OFF%
9849         >>%
9850         /View<<%
9851         /ViewState/ON%
9852         >>%
9853         >>%
9854         >>%
9855     }%
9856     \pdfm@mark{close \OBJ@OCG@view}%
9857     \def\OBJ@OCG@print{@OCG@print}%
9858     \pdfm@mark{%

```

```

9859  obj \OBJ@OCG@print <<%
9860  /Type/OCG%
9861  /Name(Print)%
9862  /Usage<<%
9863  /Print<<%
9864  /PrintState/ON%
9865  >>%
9866  /View<<%
9867  /ViewState/OFF%
9868  >>%
9869  >>%
9870  >>%
9871  }%
9872  \@pdfm@mark{close \OBJ@OCG@print}%
9873  \def\OBJ@OCGs{@OCGs}%
9874  \@pdfm@mark{%
9875  obj \OBJ@OCGs [%
9876  \OBJ@OCG@view\space\OBJ@OCG@print
9877  ]%
9878  }%
9879  \@pdfm@mark{close \OBJ@OCGs}%
9880  \@pdfm@mark{%
9881  put @catalog <<%
9882  /OCProperties<<%
9883  /OCGs \OBJ@OCGs
9884  /D<<%
9885  /OFF[\OBJ@OCG@print]%
9886  /AS[%
9887  <<%
9888  /Event/View%
9889  /OCGs \OBJ@OCGs
9890  /Category[/View]%
9891  >>%
9892  <<%
9893  /Event/Print%
9894  /OCGs \OBJ@OCGs
9895  /Category[/Print]%
9896  >>%
9897  <<%
9898  /Event/Export%
9899  /OCGs \OBJ@OCGs
9900  /Category[/Print]%
9901  >>%
9902  ]%
9903  >>%
9904  >>%
9905  >>%
9906  }%
9907  \AddToHook{shipout/before}{%
9908  \setbox\ShipoutBox=\hbox{%
9909  \copy\ShipoutBox
9910  \@pdfm@mark{%
9911  put @resources <<%
9912  /Properties<<%

```

```

9913         /OCView \OBJ@OCG@view
9914         /OCPrint \OBJ@OCG@print
9915     >>%
9916     >>%
9917     }%
9918     }%
9919     }%
9920 \Hy@AtBeginDocument{%
9921     \def\Hy@colorlink#1{%
9922         \begingroup
9923         \ifHy@ocgcolorlinks
9924             \def\Hy@ocgcolor{#1}%
9925             \setbox0=\hbox\bgroup\color@begingroup
9926         \else
9927             \HyColor@UseColor#1%
9928         \fi
9929     }%
9930 \def\Hy@endcolorlink{%
9931     \ifHy@ocgcolorlinks
9932         \color@endgroup\egroup
9933     \mbox{%
9934         \@pdfm@mark{content /OC/OCPrint BDC}%
9935         \rlap{\copy0}%
9936         \@pdfm@mark{content EMC/OC/OCView BDC}%
9937     \begingroup
9938         \expandafter\HyColor@UseColor\Hy@ocgcolor
9939         \box0 %
9940     \endgroup
9941     \@pdfm@mark{content EMC}%
9942     }%
9943     \fi
9944     \endgroup
9945     }%
9946     }%
9947 \else
9948 \Hy@DisableOption{ocgcolorlinks}%
9949 \fi

```

Use primitive counter arithmetic here to avoid amsmath redefining `\stepcounter` (github issue/13)

```

9950 \def\Hy@BeginAnnot#1{%
9951     \global\advance\c@Hy@AnnotLevel\@ne
9952     \ifnum\c@Hy@AnnotLevel=\@ne
9953         #1%
9954     \fi
9955 }
9956 \def\Hy@endAnnot{%
9957     \ifnum\value{Hy@AnnotLevel}=\@ne
9958         \Hy@endcolorlink
9959         \@pdfm@mark{eann}%
9960     \fi
9961     \global\advance\c@Hy@AnnotLevel\m@ne
9962 }
9963 \def\Hy@undefinedname{UNDEFINED}

```

```

9964 \def\hyper@linkstart#1#2{%
9965   \Hy@VerboseLinkStart{#1}{#2}%
9966   \leavevmode
9967   \Hy@BeginAnnot{%
9968     \protected@edef\Hy@testname{#2}%
9969     \ifx\Hy@testname\@empty
9970       \Hy@Warning{%
9971         Empty destination name,\MessageBreak
9972         using ` \Hy@undefinedname'%
9973       }%
9974       \let\Hy@testname\Hy@undefinedname
9975     \else
9976       \Hy@pstringdef\Hy@testname{%
9977         \expandafter\HyperDestNameFilter\expandafter{%
9978           \Hy@testname
9979         }%
9980       }%
9981     \fi
9982     \@pdfm@mark{%
9983       bann<<%
9984       /Type/Annot%
9985       /Subtype/Link%
9986       \ifHy@pdfa /F 4\fi
9987       \Hy@setpdfborder
9988       \Hy@setpdfhighlight
9989       \expandafter\ifx\c@#1bordercolor\endcsname\relax
9990       \else
9991         /C[\c@#1bordercolor\endcsname]%
9992       \fi
9993       /A<<%
9994       /S/GoTo%
9995       /D(\Hy@testname)%
9996       \Hy@href@nextactionraw
9997       >>%
9998     >>%
9999   }%
10000 \expandafter\Hy@colorlink\c@#1color\endcsname
10001 }%
10002 }
10003 \def\hyper@linkend{\Hy@EndAnnot}%
10004 \def\hyper@link#1#2#3{%
10005   \hyper@linkstart{#1}{#2}#3\Hy@xspace@end\hyper@linkend
10006 }

2025-05-20 added a group for issue #380
10007 \def\hyper@linkfile#1#2#3{%
10008   \leavevmode
10009   \begingroup
10010   \Hy@BeginAnnot{%
10011     \def\Hy@pstringF{#2}%
10012     \Hy@CleanupFile\Hy@pstringF
10013     \Hy@pstringdef\Hy@pstringF\Hy@pstringF
10014     \Hy@pstringdef\Hy@pstringD{#3}%
10015     \Hy@MakeRemoteAction

```

```

10016 \@pdfm@mark{%
10017   bann<<%
10018     /Type/Annot%
10019     /Subtype/Link%
10020     \ifHy@pdfa /F 4\fi
10021     \Hy@setpdfborder
10022     \Hy@setpdfhighlight
10023     \ifx\@filebordercolor\relax
10024     \else
10025       /C[\@filebordercolor]%
10026     \fi
10027     /A<<%
10028     /S/GoToR%
10029     /F(\Hy@pstringF)%
10030     /D%
10031     \ifx\#3\%
10032       [\Hy@href@page\@pdfremotestartview]%
10033     \else
10034       (\Hy@pstringD)%
10035     \fi
10036     \Hy@SetNewWindow
10037     \Hy@href@nextactionraw
10038     >>%
10039   >>%
10040 }%
10041 \Hy@colorlink\@filecolor
10042 }%
10043 #1\Hy@xspace@end
10044 \Hy@EndAnnot
10045 \endgroup
10046 }
10047 \def\@hyper@launch run:#1\#2#3{% filename, anchor text linkname
10048 \leavevmode
10049 \Hy@BeginAnnot{%
10050   \Hy@pstringdef\Hy@pstringF{#1}%
10051   \Hy@pstringdef\Hy@pstringP{#3}%
10052   \@pdfm@mark{%
10053     bann<<%
10054       /Type/Annot%
10055       /Subtype/Link%
10056       \ifHy@pdfa /F 4\fi
10057       \Hy@setpdfborder
10058       \Hy@setpdfhighlight
10059       \ifx\@runbordercolor\relax
10060       \else
10061         /C[\@runbordercolor]%
10062       \fi
10063       /A<<%
10064       /F(\Hy@pstringF)%
10065       /S/Launch%
10066       \Hy@SetNewWindow
10067       \ifx\#3\%
10068       \else
10069         /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%

```

```

10070     \fi
10071     \Hy@href@nextactionraw
10072     >>%
10073     >>%
10074     }%
10075     \Hy@colorlink\@runcolor
10076     }%
10077     #2\Hy@xspace@end
10078     \Hy@EndAnnot
10079 }
10080 \def\hyper@linkurl#1#2{%
10081 \leavevmode
10082 \Hy@BeginAnnot{%
10083 \Hy@pstringdef\Hy@pstringURI{#2}%
10084 \@pdfm@mark{%
10085     bann<<%
10086     /Type/Annot%
10087     /Subtype/Link%
10088     \ifHy@pdfa /F 4\fi
10089     \Hy@setpdfborder
10090     \Hy@setpdfhighlight
10091     \ifx\@urlbordercolor\relax
10092     \else
10093     /C[\@urlbordercolor]%
10094     \fi
10095     /A<<%
10096     /S/URI%
10097     /URI(\Hy@pstringURI)%
10098     \ifHy@href@ismap
10099     /IsMap true%
10100     \fi
10101     \Hy@href@nextactionraw
10102     >>%
10103     >>%
10104     }%
10105     \Hy@colorlink\@urlcolor
10106     }%
10107     #1\Hy@xspace@end
10108     \Hy@EndAnnot
10109 }
10110 \def\Acrobatmenu#1#2{%
10111 \Hy@Acrobatmenu{#1}{#2}{%
10112 \Hy@BeginAnnot{%
10113 \EdefEscapeName\Hy@temp@menu{#1}%
10114 \@pdfm@mark{%
10115     bann<<%
10116     /Type/Annot%
10117     /Subtype/Link%
10118     \ifHy@pdfa /F 4\fi
10119     \Hy@setpdfborder
10120     \Hy@setpdfhighlight
10121     \ifx\@menubordercolor\relax
10122     \else
10123     /C[\@menubordercolor]%

```



```

10124     \fi
10125     /A<<%
10126     /S/Named%
10127     /N/\Hy@temp@menu
10128     \Hy@href@nextactionraw
10129     >>%
10130     >>%
10131     }%
10132     \Hy@colorlink\@menucolor
10133     }%
10134     #2\Hy@xspace@end
10135     \Hy@endAnnot
10136     }%
10137 }
10138
10139 \def\PDF@FinishDoc{%
10140 \Hy@UseMaketitleInfos
10141 \Hy@Info@GenerateAddons
10142 \@pdfm@mark{%
10143 docinfo<<%
10144 /Title(\@pdftitle)%
10145 /Subject(\@pdfsubject)%
10146 /Creator(\@pdfcreator)%
10147 \ifx\@pdfcreationdate\@empty
10148 \else
10149 /CreationDate(\@pdfcreationdate)%
10150 \fi
10151 \ifx\@pdfmoddate\@empty
10152 \else
10153 /ModDate(\@pdfmoddate)%
10154 \fi
10155 /Author(\@pdfauthor)%
10156 \ifx\@pdfproducer\relax
10157 \else
10158 /Producer(\@pdfproducer)%
10159 \fi
10160 /Keywords(\@pdfkeywords)%
10161 \ifx\@pdftrapped\@empty
10162 \else
10163 /Trapped/\@pdftrapped
10164 \fi
10165 \Hy@Info@Addons
10166 >>%
10167 }%
10168 \Hy@DisableOption{pdfauthor}%
10169 \Hy@DisableOption{pdftitle}%
10170 \Hy@DisableOption{pdfsubject}%
10171 \Hy@DisableOption{pdfcreator}%
10172 \Hy@DisableOption{addtopdfcreator}%
10173 \Hy@DisableOption{pdfcreationdate}%
10174 \Hy@DisableOption{pdfcreationdate}%
10175 \Hy@DisableOption{pdfmoddate}%
10176 \Hy@DisableOption{pdfproducer}%
10177 \Hy@DisableOption{pdfkeywords}%

```

```

10178 \Hy@DisableOption{pdftrapped}%
10179 \Hy@DisableOption{pdfinfo}%
10180 }

10181 \def\PDF@SetupDoc{%
10182 \edef\Hy@temp{%
10183 \ifHy@pdftoolbar\else /HideToolbar true\fi
10184 \ifHy@pdfmenubar\else /HideMenubar true\fi
10185 \ifHy@pdfwindowui\else /HideWindowUI true\fi
10186 \ifHy@pdfwindow /FitWindow true\fi
10187 \ifHy@pdfcenterwindow /CenterWindow true\fi
10188 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
10189 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
10190 \Hy@UseNameKey{Direction}\@pdfdirection
10191 \Hy@UseNameKey{ViewArea}\@pdfviewarea
10192 \Hy@UseNameKey{ViewClip}\@pdfviewclip
10193 \Hy@UseNameKey{PrintArea}\@pdfprintarea
10194 \Hy@UseNameKey{PrintClip}\@pdfprintclip
10195 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
10196 \Hy@UseNameKey{Duplex}\@pdfduplex
10197 \ifx\@pdfpicktraybypdfsize\@empty
10198 \else
10199 /PickTrayByPDFSize \@pdfpicktraybypdfsize
10200 \fi
10201 \ifx\@pdfprintpagerange\@empty
10202 \else
10203 /PrintPageRange[\@pdfprintpagerange]%
10204 \fi
10205 \ifx\@pdfnumcopies\@empty
10206 \else
10207 /NumCopies \@pdfnumcopies
10208 \fi
10209 }%
10210 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
10211 \@pdfm@mark{%
10212 docview<<%
10213 \ifx\@pdfstartpage\@empty
10214 \else
10215 \ifx\@pdfstartview\@empty
10216 \else
10217 /OpenAction[@page\@pdfstartpage\@pdfstartview]%
10218 \fi
10219 \fi
10220 \ifx\@baseurl\@empty
10221 \else
10222 /URI<</Base(\Hy@pstringB)>>%
10223 \fi
10224 /PageMode/\@pdfpagemode
10225 \ifx\Hy@temp\@empty
10226 \else
10227 /ViewerPreferences<<\Hy@temp>>%
10228 \fi
10229 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
10230 \ifx\@pdflang\relax
10231 \else

```

```

10232     /Lang(\@pdflang)%
10233     \fi
10234     >>%
10235 }%
10236 \ifx\@pdfpagescrop\@empty
10237 \else
10238   \@pdfm@mark{put @pages <</CropBox[\@pdfpagescrop]>>}%
10239 \fi
10240 }
10241 </dviptfm | xetex>
10242 < *dviptfm | xetex>

```

\hyper@pagetransition

```

10243 \def\hyper@pagetransition{%
10244 \ifx\@pdfpagetransition\relax
10245 \else
10246 \ifx\@pdfpagetransition\@empty
10247 \else
10248 \special{pdf:put @thispage %
10249 <</Trans<</S/\@pdfpagetransition>>>>%
10250 }%
10251 \fi
10252 \fi
10253 }

```

\hyper@pageduration

```

10254 \def\hyper@pageduration{%
10255 \ifx\@pdfpageduration\relax
10256 \else
10257 \ifx\@pdfpageduration\@empty
10258 \else
10259 \special{pdf:put @thispage %
10260 <</Dur \@pdfpageduration>>>%
10261 }%
10262 \fi
10263 \fi
10264 }

10265 \g@addto@macro\Hy@EveryPageBoxHook{%
10266 \hyper@pagetransition
10267 \hyper@pageduration
10268 }

10269 </dviptfm | xetex>

```

XeTeX uses pdfTeX's method \pdfpagewidth and \pdfpageheight for setting the paper size.

```

10270 < *dviptfm>
10271 \AddToHook{shipout/firstpage}{%
10272 \ifHy@setpagesize
10273 \begingroup
10274 \ifnum\mag=\@m
10275 \ifdim\stockwidth>\z@
10276 \ifdim\stockheight>\z@

```

```

10277     \special{papersize=\the\stockwidth,\the\stockheight}%
10278     \else
10279         \ifdim\paperwidth>\z@
10280             \ifdim\paperheight>\z@
10281                 \special{papersize=\the\paperwidth,\the\paperheight}%
10282             \fi
10283         \fi
10284     \fi
10285     \else
10286         \ifdim\stockwidth=\z@
10287             \ifdim\paperwidth>\z@
10288                 \ifdim\paperheight>\z@
10289                     \special{papersize=\the\paperwidth,\the\paperheight}%
10290                 \fi
10291             \fi
10292         \fi
10293     \fi
10294     \fi
10295 \endgroup
10296 \fi
10297 \Hy@DisableOption{setpagesize}%
10298 }
10299 </dviptfm>

```

44.6 VTeX typesetting system

Provided by MicroPress, May 1998. They require VTeX version 6.02 or newer; see <http://www.micropress-inc.com/> for details.

```

10300 (*vtexhtml)
10301 \providecommand*\XR@ext}{htm}
10302 \RequirePackage{vtexhtml}
10303 \newif\if@Localurl
10304 \let\PDF@FinishDoc\@empty
10305 \def\PDF@SetupDoc{%
10306   \ifx\@baseurl\@empty
10307     \else
10308       \special{!direct <base href="\@baseurl">}%
10309     \fi
10310 }
10311 \def\@urltype{url}
10312 \def\hyper@link#1#2#3{%
10313   \Hy@VerboseLinkStart{#1}{#2}%
10314   \leavevmode
10315   \special{!direct <a href=%
10316     \hyper@quote\hyper@hash\HyperDestNameFilter{#2}\hyper@quote>}%
10317   #3\Hy@xspace@end
10318   \special{!direct </a>}%
10319 }
10320 \def\hyper@linkurl#1#2{%
10321   \begingroup
10322     \hyper@chars
10323     \leavevmode
10324     \MathBSuppress=1\relax
10325     \special{!direct <a href=%

```

```

10326     \hyper@quote\HyperDestNameFilter{#2}\hyper@quote>}%
10327     #1\Hy@xspace@end
10328     \MathBSuppress=0\relax
10329     \special{!direct </a>}%
10330 \endgroup
10331 }
10332 \def\hyper@linkfile#1#2#3{%
10333 \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\\else\##3\fi}%
10334 }
10335 \def\hyper@linkstart#1#2{%
10336 \Hy@VerboseLinkStart{#1}{#2}%
10337 \def\Hy@tempa{#1}\ifx\Hy@tempa\@urlltype
10338 \@Localurltrue
10339 \special{!direct <a href=\hyper@quote#2\hyper@quote>}%
10340 \else
10341 \@Localurloffalse
10342 \begingroup
10343 \hyper@chars
10344 \special{!aref \HyperDestNameFilter{#2}}%
10345 \endgroup
10346 \fi
10347 }
10348 \def\hyper@linkend{%
10349 \if@Localurl
10350 \special{!endaref}%
10351 \else
10352 \special{!direct </a>}%
10353 \fi
10354 }
10355 \Hy@WrapperDef\hyper@anchorstart#1{%
10356 \Hy@SaveLastskip
10357 \Hy@VerboseAnchor{#1}%
10358 \begingroup
10359 \hyper@chars
10360 \special{!aname #1}%
10361 \special{!direct <a name=%
10362 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
10363 \endgroup
10364 \Hy@activeanchortrue
10365 }
10366 \def\hyper@anchorend{%
10367 \special{!direct </a>}%
10368 \Hy@activeanchortrue
10369 \Hy@RestoreLastskip
10370 }
10371 \Hy@WrapperDef\hyper@anchor#1{%
10372 \Hy@SaveLastskip
10373 \Hy@VerboseAnchor{#1}%
10374 \begingroup
10375 \let\protect=\string
10376 \hyper@chars
10377 \leavevmode
10378 \special{!aname #1}%
10379 \special{!direct <a name=%

```

```

10380     \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
10381 \endgroup
10382 \Hy@activeanchortrue
10383 \bgroup\anchor@spot\egroup
10384 \special{!direct </a>}%
10385 \Hy@activeanchorfalse
10386 \Hy@RestoreLastskip
10387 }
10388 \def\@Form[#1]{%
10389 \Hy@Message{Sorry, TeXpider does not yet support FORMs}%
10390 }
10391 \let\@endForm\@empty
10392 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
10393 \Hy@Message{Sorry, TeXpider does not yet support FORM gauges}%
10394 }
10395 \def\@TextField[#1]#2{% parameters, label
10396 \Hy@Message{Sorry, TeXpider does not yet support FORM text fields}%
10397 }
10398 \def\@CheckBox[#1]#2{% parameters, label
10399 \Hy@Message{Sorry, TeXpider does not yet support FORM checkboxes}%
10400 }
10401 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
10402 \Hy@Message{Sorry, TeXpider does not yet support FORM choice menus}%
10403 }
10404 \def\@PushButton[#1]#2{% parameters, label
10405 \Hy@Message{Sorry, TeXpider does not yet support FORM pushbuttons}%
10406 }
10407 \def\@Reset[#1]#2{%
10408 \Hy@Message{Sorry, TeXpider does not yet support FORMs}%
10409 }
10410 \def\@Submit[#1]#2{%
10411 \Hy@Message{Sorry, TeXpider does not yet support FORMs}%
10412 }
10413 </vtexhtml>
10414 (*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.

```

10415 \ifcsname mediaheight\endcsname
10416 \ifHy@setpagesize
10417 \providecommand*{\VTeXInitMediaSize}{%
10418 \ifnum\mag=\@m
10419 \ifdim\stockwidth>\z@
10420 \ifdim\stockheight>\z@
10421 \setlength\mediaheight\stockheight
10422 \setlength\mediawidth\stockwidth
10423 \else
10424 \ifdim\paperwidth>\z@
10425 \ifdim\paperheight>\z@
10426 \setlength\mediaheight\paperheight
10427 \setlength\mediawidth\paperwidth
10428 \fi
10429 \fi

```

```

10430     \fi
10431     \else
10432         \ifdim\stockwidth=\z@
10433             \ifdim\paperwidth>\z@
10434                 \ifdim\paperheight>\z@
10435                     \setlength\mediaheight\paperheight
10436                     \setlength\mediawidth\paperwidth
10437             \fi
10438         \fi
10439     \fi
10440     \fi
10441     \fi
10442     }%
10443     \Hy@AtBeginDocument{\VTeXInitMediaSize}%
10444 \fi
10445 \Hy@DisableOption{setpagesize}%
10446 \fi

```

Older versions of VTeX require xyz in lower case.

```

10447 \providecommand*\@pdfview{xyz}
10448 \providecommand*\@pdfborder{0 0 1}
10449 \providecommand*\@pdfborderstyle{}
10450 \let\CurrentBorderColor\@linkbordercolor
10451 \Hy@WrapperDef\hyper@anchor#1{%
10452     \Hy@SaveLastskip
10453     \Hy@VerboseAnchor{#1}%
10454     \begingroup
10455         \let\protect=\string
10456         \hyper@chars
10457         \special{!aname \HyperDestNameFilter{#1};\@pdfview}%
10458     \endgroup
10459     \Hy@activeanchortrue
10460     \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
10461     \Hy@activeanchorfalse
10462     \Hy@RestoreLastskip
10463 }
10464 \Hy@WrapperDef\hyper@anchorstart#1{%
10465     \Hy@SaveLastskip
10466     \Hy@VerboseAnchor{#1}%
10467     \begingroup
10468         \hyper@chars
10469         \special{!aname \HyperDestNameFilter{#1};\@pdfview}%
10470     \endgroup
10471     \Hy@activeanchortrue
10472 }
10473 \def\hyper@anchorend{%
10474     \Hy@activeanchorfalse
10475     \Hy@RestoreLastskip
10476 }
10477 \def\@urltype{url}
10478 \def\Hy@undefinedname{UNDEFINED}
10479 \def\hyper@linkstart#1#2{%
10480     \Hy@VerboseLinkStart{#1}{#2}%
10481     \Hy@pstringdef\Hy@pstringURI{#2}%
10482     \expandafter\Hy@colorlink\csname @#1color\endcsname

```

```

10483 \@ifundefined{#@#1bordercolor}{%
10484   \let\CurrentBorderColor\relax
10485 }{%
10486   \edef\CurrentBorderColor{%
10487     \csname #@#1bordercolor\endcsname
10488   }%
10489 }%
10490 \def\Hy@tempa{#1}%
10491 \ifx\Hy@tempa\@urltype
10492   \special{!%
10493     aref <u=/Type/Action/S/URI/URI(\Hy@pstringURI)%
10494     \ifHy@href@ismap
10495       /IsMap true%
10496     \fi
10497     \Hy@href@nextactionraw
10498     >;%
10499     a=<%
10500     \ifHy@pdfa /F 4\fi
10501     \Hy@setpdfborder
10502     \ifx\CurrentBorderColor\relax
10503       \else
10504         /C [\CurrentBorderColor]%
10505       \fi
10506     >%
10507   }%
10508 \else
10509   \protected@edef\Hy@testname{#2}%
10510   \ifx\Hy@testname\@empty
10511     \Hy@Warning{%
10512       Empty destination name,\MessageBreak
10513       using ``\Hy@undefinedname'%
10514     }%
10515     \let\Hy@testname\Hy@undefinedname
10516   \fi
10517   \special{!%
10518     aref \expandafter\HyperDestNameFilter
10519     \expandafter{\Hy@testname};%
10520     a=<%
10521     \ifHy@pdfa /F 4\fi
10522     \Hy@setpdfborder
10523     \ifx\CurrentBorderColor\relax
10524       \else
10525         /C [\CurrentBorderColor]%
10526       \fi
10527     >%
10528   }%
10529 \fi
10530 }
10531 \def\hyper@linkend{%
10532   \special{!endaref}%
10533   \Hy@endcolorlink
10534 }
10535 \def\hyper@linkfile#1#2#3{%
10536   \leavevmode

```



```

10537 \def\Hy@pstringF{#2}%
10538 \Hy@CleanupFile\Hy@pstringF
10539 \special{!%
10540   aref <%
10541     \ifnum\Hy@VTeXversion>753 \ifHy@pdfnewwindow n\fi\fi
10542     f=\Hy@pstringF>#3;%
10543     a=<%
10544       \ifHy@pdfa /F 4\fi
10545       \Hy@setpdfborder
10546       \ifx\@filebordercolor\relax
10547         \else
10548           /C [\@filebordercolor]%
10549         \fi
10550     >%
10551 }%
10552 \Hy@colorlink\@filecolor
10553   #1\Hy@xspace@end
10554 \Hy@endcolorlink
10555 \special{!endaref}%
10556 }
10557 \def\hyper@linkurl#1#2{%
10558   \begingroup
10559   \Hy@pstringdef\Hy@pstringURI{#2}%
10560   \hyper@chars
10561   \leavevmode
10562   \special{!%
10563     aref <u=/Type/Action/S/URI/URI(\Hy@pstringURI)%
10564       \ifHy@href@ismap
10565         /IsMap true%
10566       \fi
10567       \Hy@href@nextactionraw
10568     >,%
10569     a=<%
10570       \ifHy@pdfa /F 4\fi
10571       \Hy@setpdfborder
10572       \ifx\@urlbordercolor\relax
10573         \else
10574           /C [\@urlbordercolor]%
10575         \fi
10576     >%
10577   }%
10578   \Hy@colorlink\@urlcolor
10579   #1\Hy@xspace@end
10580   \Hy@endcolorlink
10581   \special{!endaref}%
10582 \endgroup
10583 }
10584 \def\hyper@link#1#2#3{%
10585   \Hy@VerboseLinkStart{#1}{#2}%
10586   \@ifundefined{@#1bordercolor}{%
10587     \let\CurrentBorderColor\relax
10588   }{%
10589     \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
10590   }%

```

```

10591 \leavevmode
10592 \protected@edef\Hy@testname{#2}%
10593 \ifx\Hy@testname\@empty
10594   \Hy@Warning{%
10595     Empty destination name,\MessageBreak
10596     using ` \Hy@undefinedname'%
10597   }%
10598   \let\Hy@testname\Hy@undefinedname
10599 \fi
10600 \special{!%
10601   aref \expandafter\HyperDestNameFilter
10602     \expandafter{\Hy@testname};%
10603   a=<%
10604     \ifHy@pdfa /F 4\fi
10605     \Hy@setpdfborder
10606     \ifx\CurrentBorderColor\relax
10607     \else
10608       /C [\CurrentBorderColor]%
10609     \fi
10610   >%
10611 }%
10612 \expandafter
10613 \Hy@colorlink\csname @#1color\endcsname
10614   #3\Hy@xspace@end
10615 \Hy@endcolorlink
10616 \special{!endaref}%
10617 }
10618 \def\hyper@image#1#2{%
10619   \hyper@linkurl{#2}{#1}%
10620 }
10621 \def\@hyper@launch run:#1\#2#3{%
10622   \Hy@pstringdef\Hy@pstringF{#1}%
10623   \Hy@pstringdef\Hy@pstringP{#3}%
10624   \leavevmode
10625   \special{!aref %
10626     <u=%
10627       /Type/Action%
10628       /S/Launch%
10629       /F(\Hy@pstringF)%
10630       \Hy@SetNewWindow
10631       \ifx\#3\%
10632       \else
10633         /Win<</F(\Hy@pstringF)/P(\Hy@pstringP)>>%
10634       \fi
10635       \Hy@href@nextactionraw
10636     >,%
10637     a=<%
10638       \ifHy@pdfa /F 4\fi
10639       \Hy@setpdfborder
10640       \ifx\@runbordercolor\relax
10641       \else
10642         /C[\@runbordercolor]%
10643       \fi
10644     >%

```

```

10645 }%
10646 \Hy@colorlink\@runcolor
10647 #2\Hy@xspace@end
10648 \Hy@endcolorlink
10649 \special{!endaref}%
10650 }
10651 \def\Acrobatmenu#1#2{%
10652 \EdefEscapeName\Hy@temp@menu{#1}%
10653 \Hy@Acrobatmenu{#1}{#2}{%
10654 \special{!%
10655 aref <u=/S /Named /N /\Hy@temp@menu>;%
10656 a=<%
10657 \ifHy@pdfa /F 4\fi
10658 \Hy@setpdfborder
10659 \ifx\@menubordercolor\relax
10660 \else
10661 /C[\@menubordercolor]%
10662 \fi
10663 >%
10664 }%
10665 \Hy@colorlink\@menucolor
10666 #2\Hy@xspace@end
10667 \Hy@endcolorlink
10668 \special{!endaref}%
10669 }%
10670 }

```

The following code (transition effects) is made by Alex Kostin.

The code below makes sense for V_TE_X 7.02 or later.

Please never use `\@ifundefined{VTeXversion}{..}{..}` *globally*.

```

10671 \ifnum\Hy@VTeXversion<702 %
10672 \else
10673 \def\hyper@pagetransition{%
10674 \ifx\@pdfpagetransition\relax
10675 \else
10676 \ifx\@pdfpagetransition\@empty

```

Standard incantation.

1. Does an old entry have to be deleted? 2. If 1=yes, how to delete?

```

10677 \else
10678 \hvtex@parse@trans\@pdfpagetransition
10679 \fi
10680 \fi
10681 }%

```

I have to write an “honest” parser to convert raw PDF code into V_TE_X `\special`. (AVK)

Syntax of V_TE_X `\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:

```

10682 \def\hvtex@trans@effect@Blinds{\def\hvtex@trans@code{B}}%
10683 \def\hvtex@trans@effect@Box{\def\hvtex@trans@code{X}}%
10684 \def\hvtex@trans@effect@Dissolve{\def\hvtex@trans@code{D}}%
10685 \def\hvtex@trans@effect@Glitter{\def\hvtex@trans@code{G}}%
10686 \def\hvtex@trans@effect@Split{\def\hvtex@trans@code{S}}%
10687 \def\hvtex@trans@effect@Wipe{\def\hvtex@trans@code{W}}%
10688 \def\hvtex@trans@effect@R{\def\hvtex@trans@code{R}}%

```

Optional parameters:

```

10689 \def\hvtex@par@dimension{/Dm}%
10690 \def\hvtex@par@direction{/Di}%
10691 \def\hvtex@par@duration{/D}%
10692 \def\hvtex@par@motion{/M}%

```

Tokenizer:

```

10693 \def\hvtex@gettoken{%
10694   \expandafter\hvtex@gettoken@\hvtex@buffer\@nil
10695 }%

```

Notice that tokens in the input buffer must be space delimited.

```

10696 \def\hvtex@gettoken@#1 #2\@nil{%
10697   \edef\hvtex@token{#1}%
10698   \edef\hvtex@buffer{#2}%
10699 }%
10700 \def\hvtex@parse@trans#1{%

```

Initializing code:

```

10701 \let\hvtex@trans@code\@empty
10702 \let\hvtex@param@dimension\@empty
10703 \let\hvtex@param@direction\@empty
10704 \let\hvtex@param@duration\@empty
10705 \let\hvtex@param@motion\@empty
10706 \edef\hvtex@buffer{#1\space}%

```

First token is the PDF transition name without escape.

```

10707 \hvtex@gettoken
10708 \ifx\hvtex@token\@empty

```

Leading space(s)?

```

10709 \ifx\hvtex@buffer\@empty

```

The buffer is empty, nothing to do.

```

10710   \else
10711     \hvtex@gettoken
10712   \fi
10713 \fi
10714 \csname hvtex@trans@effect@\hvtex@token\endcsname

```

Now is time to parse optional parameters.

```
10715 \hvtex@trans@params
10716 }%
```

Reentrant macro to parse optional parameters.

```
10717 \def\hvtex@trans@params{%
10718 \ifx\hvtex@buffer\@empty
10719 \else
10720 \hvtex@gettoken
10721 \let\hvtex@trans@par\hvtex@token
10722 \ifx\hvtex@buffer\@empty
10723 \else
10724 \hvtex@gettoken
10725 \ifx\hvtex@trans@par\hvtex@par@duration
```

/D is the effect duration in seconds. \TeX special takes it in milliseconds.

```
10726 \let\hvtex@param@duration\hvtex@token
10727 \else \ifx\hvtex@trans@par\hvtex@par@motion
```

/M can be either /I or /O

```
10728 \expandafter\edef\expandafter\hvtex@param@motion
10729 \expandafter{\expandafter\@gobble\hvtex@token}%
10730 \else \ifx\hvtex@trans@par\hvtex@par@dimension
```

/Dm can be either /H or /V

```
10731 \expandafter\edef\expandafter\hvtex@param@dimension
10732 \expandafter{\expandafter\@gobble\hvtex@token}%
10733 \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).

```
10734 \let\hvtex@param@direction\hvtex@token
10735 \fi\fi\fi
10736 \fi
10737 \fi
10738 \ifx\hvtex@buffer\@empty
10739 \let\next\hvtex@produce@trans
10740 \else
10741 \let\next\hvtex@trans@params
10742 \fi
10743 \next
10744 }%
```

Merge `<transition_effect>` and issue the special when possible. Too lazy to validate optional parameters.

```
10745 \def\hvtex@produce@trans{%
10746 \let\vtex@trans@special\@empty
10747 \if S\hvtex@trans@code
10748 \edef\vtex@trans@special{\hvtex@trans@code
10749 \hvtex@param@dimension\hvtex@param@motion}%
10750 \else\if B\hvtex@trans@code
10751 \edef\vtex@trans@special{%
10752 \hvtex@trans@code\hvtex@param@dimension
10753 }%
10754 \else\if X\hvtex@trans@code
10755 \edef\vtex@trans@special{%
```

```

10756     \hvtex@trans@code\hvtex@param@motion
10757   }%
10758 \else\if W\hvtex@trans@code
10759   \edef\vtex@trans@special{%
10760     \hvtex@trans@code\hvtex@param@direction
10761   }%
10762 \else\if D\hvtex@trans@code
10763   \let\vtex@trans@special\hvtex@trans@code
10764 \else\if R\hvtex@trans@code
10765   \let\vtex@trans@special\hvtex@trans@code
10766 \else\if G\hvtex@trans@code
10767   \edef\vtex@trans@special{%
10768     \hvtex@trans@code\hvtex@param@direction
10769   }%
10770 \fi\fi\fi\fi\fi\fi
10771 \ifx\vtex@trans@special\@empty
10772 \else
10773   \ifx\hvtex@param@duration\@empty
10774   \else
10775     \setlength{\dimen@}{\hvtex@param@duration\p@}%

```

I'm not guilty of possible overflow.

```

10776   \multiply\dimen@\@m
10777   \edef\vtex@trans@special{%
10778     \vtex@trans@special,\strip@pt\dimen@
10779   }%
10780 \fi

```

And all the mess is just for this.

```

10781   \special{!trans \vtex@trans@special}%
10782 \fi
10783 }%
10784 \def\hyper@pageduration{%
10785   \ifx\@pdfpageduration\relax
10786   \else
10787     \ifx\@pdfpageduration\@empty
10788       \special{!duration-}%
10789     \else
10790       \special{!duration \@pdfpageduration}%
10791     \fi
10792 \fi
10793 }%
10794 \g@addto@macro\Hy@EveryPageBoxHook{%
10795   \hyper@pagetransition
10796   \hyper@pageduration
10797 }%
10798 \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
10799 \ifx \@pdfproducer\relax
10800 \def \@pdfproducer{VTeX}%
10801 \ifnum \Hy@VTeXversion > \z@
10802 \count@ \VTeXversion
10803 \divide \count@ 100 %
10804 \edef \@pdfproducer{ \@pdfproducer \space v \the \count@ }%
10805 \multiply \count@ -100 %
10806 \advance \count@ \VTeXversion
10807 \edef \@pdfproducer{%
10808 \@pdfproducer
10809 .\ifnum \count@ < 10 0 \fi \the \count@
10810 \ifx \VTeXOS \@undefined \else
10811 \ifnum \VTeXOS > 0 %
10812 \ifnum \VTeXOS < 6 %
10813 \space %
10814 \ifcase \VTeXOS
10815 \or Windows \or Linux \or OS/2 \or MacOS \or MacOS/X%
10816 \fi
10817 )%
10818 \fi
10819 \fi
10820 \fi
10821 , \space
10822 \ifnum \OpMode = \@ne PDF \else PS \fi
10823 \space backend%
10824 \ifx \gexmode \@undefined \else
10825 \ifnum \gexmode > \z@ \space with GeX \fi
10826 \fi
10827 }%
10828 \fi
10829 \fi

```

Current `!pdfinfo` key syntax:

Key	Field	Type
a	A uthor	String
b	C rop B ox	String
c	C reator	String
k	K eywords	String
l	P age L ayout	PS
p	P age M ode	PS
r	P roducer	String
s	S ubject	String
t	T itle	String
u	U RI	PS
v	V iew P references	PS

Note: PS objects that are dicts are in <<.>> (yuck; no choice).

```

10830 \def \PDF@SetupDoc{%
10831 \ifx \@pdfpagescrop \@empty

```

```

10832 \else
10833   \special{!pdffinfo b=<\@pdfpagescrop>}%
10834 \fi
10835 \ifx\@pdfstartpage\@empty
10836 \else
10837   \ifx\@pdfstartview\@empty
10838   \else
10839     \special{!onopen Page\@pdfstartpage}%
10840   \fi
10841 \fi
10842 \special{!pdffinfo p=<\/\@pdfpagemode>}%
10843 \ifx\@baseurl\@empty
10844 \else
10845   \special{!pdffinfo u=<<<\/Base (\@baseurl)>>>}%
10846 \fi
10847 \special{!pdffinfo v=<<<%
10848   \ifHy@pdftoolbar\else /HideToolbar true\fi
10849   \ifHy@pdfmenubar\else /HideMenubar true\fi
10850   \ifHy@pdfwindowui\else /HideWindowUI true\fi
10851   \ifHy@pdffitwindow /FitWindow true\fi
10852   \ifHy@pdfcenterwindow /CenterWindow true\fi
10853   \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
10854   \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
10855   \Hy@UseNameKey{Direction}\@pdfdirection
10856   \Hy@UseNameKey{ViewArea}\@pdfviewarea
10857   \Hy@UseNameKey{ViewClip}\@pdfviewclip
10858   \Hy@UseNameKey{PrintArea}\@pdfprintarea
10859   \Hy@UseNameKey{PrintClip}\@pdfprintclip
10860   \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
10861   \Hy@UseNameKey{Duplex}\@pdfduplex
10862   \ifx\@pdfpicktraybypdfsize\@empty
10863   \else
10864     /PickTrayByPDFSize \@pdfpicktraybypdfsize
10865   \fi
10866   \ifx\@pdfprintpagerange\@empty
10867   \else
10868     /PrintPageRange[\@pdfprintpagerange]%
10869   \fi
10870   \ifx\@pdfnumcopies\@empty
10871   \else
10872     /NumCopies \@pdfnumcopies
10873   \fi
10874 >>>}%
10875 \ifx\@pdfpagelayout\@empty
10876 \else
10877   \special{!pdffinfo l=<\/\@pdfpagelayout\space>}%
10878 \fi
10879 }%
10880 \HyInfo@AddonUnsupportedtrue
10881 \define@key{Hyp}{pdfcreationdate}{%
10882   \Hy@Warning{%
10883     VTeX does not support pdfcreationdate.\MessageBreak
10884     Therefore its setting is ignored%
10885   }%

```



```

10886 }
10887 \define@key{Hyp}{pdfmoddate}{%
10888   \Hy@Warning{%
10889     VTeX does not support pdfmoddate.\MessageBreak
10890     Therefore its setting is ignored%
10891   }%
10892 }
10893 \def\PDF@FinishDoc{%
10894   \Hy@UseMaketitleInfos
10895   \HyInfo@TrappedUnsupported
10896   \special{!pdfinfo a=<\pdfauthor>}%
10897   \special{!pdfinfo t=<\pdftitle>}%
10898   \special{!pdfinfo s=<\pdfsubject>}%
10899   \special{!pdfinfo c=<\pdfcreator>}%
10900   \ifx\pdfproducer\relax
10901     \else
10902     \special{!pdfinfo r=<\pdfproducer>}%
10903     \fi
10904   \special{!pdfinfo k=<\pdfkeywords>}%
10905   \Hy@DisableOption{pdfauthor}%
10906   \Hy@DisableOption{pdftitle}%
10907   \Hy@DisableOption{pdfsubject}%
10908   \Hy@DisableOption{pdfcreator}%
10909   \Hy@DisableOption{addtopdfcreator}%
10910   \Hy@DisableOption{pdfcreationdate}%
10911   \Hy@DisableOption{pdfcreationdate}%
10912   \Hy@DisableOption{pdfmoddate}%
10913   \Hy@DisableOption{pdfproducer}%
10914   \Hy@DisableOption{pdfkeywords}%
10915   \Hy@DisableOption{pdftrapped}%
10916   \Hy@DisableOption{pdfinfo}%
10917 }
10918 </vtex>

```

44.7 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.

```

10919 <dviwindo>\def\literalps@out#1{\special{ps:#1}}%
10920 <packageEnd>\providecommand*\Hy@DistillerDestFix{}
10921 <*pdfmark | dviwindo>
10922 \def\Hy@DistillerDestFix{%
10923   \begingroup
10924   \let\x\literalps@out

```

The fix has to be passed unchanged through GeX, if VTeX in PostScript mode with GeX is used.

```

10925 \ifnum \@ifundefined{OpMode}{0}{%
10926   \@ifundefined{gexmode}{0}{%
10927     \ifnum\gexmode>0 \OpMode\else 0\fi
10928   }>1 %
10929   \def\x##1{%
10930     \immediate\special{!=##1}%
10931   }%
10932 \fi
10933 \x{%
10934   /product where{%
10935     pop %
10936     product(Distiller)search{%
10937       pop pop pop %
10938       version(.)search{%
10939         exch pop exch pop%
10940         (3011)eq{%
10941           gsave %
10942           newpath 0 0 moveto closepath clip%
10943           /Courier findfont 10 scalefont setfont %
10944           72 72 moveto(.show %
10945           grestore%
10946         }if%
10947       }{pop}ifelse%
10948     }{pop}ifelse%
10949   }if%
10950 }%
10951 \endgroup
10952 }
10953 </pdfmark | dviwindo>

```

44.8 Direct pdfmark support

Drivers that load `pdfmark.def` have to provide the correct macro definitions of

```

\@pdfproducer for document information
\literalps@out PostScript output
\headerps@out 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

```

```

10954 (*pdfmark)
10955 \Hy@breaklinks@unsupported
10956 \def\HyPat@ObjRef{%
10957   \[~{}]+\}%
10958 }
10959 \Hy@WrapperDef\hyper@anchor#1{%
10960   \Hy@SaveLastskip
10961   \Hy@VerboseAnchor{#1}%
10962   \beginngroup

```

```

10963 \pdfmark[\anchor@spot]{%
10964 pdfmark=/DEST,%
10965 linktype=anchor,%
10966 View=/\@pdfview \@pdfviewparams,%
10967 DestAnchor={#1}%
10968 }%
10969 \endgroup
10970 \Hy@RestoreLastskip
10971 }
10972 \@ifundefined{hyper@anchorstart}{\endinput}
10973 \Hy@WrapperDef\hyper@anchorstart#1{%
10974 \Hy@SaveLastskip
10975 \Hy@VerboseAnchor{#1}%
10976 \literalps@out{H.S}%
10977 \Hy@AllowHyphens
10978 \xdef\hyper@currentanchor{#1}%
10979 \Hy@activeanchortrue
10980 }
10981 \def\hyper@anchorend{%
10982 \literalps@out{\strip@pt@and@otherjunk\baselineskip\space H.A}%
10983 \pdfmark{%
10984 pdfmark=/DEST,%
10985 linktype=anchor,%
10986 View=/\@pdfview \@pdfviewparams,%
10987 DestAnchor=\hyper@currentanchor,%
10988 }%
10989 \Hy@activeanchorfalse
10990 \Hy@RestoreLastskip
10991 }
10992 \def\hyper@linkstart#1#2{%
10993 \Hy@VerboseLinkStart{#1}{#2}%
10994 \ifHy@breaklinks
10995 \else
10996 \leavevmode
10997 \ifmmode
10998 \def\Hy@LinkMath{${}%
10999 \else
11000 \let\Hy@LinkMath\@empty
11001 \fi
11002 \Hy@SaveSpaceFactor
11003 \hbox\bgroup
11004 \Hy@RestoreSpaceFactor
11005 \Hy@LinkMath
11006 \fi
11007 \expandafter\Hy@colorlink\csname @#1color\endcsname
11008 \literalps@out{H.S}%
11009 \Hy@AllowHyphens
11010 \xdef\hyper@currentanchor{#2}%
11011 \gdef\hyper@currentlinktype{#1}%
11012 }
11013 \def\hyper@linkend{%
11014 \literalps@out{\strip@pt@and@otherjunk\baselineskip\space H.L}%
11015 \@ifundefined{@\hyper@currentlinktype bordercolor}{%
11016 \let\Hy@tempcolor\relax

```

```

11017 }{%
11018   \edef\Hy@tempcolor{%
11019     \csname @\hyper@currentlinktype bordercolor\endcsname
11020   }%
11021 }%
11022 \pdfmark{%
11023   pdfmark=/ANN,%
11024   linktype=link,%
11025   Subtype=/Link,%
11026   PDFAFlags=4,%
11027   Dest=\hyper@currentanchor,%
11028   AcroHighlight=\@pdfhighlight,%
11029   Border=\@pdfborder,%
11030   BorderStyle=\@pdfborderstyle,%
11031   Color=\Hy@tempcolor,%
11032   Raw=H.B%
11033 }%
11034 \Hy@endcolorlink
11035 \ifHy@breaklinks
11036 \else
11037   \Hy@LinkMath
11038   \Hy@SaveSpaceFactor
11039   \egroup
11040   \Hy@RestoreSpaceFactor
11041 \fi
11042 }

```

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.

```

11043 \begingroup
11044 \catcode`P=12 %
11045 \catcode`T=12 %
11046 \lowercase{\endgroup
11047 \gdef\rem@ptetc#1.#2PT#3!{#1\ifnum#2>\z@.#2\fi}%
11048 }
11049 \def\strip@pt@and@otherjunk#1{\expandafter\rem@ptetc\the#1!}

```

`\hyper@pagetransition`

```

11050 \def\hyper@pagetransition{%
11051   \ifx\@pdfpagetransition\relax
11052   \else
11053     \ifx\@pdfpagetransition\@empty
11054       % 1. Does an old entry have to be deleted?
11055       % 2. If 1=yes, how to delete?
11056     \else
11057       \pdfmark{%
11058         pdfmark=/PUT,%
11059         Raw={%
11060           \string{ThisPage\string}%
11061           <</Trans << /S /\@pdfpagetransition\space >> >>%
11062         }%
11063       }%
11064     \fi

```

```
11065 \fi
11066 }
```

\hyper@pageduration

```
11067 \def\hyper@pageduration{%
11068 \ifx\@pdfpageduration\relax
11069 \else
11070 \ifx\@pdfpageduration\@empty
11071 % 1. Does an old entry have to be deleted?
11072 % 2. If 1=yes, how to delete?
11073 \else
11074 \pdfmark{%
11075 pdfmark=/PUT,%
11076 Raw={%
11077 \string{ThisPage\string}%
11078 <</Dur \@pdfpageduration>>%
11079 }%
11080 }%
11081 \fi
11082 \fi
11083 }
```

```
11084 \g@addto@macro\Hy@EveryPageBoxHook{%
11085 \hyper@pagetransition
11086 \hyper@pageduration
11087 }
```

```
11088 \def\hyper@image#1#2{%
11089 \hyper@linkurl{#2}{#1}%
11090 }
11091 \def\Hy@undefinedname{UNDEFINED}
11092 \def\hyper@link#1#2#3{%
11093 \Hy@VerboseLinkStart{#1}{#2}%
11094 \@ifundefined{@#1bordercolor}{%
11095 \let\Hy@tempcolor\relax
11096 }{%
11097 \edef\Hy@tempcolor{\csname @#1bordercolor\endcsname}%
11098 }%
11099 \begingroup
11100 \protected@edef\Hy@testname{#2}%
11101 \ifx\Hy@testname\@empty
11102 \Hy@Warning{%
11103 Empty destination name,\MessageBreak
11104 using '\Hy@undefinedname'%
11105 }%
11106 \let\Hy@testname\Hy@undefinedname
11107 \fi
11108 \pdfmark[#{#3}]{%
11109 Color=\Hy@tempcolor,%
11110 linktype={#1},%
11111 AcroHighlight=\@pdfhighlight,%
11112 Border=\@pdfborder,%
11113 BorderStyle=\@pdfborderstyle,%
11114 pdfmark=/ANN,%
11115 Subtype=/Link,%
```

```

11116     PDFAFlags=4,%
11117     Dest=\Hy@testname
11118   }%
11119 \endgroup
11120 }
11121 \newtoks\pdf@docset
11122 \def\PDF@FinishDoc{%
11123   \Hy@UseMaketitleInfos
11124   \HyInfo@GenerateAddons
11125   \let\Hy@temp\@empty
11126   \ifx\@pdfcreationdate\@empty
11127   \else
11128     \def\Hy@temp{CreationDate=\@pdfcreationdate,}%
11129   \fi
11130   \ifx\@pdfmoddate\@empty
11131   \else
11132     \expandafter\def\expandafter\Hy@temp\expandafter{%
11133       \Hy@temp
11134       ModDate=\@pdfmoddate,%
11135     }%
11136   \fi
11137   \ifx\@pdfproducer\relax
11138   \else
11139     \expandafter\def\expandafter\Hy@temp\expandafter{%
11140       \Hy@temp
11141       Producer=\@pdfproducer,%
11142     }%
11143   \fi
11144   \expandafter
11145   \pdfmark\expandafter{%
11146     \Hy@temp
11147     pdfmark=/DOCINFO,%
11148     Title=\@pdftitle,%
11149     Subject=\@pdfsubject,%
11150     Creator=\@pdfcreator,%
11151     Author=\@pdfauthor,%
11152     Keywords=\@pdfkeywords,%
11153     Trapped=\@pdftrapped
11154   }%
11155   \ifx\HyInfo@Addons\@empty
11156   \else
11157     \pdfmark{%
11158       pdfmark=/DOCINFO,%
11159       Raw={\HyInfo@Addons}%
11160     }%
11161   \fi
11162   \Hy@DisableOption{pdfauthor}%
11163   \Hy@DisableOption{pdftitle}%
11164   \Hy@DisableOption{pdfsubject}%
11165   \Hy@DisableOption{pdfcreator}%
11166   \Hy@DisableOption{addtopdfcreator}%
11167   \Hy@DisableOption{pdfcreationdate}%
11168   \Hy@DisableOption{pdfcreationdate}%
11169   \Hy@DisableOption{pdfmoddate}%

```

```

11170 \Hy@DisableOption{pdfproducer}%
11171 \Hy@DisableOption{pdfkeywords}%
11172 \Hy@DisableOption{pdftrapped}%
11173 \Hy@DisableOption{pdfinfo}%
11174 }
11175 \def\PDF@SetupDoc{%
11176 \def\Hy@temp{}%
11177 \ifx\@pdfstartpage\@empty
11178 \else
11179 \ifx\@pdfstartview\@empty
11180 \else
11181 \edef\Hy@temp{%
11182 ,Page=\@pdfstartpage
11183 ,View=\@pdfstartview
11184 }%
11185 \fi
11186 \fi
11187 \edef\Hy@temp{%
11188 \noexpand\pdfmark{%
11189 pdfmark=/DOCVIEW,%
11190 PageMode=/\@pdfpagemode
11191 \Hy@temp
11192 }%
11193 }%
11194 \Hy@temp
11195 \ifx\@pdfpagescrop\@empty
11196 \else
11197 \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
11198 \fi
11199 \edef\Hy@temp{%
11200 \ifHy@pdftoolbar\else /HideToolbar true\fi
11201 \ifHy@pdfmenubar\else /HideMenubar true\fi
11202 \ifHy@pdfwindowui\else /HideWindowUI true\fi
11203 \ifHy@pdffitwindow /FitWindow true\fi
11204 \ifHy@pdfcenterwindow /CenterWindow true\fi
11205 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
11206 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
11207 \Hy@UseNameKey{Direction}\@pdfdirection
11208 \Hy@UseNameKey{ViewArea}\@pdfviewarea
11209 \Hy@UseNameKey{ViewClip}\@pdfviewclip
11210 \Hy@UseNameKey{PrintArea}\@pdfprintarea
11211 \Hy@UseNameKey{PrintClip}\@pdfprintclip
11212 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
11213 \Hy@UseNameKey{Duplex}\@pdfduplex
11214 \ifx\@pdfpicktraybypdfsize\@empty
11215 \else
11216 /PickTrayByPDFSize \@pdfpicktraybypdfsize
11217 \fi
11218 \ifx\@pdfprintpagerange\@empty
11219 \else
11220 /PrintPageRange[\@pdfprintpagerange]%
11221 \fi
11222 \ifx\@pdfnumcopies\@empty
11223 \else

```

```

11224 /NumCopies \@pdfnumcopies
11225 \fi
11226 }%
11227 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
11228 \pdfmark{%
11229 pdfmark=/PUT,%
11230 Raw={%
11231 \string{Catalog\string}<<%
11232 \ifx\Hy@temp\@empty
11233 \else
11234 /ViewerPreferences<<\Hy@temp>>%
11235 \fi
11236 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
11237 \ifx\@pdflang\relax
11238 \else
11239 /Lang(\@pdflang)%
11240 \fi
11241 \ifx\@baseurl\@empty
11242 \else
11243 /URI<</Base(\Hy@pstringB)>>%
11244 \fi
11245 >>%
11246 }%
11247 }%
11248 }
11249 </pdfmark>
11250 <*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.

```

11251 \newif\ifHy@pdfmarkerror
11252 \def\pdfmark{\@ifnextchar{\pdfmark@}{\pdfmark@[]}}
11253 \def\pdfmark@[#1]#2{%
11254 \Hy@pdfmarkerrorfalse
11255 \edef\@processme{\noexpand\pdf@toks={\the\pdf@defaulttoks}}%
11256 \@processme
11257 \let\pdf@type\relax
11258 \let\pdf@objdef\@empty
11259 \kvsetkeys{PDF}{#2}%
11260 \ifHy@pdfmarkerror
11261 \else
11262 \ifx\pdf@type\relax
11263 \Hy@WarningNoLine{no pdfmark type specified in #2!}%
11264 \ifx\#1\%
11265 \else
11266 \pdf@rect{#1}%
11267 \fi
11268 \else
11269 \ifx\#1\%
11270 \literalps@out{%

```



```

11271 [%
11272 \ifx\pdf@objdef\@empty
11273 \else
11274 /_objdef\string{\pdf@objdef\string}%
11275 \fi
11276 \the\pdf@toks\space\pdf@type\space pdfmark%
11277 }%
11278 \else
11279 \@ifundefined{@\pdf@linktype color}{%
11280 \Hy@colorlink\@linkcolor
11281 }{%
11282 \expandafter\Hy@colorlink
11283 \csname @\pdf@linktype color\endcsname
11284 }%
11285 \pdf@rect{#1}%
11286 \literalps@out{%
11287 [%
11288 \ifx\pdf@objdef\@empty
11289 \else
11290 /_objdef\string{\pdf@objdef\string}%
11291 \fi
11292 \the\pdf@toks\space\pdf@type\space pdfmark%
11293 }%
11294 \Hy@endcolorlink
11295 \fi
11296 \fi
11297 \fi
11298 }

```

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}

```

```

11299 \newsavebox{\pdf@box}
11300 \providecommand*\Hy@setouterhbox{\sbox}
11301 \providecommand*\Hy@breaklinksunhbox{\unhbox}
11302 \def\Hy@DEST{/DEST}
11303 \def\pdf@rect#1{%
11304 \begingroup
11305 \chardef\x=1 %
11306 \def\Hy@temp{#1}%
11307 \ifx\Hy@temp\@empty
11308 \chardef\x=0 %
11309 \else
11310 \def\y{\anchor@spot}%

```

```

11311 \ifx\Hy@temp\y
11312 \def\y{\relax}%
11313 \ifx\anchor@spot\y
11314 \chardef\x=0 %
11315 \fi
11316 \fi
11317 \fi
11318 \expandafter\endgroup
11319 \ifcase\x
11320 \literalps@out{H.S}%
11321 \literalps@out{H.R}%
11322 \else
11323 \leavevmode
11324 \Hy@SaveSpaceFactor
11325 \ifmmode
11326 \def\Hy@LinkMath{\$}%
11327 \else
11328 \let\Hy@LinkMath\@empty
11329 \fi
11330 \ifHy@breaklinks
11331 \Hy@setouterhbox\pdf@box{%
11332 \Hy@RestoreSpaceFactor
11333 \Hy@LinkMath
11334 \Hy@AllowHyphens#1\Hy@xspace@end
11335 \Hy@LinkMath
11336 \Hy@SaveSpaceFactor
11337 }%
11338 \else
11339 \sbox\pdf@box{%
11340 \Hy@RestoreSpaceFactor
11341 \Hy@LinkMath
11342 #1\Hy@xspace@end
11343 \Hy@LinkMath
11344 \Hy@SaveSpaceFactor
11345 }%
11346 \fi
11347 \dimen@ht\pdf@box
11348 \ifdim\dp\pdf@box=\z@
11349 \literalps@out{H.S}%
11350 \else
11351 \lower\dp\pdf@box\hbox{\literalps@out{H.S}}%
11352 \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...).

```

11353 \ifHy@breaklinks
11354 \ifhmode
11355 \Hy@breaklinksunhbox\pdf@box
11356 \else
11357 \box\pdf@box
11358 \fi
11359 \else
11360 \expandafter\box\pdf@box
11361 \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

11362 \ifdim\dimen@=\z@
11363 \literalps@out{H.R.}%
11364 \else
11365 \raise\dimen@\hbox{\literalps@out{H.R.}}%
11366 \fi
11367 \Hy@RestoreSpaceFactor
11368 \fi
11369 \ifx\pdf@type\Hy@DEST
11370 \else
11371 \pdf@addtoksx{H.B.}%
11372 \fi
11373 }

```

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.

```

11374 \newtoks\pdf@toks
11375 \newtoks\pdf@defaulttoks
11376 \pdf@defaulttoks={}%
11377 \def\pdf@addtoks#1#2{%
11378 \edef\@processme{\pdf@toks{\the\pdf@toks/#2 #1}}%
11379 \@processme
11380 }
11381 \def\pdf@addtoksx#1{%
11382 \edef\@processme{\pdf@toks{\the\pdf@toks\space #1}}%
11383 \@processme
11384 }
11385 \def\PDFdefaults#1{%
11386 \pdf@defaulttoks={#1}%
11387 }

```

This is the list of allowed keys. See the Acrobat manual for an explanation.

```

11388 % what is the type of pdfmark?
11389 \define@key{PDF}{pdfmark}{\def\pdf@type{#1}}
11390 % what is the link type?
11391 \define@key{PDF}{linktype}{\def\pdf@linktype{#1}}
11392 \def\pdf@linktype{link}
11393 % named object?
11394 \define@key{PDF}{objdef}{\edef\pdf@objdef{#1}}
11395 \let\pdf@objdef\@empty
11396 % parameter is a stream of PDF
11397 \define@key{PDF}{Raw}{\pdf@addtoksx{#1}}
11398 % parameter is a name
11399 \define@key{PDF}{Action}{\pdf@addtoks{#1}{Action}}
11400 % parameter is a array
11401 \define@key{PDF}{Border}{%
11402 \edef\Hy@temp{#1}%
11403 \ifx\Hy@temp\@empty
11404 \else

```

```

11405 \pdf@addtoks{[#1]\Hy@BorderArrayPatch}{Border}% hash-ok
11406 \fi
11407 }
11408 \let\Hy@BorderArrayPatch\@empty
11409 % parameter is a dictionary
11410 \define@key{PDF}{BorderStyle}{%
11411 \edef\Hy@temp{#1}%
11412 \ifx\Hy@temp\@empty
11413 \else
11414 \pdf@addtoks{<<#1>>}{BS}%
11415 \fi
11416 }
11417 % parameter is a array
11418 \define@key{PDF}{Color}{%
11419 \ifx\relax#1\relax
11420 \else
11421 \pdf@addtoks{[#1]}{Color}% hash-ok
11422 \fi
11423 }
11424 % parameter is a string
11425 \define@key{PDF}{Contents}{\pdf@addtoks{(#1)}{Contents}}
11426 % parameter is a integer
11427 \define@key{PDF}{Count}{\pdf@addtoks{#1}{Count}}
11428 % parameter is a array
11429 \define@key{PDF}{CropBox}{\pdf@addtoks{[#1]}{CropBox}}% hash-ok
11430 % parameter is a string
11431 \define@key{PDF}{DOSFile}{\pdf@addtoks{(#1)}{DOSFile}}
11432 % parameter is a string or file
11433 \define@key{PDF}{DataSource}{\pdf@addtoks{(#1)}{DataSource}}
11434 % parameter is a destination
11435 \define@key{PDF}{Dest}{%
11436 \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
11437 \ifx\Hy@pstringDest\@empty
11438 \Hy@pdfmarkerrortrue
11439 \Hy@Warning{Destination with empty name ignored}%
11440 \else
11441 \pdf@addtoks{(\Hy@pstringDest) cvn}{Dest}%
11442 \fi
11443 }
11444 \define@key{PDF}{DestAnchor}{%
11445 \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
11446 \ifx\Hy@pstringDest\@empty
11447 \Hy@pdfmarkerrortrue
11448 \Hy@Warning{Destination with empty name ignored}%
11449 \else
11450 \pdf@addtoks{(\Hy@pstringDest) cvn}{Dest}%
11451 \fi
11452 }
11453 % parameter is a string
11454 \define@key{PDF}{Dir}{\pdf@addtoks{(#1)}{Dir}}
11455 % parameter is a string
11456 \define@key{PDF}{File}{\pdf@addtoks{(#1)}{File}}
11457 % parameter is a int
11458 \define@key{PDF}{Flags}{\pdf@addtoks{#1}{Flags}}

```

```

11459 \define@key{PDF}{PDFAFlags}{%
11460   \ifHy@pdfa
11461     \pdf@addtoks{#1}{F}%
11462   \fi
11463 }
11464 % parameter is a name
11465 \define@key{PDF}{AcroHighlight}{%
11466   \begingroup
11467     \edef\x{#1}%
11468     \expandafter\endgroup\ifx\x\@empty
11469     \else
11470       \pdf@addtoks{#1}{H}%
11471     \fi
11472 }
11473 % parameter is a string
11474 \define@key{PDF}{ID}{\pdf@addtoks{[#1]}{ID}}% hash-ok
11475 % parameter is a string
11476 \define@key{PDF}{MacFile}{\pdf@addtoks{(#1)}{MacFile}}
11477 % parameter is a string
11478 \define@key{PDF}{ModDate}{\pdf@addtoks{(#1)}{ModDate}}
11479 % parameter is a string
11480 \define@key{PDF}{Op}{\pdf@addtoks{(#1)}{Op}}
11481 % parameter is a Boolean
11482 \define@key{PDF}{Open}{\pdf@addtoks{#1}{Open}}
11483 % parameter is a integer or name
11484 \define@key{PDF}{Page}{\pdf@addtoks{#1}{Page}}
11485 % parameter is a name
11486 \define@key{PDF}{PageMode}{\pdf@addtoks{#1}{PageMode}}
11487 % parameter is a string
11488 \define@key{PDF}{Params}{\pdf@addtoks{(#1)}{Params}}
11489 % parameter is a array
11490 \define@key{PDF}{Rect}{\pdf@addtoks{[#1]}{Rect}}% hash-ok
11491 % parameter is a integer
11492 \define@key{PDF}{SrcPg}{\pdf@addtoks{#1}{SrcPg}}
11493 % parameter is a name
11494 \define@key{PDF}{Subtype}{\pdf@addtoks{#1}{Subtype}}
11495 % parameter is a string
11496 \define@key{PDF}{Title}{\pdf@addtoks{(#1)}{Title}}
11497 % parameter is a string
11498 \define@key{PDF}{Unix}{\pdf@addtoks{(#1)}{Unix}}
11499 % parameter is a string
11500 \define@key{PDF}{UnixFile}{\pdf@addtoks{(#1)}{UnixFile}}
11501 % parameter is an array
11502 \define@key{PDF}{View}{\pdf@addtoks{[#1]}{View}}% hash-ok
11503 % parameter is a string
11504 \define@key{PDF}{WinFile}{\pdf@addtoks{(#1)}{WinFile}}

```

These are the keys used in the DOCINFO section.

```

11505 \define@key{PDF}{Author}{\pdf@addtoks{(#1)}{Author}}
11506 \define@key{PDF}{Creator}{\pdf@addtoks{(#1)}{Creator}}
11507 \define@key{PDF}{CreationDate}{\pdf@addtoks{(#1)}{CreationDate}}
11508 \define@key{PDF}{ModDate}{\pdf@addtoks{(#1)}{ModDate}}
11509 \define@key{PDF}{Producer}{\pdf@addtoks{(#1)}{Producer}}
11510 \define@key{PDF}{Subject}{\pdf@addtoks{(#1)}{Subject}}
11511 \define@key{PDF}{Keywords}{\pdf@addtoks{(#1)}{Keywords}}

```

```

11512 \define@key{PDF}{ModDate}{\pdf@addtoks{(#1)}{ModDate}}
11513 \define@key{PDF}{Base}{\pdf@addtoks{(#1)}{Base}}
11514 \define@key{PDF}{URI}{\pdf@addtoks{(#1)}{URI}}
11515 \define@key{PDF}{Trapped}{%
11516   \edef\Hy@temp{#1}%
11517   \ifx\Hy@temp\@empty
11518   \else
11519     \pdf@addtoks{/#1}{Trapped}%
11520   \fi
11521 }
11522
11523 </pdfmarkbase>
11524 (*pdfmark)
11525 \def\Acrobatmenu#1#2{%
11526   \EdefEscapeName\Hy@temp@menu{#1}%
11527   \Hy@Acrobatmenu{#1}{#2}{%
11528     \pdfmark[{#2}]{%
11529       linktype=menu,%
11530       pdfmark=/ANN,%
11531       AcroHighlight=\@pdfhighlight,%
11532       Border=\@pdfborder,%
11533       BorderStyle=\@pdfborderstyle,%
11534       Color=\@menubordercolor,%
11535       Action={<</Subtype/Named/N/\Hy@temp@menu>>},%
11536       Subtype=/Link,%
11537       PDFAFlags=4%
11538     }%
11539   }%
11540 }

```

And now for some useful examples:

```

11541 \def\PDFNextPage{\@ifnextchar{\PDFNextPage@}{\PDFNextPage@[]}}
11542 \def\PDFNextPage@[#1]#2{%
11543   \pdfmark[{#2}]{%
11544     #1,%
11545     Border=\@pdfborder,%
11546     BorderStyle=\@pdfborderstyle,%
11547     Color=.2 .1 .5,%
11548     pdfmark=/ANN,%
11549     Subtype=/Link,%
11550     PDFAFlags=4,%
11551     Page=/Next%
11552   }%
11553 }
11554 \def\PDFPreviousPage{%
11555   \@ifnextchar{\PDFPreviousPage@}{\PDFPreviousPage@[]}%
11556 }
11557 \def\PDFPreviousPage@[#1]#2{%
11558   \pdfmark[{#2}]{%
11559     #1,%
11560     Border=\@pdfborder,%
11561     BorderStyle=\@pdfborderstyle,%
11562     Color=.4 .4 .1,%
11563     pdfmark=/ANN,%
11564     Subtype=/Link,%

```

```

11565   PDFAFlags=4,%
11566   Page=/Prev%
11567 }%
11568 }
11569 \def\PDFOpen#1{%
11570   \pdfmark{#1,pdfmark=/DOCVIEW}%
11571 }
This will only work if you use Distiller 2.1 or higher.
11572 \def\hyper@linkurl#1#2{%
11573   \begingroup
11574   \Hy@pstringdef\Hy@pstringURI{#2}%
11575   \hyper@chars
11576   \leavevmode
11577   \pdfmark[#{#1}]{%
11578     pdfmark=/ANN,%
11579     linktype=url,%
11580     AcroHighlight=\@pdfhighlight,%
11581     Border=\@pdfborder,%
11582     BorderStyle=\@pdfborderstyle,%
11583     Color=\@urlbordercolor,%
11584     Action={<<%
11585       /Subtype/URI%
11586       /URI(\Hy@pstringURI)%
11587       \ifHy@href@ismap
11588         /IsMap true%
11589       \fi
11590     >>},%
11591     Subtype=/Link,%
11592     PDFAFlags=4%
11593   }%
11594 \endgroup
11595 }
11596 \def\hyper@linkfile#1#2#3{%
11597   \begingroup
11598   \def\Hy@pstringF{#2}%
11599   \Hy@CleanupFile\Hy@pstringF
11600   \Hy@pstringdef\Hy@pstringF\Hy@pstringF
11601   \Hy@pstringdef\Hy@pstringD{#3}%
11602   \Hy@MakeRemoteAction
11603   \leavevmode
11604   \pdfmark[#{#1}]{%
11605     pdfmark=/ANN,%
11606     Subtype=/Link,%
11607     PDFAFlags=4,%
11608     AcroHighlight=\@pdfhighlight,%
11609     Border=\@pdfborder,%
11610     BorderStyle=\@pdfborderstyle,%
11611     linktype=file,%
11612     Color=\@filebordercolor,%
11613     Action={%
11614       <<%
11615       /S/GoToR%
11616       \Hy@SetNewWindow
11617       /F(\Hy@pstringF)%

```

```

11618      /D%
11619      \ifx\|#3\|%
11620          [\Hy@href@page\@pdfremotestartview]%
11621      \else
11622          (\Hy@pstringD)cvn%
11623      \fi
11624      \Hy@href@nextactionraw
11625      >>%
11626  }%
11627 }%
11628 \endgroup
11629 }
11630 \def\@hyper@launch run:#1\|#2#3{%
11631 \begingroup
11632 \Hy@pstringdef\Hy@pstringF{#1}%
11633 \Hy@pstringdef\Hy@pstringP{#3}%
11634 \leavevmode
11635 \pdfmark[#{#2}]{%
11636 pdfmark=/ANN,%
11637 Subtype=/Link,%
11638 PDFAFlags=4,%
11639 AcroHighlight=\@pdfhighlight,%
11640 Border=\@pdfborder,%
11641 BorderStyle=\@pdfborderstyle,%
11642 linktype=run,%
11643 Color=\@runbordercolor,%
11644 Action={%
11645 <<%
11646 /S/Launch%
11647 \Hy@SetNewWindow
11648 /F(\Hy@pstringF)%
11649 \ifx\|#3\|%
11650 \else
11651 /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
11652 \fi
11653 \Hy@href@nextactionraw
11654 >>%
11655 }%
11656 }%
11657 \endgroup
11658 }
11659 \pdfmark

```

Unfortunately, some parts of the `pdfmark` PostScript code depend on vagaries of the dvi driver. We isolate here all the problems.

44.9 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.

```

11660 (*dvips)
11661 \providecommand*\XR@ext}{pdf}

```



```

11662 \let\Hy@raisedlink\@empty
11663 \def\literalps@out#1{\special{ps:SDict begin #1 end}}%
11664 \def\headerps@out#1{\special{! #1}}%
11665 \input{pdfmark.def}%
11666 \ifx\@pdfproducer\relax
11667 \def\@pdfproducer{dvips + Distiller}%
11668 \fi
11669 \providecommand*\@pdfborder{0 0 1}
11670 \providecommand*\@pdfborderstyle{}
11671 \providecommand*\@pdfview{XYZ}
11672 \providecommand*\@pdfviewparams{ H.V}
11673 \def\Hy@BorderArrayPatch{BorderArrayPatch}
11674 \g@addto@macro\Hy@FirstPageHook{%
11675 \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.

```

11676 /DvipsToPDF{72.27 mul Resolution div} def%
11677 /PDFToDvips{72.27 div Resolution mul} def%
11678 /BPToDvips{72 div Resolution mul}def

```

The values inside the /Border 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.

Note GhostScript changed its behaviour here and later versions do not need this scaling, so test the PostScript interpreter is GhostScript and if so check its version.

If using gs and release > 9.27 no-op, otherwise patch.

```

11679 product (Ghostscript) search {pop pop pop revision 927 gt}%
11680 {pop false} ifelse%
11681 {%
11682 /BorderArrayPatch{} def%
11683 }%
11684 {%
11685 /BorderArrayPatch{%
11686 [exch{%
11687 dup dup type/integertype eq exch type/realtype eq or%
11688 {BPToDvips}if%
11689 }forall]%
11690 }def%
11691 } ifelse

```

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.

```

11692 /HyperBorder {1 PDFToDvips} def%
11693 /H.V {pdf@hoff pdf@voff null} def%
11694 /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
11695 /H.S {%
11696   currentpoint %
11697   HyperBorder add /pdf@lly exch def %
11698   dup DvipsToPDF 72 add /pdf@hoff exch def %
11699   HyperBorder sub /pdf@llx exch def%
11700 } def%

```

The calculation of upper left y is done without raising the point in \TeX , 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`

```

11701 /H.L {%
11702   2 sub dup%
11703   /HyperBasePt exch def %
11704   PDFToDvips /HyperBaseDvips exch def %
11705   currentpoint %
11706   HyperBaseDvips sub /pdf@ury exch def%
11707   /pdf@urx exch def%
11708 } def%
11709 /H.A {%
11710   H.L %
11711 % |pdf@voff| = the distance from the top of the page to a point
11712 % |\baselineskip| above the current point in PDF coordinates
11713   currentpoint exch pop %
11714   vsize 72 sub exch DvipsToPDF %
11715   HyperBasePt sub % baseline skip
11716   sub /pdf@voff exch def%
11717 } def%
11718 /H.R {%
11719   currentpoint %
11720   HyperBorder sub /pdf@ury exch def %
11721   HyperBorder add /pdf@urx exch def %
11722 % |pdf@voff| = the distance from the top of the page to the current point, in
11723 % PDF coordinates
11724   currentpoint exch pop vsize 72 sub %
11725   exch DvipsToPDF sub /pdf@voff exch def%
11726 } def%
11727 }%
11728 }
11729 \AddToHook{shipout/firstpage}{%
11730 \ifHy@setpagesize
11731 \begingroup
11732 \ifnum\mag=\@m
11733 \ifdim\stockwidth>\z@
11734 \ifdim\stockheight>\z@

```

```

11735     \special{papersize=\the\stockwidth,\the\stockheight}%
11736     \else
11737         \ifdim\paperwidth>\z@
11738             \ifdim\paperheight>\z@
11739                 \special{papersize=\the\paperwidth,\the\paperheight}%
11740             \fi
11741         \fi
11742     \fi
11743 \else
11744     \ifdim\stockwidth=\z@
11745         \ifdim\paperwidth>\z@
11746             \ifdim\paperheight>\z@
11747                 \special{papersize=\the\paperwidth,\the\paperheight}%
11748             \fi
11749         \fi
11750     \fi
11751 \fi
11752 \fi
11753 \endgroup
11754 \fi
11755 \Hy@DisableOption{setpagesize}%
11756 }

11757 \def\setpdfinkmargin#1{%
11758 \begingroup
11759 \setlength{\dimen@}{#1}%
11760 \literalps@out{%
11761 /HyperBorder{\strip@pt\dimen@\space PDFToDvips}def%
11762 }%
11763 \endgroup
11764 }

11765 </dvips>

```

44.10 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.

```

11766 (*vtexpdfmark)
11767 \providecommand*\XR@ext}{pdf}
11768 \let\Hy@raisedlink\@empty
11769 \def\literalps@out#1{\special{pS:#1}}%
11770 \def\headerps@out#1{\immediate\special{pS:#1}}%
11771 \input{pdfmark.def}%
11772 \ifx\@pdfproducer\relax
11773 \ifnum\OpMode=\@ne
11774 \def\@pdfproducer{VTeX}%
11775 \else
11776 \def\@pdfproducer{VTeX + Distiller}%
11777 \fi
11778 \fi
11779 \providecommand*\@pdfborder{0 0 1}

```

```

11780 \providecommand*\@pdfborderstyle{}
11781 \providecommand*\@pdfview{XYZ}
11782 \providecommand*\@pdfviewparams{ H.V}

11783 \g@addto@macro\Hy@FirstPageHook{%
11784   \headerps@out{%
11785     /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.

```

11786   /HyperBorder {1} def%
11787   /H.V {pdf@hoff pdf@voff null} def%
11788   /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: pdf@lly = $Y_c - \text{HyperBorder}$, pdf@hoff = $X_c + 72$, pdf@llx = $X_c - \text{HyperBorder}$

```

11789   /H.S {%
11790     currentpoint %
11791     HyperBorder sub%
11792     /pdf@lly exch def %
11793     dup 72 add /pdf@hoff exch def %
11794     HyperBorder sub%
11795     /pdf@llx exch def%
11796   } def%

```

The x and y coordinates of the current point, minus the \baselineskip: pdf@ury = $Y_c + \text{HyperBasePt} + \text{HyperBorder}$, pdf@urx = $X_c + \text{HyperBorder}$

```

11797   /H.L {%
11798     2 sub%
11799     /HyperBasePt exch def %
11800     currentpoint %
11801     HyperBasePt add HyperBorder add%
11802     /pdf@ury exch def %
11803     HyperBorder add%
11804     /pdf@urx exch def%
11805   } def%
11806   /H.A {%
11807     H.L %
11808     currentpoint exch pop %
11809     vsize 72 sub exch %
11810     HyperBasePt add add%
11811     /pdf@voff exch def%
11812   } def%

```

pdf@ury = $Y_c + \text{HyperBorder}$, pdf@urx = $X_c + \text{HyperBorder}$

```

11813   /H.R {%
11814     currentpoint %
11815     HyperBorder add%
11816     /pdf@ury exch def %
11817     HyperBorder add%
11818     /pdf@urx exch def %
11819     currentpoint exch pop vsize 72 sub add%
11820     /pdf@voff exch def%
11821   } def%
11822 }%

```

```

11823 }
11824 \def\setpdfinkmargin#1{%
11825   \begingroup
11826     \setlength{\dimen@}{#1}%
11827     \literalps@out{%
11828       /HyperBorder{\strip@pt\dimen@}def%
11829     }%
11830   \endgroup
11831 }
11832 </vtexpdfmark>

```

44.11 Textures

```

11833 <*textures>
11834 \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.

```

11835 \begingroup
11836   \obeylines %
11837   \gdef\Hy@ps@CR{\noexpand
11838   }%
11839 \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`.

```

11840 \def\literalps@out#1{%
11841   \special{postscript 0 0 transform}%
11842   \special{rawpostscript itransform moveto\Hy@ps@CR #1}%
11843 }%
11844 %

```

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.

```

11845 \def\headerps@out#1{%
11846   \special{%

```

```

11847   prepostscript TeXdict begin\Hy@ps@CR
11848     #1\Hy@ps@CR
11849   end%
11850 }%
11851 }%
11852 %

```

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.

```

11853 \g@addto@macro\Hy@FirstPageHook{%
11854   \headerps@out{%
11855     /betterpdfmark {%
11856       systemdict begin %
11857         dup /BP eq%
11858         {cleartomark gsave nulldevice []%
11859           {dup /EP eq%
11860             {cleartomark cleartomark grestore}%
11861             {cleartomark}%
11862             ifelse%
11863           }ifelse %
11864         end%
11865       }def\Hy@ps@CR
11866     ___pdfmark___ not{/pdfmark /betterpdfmark load def}if%
11867   }% end of \headerps@out
11868 }% end of \AddToHook{shipout/firstpage}
11869 %
11870 \input{pdfmark.def}%
11871 %
11872 \ifx\@pdfproducer\relax
11873   \def\@pdfproducer{Textures + Distiller}%
11874 \fi
11875 \providecommand*\@pdfborder{0 0 1}
11876 \providecommand*\@pdfborderstyle{}
11877 \providecommand*\@pdfview{XYZ}
11878 \providecommand*\@pdfviewparams{ H.V}
11879 %

```

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`.

```

11880 \Hy@AtBeginDocument{%
11881   \headerps@out{%

```

Textures lives in normal points, I think. So conversion from one coordinate system to another involves doing nothing.

```

11882     /vsize {\Hy@pageheight} def%
11883     /DvipsToPDF {} def%
11884     /PDFToDvips {} def%
11885     /BPToDvips {} def%
11886     /HyperBorder { 1 PDFToDvips } def\Hy@ps@CR
11887     /H.V {pdf@hoff pdf@voff null} def\Hy@ps@CR

```

```

11888 /H.B {/Rect[pdf@llx pdf@lly pdf@urx pdf@ury]} def\Hy@ps@CR
11889 /H.S {%
11890   currentpoint %
11891   HyperBorder add /pdf@lly exch def %
11892   dup DvipsToPDF 72 add /pdf@hoff exch def %
11893   HyperBorder sub /pdf@llx exch def%
11894 } def\Hy@ps@CR
11895 /H.L {%
11896   2 sub %
11897   PDFToDvips /HyperBase exch def %
11898   currentpoint %
11899   HyperBase sub /pdf@ury exch def%
11900   /pdf@urx exch def%
11901 } def\Hy@ps@CR
11902 /H.A {%
11903   H.L %
11904   currentpoint exch pop %
11905   vsize 72 sub exch DvipsToPDF %
11906   HyperBase sub % baseline skip
11907   sub /pdf@voff exch def%
11908 } def\Hy@ps@CR
11909 /H.R {%
11910   currentpoint %
11911   HyperBorder sub /pdf@ury exch def %
11912   HyperBorder add /pdf@urx exch def %
11913   currentpoint exch pop vsize 72 sub %
11914   exch DvipsToPDF sub /pdf@voff exch def%
11915 } def\Hy@ps@CR
11916 }%
11917 }

11918 \def\setpdfinkmargin#1{%
11919   \begingroup
11920   \setlength{\dimen@}{#1}%
11921   \literalps@out{%
11922     /HyperBorder{\strip@pt\dimen@\space PDFToDvips}def%
11923   }%
11924   \endgroup
11925 }

11926 \Hy@AtBeginDocument{%
11927   \ifHy@colorlinks
11928     \headerps@out{/PDFBorder{/Border [0 0 0]}def}%
11929   \fi
11930 }

11931 \expandafter\let\expandafter\keepPDF@SetupDoc
11932   \csname PDF@SetupDoc\endcsname
11933 \def\PDF@SetupDoc{%
11934   \ifx\@baseurl\@empty
11935   \else
11936     \special{html:<base href="\@baseurl">}%

```

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.

```

11937 \fi
11938 \keepPDF@SetupDoc
11939 }
11940 \Hy@WrapperDef\hyper@anchor#1{%
11941 \Hy@SaveLastskip
11942 \Hy@VerboseAnchor{#1}%
11943 \begingroup
11944 \let\protect=\string
11945 \special{html:<a name=%
11946 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
11947 \endgroup
11948 \Hy@activeanchortrue
11949 \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
11950 \special{html:</a>}%
11951 \Hy@activeanchorfalse
11952 \Hy@RestoreLastskip
11953 }
11954 \Hy@WrapperDef\hyper@anchorstart#1{%
11955 \Hy@SaveLastskip
11956 \Hy@VerboseAnchor{#1}%
11957 \begingroup
11958 \hyper@chars
11959 \special{html:<a name=%
11960 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
11961 \endgroup
11962 \Hy@activeanchortrue
11963 }
11964 \def\hyper@anchorend{%
11965 \special{html:</a>}%
11966 \Hy@activeanchorfalse
11967 \Hy@RestoreLastskip
11968 }
11969 \def\@urltype{url}
11970 \def\hyper@linkstart#1#2{%
11971 \Hy@VerboseLinkStart{#1}{#2}%
11972 \expandafter\Hy@colorlink\csname @#1color\endcsname
11973 \def\Hy@tempa{#1}%
11974 \ifx\Hy@tempa\@urltype
11975 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
11976 \else
11977 \begingroup
11978 \hyper@chars
11979 \special{%
11980 html:<a href=%
11981 \hyper@quote#\HyperDestNameFilter{#2}\hyper@quote>%
11982 }%
11983 \endgroup
11984 \fi
11985 }
11986 \def\hyper@linkend{%
11987 \special{html:</a>}%
11988 \Hy@endcolorlink
11989 }
11990 \def\hyper@linkfile#1#2#3{%

```



```

11991 \hyper@linkurl{#1}{%
11992   \Hy@linkfileprefix#2\ifx\#3\\\else\##3\fi
11993 }%
11994 }
11995 \def\hyper@linkurl#1#2{%
11996   \leavevmode
11997   \ifHy@raiselinks
11998     \Hy@SaveSpaceFactor
11999     \Hy@SaveSavedSpaceFactor
12000     \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
12001     \Hy@RestoreSavedSpaceFactor
12002     \@linkdim\dp\@tempboxa
12003     \lower\@linkdim\hbox{%
12004       \hyper@chars
12005       \special{html:<a href=\hyper@quote#2\hyper@quote>}%
12006     }%
12007     \Hy@colorlink\@urlcolor
12008     \Hy@RestoreSpaceFactor
12009     #1\Hy@xspace@end
12010     \Hy@SaveSpaceFactor
12011     \@linkdim\ht\@tempboxa
12012     \advance\@linkdim by -6.5\p@
12013     \raise\@linkdim\hbox{\special{html:</a>}}%
12014     \Hy@endcolorlink
12015     \Hy@RestoreSpaceFactor
12016   \else
12017     \begingroup
12018     \hyper@chars
12019     \special{html:<a href=\hyper@quote#2\hyper@quote>}%
12020     \Hy@colorlink\@urlcolor#1\Hy@xspace@end
12021     \special{html:</a>}%
12022     \Hy@endcolorlink
12023   \endgroup
12024   \fi
12025 }

```

Very poor implementation of \hyper@link without considering #1.

```

12026 \def\hyper@link#1#2#3{%
12027   \Hy@VerboseLinkStart{#1}{#2}%
12028   \hyper@linkurl{#3}{#\Hy@HyperDestNameFilter{#2}}%
12029 }
12030 \def\hyper@image#1#2{%
12031   \begingroup
12032   \hyper@chars
12033   \special{html:<img src=\hyper@quote#1\hyper@quote>}%
12034   \endgroup
12035 }
12036 </textures>

```

44.12 dvipsone

```

12037 % \subsection{dvipsone driver}
12038 % Over-ride the default setup macro in pdfmark driver to use Y\&Y
12039 % |\special| commands.

```

```

12040 (*dvipsone)
12041 \providecommand*\XR@ext}{pdf}
12042 \let\Hy@raisedlink\@empty
12043 \providecommand*\@pdfborder{0 0 1}
12044 \providecommand*\@pdfborderstyle{}
12045 \def\literalps@out#1{\special{ps:#1}}%
12046 \def\headerps@out#1{\special{headertext=#1}}%
12047 \input{pdfmark.def}%
12048 \HyInfo@AddonUnsupportedtrue
12049 \def\PDF@FinishDoc{%
12050   \Hy@UseMaketitleInfos
12051   \HyInfo@TrappedUnsupported
12052   \special{PDF: Keywords \@pdfkeywords}%
12053   \special{PDF: Title \@pdftitle}%
12054   \special{PDF: Creator \@pdfcreator}%
12055   \ifx\@pdfcreationdate\@empty
12056   \else
12057     \special{PDF: CreationDate \@pdfcreationdate}%
12058   \fi
12059   \ifx\@pdfmoddate\@empty
12060   \else
12061     \special{PDF: ModDate \@pdfmoddate}%
12062   \fi
12063   \special{PDF: Author \@pdfauthor}%
12064   \ifx\@pdfproducer\relax
12065   \else
12066     \special{PDF: Producer \@pdfproducer}%
12067   \fi
12068   \special{PDF: Subject \@pdfsubject}%
12069   \Hy@DisableOption{pdfauthor}%
12070   \Hy@DisableOption{pdftitle}%
12071   \Hy@DisableOption{pdfsubject}%
12072   \Hy@DisableOption{pdfcreator}%
12073   \Hy@DisableOption{addtopdfcreator}%
12074   \Hy@DisableOption{pdfcreationdate}%
12075   \Hy@DisableOption{pdfcreationdate}%
12076   \Hy@DisableOption{pdfmoddate}%
12077   \Hy@DisableOption{pdfproducer}%
12078   \Hy@DisableOption{pdfkeywords}%
12079   \Hy@DisableOption{pdftrapped}%
12080   \Hy@DisableOption{pdfinfo}%
12081 }
12082 \def\PDF@SetupDoc{%
12083   \def\Hy@temp{}%
12084   \ifx\@pdfstartpage\@empty
12085   \else
12086     \ifx\@pdfstartview\@empty
12087     \else
12088       \edef\Hy@temp{%
12089         ,Page=\@pdfstartpage
12090         ,View=\@pdfstartview
12091       }%
12092     \fi
12093   \fi

```

```

12094 \edef\Hy@temp{%
12095   \noexpand\pdfmark{%
12096     pdfmark=/DOCVIEW,%
12097     PageMode=/\@pdfpagemode
12098     \Hy@temp
12099   }%
12100 }%
12101 \Hy@temp
12102 \ifx\@pdfpagescrop\@empty
12103 \else
12104   \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
12105 \fi
12106 \edef\Hy@temp{%
12107   \ifHy@pdftoolbar\else /HideToolbar true\fi
12108   \ifHy@pdfmenubar\else /HideMenubar true\fi
12109   \ifHy@pdfwindowui\else /HideWindowUI true\fi
12110   \ifHy@pdffitwindow /FitWindow true\fi
12111   \ifHy@pdfcenterwindow /CenterWindow true\fi
12112   \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
12113   \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
12114   \Hy@UseNameKey{Direction}\@pdfdirection
12115   \Hy@UseNameKey{ViewArea}\@pdfviewarea
12116   \Hy@UseNameKey{ViewClip}\@pdfviewclip
12117   \Hy@UseNameKey{PrintArea}\@pdfprintarea
12118   \Hy@UseNameKey{PrintClip}\@pdfprintclip
12119   \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
12120   \Hy@UseNameKey{Duplex}\@pdfduplex
12121   \ifx\@pdfpicktraybypdfsize\@empty
12122   \else
12123     /PickTrayByPDFSize \@pdfpicktraybypdfsize
12124   \fi
12125   \ifx\@pdfprintpagerange\@empty
12126   \else
12127     /PrintPageRange[\@pdfprintpagerange]%
12128   \fi
12129   \ifx\@pdfnumcopies\@empty
12130   \else
12131     /NumCopies \@pdfnumcopies
12132   \fi
12133 }%
12134 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
12135 \pdfmark{%
12136   pdfmark=/PUT,%
12137   Raw={%
12138     \string{Catalog\string}<<%
12139     \ifx\Hy@temp\@empty
12140     \else
12141       /ViewerPreferences<<\Hy@temp>>%
12142     \fi
12143     \Hy@UseNameKey{PageLayout}\@pdfpagelayout
12144     \ifx\@pdflang\relax
12145     \else
12146       /Lang(\@pdflang)%
12147     \fi

```

```

12148     \ifx\@baseurl\@empty
12149     \else
12150     /URI<</Base(\Hy@pstringB)>>%
12151     \fi
12152     >>%
12153   }%
12154 }%
12155 }
12156 \providecommand*\@pdfview{XYZ}
12157 \providecommand*\@pdfviewparams{ %
12158   gsave revscl currentpoint grestore %
12159   72 add exch pop null exch null%
12160 }
12161 \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 T_EX.

```

12162 \g@addto@macro\Hy@FirstPageHook{%
12163   \headerps@out{%
dvipsone lives in scaled points; does this mean 65536 or 65781?
12164   /DvipsToPDF { 65781 div } def%
12165   /PDFToDvips { 65781 mul } def%
12166   /BPToDvips{65781 mul}def%
12167   /HyperBorder { 1 PDFToDvips } def%
12168   /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.

```

12169   /BorderArrayPatch{%
12170     [exch{%
12171       dup dup type/integertype eq exch type/realttype eq or%
12172       {BPToDvips}if%
12173     }forall]%
12174   }def%
12175 /H.S {%
12176   currentpoint %
12177   HyperBorder add /pdf@lly exch def %
12178   dup DvipsToPDF 72 add /pdf@hoff exch def %
12179   HyperBorder sub /pdf@llx exch def%
12180 } def%
12181 /H.L {%
12182   2 sub %
12183   PDFToDvips /HyperBase exch def %
12184   currentpoint %
12185   HyperBase sub /pdf@ury exch def%
12186   /pdf@urx exch def%
12187 } def%
12188 /H.A {%
12189   H.L %
12190   currentpoint exch pop %

```

```

12191   HyperBase sub % baseline skip
12192   DvipsToPDF /pdf@voff exch def%
12193   } def%
12194   /H.R {%
12195     currentpoint %
12196     HyperBorder sub /pdf@ury exch def %
12197     HyperBorder add /pdf@urx exch def %
12198     currentpoint exch pop DvipsToPDF /pdf@voff exch def%
12199   } def%
12200 }%
12201 }

12202 \def\setpdfinkmargin#1{%
12203   \begingroup
12204   \setlength{\dimen@}{#1}%
12205   \literalps@out{%
12206     /HyperBorder{\strip@pt\dimen@\space PDFToDvips}def%
12207   }%
12208   \endgroup
12209 }

12210 </dvipsone>

```

44.13 TeX4ht

```

12211 <*tex4ht>
12212 \providecommand*\XR@ext}{html}
12213 \let\Hy@raisedlink\@empty
12214 \@ifpackageloaded{tex4ht}{%
12215   \Hy@InfoNoLine{tex4ht is already loaded}%
12216 }{%
12217   \RequirePackage[hTeX4ht]{tex4ht}%
12218 }
12219 \hyperlinkfileprefix{}
12220 \let\PDF@FinishDoc\@empty
12221 \def\PDF@SetupDoc{%
12222   \ifx\@baseurl\@empty
12223     \else
12224     \special{t4ht=<base href="\@baseurl">}%
12225     \fi
12226 }
12227 \Hy@WrapperDef\hyper@anchor#1{%
12228   \Hy@SaveLastskip
12229   \Hy@VerboseAnchor{#1}%
12230   \begingroup
12231     \let\protect=\string
12232     \special{t4ht=<a name=%
12233       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
12234   \endgroup
12235   \Hy@activeanchortrue
12236   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
12237   \special{t4ht=</a>}%
12238   \Hy@activeanchorfals
12239   \Hy@RestoreLastskip
12240 }
12241 \Hy@WrapperDef\hyper@anchorstart#1{%

```

```

12242 \Hy@SaveLastskip
12243 \Hy@VerboseAnchor{#1}%
12244 \begingroup
12245   \hyper@chars\special{t4ht=<a name=%
12246     \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
12247 \endgroup
12248 \Hy@activeanchortrue
12249 }
12250 \def\hyper@anchorend{%
12251   \special{t4ht=</a>}%
12252   \Hy@activeanchorfalse
12253   \Hy@RestoreLastskip
12254 }
12255 \def\@urltype{url}
12256 \def\hyper@linkstart#1#2{%
12257   \Hy@VerboseLinkStart{#1}{#2}%
12258   \expandafter\Hy@colorlink\csname @#1color\endcsname
12259   \def\Hy@tempa{#1}%
12260   \ifx\Hy@tempa\@urltype
12261     \special{t4ht=<a href=\hyper@quote#2\hyper@quote>}%
12262   \else
12263     \begingroup
12264       \hyper@chars
12265       \special{t4ht=<a href=%
12266         \hyper@quote\#\HyperDestNameFilter{#2}\hyper@quote>}%
12267     \endgroup
12268   \fi
12269 }
12270 \def\hyper@linkend{%
12271   \special{t4ht=</a>}%
12272   \Hy@endcolorlink
12273 }
12274 \def\hyper@linkfile#1#2#3{%
12275   \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\\else\##3\fi}%
12276 }
12277 \def\hyper@linkurl#1#2{%
12278   \leavevmode
12279   \ifHy@raiselinks
12280     \Hy@SaveSpaceFactor
12281     \Hy@SaveSavedSpaceFactor
12282     \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
12283     \Hy@RestoreSavedSpaceFactor
12284     \@linkdim\dp\@tempboxa
12285     \lower\@linkdim\hbox{%
12286       \begingroup
12287         \hyper@chars
12288         \special{%
12289           t4ht=<a href=\hyper@quote#2\hyper@quote>%
12290         }%
12291       \endgroup
12292     }%
12293     \Hy@colorlink\@urlcolor
12294     \Hy@RestoreSpaceFactor
12295     #1\Hy@xspace@end

```

```

12296 \Hy@SaveSpaceFactor
12297 \Hy@endcolorlink
12298 \@linkdim\ht\@tempboxa
12299 \advance\@linkdim by -6.5\p@
12300 \raise\@linkdim\hbox{\special{t4ht=</a>}}%
12301 \Hy@RestoreSpaceFactor
12302 \else
12303 \begingroup
12304 \hyper@chars
12305 \special{t4ht=<a href=\hyper@quote#2\hyper@quote>}%
12306 \Hy@colorlink\@urlcolor
12307 #1\Hy@xspace@end
12308 \Hy@endcolorlink
12309 \special{t4ht=</a>}%
12310 \endgroup
12311 \fi
12312 }

```

Poor implementation of \hyper@link without considering #1.

```

12313 \def\hyper@link#1#2#3{%
12314 \Hy@VerboseLinkStart{#1}{#2}%
12315 \hyper@linkurl{#3}{\#\Hy@HyperDestNameFilter{#2}}%
12316 }
12317 \def\hyper@image#1#2{%
12318 \begingroup
12319 \hyper@chars
12320 \special{t4ht=<img src=\hyper@quote#1\hyper@quote>}%
12321 \endgroup
12322 }
12323 \let\autoref\ref
12324 \ifx \rEFLiNK \UnDef
12325 \def\rEFLiNK #1#2{#2}%
12326 \fi
12327 \let\backref\@gobble

```

Fix for tex4ht.

```

12328 \AtBeginDocument{%
12329 \expandafter
12330 \let\expandafter\Hy@OrgMakeLabel\csname Make:Label\endcsname
12331 \expandafter\def\csname Make:Label\endcsname#1#2{%
12332 \ifhmode
12333 \Hy@SaveSpaceFactor
12334 \else
12335 \global\Hy@SavedSpaceFactor=1000 %
12336 \fi
12337 \Hy@OrgMakeLabel{#1}{#2}%
12338 \Hy@RestoreSpaceFactor
12339 #2\Hy@xspace@end%
12340 \Hy@SaveSpaceFactor
12341 }%
12342 \Hy@RestoreSpaceFactor
12343 }%
12344 }
12345 </tex4ht>
12346 (*tex4htcfg)

```

```

12347 \IfFileExists{jobname.cfg}{\endinput}{}
12348 \Preamble{html}
12349 \begin{document}%
12350 \EndPreamble
12351 \def\TeX{TeX}
12352 \def\OMEGA{Omega}
12353 \def\LaTeX{LaTeX}
12354 \def\LaTeXe{\LaTeX2e}
12355 \def\TeXe{e-TeX}
12356 \def\MF{Metafont}
12357 \def\MP{MetaPost}
12358 </tex4htcfg>

```

45 Driver-specific form support

45.1 pdfmarks

change 2020-06-20: added /Euro to encoding

```

12359 (*pdfmark)
12360 \long\def\@Form[#1]{%
12361 \g@addto@macro\Hy@FirstPageHook{%
12362 \headerps@out{%
12363 [%
12364 /_objdef{pdfDocEncoding}%
12365 /type/dict%
12366 /OBJ pdfmark%
12367 [%
12368 {pdfDocEncoding}%
12369 <<%
12370 /Type/Encoding%
12371 /Differences[%
12372 24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek/ring%
12373 /tilde %
12374 39/quotesingle %
12375 96/grave %
12376 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
12377 /fraction/guilsinglleft/guilsinglright/minus/perthousand%
12378 /quotedblbase/quotedblleft/quotedblright/quoteleft%
12379 /quoteright/quotesinglbase/trademark/fi/fl/Lslash/OE/Scaron%
12380 /Ydieresis/Zcaron/dotlessi/lslash/oe/scaron/zcaron %
12381 160/Euro %
12382 164/currency %
12383 166/brokenbar %
12384 168/dieresis/copyright/ordfeminine %
12385 172/logicalnot/.notdef/registered/macron/degree/plusminus%
12386 /twosuperior/threesuperior/acute/mu %
12387 183/periodcentered/cedilla/onesuperior/ordmasculine %
12388 188/onequarter/onehalf/threequarters %
12389 192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
12390 /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave%
12391 /Iacute/Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute%
12392 /Ocircumflex/Otilde/Odieresis/multiply/Oslash/Ugrave%
12393 /Uacute/Ucircumflex/Udieresis/Yacute/Thorn/germandbls%
12394 /agrave/aacute/acircumflex/atilde/adieresis/aring/ae%

```


12395 /cedilla/egrave/eacute/ecircumflex/edieresis/igrave%
12396 /iacute/icircumflex/idieresis/eth/ntilde/ograve/oacute%
12397 /ocircumflex/otilde/odieresis/divide/oshlash/ugrave/uacute%
12398 /ucircumflex/udieresis/yacute/thorn/ydieresis%
12399]%
12400 >>%
12401 /PUT pdfmark%
12402 [%
12403 /_objdef{ZaDb}%
12404 /type/dict%
12405 /OBJ pdfmark%
12406 [%
12407 {ZaDb}%
12408 <<%
12409 /Type/Font%
12410 /Subtype/Type1%
12411 /Name/ZaDb%
12412 /BaseFont/ZapfDingbats%
12413 >>%
12414 /PUT pdfmark%
12415 [%
12416 /_objdef{Helv}%
12417 /type/dict%
12418 /OBJ pdfmark%
12419 [%
12420 {Helv}%
12421 <<%
12422 /Type/Font%
12423 /Subtype/Type1%
12424 /Name/Helv%
12425 /BaseFont/Helvetica%
12426 /Encoding{pdfDocEncoding}%
12427 >>%
12428 /PUT pdfmark%
12429 [%
12430 /_objdef{aform}%
12431 /type/dict%
12432 /OBJ pdfmark%
12433 [%
12434 /_objdef{afields}%
12435 /type/array%
12436 /OBJ pdfmark%
12437 [%
12438 /_objdef{corder}%
12439 /type/array%
12440 /OBJ pdfmark%
12441 {%
12442 [%
12443 /BBox[0 0 100 100]%
12444 /_objdef{Check}%
12445 /BP pdfmark %
12446 1 0 0 setrgbcolor%
12447 /ZapfDingbats 80 selectfont %
12448 20 20 moveto%

12449 (4)show%
12450 [/EP pdfmark%
12451 [%
12452 /BBox[0 0 100 100]%
12453 /_objdef{Cross}%
12454 /BP pdfmark %
12455 1 0 0 setrgbcolor%
12456 /ZapfDingbats 80 selectfont %
12457 20 20 moveto%
12458 (8)show%
12459 [/EP pdfmark%
12460 [%
12461 /BBox[0 0 250 100]%
12462 /_objdef{Submit}%
12463 /BP pdfmark %
12464 0.6 setgray %
12465 0 0 250 100 rectfill %
12466 1 setgray %
12467 2 2 moveto %
12468 2 98 lineto %
12469 248 98 lineto %
12470 246 96 lineto %
12471 4 96 lineto %
12472 4 4 lineto %
12473 fill %
12474 0.34 setgray %
12475 248 98 moveto %
12476 248 2 lineto %
12477 2 2 lineto %
12478 4 4 lineto %
12479 246 4 lineto %
12480 246 96 lineto %
12481 fill%
12482 /Helvetica 76 selectfont %
12483 0 setgray %
12484 8 22.5 moveto%
12485 (Submit)show%
12486 [/EP pdfmark%
12487 [%
12488 /BBox[0 0 250 100]%
12489 /_objdef{SubmitP}%
12490 /BP pdfmark %
12491 0.6 setgray %
12492 0 0 250 100 rectfill %
12493 0.34 setgray %
12494 2 2 moveto %
12495 2 98 lineto %
12496 248 98 lineto %
12497 246 96 lineto %
12498 4 96 lineto %
12499 4 4 lineto %
12500 fill %
12501 1 setgray %
12502 248 98 moveto %

```

12503 248 2 lineto %
12504 2 2 lineto %
12505 4 4 lineto %
12506 246 4 lineto %
12507 246 96 lineto %
12508 fill%
12509 /Helvetica 76 selectfont %
12510 0 setgray %
12511 10 20.5 moveto%
12512 (Submit)show%
12513 [/EP pdfmark%
12514 } ?pdfmark%
12515 [%
12516 {aform}%
12517 <<%
12518 /Fields{afields}%
12519 /DR<<%
12520 /Font<<%
12521 /ZaDb{ZaDb}%
12522 /Helv{Helv}%
12523 >>%
12524 >>%
12525 /DA(/Helv 10 Tf 0 g)%
12526 /CO{corder}%
12527 \ifHy@pdfa
12528 \else
12529 \ifHyField@NeedAppearances
12530 /NeedAppearances true%
12531 \fi
12532 \fi
12533 >>%
12534 /PUT pdfmark%
12535 [%
12536 {Catalog}%
12537 <<%
12538 /AcroForm{aform}%
12539 >>%
12540 /PUT pdfmark%
12541 }}%
12542 \kvsetkeys{Form}{#1}%
12543 }
12544 \let@endForm@empty
12545 \def@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
12546 \Hy@Message{Sorry, pdfmark drivers do not support FORM gauges}%
12547 }

12548 \newcount\HyField@AnnotCount
12549 \HyField@AnnotCount=\z@
12550 \def\HyField@AdvanceAnnotCount{%
12551 \global\advance\HyField@AnnotCount\@ne
12552 }
12553 \def\HyField@TheAnnotCount{%
12554 \the\HyField@AnnotCount
12555 }

```

```

12556 \edef\Fld@pageobjref{/P\string{ThisPage\string}}
12557 \def\HyField@AddToFields#1{%
12558   \pdfmark{%
12559     pdfmark=/APPEND,%
12560     Raw={%
12561       \string{afields\string}%
12562       \string{#1\HyField@TheAnnotCount\string}%
12563     }%
12564   }%
12565   \ifx\Fld@calculate@code\@empty
12566   \else
12567     \pdfmark{%
12568       pdfmark=/APPEND,%
12569       Raw={%
12570         \string{corder\string}%
12571         \string{#1\HyField@TheAnnotCount\string}%
12572       }%
12573     }%
12574   \fi
12575 }

12576 \def\@TextField[#1]#2{% parameters, label
12577   \def\Fld@name{#2}%
12578   \let\Fld@default\@empty
12579   \let\Fld@value\@empty
12580   \def\Fld@width{\DefaultWidthofText}%
12581   \def\Fld@height{%
12582     \ifFld@multiline
12583       \DefaultHeightofTextMultiline
12584     \else
12585       \DefaultHeightofText
12586     \fi
12587   }%
12588   \begingroup
12589   \expandafter\HyField@SetKeys\expandafter{%
12590     \DefaultOptionsofText,#1%
12591   }%
12592   \HyField@FlagsText
12593   \ifFld@hidden\def\Fld@width{1sp}\fi
12594   \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
12595   \HyField@AdvanceAnnotCount
12596   \LayoutTextField{#2}{%
12597     \leavevmode
12598     \Hy@escapeform\PDFForm@Text
12599     \pdfmark[\MakeTextField{\Fld@width}{\Fld@height}]{%
12600       pdfmark=/ANN,%
12601       objdef=text\HyField@TheAnnotCount,%
12602       Raw={\PDFForm@Text}%
12603     }%
12604   }%
12605   \HyField@AddToFields{text}%
12606 \endgroup
12607 }

12608 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices

```

```

12609 \def\Fld@name{#2}%
12610 \let\Fld@default\relax
12611 \let\Fld@value\relax
12612 \def\Fld@width{\DefaultWidthofChoiceMenu}%
12613 \def\Fld@height{\DefaultHeightofChoiceMenu}%
12614 \begingroup
12615 \Fld@menulength=0 %
12616 \@tempdima\z@
12617 \@for\@curropt:=#3\do{%
12618 \expandafter\Fld@checkequals\@curropt==\\%
12619 \Hy@StepCount\Fld@menulength
12620 \settowidth{\@tempdimb}{\@currDisplay}%
12621 \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
12622 }%
12623 \advance\@tempdima by 15\p@
12624 \begingroup
12625 \HyField@SetKeys{#1}%
12626 \edef\x{\endgroup
12627 \noexpand\expandafter
12628 \noexpand\HyField@SetKeys
12629 \noexpand\expandafter{%
12630 \expandafter\noexpand\cname DefaultOptionsof%
12631 \ifFld@radio
12632 Radio%
12633 \else
12634 \ifFld@combo
12635 \ifFld@popdown
12636 PopdownBox%
12637 \else
12638 ComboBox%
12639 \fi
12640 \else
12641 ListBox%
12642 \fi
12643 \fi
12644 \endcsname
12645 }%
12646 }\x
12647 \HyField@SetKeys{#1}%
12648 \ifFld@hidden\def\Fld@width{1sp}\fi
12649 \ifx\Fld@value\relax
12650 \let\Fld@value\Fld@default
12651 \fi
12652 \LayoutChoiceField{#2}{%
12653 \ifFld@radio
12654 \HyField@FlagsRadioButton
12655 \@@Radio{#3}%
12656 \else
12657 \begingroup
12658 \HyField@FlagsChoice
12659 \ifdim\Fld@width<\@tempdima
12660 \ifdim\@tempdima<1cm\@tempdima1cm\fi
12661 \edef\Fld@width{\the\@tempdima}%
12662 \fi

```

```

12663     \ifFld@combo
12664     \else
12665         \@tempdima=\the\Fld@menulength\Fld@charsize
12666         \advance\@tempdima by \Fld@borderwidth bp %
12667         \advance\@tempdima by \Fld@borderwidth bp %
12668         \edef\Fld@height{\the\@tempdima}%
12669     \fi
12670     \@@ListBox{#3}%
12671 \endgroup
12672 \fi
12673 }%
12674 \endgroup
12675 }
12676 \def\@@Radio#1{%
12677 \Fld@listcount=0 %
12678 \EdefEscapeName\Fld@default{\Fld@default}%
12679 \@for\@curropt:=#1\do{%
12680 \expandafter\Fld@checkequals\@curropt==\%
12681 \EdefEscapeName\@currValue{\@currValue}%
12682 \Hy@StepCount\Fld@listcount
12683 \@currDisplay\space
12684 \Hy@escapeform\PDFForm@Radio
12685 \ifnum\Fld@listcount=1 %
12686 \HyField@AdvanceAnnotCount
12687 \fi
12688 \pdfmark[\MakeRadioField{\Fld@width}{\Fld@height}]{%
12689 pdfmark=/ANN,%
12690 objdef=\ifnum\Fld@listcount=1 radio\HyField@TheAnnotCount\fi,%
12691 Raw={%
12692 \PDFForm@Radio /AP <</N <</\@currValue\space {Check}>> >>%
12693 }%
12694 } % deliberate space between radio buttons
12695 \ifnum\Fld@listcount=1 %
12696 \HyField@AddToFields{radio}%
12697 \fi
12698 }%
12699 }
12700 \newcount\Fld@listcount
12701 \def\@@ListBox#1{%
12702 \HyField@PDFChoices{#1}%
12703 \Hy@escapeform\PDFForm@List
12704 \HyField@AdvanceAnnotCount
12705 \pdfmark[\MakeChoiceField{\Fld@width}{\Fld@height}]{%
12706 pdfmark=/ANN,%
12707 objdef=list\HyField@TheAnnotCount,%
12708 Raw={\PDFForm@List}%
12709 }%
12710 \HyField@AddToFields{list}%
12711 }
12712 \def\@PushButton[#1]#2{% parameters, label
12713 \def\Fld@name{#2}%
12714 \begingroup
12715 \expandafter\HyField@SetKeys\expandafter{%
12716 \DefaultOptionsofPushButton,#1%

```

```

12717 }%
12718 \ifHy@pdfa
12719 \Hy@Error{%
12720   PDF/A: Push button with JavaScript is prohibited%
12721 } \@ehc
12722 \LayoutPushButtonField{%
12723   \leavevmode
12724   \MakeButtonField{#2}%
12725 }%
12726 \else
12727   \HyField@FlagsPushButton
12728   \ifFld@hidden\def\Fld@width{1sp}\fi
12729   \HyField@AdvanceAnnotCount
12730   \LayoutPushButtonField{%
12731     \leavevmode
12732     \Hy@escapeform\PDFForm@Push
12733     \pdfmark[\MakeButtonField{#2}]{%
12734       pdfmark=/ANN,%
12735       objdef=push\HyField@TheAnnotCount,%
12736       Raw={\PDFForm@Push}%
12737     }%
12738   }%
12739   \HyField@AddToFields{push}%
12740 \fi
12741 \endgroup
12742 }
12743 \def\@Submit[#1]#2{%
12744   \def\Fld@width{\DefaultWidthofSubmit}%
12745   \def\Fld@height{\DefaultHeightofSubmit}%
12746   \begingroup
12747     \expandafter\HyField@SetKeys\expandafter{%
12748       \DefaultOptionsofSubmit,#1%
12749     }%
12750     \HyField@FlagsPushButton
12751     \HyField@FlagsSubmit
12752     \ifFld@hidden\def\Fld@width{1sp}\fi
12753     \Hy@escapeform\PDFForm@Submit
12754     \HyField@AdvanceAnnotCount
12755     \pdfmark[\MakeButtonField{#2}]{%
12756       pdfmark=/ANN,%
12757       objdef=submit\HyField@TheAnnotCount,%
12758       Raw={\PDFForm@Submit /AP<</N{Submit}/D{SubmitP}>>}%
12759     }%
12760     \HyField@AddToFields{submit}%
12761   \endgroup
12762 }
12763 \def\@Reset[#1]#2{%
12764   \def\Fld@width{\DefaultWidthofReset}%
12765   \def\Fld@height{\DefaultHeightofReset}%
12766   \begingroup
12767     \expandafter\HyField@SetKeys\expandafter{%
12768       \DefaultOptionsofReset,#1%
12769     }%
12770   \leavevmode

```

```

12771 \ifHy@pdfa
12772 \Hy@Error{%
12773   PDF/A: Reset action is prohibited%
12774 } \@ehc
12775 \MakeButtonField{#2}%
12776 \else
12777 \HyField@FlagsPushButton
12778 \ifFld@hidden\def\Fld@width{1sp}\fi
12779 \Hy@escapeform\PDFForm@Reset
12780 \HyField@AdvanceAnnotCount
12781 \pdfmark[\MakeButtonField{#2}]{%
12782   pdfmark=/ANN,%
12783   objdef=reset\HyField@TheAnnotCount,%
12784   Raw={\PDFForm@Reset}%
12785 }%
12786 \HyField@AddToFields{reset}%
12787 \fi
12788 \endgroup
12789 }%
12790 \def\@CheckBox[#1]#2{% parameters, label
12791 \def\Fld@name{#2}%
12792 \def\Fld@default{0}%
12793 \begingroup
12794 \def\Fld@width{\DefaultWidthofCheckBox}%
12795 \def\Fld@height{\DefaultHeightofCheckBox}%
12796 \expandafter\HyField@SetKeys\expandafter{%
12797 \DefaultOptionsofCheckBox,#1%
12798 }%
12799 \HyField@FlagsCheckBox
12800 \ifFld@hidden\def\Fld@width{1sp}\fi
12801 \HyField@AdvanceAnnotCount
12802 \LayoutCheckField{#2}{%
12803 \leavevmode
12804 \Hy@escapeform\PDFForm@Check
12805 \pdfmark[\MakeCheckField{\Fld@width}{\Fld@height}]{%
12806   pdfmark=/ANN,%
12807   objdef=check\HyField@TheAnnotCount,%
12808   Raw={\PDFForm@Check}%
12809 }%
12810 }%
12811 \HyField@AddToFields{check}%
12812 \endgroup
12813 }
12814 \pdfmark)

```

45.2 HyperTeX

```

12815 (*hypertex)
12816 \def\@Form[#1]{%
12817 \Hy@Message{Sorry, HyperTeX does not support FORMs}%
12818 }
12819 \let\@endForm\@empty
12820 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
12821 \Hy@Message{Sorry, HyperTeX does not support FORM gauges}%

```



```

12822 }
12823 \def\@TextField[#1]#2{% parameters, label
12824 \Hy@Message{Sorry, HyperTeX does not support FORM text fields}%
12825 }
12826 \def\@CheckBox[#1]#2{% parameters, label
12827 \Hy@Message{Sorry, HyperTeX does not support FORM checkboxes}%
12828 }
12829 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
12830 \Hy@Message{Sorry, HyperTeX does not support FORM choice menus}%
12831 }
12832 \def\@PushButton[#1]#2{% parameters, label
12833 \Hy@Message{Sorry, HyperTeX does not support FORM pushbuttons}%
12834 }
12835 \def\@Reset[#1]#2{%
12836 \Hy@Message{Sorry, HyperTeX does not support FORMs}%
12837 }
12838 \def\@Submit[#1]#2{%
12839 \Hy@Message{Sorry, HyperTeX does not support FORMs}%
12840 }
12841 </hypertext>

```

45.3 TeX4ht

```

12842 (*tex4ht)
12843 \def\@Form[#1]{%
12844 \kvsetkeys{Form}{#1}%
12845 \HCode{<form action="\Form@action" method="\Form@method">}%
12846 }
12847 \def\@endForm{\HCode{</form>}}
12848 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
12849 \Hy@Message{Sorry, TeX4ht does not support gauges}%
12850 }
12851 \def\@TextField[#1]#2{% parameters, label
12852 \let\Hy@reserved@a\@empty
12853 \def\Fld@name{#2}%
12854 \let\Fld@default\@empty
12855 \bgroup
12856 \Field@toks={ }%
12857 \kvsetkeys{Field}{#1}%
12858 \HCode{<label for="\Fld@name">#2</label>}%
12859 \ifFld@password
12860 \@@PasswordField
12861 \else
12862 \@@TextField
12863 \fi
12864 \egroup
12865 }
12866 \def\@@PasswordField{%
12867 \HCode{%
12868 <input type="password" %
12869 id="\Fld@name" %
12870 name="\Fld@name" %
12871 \ifFld@hidden type="hidden" \fi
12872 value="\Fld@default" %
12873 \the\Field@toks

```

```

12874 >%
12875 }%
12876 }
12877 \def\@@TextField{%
12878 \ifFld@multiline
12879 \HCode{<textarea %
12880 \ifFld@readonly readonly \fi
12881 id="\Fld@name" %
12882 name="\Fld@name" %
12883 \ifFld@hidden type="hidden" \fi
12884 \the\Field@toks>%
12885 }%
12886 \Fld@default
12887 \HCode{</textarea>}%
12888 \else
12889 \HCode{<input type="textbox" %
12890 \ifFld@readonly readonly \fi
12891 id="\Fld@name" %
12892 name="\Fld@name" %
12893 \ifFld@hidden type="hidden" \fi
12894 value="\Fld@default" %
12895 \the\Field@toks>%
12896 }%
12897 \fi
12898 }
12899 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
12900 \def\Fld@name{#2}%
12901 \let\Fld@default\@empty
12902 \let\Hy@reserved@a\relax
12903 \begingroup
12904 \expandafter\Fld@findlength#3\%
12905 \Field@toks={ }%
12906 \kvsetkeys{Field}{#1}%
12907 #2%
12908 \ifFld@radio
12909 \expandafter\@@Radio#3\%
12910 \else
12911 \expandafter\@@Menu#3\%
12912 \fi
12913 \endgroup
12914 }
12915 \def\Fld@findlength#1\%
12916 \Fld@menulength=0 %
12917 \@for\@curropt:=#1\do{\Hy@StepCount\Fld@menulength}%
12918 }
12919 \def\@@Menu#1\%
12920 \HCode{<select size="\the\Fld@menulength" %
12921 name="\Fld@name" %
12922 \the\Field@toks>%
12923 }%
12924 \@for\@curropt:=#1\do{%
12925 \expandafter\Fld@checkequals\@curropt==\%
12926 \HCode{<option %
12927 \ifx\@curropt\Fld@default selected \fi

```

```

12928     value="\@currValue">\@currDisplay</option>%
12929   }%
12930 }%
12931 \HCode{</select>}%
12932 }
12933 \def\@@Radio#1\{ %
12934 \@for\@curropt:=#1\do{ %
12935   \expandafter\Fld@checkequals\@curropt==\ %
12936   \HCode{<input type="radio" %
12937     \ifx\@curropt\Fld@default checked \fi
12938     name="\Fld@name" %
12939     value="\@currValue" %
12940     \the\Field@toks>%
12941   }%
12942   \@currDisplay
12943 }%
12944 }
12945 \def\@PushButton[#1]#2{ % parameters, label
12946 \def\Fld@name{#2}%
12947 \bgroup
12948 \Field@toks={ }%
12949 \kvsetkeys{Field}{#1}%
12950 \HCode{<input type="button" %
12951   name="\Fld@name" %
12952   value="#2" %
12953   \the\Field@toks>%
12954 }%
12955 \HCode{</button>}%
12956 \egroup
12957 }
12958 \def\@Submit[#1]#2{ %
12959 \HCode{<button type="submit">#2</button>}%
12960 }
12961 \def\@Reset[#1]#2{ %
12962 \HCode{<button type="reset">#2</button>}%
12963 }
12964 \def\@CheckBox[#1]#2{ % parameters, label
12965 \let\Hy@reserved@a\@empty
12966 \def\Fld@name{#2}%
12967 \def\Fld@default{0}%
12968 \bgroup
12969 \Field@toks={ }%
12970 \kvsetkeys{Field}{#1}%
12971 \HCode{<input type="checkbox" %
12972   \ifFld@checked checked \fi
12973   \ifFld@disabled disabled \fi
12974   \ifFld@readonly readonly \fi
12975   name="\Fld@name" %
12976   \ifFld@hidden type="hidden" \fi
12977   value="\Fld@default" %
12978   \the\Field@toks>%
12979   #2%
12980 }%
12981 \egroup

```

```
12982 }
12983 </tex4ht>
```

45.4 pdfTeX

```
12984 (*pdfTeX)
12985 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
12986 \Hy@Message{Sorry, pdfTeX does not support FORM gauges}%
12987 }
12988 \def\MakeFieldObject#1#2{\sbox0{#1}%
12989 \immediate\pdfxform0 %
12990 \expandafter\edef\csname #2Object\endcsname{%
12991 \the\pdflastxform\space 0 R%
12992 }%
12993 % \hbox to 0pt{\hskip-\maxdimen{\pdfrefxform \the\pdflastxform}}%
12994 }%
12995 \let\HyField@afields\@empty
12996 \let\HyField@cofields\@empty
12997 \@ifundefined{pdflastlink}
12998 {%
12999 \let\HyField@AddToFields\relax
13000 \PackageInfo{hyperref}{%
13001 You need pdfTeX 1.40.0 for setting the /Fields entry.%
13002 \MessageBreak
13003 Adobe Reader/Acrobat accepts an empty /Field array,%
13004 \MessageBreak
13005 but other PDF viewers might complain%
13006 }}%
13007 {%
13008 \let\HyField@AuxAddToFields\@gobble
13009 \let\HyField@AuxAddToCoFields\@gobbletwo
13010 \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.

```
13011 \def\HyField@ABD@AuxAddToCoFields#1#2{%
13012 \begingroup
13013 \Hy@safe@activestrue
13014 \let\@secondoftwo\relax
13015 \ifx\HyField@cofields\@empty
13016 \xdef\HyField@cofields{%
13017 \@secondoftwo{#1}{ #2 0 R}%
13018 }%
13019 \else
13020 \let\@secondoftwo\relax
13021 \def\HyField@AddCoField###1##2###3{%
13022 \ifx##1\@empty
13023 \@secondoftwo{#1}{ #2 0 R}%
13024 \expandafter\@gobble
13025 \else
13026 \ifnum\pdfstrcmp{##2}{#1}>\z@
13027 \@secondoftwo{#1}{ #2 0 R}%
13028 \@secondoftwo{##2}{##3}%
13029 \expandafter\expandafter\expandafter\@gobble
13030 \else
```

```

13031         \@secondoftwo{##2}{##3}%
13032         \fi
13033     \fi
13034     \HyField@AddCoField
13035 }%
13036 \xdef\HyField@cofields{%
13037     \expandafter\HyField@AddCoField
13038     \HyField@cofields\@empty\@empty\@empty
13039 }%
13040 \fi
13041 \endgroup
13042 }%
13043 \Hy@AtBeginDocument{%
13044     \if@filesw
13045         \immediate\write\@mainaux{%
13046             \string\providecommand\string\HyField@AuxAddToFields[1]{}%
13047         }%
13048         \immediate\write\@mainaux{%
13049             \string\providecommand\string\HyField@AuxAddToCoFields[2]{}%
13050         }%
13051     \fi
13052     \let\HyField@AfterAuxOpen\@firstofone
13053     \def\HyField@AuxAddToFields#1{%
13054         \xdef\HyField@afields{%
13055             \ifx\HyField@afields\@empty
13056                 \else
13057                     \HyField@afields
13058                 \space
13059             \fi
13060             #1 0 R%
13061         }%
13062     }%
13063     \let\HyField@AuxAddToCoFields\HyField@ABD@AuxAddToCoFields
13064 }%
13065 \def\HyField@AddToFields{%
13066     \expandafter\HyField@@AddToFields\expandafter{%
13067         \the\pdfastlink
13068     }%
13069     \ifx\Fld@calculate@code\@empty
13070     \else
13071         \begingroup
13072         \Hy@safe@activestrue
13073         \edef\Hy@temp{%
13074             \endgroup
13075             \if@filesw
13076                 \write\@mainaux{%
13077                     \string\HyField@AuxAddToCoFields{%
13078                         \Fld@calculate@sortkey
13079                     }{%
13080                         \the\pdfastlink
13081                     }%
13082                 }%
13083             \fi
13084         }%

```

```

13085   \Hy@temp
13086   \fi
13087 }%
13088 \def\HyField@@AddToFields#1{%
13089   \HyField@AfterAuxOpen{%
13090     \if@filesw
13091       \write\@mainaux{%
13092         \string\HyField@AuxAddToFields{#1}%
13093       }%
13094     \fi
13095   }%
13096 }%
13097 }
13098 \def\@Form[#1]{%
13099   \@ifundefined{textcolor}{\let\textcolor\@gobble}{}%
13100   \kvsetkeys{Form}{#1}%
13101   \pdf@ifdraftmode{}{%
13102     \Hy@FormObjects
13103     \ifnum\pdftexversion>13 %
13104       \pdfrefobj\OBJ@pdfdocencoding
13105       \pdfrefobj\OBJ@ZaDb
13106       \pdfrefobj\OBJ@Helv
13107     \fi
13108     \AddToHook{enddocument/afteraux}{%
13109       \immediate\pdfobj{%
13110         <<%
13111         /Fields[\HyField@afields]%
13112         \ifx\HyField@cofields\@empty
13113         \else
13114         /CO[\romannumeral-`\Q\HyField@cofields]%
13115         \fi
13116         /DR<<%
13117         /Font<<%
13118         /ZaDb \OBJ@ZaDb\space 0 R%
13119         /Helv \OBJ@Helv\space 0 R%
13120         >>%
13121         >>%
13122         /DA(/Helv 10 Tf 0 g)%
13123         \ifHy@pdfa
13124         \else
13125         \ifHyField@NeedAppearances
13126         /NeedAppearances true%
13127         \fi
13128         \fi
13129         >>%
13130       }%
13131       \edef\OBJ@acroform{\the\pdfastobj}%
13132       \pdfcatalog{/AcroForm \OBJ@acroform\space 0 R}%
13133     }%
13134   }%
13135   \MakeFieldObject{%
Same as \ding{123} of package pifont.
13136   \begingroup
13137   \fontfamily{pzd}%

```

```

13138 \fontencoding{U}%
13139 \fontseries{m}%
13140 \fontshape{n}%
13141 \selectfont
13142 \char123 %
13143 \endgroup
13144 }{Ding}%
13145 \MakeFieldObject{%
13146 \fbox{\textcolor{yellow}{\textsf{Submit}}}%
13147 }{Submit}%
13148 \MakeFieldObject{%
13149 \fbox{\textcolor{yellow}{\textsf{SubmitP}}}%
13150 }{SubmitP}%
13151 }
13152 \let\@endForm\@empty
13153 \let\HyAnn@AbsPageLabel\@empty
13154 \let\Fld@pageobjref\@empty
13155 \@ifundefined{pdfpageref}{%
13156 }{%
13157 \@ifpackageloaded{zref-abspage}{%
13158 \newcount\HyAnn@Count
13159 \HyAnn@Count=\z@
13160 \def\HyAnn@AbsPageLabel{%
13161 \global\advance\HyAnn@Count by\@ne
13162 \zref@labelbyprops{HyAnn@\the\HyAnn@Count}{abspage}%
13163 \zref@refused{HyAnn@\the\HyAnn@Count}%
13164 }%
13165 \def\Fld@pageobjref{%
13166 \zref@ifrefundefined{HyAnn@\the\HyAnn@Count}{%
13167 }{%
13168 \zref@ifrefcontainsprop{HyAnn@\the\HyAnn@Count}{abspage}{%
13169 /P \pdfpageref
13170 \zref@extractdefault{HyAnn@\the\HyAnn@Count}{abspage}{1} %
13171 \space 0 R%
13172 }{%
13173 }%
13174 }%
13175 }%
13176 }{%
13177 }%
13178 }
13179 \def\@TextField[#1]#2{% parameters, label
13180 \def\Fld@name{#2}%
13181 \let\Fld@default\@empty
13182 \let\Fld@value\@empty
13183 \def\Fld@width{\DefaultWidthofText}%
13184 \def\Fld@height{%
13185 \iffld@multiline
13186 \DefaultHeightofTextMultiline
13187 \else
13188 \DefaultHeightofText
13189 \fi
13190 }%
13191 \begingroup

```

```

13192 \expandafter\HyField@SetKeys\expandafter{%
13193 \DefaultOptionsofText,#1%
13194 }%
13195 \PDFForm@Name
13196 \HyField@FlagsText
13197 \ifFld@hidden\def\Fld@width{1sp}\fi
13198 \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
13199 \LayoutTextField{#2}{%
13200 \leavevmode
13201 \HyAnn@AbsPageLabel
13202 \Hy@escapeform\PDFForm@Text
13203 \pdfstartlink user {\PDFForm@Text}\relax
13204 \MakeTextField{\Fld@width}{\Fld@height}\pdfendlink
13205 \HyField@AddToFields
13206 }%
13207 \endgroup
13208 }
13209 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
13210 \def\Fld@name{#2}%
13211 \let\Fld@default\relax
13212 \let\Fld@value\relax
13213 \def\Fld@width{\DefaultWidthofChoiceMenu}%
13214 \def\Fld@height{\DefaultHeightofChoiceMenu}%
13215 \beginngroup
13216 \Fld@menulength=0 %
13217 \@tempdima\z@
13218 \@for\@curropt:=#3\do{%
13219 \expandafter\Fld@checkequals\@curropt==\%
13220 \Hy@StepCount\Fld@menulength
13221 \settowidth{\@tempdimb}{\@currDisplay}%
13222 \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
13223 }%
13224 \advance\@tempdima by 15\p@
13225 \beginngroup
13226 \HyField@SetKeys{#1}%
13227 \edef\x{\endgroup
13228 \noexpand\expandafter
13229 \noexpand\HyField@SetKeys
13230 \noexpand\expandafter{%
13231 \expandafter\noexpand\cename DefaultOptionsof%
13232 \ifFld@radio
13233 Radio%
13234 \else
13235 \ifFld@combo
13236 \ifFld@popdown
13237 PopdownBox%
13238 \else
13239 ComboBox%
13240 \fi
13241 \else
13242 ListBox%
13243 \fi
13244 \fi
13245 \endcename

```



```

13246 }%
13247 }\x
13248 \HyField@SetKeys{#1}%
13249 \PDFForm@Name
13250 \ifFld@hidden\def\Fld@width{1sp}\fi
13251 \ifx\Fld@value\relax
13252 \let\Fld@value\Fld@default
13253 \fi
13254 \LayoutChoiceField{#2}{%
13255 \ifFld@radio
13256 \HyField@FlagsRadioButton
13257 \@@Radio{#3}%
13258 \else
13259 \begingroup
13260 \HyField@FlagsChoice
13261 \ifdim\Fld@width<\@tempdima
13262 \ifdim\@tempdima<1cm\@tempdima1cm\fi
13263 \edef\Fld@width{\the\@tempdima}%
13264 \fi
13265 \ifFld@combo
13266 \else
13267 \@tempdima=\the\Fld@menulength\Fld@charsize
13268 \advance\@tempdima by \Fld@borderwidth bp %
13269 \advance\@tempdima by \Fld@borderwidth bp %
13270 \edef\Fld@height{\the\@tempdima}%
13271 \fi
13272 \@@ListBox{#3}%
13273 \endgroup
13274 \fi
13275 }%
13276 \endgroup
13277 }
13278 \def\@@Radio#1{%
13279 \Fld@listcount=0 %
13280 \EdefEscapeName\Fld@default{\Fld@default}%
13281 \@for\@curropt:=#1\do{%
13282 \expandafter\Fld@checkequals\@curropt==\%
13283 \EdefEscapeName\@currValue{\@currValue}%
13284 \Hy@StepCount\Fld@listcount
13285 \@currDisplay\space
13286 \leavevmode
13287 \HyAnn@AbsPageLabel
13288 \Hy@escapeform\PDFForm@Radio
13289 \pdfstartlink user {%
13290 \PDFForm@Radio
13291 /AP<<%
13292 /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.

```

13293 \/\@currValue\space \DingObject
13294 >>%
13295 >>%

```

```

13296 }%
13297 \relax
13298 \MakeRadioField{\Fld@width}{\Fld@height}\pdfendlink
13299 \ifnum\Fld@listcount=1 %
13300 \HyField@AddToFields
13301 \fi
13302 \space % deliberate space between radio buttons
13303 }%
13304 }
13305 \newcount\Fld@listcount
13306 \def\@@ListBox#1{%
13307 \HyField@PDFChoices{#1}%
13308 \leavevmode
13309 \HyAnn@AbsPageLabel
13310 \Hy@escapeform\PDFForm@List
13311 \pdfstartlink user {\PDFForm@List}\relax
13312 \MakeChoiceField{\Fld@width}{\Fld@height}%
13313 \pdfendlink
13314 \HyField@AddToFields
13315 }
13316 \def\@PushButton[#1]#2{% parameters, label
13317 \def\Fld@name{#2}%
13318 \begingroup
13319 \expandafter\HyField@SetKeys\expandafter{%
13320 \DefaultOptionsofPushButton,#1%
13321 }%
13322 \PDFForm@Name
13323 \ifHy@pdfa
13324 \Hy@Error{%
13325 PDF/A: Push button with JavaScript is prohibited%
13326 } \@ehc
13327 \LayoutPushButtonField{%
13328 \leavevmode
13329 \MakeButtonField{#2}%
13330 }%
13331 \else
13332 \HyField@FlagsPushButton
13333 \ifFld@hidden\def\Fld@width{1sp}\fi
13334 \LayoutPushButtonField{%
13335 \leavevmode
13336 \HyAnn@AbsPageLabel
13337 \Hy@escapeform\PDFForm@Push
13338 \pdfstartlink user {\PDFForm@Push}\relax
13339 \MakeButtonField{#2}%
13340 \pdfendlink
13341 \HyField@AddToFields
13342 }%
13343 \fi
13344 \endgroup
13345 }
13346 \def\@Submit[#1]#2{%
13347 \def\Fld@width{\DefaultWidthofSubmit}%
13348 \def\Fld@height{\DefaultHeightofSubmit}%
13349 \begingroup

```

```

13350 \expandafter\HyField@SetKeys\expandafter{%
13351 \DefaultOptionsofSubmit,#1%
13352 }%
13353 \HyField@FlagsPushButton
13354 \HyField@FlagsSubmit
13355 \ifFld@hidden\def\Fld@width{1sp}\fi
13356 \leavevmode
13357 \HyAnn@AbsPageLabel
13358 \Hy@escapeform\PDFForm@Submit
13359 \pdfstartlink user {%
13360 \PDFForm@Submit
13361 /AP<</N \SubmitObject/D \SubmitPObject>>%
13362 }%
13363 \relax
13364 \MakeButtonField{#2}%
13365 \pdfendlink
13366 \HyField@AddToFields
13367 \endgroup
13368 }
13369 \def\@Reset[#1]#2{%
13370 \def\Fld@width{\DefaultWidthofReset}%
13371 \def\Fld@height{\DefaultHeightofReset}%
13372 \begingroup
13373 \expandafter\HyField@SetKeys\expandafter{%
13374 \DefaultOptionsofReset,#1%
13375 }%
13376 \leavevmode
13377 \ifHy@pdfa
13378 \Hy@Error{%
13379 PDF/A: Reset action is prohibited%
13380 }\@ehc
13381 \MakeButtonField{#2}%
13382 \else
13383 \HyField@FlagsPushButton
13384 \ifFld@hidden\def\Fld@width{1sp}\fi
13385 \HyAnn@AbsPageLabel
13386 \Hy@escapeform\PDFForm@Reset
13387 \pdfstartlink user {\PDFForm@Reset}\relax
13388 \MakeButtonField{#2}%
13389 \pdfendlink
13390 \HyField@AddToFields
13391 \fi
13392 \endgroup
13393 }
13394 \def\@CheckBox[#1]#2{% parameters, label
13395 \def\Fld@name{#2}%
13396 \def\Fld@default{0}%
13397 \begingroup
13398 \def\Fld@width{\DefaultWidthofCheckBox}%
13399 \def\Fld@height{\DefaultHeightofCheckBox}%
13400 \expandafter\HyField@SetKeys\expandafter{%
13401 \DefaultOptionsofCheckBox,#1%
13402 }%
13403 \PDFForm@Name

```

```

13404 \HyField@FlagsCheckBox
13405 \ifFld@hidden\def\Fld@width{1sp}\fi
13406 \LayoutCheckField{#2}{%
13407 \leavevmode
13408 \HyAnn@AbsPageLabel
13409 \Hy@escapeform\PDFForm@Check
13410 \pdfstartlink user {\PDFForm@Check}\relax
13411 \MakeCheckField{\Fld@width}{\Fld@height}%
13412 \pdfendlink
13413 \HyField@AddToFields
13414 }%
13415 \endgroup
13416 }
13417 \def\Hy@FormObjects{%
13418 \pdfobj {%
13419 <<%
13420 /Type/Encoding%
13421 /Differences[
13422 24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek%
13423 /ring/tilde %
13424 39/quotesingle %
13425 96/grave %
13426 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
13427 /fraction/guilsinglleft/guilsingright/minus/perthousand%
13428 /quotedblbase/quotedblleft/quotedblright/quoteleft%
13429 /quoteright/quotesinglbase/trademark/ff/Lslash/OE%
13430 /Scaron/Ydieresis/Zcaron/dotlessi/lslash/oe/scaron/zcaron %
13431 160/Euro %
13432 164/currency %
13433 166/brokenbar %
13434 168/dieresis/copyright/ordfeminine %
13435 172/logicalnot/.notdef/registered/macron/degree/plusminus%
13436 /twosuperior/threesuperior/acute/mu %
13437 183/periodcentered/cedilla/onesuperior/ordmasculine %
13438 188/onequarter/onehalf/threequarters %
13439 192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
13440 /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave%
13441 /Iacute/Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute%
13442 /Ocircumflex/Otilde/Odieresis/multiply/Oslash/Ugrave%
13443 /Uacute/Ucircumflex/Udieresis/Yacute/Thorn/germandbls%
13444 /agrave/aacute/acircumflex/atilde/adieresis/aring/ae%
13445 /ccedilla/egrave/eacute/ecircumflex/edieresis/igrave%
13446 /iacute/icircumflex/idieresis/eth/ntilde/ograde/oacute%
13447 /ocircumflex/otilde/odieresis/divide/oslash/ugrave%
13448 /uacute/ucircumflex/udieresis/yacute/thorn/ydieresis%
13449 ]%
13450 >>%
13451 }%
13452 \xdef\OBJ@pdfdocencoding{\the\pdfastobj}%
13453 \pdfobj{%
13454 <<%
13455 /Type/Font%
13456 /Subtype/Type1%
13457 /Name/ZaDb%

```

```

13458     /BaseFont/ZapfDingbats%
13459     >>%
13460   }%
13461   \xdef\OBJ@ZaDb{\the\pdfastobj}%
13462   \pdfobj{%
13463     <<%
13464     /Type/Font%
13465     /Subtype/Type1%
13466     /Name/Helv%
13467     /BaseFont/Helvetica%
13468     /Encoding \OBJ@pdfdocencoding\space 0 R%
13469     >>%
13470   }%
13471   \xdef\OBJ@Helv{\the\pdfastobj}%
13472   \global\let\Hy@FormObjects\relax
13473 }
13474 </pdfTeX>

```

45.5 dvipdfm, xetex

D. P. Story adapted the pdfTeX forms part for dvipdfm, of which version 0.12.7b or higher is required because of a bug.

```

13475 <*dvipdfm | xetex>

```

\@Gauge

```

13476 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
13477   \Hy@Message{Sorry, dvipdfm/XeTeX does not support FORM gauges}%
13478 }

```

\@Form

```

13479 \def\@Form[#1]{%
13480   \@ifundefined{textcolor}{\let\textcolor\@gobble}{}%
13481   \kvsetkeys{Form}{#1}%
13482   \Hy@FormObjects
13483   \@pdfm@mark{obj @afields []}%
13484   \@pdfm@mark{obj @corder []}%
13485   \@pdfm@mark{%
13486     obj @aform <<%
13487     /Fields @afields%
13488     /DR<<%
13489     /Font<<%
13490     /ZaDb @OBJZaDb%
13491     /Helv @OBJHelv%
13492     >>%
13493     >>%
13494     /DA(/Helv 10 Tf 0 g)%
13495     /CO @corder%
13496     \ifHy@pdfa
13497     \else
13498     \ifHyField@NeedAppearances
13499     /NeedAppearances true%
13500     \fi
13501     \fi
13502     >>%

```

```

13503 }%
13504 \@pdfm@mark{put @catalog <</AcroForm @aform>>}%
13505 }

```

\@endForm

```

13506 \let\@endForm\@empty

```

\dvipdfm@setdim \dvipdfm@setdim sets dimensions for ann using \pdfm@box.

```

13507 \def\dvipdfm@setdim{%
13508   height \the\ht\pdfm@box\space
13509   width \the\wd\pdfm@box\space
13510   depth \the\dp\pdfm@box\space
13511 }

```

\HyField@AnnotCount

```

13512 \newcount\HyField@AnnotCount
13513 \HyField@AnnotCount=\z@

```

\HyField@AdvanceAnnotCount

```

13514 \def\HyField@AdvanceAnnotCount{%
13515   \global\advance\HyField@AnnotCount\@ne
13516 }

```

\HyField@TheAnnotCount

```

13517 \def\HyField@TheAnnotCount{%
13518   \the\HyField@AnnotCount
13519 }

```

\Fld@pageobjref

```

13520 \def\Fld@pageobjref{/P @thispage}%

```

\HyField@AddToFields

```

13521 \def\HyField@AddToFields#1{%
13522   \@pdfm@mark{put @afields @#1\HyField@TheAnnotCount}%
13523   \ifx\Fld@calculate@code\@empty
13524     \else
13525     \@pdfm@mark{put @corder @#1\HyField@TheAnnotCount}%
13526     \fi
13527 }

```

\@TextField

```

13528 \def\@TextField[#1]#2{% parameters, label
13529   \def\Fld@name{#2}%
13530   \let\Fld@default\@empty
13531   \let\Fld@value\@empty
13532   \def\Fld@width{\DefaultWidthofText}%
13533   \def\Fld@height{%
13534     \ifFld@multiline
13535       \DefaultHeightofTextMultiline
13536     \else
13537       \DefaultHeightofText
13538     \fi
13539   }%

```

```

13540 \begingroup
13541 \expandafter\HyField@SetKeys\expandafter{%
13542 \DefaultOptionsofText,#1%
13543 }%
13544 \PDFForm@Name
13545 \HyField@FlagsText
13546 \ifFld@hidden\def\Fld@width{1sp}\fi
13547 \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
13548 \setbox\pdfm@box=\hbox{%
13549 \MakeTextField{\Fld@width}{\Fld@height}%
13550 }%
13551 \HyField@AdvanceAnnotCount
13552 \LayoutTextField{#2}{%
13553 \leavevmode
13554 \Hy@escapeform\PDFForm@Text
13555 \@pdfm@mark{%
13556 ann @text\HyField@TheAnnotCount\space
13557 \dviPDFm@setdim << \PDFForm@Text >>%
13558 }%
13559 }%
13560 \unhbox\pdfm@box
13561 \HyField@AddToFields{text}%
13562 % record in @afields array
13563 \endgroup
13564 }

```

\@ChoiceMenu

```

13565 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
13566 \def\Fld@name{#2}%
13567 \let\Fld@default\relax
13568 \let\Fld@value\relax
13569 \def\Fld@width{\DefaultWidthofChoiceMenu}%
13570 \def\Fld@height{\DefaultHeightofChoiceMenu}%
13571 \begingroup
13572 \Fld@menulength=0 %
13573 \@tempdima\z@
13574 \@for\@curropt:=#3\do{%
13575 \expandafter\Fld@checkequals\@curropt==\%
13576 \Hy@StepCount\Fld@menulength
13577 \settowidth{\@tempdimb}{\@currDisplay}%
13578 \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
13579 }%
13580 \advance\@tempdima by 15\p@
13581 \begingroup
13582 \HyField@SetKeys{#1}%
13583 \edef\x{\endgroup
13584 \noexpand\expandafter
13585 \noexpand\HyField@SetKeys
13586 \noexpand\expandafter{%
13587 \expandafter\noexpand\curname DefaultOptionsof%
13588 \ifFld@radio
13589 Radio%
13590 \else
13591 \ifFld@combo

```

```

13592         \ifFld@popdown
13593             PopdownBox%
13594         \else
13595             ComboBox%
13596         \fi
13597     \else
13598         ListBox%
13599     \fi
13600 \fi
13601 \endcsname
13602 }%
13603 } \x
13604 \HyField@SetKeys{#1}%
13605 \PDFForm@Name
13606 \ifFld@hidden\def\Fld@width{1sp}\fi
13607 \ifx\Fld@value\relax
13608     \let\Fld@value\Fld@default
13609 \fi
13610 \LayoutChoiceField{#2}{%
13611     \ifFld@radio
13612         \HyField@FlagsRadioButton
13613     \@@Radio{#3}%
13614 \else
13615     \begingroup
13616         \HyField@FlagsChoice
13617         \ifdim\Fld@width<\@tempdima
13618             \ifdim\@tempdima<1cm\@tempdima1cm\fi
13619             \edef\Fld@width{\the\@tempdima}%
13620         \fi
13621         \ifFld@combo
13622         \else
13623             \@tempdima=\the\Fld@menulength\Fld@charsize
13624             \advance\@tempdima by \Fld@borderwidth bp %
13625             \advance\@tempdima by \Fld@borderwidth bp %
13626             \edef\Fld@height{\the\@tempdima}%
13627         \fi
13628         \@@ListBox{#3}%
13629     \endgroup
13630 \fi
13631 }%
13632 \endgroup
13633 }

```

\@@Radio

```

13634 \def\@@Radio#1{%
13635     \Fld@listcount=0 %
13636     \EdefEscapeName\Fld@default{\Fld@default}%
13637     \setbox\pdfm@box=\hbox{%
13638         \MakeRadioField{\Fld@width}{\Fld@height}%
13639     }%
13640     \@for\@curropt:=#1\do{%
13641         \expandafter\Fld@checkequals\@curropt==\%
13642         \EdefEscapeName\@currValue{\@currValue}%
13643         \Hy@StepCount\Fld@listcount

```



```

13644 \@currDisplay\space
13645 \leavevmode
13646 \Hy@escapeform\PDFForm@Radio
13647 \ifnum\Fld@listcount=1 %
13648   \HyField@AdvanceAnnotCount
13649 \fi
13650 \@pdfm@mark{%
13651   ann %
13652   \ifnum\Fld@listcount=1 %
13653     @radio\HyField@TheAnnotCount%
13654   \space
13655   \fi
13656   \dvipdfm@setdim
13657   <<%
13658   \PDFForm@Radio
13659   /AP<</N<</\@currValue /null>>>>%
13660   >>%
13661   }%
13662   \unhcopy\pdfm@box\space% deliberate space between radio buttons
13663   \ifnum\Fld@listcount=1 %
13664     \HyField@AddToFields{radio}%
13665   \fi
13666   }%
13667 }

```

\Fld@listcount

```
13668 \newcount\Fld@listcount
```

\@@ListBox

```

13669 \def\@@ListBox#1{%
13670   \HyField@PDFChoices{#1}%
13671   \setbox\pdfm@box=\hbox{%
13672     \MakeChoiceField{\Fld@width}{\Fld@height}%
13673   }%
13674   \leavevmode
13675   \Hy@escapeform\PDFForm@List
13676   \HyField@AdvanceAnnotCount
13677   \@pdfm@mark{%
13678     ann @list\HyField@TheAnnotCount\space
13679     \dvipdfm@setdim
13680     <<\PDFForm@List>>%
13681   }%
13682   \unhbox\pdfm@box
13683   \HyField@AddToFields{list}%
13684 }

```

\@PushButton

```

13685 \def\@PushButton[#1]#2{% parameters, label
13686   \def\Fld@name{#2}%
13687   \begingroup
13688     \expandafter\HyField@SetKeys\expandafter{%
13689       \DefaultOptionsofPushButton,#1%
13690     }%
13691   \PDFForm@Name

```

```

13692 \ifHy@pdfa
13693 \Hy@Error{%
13694   PDF/A: Push button with JavaScript is prohibited%
13695 } \@ehc
13696 \LayoutPushButtonField{%
13697   \leavevmode
13698   \MakeButtonField{#2}%
13699 }%
13700 \else
13701   \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
13702   \HyField@FlagsPushButton
13703   \ifFld@hidden\def\Fld@width{1sp}\fi
13704   \HyField@AdvanceAnnotCount
13705   \LayoutPushButtonField{%
13706     \leavevmode
13707     \Hy@escapeform\PDFForm@Push
13708     \@pdfm@mark{%
13709       ann @push\HyField@TheAnnotCount\space
13710       \dvi pdfm@setdim
13711       <<\PDFForm@Push>>%
13712     }%
13713   }%
13714   \unhbox\pdfm@box
13715   \HyField@AddToFields{push}%
13716 \fi
13717 \endgroup
13718 }

```

\@Submit

```

13719 \def\@Submit[#1]#2{%
13720 \def\Fld@width{\DefaultWidthofSubmit}%
13721 \def\Fld@height{\DefaultHeightofSubmit}%
13722 \begingroup
13723 \expandafter\HyField@SetKeys\expandafter{%
13724   \DefaultOptionsofSubmit,#1%
13725 }%
13726 \HyField@FlagsPushButton
13727 \HyField@FlagsSubmit
13728 \ifFld@hidden\def\Fld@width{1sp}\fi
13729 \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
13730 \leavevmode
13731 \Hy@escapeform\PDFForm@Submit
13732 \HyField@AdvanceAnnotCount
13733 \@pdfm@mark{%
13734   ann @submit\HyField@TheAnnotCount\space
13735   \dvi pdfm@setdim
13736   <<\PDFForm@Submit>>%
13737 }%
13738 \unhbox\pdfm@box%
13739 \HyField@AddToFields{submit}%
13740 \endgroup
13741 }

```

\@Reset

```

13742 \def\@Reset[#1]#2{%
13743   \def\Fld@width{\DefaultWidthofReset}%
13744   \def\Fld@height{\DefaultHeightofReset}%
13745   \begingroup
13746     \expandafter\HyField@SetKeys\expandafter{%
13747       \DefaultOptionsofReset,#1%
13748     }%
13749     \leavevmode
13750     \ifHy@pdfa
13751       \Hy@Error{%
13752         PDF/A: Reset action is prohibited%
13753       }\@ehc
13754       \MakeButtonField{#2}%
13755     \else
13756       \HyField@FlagsPushButton
13757       \ifFld@hidden\def\Fld@width{1sp}\fi
13758       \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
13759       \Hy@escapeform\PDFForm@Reset
13760       \HyField@AdvanceAnnotCount
13761       \@pdfm@mark{%
13762         ann @reset\HyField@TheAnnotCount\space
13763         \dviPDFForm@setdim
13764         <<\PDFForm@Reset>>%
13765       }%
13766       \unhbox\pdfm@box
13767       \HyField@AddToFields{reset}%
13768     \fi
13769   \endgroup
13770 }

```

\@CheckBox

```

13771 \def\@CheckBox[#1]#2{% parameters, label
13772   \def\Fld@name{#2}%
13773   \def\Fld@default{0}%
13774   \begingroup
13775     \def\Fld@width{\DefaultWidthofCheckBox}%
13776     \def\Fld@height{\DefaultHeightofCheckBox}%
13777     \expandafter\HyField@SetKeys\expandafter{%
13778       \DefaultOptionsofCheckBox,#1%
13779     }%
13780     \PDFForm@Name
13781     \HyField@FlagsCheckBox
13782     \ifFld@hidden\def\Fld@width{1sp}\fi
13783     \setbox\pdfm@box=\hbox{%
13784       \MakeCheckField{\Fld@width}{\Fld@height}%
13785     }%
13786     \HyField@AdvanceAnnotCount
13787     \LayoutCheckField{#2}%
13788     \leavevmode
13789     \Hy@escapeform\PDFForm@Check
13790     \@pdfm@mark{%
13791       ann @check\HyField@TheAnnotCount\space
13792       \dviPDFForm@setdim
13793       <<\PDFForm@Check>>%

```

```

13794 }%
13795 \unhbox\pdfm@box
13796 \HyField@AddToFields{check}%
13797 }%
13798 \endgroup
13799 }

13800 \def\Hy@FormObjects{%
13801 \@pdfm@mark{obj @OBJpdfdocencoding%
13802 <<%
13803 /Type/Encoding%
13804 /Differences[
13805 24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek/ring/tilde %
13806 39/quotesingle %
13807 96/grave %
13808 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
13809 /fraction/guilsingleft/guilsingright/minus/perthousand%
13810 /quotedblbase/quotedblleft/quotedblright/quoteleft/quoteright%
13811 /quotesinglbase/trademark/fi/fl/Lslash/OE/Scaron/Ydieresis%
13812 /Zcaron/dotlessi/lslash/oe/scaron/zcaron %
13813 160/Euro %
13814 164/currency %
13815 166/brokenbar %
13816 168/dieresis/copyright/ordfeminine %
13817 172/logicalnot/.notdef/registered/macron/degree/plusminus%
13818 /twosuperior/threesuperior/acute/mu %
13819 183/periodcentered/cedilla/onesuperior/ordmasculine %
13820 188/onequarter/onehalf/threequarters %
13821 192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
13822 /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave/Iacute%
13823 /Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute/Ocircumflex%
13824 /Otilde/Odieresis/multiply/Oslash/Ugrave/Uacute/Ucircumflex%
13825 /Udieresis/Yacute/Thorn/germandbls/agrave/aacute/acircumflex%
13826 /atilde/adieresis/aring/ae/ccedilla/egrave/eacute%
13827 /ecircumflex/edieresis/igrave/iacute/icircumflex/idieresis%
13828 /eth/ntilde/ograve/oacute/ocircumflex/otilde/odieresis%
13829 /divide/oslash/ugrave/uacute/ucircumflex/udieresis/yacute%
13830 /thorn/ydieresis%
13831 ]%
13832 >>%
13833 }%
13834 \@pdfm@mark{obj @OBJZaDb%
13835 <<%
13836 /Type/Font%
13837 /Subtype/Type1%
13838 /Name/ZaDb%
13839 /BaseFont/ZapfDingbats%
13840 >>%
13841 }%
13842 \@pdfm@mark{obj @OBJHelv%
13843 <<%
13844 /Type/Font%
13845 /Subtype/Type1%
13846 /Name/Helv%

```

```

13847 /BaseFont/Helvetica%
13848 /Encoding @OBJpdfdocencoding%
13849 >>%
13850 }%
13851 \global\let\Hy@FormObjects\relax
13852 }
13853 </dviptfm | xetex>

```

45.6 Common forms part

```
13854 (*pdfform)
```

\Fld@pageobjref

```
13855 \providecommand*\Fld@pageobjref{}
```

\Hy@escapestring

```

13856 \@ifundefined{pdf@escapestring}
13857 {%
13858 \let\Hy@escapestring\@firstofone
13859 \def\Hy@escapeform#1{%
13860 \ifHy@pdfescapeform
13861 \def\Hy@escapestring##1{%
13862 \noexpand\Hy@escapestring{\noexpand##1}%
13863 }%
13864 \edef\Hy@temp{#1}%
13865 \expandafter\Hy@@@escapeform\Hy@temp\Hy@escapestring}\@nil
13866 \def\Hy@escapestring##1{%
13867 \@ifundefined{Hy@esc@\string##1}{%
13868 ##1%
13869 \ThisShouldNotHappen
13870 }{%
13871 \csname Hy@esc@\string##1\endcsname
13872 }%
13873 }%
13874 \else
13875 \let\Hy@escapestring\@firstofone
13876 \fi
13877 }%
13878 \def\Hy@@@escapeform#1\Hy@escapestring#2#3\@nil{%
13879 \ifx\#3\%
13880 \else
13881 \expandafter
13882 \Hy@pstringdef\csname Hy@esc@\string#2\endcsname{#2}%
13883 \Hy@ReturnAfterFi{%
13884 \Hy@@@escapeform#3\@nil
13885 }%
13886 \fi
13887 }%
13888 }{%
13889 \def\Hy@escapeform#1{%
13890 \ifHy@pdfescapeform
13891 \let\Hy@escapestring\pdfescapestring
13892 \else
13893 \let\Hy@escapestring\@firstofone

```

```

13894 \fi
13895 }%
13896 \Hy@escapeform{}%
13897 }

```

\PDFForm@Name

```

13898 \def\PDFForm@Name{%
13899 \PDFForm@@Name\Fld@name
13900 \ifx\Fld@altname\relax
13901 \else
13902 \PDFForm@@Name\Fld@altname
13903 \fi
13904 \ifx\Fld@mappingname\relax
13905 \else
13906 \PDFForm@@Name\Fld@mappingname
13907 \fi
13908 }

```

\PDFForm@@Name

```

13909 \def\PDFForm@@Name#1{%
13910 \begingroup
13911 \ifnum\Hy@pdf@major@minor@version<105 % implementation note 117, PDF spec 1.7
13912 \ifHy@unicode
13913 \Hy@unicodedefalse
13914 \fi
13915 \fi
13916 \pdfstringdef\Hy@gtemp#1%
13917 \endgroup
13918 \let#1\Hy@gtemp
13919 }

```

\Fld@additionalactions

```

13920 \def\Fld@@additionalactions{%
K input (keystroke) format
13921 \ifx\Fld@keystroke@code\@empty
13922 \else
13923 /K<</S/JavaScript/JS(\Hy@escapestring{\Fld@keystroke@code})>>%
13924 \fi

F display format
13925 \ifx\Fld@format@code\@empty
13926 \else
13927 /F<</S/JavaScript/JS(\Hy@escapestring{\Fld@format@code})>>%
13928 \fi

V validation
13929 \ifx\Fld@validate@code\@empty
13930 \else
13931 /V<</S/JavaScript/JS(\Hy@escapestring{\Fld@validate@code})>>%
13932 \fi

C calculation
13933 \ifx\Fld@calculate@code\@empty
13934 \else

```

```

13935 /C<</S/JavaScript/JS(\Hy@escapestring{\Fld@calculate@code})>>%
13936 \fi

Fo receiving the input focus
13937 \ifx\Fld@onfocus@code\@empty
13938 \else
13939 /Fo<</S/JavaScript/JS(\Hy@escapestring{\Fld@onfocus@code})>>%
13940 \fi

Bl losing the input focus (blurred)
13941 \ifx\Fld@onblur@code\@empty
13942 \else
13943 /Bl<</S/JavaScript/JS(\Hy@escapestring{\Fld@onblur@code})>>%
13944 \fi

D pressing the mouse button (down)
13945 \ifx\Fld@onmousedown@code\@empty
13946 \else
13947 /D<</S/JavaScript/JS(\Hy@escapestring{\Fld@onmousedown@code})>>%
13948 \fi

U releasing the mouse button (up)
13949 \ifx\Fld@onmouseup@code\@empty
13950 \else
13951 /U<</S/JavaScript/JS(\Hy@escapestring{\Fld@onmouseup@code})>>%
13952 \fi

E cursor enters the annotation's active area.
13953 \ifx\Fld@onenter@code\@empty
13954 \else
13955 /E<</S/JavaScript/JS(\Hy@escapestring{\Fld@onenter@code})>>%
13956 \fi

X cursor exits the annotation's active area.
13957 \ifx\Fld@onexit@code\@empty
13958 \else
13959 /X<</S/JavaScript/JS(\Hy@escapestring{\Fld@onexit@code})>>%
13960 \fi
13961 }
13962 \def\Fld@additionalactions{%
13963 \if-\Fld@@additionalactions-%
13964 \else
13965 \ifHy@pdfa
13966 \else
13967 /AA<<\Fld@@additionalactions>>%
13968 \fi
13969 \fi
13970 }

\Fld@annotnames
13971 \def\Fld@annotnames{%
13972 /T(\Fld@name)%
13973 \ifx\Fld@altname\relax
13974 \else
13975 /TU(\Fld@altname)%
13976 \fi

```

```

13977 \ifx\Fld@mappingname\relax
13978 \else
13979 /TM(\Fld@mappingname)%
13980 \fi
13981 }

```

\PDFForm@Check

```

13982 \def\PDFForm@Check{%
13983 /Subtype/Widget%
13984 \Fld@annotflags
13985 \Fld@pageobjref
13986 \Fld@annotnames
13987 /FT/Btn%
13988 \Fld@flags
13989 /Q \Fld@align
13990 /BS<</W \Fld@borderwidth /S/\Fld@borderstyle>>%
13991 /AP<< /N <</Yes<<>>>> >> %new string /Yes is from below
13992 /MK<<%
13993 \ifnum\Fld@rotation=z@
13994 \else
13995 /R \Fld@rotation
13996 \fi
13997 \ifx\Fld@bordercolor\relax
13998 \else
13999 /BC[\Fld@bordercolor]%
14000 \fi
14001 \ifx\Fld@bcolor\relax
14002 \else
14003 /BG[\Fld@bcolor]%
14004 \fi
14005 /CA(\Hy@escapestring{\Fld@cbsymbol})%
14006 >>%
14007 /DA(/ZaDb \strip@pt\Fld@charsize\space Tf%
14008 \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
14009 /H/P%
14010 \ifFld@checked /V/Yes/AS/Yes\else /V/Off/AS/Off\fi
14011 \Fld@additionalactions
14012 }

```

\PDFForm@Push

```

14013 \ifHy@pdfa
14014 \else
14015 \def\PDFForm@Push{%
14016 /Subtype/Widget%
14017 \Fld@annotflags
14018 \Fld@pageobjref
14019 \Fld@annotnames
14020 /FT/Btn%
14021 \Fld@flags
14022 /H/P%
14023 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
14024 \ifcase0\ifnum\Fld@rotation=z@ \else 1\fi
14025 \ifx\Fld@bordercolor\relax\else 1\fi
14026 \space

```



```

14027 \else
14028 /MK<<%
14029 \ifnum\Fld@rotation=\z@
14030 \else
14031 /R \Fld@rotation
14032 \fi
14033 \ifx\Fld@bordercolor\relax
14034 \else
14035 /BC[\Fld@bordercolor]%
14036 \fi
14037 >>%
14038 \fi
14039 /A<</S/JavaScript/JS(\Hy@escapestring{\Fld@onclick@code})>>%
14040 \Fld@additionalactions
14041 }%
14042 \fi

```

\PDFForm@List

```

14043 \def\PDFForm@List{%
14044 /Subtype/Widget%
14045 \Fld@annotflags
14046 \Fld@pageobjref
14047 \Fld@annotnames
14048 /FT/Ch%
14049 \Fld@flags
14050 /Q \Fld@align
14051 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
14052 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
14053 \ifx\Fld@bordercolor\relax\else 1\fi
14054 \ifx\Fld@bcolor\relax \else 1\fi
14055 \space
14056 \else
14057 /MK<<%
14058 \ifnum\Fld@rotation=\z@
14059 \else
14060 /R \Fld@rotation
14061 \fi
14062 \ifx\Fld@bordercolor\relax
14063 \else
14064 /BC[\Fld@bordercolor]%
14065 \fi
14066 \ifx\Fld@bcolor\relax
14067 \else
14068 /BG[\Fld@bcolor]%
14069 \fi
14070 >>%
14071 \fi
14072 /DA(/Helv \strip@pt\Fld@charsize\space Tf%
14073 \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
14074 \Fld@choices
14075 \Fld@additionalactions
14076 }

```

\PDFForm@Radio

```

14077 \def\PDFForm@Radio{%
14078 /Subtype/Widget%
14079 \Fld@annotflags
14080 \Fld@pageobjref
14081 \Fld@annotnames
14082 /FT/Btn%
14083 \Fld@flags
14084 /H/P%
14085 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
14086 /MK<<%
14087 \ifnum\Fld@rotation=\z@
14088 \else
14089 /R \Fld@rotation
14090 \fi
14091 \ifx\Fld@bordercolor\relax
14092 \else
14093 /BC[\Fld@bordercolor]%
14094 \fi
14095 \ifx\Fld@bcolor\relax
14096 \else
14097 /BG[\Fld@bcolor]%
14098 \fi
14099 /CA(\Hy@escapestring{\Fld@radiosymbol})%
14100 >>%
14101 /DA(/ZaDb \strip@pt\Fld@charsize\space Tf%
14102 \ifx\Fld@color\@empty\else\space\Fld@color\fi)%

```

New code, the default value is used for all buttons

```

14103 \ifx\Fld@default\@empty
14104 /V/Off%
14105 /DV/Off%
14106 \else
14107 /V/\Fld@default
14108 /DV/\Fld@default
14109 \fi
14110 \Fld@additionalactions
14111 }

```

\PDFForm@Text

```

14112 \def\PDFForm@Text{%
14113 /Subtype/Widget%
14114 \Fld@annotflags
14115 \Fld@pageobjref
14116 \Fld@annotnames
14117 /FT/Tx%
14118 \Fld@flags
14119 /Q \Fld@align
14120 /BS<</W \Fld@borderwidth\space /S /\Fld@borderstyle>>%
14121 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
14122 \ifx\Fld@bordercolor\relax\else 1\fi
14123 \ifx\Fld@bcolor\relax \else 1\fi
14124 \space
14125 \else
14126 /MK<<%

```

```

14127 \ifnum\Fld@rotation=\z@
14128 \else
14129 /R \Fld@rotation
14130 \fi
14131 \ifx\Fld@bordercolor\relax
14132 \else
14133 /BC[\Fld@bordercolor]%
14134 \fi
14135 \ifx\Fld@bcolor\relax
14136 \else
14137 /BG[\Fld@bcolor]%
14138 \fi
14139 >>%
14140 \fi
14141 /DA(/Helv \strip@pt\Fld@charsize\space Tf%
14142 \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
14143 /DV(\Hy@escapestring{\Fld@default})%
14144 /V(\Hy@escapestring{\Fld@value})%
14145 \Fld@additionalactions
14146 \ifnum\Fld@maxlen>\z@/MaxLen \Fld@maxlen \fi
14147 }

```

\PDFForm@Submit

```

14148 \def\PDFForm@Submit{%
14149 /Subtype/Widget%
14150 \Fld@annotflags
14151 \Fld@pageobjref
14152 \Fld@annotnames
14153 /FT/Btn%
14154 \Fld@flags
14155 /H/P%
14156 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
14157 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
14158 \ifx\Fld@bordercolor\relax\else 1\fi
14159 \space
14160 \else
14161 /MK<<%
14162 \ifnum\Fld@rotation=\z@
14163 \else
14164 /R \Fld@rotation
14165 \fi
14166 \ifx\Fld@bordercolor\relax
14167 \else
14168 /BC[\Fld@bordercolor]%
14169 \fi
14170 >>%
14171 \fi
14172 /A<<%
14173 /S/SubmitForm%
14174 /F<<%
14175 /FS/URL%
14176 /F(\Hy@escapestring{\Form@action})%
14177 >>%
14178 \Fld@submitflags

```

```

14179 >>%
14180 \Fld@additionalactions
14181 }

\PDFForm@Reset

14182 \ifHy@pdfa
14183 \else
14184 \def\PDFForm@Reset{%
14185   /Subtype/Widget%
14186   \Fld@annotflags
14187   \Fld@pageobjref
14188   \Fld@annotnames
14189   /FT/Btn%
14190   \Fld@flags
14191   /H/P%
14192   /DA(/Helv \strip@pt\Fld@charsize\space Tf 0 0 1 rg)%
14193   \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
14194     \ifx\Fld@bordercolor\relax\else 1\fi
14195     \space
14196   \else
14197     /MK<<%
14198     \ifnum\Fld@rotation=\z@
14199     \else
14200     /R \Fld@rotation
14201     \fi
14202     \ifx\Fld@bordercolor\relax
14203     \else
14204     /BC[\Fld@bordercolor]%
14205     \fi
14206 %   /CA (Clear)
14207 %   /AC (Done)
14208   >>%
14209   \fi
14210   /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
14211   /A<</S/ResetForm>>%
14212   \Fld@additionalactions
14213 }%
14214 \fi

14215 </pdfform>
14216 <*packageEnd>

```

46 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`

```

14217 \def\phantomsection{%
14218 \Hy@MakeCurrentHrefAuto{section*}%
14219 \Hy@raisedlink{\hyper@anchorstart{\@currentHref}\hyper@anchorend}%
14220 }
14221 \endpackage

```

46.1 Bookmarks

```
14222 (*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 ε -TeX, the order of the `\BOOKMARK` commands written to the `\@outlinefile` could appear wrong, because of mis-feature of ε -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.

```

14223 \def\Hy@writebookmark#1#2#3#4#5{%
14224   % section number, text, label, level, file
14225   \ifx\WriteBookmarks\relax%
14226   \else
14227     \ifnum#4>\Hy@bookmarksdepth\relax
14228     \else
14229       \@writetorep{#1}{#2}{#3}{#4}{#5}%
14230     \fi
14231   \fi
14232 }
14233 \def\Hy@currentbookmarklevel{0}
14234 \def\Hy@numberline#1{#1 }
14235 \def\@writetorep#1#2#3#4#5{%
14236   \begingroup
14237   \edef\Hy@tempa{#5}%
14238   \ifx\Hy@tempa\Hy@bookmarkstype
14239     \edef\Hy@level{#4}%
14240     \ifx\Hy@levelcheck Y%
14241       \@tempcnta\Hy@level\relax
14242       \advance\@tempcnta by -1 %
14243       \ifnum\Hy@currentbookmarklevel<\@tempcnta
14244         \advance\@tempcnta by -\Hy@currentbookmarklevel\relax
14245       \advance\@tempcnta by 1 %
14246       \Hy@Warning{%
14247         Difference (\the\@tempcnta) between bookmark levels is %
14248         greater \MessageBreak than one, level fixed%
14249     }%

```

```

14250     \@tempcnta\Hy@currentbookmarklevel
14251     \advance\@tempcnta by 1 %
14252     \edef\Hy@level{\the\@tempcnta}%
14253     \fi
14254   \else
14255     \global\let\Hy@levelcheck Y%
14256     \fi
14257   \global\let\Hy@currentbookmarklevel\Hy@level
14258   \@tempcnta\Hy@level\relax
14259   \expandafter\xdef\csname Parent\Hy@level\endcsname{#3}%
14260   \advance\@tempcnta by -1 %
14261   \edef\Hy@tempa{#3}%
14262   \edef\Hy@tempb{\csname Parent\the\@tempcnta\endcsname}%
14263   \ifx\Hy@tempa\Hy@tempb
14264     \Hy@Warning{%
14265       The anchor of a bookmark and its parent's must not%
14266       \MessageBreak be the same. Added a new anchor%
14267     }%
14268     \phantomsection
14269   \fi
14270   \ifHy@bookmarksnumbered
14271     \let\numberline\Hy@numberline
14272     \let\booknumberline\Hy@numberline
14273     \let\partnumberline\Hy@numberline
14274     \let\chapternumberline\Hy@numberline
14275   \else
14276     \let\numberline\@gobble
14277     \let\booknumberline\@gobble
14278     \let\partnumberline\@gobble
14279     \let\chapternumberline\@gobble
14280   \fi
14281   \pdfstringdef\Hy@tempa{#2}%
14282   \HyPsd@SanitizeForOutFile\Hy@tempa
14283   \if@filesw
14284     \stepcounter{bookmark@seq@number}%
14285     \@ifundefined{@outlinefile}{%
14286     }{%
14287     \protected@write\@outlinefile}{%
14288     \protect\BOOKMARK
14289     [\Hy@level][\@bookmarkopenstatus{\Hy@level}]{#3}%
14290     {\Hy@tempa}{\Hy@tempb}%
14291     \@percentchar\space\thebookmark@seq@number
14292     }%
14293     }%
14294   \fi
14295   \fi
14296 \endgroup
14297 }
14298 \newcounter{bookmark@seq@number}
14299 \begingroup
14300 \lccode`(`=`{%
14301 \lccode`)`=`}%
14302 \lccode`1`=\z@
14303 \lccode`2`=\z@

```

```

14304 \lccode`3=\z@
14305 \lccode`5=\z@
14306 \lccode`7=\z@
14307 \lccode`\#=\z@
14308 \lccode``=\z@
14309 \lccode`\{=\z@
14310 \lccode`\}= \z@
14311 \lowercase{%
14312 \endgroup
14313 \def\HyPsd@SanitizeForOutFile#1{%
14314 \@onelevel@sanitize\Hy@tempa
14315 \escapechar``\%
14316 \edef\Hy@tempa{%
14317 \expandafter\HyPsd@SanitizeOut@BraceLeft\Hy@tempa(\@nil
14318 }%
14319 \edef\Hy@tempa{%
14320 \expandafter\HyPsd@SanitizeOut@BraceRight\Hy@tempa)\@nil
14321 }%
14322 }%
14323 \def\HyPsd@SanitizeOut@BraceLeft#1(#2\@nil{%
14324 #1%
14325 \ifx\#2\%
14326 \expandafter\@gobble
14327 \else
14328 \expandafter\@firstofone
14329 \fi
14330 {%
14331 \string\173%
14332 \HyPsd@SanitizeOut@BraceLeft#2\@nil
14333 }%
14334 }%
14335 \def\HyPsd@SanitizeOut@BraceRight#1)#2\@nil{%
14336 #1%
14337 \ifx\#2\%
14338 \expandafter\@gobble
14339 \else
14340 \expandafter\@firstofone
14341 \fi
14342 {%
14343 \string\175%
14344 \HyPsd@SanitizeOut@BraceRight#2\@nil
14345 }%
14346 }%
14347 }

```

In the call of \BOOKMARK the braces around #4 are omitted, because it is not likely, that the level number contains].

```

14348 \newcommand{\currentpdfbookmark}{%
14349 \pdfbookmark[\Hy@currentbookmarklevel]%
14350 }
14351 \newcommand{\subpdfbookmark}{%
14352 \@tempcnta\Hy@currentbookmarklevel
14353 \Hy@StepCount\@tempcnta
14354 \expandafter\pdfbookmark\expandafter[\the\@tempcnta]%
14355 }

```

```

14356 \newcommand{\belowpdfbookmark}[2]{%
14357   \@tempcnta\Hy@currentbookmarklevel
14358   \Hy@StepCount\@tempcnta
14359   \expandafter\pdfbookmark\expandafter[\the\@tempcnta]{#1}{#2}%
14360   \advance\@tempcnta by -1 %
14361   \xdef\Hy@currentbookmarklevel{\the\@tempcnta}%
14362 }

```

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.

```

14363 \renewcommand\pdfbookmark[3][0]{%
14364   \Hy@writebookmark}{#2}{#3.#1}{#1}{toc}%
14365   \hyper@anchorstart{#3.#1}\hyper@anchorend
14366 }
14367 \def\BOOKMARK{%
14368   \@ifnextchar[{\@BOOKMARK}{\@@BOOKMARK[1][-]}%
14369 }
14370 \def\@BOOKMARK[#1]{%
14371   \@ifnextchar[{\@@BOOKMARK[#1]}{\@@BOOKMARK[#1][-]}%
14372 }

```

The macros for calculating structure of outlines are derived from those by Petr Olsak used in the `texinfo` macros.

46.1.1 Rerun warning

`\Hy@OutlineRerunCheck`

```

14373 \RequirePackage{rerunfilecheck}[2009/12/10]
14374 \def\Hy@OutlineRerunCheck{%
14375   \RerunFileCheck{\jobname.out}{%
14376     \immediate\closeout\@outlinefile
14377   }{%
14378     Rerun to get outlines right\MessageBreak
14379     or use package `bookmark'%
14380   }%
14381 }

```

46.1.2 Driver stuff

The VTEX section was written originally by VTEX, but then amended by Denis Girou (denis.girou@idris.fr), then by 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.

```

14382 <*vtex>
14383 \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.

```

14384 \begingroup
14385   \catcode`\'=12 %
14386   \ifnum\Hy@VTeXversion<650 %
14387     \catcode`\ "=12 %

```



```

14388 \gdef\hv@pdf@char#1#2#3{%
14389 \char
14390 \ifcase'#1#2#3 %
14391 "00\or"01\or"02\or"03\or"04\or"05\or"06\or"07%
14392 \or"08\or"09\or"0A\or"0B\or"0C\or"0D\or"0E\or"0F%
14393 \or"10\or"11\or"12\or"13\or"14\or"15\or"16\or"17%
14394 \or"18\or"19\or"1A\or"1B\or"1C\or"1D\or"1E\or"1F%
14395 \or"20\or"21\or"22\or"23\or"24\or"25\or"26\or"27%
14396 \or"28\or"29\or"2A\or"2B\or"2C\or"2D\or"2E\or"2F%
14397 \or"30\or"31\or"32\or"33\or"34\or"35\or"36\or"37%
14398 \or"38\or"39\or"3A\or"3B\or"3C\or"3D\or"3E\or"3F%
14399 \or"40\or"41\or"42\or"43\or"44\or"45\or"46\or"47%
14400 \or"48\or"49\or"4A\or"4B\or"4C\or"4D\or"4E\or"4F%
14401 \or"50\or"51\or"52\or"53\or"54\or"55\or"56\or"57%
14402 \or"58\or"59\or"5A\or"5B\or"5C\or"5D\or"5E\or"5F%
14403 \or"60\or"61\or"62\or"63\or"64\or"65\or"66\or"67%
14404 \or"68\or"69\or"6A\or"6B\or"6C\or"6D\or"6E\or"6F%
14405 \or"70\or"71\or"72\or"73\or"74\or"75\or"76\or"77%
14406 \or"78\or"79\or"7A\or"7B\or"7C\or"7D\or"7E\or"7F%
14407 \or"80\or"81\or"82\or"83\or"84\or"85\or"86\or"87%
14408 \or"88\or"89\or"8A\or"8B\or"8C\or"8D\or"8E\or"8F%
14409 \or"90\or"91\or"92\or"93\or"94\or"95\or"96\or"97%
14410 \or"98\or"99\or"9A\or"9B\or"9C\or"9D\or"9E\or"9F%
14411 \or"A0\or"A1\or"A2\or"A3\or"A4\or"A5\or"A6\or"A7%
14412 \or"A8\or"A9\or"AA\or"AB\or"AC\or"AD\or"AE\or"AF%
14413 \or"B0\or"B1\or"B2\or"B3\or"B4\or"B5\or"B6\or"B7%
14414 \or"B8\or"B9\or"BA\or"BB\or"BC\or"BD\or"BE\or"BF%
14415 \or"C0\or"C1\or"C2\or"C3\or"C4\or"C5\or"C6\or"C7%
14416 \or"C8\or"C9\or"CA\or"CB\or"CC\or"CD\or"CE\or"CF%
14417 \or"D0\or"D1\or"D2\or"D3\or"D4\or"D5\or"D6\or"D7%
14418 \or"D8\or"D9\or"DA\or"DB\or"DC\or"DD\or"DE\or"DF%
14419 \or"E0\or"E1\or"E2\or"E3\or"E4\or"E5\or"E6\or"E7%
14420 \or"E8\or"E9\or"EA\or"EB\or"EC\or"ED\or"EE\or"EF%
14421 \or"F0\or"F1\or"F2\or"F3\or"F4\or"F5\or"F6\or"F7%
14422 \or"F8\or"F9\or"FA\or"FB\or"FC\or"FD\or"FE\or"FF%
14423 \fi
14424 }%
14425 \else
14426 \gdef\hv@pdf@char{\char'}%
14427 \fi
14428 \endgroup

```

\@@BOOKMARK

```

14429 \def\@@BOOKMARK[#1][#2]#3#4#5{%
14430 \expandafter\edef\csname @count@#3\endcsname{%
14431 \the\@serial@counter
14432 }%
14433 \edef\@mycount{\the\@serial@counter}%
14434 \Hy@StepCount\@serial@counter
14435 \edef\@parcount{%
14436 \expandafter\ifx\csname @count@#5\endcsname\relax
14437 0%
14438 \else
14439 \csname @count@#5\endcsname

```

```

14440 \fi
14441 }%
14442 \immediate\special{%
14443 !outline \HyperDestNameFilter{#3};p=\@parcount,i=\@mycount,%
14444 s=\ifx#2-c\else o\fi,t=#4%
14445 }%
14446 }%

```

\ReadBookmarks

```

14447 \def\ReadBookmarks{%
14448 \begingroup
14449 \def\0{\hv@pdf@char 0}%
14450 \def\1{\hv@pdf@char 1}%
14451 \def\2{\hv@pdf@char 2}%
14452 \def\3{\hv@pdf@char 3}%
14453 \def\({}%
14454 \def\)}%
14455 \def\do###1{%
14456 \ifnum\catcode`###1=\active
14457 \@makeother###1%
14458 \else
14459 \ifnum\catcode`###1=6 %
14460 \@makeother###1%
14461 \fi
14462 \fi
14463 }%
14464 \dospecials
14465 \Hy@safe@activestrue
14466 \InputIfFileExists{\jobname.out}{\}{}%
14467 \endgroup
14468 \ifx\WriteBookmarks\relax
14469 \else
14470 \if@filesw
14471 \newwrite\@outlinefile
14472 \Hy@OutlineRerunCheck
14473 \immediate\openout\@outlinefile=\jobname.out\relax
14474 \fi
14475 \fi
14476 }

14477 </vtex>
14478 <*\vtex>
14479 \def\ReadBookmarks{%
14480 \pdf@ifdraftmode{\}{%
14481 \begingroup
14482 \def\do###1{%
14483 \ifnum\catcode`###1=\active
14484 \@makeother###1%
14485 \else
14486 \ifnum\catcode`###1=6 %
14487 \@makeother###1%
14488 \fi
14489 \fi
14490 }%

```

```

14491 \dospecials
14492 \Hy@safe@activestruer
14493 \escapechar=`\%
14494 \def\@@BOOKMARK[##1][##2]##3##4##5{%
14495   \calc@bm@number{##5}%
14496 }%
14497 \InputIfFileExists{\jobname.out}{-}{-}%
14498 \ifx\WriteBookmarks\relax
14499   \global\let\WriteBookmarks\relax
14500 \fi
14501 \def\@@BOOKMARK[##1][##2]##3##4##5{%
14502   \def\Hy@temp{##4}%
14503 (*pdfTeX)
14504   \Hy@pstringdef\Hy@pstringName{\HyperDestNameFilter{##3}}%
14505   \Hy@OutlineName{}\Hy@pstringName{%
14506     ##2\check@bm@number{##3}%
14507   }{%
14508     \expandafter\strip@prefix\meaning\Hy@temp
14509   }%
14510 \pdfTeX)
14511 (*pdfmark)
14512   \pdfmark{%
14513     pdfmark=/OUT,%
14514     Count={##2\check@bm@number{##3}},%
14515     Dest={##3},%
14516     Title=\expandafter\strip@prefix\meaning\Hy@temp
14517   }%
14518 \pdfmark)
14519 (*dviPDFM | xetex)
14520   \Hy@pstringdef\Hy@pstringName{\HyperDestNameFilter{##3}}%
14521   \@pdfm@mark{%
14522     outline \ifHy@DvipdfmxOutlineOpen
14523       [%
14524         \ifnum##21>\z@
14525         \else
14526         -%
14527         \fi
14528         ] %
14529         \fi
14530         ##1<<%
14531         /Title(\expandafter\strip@prefix\meaning\Hy@temp)%
14532         /A<<%
14533         /S/GoTo%
14534         /D(\Hy@pstringName)%
14535         >>%
14536         >>%
14537       }%
14538 \dviPDFM | xetex)
14539 }%
14540 \begingroup
14541   \def\WriteBookmarks{0}%
14542   \InputIfFileExists{\jobname.out}{-}{-}%
14543 \endgroup
14544 %{\escapechar\m@ne\InputIfFileExists{\jobname.out}{-}{-}}%

```

```

14545 \endgroup
14546 }%
14547 \ifx\WriteBookmarks\relax
14548 \else
14549 \if@filesw
14550 \newwrite\@outlinefile
14551 \Hy@OutlineRerunCheck
14552 \immediate\openout\@outlinefile=\jobname.out\relax
14553 \fi
14554 \fi
14555 }
14556 <*pdftex>
14557 \def\Hy@OutlineName#1#2#3#4{%
14558 \pdfoutline goto name{#2}count#3{#4}%
14559 }
14560 </pdftex>
14561 \def\check@bm@number#1{%
14562 \expandafter\ifx\csname B_#1\endcsname\relax
14563 0%
14564 \else
14565 \csname B_#1\endcsname
14566 \fi
14567 }
14568 \def\calc@bm@number#1{%
14569 \@tempcnta=\check@bm@number{#1}\relax
14570 \advance\@tempcnta by 1 %
14571 \expandafter\xdef\csname B_#1\endcsname{\the\@tempcnta}%
14572 }
14573 </!vtex>

14574 \ifHy@implicit
14575 \else
14576 \expandafter\endinput
14577 \fi

14578 </outlines>
14579 <*outlines | hypertex>

14580 \newlength\Hy@SectionHShift
14581 \def\Hy@SectionAnchorHref#1{%
14582 \ifx\protect\@typeset@protect
14583 \Hy@@@SectionAnchor{#1}%
14584 \fi
14585 }
14586 \DeclareRobustCommand*{\Hy@@@SectionAnchor}[1]{%
14587 \leavevmode
14588 \hbox to 0pt{%
14589 \kern-\Hy@SectionHShift
14590 \Hy@raisedlink{%
14591 \hyper@anchorstart{#1}\hyper@anchorend
14592 }%
14593 \hss
14594 }%
14595 }
14596 \AddToNoCaseChangeList{\Hy@@@SectionAnchor}
14597 \@ifundefined{hyper@nopatch@sectioning}

```

```

14598 {
14599 \let\H@old@ssect\@ssect
14600 \def\@ssect#1#2#3#4#5{%
14601 \Hy@MakeCurrentHrefAuto{section*}%
14602 \setlength{\Hy@SectionHShift}{#1}%
14603 \begingroup
14604 \toks@{\H@old@ssect{#1}{#2}{#3}{#4}}%
14605 \toks\tw@\expandafter{%
14606 \expandafter\Hy@SectionAnchorHref\expandafter{\@currentHref}%
14607 #5%
14608 }%
14609 \edef\x{\endgroup
14610 \the\toks@\the\toks\tw@}%
14611 }\x
14612 }
14613 \let\H@old@schapter\@schapter
14614 \def\@schapter#1{%
14615 \begingroup
14616 \let\@mkboth\@gobbletwo
14617 \Hy@MakeCurrentHrefAuto{\Hy@chapapp*}%
14618 \Hy@raisedlink{%
14619 \hyper@anchorstart{\@currentHref}\hyper@anchorend
14620 }%
14621 \endgroup
14622 \H@old@schapter{#1}%
14623 }

```

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:

```

14624 \@ifundefined{@chapter}{}{%
14625 \let\Hy@org@chapter\@chapter
14626 \def\@chapter{%
14627 \def\Hy@next{%
14628 \Hy@MakeCurrentHrefAuto{\Hy@chapapp*}%
14629 \Hy@raisedlink{%
14630 \hyper@anchorstart{\@currentHref}\hyper@anchorend
14631 }%
14632 }%
14633 \ifnum\c@secnumdepth>\m@ne
14634 \@ifundefined{if@mainmatter}%
14635 \iftrue{\csname if@mainmatter\endcsname}%
14636 \let\Hy@next\relax
14637 \fi
14638 \fi
14639 \Hy@next
14640 \Hy@org@chapter
14641 }%
14642 }
14643 \let\H@old@part\@part
14644 \@ifundefined{chapter}
14645 {\let\Hy@secnum@part\z@}
14646 {\let\Hy@secnum@part\m@ne}
14647 \def\@part{%

```

```

14648 \ifnum\Hy@secnum@part>\c@secnumdepth
14649 \phantomsection
14650 \fi
14651 \H@old@part
14652 }

14653 \let\H@old@spart\@spart
14654 \def\@spart#1{%
14655 \Hy@MakeCurrentHrefAuto{part*}%
14656 \Hy@raisedlink{%
14657 \hyper@anchorstart{\@currentHref}\hyper@anchorend
14658 }%
14659 \H@old@spart{#1}%
14660 }

14661 \let\H@old@sect\@sect
14662 \def\@sect#1#2#3#4#5#6[#7]#8{%
14663 \ifnum #2>\c@secnumdepth
14664 \expandafter\@firstoftwo
14665 \else
14666 \expandafter\@secondoftwo
14667 \fi
14668 {%
14669 \Hy@MakeCurrentHrefAuto{section*}%
14670 \setlength{\Hy@SectionHShift}{#3}%
14671 \begingroup
14672 \toks@{\H@old@sect{#1}{#2}{#3}{#4}{#5}{#6}{#7}}%
14673 \toks\tw@\expandafter{%
14674 \expandafter\Hy@SectionAnchorHref\expandafter{\@currentHref}%
14675 #8%
14676 }%
14677 \edef\x{\endgroup
14678 \the\toks@\the\toks\tw@}%
14679 }\x
14680 }{%
14681 \H@old@sect{#1}{#2}{#3}{#4}{#5}{#6}{#7}{#8}%
14682 }%
14683 }
14684 }-}

14685 </outlines | hypertex>
14686 <*outlines>

14687 \expandafter\def\csname Parent-4\endcsname{}
14688 \expandafter\def\csname Parent-3\endcsname{}
14689 \expandafter\def\csname Parent-2\endcsname{}
14690 \expandafter\def\csname Parent-1\endcsname{}
14691 \expandafter\def\csname Parent0\endcsname{}
14692 \expandafter\def\csname Parent1\endcsname{}
14693 \expandafter\def\csname Parent2\endcsname{}
14694 \expandafter\def\csname Parent3\endcsname{}
14695 \expandafter\def\csname Parent4\endcsname{}

14696 </outlines>

```

47 Encoding definition files for encodings of PDF strings

This was contributed by Heiko Oberdiek.

47.1 PD1 encoding

```
14697 (*pd1enc)
14698 \DeclareFontEncoding{PD1}{}{}

Accents
14699 \DeclareTextAccent{\`}{PD1}{\textasciigrave}
14700 \DeclareTextAccent{\'}{PD1}{\textacute}
14701 \DeclareTextAccent{\~}{PD1}{\textasciicircum}
14702 \DeclareTextAccent{\~}{PD1}{\texttilde}
14703 \DeclareTextAccent{\"}{PD1}{\textasciidieresis}
14704 \DeclareTextAccent{\r}{PD1}{\textring}
14705 \DeclareTextAccent{\v}{PD1}{\textasciicaron}
14706 \DeclareTextAccent{\.}{PD1}{\textdotaccent}
14707 \DeclareTextAccent{\c}{PD1}{\textcedilla}
14708 \DeclareTextAccent{\=}{PD1}{\textasciimacron}
14709 \DeclareTextAccent{\b}{PD1}{\textmacronbelow}
14710 \DeclareTextAccent{\d}{PD1}{\textdotbelow}
14711 \DeclareTextCompositeCommand{\`}{PD1}{\@empty}{\textasciigrave}
14712 \DeclareTextCompositeCommand{\'}{PD1}{\@empty}{\textacute}
14713 \DeclareTextCompositeCommand{\~}{PD1}{\@empty}{\textasciicircum}
14714 \DeclareTextCompositeCommand{\~}{PD1}{\@empty}{\texttilde}
14715 \DeclareTextCompositeCommand{\"}{PD1}{\@empty}{\textasciidieresis}
14716 \DeclareTextCompositeCommand{\r}{PD1}{\@empty}{\textring}
14717 \DeclareTextCompositeCommand{\v}{PD1}{\@empty}{\textasciicaron}
14718 \DeclareTextCompositeCommand{\.}{PD1}{\@empty}{\textdotaccent}
14719 \DeclareTextCompositeCommand{\c}{PD1}{\@empty}{\textcedilla}
14720 \DeclareTextCompositeCommand{\=}{PD1}{\@empty}{\textasciimacron}
14721 \DeclareTextCompositeCommand{\b}{PD1}{\@empty}{\textmacronbelow}
14722 \DeclareTextCompositeCommand{\d}{PD1}{\@empty}{\textdotbelow}
14723 \DeclareTextCompositeCommand{\`}{PD1}{\ }{\textasciigrave}
14724 \DeclareTextCompositeCommand{\'}{PD1}{\ }{\textacute}
14725 \DeclareTextCompositeCommand{\~}{PD1}{\ }{\textasciicircum}
14726 \DeclareTextCompositeCommand{\~}{PD1}{\ }{\texttilde}
14727 \DeclareTextCompositeCommand{\"}{PD1}{\ }{\textasciidieresis}
14728 \DeclareTextCompositeCommand{\r}{PD1}{\ }{\textring}
14729 \DeclareTextCompositeCommand{\v}{PD1}{\ }{\textasciicaron}
14730 \DeclareTextCompositeCommand{\.}{PD1}{\ }{\textdotaccent}
14731 \DeclareTextCompositeCommand{\c}{PD1}{\ }{\textcedilla}
14732 \DeclareTextCompositeCommand{\=}{PD1}{\ }{\textasciimacron}
14733 \DeclareTextCompositeCommand{\b}{PD1}{\ }{\textmacronbelow}
14734 \DeclareTextCompositeCommand{\d}{PD1}{\ }{\textdotbelow}
14735 \DeclareTextCommand{\k}{PD1}[1]{\TextSymbolUnavailable{\k{#1}}#1}
14736 \DeclareTextCommand{\t}{PD1}[1]{\TextSymbolUnavailable{\t{#1}}#1}
14737 \DeclareTextCommand{\newtie}{PD1}[1]{%
14738 \TextSymbolUnavailable{\newtie{#1}}#1%
14739 }
```

Special white space escape characters not for use in bookmarks but for other PDF strings.

14740 % U+0009 (CHARACTER TABULATION)
14741 \DeclareTextCommand{\textHT}{PD1}{\011}% U+0009
14742 % U+000A (LINE FEED)
14743 \DeclareTextCommand{\textLF}{PD1}{\012}% U+000A
14744 % U+000D (CARRIAGE RETURN)
14745 \DeclareTextCommand{\textCR}{PD1}{\015}% U+000D
Accent glyph names
14746 % U+02D8 BREVE; breve
14747 \DeclareTextCommand{\textasciibreve}{PD1}{\030}% U+02D8
14748 % U+02C7 CARON; caron
14749 \DeclareTextCommand{\textasciicaron}{PD1}{\031}% U+02C7
14750 % U+02C6 MODIFIER LETTER CIRCUMFLEX ACCENT; circumflex
14751 \DeclareTextCommand{\textcircumflex}{PD1}{\032}% U+02C6
14752 % U+02D9 DOT ABOVE; dotaccent
14753 \DeclareTextCommand{\textdotaccent}{PD1}{\033}% U+02D9
14754 % U+02DD DOUBLE ACUTE ACCENT; hungarumlaut
14755 \DeclareTextCommand{\texthungarumlaut}{PD1}{\034}% U+02DD
14756 % U+02DB OGONEK; ogonek
14757 \DeclareTextCommand{\textogonek}{PD1}{\035}% U+02DB
14758 % U+02DA RING ABOVE; ring
14759 \DeclareTextCommand{\textring}{PD1}{\036}% U+02DA
14760 % U+02DC SMALL TILDE; ilde, *tilde
14761 \DeclareTextCommand{\texttilde}{PD1}{\037}% U+02DC
\040: U+0020 SPACE; *space, spacehackarabic
\041: U+0021 EXCLAMATION MARK; exclam
14762 % U+0022 QUOTATION MARK; quotedbl
14763 \DeclareTextCommand{\textquotedbl}{PD1}{"}% \042 U+0022
14764 % U+0023 NUMBER SIGN; numbersign
14765 \DeclareTextCommand{\textnumbersign}{PD1}{\043}% U+0023
14766 % U+0024 DOLLAR SIGN; dollar
14767 \DeclareTextCommand{\textdollar}{PD1}{\044}% U+0024
14768 % U+0025 PERCENT SIGN; percent
14769 \DeclareTextCommand{\textpercent}{PD1}{\045}% U+0025
14770 % U+0026 AMPERSAND; ampersand
14771 \DeclareTextCommand{\textampersand}{PD1}{\046}% U+0026
\047: U+0027 APOSTROPHE; quotesingle

14772 % U+0028 LEFT PARENTHESIS; parenleft
14773 \DeclareTextCommand{\textparenleft}{PD1}{\string\}% \050 U+0028
14774 % U+0029 RIGHT PARENTHESIS; parenright
14775 \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
14776 % U+002E FULL STOP; period
14777 \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
14778 % U+003C LESS-THAN SIGN; less
14779 \DeclareTextCommand{\textless}{PD1}{<}% \074 U+003C
\075: U+003D EQUALS SIGN; equal
14780 % U+003E GREATER-THAN SIGN; greater
14781 \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
14782 % U+005C REVERSE SOLIDUS; backslash
14783 \DeclareTextCommand{\textbackslash}{PD1}{\134}% U+005C
14784 % "U+2216 SET MINUS" simulated by "U+005C REVERSE SOLIDUS"
14785 \DeclareTextCommand{\textsetminus}{PD1}{\textbackslash}
\135: U+005D RIGHT SQUARE BRACKET; bracketright
14786 % U+005E CIRCUMFLEX ACCENT; asciicircum
14787 \DeclareTextCommand{\textasciicircum}{PD1}{\136}% U+005E
14788 % U+005F LOW LINE; underscore
14789 \DeclareTextCommand{\textunderscore}{PD1}{\137}% U+005F
14790 \DeclareTextCommand{\textmacronbelow}{PD1}{\137}% U+005F
14791 % U+0060 GRAVE ACCENT; grave
14792 \DeclareTextCommand{\textasciigrave}{PD1}{\140}% U+0060
\141: U+0061 LATIN SMALL LETTER A; a
...
\150: U+0068 LATIN SMALL LETTER H; h
14793 % U+0069 LATIN SMALL LETTER I; i
14794 \DeclareTextCompositeCommand{\.}{PD1}{i}{i}% \151 U+0069
\152: U+006A LATIN SMALL LETTER J; j
...
\172: U+007A LATIN SMALL LETTER Z; z
14795 % U+007B LEFT CURLY BRACKET; braceleft
14796 \DeclareTextCommand{\textbraceleft}{PD1}{\173}% U+007B
14797 % U+007C VERTICAL LINE; *bar, verticalbar
14798 \DeclareTextCommand{\textbar}{PD1}{|}% U+007C
14799 % U+007D RIGHT CURLY BRACKET; braceright
14800 \DeclareTextCommand{\textbraceright}{PD1}{\175}% U+007D
14801 % U+007E TILDE; asciitilde
14802 \DeclareTextCommand{\textasciitilde}{PD1}{\176}% U+007E
Slot \177 (0x7F) is undefined in PDFDocEncoding.
14803 % U+2022 BULLET; bullet
14804 \DeclareTextCommand{\textbullet}{PD1}{\200}% U+2022
14805 % U+2020 DAGGER; dagger
14806 \DeclareTextCommand{\textdagger}{PD1}{\201}% U+2020
14807 % U+2021 DOUBLE DAGGER; daggerdbl; \ddagger (LaTeX)
14808 \DeclareTextCommand{\textdaggerdbl}{PD1}{\202}% U+2021
14809 \DeclareTextCommand{\textddagger}{PD1}{\textdaggerdbl}
14810 % U+2026 HORIZONTAL ELLIPSIS; ellipsis
14811 \DeclareTextCommand{\textellipsis}{PD1}{\203}% U+2026

14812 % U+2014 EM DASH; emdash
14813 \DeclareTextCommand{\textemdash}{PD1}{\204}% U+2014
14814 % U+2013 EN DASH; endash
14815 \DeclareTextCommand{\textendash}{PD1}{\205}% U+2013
14816 % U+0192 LATIN SMALL LETTER F WITH HOOK; florin
14817 \DeclareTextCommand{\textflorin}{PD1}{\206}% U+0192
14818 % U+2044 FRACTION SLASH; fraction
14819 \DeclareTextCommand{\textfractionsolidus}{PD1}{\207}% U+2044
14820 % U+2039 SINGLE LEFT-POINTING ANGLE QUOTATION MARK; guil-
inglleft
14821 \DeclareTextCommand{\guilsinglleft}{PD1}{\210}% U+2039
14822 % U+203A SINGLE RIGHT-POINTING ANGLE QUOTATION MARK; guils-
inglright
14823 \DeclareTextCommand{\guilsinglright}{PD1}{\211}% U+203A
14824 % U+2212 MINUS SIGN; minus
14825 \DeclareTextCommand{\textminus}{PD1}{\212}% U+2212
14826 % U+2030 PER MILLE SIGN; perthousand
14827 \DeclareTextCommand{\textperthousand}{PD1}{\213}% U+2030
14828 % U+201E DOUBLE LOW-9 QUOTATION MARK; quotedblbase
14829 \DeclareTextCommand{\quotedblbase}{PD1}{\214}% U+201E
14830 % U+201C LEFT DOUBLE QUOTATION MARK; quotedblleft
14831 \DeclareTextCommand{\textquotedblleft}{PD1}{\215}% U+201C
14832 % U+201D RIGHT DOUBLE QUOTATION MARK; quotedblright
14833 \DeclareTextCommand{\textquotedblright}{PD1}{\216}% U+201D
14834 % U+2018 LEFT SINGLE QUOTATION MARK; quoteleft
14835 \DeclareTextCommand{\textquoteleft}{PD1}{\217}% U+2018
14836 % U+2019 RIGHT SINGLE QUOTATION MARK; quoteright
14837 \DeclareTextCommand{\textquoteright}{PD1}{\220}% U+2019
14838 % U+201A SINGLE LOW-9 QUOTATION MARK; quotesinglbase
14839 \DeclareTextCommand{\quotesinglbase}{PD1}{\221}% U+201A
14840 % U+2122 TRADE MARK SIGN; trademark
14841 \DeclareTextCommand{\texttrademark}{PD1}{\222}% U+2122
14842 % U+FB01 LATIN SMALL LIGATURE FI; fi
14843 \DeclareTextCommand{\textfi}{PD1}{\223}% U+FB01
14844 % U+FB02 LATIN SMALL LIGATURE FL; fl
14845 \DeclareTextCommand{\textfl}{PD1}{\224}% U+FB02
14846 % U+0141 LATIN CAPITAL LETTER L WITH STROKE; Lslash
14847 \DeclareTextCommand{\L}{PD1}{\225}% U+0141
14848 % U+0152 LATIN CAPITAL LIGATURE OE; OE
14849 \DeclareTextCommand{\OE}{PD1}{\226}% U+0152
14850 % U+0160 LATIN CAPITAL LETTER S WITH CARON; Scaron
14851 \DeclareTextCompositeCommand{\v}{PD1}{S}{\227}% U+0160
14852 % U+0178 LATIN CAPITAL LETTER Y WITH DIAERESIS; Ydieresis
14853 \DeclareTextCompositeCommand{\"}{PD1}{Y}{\230}% U+0178
14854 \DeclareTextCommand{\IJ}{PD1}{IJ}% ligature U+0049 U+004A
14855 % U+017D LATIN CAPITAL LETTER Z WITH CARON; Zcaron
14856 \DeclareTextCompositeCommand{\v}{PD1}{Z}{\231}% U+017D
14857 % U+0131 LATIN SMALL LETTER DOTLESS I; dotlessi
14858 \DeclareTextCommand{\i}{PD1}{\232}% U+0131
14859 % U+0142 LATIN SMALL LETTER L WITH STROKE; lslash
14860 \DeclareTextCommand{\l}{PD1}{\233}% U+0142
14861 % U+0153 LATIN SMALL LIGATURE OE; oe
14862 \DeclareTextCommand{\oe}{PD1}{\234}% U+0153
14863 % U+0161 LATIN SMALL LETTER S WITH CARON; scaron

14864 \DeclareTextCompositeCommand{\v}{PD1}{s}{\235}% U+0161
14865 % U+017E LATIN SMALL LETTER Z WITH CARON; zcaron
14866 \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.
14867 % U+20AC EURO SIGN; *Euro, euro
14868 \DeclareTextCommand{\texteuro}{PD1}{\240}% U+20AC
14869 % U+00A1 INVERTED EXCLAMATION MARK; exclamdown
14870 \DeclareTextCommand{\textexclamdown}{PD1}{\241}% U+00A1
14871 % U+00A2 CENT SIGN; cent
14872 \DeclareTextCommand{\textcent}{PD1}{\242}% U+00A2
14873 % U+00A3 POUND SIGN; sterling
14874 \DeclareTextCommand{\textsterling}{PD1}{\243}% U+00A3
14875 % U+00A4 CURRENCY SIGN; currency
14876 \DeclareTextCommand{\textcurrency}{PD1}{\244}% U+00A4
14877 % U+00A5 YEN SIGN; yen
14878 \DeclareTextCommand{\textyen}{PD1}{\245}% U+00A5
14879 % U+00A6 BROKEN BAR; brokenbar
14880 \DeclareTextCommand{\textbrokenbar}{PD1}{\246}% U+00A6
14881 % U+00A7 SECTION SIGN; section
14882 \DeclareTextCommand{\textsection}{PD1}{\247}% U+00A7
14883 % U+00A8 DIAERESIS; diaeresis
14884 \DeclareTextCommand{\textasciidieresis}{PD1}{\250}% U+00A8
14885 % U+00A9 COPYRIGHT SIGN; copyright
14886 \DeclareTextCommand{\textcopyright}{PD1}{\251}% U+00A9
14887 % U+00AA FEMININE ORDINAL INDICATOR; ordfeminine
14888 \DeclareTextCommand{\textordfeminine}{PD1}{\252}% U+00AA
14889 % U+00AB LEFT-POINTING DOUBLE ANGLE QUOTATION MARK; guillemetleft
14890 \DeclareTextCommand{\guillemotleft}{PD1}{\253}% U+00AB
14891 \DeclareTextCommand{\guillemotleft}{PD1}{\253}% U+00AB
14892 % U+00AC NOT SIGN; logicalnot
14893 \DeclareTextCommand{\textlogicalnot}{PD1}{\254}% U+00AC
14894 \DeclareTextCommand{\textlnot}{PD1}{\254}% logical not
No glyph \255 in PDFDocEncoding.
14895 % U+00AE REGISTERED SIGN; registered
14896 \DeclareTextCommand{\textregistered}{PD1}{\256}% U+00AE
14897 % U+00AF MACRON; *macron, overscore
14898 \DeclareTextCommand{\textasciimacron}{PD1}{\257}% U+00AF
14899 % U+00B0 DEGREE SIGN; degree
14900 \DeclareTextCommand{\textdegree}{PD1}{\260}% U+00B0
14901 % U+00B1 PLUS-MINUS SIGN; plusminus
14902 \DeclareTextCommand{\textplusminus}{PD1}{\261}% U+00B1
14903 % U+00B2 SUPERSCRIPT TWO; twosuperior
14904 \DeclareTextCommand{\texttwosuperior}{PD1}{\262}%* U+00B2
14905 % U+00B3 SUPERSCRIPT THREE; threesuperior
14906 \DeclareTextCommand{\textthreesuperior}{PD1}{\263}%* U+00B3
14907 % U+00B4 ACUTE ACCENT; acute
14908 \DeclareTextCommand{\textacute}{PD1}{\264}% U+00B4
14909 % U+00B5 MICRO SIGN; mu, mu1
14910 \DeclareTextCommand{\textmu}{PD1}{\265}% U+00B5
14911 % U+00B6 PILCROW SIGN; paragraph
14912 \DeclareTextCommand{\textparagraph}{PD1}{\266}% U+00B6
14913 % U+00B7 MIDDLE DOT; middot, *periodcentered

14914 \DeclareTextCommand{\textperiodcentered}{PD1}{\267}% U+00B7
14915 % U+00B8 CEDILLA; cedilla
14916 \DeclareTextCommand{\textcedilla}{PD1}{\270}% U+00B8
14917 % U+00B9 SUPERSCRIPT ONE; onesuperior
14918 \DeclareTextCommand{\textonesuperior}{PD1}{\271}%* U+00B9
14919 % U+00BA MASCULINE ORDINAL INDICATOR; ordmasculine
14920 \DeclareTextCommand{\textordmasculine}{PD1}{\272}% U+00BA
14921 % U+00BB RIGHT-POINTING DOUBLE ANGLE QUOTATION MARK; guillemetright
14922 \DeclareTextCommand{\guillemotright}{PD1}{\273}% U+00BB
14923 \DeclareTextCommand{\guillemetright}{PD1}{\273}% U+00BB
14924 % U+00BC VULGAR FRACTION ONE QUARTER; onequarter
14925 \DeclareTextCommand{\textonequarter}{PD1}{\274}% U+00BC
14926 % U+00BD VULGAR FRACTION ONE HALF; onehalf
14927 \DeclareTextCommand{\textonehalf}{PD1}{\275}% U+00BD
14928 % U+00BE VULGAR FRACTION THREE QUARTERS; threequarters
14929 \DeclareTextCommand{\textthreequarters}{PD1}{\276}% U+00BE
14930 % U+00BF INVERTED QUESTION MARK; questiondown
14931 \DeclareTextCommand{\textquestiondown}{PD1}{\277}% U+00BF
14932 % U+00C0 LATIN CAPITAL LETTER A WITH GRAVE; Agrave
14933 \DeclareTextCompositeCommand{\`}{PD1}{A}{\300}% U+00C0
14934 % U+00C1 LATIN CAPITAL LETTER A WITH ACUTE; Aacute
14935 \DeclareTextCompositeCommand{\'}{PD1}{A}{\301}% U+00C1
14936 % U+00C2 LATIN CAPITAL LETTER A WITH CIRCUMFLEX; Acircumflex
14937 \DeclareTextCompositeCommand{\^}{PD1}{A}{\302}% U+00C2
14938 % U+00C3 LATIN CAPITAL LETTER A WITH TILDE; Atilde
14939 \DeclareTextCompositeCommand{\~}{PD1}{A}{\303}% U+00C3
14940 % U+00C4 LATIN CAPITAL LETTER A WITH DIAERESIS; Adieresis
14941 \DeclareTextCompositeCommand{\\"}{PD1}{A}{\304}% U+00C4
14942 % U+00C5 LATIN CAPITAL LETTER A WITH RING ABOVE; Aring
14943 \DeclareTextCompositeCommand{\r}{PD1}{A}{\305}% U+00C5
14944 % U+00C6 LATIN CAPITAL LETTER AE; AE
14945 \DeclareTextCommand{\AE}{PD1}{\306}% U+00C6
14946 % U+00C7 LATIN CAPITAL LETTER C WITH CEDILLA; Ccedilla
14947 \DeclareTextCompositeCommand{\c}{PD1}{C}{\307}% U+00C7
14948 % U+00C8 LATIN CAPITAL LETTER E WITH GRAVE; Egrave
14949 \DeclareTextCompositeCommand{\`}{PD1}{E}{\310}% U+00C8
14950 % U+00C9 LATIN CAPITAL LETTER E WITH ACUTE; Eacute
14951 \DeclareTextCompositeCommand{\'}{PD1}{E}{\311}% U+00C9
14952 % U+00CA LATIN CAPITAL LETTER E WITH CIRCUMFLEX; Ecircumflex
14953 \DeclareTextCompositeCommand{\^}{PD1}{E}{\312}% U+00CA
14954 % U+00CB LATIN CAPITAL LETTER E WITH DIAERESIS; Edieresis
14955 \DeclareTextCompositeCommand{\\"}{PD1}{E}{\313}% U+00CB
14956 % U+00CC LATIN CAPITAL LETTER I WITH GRAVE; Igrave
14957 \DeclareTextCompositeCommand{\`}{PD1}{I}{\314}% U+00CC
14958 % U+00CD LATIN CAPITAL LETTER I WITH ACUTE; Iacute
14959 \DeclareTextCompositeCommand{\'}{PD1}{I}{\315}% U+00CD
14960 % U+00CE LATIN CAPITAL LETTER I WITH CIRCUMFLEX; Icircumflex
14961 \DeclareTextCompositeCommand{\^}{PD1}{I}{\316}% U+00CE
14962 % U+00CF LATIN CAPITAL LETTER I WITH DIAERESIS; Idieresis
14963 \DeclareTextCompositeCommand{\\"}{PD1}{I}{\317}% U+00CF
14964 % U+00D0 LATIN CAPITAL LETTER ETH; Eth
14965 \DeclareTextCommand{\DH}{PD1}{\320}% U+00D0
14966 \DeclareTextCommand{\DJ}{PD1}{\320}% U+00D0
14967 % U+00D1 LATIN CAPITAL LETTER N WITH TILDE; Ntilde

14968 \DeclareTextCompositeCommand{\~}{PD1}{N}{\321}% U+00D1
14969 % U+00D2 LATIN CAPITAL LETTER O WITH GRAVE; Ograve
14970 \DeclareTextCompositeCommand{\`}{PD1}{O}{\322}% U+00D2
14971 % U+00D3 LATIN CAPITAL LETTER O WITH ACUTE; Oacute
14972 \DeclareTextCompositeCommand{\'}{PD1}{O}{\323}% U+00D3
14973 % U+00D4 LATIN CAPITAL LETTER O WITH CIRCUMFLEX; Ocircumflex
14974 \DeclareTextCompositeCommand{\^}{PD1}{O}{\324}% U+00D4
14975 % U+00D5 LATIN CAPITAL LETTER O WITH TILDE; Otilde
14976 \DeclareTextCompositeCommand{\~}{PD1}{O}{\325}% U+00D5
14977 % U+00D6 LATIN CAPITAL LETTER O WITH DIAERESIS; Odieresis
14978 \DeclareTextCompositeCommand{\"}{PD1}{O}{\326}% U+00D6
14979 % U+00D7 MULTIPLICATION SIGN; multiply
14980 \DeclareTextCommand{\textmultiply}{PD1}{\327}% U+00D7
14981 % U+00D8 LATIN CAPITAL LETTER O WITH STROKE; Oslash
14982 \DeclareTextCommand{\O}{PD1}{\330}% U+00D8
14983 % U+00D9 LATIN CAPITAL LETTER U WITH GRAVE; Ugrave
14984 \DeclareTextCompositeCommand{\`}{PD1}{U}{\331}% U+00D9
14985 % U+00DA LATIN CAPITAL LETTER U WITH ACUTE; Uacute
14986 \DeclareTextCompositeCommand{\'}{PD1}{U}{\332}% U+00DA
14987 % U+00DB LATIN CAPITAL LETTER U WITH CIRCUMFLEX; Ucircumflex
14988 \DeclareTextCompositeCommand{\^}{PD1}{U}{\333}% U+00DB
14989 % U+00DC LATIN CAPITAL LETTER U WITH DIAERESIS; Udieresis
14990 \DeclareTextCompositeCommand{\"}{PD1}{U}{\334}% U+00DC
14991 % U+00DD LATIN CAPITAL LETTER Y WITH ACUTE; Yacute
14992 \DeclareTextCompositeCommand{\'}{PD1}{Y}{\335}% U+00DD
14993 % U+00DE LATIN CAPITAL LETTER THORN; Thorn; \TH, \Thorn (wasysym)
14994 \DeclareTextCommand{\TH}{PD1}{\336}% U+00DE
14995 \DeclareTextCommand{\textThorn}{PD1}{\336}%* U+00DE
14996 % U+00DF LATIN SMALL LETTER SHARP S; germandbls
14997 \DeclareTextCommand{\ss}{PD1}{\337}% U+00DF
14998 % U+00E0 LATIN SMALL LETTER A WITH GRAVE; agrave
14999 \DeclareTextCompositeCommand{\`}{PD1}{a}{\340}% U+00E0
15000 % U+00E1 LATIN SMALL LETTER A WITH ACUTE; aacute
15001 \DeclareTextCompositeCommand{\'}{PD1}{a}{\341}% U+00E1
15002 % U+00E2 LATIN SMALL LETTER A WITH CIRCUMFLEX; acircumflex
15003 \DeclareTextCompositeCommand{\^}{PD1}{a}{\342}% U+00E2
15004 % U+00E3 LATIN SMALL LETTER A WITH TILDE; atilde
15005 \DeclareTextCompositeCommand{\~}{PD1}{a}{\343}% U+00E3
15006 % U+00E4 LATIN SMALL LETTER A WITH DIAERESIS; adieresis
15007 \DeclareTextCompositeCommand{\"}{PD1}{a}{\344}% U+00E4
15008 % U+00E5 LATIN SMALL LETTER A WITH RING ABOVE; aring
15009 \DeclareTextCompositeCommand{\r}{PD1}{a}{\345}% U+00E5
15010 % U+00E6 LATIN SMALL LETTER AE; ae
15011 \DeclareTextCommand{\ae}{PD1}{\346}% U+00E6
15012 % U+00E7 LATIN SMALL LETTER C WITH CEDILLA; ccedilla
15013 \DeclareTextCompositeCommand{\c}{PD1}{c}{\347}% U+00E7
15014 % U+00E8 LATIN SMALL LETTER E WITH GRAVE; egrave
15015 \DeclareTextCompositeCommand{\`}{PD1}{e}{\350}% U+00E8
15016 % U+00E9 LATIN SMALL LETTER E WITH ACUTE; eacute
15017 \DeclareTextCompositeCommand{\'}{PD1}{e}{\351}% U+00E9
15018 % U+00EA LATIN SMALL LETTER E WITH CIRCUMFLEX; ecircumflex
15019 \DeclareTextCompositeCommand{\^}{PD1}{e}{\352}% U+00EA
15020 % U+00EB LATIN SMALL LETTER E WITH DIAERESIS; edieresis
15021 \DeclareTextCompositeCommand{\"}{PD1}{e}{\353}% U+00EB

15022 % U+00EC LATIN SMALL LETTER I WITH GRAVE; igrave
15023 \DeclareTextCompositeCommand{\`}{PD1}{i}{\354}% U+00EC
15024 \DeclareTextCompositeCommand{\`}{PD1}{i}{\354}% U+00EC
15025 % U+00ED LATIN SMALL LETTER I WITH ACUTE; iacute
15026 \DeclareTextCompositeCommand{\'}{PD1}{i}{\355}% U+00ED
15027 \DeclareTextCompositeCommand{\'}{PD1}{i}{\355}% U+00ED
15028 % U+00EE LATIN SMALL LETTER I WITH CIRCUMFLEX; icircumflex
15029 \DeclareTextCompositeCommand{\^}{PD1}{i}{\356}% U+00EE
15030 \DeclareTextCompositeCommand{\^}{PD1}{i}{\356}% U+00EE
15031 % U+00EF LATIN SMALL LETTER I WITH DIAERESIS; idieresis
15032 \DeclareTextCompositeCommand{\"}{PD1}{i}{\357}% U+00EF
15033 \DeclareTextCompositeCommand{\"}{PD1}{i}{\357}% U+00EF
15034 % U+00F0 LATIN SMALL LETTER ETH; eth
15035 \DeclareTextCommand{\dh}{PD1}{\360}% U+00F0
15036 % U+00F1 LATIN SMALL LETTER N WITH TILDE; ntilde
15037 \DeclareTextCompositeCommand{\~}{PD1}{n}{\361}% U+00F1
15038 % U+00F2 LATIN SMALL LETTER O WITH GRAVE; ograve
15039 \DeclareTextCompositeCommand{\`}{PD1}{o}{\362}% U+00F2
15040 % U+00F3 LATIN SMALL LETTER O WITH ACUTE; oacute
15041 \DeclareTextCompositeCommand{\'}{PD1}{o}{\363}% U+00F3
15042 % U+00F4 LATIN SMALL LETTER O WITH CIRCUMFLEX; ocircumflex
15043 \DeclareTextCompositeCommand{\^}{PD1}{o}{\364}% U+00F4
15044 % U+00F5 LATIN SMALL LETTER O WITH TILDE; otilde
15045 \DeclareTextCompositeCommand{\~}{PD1}{o}{\365}% U+00F5
15046 % U+00F6 LATIN SMALL LETTER O WITH DIAERESIS; odieresis
15047 \DeclareTextCompositeCommand{\"}{PD1}{o}{\366}% U+00F6
15048 % U+00F7 DIVISION SIGN; divide
15049 \DeclareTextCommand{\textdivide}{PD1}{\367}% U+00F7
15050 % U+00F8 LATIN SMALL LETTER O WITH STROKE; oslash
15051 \DeclareTextCommand{\o}{PD1}{\370}% U+00F8
15052 % U+00F9 LATIN SMALL LETTER U WITH GRAVE; ugrave
15053 \DeclareTextCompositeCommand{\`}{PD1}{u}{\371}% U+00F9
15054 % U+00FA LATIN SMALL LETTER U WITH ACUTE; uacute
15055 \DeclareTextCompositeCommand{\'}{PD1}{u}{\372}% U+00FA
15056 % U+00FB LATIN SMALL LETTER U WITH CIRCUMFLEX; ucircumflex
15057 \DeclareTextCompositeCommand{\^}{PD1}{u}{\373}% U+00FB
15058 % U+00FC LATIN SMALL LETTER U WITH DIAERESIS; udieresis
15059 \DeclareTextCompositeCommand{\"}{PD1}{u}{\374}% U+00FC
15060 % U+00FD LATIN SMALL LETTER Y WITH ACUTE; yacute
15061 \DeclareTextCompositeCommand{\'}{PD1}{y}{\375}% U+00FD
15062 % U+00FE LATIN SMALL LETTER THORN; thorn; \th, \thorn (wasysym)
15063 \DeclareTextCommand{\th}{PD1}{\376}% U+00FE
15064 \DeclareTextCommand{\textthorn}{PD1}{\376}%* U+00FE
15065 % U+00FF LATIN SMALL LETTER Y WITH DIAERESIS; ydieresis
15066 \DeclareTextCompositeCommand{\"}{PD1}{y}{\377}% U+00FF
15067 \DeclareTextCommand{\ij}{PD1}{ij}% ligature U+0069 U+006A

Glyphs that consist of several characters.
15068 \DeclareTextCommand{\SS}{PD1}{SS}%
15069 \DeclareTextCommand{\textcelsius}{PD1}{\textdegree C}%

Aliases (german.sty)
15070 \DeclareTextCommand{\textglqq}{PD1}{\quotedblbase}%
15071 \DeclareTextCommand{\textgrqq}{PD1}{\textquotedblleft}%
15072 \DeclareTextCommand{\textglq}{PD1}{\quotesinglbase}%

```

15073 \DeclareTextCommand{\textgrq}{PD1}{\textquoteleft}%
15074 \DeclareTextCommand{\textflqq}{PD1}{\guillemetleft}%
15075 \DeclareTextCommand{\textfrqq}{PD1}{\guillemetright}%
15076 \DeclareTextCommand{\textflq}{PD1}{\guilsingleft}%
15077 \DeclareTextCommand{\textfrq}{PD1}{\guilsingright}%
Aliases (math names)
15078 \DeclareTextCommand{\textneg}{PD1}{\textlogicalnot}%
15079 \DeclareTextCommand{\texttimes}{PD1}{\textmultiply}%
15080 \DeclareTextCommand{\textdiv}{PD1}{\textdivide}%
15081 \DeclareTextCommand{\textpm}{PD1}{\textplusminus}%
15082 \DeclareTextCommand{\textcdot}{PD1}{\textperiodcentered}%
15083 \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).
15084 \DeclareTextCompositeCommand{\k}{PD1}{a}{a}% aogonek
15085 \DeclareTextCompositeCommand{\'}{PD1}{c}{c}% cacute
15086 \DeclareTextCompositeCommand{\k}{PD1}{e}{e}% eogonek
15087 \DeclareTextCompositeCommand{\'}{PD1}{n}{n}% nacute
15088 \DeclareTextCompositeCommand{\'}{PD1}{s}{s}% sacute
15089 \DeclareTextCompositeCommand{\'}{PD1}{z}{z}% zacute
15090 \DeclareTextCompositeCommand{\.}{PD1}{z}{z}% zdot
15091 \DeclareTextCompositeCommand{\k}{PD1}{A}{A}% Aogonek
15092 \DeclareTextCompositeCommand{\'}{PD1}{C}{C}% Cacute
15093 \DeclareTextCompositeCommand{\k}{PD1}{E}{E}% Eogonek
15094 \DeclareTextCompositeCommand{\'}{PD1}{N}{N}% Nacute
15095 \DeclareTextCompositeCommand{\'}{PD1}{S}{S}% Sacute
15096 \DeclareTextCompositeCommand{\'}{PD1}{Z}{Z}% Zacute
15097 \DeclareTextCompositeCommand{\.}{PD1}{Z}{Z}% Zdot
15098 (/pd1enc)

```

47.2 PU encoding

```

15099 (*puenc)
15100 \DeclareFontEncoding{PU}{-}{-}

```

47.2.1 NFSS2 accents

```

15101 % U+0300 COMBINING GRAVE ACCENT; gravecmb, *gravecomb
15102 \DeclareTextCommand{\`}{PU}[1]{#1\83\000}% U+0300
15103 % U+0301 COMBINING ACUTE ACCENT; acutecmb, *acutecomb
15104 \DeclareTextCommand{\'}{PU}[1]{#1\83\001}% U+0301
15105 % U+0302 COMBINING CIRCUMFLEX ACCENT; circumflexcmb
15106 \DeclareTextCommand{\^}{PU}[1]{#1\83\002}% U+0302
15107 % U+0303 COMBINING TILDE; tildecmb, *tildecmb
15108 \DeclareTextCommand{\~}{PU}[1]{#1\83\003}% U+0303
15109 % U+0304 COMBINING MACRON; macroncmb
15110 \DeclareTextCommand{\=}{PU}[1]{#1\83\004}% U+0304
15111 % U+0306 COMBINING BREVE; brevecmb
15112 \DeclareTextCommand{\u}{PU}[1]{#1\83\006}% U+0306
15113 \ifx\CYRDZE\@undefined \else
15114 \DeclareTextCommand{\U}{PU}[1]{#1\83\006}% U+0306
15115 \fi
15116 % U+0307 COMBINING DOT ABOVE; dotaccentcmb

```

```

15117 \DeclareTextCommand{\.}{PU}[1]{#1\83\007}% U+0307
15118 % U+0308 COMBINING DIAERESIS; dieresiscmb
15119 \DeclareTextCommand{\"}{PU}[1]{#1\83\010}% U+0308
15120 % U+030A COMBINING RING ABOVE; ringcmb
15121 \DeclareTextCommand{\r}{PU}[1]{#1\83\012}% U+030A
15122 % U+030B COMBINING DOUBLE ACUTE ACCENT; hungarumlautcmb
15123 \DeclareTextCommand{\H}{PU}[1]{#1\83\013}% U+030B
15124 % U+030C COMBINING CARON; caroncmb
15125 \DeclareTextCommand{\v}{PU}[1]{#1\83\014}% U+030C
15126 \puenc)
15127 % U+030F COMBINING DOUBLE GRAVE ACCENT; dblgravecmb
15128 \puextra)\DeclareTextCommand{\G}{PU}[1]{#1\83\017}% U+030F
15129 (*puenc)
15130 \ifx\CYRDZE\undefined \else
15131 \DeclareTextCommand{\C}{PU}[1]{#1\83\017}% U+030F
15132 \fi
15133 % U+0311 COMBINING INVERTED BREVE; breveinvertedcmb
15134 \DeclareTextCommand{\textinvbreve}{PU}[1]{#1\83\021}% U+0311
15135 \DeclareTextCommand{\newtie}{PU}[1]{#1\83\021}% U+0311
15136 % U+0323 COMBINING DOT BELOW; dotbelowcmb, *dotbelowcmb
15137 \DeclareTextCommand{\d}{PU}[1]{#1\83\043}% U+0323
15138 % U+0324 COMBINING DIAERESIS BELOW; dieresisbelowcmb; \textsubum-
    laut (tipa)
15139 \DeclareTextCommand{\textsubumlaut}{PU}[1]{#1\83\044}% U+0324
15140 % U+0325 COMBINING RING BELOW; ringbelowcmb; \textsubring (tipa)
15141 \DeclareTextCommand{\textsubring}{PU}[1]{#1\83\045}% U+0325
15142 % U+0327 COMBINING CEDILLA; cedillacmb
15143 \DeclareTextCommand{\c}{PU}[1]{#1\83\047}% U+0327
15144 % U+0328 COMBINING OGONEK; ogonekcmb
15145 \DeclareTextCommand{\k}{PU}[1]{#1\83\050}% U+0328
15146 % U+032D COMBINING CIRCUMFLEX ACCENT BELOW;
15147 % \textsubcircum (tipa)
15148 \DeclareTextCommand{\textsubcircum}{PU}[1]{#1\83\055}% U+032D
15149 % U+032E COMBINING BREVE BELOW; brevebelowcmb
15150 \DeclareTextCommand{\textsubbreve}{PU}[1]{#1\83\056}% U+032E
15151 % U+0330 COMBINING TILDE BELOW; tildebelowcmb; \textsubtilde (tipa)
15152 \DeclareTextCommand{\textsubtilde}{PU}[1]{#1\83\060}% U+0330
15153 % U+0331 COMBINING MACRON BELOW; macronbelowcmb
15154 \DeclareTextCommand{\b}{PU}[1]{#1\83\061}% U+0331
15155 % U+0361 COMBINING DOUBLE INVERTED BREVE; breveinverteddou-
    blecmb
15156 \DeclareTextCommand{\t}{PU}[1]{#1\83\141}% U+0361
15157 % U+20DD COMBINING ENCLOSING CIRCLE
15158 \DeclareTextCommand{\textcircled}{PU}[1]{#1\9040\335}% U+20DD

```

Double accents.

```

15159 \DeclareTextCommand{\textacutemacron}{PU}[1]{#1\83\001\83\004}% U+0301 U+0304
15160 \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.

```

15161 \DeclareTextCompositeCommand{\`}{PU}{\@empty}{\textasciigrave}%
15162 \DeclareTextCompositeCommand{\'}{PU}{\@empty}{\textacute}%
15163 \DeclareTextCompositeCommand{\^}{PU}{\@empty}{\textasciicircum}%
15164 \DeclareTextCompositeCommand{\~}{PU}{\@empty}{\texttilde}%

```


15165 \DeclareTextCompositeCommand{\`}{PU}{\@empty}{\textasciidieresis}%
15166 \DeclareTextCompositeCommand{\r}{PU}{\@empty}{\textring}%
15167 \DeclareTextCompositeCommand{\v}{PU}{\@empty}{\textasciicaron}%
15168 \DeclareTextCompositeCommand{\.}{PU}{\@empty}{\textdotaccent}%
15169 \DeclareTextCompositeCommand{\c}{PU}{\@empty}{\textcedilla}%
15170 \DeclareTextCompositeCommand{\u}{PU}{\@empty}{\textasciibreve}%
15171 (/puenc)
15172 (puextra)\DeclareTextCompositeCommand{\G}{PU}{\@empty}{\textdoublegrave}%
15173 (*puenc)
15174 \DeclareTextCompositeCommand{\=}{PU}{\@empty}{\textasciimacron}%
15175 \DeclareTextCompositeCommand{\H}{PU}{\@empty}{\texthungarumlaut}%
15176 \DeclareTextCompositeCommand{\k}{PU}{\@empty}{\textogonek}%
15177 \DeclareTextCompositeCommand{\textinvbreve}{PU}{\@empty}{\{\ \83\021\}}% U+0311
15178 \DeclareTextCompositeCommand{\textsubumlaut}{PU}{\@empty}{\{\ \83\044\}}% U+0324
15179 \DeclareTextCompositeCommand{\textsubring}{PU}{\@empty}{\texttringlow}%
15180 \DeclareTextCompositeCommand{\textsubcircum}{PU}{\@empty}{\textcircum-
low}%
15181 \DeclareTextCompositeCommand{\textsubbreve}{PU}{\@empty}{\{\ \83\056\}}% U+032E
15182 \DeclareTextCompositeCommand{\textsubtilde}{PU}{\@empty}{\texttildelow}%
15183 \DeclareTextCompositeCommand{\b}{PU}{\@empty}{\textmacronbelow}%
15184 \DeclareTextCompositeCommand{\d}{PU}{\@empty}{\textdotbelow}%
15185 \DeclareTextCompositeCommand{\t}{PU}{\@empty}{\texttie}%
15186 \DeclareTextCompositeCommand{\newtie}{PU}{\@empty}{\textnewtie}%
15187 \DeclareTextCompositeCommand{\textcircled}{PU}{\@empty}{\textbigcircle}%
15188 \DeclareTextCompositeCommand{\textacutemacron}{PU}{\@empty}{\{\ \83\001\83\004\}}% U+0301 U+0304
15189 \DeclareTextCompositeCommand{\textgravemacron}{PU}{\@empty}{\{\ \83\000\83\004\}}% U+0300 U+0304
15190 \DeclareTextCompositeCommand{\`}{PU}{\ }{\textasciigrave}%
15191 \DeclareTextCompositeCommand{\'}{PU}{\ }{\textacute}%
15192 \DeclareTextCompositeCommand{\^}{PU}{\ }{\textasciicircum}%
15193 \DeclareTextCompositeCommand{\~}{PU}{\ }{\texttilde}%
15194 \DeclareTextCompositeCommand{\`}{PU}{\ }{\textasciidieresis}%
15195 \DeclareTextCompositeCommand{\r}{PU}{\ }{\textring}%
15196 \DeclareTextCompositeCommand{\v}{PU}{\ }{\textasciicaron}%
15197 \DeclareTextCompositeCommand{\.}{PU}{\ }{\textdotaccent}%
15198 \DeclareTextCompositeCommand{\c}{PU}{\ }{\textcedilla}%
15199 \DeclareTextCompositeCommand{\u}{PU}{\ }{\textasciibreve}%
15200 (/puenc)
15201 (puextra)\DeclareTextCompositeCommand{\G}{PU}{\ }{\textdoublegrave}%
15202 (*puenc)
15203 \DeclareTextCompositeCommand{\=}{PU}{\ }{\textasciimacron}%
15204 \DeclareTextCompositeCommand{\H}{PU}{\ }{\texthungarumlaut}%
15205 \DeclareTextCompositeCommand{\k}{PU}{\ }{\textogonek}%
15206 \DeclareTextCompositeCommand{\textinvbreve}{PU}{\ }{\{\ \83\021\}}% U+0311
15207 \DeclareTextCompositeCommand{\textsubumlaut}{PU}{\ }{\{\ \83\044\}}% U+0324
15208 \DeclareTextCompositeCommand{\textsubring}{PU}{\ }{\texttringlow}%
15209 \DeclareTextCompositeCommand{\textsubcircum}{PU}{\ }{\textcircumlow}%
15210 \DeclareTextCompositeCommand{\textsubbreve}{PU}{\ }{\{\ \83\056\}}% U+032E
15211 \DeclareTextCompositeCommand{\textsubtilde}{PU}{\ }{\texttildelow}%
15212 \DeclareTextCompositeCommand{\b}{PU}{\ }{\textmacronbelow}%
15213 \DeclareTextCompositeCommand{\d}{PU}{\ }{\textdotbelow}%
15214 \DeclareTextCompositeCommand{\t}{PU}{\ }{\texttie}%
15215 \DeclareTextCompositeCommand{\newtie}{PU}{\ }{\textnewtie}%
15216 \DeclareTextCompositeCommand{\textcircled}{PU}{\ }{\textbigcircle}%
15217 \DeclareTextCompositeCommand{\textacutemacron}{PU}{\ }{\{\ \83\001\83\004\}}% U+0301 U+0304

15218 \DeclareTextCompositeCommand{\textgravemacron}{PU}{\ }{\{\ \83\000\83\004\}}% U+0300 U+0304

Accents for capitals (see encoding TS1)

15219 \DeclareTextCommand{\capitalcedilla}{PU}[1]{\c{#1}}%
15220 \DeclareTextCommand{\capitalogonek}{PU}[1]{\k{#1}}%
15221 \DeclareTextCommand{\capitalgrave}{PU}[1]{\`{#1}}%
15222 \DeclareTextCommand{\capitalacute}{PU}[1]{\'{#1}}%
15223 \DeclareTextCommand{\capitalcircumflex}{PU}[1]{\^{#1}}%
15224 \DeclareTextCommand{\capitaltilde}{PU}[1]{\~{#1}}%
15225 \DeclareTextCommand{\capitaldieresis}{PU}[1]{\\"{#1}}%
15226 \DeclareTextCommand{\capitalhungarumlaut}{PU}[1]{\H{#1}}%
15227 \DeclareTextCommand{\capitalring}{PU}[1]{\r{#1}}%
15228 \DeclareTextCommand{\capitalcaron}{PU}[1]{\v{#1}}%
15229 \DeclareTextCommand{\capitalbreve}{PU}[1]{\u{#1}}%
15230 \DeclareTextCommand{\capitalmacron}{PU}[1]{\={#1}}%
15231 \DeclareTextCommand{\capitaldotaccent}{PU}[1]{\.{#1}}%
15232 \DeclareTextCommand{\capitaltie}{PU}[1]{\t{#1}}%
15233 \DeclareTextCommand{\capitalnewtie}{PU}[1]{\newtie{#1}}%

47.2.2 Basic Latin: U+0000 to U+007F

Special white space escape characters.

15234 % U+0009 (CHARACTER TABULATION)
15235 \DeclareTextCommand{\textHT}{PU}{\80\011}% U+0009
15236 % U+000A (LINE FEED)
15237 \DeclareTextCommand{\textLF}{PU}{\80\012}% U+000A
15238 % U+000D (CARRIAGE RETURN)
15239 \DeclareTextCommand{\textCR}{PU}{\80\015}% U+000D

\80\040: U+0020 SPACE; space, spacehackarabic
\80\041: U+0021 EXCLAMATION MARK; exclam

15240 % U+0022 QUOTATION MARK; quotedbl
15241 \DeclareTextCommand{\textquotedbl}{PU}{"}% \80\042 U+0022
15242 % U+0023 NUMBER SIGN; numbersign
15243 \DeclareTextCommand{\textnumbersign}{PU}{\80\043}% U+0023
15244 % U+0024 DOLLAR SIGN; dollar
15245 \DeclareTextCommand{\textdollar}{PU}{\80\044}% U+0024
15246 %* \textdollar -> \mathdollar
15247 %* \textdollar -> \EyesDollar (marvosym)
15248 % U+0025 PERCENT SIGN; percent
15249 \DeclareTextCommand{\textpercent}{PU}{\80\045}% U+0025
15250 % U+0026 AMPERSAND; ampersand
15251 \DeclareTextCommand{\textampersand}{PU}{\80\046}% U+0026
15252 %* \textampersand -> \binampersand (stmaryrd)
15253 %* \textampersand -> \with (cml)
15254 % U+0027 APOSTROPHE; quotesingle
15255 \DeclareTextCommand{\textquotesingle}{PU}{\80\047}% U+0027
15256 % U+0028 LEFT PARENTHESIS; parenleft
15257 \DeclareTextCommand{\textparenleft}{PU}{\80\050}% U+0028
15258 % U+0029 RIGHT PARENTHESIS; parenright
15259 \DeclareTextCommand{\textparenright}{PU}{\80\051}% U+0029
15260 % U+002A ASTERISK; asterisk; (?)
15261 \DeclareTextCommand{\textasteriskcentered}{PU}{\80\052}% U+002A
15262 % U+002B PLUS SIGN; plus; \MVPlus (marvosym)
15263 \DeclareTextCommand{\textMVPlus}{PU}{\80\053}%* U+002B
15264 % U+002C COMMA; comma; \MVComma (marvosym)

15265 \DeclareTextCommand{\textMVComma}{PU}{\80\054}%* U+002C
15266 % U+002D HYPHEN-MINUS; hyphen; \MVMinus (marvosym)
15267 \DeclareTextCommand{\textMVMinus}{PU}{\80\055}%* U+002D
15268 % U+002E FULL STOP; period; \MVPeriod (marvosym)
15269 \DeclareTextCommand{\textMVPeriod}{PU}{\80\056}%* U+002E
15270 % U+002F SOLIDUS; slash; \MVDivision (marvosym)
15271 \DeclareTextCommand{\textMVDivision}{PU}{\80\057}%* U+002F
15272 % U+0030 DIGIT ZERO; zero; \MVZero (marvosym)
15273 \DeclareTextCommand{\textMVZero}{PU}{\80\060}%* U+0030
15274 % U+0031 DIGIT ONE; one; \MVOne (marvosym)
15275 \DeclareTextCommand{\textMVOne}{PU}{\80\061}%* U+0031
15276 % U+0032 DIGIT TWO; two; \MVTwo (marvosym)
15277 \DeclareTextCommand{\textMVTwo}{PU}{\80\062}%* U+0032
15278 % U+0033 DIGIT THREE; three; \MVThree (marvosym)
15279 \DeclareTextCommand{\textMVThree}{PU}{\80\063}%* U+0033
15280 % U+0034 DIGIT FOUR; four; \MVFour (marvosym)
15281 \DeclareTextCommand{\textMVFour}{PU}{\80\064}%* U+0034
15282 % U+0035 DIGIT FIVE; five; \MVFive (marvosym)
15283 \DeclareTextCommand{\textMVFive}{PU}{\80\065}%* U+0035
15284 % U+0036 DIGIT SIX; six; \MVSix (marvosym)
15285 \DeclareTextCommand{\textMVSix}{PU}{\80\066}%* U+0036
15286 % U+0037 DIGIT SEVEN; seven; \MVSeven (marvosym)
15287 \DeclareTextCommand{\textMVSeven}{PU}{\80\067}%* U+0037
15288 % U+0038 DIGIT EIGHT; eight; \MVEight (marvosym)
15289 \DeclareTextCommand{\textMVEight}{PU}{\80\070}%* U+0038
15290 % U+0039 DIGIT NINE; nine; \MVNine (marvosym)
15291 \DeclareTextCommand{\textMVNine}{PU}{\80\071}%* U+0039

\80\072: U+003A COLON; colon
\80\073: U+003B SEMICOLON; semicolon

15292 % U+003C LESS-THAN SIGN; less
15293 \DeclareTextCommand{\textless}{PU}{<}% \80\074 U+003C

\80\075: U+003D EQUALS SIGN; equal

15294 % U+003E GREATER-THAN SIGN; greater
15295 \DeclareTextCommand{\textgreater}{PU}{>}% \80\076 U+003E

\80\077: U+003F QUESTION MARK; question

15296 % U+0040 COMMERCIAL AT; at; \MVAt (marvosym)
15297 \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

15298 % U+005C REVERSE SOLIDUS; backslash
15299 \DeclareTextCommand{\textbackslash}{PU}{\80\134}% U+005C

\80\135: U+005D RIGHT SQUARE BRACKET; bracketright

15300 % U+005E CIRCUMFLEX ACCENT; asciicircum
15301 \DeclareTextCommand{\textasciicircum}{PU}{\80\136}% U+005E
15302 % U+005F LOW LINE; underscore
15303 \DeclareTextCommand{\textunderscore}{PU}{\80\137}% U+005F
15304 %* \textunderscore -> \mathunderscore (LaTeX)
15305 % U+0060 GRAVE ACCENT; grave
15306 \DeclareTextCommand{\textasciigrave}{PU}{\80\140}% U+0060

$\backslash 80\backslash 141$: U+0061 LATIN SMALL LETTER A; a
 ...
 $\backslash 80\backslash 150$: U+0068 LATIN SMALL LETTER H; h
 15307 % U+0069 LATIN SMALL LETTER I; i
 15308 $\backslash \text{DeclareTextCompositeCommand}\{\backslash .\}\{\text{PU}\}\{\text{i}\}\{\text{i}\}\%$ $\backslash 80\backslash 151$ U+0069
 15309 $\backslash \text{DeclareTextCompositeCommand}\{\backslash .\}\{\text{PU}\}\{\text{i}\}\{\text{i}\}\%$ $\backslash 80\backslash 151$ U+0069
 $\backslash 80\backslash 152$: U+006A LATIN SMALL LETTER J; j
 ...
 $\backslash 80\backslash 172$: U+007A LATIN SMALL LETTER Z; z
 15310 % U+007B LEFT CURLY BRACKET; braceleft
 15311 $\backslash \text{DeclareTextCommand}\{\backslash \text{textbraceleft}\}\{\text{PU}\}\{\backslash 80\backslash 173}\%$ U+007B
 15312 % U+007C VERTICAL LINE; *bar, verticalbar
 15313 $\backslash \text{DeclareTextCommand}\{\backslash \text{textbar}\}\{\text{PU}\}\{\text{|}\}\%$ $\backslash 80\backslash 174$ U+007C
 15314 %* $\backslash \text{textbar} \rightarrow \backslash \text{textvtrline}$ (tipa)
 15315 % U+007D RIGHT CURLY BRACKET; braceright
 15316 $\backslash \text{DeclareTextCommand}\{\backslash \text{textbraceright}\}\{\text{PU}\}\{\backslash 80\backslash 175}\%$ U+007D
 15317 % U+007E TILDE; asciitilde
 15318 $\backslash \text{DeclareTextCommand}\{\backslash \text{textasciitilde}\}\{\text{PU}\}\{\backslash 80\backslash 176}\%$ U+007E

47.2.3 Latin-1 Supplement: U+0080 to U+00FF

$\backslash 80\backslash 240$: U+00A0 NO-BREAK SPACE; nbspace, nonbreakingspace
 15319 % U+00A1 INVERTED EXCLAMATION MARK; exclamdown
 15320 $\backslash \text{DeclareTextCommand}\{\backslash \text{textexclamdown}\}\{\text{PU}\}\{\backslash 80\backslash 241}\%$ U+00A1
 15321 % U+00A2 CENT SIGN; cent
 15322 $\backslash \text{DeclareTextCommand}\{\backslash \text{textcent}\}\{\text{PU}\}\{\backslash 80\backslash 242}\%$ U+00A2
 15323 % U+00A3 POUND SIGN; sterling
 15324 $\backslash \text{DeclareTextCommand}\{\backslash \text{textsterling}\}\{\text{PU}\}\{\backslash 80\backslash 243}\%$ U+00A3
 15325 %* $\backslash \text{textsterling} \rightarrow \backslash \text{mathsterling}$ (LaTeX)
 15326 %* $\backslash \text{textsterling} \rightarrow \backslash \text{pounds}$ (LaTeX)
 15327 % U+00A4 CURRENCY SIGN; currency
 15328 $\backslash \text{DeclareTextCommand}\{\backslash \text{textcurrency}\}\{\text{PU}\}\{\backslash 80\backslash 244}\%$ U+00A4
 15329 % U+00A5 YEN SIGN; yen
 15330 $\backslash \text{DeclareTextCommand}\{\backslash \text{textyen}\}\{\text{PU}\}\{\backslash 80\backslash 245}\%$ U+00A5
 15331 % U+00A6 BROKEN BAR; brokenbar
 15332 $\backslash \text{DeclareTextCommand}\{\backslash \text{textbrokenbar}\}\{\text{PU}\}\{\backslash 80\backslash 246}\%$ U+00A6
 15333 %* $\backslash \text{textbrokenbar} \rightarrow \backslash \text{brokenvert}$ (wasysym)
 15334 % U+00A7 SECTION SIGN; section
 15335 $\backslash \text{DeclareTextCommand}\{\backslash \text{textsection}\}\{\text{PU}\}\{\backslash 80\backslash 247}\%$ U+00A7
 15336 %* $\backslash \text{textsection} \rightarrow \backslash \text{mathsection}$ (LaTeX)
 15337 %* $\backslash \text{textsection} \rightarrow \backslash \text{S}$ (LaTeX)
 15338 % U+00A8 DIAERESIS; diaeresis
 15339 $\backslash \text{DeclareTextCommand}\{\backslash \text{textasciidieresis}\}\{\text{PU}\}\{\backslash 80\backslash 250}\%$ U+00A8
 15340 % U+00A9 COPYRIGHT SIGN; copyright
 15341 $\backslash \text{DeclareTextCommand}\{\backslash \text{textcopyright}\}\{\text{PU}\}\{\backslash 80\backslash 251}\%$ * U+00A9
 15342 % U+00AA FEMININE ORDINAL INDICATOR; ordfeminine
 15343 $\backslash \text{DeclareTextCommand}\{\backslash \text{textordfeminine}\}\{\text{PU}\}\{\backslash 80\backslash 252}\%$ U+00AA
 15344 % U+00AB LEFT-POINTING DOUBLE ANGLE QUOTATION MARK; guillemetleft
 15345 $\backslash \text{DeclareTextCommand}\{\backslash \text{guillemotleft}\}\{\text{PU}\}\{\backslash 80\backslash 253}\%$ U+00AB
 15346 $\backslash \text{DeclareTextCommand}\{\backslash \text{guillemetleft}\}\{\text{PU}\}\{\backslash 80\backslash 253}\%$ U+00AB
 15347 % U+00AC NOT SIGN; logicalnot
 15348 $\backslash \text{DeclareTextCommand}\{\backslash \text{textlogicalnot}\}\{\text{PU}\}\{\backslash 80\backslash 254}\%$ U+00AC
 15349 $\backslash \text{DeclareTextCommand}\{\backslash \text{textlnot}\}\{\text{PU}\}\{\backslash 80\backslash 254}\%$ U+00AC

$\backslash 80\backslash 255$: U+00AD SOFT HYPHEN; sftthyphen, softthyphen
15350 % U+00AE REGISTERED SIGN; registered
15351 $\backslash \text{DeclareTextCommand}\{\backslash \text{textregistered}\}\{\text{PU}\}\{\backslash 80\backslash 256\}$ % U+00AE
15352 % U+00AF MACRON; *macron, overscore
15353 $\backslash \text{DeclareTextCommand}\{\backslash \text{textasciimacron}\}\{\text{PU}\}\{\backslash 80\backslash 257\}$ % U+00AF
15354 % U+00B0 DEGREE SIGN; degree
15355 $\backslash \text{DeclareTextCommand}\{\backslash \text{textdegree}\}\{\text{PU}\}\{\backslash 80\backslash 260\}$ % U+00B0
15356 % U+00B1 PLUS-MINUS SIGN; plusminus
15357 $\backslash \text{DeclareTextCommand}\{\backslash \text{textplusminus}\}\{\text{PU}\}\{\backslash 80\backslash 261\}$ % U+00B1
15358 % U+00B2 SUPERSCRIPT TWO; twosuperior
15359 $\backslash \text{DeclareTextCommand}\{\backslash \text{texttwosuperior}\}\{\text{PU}\}\{\backslash 80\backslash 262\}$ %* U+00B2
15360 % U+00B3 SUPERSCRIPT THREE; threesuperior
15361 $\backslash \text{DeclareTextCommand}\{\backslash \text{textthreesuperior}\}\{\text{PU}\}\{\backslash 80\backslash 263\}$ %* U+00B3
15362 % U+00B4 ACUTE ACCENT; acute
15363 $\backslash \text{DeclareTextCommand}\{\backslash \text{textacute}\}\{\text{PU}\}\{\backslash 80\backslash 264\}$ % U+00B4
15364 $\backslash \text{DeclareTextCommand}\{\backslash \text{textasciiacute}\}\{\text{PU}\}\{\backslash 80\backslash 264\}$ % U+00B4
15365 % U+00B5 MICRO SIGN; mu, mu1
15366 $\backslash \text{DeclareTextCommand}\{\backslash \text{textmu}\}\{\text{PU}\}\{\backslash 80\backslash 265\}$ % U+00B5
15367 % U+00B6 PILCROW SIGN; paragraph
15368 $\backslash \text{DeclareTextCommand}\{\backslash \text{textparagraph}\}\{\text{PU}\}\{\backslash 80\backslash 266\}$ % U+00B6
15369 %* $\backslash \text{textparagraph}$ -> $\backslash \text{mathparagraph}$ (LaTeX)
15370 % U+00B7 MIDDLE DOT; middot, *periodcentered
15371 $\backslash \text{DeclareTextCommand}\{\backslash \text{textperiodcentered}\}\{\text{PU}\}\{\backslash 80\backslash 267\}$ % U+00B7
15372 %* $\backslash \text{textperiodcentered}$ -> $\backslash \text{MultiplicationDot}$ (marvosym)
15373 %* $\backslash \text{textperiodcentered}$ -> $\backslash \text{Squaredot}$ (marvosym)
15374 % U+00B8 CEDILLA; cedilla
15375 $\backslash \text{DeclareTextCommand}\{\backslash \text{textcedilla}\}\{\text{PU}\}\{\backslash 80\backslash 270\}$ % U+00B8
15376 % U+00B9 SUPERSCRIPT ONE; onesuperior
15377 $\backslash \text{DeclareTextCommand}\{\backslash \text{textonesuperior}\}\{\text{PU}\}\{\backslash 80\backslash 271\}$ %* U+00B9
15378 % U+00BA MASCULINE ORDINAL INDICATOR; ordmasculine
15379 $\backslash \text{DeclareTextCommand}\{\backslash \text{textordmasculine}\}\{\text{PU}\}\{\backslash 80\backslash 272\}$ % U+00BA
15380 % U+00BB RIGHT-POINTING DOUBLE ANGLE QUOTATION MARK; guillemetright
15381 $\backslash \text{DeclareTextCommand}\{\backslash \text{guillemotright}\}\{\text{PU}\}\{\backslash 80\backslash 273\}$ % U+00BB
15382 $\backslash \text{DeclareTextCommand}\{\backslash \text{guillemetright}\}\{\text{PU}\}\{\backslash 80\backslash 273\}$ % U+00BB
15383 % U+00BC VULGAR FRACTION ONE QUARTER; onequarter
15384 $\backslash \text{DeclareTextCommand}\{\backslash \text{textonequarter}\}\{\text{PU}\}\{\backslash 80\backslash 274\}$ % U+00BC
15385 % U+00BD VULGAR FRACTION ONE HALF; onehalf
15386 $\backslash \text{DeclareTextCommand}\{\backslash \text{textonehalf}\}\{\text{PU}\}\{\backslash 80\backslash 275\}$ % U+00BD
15387 % U+00BE VULGAR FRACTION THREE QUARTERS; threequarters
15388 $\backslash \text{DeclareTextCommand}\{\backslash \text{textthreequarters}\}\{\text{PU}\}\{\backslash 80\backslash 276\}$ % U+00BE
15389 % U+00BF INVERTED QUESTION MARK; questiondown
15390 $\backslash \text{DeclareTextCommand}\{\backslash \text{textquestiondown}\}\{\text{PU}\}\{\backslash 80\backslash 277\}$ % U+00BF
15391 % U+00C0 LATIN CAPITAL LETTER A WITH GRAVE; Agrave
15392 $\backslash \text{DeclareTextCompositeCommand}\{\backslash \grave{\text{A}}\}\{\text{PU}\}\{\text{A}\}\{\backslash 80\backslash 300\}$ % U+00C0
15393 % U+00C1 LATIN CAPITAL LETTER A WITH ACUTE; Aacute
15394 $\backslash \text{DeclareTextCompositeCommand}\{\backslash \acute{\text{A}}\}\{\text{PU}\}\{\text{A}\}\{\backslash 80\backslash 301\}$ % U+00C1
15395 % U+00C2 LATIN CAPITAL LETTER A WITH CIRCUMFLEX; Acircumflex
15396 $\backslash \text{DeclareTextCompositeCommand}\{\backslash \hat{\text{A}}\}\{\text{PU}\}\{\text{A}\}\{\backslash 80\backslash 302\}$ % U+00C2
15397 % U+00C3 LATIN CAPITAL LETTER A WITH TILDE; Atilde
15398 $\backslash \text{DeclareTextCompositeCommand}\{\backslash \tilde{\text{A}}\}\{\text{PU}\}\{\text{A}\}\{\backslash 80\backslash 303\}$ % U+00C3
15399 % U+00C4 LATIN CAPITAL LETTER A WITH DIAERESIS; Adieresis
15400 $\backslash \text{DeclareTextCompositeCommand}\{\backslash \ddot{\text{A}}\}\{\text{PU}\}\{\text{A}\}\{\backslash 80\backslash 304\}$ % U+00C4
15401 % U+00C5 LATIN CAPITAL LETTER A WITH RING ABOVE; Aring
15402 $\backslash \text{DeclareTextCompositeCommand}\{\backslash \text{r}\}\{\text{PU}\}\{\text{A}\}\{\backslash 80\backslash 305\}$ % U+00C5

15403 % U+00C6 LATIN CAPITAL LETTER AE; AE
15404 \DeclareTextCommand{\AE}{PU}{\80\306}% U+00C6
15405 % U+00C7 LATIN CAPITAL LETTER C WITH CEDILLA; Ccedilla
15406 \DeclareTextCompositeCommand{\c}{PU}{C}{\80\307}% U+00C7
15407 % U+00C8 LATIN CAPITAL LETTER E WITH GRAVE; Egrave
15408 \DeclareTextCompositeCommand{\`}{PU}{E}{\80\310}% U+00C8
15409 % U+00C9 LATIN CAPITAL LETTER E WITH ACUTE; Eacute
15410 \DeclareTextCompositeCommand{\'}{PU}{E}{\80\311}% U+00C9
15411 % U+00CA LATIN CAPITAL LETTER E WITH CIRCUMFLEX; Ecircumflex
15412 \DeclareTextCompositeCommand{\^}{PU}{E}{\80\312}% U+00CA
15413 % U+00CB LATIN CAPITAL LETTER E WITH DIAERESIS; Edieresis
15414 \DeclareTextCompositeCommand{\"}{PU}{E}{\80\313}% U+00CB
15415 % U+00CC LATIN CAPITAL LETTER I WITH GRAVE; Igrave
15416 \DeclareTextCompositeCommand{\`}{PU}{I}{\80\314}% U+00CC
15417 % U+00CD LATIN CAPITAL LETTER I WITH ACUTE; Iacute
15418 \DeclareTextCompositeCommand{\'}{PU}{I}{\80\315}% U+00CD
15419 % U+00CE LATIN CAPITAL LETTER I WITH CIRCUMFLEX; Icircumflex
15420 \DeclareTextCompositeCommand{\^}{PU}{I}{\80\316}% U+00CE
15421 % U+00CF LATIN CAPITAL LETTER I WITH DIAERESIS; Idieresis
15422 \DeclareTextCompositeCommand{\"}{PU}{I}{\80\317}% U+00CF
15423 % U+00D0 LATIN CAPITAL LETTER ETH; Eth
15424 \DeclareTextCommand{\DH}{PU}{\80\320}% U+00D0
15425 % U+00D1 LATIN CAPITAL LETTER N WITH TILDE; Ntilde
15426 \DeclareTextCompositeCommand{\~}{PU}{N}{\80\321}% U+00D1
15427 % U+00D2 LATIN CAPITAL LETTER O WITH GRAVE; Ograve
15428 \DeclareTextCompositeCommand{\`}{PU}{O}{\80\322}% U+00D2
15429 % U+00D3 LATIN CAPITAL LETTER O WITH ACUTE; Oacute
15430 \DeclareTextCompositeCommand{\'}{PU}{O}{\80\323}% U+00D3
15431 % U+00D4 LATIN CAPITAL LETTER O WITH CIRCUMFLEX; Ocircumflex
15432 \DeclareTextCompositeCommand{\^}{PU}{O}{\80\324}% U+00D4
15433 % U+00D5 LATIN CAPITAL LETTER O WITH TILDE; Otilde
15434 \DeclareTextCompositeCommand{\~}{PU}{O}{\80\325}% U+00D5
15435 % U+00D6 LATIN CAPITAL LETTER O WITH DIAERESIS; Odieresis
15436 \DeclareTextCompositeCommand{\"}{PU}{O}{\80\326}% U+00D6
15437 % U+00D7 MULTIPLICATION SIGN; multiply
15438 \DeclareTextCommand{\textmultiply}{PU}{\80\327}% U+00D7
15439 %* \textmultiply -> \vartimes (stmaryrd)
15440 %* \textmultiply -> \MVMultiplication (marvosym)
15441 % U+00D8 LATIN CAPITAL LETTER O WITH STROKE; Oslash
15442 \DeclareTextCommand{\O}{PU}{\80\330}% U+00D8
15443 % U+00D9 LATIN CAPITAL LETTER U WITH GRAVE; Ugrave
15444 \DeclareTextCompositeCommand{\`}{PU}{U}{\80\331}% U+00D9
15445 % U+00DA LATIN CAPITAL LETTER U WITH ACUTE; Uacute
15446 \DeclareTextCompositeCommand{\'}{PU}{U}{\80\332}% U+00DA
15447 % U+00DB LATIN CAPITAL LETTER U WITH CIRCUMFLEX; Ucircumflex
15448 \DeclareTextCompositeCommand{\^}{PU}{U}{\80\333}% U+00DB
15449 % U+00DC LATIN CAPITAL LETTER U WITH DIAERESIS; Udieresis
15450 \DeclareTextCompositeCommand{\"}{PU}{U}{\80\334}% U+00DC
15451 % U+00DD LATIN CAPITAL LETTER Y WITH ACUTE; Yacute
15452 \DeclareTextCompositeCommand{\'}{PU}{Y}{\80\335}% U+00DD
15453 % U+00DE LATIN CAPITAL LETTER THORN; Thorn; \TH, \Thorn (wasysym)
15454 \DeclareTextCommand{\TH}{PU}{\80\336}% U+00DE
15455 \DeclareTextCommand{\textThorn}{PU}{\80\336}%* U+00DE
15456 % U+00DF LATIN SMALL LETTER SHARP S; germandbls

15457 \DeclareTextCommand{\ss}{PU}{\80\337}% U+00DF
15458 % U+00E0 LATIN SMALL LETTER A WITH GRAVE; agrave
15459 \DeclareTextCompositeCommand{\`}{PU}{a}{\80\340}% U+00E0
15460 % U+00E1 LATIN SMALL LETTER A WITH ACUTE; aacute
15461 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\341}% U+00E1
15462 % U+00E2 LATIN SMALL LETTER A WITH CIRCUMFLEX; acircumflex
15463 \DeclareTextCompositeCommand{\^}{PU}{a}{\80\342}% U+00E2
15464 % U+00E3 LATIN SMALL LETTER A WITH TILDE; atilde
15465 \DeclareTextCompositeCommand{\~}{PU}{a}{\80\343}% U+00E3
15466 % U+00E4 LATIN SMALL LETTER A WITH DIAERESIS; adieresis
15467 \DeclareTextCompositeCommand{\"}{PU}{a}{\80\344}% U+00E4
15468 % U+00E5 LATIN SMALL LETTER A WITH RING ABOVE; aring
15469 \DeclareTextCompositeCommand{\r}{PU}{a}{\80\345}% U+00E5
15470 % U+00E6 LATIN SMALL LETTER AE; ae
15471 \DeclareTextCommand{\ae}{PU}{\80\346}% U+00E6
15472 % U+00E7 LATIN SMALL LETTER C WITH CEDILLA; ccedilla
15473 \DeclareTextCompositeCommand{\c}{PU}{c}{\80\347}% U+00E7
15474 % U+00E8 LATIN SMALL LETTER E WITH GRAVE; egrave
15475 \DeclareTextCompositeCommand{\`}{PU}{e}{\80\350}% U+00E8
15476 % U+00E9 LATIN SMALL LETTER E WITH ACUTE; eacute
15477 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\351}% U+00E9
15478 % U+00EA LATIN SMALL LETTER E WITH CIRCUMFLEX; ecircumflex
15479 \DeclareTextCompositeCommand{\^}{PU}{e}{\80\352}% U+00EA
15480 % U+00EB LATIN SMALL LETTER E WITH DIAERESIS; edieresis
15481 \DeclareTextCompositeCommand{\"}{PU}{e}{\80\353}% U+00EB
15482 % U+00EC LATIN SMALL LETTER I WITH GRAVE; igrave
15483 \DeclareTextCompositeCommand{\`}{PU}{i}{\80\354}% U+00EC
15484 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\354}% U+00EC
15485 % U+00ED LATIN SMALL LETTER I WITH ACUTE; iacute
15486 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}% U+00ED
15487 \DeclareTextCompositeCommand{\^}{PU}{i}{\80\355}% U+00ED
15488 % U+00EE LATIN SMALL LETTER I WITH CIRCUMFLEX; icircumflex
15489 \DeclareTextCompositeCommand{\^}{PU}{i}{\80\356}% U+00EE
15490 \DeclareTextCompositeCommand{\^}{PU}{i}{\80\356}% U+00EE
15491 % U+00EF LATIN SMALL LETTER I WITH DIAERESIS; idieresis
15492 \DeclareTextCompositeCommand{\"}{PU}{i}{\80\357}% U+00EF
15493 \DeclareTextCompositeCommand{\"}{PU}{i}{\80\357}% U+00EF
15494 % U+00F0 LATIN SMALL LETTER ETH; eth
15495 \DeclareTextCommand{\dh}{PU}{\80\360}% U+00F0
15496 %* \dh -> \eth (wsuipa, phonetic)
15497 % U+00F1 LATIN SMALL LETTER N WITH TILDE; ntilde
15498 \DeclareTextCompositeCommand{\~}{PU}{n}{\80\361}% U+00F1
15499 % U+00F2 LATIN SMALL LETTER O WITH GRAVE; ograve
15500 \DeclareTextCompositeCommand{\`}{PU}{o}{\80\362}% U+00F2
15501 % U+00F3 LATIN SMALL LETTER O WITH ACUTE; oacute
15502 \DeclareTextCompositeCommand{\'}{PU}{o}{\80\363}% U+00F3
15503 % U+00F4 LATIN SMALL LETTER O WITH CIRCUMFLEX; ocircumflex
15504 \DeclareTextCompositeCommand{\^}{PU}{o}{\80\364}% U+00F4
15505 % U+00F5 LATIN SMALL LETTER O WITH TILDE; otilde
15506 \DeclareTextCompositeCommand{\~}{PU}{o}{\80\365}% U+00F5
15507 % U+00F6 LATIN SMALL LETTER O WITH DIAERESIS; odieresis
15508 \DeclareTextCompositeCommand{\"}{PU}{o}{\80\366}% U+00F6
15509 % U+00F7 DIVISION SIGN; divide
15510 \DeclareTextCommand{\textdivide}{PU}{\80\367}% U+00F7

15511 % U+00F8 LATIN SMALL LETTER O WITH STROKE; oslash
15512 \DeclareTextCommand{\o}{PU}{\80\370}% U+00F8
15513 % U+00F9 LATIN SMALL LETTER U WITH GRAVE; ugrave
15514 \DeclareTextCompositeCommand{\`}{PU}{u}{\80\371}% U+00F9
15515 % U+00FA LATIN SMALL LETTER U WITH ACUTE; uacute
15516 \DeclareTextCompositeCommand{\'}{PU}{u}{\80\372}% U+00FA
15517 % U+00FB LATIN SMALL LETTER U WITH CIRCUMFLEX; ucircumflex
15518 \DeclareTextCompositeCommand{\^}{PU}{u}{\80\373}% U+00FB
15519 % U+00FC LATIN SMALL LETTER U WITH DIAERESIS; udieresis
15520 \DeclareTextCompositeCommand{\"}{PU}{u}{\80\374}% U+00FC
15521 % U+00FD LATIN SMALL LETTER Y WITH ACUTE; yacute
15522 \DeclareTextCompositeCommand{\'}{PU}{y}{\80\375}% U+00FD
15523 % U+00FE LATIN SMALL LETTER THORN; thorn;
15524 % \th, \thorn (wasysym), \textthorn (tipa)
15525 \DeclareTextCommand{\th}{PU}{\80\376}% U+00FE
15526 \DeclareTextCommand{\textthorn}{PU}{\80\376}%* U+00FE
15527 % U+00FF LATIN SMALL LETTER Y WITH DIAERESIS; ydieresis
15528 \DeclareTextCompositeCommand{\"}{PU}{y}{\80\377}% U+00FF

47.2.4 Latin Extended-A: U+0080 to U+017F

15529 % U+0100 LATIN CAPITAL LETTER A WITH MACRON; Amacron
15530 \DeclareTextCompositeCommand{\=}{PU}{A}{\81\000}% U+0100
15531 % U+0101 LATIN SMALL LETTER A WITH MACRON; amacron
15532 \DeclareTextCompositeCommand{\=}{PU}{a}{\81\001}% U+0101
15533 % U+0102 LATIN CAPITAL LETTER A WITH BREVE; Abreve
15534 \DeclareTextCompositeCommand{\u}{PU}{A}{\81\002}% U+0102
15535 % U+0103 LATIN SMALL LETTER A WITH BREVE; abreve
15536 \DeclareTextCompositeCommand{\u}{PU}{a}{\81\003}% U+0103
15537 % U+0104 LATIN CAPITAL LETTER A WITH OGONEK; Aogonek
15538 \DeclareTextCompositeCommand{\k}{PU}{A}{\81\004}% U+0104
15539 % U+0105 LATIN SMALL LETTER A WITH OGONEK; aogonek
15540 \DeclareTextCompositeCommand{\k}{PU}{a}{\81\005}% U+0105
15541 % U+0106 LATIN CAPITAL LETTER C WITH ACUTE; Cacute
15542 \DeclareTextCompositeCommand{\'}{PU}{C}{\81\006}% U+0106
15543 % U+0107 LATIN SMALL LETTER C WITH ACUTE; cacute
15544 \DeclareTextCompositeCommand{\'}{PU}{c}{\81\007}% U+0107
15545 % U+0108 LATIN CAPITAL LETTER C WITH CIRCUMFLEX; Ccircumflex
15546 \DeclareTextCompositeCommand{\^}{PU}{C}{\81\010}% U+0108
15547 % U+0109 LATIN SMALL LETTER C WITH CIRCUMFLEX; ccircumflex
15548 \DeclareTextCompositeCommand{\^}{PU}{c}{\81\011}% U+0109
15549 % U+010A LATIN CAPITAL LETTER C WITH DOT ABOVE; Cdot, Cdotac-
cent
15550 \DeclareTextCompositeCommand{\.}{PU}{C}{\81\012}% U+010A
15551 % U+010B LATIN SMALL LETTER C WITH DOT ABOVE; cdot, cdotaccent
15552 \DeclareTextCompositeCommand{\.}{PU}{c}{\81\013}% U+010B
15553 % U+010C LATIN CAPITAL LETTER C WITH CARON; Ccaron
15554 \DeclareTextCompositeCommand{\v}{PU}{C}{\81\014}% U+010C
15555 % U+010D LATIN SMALL LETTER C WITH CARON; ccaron
15556 \DeclareTextCompositeCommand{\v}{PU}{c}{\81\015}% U+010D
15557 % U+010E LATIN CAPITAL LETTER D WITH CARON; Dcaron
15558 \DeclareTextCompositeCommand{\v}{PU}{D}{\81\016}% U+010E
15559 % U+010F LATIN SMALL LETTER D WITH CARON; dcaron
15560 \DeclareTextCompositeCommand{\v}{PU}{d}{\81\017}% U+010F

15561 % U+0110 LATIN CAPITAL LETTER D WITH STROKE; Dcroat, Dslash
15562 \DeclareTextCommand{\DJ}{PU}{\81\020}% U+0110
15563 % U+0111 LATIN SMALL LETTER D WITH STROKE; dcroat, dmacron;
15564 % \textcrd (tipa)
15565 \DeclareTextCommand{\dj}{PU}{\81\021}% U+0111
15566 \DeclareTextCommand{\textcrd}{PU}{\81\021}% U+0111
15567 %* \textcrd -> \crossd (wsuipa)
15568 % An alternate glyph with the stroke through the bowl:
15569 %* \textcrd -> \textbard (tipa)
15570 %* \textcrd -> \bard (wsuipa)
15571 % U+0112 LATIN CAPITAL LETTER E WITH MACRON; Emacron
15572 \DeclareTextCompositeCommand{\=}{PU}{E}{\81\022}% U+0112
15573 % U+0113 LATIN SMALL LETTER E WITH MACRON; emacron
15574 \DeclareTextCompositeCommand{\=}{PU}{e}{\81\023}% U+0113
15575 % U+0114 LATIN CAPITAL LETTER E WITH BREVE; Ebreve
15576 \DeclareTextCompositeCommand{\u}{PU}{E}{\81\024}% U+0114
15577 % U+0115 LATIN SMALL LETTER E WITH BREVE; ebreve
15578 \DeclareTextCompositeCommand{\u}{PU}{e}{\81\025}% U+0115
15579 % U+0116 LATIN CAPITAL LETTER E WITH DOT ABOVE; Edot, Edotaccent
15580 \DeclareTextCompositeCommand{\.}{PU}{E}{\81\026}% U+0116
15581 % U+0117 LATIN SMALL LETTER E WITH DOT ABOVE; edot, edotaccent
15582 \DeclareTextCompositeCommand{\.}{PU}{e}{\81\027}% U+0117
15583 % U+0118 LATIN CAPITAL LETTER E WITH OGONEK; Eogonek
15584 \DeclareTextCompositeCommand{\k}{PU}{E}{\81\030}% U+0118
15585 % U+0119 LATIN SMALL LETTER E WITH OGONEK; eogonek
15586 \DeclareTextCompositeCommand{\k}{PU}{e}{\81\031}% U+0119
15587 % U+011A LATIN CAPITAL LETTER E WITH CARON; Ecaron
15588 \DeclareTextCompositeCommand{\v}{PU}{E}{\81\032}% U+011A
15589 % U+011B LATIN SMALL LETTER E WITH CARON; ecaron
15590 \DeclareTextCompositeCommand{\v}{PU}{e}{\81\033}% U+011B
15591 % U+011C LATIN CAPITAL LETTER G WITH CIRCUMFLEX; Gcircumflex
15592 \DeclareTextCompositeCommand{\^}{PU}{G}{\81\034}% U+011C
15593 % U+011D LATIN SMALL LETTER G WITH CIRCUMFLEX; gcircumflex
15594 \DeclareTextCompositeCommand{\^}{PU}{g}{\81\035}% U+011D
15595 % U+011E LATIN CAPITAL LETTER G WITH BREVE; Gbreve
15596 \DeclareTextCompositeCommand{\u}{PU}{G}{\81\036}% U+011E
15597 % U+011F LATIN SMALL LETTER G WITH BREVE; gbreve
15598 \DeclareTextCompositeCommand{\u}{PU}{g}{\81\037}% U+011F
15599 % U+0120 LATIN CAPITAL LETTER G WITH DOT ABOVE; Gdot, Gdotac-
cent
15600 \DeclareTextCompositeCommand{\.}{PU}{G}{\81\040}% U+0120
15601 % U+0121 LATIN SMALL LETTER G WITH DOT ABOVE; gdot, gdotaccent
15602 \DeclareTextCompositeCommand{\.}{PU}{g}{\81\041}% U+0121
15603 % U+0122 LATIN CAPITAL LETTER G WITH CEDILLA; Gcedilla, Gcom-
maaccent
15604 \DeclareTextCompositeCommand{\c}{PU}{G}{\81\042}% U+0122
15605 % U+0123 LATIN SMALL LETTER G WITH CEDILLA; gcedilla, gcommaaccent
15606 \DeclareTextCompositeCommand{\c}{PU}{g}{\81\043}% U+0123
15607 % U+0124 LATIN CAPITAL LETTER H WITH CIRCUMFLEX; Hcircumflex
15608 \DeclareTextCompositeCommand{\^}{PU}{H}{\81\044}% U+0124
15609 % U+0125 LATIN SMALL LETTER H WITH CIRCUMFLEX; hcircumflex
15610 \DeclareTextCompositeCommand{\^}{PU}{h}{\81\045}% U+0125
15611 % U+0126 LATIN CAPITAL LETTER H WITH STROKE; Hbar
15612 \DeclareTextCommand{\textHslash}{PU}{\81\046}% U+0126

15613 % U+0127 LATIN SMALL LETTER H WITH STROKE; hbar; \hbar (AmS)
15614 \DeclareTextCommand{\texthbar}{PU}{\81\047}%* U+0127
15615 %* \texthbar -> \textcrh (tipa)
15616 %* \texthbar -> \crossh (wsuipa)
15617 %* \texthbar -> \planck (phonetic)
15618 % U+0128 LATIN CAPITAL LETTER I WITH TILDE; Itilde
15619 \DeclareTextCompositeCommand{\~}{PU}{I}{\81\050}% U+0128
15620 % U+0129 LATIN SMALL LETTER I WITH TILDE; itilde
15621 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}% U+0129
15622 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}% U+0129
15623 % U+012A LATIN CAPITAL LETTER I WITH MACRON; Imacron
15624 \DeclareTextCompositeCommand{\=} {PU}{I}{\81\052}% U+012A
15625 % U+012B LATIN SMALL LETTER I WITH MACRON; imacron
15626 \DeclareTextCompositeCommand{\=} {PU}{i}{\81\053}% U+012B
15627 \DeclareTextCompositeCommand{\=} {PU}{i}{\81\053}% U+012B
15628 % U+012C LATIN CAPITAL LETTER I WITH BREVE; Ibreve
15629 \DeclareTextCompositeCommand{\u}{PU}{I}{\81\054}% U+012C
15630 % U+012D LATIN SMALL LETTER I WITH BREVE; ibreve
15631 \DeclareTextCompositeCommand{\u}{PU}{i}{\81\055}% U+012D
15632 \DeclareTextCompositeCommand{\u}{PU}{i}{\81\055}% U+012D
15633 % U+012E LATIN CAPITAL LETTER I WITH OGONEK; Iogonek
15634 \DeclareTextCompositeCommand{\k}{PU}{I}{\81\056}% U+012E
15635 % U+012F LATIN SMALL LETTER I WITH OGONEK; iogonek
15636 \DeclareTextCompositeCommand{\k}{PU}{i}{\81\057}% U+012F
15637 \DeclareTextCompositeCommand{\k}{PU}{i}{\81\057}% U+012F
15638 % U+0130 LATIN CAPITAL LETTER I WITH DOT ABOVE; Idot, Idotaccent
15639 \DeclareTextCompositeCommand{\.}{PU}{I}{\81\060}% U+0130
15640 % U+0131 LATIN SMALL LETTER DOTLESS I; dotlessi
15641 \DeclareTextCommand{\i}{PU}{\81\061}% U+0131
15642 % U+0132 LATIN CAPITAL LIGATURE IJ; IJ
15643 \DeclareTextCommand{\IJ}{PU}{\81\062}% U+0132
15644 % U+0133 LATIN SMALL LIGATURE IJ; ij
15645 \DeclareTextCommand{\ij}{PU}{\81\063}% U+0133
15646 % U+0134 LATIN CAPITAL LETTER J WITH CIRCUMFLEX; Jcircumflex
15647 \DeclareTextCompositeCommand{\^}{PU}{J}{\81\064}% U+0134
15648 % U+0135 LATIN SMALL LETTER J WITH CIRCUMFLEX; jcircumflex
15649 \DeclareTextCompositeCommand{\^}{PU}{j}{\81\065}% U+0135
15650 \DeclareTextCompositeCommand{\^}{PU}{j}{\81\065}% U+0135
15651 % U+0136 LATIN CAPITAL LETTER K WITH CEDILLA; Kcedilla, Kcommaac-
cent
15652 \DeclareTextCompositeCommand{\c}{PU}{K}{\81\066}% U+0136
15653 % U+0137 LATIN SMALL LETTER K WITH CEDILLA; kcedilla, kcommaaccent
15654 \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 chosen `\textkra`.

15655 % U+0138 LATIN SMALL LETTER KRA; kgreenlandic
15656 \DeclareTextCommand{\textkra}{PU}{\81\070}% U+0138
15657 % U+0139 LATIN CAPITAL LETTER L WITH ACUTE; Lacute
15658 \DeclareTextCompositeCommand{\'}{PU}{L}{\81\071}% U+0139
15659 % U+013A LATIN SMALL LETTER L WITH ACUTE; lacute
15660 \DeclareTextCompositeCommand{\'}{PU}{l}{\81\072}% U+013A
15661 % U+013B LATIN CAPITAL LETTER L WITH CEDILLA; Lcedilla, Lcommaac-

cent

15662 \DeclareTextCompositeCommand{\c}{PU}{L}{\81\073}% U+013B
15663 % U+013C LATIN SMALL LETTER L WITH CEDILLA; lcedilla, lcommaaccent
15664 \DeclareTextCompositeCommand{\c}{PU}{l}{\81\074}% U+013C
15665 % U+013D LATIN CAPITAL LETTER L WITH CARON; Lcaron
15666 \DeclareTextCompositeCommand{\v}{PU}{L}{\81\075}% U+013D
15667 % U+013E LATIN SMALL LETTER L WITH CARON; lcaron
15668 \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.

15669 % U+013F LATIN CAPITAL LETTER L WITH MIDDLE DOT; Ldot, Ldotac-
cent

15670 \DeclareTextCompositeCommand{\.}{PU}{L}{\81\077}% U+013F
15671 % U+0140 LATIN SMALL LETTER L WITH MIDDLE DOT; ldot, ldotaccent
15672 \DeclareTextCompositeCommand{\.}{PU}{l}{\81\100}% U+0140
15673 % U+0141 LATIN CAPITAL LETTER L WITH STROKE; Lslash
15674 \DeclareTextCommand{\L}{PU}{\81\101}% U+0141
15675 % U+0142 LATIN SMALL LETTER L WITH STROKE; lslash
15676 \DeclareTextCommand{\l}{PU}{\81\102}% U+0142
15677 % U+0143 LATIN CAPITAL LETTER N WITH ACUTE; Nacute
15678 \DeclareTextCompositeCommand{\'}{PU}{N}{\81\103}% U+0143
15679 % U+0144 LATIN SMALL LETTER N WITH ACUTE; nacute
15680 \DeclareTextCompositeCommand{\'}{PU}{n}{\81\104}% U+0144
15681 % U+0145 LATIN CAPITAL LETTER N WITH CEDILLA; Ncedilla, Ncommaac-
cent

15682 \DeclareTextCompositeCommand{\c}{PU}{N}{\81\105}% U+0145
15683 % U+0146 LATIN SMALL LETTER N WITH CEDILLA; ncedilla, ncommaaccent
15684 \DeclareTextCompositeCommand{\c}{PU}{n}{\81\106}% U+0146
15685 % U+0147 LATIN CAPITAL LETTER N WITH CARON; Ncaron
15686 \DeclareTextCompositeCommand{\v}{PU}{N}{\81\107}% U+0147
15687 % U+0148 LATIN SMALL LETTER N WITH CARON; ncaron
15688 \DeclareTextCompositeCommand{\v}{PU}{n}{\81\110}% U+0148
15689 % U+0149 LATIN SMALL LETTER N PRECEDED BY APOSTROPHE; napos-
trophe, quoterightn

15690 \DeclareTextCommand{\textnapostrophe}{PU}{\81\111}% U+0149
15691 % U+014A LATIN CAPITAL LETTER ENG; Eng
15692 \DeclareTextCommand{\NG}{PU}{\81\112}% U+014A
15693 % U+014B LATIN SMALL LETTER ENG; eng
15694 \DeclareTextCommand{\ng}{PU}{\81\113}% U+014B
15695 %* \ng -> \eng (wsuipa)
15696 %* \ng -> \engma (phonetic)

15697 % U+014C LATIN CAPITAL LETTER O WITH MACRON; Omacron
15698 \DeclareTextCompositeCommand{\=}{PU}{O}{\81\114}% U+014C
15699 % U+014D LATIN SMALL LETTER O WITH MACRON; omacron
15700 \DeclareTextCompositeCommand{\=}{PU}{o}{\81\115}% U+014D
15701 % U+014E LATIN CAPITAL LETTER O WITH BREVE; Obreve
15702 \DeclareTextCompositeCommand{\u}{PU}{O}{\81\116}% U+014E
15703 % U+014F LATIN SMALL LETTER O WITH BREVE; obreve
15704 \DeclareTextCompositeCommand{\u}{PU}{o}{\81\117}% U+014F
15705 % U+0150 LATIN CAPITAL LETTER O WITH DOUBLE ACUTE; Odblac-
cute, Ohungarumlaut

15706 \DeclareTextCompositeCommand{\H}{PU}{O}{\81\120}% U+0150
15707 % U+0151 LATIN SMALL LETTER O WITH DOUBLE ACUTE; odbla-

cute, ohungarumlaut

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15708 \DeclareTextCompositeCommand{\H}{PU}{o}{\81\121}% U+0151
15709 % U+0152 LATIN CAPITAL LIGATURE OE; OE
15710 \DeclareTextCommand{\OE}{PU}{\81\122}% U+0152
15711 % U+0153 LATIN SMALL LIGATURE OE; oe
15712 \DeclareTextCommand{\oe}{PU}{\81\123}% U+0153
15713 % U+0154 LATIN CAPITAL LETTER R WITH ACUTE; Racute
15714 \DeclareTextCompositeCommand{\'}{PU}{R}{\81\124}% U+0154
15715 % U+0155 LATIN SMALL LETTER R WITH ACUTE; racute
15716 \DeclareTextCompositeCommand{\'}{PU}{r}{\81\125}% U+0155
15717 % U+0156 LATIN CAPITAL LETTER R WITH CEDILLA; Rcedilla, Rcommaac-
cent
15718 \DeclareTextCompositeCommand{\c}{PU}{R}{\81\126}% U+0156
15719 % U+0157 LATIN SMALL LETTER R WITH CEDILLA; rcedilla, rcommaaccent
15720 \DeclareTextCompositeCommand{\c}{PU}{r}{\81\127}% U+0157
15721 % U+0158 LATIN CAPITAL LETTER R WITH CARON; Rcaron
15722 \DeclareTextCompositeCommand{\v}{PU}{R}{\81\130}% U+0158
15723 % U+0159 LATIN SMALL LETTER R WITH CARON; rcaron
15724 \DeclareTextCompositeCommand{\v}{PU}{r}{\81\131}% U+0159
15725 % U+015A LATIN CAPITAL LETTER S WITH ACUTE; Sacute
15726 \DeclareTextCompositeCommand{\'}{PU}{S}{\81\132}% U+015A
15727 % U+015B LATIN SMALL LETTER S WITH ACUTE; sacute
15728 \DeclareTextCompositeCommand{\'}{PU}{s}{\81\133}% U+015B
15729 % U+015C LATIN CAPITAL LETTER S WITH CIRCUMFLEX; Scircumflex
15730 \DeclareTextCompositeCommand{\^}{PU}{S}{\81\134}% U+015C
15731 % U+015D LATIN SMALL LETTER S WITH CIRCUMFLEX; scircumflex
15732 \DeclareTextCompositeCommand{\^}{PU}{s}{\81\135}% U+015D
15733 % U+015E LATIN CAPITAL LETTER S WITH CEDILLA; Scedilla
15734 \DeclareTextCompositeCommand{\c}{PU}{S}{\81\136}% U+015E
15735 % U+015F LATIN SMALL LETTER S WITH CEDILLA; scedilla
15736 \DeclareTextCompositeCommand{\c}{PU}{s}{\81\137}% U+015F
15737 % U+0160 LATIN CAPITAL LETTER S WITH CARON; Scaron
15738 \DeclareTextCompositeCommand{\v}{PU}{S}{\81\140}% U+0160
15739 % U+0161 LATIN SMALL LETTER S WITH CARON; scaron
15740 \DeclareTextCompositeCommand{\v}{PU}{s}{\81\141}% U+0161
15741 % U+0162 LATIN CAPITAL LETTER T WITH CEDILLA; Tcedilla, Tcommaac-
cent
15742 \DeclareTextCompositeCommand{\c}{PU}{T}{\81\142}% U+0162
15743 % U+0163 LATIN SMALL LETTER T WITH CEDILLA; tcedilla, tcommaaccent
15744 \DeclareTextCompositeCommand{\c}{PU}{t}{\81\143}% U+0163
15745 % U+0164 LATIN CAPITAL LETTER T WITH CARON; Tcaron
15746 \DeclareTextCompositeCommand{\v}{PU}{T}{\81\144}% U+0164
15747 % U+0165 LATIN SMALL LETTER T WITH CARON; tcaron
15748 \DeclareTextCompositeCommand{\v}{PU}{t}{\81\145}% U+0165
15749 % U+0166 LATIN CAPITAL LETTER T WITH STROKE; Tbar
15750 \DeclareTextCommand{\textTslash}{PU}{\81\146}% U+0166
15751 % U+0167 LATIN SMALL LETTER T WITH STROKE; tbar
15752 \DeclareTextCommand{\texttslash}{PU}{\81\147}% U+0167
15753 % U+0168 LATIN CAPITAL LETTER U WITH TILDE; Utilde
15754 \DeclareTextCompositeCommand{\~}{PU}{U}{\81\150}% U+0168
15755 % U+0169 LATIN SMALL LETTER U WITH TILDE; utilde
15756 \DeclareTextCompositeCommand{\~}{PU}{u}{\81\151}% U+0169
15757 % U+016A LATIN CAPITAL LETTER U WITH MACRON; Umacron
15758 \DeclareTextCompositeCommand{\=}{PU}{U}{\81\152}% U+016A

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15759 % U+016B LATIN SMALL LETTER U WITH MACRON; umacron
15760 \DeclareTextCompositeCommand{\=} {PU}{u}{\81\153}% U+016B
15761 % U+016C LATIN CAPITAL LETTER U WITH BREVE; Ubreve
15762 \DeclareTextCompositeCommand{\u} {PU}{U}{\81\154}% U+016C
15763 % U+016D LATIN SMALL LETTER U WITH BREVE; ubreve
15764 \DeclareTextCompositeCommand{\u} {PU}{u}{\81\155}% U+016D
15765 % U+016E LATIN CAPITAL LETTER U WITH RING ABOVE; Uring
15766 \DeclareTextCompositeCommand{\r} {PU}{U}{\81\156}% U+016E
15767 % U+016F LATIN SMALL LETTER U WITH RING ABOVE; uring
15768 \DeclareTextCompositeCommand{\r} {PU}{u}{\81\157}% U+016F
15769 % U+0170 LATIN CAPITAL LETTER U WITH DOUBLE ACUTE; Udblac
cute, Uhungarumlaut
15770 \DeclareTextCompositeCommand{\H} {PU}{U}{\81\160}% U+0170
15771 % U+0171 LATIN SMALL LETTER U WITH DOUBLE ACUTE; udblac
cute, uhungarumlaut
15772 \DeclareTextCompositeCommand{\H} {PU}{u}{\81\161}% U+0171
15773 % U+0172 LATIN CAPITAL LETTER U WITH OGONEK; Uogonek
15774 \DeclareTextCompositeCommand{\k} {PU}{U}{\81\162}% U+0172
15775 % U+0173 LATIN SMALL LETTER U WITH OGONEK; uogonek
15776 \DeclareTextCompositeCommand{\k} {PU}{u}{\81\163}% U+0173
15777 % U+0174 LATIN CAPITAL LETTER W WITH CIRCUMFLEX; Wcircumflex
15778 \DeclareTextCompositeCommand{\^} {PU}{W}{\81\164}% U+0174
15779 % U+0175 LATIN SMALL LETTER W WITH CIRCUMFLEX; wcircumflex
15780 \DeclareTextCompositeCommand{\^} {PU}{w}{\81\165}% U+0175
15781 % U+0176 LATIN CAPITAL LETTER Y WITH CIRCUMFLEX; Ycircumflex
15782 \DeclareTextCompositeCommand{\^} {PU}{Y}{\81\166}% U+0176
15783 % U+0177 LATIN SMALL LETTER Y WITH CIRCUMFLEX; ycircumflex
15784 \DeclareTextCompositeCommand{\^} {PU}{y}{\81\167}% U+0177
15785 % U+0178 LATIN CAPITAL LETTER Y WITH DIAERESIS; Ydieresis
15786 \DeclareTextCompositeCommand{\"} {PU}{Y}{\81\170}% U+0178
15787 % U+0179 LATIN CAPITAL LETTER Z WITH ACUTE; Zacute
15788 \DeclareTextCompositeCommand{\'} {PU}{Z}{\81\171}% U+0179
15789 % U+017A LATIN SMALL LETTER Z WITH ACUTE; zacute
15790 \DeclareTextCompositeCommand{\'} {PU}{z}{\81\172}% U+017A
15791 % U+017B LATIN CAPITAL LETTER Z WITH DOT ABOVE; Zdot, Zdotaccent
15792 \DeclareTextCompositeCommand{\.} {PU}{Z}{\81\173}% U+017B
15793 % U+017C LATIN SMALL LETTER Z WITH DOT ABOVE; zdot, zdotaccent
15794 \DeclareTextCompositeCommand{\.} {PU}{z}{\81\174}% U+017C
15795 % U+017D LATIN CAPITAL LETTER Z WITH CARON; Zcaron
15796 \DeclareTextCompositeCommand{\v} {PU}{Z}{\81\175}% U+017D
15797 % U+017E LATIN SMALL LETTER Z WITH CARON; zcaron
15798 \DeclareTextCompositeCommand{\v} {PU}{z}{\81\176}% U+017E
15799 % U+017F LATIN SMALL LETTER LONG S; longs, slong
15800 \DeclareTextCommand{\textlongS} {PU}{\81\177}% U+017F

47.2.5 Latin Extended-B: U+0180 to U+024F

15801 % U+0180 LATIN SMALL LETTER B WITH STROKE; bstroke; \textcrb (tipa)
15802 \DeclareTextCommand{\textcrb} {PU}{\81\200}% U+0180
15803 %* \textcrb -> \crossb (wsuipa)
15804 % An alternate glyph with the stroke through the bowl:
15805 %* \textcrb -> \textbarb (tipa)
15806 %* \textcrb -> \barb (wsuipa)
15807 % U+0181 LATIN CAPITAL LETTER B WITH HOOK; Bhook; \hausaB (pho
netic)

15808 \DeclareTextCommand{\texthausaB}{PU}{\81\201}%* U+0181
15809 % U+0188 LATIN SMALL LETTER C WITH HOOK; chook; \texthtc (tipa)
15810 \DeclareTextCommand{\texthtc}{PU}{\81\210}% U+0188
15811 % U+018A LATIN CAPITAL LETTER D WITH HOOK; Dhook; \hausaD (pho-
netic)
15812 \DeclareTextCommand{\texthausaD}{PU}{\81\212}%* U+018A
15813 % U+018E LATIN CAPITAL LETTER REVERSED E; Ereversed
15814 \DeclareTextCommand{\textEreversed}{PU}{\81\216}% U+018E
15815 \DeclareTextCommand{\textrevE}{PU}{\81\216}% U+018E
15816 % U+0192 LATIN SMALL LETTER F WITH HOOK; florin
15817 \DeclareTextCommand{\textflorin}{PU}{\81\222}% U+0192
15818 %* \textflorin -> \Florin (marvosym)
15819 % U+0195 LATIN SMALL LETTER HV; hv; \texthvlig (tipa)
15820 \DeclareTextCommand{\texthvlig}{PU}{\81\225}% U+0195
15821 %* \texthvlig -> \hv (wsuipa)
15822 % U+0198 LATIN CAPITAL LETTER K WITH HOOK; Khook; \hausaK (pho-
netic)
15823 \DeclareTextCommand{\texthausaK}{PU}{\81\230}%* U+0198
15824 % U+0199 LATIN SMALL LETTER K WITH HOOK; khook; \texthtk (tipa)
15825 \DeclareTextCommand{\texthtk}{PU}{\81\231}% U+0199
15826 %* \texthtk -> \hausak (phonetic)
15827 % U+019A LATIN SMALL LETTER L WITH BAR; lbar;
15828 % \textbarl (tipa), \barl (wsuipa)
15829 \DeclareTextCommand{\textbarl}{PU}{\81\232}%* U+019A
15830 % U+019B LATIN SMALL LETTER LAMBDA WITH STROKE/
15831 % LATIN SMALL LETTER BARRED LAMBDA; lambdastroke;
15832 % \textclambda (tipa)
15833 \DeclareTextCommand{\textclambda}{PU}{\81\233}% U+019B
15834 %* \textclambda -> \crossnilambda (wsuipa)
15835 %* \textclambda -> \barlambda (phonetic)
15836 %* \textclambda -> \lambdabar (txfonts/pxfonts)
15837 %* \textclambda -> \lambdash (txfonts/pxfonts)
15838 % U+019E LATIN SMALL LETTER N WITH LONG RIGHT LEG; nlegright-
long;
15839 % \textnrleg (tipx)
15840 \DeclareTextCommand{\textPUnrleg}{PU}{\81\236}% U+019E
15841 %* \textPUnrleg -> \textnrleg (tipx)
15842 % U+01A5 LATIN SMALL LETTER P WITH HOOK; phook; \texthtp (tipa)
15843 \DeclareTextCommand{\texthtp}{PU}{\81\245}% U+01A5
15844 % U+01AB LATIN SMALL LETTER T WITH PALATAL HOOK; tpalatalhook;
15845 % \textlhookt (tipa)
15846 \DeclareTextCommand{\textlhookt}{PU}{\81\253}% U+01AB
15847 % U+01AD LATIN SMALL LETTER T WITH HOOK; thook; \texthtt (tipa)
15848 \DeclareTextCommand{\texthtt}{PU}{\81\255}% U+01AD
15849 % U+01B9 LATIN SMALL LETTER EZH REVERSED/
15850 % LATIN SMALL LETTER REVERSED YOGH; \textrevyogh (tipa)
15851 \DeclareTextCommand{\textrevyogh}{PU}{\81\271}% U+01B9
15852 % U+01BB LATIN LETTER TWO WITH STROKE; twostroke; \textcrtwo (tipa)
15853 \DeclareTextCommand{\textcrtwo}{PU}{\81\273}% U+01BB
15854 % U+01BE LATIN LETTER INVERTED GLOTTAL STOP WITH STROKE;
15855 % glottalinvertedstroke; \textcrinvglotstop (tipa)
15856 \DeclareTextCommand{\textcrinvglotstop}{PU}{\81\276}% U+01BE
15857 % U+01BF LATIN LETTER WYNN; wynn; \textwynn (tipa)
15858 \DeclareTextCommand{\textwynn}{PU}{\81\277}% U+01BF

15859 % U+01C0 LATIN LETTER DENTAL CLICK/LATIN LETTER PIPE; clickden-
tal;
15860 % \textpipe (tipa)
15861 \DeclareTextCommand{\textpipe}{PU}{\81\300}% U+01C0
15862 %* \textpipe -> \textpipevar (tipx)
15863 % U+01C1 LATIN LETTER LATERAL CLICK/LATIN LETTER
15864 % DOUBLE PIPE; clicklateral; \textdoublepipe (tipa)
15865 \DeclareTextCommand{\textdoublepipe}{PU}{\81\301}% U+01C1
15866 %* \textdoublepipe -> \textdoublepipevar (tipx)
15867 % U+01C2 LATIN LETTER ALVEOLAR CLICK/LATIN LETTER PIPE DOU-
BLE BAR;
15868 % clickalveolar; \textdoublebarpipe (tipa)
15869 \DeclareTextCommand{\textdoublebarpipe}{PU}{\81\302}% U+01C2
15870 %* \textdoublebarpipe -> \textdoublebarpipevar (tipx)
15871 % U+01CD LATIN CAPITAL LETTER A WITH CARON; Acaron
15872 \DeclareTextCompositeCommand{\v}{PU}{A}{\81\315}% U+01CD
15873 % U+01CE LATIN SMALL LETTER A WITH CARON; acaron
15874 \DeclareTextCompositeCommand{\v}{PU}{a}{\81\316}% U+01CE
15875 % U+01CF LATIN CAPITAL LETTER I WITH CARON; Icaron
15876 \DeclareTextCompositeCommand{\v}{PU}{I}{\81\317}% U+01CF
15877 % U+01D0 LATIN SMALL LETTER I WITH CARON; icaron
15878 \DeclareTextCompositeCommand{\v}{PU}{i}{\81\320}% U+01D0
15879 \DeclareTextCompositeCommand{\v}{PU}{i}{\81\320}% U+01D0
15880 % U+01D1 LATIN CAPITAL LETTER O WITH CARON; Ocaron
15881 \DeclareTextCompositeCommand{\v}{PU}{O}{\81\321}% U+01D1
15882 % U+01D2 LATIN SMALL LETTER O WITH CARON; ocaron
15883 \DeclareTextCompositeCommand{\v}{PU}{o}{\81\322}% U+01D2
15884 % U+01D3 LATIN CAPITAL LETTER U WITH CARON; Ucaron
15885 \DeclareTextCompositeCommand{\v}{PU}{U}{\81\323}% U+01D3
15886 % U+01D4 LATIN SMALL LETTER U WITH CARON; ucaron
15887 \DeclareTextCompositeCommand{\v}{PU}{u}{\81\324}% U+01D4
15888 % U+01DD LATIN SMALL LETTER TURNED E; eturned; \inve (wasysym)
15889 \DeclareTextCommand{\textinve}{PU}{\81\335}%* U+01DD
15890 % U+01E4 LATIN CAPITAL LETTER G WITH STROKE; Gstroke
15891 \DeclareTextCommand{\textGslash}{PU}{\81\344}% U+01E4
15892 % U+01E5 LATIN SMALL LETTER G WITH STROKE; gstroke
15893 \DeclareTextCommand{\textgslash}{PU}{\81\345}% U+01E5
15894 %* \textgslash -> \textcrg (tipa)
15895 % U+01E6 LATIN CAPITAL LETTER G WITH CARON; Gcaron
15896 \DeclareTextCompositeCommand{\v}{PU}{G}{\81\346}% U+01E6
15897 % U+01E7 LATIN SMALL LETTER G WITH CARON; gcaron
15898 \DeclareTextCompositeCommand{\v}{PU}{g}{\81\347}% U+01E7
15899 % U+01E8 LATIN CAPITAL LETTER K WITH CARON; Kcaron
15900 \DeclareTextCompositeCommand{\v}{PU}{K}{\81\350}% U+01E8
15901 % U+01E9 LATIN SMALL LETTER K WITH CARON; kcaron
15902 \DeclareTextCompositeCommand{\v}{PU}{k}{\81\351}% U+01E9
15903 % U+01EA LATIN CAPITAL LETTER O WITH OGONEK; Oogonek
15904 \DeclareTextCompositeCommand{\k}{PU}{O}{\81\352}% U+01EA
15905 % U+01EB LATIN SMALL LETTER O WITH OGONEK; oogonek
15906 \DeclareTextCompositeCommand{\k}{PU}{o}{\81\353}% U+01EB
15907 % U+01F0 LATIN SMALL LETTER J WITH CARON; jcaron
15908 \DeclareTextCompositeCommand{\v}{PU}{j}{\81\360}% U+01F0
15909 \DeclareTextCompositeCommand{\v}{PU}{j}{\81\360}% U+01F0
15910 % U+01F4 LATIN CAPITAL LETTER G WITH ACUTE; Gacute

15911 \DeclareTextCompositeCommand{\'}{PU}{G}{\81\364}% U+01F4
15912 % U+01F5 LATIN SMALL LETTER G WITH ACUTE; gacute
15913 \DeclareTextCompositeCommand{\'}{PU}{g}{\81\365}% U+01F5
15914 % U+01F8 LATIN CAPITAL LETTER N WITH GRAVE
15915 \DeclareTextCompositeCommand{\'}{PU}{N}{\81\370}% U+01F8
15916 % U+01F9 LATIN SMALL LETTER N WITH GRAVE
15917 \DeclareTextCompositeCommand{\'}{PU}{n}{\81\371}% U+01F9
15918 % U+01FC LATIN CAPITAL LETTER AE WITH ACUTE; AEacute
15919 \DeclareTextCompositeCommand{\'}{PU}{\AE}{\81\374}% U+01FC
15920 % U+01FD LATIN SMALL LETTER AE WITH ACUTE; aeacute
15921 \DeclareTextCompositeCommand{\'}{PU}{\ae}{\81\375}% U+01FD
15922 % U+01FE LATIN CAPITAL LETTER O WITH STROKE AND ACUTE;
15923 % *Oslashacute, Ostrokeacut
15924 \DeclareTextCompositeCommand{\'}{PU}{\O}{\81\376}% U+01FE
15925 % U+01FF LATIN SMALL LETTER O WITH STROKE AND ACUTE;
15926 % *oslashacute, ostrokeacute
15927 \DeclareTextCompositeCommand{\'}{PU}{\o}{\81\377}% U+01FF
15928 (/puenc)
15929 (*puextra)
15930 % U+0200 LATIN CAPITAL LETTER A WITH DOUBLE GRAVE; Adblgrave
15931 \DeclareTextCompositeCommand{\G}{PU}{A}{\82\000}% U+0200
15932 % U+0201 LATIN SMALL LETTER A WITH DOUBLE GRAVE; adblgrave
15933 \DeclareTextCompositeCommand{\G}{PU}{a}{\82\001}% U+0201
15934 % U+0204 LATIN CAPITAL LETTER E WITH DOUBLE GRAVE; Edblgrave
15935 \DeclareTextCompositeCommand{\G}{PU}{E}{\82\004}% U+0204
15936 % U+0205 LATIN SMALL LETTER E WITH DOUBLE GRAVE; edblgrave
15937 \DeclareTextCompositeCommand{\G}{PU}{e}{\82\005}% U+0205
15938 (/puextra)
15939 (*puenc)
15940 % U+0206 LATIN CAPITAL LETTER E WITH INVERTED BREVE; Einvert-
edbreve
15941 \DeclareTextCompositeCommand{\textinvbreve}{PU}{E}{\82\006}% U+0206
15942 % U+0207 LATIN SMALL LETTER E WITH INVERTED BREVE; einverted-
breve
15943 \DeclareTextCompositeCommand{\textinvbreve}{PU}{e}{\82\007}% U+0207
15944 (/puenc)
15945 (*puextra)
15946 % U+0208 LATIN CAPITAL LETTER I WITH DOUBLE GRAVE; Idblgrave
15947 \DeclareTextCompositeCommand{\G}{PU}{I}{\82\010}% U+0208
15948 % U+0209 LATIN SMALL LETTER I WITH DOUBLE GRAVE; idblgrave
15949 \DeclareTextCompositeCommand{\G}{PU}{i}{\82\011}% U+0209
15950 \DeclareTextCompositeCommand{\G}{PU}{i}{\82\011}% U+0209
15951 (/puextra)
15952 (*puenc)
15953 % U+020A LATIN CAPITAL LETTER I WITH INVERTED BREVE; Iinverted-
breve
15954 \DeclareTextCompositeCommand{\textinvbreve}{PU}{I}{\82\012}% U+020A
15955 % U+020B LATIN SMALL LETTER I WITH INVERTED BREVE; Iinverted-
breve
15956 \DeclareTextCompositeCommand{\textinvbreve}{PU}{i}{\82\013}% U+020B
15957 \DeclareTextCompositeCommand{\textinvbreve}{PU}{i}{\82\013}% U+020B
15958 (/puenc)
15959 (*puextra)
15960 % U+020C LATIN CAPITAL LETTER O WITH DOUBLE GRAVE; Odblgrave

15961 \DeclareTextCompositeCommand{\G}{PU}{O}{\82\014}% U+020C
15962 % U+020D LATIN SMALL LETTER O WITH DOUBLE GRAVE; odblgrave
15963 \DeclareTextCompositeCommand{\G}{PU}{o}{\82\015}% U+020D
15964 </puextra>
15965 <*puenc>
15966 % U+020E LATIN CAPITAL LETTER O WITH INVERTED BREVE; Oinvert-
edbreve
15967 \DeclareTextCompositeCommand{\textinvbreve}{PU}{O}{\82\016}% U+020E
15968 % U+020F LATIN SMALL LETTER O WITH INVERTED BREVE; oinverted-
breve
15969 \DeclareTextCompositeCommand{\textinvbreve}{PU}{o}{\82\017}% U+020F
15970 </puenc>
15971 <*puextra>
15972 % U+0210 LATIN CAPITAL LETTER R WITH DOUBLE GRAVE; Rdblgrave
15973 \DeclareTextCompositeCommand{\G}{PU}{R}{\82\020}% U+0210
15974 % U+0211 LATIN SMALL LETTER R WITH DOUBLE GRAVE; rdblgrave
15975 \DeclareTextCompositeCommand{\G}{PU}{r}{\82\021}% U+0211
15976 % U+0214 LATIN CAPITAL LETTER U WITH DOUBLE GRAVE; Udblgrave
15977 \DeclareTextCompositeCommand{\G}{PU}{U}{\82\024}% U+0214
15978 % U+0215 LATIN SMALL LETTER U WITH DOUBLE GRAVE; udblgrave
15979 \DeclareTextCompositeCommand{\G}{PU}{u}{\82\025}% U+0215
15980 </puextra>
15981 <*puenc>
15982 % U+0216 LATIN CAPITAL LETTER U WITH INVERTED BREVE; Uinvert-
edbreve
15983 \DeclareTextCompositeCommand{\textinvbreve}{PU}{U}{\82\026}% U+0216
15984 % U+0217 LATIN SMALL LETTER U WITH INVERTED BREVE; uinverted-
breve
15985 \DeclareTextCompositeCommand{\textinvbreve}{PU}{u}{\82\027}% U+0217
15986 % U+021E LATIN CAPITAL LETTER H WITH CARON
15987 \DeclareTextCompositeCommand{\v}{PU}{H}{\82\036}% U+021E
15988 % U+021F LATIN SMALL LETTER H WITH CARON
15989 \DeclareTextCompositeCommand{\v}{PU}{h}{\82\037}% U+021F
15990 % U+0221 LATIN SMALL LETTER D WITH CURL; \textctd (tipa)
15991 \DeclareTextCommand{\textctd}{PU}{\82\041}% U+0221
15992 % U+0225 LATIN SMALL LETTER Z WITH HOOK; \textcommatailz (tipa)
15993 \DeclareTextCommand{\textcommatailz}{PU}{\82\045}% U+0225
15994 % U+0226 LATIN CAPITAL LETTER A WITH DOT ABOVE
15995 \DeclareTextCompositeCommand{\.}{PU}{A}{\82\046}% U+0226
15996 % U+0227 LATIN SMALL LETTER A WITH DOT ABOVE
15997 \DeclareTextCompositeCommand{\.}{PU}{a}{\82\047}% U+0227
15998 % U+0228 LATIN CAPITAL LETTER E WITH CEDILLA
15999 \DeclareTextCompositeCommand{\c}{PU}{E}{\82\050}% U+0228
16000 % U+0229 LATIN SMALL LETTER E WITH CEDILLA
16001 \DeclareTextCompositeCommand{\c}{PU}{e}{\82\051}% U+0229
16002 % U+022E LATIN CAPITAL LETTER O WITH DOT ABOVE
16003 \DeclareTextCompositeCommand{\.}{PU}{O}{\82\056}% U+022E
16004 % U+022F LATIN SMALL LETTER O WITH DOT ABOVE
16005 \DeclareTextCompositeCommand{\.}{PU}{o}{\82\057}% U+022F
16006 % U+0232 LATIN CAPITAL LETTER Y WITH MACRON
16007 \DeclareTextCompositeCommand{\=} {PU}{Y}{\82\062}% U+0232
16008 % U+0233 LATIN SMALL LETTER Y WITH MACRON
16009 \DeclareTextCompositeCommand{\=} {PU}{y}{\82\063}% U+0233
16010 % U+0235 LATIN SMALL LETTER N WITH CURL; \textctn (tipa)

16011 \DeclareTextCommand{\textctn}{PU}{\82\065}% U+0235
 16012 % U+0236 LATIN SMALL LETTER T WITH CURL; \textctt (tipa)
 16013 \DeclareTextCommand{\textctt}{PU}{\82\066}% U+0236
 16014 % U+0237 LATIN SMALL LETTER DOTLESS J
 16015 \DeclareTextCommand{\j}{PU}{\82\067}% U+0237
 16016 % U+0238 LATIN SMALL LETTER DB DIGRAPH; \textdblig (tipx)
 16017 \DeclareTextCommand{\textPUdblig}{PU}{\82\070}% U+0238
 16018 %* \textPUdblig -> \textdblig (tipx)
 16019 % U+0239 LATIN SMALL LETTER QP DIGRAPH; \textqplig (tipx)
 16020 \DeclareTextCommand{\textPUqplig}{PU}{\82\071}% U+0239
 16021 %* \textPUqplig -> \textqplig (tipx)
 16022 % U+023C LATIN SMALL LETTER C WITH STROKE; \slashc (wsuipa)
 16023 \DeclareTextCommand{\textslashc}{PU}{\82\074}%* U+023C
 16024 %* \textslashc -> \textcentoldstyle (textcomp)
 16025 % With bar instead of stroke:
 16026 %* \textslashc -> \textbarc (tipa)

47.2.6 IPA Extensions: U+0250 to U+02AF

16027 % U+0250 LATIN SMALL LETTER TURNED A; aturned; \textturna (tipa)
 16028 \DeclareTextCommand{\textturna}{PU}{\82\120}% U+0250
 16029 %* \textturna -> \inva (wasysym)
 16030 % U+0251 LATIN SMALL LETTER ALPHA/LATIN SMALL LETTER
 16031 % SCRIPT A; ascript; \textscripta (tipa), \scripta (wsuipa)
 16032 \DeclareTextCommand{\textscripta}{PU}{\82\121}%* U+0251
 16033 %* \textscripta -> \vara (phonetic)
 16034 % U+0252 LATIN SMALL LETTER TURNED ALPHA; ascriptturned;
 16035 % \textturnscripta (tipa)
 16036 \DeclareTextCommand{\textturnscripta}{PU}{\82\122}% U+0252
 16037 %* \textturnscripta -> \invscripta (wsuipa)
 16038 %* \textturnscripta -> \rotvara (phonetic)
 16039 % U+0253 LATIN CAPITAL LETTER B WITH HOOK; bhook; \texthtb (tipa)
 16040 \DeclareTextCommand{\texthtb}{PU}{\82\123}% U+0253
 16041 %* \texthtb -> \hookb (wsuipa)
 16042 %* \texthtb -> \hausab (phonetic)
 16043 % U+0254 LATIN SMALL LETTER OPEN O; oopen;
 16044 % \textopeno (tipa), \openo (wasysym)
 16045 \DeclareTextCommand{\textopeno}{PU}{\82\124}%* U+0254
 16046 %* \textopeno -> \varopeno (phonetic)
 16047 % U+0255 LATIN SMALL LETTER C WITH CURL; ccurl; \textctc (tipa)
 16048 \DeclareTextCommand{\textctc}{PU}{\82\125}% U+0255
 16049 %* \textctc -> \curlyc (wsuipa)
 16050 % U+0256 LATIN SMALL LETTER D WITH TAIL; dtail; \textrtaild (tipa)
 16051 \DeclareTextCommand{\textrtaild}{PU}{\82\126}%* U+0256
 16052 %* \textrtaild -> \taild (wsuipa)
 16053 % U+0257 LATIN SMALL LETTER D WITH HOOK; dhook; \texthtd (tipa)
 16054 \DeclareTextCommand{\texthtd}{PU}{\82\127}% U+0257
 16055 %* \texthtd -> \hookd (wsuipa)
 16056 %* \texthtd -> \hausad (phonetic)
 16057 % U+0258 LATIN SMALL LETTER REVERSED E; ereversed;
 16058 % \textreve (tipa), \reve (wsuipa)
 16059 \DeclareTextCommand{\textreve}{PU}{\82\130}%* U+0258
 16060 % U+0259 LATIN SMALL LETTER SCHWA; schwa;
 16061 % \textschwa (tipa), \schwa (wsuipa, phonetic)
 16062 \DeclareTextCommand{\textschwa}{PU}{\82\131}%* U+0259

16063 % U+025A LATIN SMALL LETTER SCHWA WITH HOOK; schwahook;
16064 % \textrhookschwa (tipa)
16065 \DeclareTextCommand{\textrhookschwa}{PU}{\82\132}% U+025A
16066 %* \textrhookschwa -> \er (wsuipa)
16067 % U+025B LATIN SMALL LETTER OPEN E/LATIN SMALL LETTER EP-
SILON; eopen;
16068 % \niepsilon (wsuipa)
16069 \DeclareTextCommand{\textniepsilon}{PU}{\82\133}%* U+025B
16070 %* \textniepsilon -> \epsi (phonetic)
16071 % U+025C LATIN SMALL LETTER REVERSED OPEN E; eopenreversed;
16072 % \textrepsilon (tipa), \repsilon (wsuipa)
16073 \DeclareTextCommand{\textrepsilon}{PU}{\82\134}%* U+025C
16074 % U+025D LATIN SMALL LETTER REVERSED OPEN E WITH HOOK; eopen-
reversedhook;
16075 % \texthookrepsilon (tipa)
16076 \DeclareTextCommand{\texthookrepsilon}{PU}{\82\135}%* U+025D
16077 %* \texthookrepsilon -> \hookrepsilon (wsuipa)
16078 % U+025E LATIN SMALL LETTER CLOSED REVERSED OPEN E; eopenre-
versedclosed;
16079 % \textcloseriepsilon (tipa)
16080 \DeclareTextCommand{\textcloseriepsilon}{PU}{\82\136}% U+025E
16081 %* \textcloseriepsilon -> \closedrepsilon (wsuipa)
16082 % U+025F LATIN SMALL LETTER DOTLESS J WITH STROKE; jdot-
lessstroke;
16083 % \textbardotlessj (tipa)
16084 \DeclareTextCommand{\textbardotlessj}{PU}{\82\137}% U+025F
16085 %* \textbardotlessj -> \barj (phonetic)
16086 % U+0260 LATIN SMALL LETTER G WITH HOOK; ghook; \texthtg (tipa)
16087 \DeclareTextCommand{\texthtg}{PU}{\82\140}% U+0260
16088 %* \texthtg -> \hookg (wsuipa)
16089 % U+0261 LATIN SMALL LETTER SCRIPT G; gscript;
16090 % \textscriptg (tipa), \scriptg (wsuipa)
16091 \DeclareTextCommand{\textscriptg}{PU}{\82\141}%* U+0261
16092 %* \textscriptg -> \varg (phonetic)
16093 % U+0262 LATIN LETTER SMALL CAPITAL G; \textscg (tipa), \scg (wsuipa)
16094 \DeclareTextCommand{\textscg}{PU}{\82\142}%* U+0262
16095 % U+0263 LATIN SMALL LETTER GAMMA; gammalatinsmall;
16096 % \ipagamma (wsuipa), \vod (phonetic)
16097 \DeclareTextCommand{\textipagamma}{PU}{\82\143}%* U+0263
16098 %* \textipagamma -> \vod (pnonetic)
16099 % U+0264 LATIN SMALL LETTER RAMS HORN; ramshorn;
16100 % \babygamma (wsuipa)
16101 \DeclareTextCommand{\textbabygamma}{PU}{\82\144}%* U+0264
16102 % U+0265 LATIN SMALL LETTER TURNED H; hturned; \textturnh (tipa)
16103 \DeclareTextCommand{\textturnh}{PU}{\82\145}% U+0265
16104 %* \textturnh -> \invh (wsuipa)
16105 %* \textturnh -> \udesc (phonetic)
16106 % U+0266 LATIN SMALL LETTER H WITH HOOK; hhook; \texthth (tipa)
16107 \DeclareTextCommand{\texthth}{PU}{\82\146}% U+0266
16108 %* \texthth -> \hookh (wsuipa)
16109 %* \texthth -> \voicedh (phonetic)
16110 % U+0267 LATIN SMALL LETTER HENG WITH HOOK; henghook; \tex-
ththeng (tipa)
16111 \DeclareTextCommand{\texththeng}{PU}{\82\147}% U+0267

16112 %* \texththeng -> \hookheng (wsuipa)
16113 % U+0268 LATIN SMALL LETTER I WITH STROKE;
16114 % \textbari (tipa), \bari (wsuipa)
16115 \DeclareTextCommand{\textbari}{PU}{\82\150}%* U+0268
16116 %* \textbari -> \ibar (phonetic)
16117 % U+0269 LATIN SMALL LETTER IOTA; iotalatin; \niiota (wsuipa)
16118 \DeclareTextCommand{\textniiota}{PU}{\82\151}%* U+0269
16119 %* \textniiota -> \vari (phonetic)
16120 % U+026A LATIN LETTER SMALL CAPITAL I; \textsci (tipa), \sci (wsuipa)
16121 \DeclareTextCommand{\textsci}{PU}{\82\152}%* U+026A
16122 % U+026B LATIN SMALL LETTER L WITH MIDDLE TILDE; lmiddletilde;
16123 % \textltilde (tipa)
16124 \DeclareTextCommand{\textltilde}{PU}{\82\153}% U+026B
16125 %* \textltilde -> \tildel (wsuipa)
16126 % U+026C LATIN SMALL LETTER L WITH BELT; lbelt; \textbeltl (tipa)
16127 \DeclareTextCommand{\textbeltl}{PU}{\82\154}% U+026C
16128 %* \textbeltl -> \latfric (wsuipa)
16129 % U+026D LATIN SMALL LETTER L WITH RETROFLEX HOOK;
16130 % lhookretroflex; \textrtaill (tipa)
16131 \DeclareTextCommand{\textrtaill}{PU}{\82\155}% U+026D
16132 %* \textrtaill -> \taill (wsuipa)
16133 % U+026E LATIN SMALL LETTER LEZH; lezh; \textlyoghlig (tipa)
16134 \DeclareTextCommand{\textlyoghlig}{PU}{\82\156}% U+026E
16135 %* \textlyoghlig -> \lz (wsuipa)
16136 % U+026F LATIN SMALL LETTER TURNED M; mturned; \textturnm (tipa)
16137 \DeclareTextCommand{\textturnm}{PU}{\82\157}% U+026F
16138 %* \textturnm -> \invm (wsuipa)
16139 %* \textturnm -> \rotm (phonetic)
16140 % U+0270 LATIN SMALL LETTER TURNED M WITH LONG LEG; mlongleg-
turned;
16141 % \textturnmreg (tipa)
16142 \DeclareTextCommand{\textturnmreg}{PU}{\82\160}% U+0270
16143 %* \textturnmreg -> \legm (wsuipa)
16144 % U+0271 LATIN SMALL LETTER M WITH HOOK; mhook; \textltailm (tipa)
16145 \DeclareTextCommand{\textltailm}{PU}{\82\161}% U+0271
16146 %* \textltailm -> \labdentálnas (wsuipa)
16147 %* \textltailm -> \emgma (phonetic)
16148 % U+0272 LATIN SMALL LETTER N WITH LEFT HOOK; nhookleft; \textl-
tailn (tipa)
16149 \DeclareTextCommand{\textltailn}{PU}{\82\162}% U+0272
16150 %* \textltailn -> \nj (wsuipa)
16151 %* \textltailn -> \enya (phonetic)
16152 % U+0273 LATIN SMALL LETTER N WITH RETROFLEX HOOK;
16153 % nhookretroflex; \textrtailn (tipa)
16154 \DeclareTextCommand{\textrtailn}{PU}{\82\163}% U+0273
16155 %* \textrtailn -> \tailn (wsuipa)
16156 % U+0274 LATIN LETTER SMALL CAPITAL N; \textscn (tipa), \scn (wsuipa)
16157 \DeclareTextCommand{\textscn}{PU}{\82\164}%* U+0274
16158 % U+0275 LATIN CAPITAL LETTER O WITH MIDDLE TILDE/
16159 % LATIN CAPITAL LETTER BARRED O; obarred;
16160 % \textbaro (tipa), \baro (wsuipa)
16161 % But \baro from stmaryrd is different!
16162 \DeclareTextCommand{\textbaro}{PU}{\82\165}% U+0275
16163 % U+0276 LATIN LETTER SMALL CAPITAL OE; \textskoelig (tipa)

16164 \DeclareTextCommand{\textscelig}{PU}{\82\166}% U+0276
16165 % U+0277 LATIN SMALL LETTER CLOSED OMEGA; omegalatinclosed;
16166 % \textcloseomega (tipa)
16167 \DeclareTextCommand{\textcloseomega}{PU}{\82\167}% U+0277
16168 %* \textcloseomega -> \closedniomega (wsuipa)
16169 %* \textcloseomega -> \varomega (phonetic)
16170 % U+0278 LATIN SMALL LETTER PHI; philatin; \nipher (wsuipa)
16171 \DeclareTextCommand{\textnipher}{PU}{\82\170}%* U+0278
16172 % U+0279 LATIN SMALL LETTER TURNED R; rturned; \textturnr (tipa)
16173 \DeclareTextCommand{\textturnr}{PU}{\82\171}% U+0279
16174 %* \textturnr -> \invr (wsuipa)
16175 %* \textturnr -> \rotr (phonetic)
16176 % U+027A LATIN SMALL LETTER TURNED R WITH LONG LEG;
16177 % rlonglegturned; \textturnlongleg (tipa)
16178 \DeclareTextCommand{\textturnlongleg}{PU}{\82\172}% U+027A
16179 %* \textturnlongleg -> \invlegr (wsuipa)
16180 % U+027B LATIN SMALL LETTER TURNED R WITH HOOK; rhookturned;
16181 % \textturnrrtail (tipa)
16182 \DeclareTextCommand{\textturnrrtail}{PU}{\82\173}% U+027B
16183 %* \textturnrrtail -> \tailinvr (wsuipa)
16184 % U+027C LATIN SMALL LETTER R WITH LONG LEG; rlongleg; \textlongleg (tipa)
16185 \DeclareTextCommand{\textlongleg}{PU}{\82\174}%* U+027C
16186 %* \textlongleg -> \legr (wsuipa)
16187 % U+027D LATIN SMALL LETTER R WITH TAIL; rhook; \textrtailr (tipa)
16188 \DeclareTextCommand{\textrtailr}{PU}{\82\175}% U+027D
16189 %* \textrtailr -> \tailr (wsuipa)
16190 % U+027E LATIN SMALL LETTER R WITH FISHHOOK; rfishhook;
16191 % \textfishhookr (tipa)
16192 \DeclareTextCommand{\textfishhookr}{PU}{\82\176}% U+027E
16193 %* \textfishhookr -> \flapr (wsuipa)
16194 %* \textfishhookr -> \flap (phonetic)
16195 % U+027F LATIN SMALL LETTER REVERSED R WITH FISHHOOK; rfishhookreversed;
16196 % \textlhtlongi (tipa)
16197 \DeclareTextCommand{\textlhtlongi}{PU}{\82\177}% U+027F
16198 % U+0280 LATIN LETTER SMALL CAPITAL R; \textscr (tipa), \scr (wsuipa)
16199 \DeclareTextCommand{\textscr}{PU}{\82\200}%* U+0280
16200 % U+0281 LATIN LETTER SMALL CAPITAL INVERTED R; Rsmallinverted;
16201 % \textinvscr (tipa), \invscr (wsuipa)
16202 \DeclareTextCommand{\textinvscr}{PU}{\82\201}%* U+0281
16203 % U+0282 LATIN SMALL LETTER S WITH HOOK; shook; \textrtails (tipa)
16204 \DeclareTextCommand{\textrtails}{PU}{\82\202}% U+0282
16205 %* \textrtails -> \tails (wsuipa)
16206 % U+0283 LATIN SMALL LETTER ESH; esh; \textesh (tipa), \esh (wsuipa)
16207 \DeclareTextCommand{\textesh}{PU}{\82\203}%* U+0283
16208 % U+0284 LATIN SMALL LETTER DOTLESS J WITH STROKE AND HOOK;
16209 % dotlessjstrokehook; \texthtbardotlessj (tipa)
16210 \DeclareTextCommand{\texthtbardotlessj}{PU}{\82\204}% U+0284
16211 % U+0285 LATIN SMALL LETTER SQUAT REVERSED ESH; eshsquatreversed;
16212 % \textvibyi (tipa)
16213 \DeclareTextCommand{\textvibyi}{PU}{\82\205}% U+0285
16214 % U+0286 LATIN SMALL LETTER ESH WITH CURL; eshcurl; \textctesh (tipa)

16215 \DeclareTextCommand{\textctesh}{PU}{\82\206}% U+0286
16216 %* \textctesh -> \curlyesh (wsuipa)
16217 % U+0287 LATIN SMALL LETTER TURNED T; tturned; \textturnt (tipa)
16218 \DeclareTextCommand{\textturnt}{PU}{\82\207}% U+0287
16219 %* \textturnt -> \clickt (wsuipa)
16220 % U+0288 LATIN SMALL LETTER T WITH RETROFLEX HOOK; retroflex-hook;
16221 % \textrtailt (tipa)
16222 \DeclareTextCommand{\textrtailt}{PU}{\82\210}% U+0288
16223 %* \textrtailt -> \tailt (wsuipa)
16224 % U+0289 LATIN SMALL LETTER U BAR; ubar;
16225 % \textbaru (tipa), \baru (wsuipa)
16226 \DeclareTextCommand{\textbaru}{PU}{\82\211}%* U+0289
16227 %* \textbaru -> \ubar (phonetic)
16228 % U+028A LATIN SMALL LETTER UPSILON; \niupsilon (wsuipa)
16229 \DeclareTextCommand{\textniupsilon}{PU}{\82\212}%* U+028A
16230 %* \textniupsilon -> \rotOmega (phonetic)
16231 % U+028B LATIN SMALL LETTER V WITH HOOK/LATIN SMALL LETTER SCRIPT V;
16232 % vhook; \textscriptv (tipa), \scriptv (wsuipa)
16233 \DeclareTextCommand{\textscriptv}{PU}{\82\213}%* U+028B
16234 % U+028C LATIN SMALL LETTER TURNED V; vturned; \textturnv (tipa)
16235 \DeclareTextCommand{\textturnv}{PU}{\82\214}%* U+028C
16236 %* \textturnv -> \invv (wsuipa)
16237 %* \textturnv -> \pwedge (phonetic)
16238 % U+028D LATIN SMALL LETTER TURNED W; wturned; \textturnw (tipa)
16239 \DeclareTextCommand{\textturnw}{PU}{\82\215}%* U+028D
16240 %* \textturnw -> \invw (wsuipa)
16241 %* \textturnw -> \rotw (phonetic)
16242 % U+028E LATIN SMALL LETTER TURNED Y; yturned; \textturny (tipa)
16243 \DeclareTextCommand{\textturny}{PU}{\82\216}%* U+028E
16244 %* \textturny -> \invy (wsuipa)
16245 %* \textturny -> \roty (phonetic)
16246 % U+028F LATIN LETTER SMALL CAPITAL Y; \textscy (tipa), \scy (wsuipa)
16247 \DeclareTextCommand{\textscy}{PU}{\82\217}%* U+028F
16248 % U+0290 LATIN SMALL LETTER Z WITH RETROFLEX HOOK; zretroflex-hook;
16249 % \textrtailz (tipa)
16250 \DeclareTextCommand{\textrtailz}{PU}{\82\220}% U+0290
16251 %* \textrtailz -> \tailz (wsuipa)
16252 % U+0291 LATIN SMALL LETTER Z WITH CURL; zcurl; \textctz (tipa)
16253 \DeclareTextCommand{\textctz}{PU}{\82\221}% U+0291
16254 %* \textctz -> \curlyz (wsuipa)
16255 % U+0292 LATIN SMALL LETTER EZH/LATIN SMALL LETTER YOGH; ezh;
16256 % \textyogh (tipa), \yogh (wsuipa)
16257 \DeclareTextCommand{\textyogh}{PU}{\82\222}%* U+0292
16258 % U+0293 LATIN SMALL LETTER EZH WITH CURL/LATIN SMALL LETTER YOGH CURL;
16259 % ezhcurl; \textctyogh (tipa)
16260 \DeclareTextCommand{\textctyogh}{PU}{\82\223}% U+0293
16261 %* \textctyogh -> \curlyyogh (wsuipa)
16262 % U+0294 LATIN LETTER GLOTTAL STOP; glottalstop;
16263 % \textglotstop (tipa), \glotstop (wsuipa)
16264 \DeclareTextCommand{\textglotstop}{PU}{\82\224}%* U+0294

16265 %* \textglotstop -> \ejective (wsuipa)
16266 %* \textglotstop -> \glottal (phonetic)
16267 % U+0295 LATIN LETTER PHARYNGEAL VOICED FRICATIVE/
16268 % LATIN LETTER REVERSED GLOTTAL STOP; glottalstopreversed;
16269 % \textrevglotstop (tipa), \revglotstop (wsuipa)
16270 \DeclareTextCommand{\textrevglotstop}{PU}{\82\225}%* U+0295
16271 %* \textrevglotstop -> \reveject (wsuipa)
16272 % U+0296 LATIN LETTER INVERTED GLOTTAL STOP; glottalstopinverted;
16273 % \textinvglotstop (tipa), \invglotstop (wsuipa)
16274 \DeclareTextCommand{\textinvglotstop}{PU}{\82\226}%* U+0296
16275 % U+0297 LATIN LETTER STRETCHED C; cstretched; \textstretchc (tipa)
16276 \DeclareTextCommand{\textstretchc}{PU}{\82\227}% U+0297
16277 %* \textstretchc -> \clickc (wsuipa)
16278 %* \textstretchc -> \textstretchcvar (tipx)
16279 % U+0298 LATIN LETTER BILABIAL CLICK; bilabialclick;
16280 % \textbullseye (tipa)
16281 \DeclareTextCommand{\textbullseye}{PU}{\82\230}% U+0298
16282 %* \textbullseye -> \clickb (wsuipa)
16283 %* \textbullseye -> \textObullseye (tipx)
16284 % U+0299 LATIN LETTER SMALL CAPITAL B; \textscb (tipa)
16285 \DeclareTextCommand{\textscb}{PU}{\82\231}% U+0299
16286 % U+029A LATIN SMALL LETTER CLOSED OPEN E; eopenclosed;
16287 % \textcloseepsilon (tipa)
16288 \DeclareTextCommand{\textcloseepsilon}{PU}{\82\232}% U+029A
16289 % U+029B LATIN LETTER SMALL CAPITAL G WITH HOOK; Gsmallhook;
16290 % \texthtscg (tipa)
16291 \DeclareTextCommand{\texthtscg}{PU}{\82\233}% U+029B
16292 % U+029C LATIN LETTER SMALL CAPITAL H; \textsch (tipa)
16293 \DeclareTextCommand{\textsch}{PU}{\82\234}% U+029C
16294 % U+029D LATIN SMALL LETTER J WITH CROSSED-TAIL; jcros-
tail; \textcdj (tipa)
16295 \DeclareTextCommand{\textctj}{PU}{\82\235}% U+029D
16296 %* \textctj -> \textctjvar (tipx)
16297 % U+029E LATIN SMALL LETTER TURNED K; kturned; \textturnk (tipa)
16298 \DeclareTextCommand{\textturnk}{PU}{\82\236}% U+029E
16299 %* \textturnk -> \textturnsck (tipx)
16300 % U+029F LATIN LETTER SMALL CAPITAL L; \textscL (tipa)
16301 \DeclareTextCommand{\textscL}{PU}{\82\237}% U+029F
16302 % U+02A0 LATIN SMALL LETTER Q WITH HOOK; qhook; \texthtq (tipa)
16303 \DeclareTextCommand{\texthtq}{PU}{\82\240}% U+02A0
16304 % U+02A1 LATIN LETTER GLOTTAL STOP WITH STROKE; glottalstop-
stroke;
16305 % \textbarglotstop (tipa)
16306 \DeclareTextCommand{\textbarglotstop}{PU}{\82\241}% U+02A1
16307 % U+02A2 LATIN LETTER REVERSED GLOTTAL STOP WITH STROKE/
16308 % LATIN LETTER REVERSED GLOTTAL STOP BAR; glottalstopstrokere-
versed;
16309 % \textbarrevglotstop (tipa)
16310 \DeclareTextCommand{\textbarrevglotstop}{PU}{\82\242}% U+02A2
16311 % U+02A3 LATIN SMALL LETTER DZ DIGRAPH; dzaltone; \textdzlig (tipa)
16312 \DeclareTextCommand{\textdzlig}{PU}{\82\243}% U+02A3
16313 %* \textdzlig -> \dz (wsupipa)
16314 % U+02A4 LATIN SMALL LETTER DEZH DIGRAPH; dezH; \textdyogh-
lig (tipa)

16315 \DeclareTextCommand{\textdyoghlig}{PU}{\82\244}% U+02A4
 16316 % U+02A5 LATIN SMALL LETTER DZ DIGRAPH WITH CURL; dzcurl;
 16317 % \textdctzlig (tipa)
 16318 \DeclareTextCommand{\textdctzlig}{PU}{\82\245}% U+02A5
 16319 % U+02A6 LATIN SMALL LETTER TS DIGRAPH; ts; \texttslig (tipa)
 16320 \DeclareTextCommand{\texttslig}{PU}{\82\246}% U+02A6
 16321 % U+02A7 LATIN SMALL LETTER TESH DIGRAPH; tesh; \texttshlig (tipa)
 16322 \DeclareTextCommand{\texttshlig}{PU}{\82\247}% U+02A7
 16323 %* \texttshlig -> \tesh (wsuipa)
 16324 % U+02A8 LATIN SMALL LETTER TC DIGRAPH WITH CURL; tccurl;
 16325 % \texttctclig (tipa)
 16326 \DeclareTextCommand{\texttctclig}{PU}{\82\250}% U+02A8
 16327 % U+02AE LATIN SMALL LETTER TURNED H WITH FISHHOOK;
 16328 % \textlhtlongy (tipa)
 16329 \DeclareTextCommand{\textlhtlongy}{PU}{\82\256}% U+02AE
 16330 % U+02AF LATIN SMALL LETTER TURNED H WITH FISHHOOK AND TAIL;
 16331 % \textvibyy (tipa)
 16332 \DeclareTextCommand{\textvibyy}{PU}{\82\257}% U+02AF

47.2.7 Spacing Modifier Letters: U+02B0 to U+02FF

16333 % U+02BD MODIFIER LETTER REVERSED COMMA;
 16334 % commareversedmod, afi64937; \textrevapostrophe (tipa)
 16335 \DeclareTextCommand{\textrevapostrophe}{PU}{\82\275}% U+02BD
 16336 % U+02C0 MODIFIER LETTER GLOTTAL STOP; glottalstopmod;
 16337 % \textraiseglotstop (tipa)
 16338 \DeclareTextCommand{\textraiseglotstop}{PU}{\82\300}% U+02C0
 16339 % U+02C2 MODIFIER LETTER LEFT ARROWHEAD; arrowheadleftmod;
 16340 % \textlptr (tipa)
 16341 \DeclareTextCommand{\textlptr}{PU}{\82\302}% U+02C2
 16342 % U+02C3 MODIFIER LETTER RIGHT ARROWHEAD; arrowheadrightmod;
 16343 % \textrptr (tipa)
 16344 \DeclareTextCommand{\textrptr}{PU}{\82\303}% U+02C3
 16345 % U+02C7 CARON; caron
 16346 \DeclareTextCommand{\textasciicaron}{PU}{\82\307}% U+02C7
 16347 % U+02C8 MODIFIER LETTER VERTICAL LINE; verticallinemod;
 16348 % \textprimstress (tipa)
 16349 \DeclareTextCommand{\textprimstress}{PU}{\82\310}% U+02C8
 16350 % U+02CC MODIFIER LETTER LOW VERTICAL LINE; verticallinelowmod;
 16351 % \textsecstress (tipa)
 16352 \DeclareTextCommand{\textsecstress}{PU}{\82\314}% U+02CC
 16353 % U+02D0 MODIFIER LETTER TRIANGULAR COLON; colontriangularmod;
 16354 % \textlengthmark (tipa)
 16355 \DeclareTextCommand{\textlengthmark}{PU}{\82\320}% U+02D0
 16356 % U+02D1 MODIFIER LETTER HALF TRIANGULAR COLON; colontriangu-
 larhalfmod;
 16357 % \texthalflength (tipa)
 16358 \DeclareTextCommand{\texthalflength}{PU}{\82\321}% U+02D1
 16359 % U+02D8 BREVE; breve
 16360 \DeclareTextCommand{\textasciibreve}{PU}{\82\330}% U+02D8
 16361 % U+02D9 DOT ABOVE; dotaccent
 16362 \DeclareTextCommand{\textdotaccent}{PU}{\82\331}% U+02D9
 16363 % U+02DA RING ABOVE; ring
 16364 \DeclareTextCommand{\textring}{PU}{\82\332}% U+02DA
 16365 % U+02DB OGONEK; ogonek


```

16366 \DeclareTextCommand{\textogonek}{PU}{\82\333}% U+02DB
16367 % U+02DC SMALL TILDE; ilde, *tilde
16368 \DeclareTextCommand{\texttilde}{PU}{\82\334}% U+02DC
16369 % U+02DD DOUBLE ACUTE ACCENT; hungarumlaut
16370 \DeclareTextCommand{\texthungarumlaut}{PU}{\82\335}% U+02DD
16371 \DeclareTextCommand{\textacutedbl}{PU}{\82\335}% U+02DD
16372 % U+02F3 MODIFIER LETTER LOW RING
16373 \DeclareTextCommand{\textringlow}{PU}{\82\363}% U+02F3
16374 % U+02F5 MODIFIER LETTER MIDDLE DOUBLE GRAVE ACCENT
16375 \DeclareTextCommand{\textgravedbl}{PU}{\82\365}% U+02F5
16376 % U+02F7 MODIFIER LETTER LOW TILDE
16377 \DeclareTextCommand{\texttildelow}{PU}{\82\367}% U+02F7
16378 % U+02F9 MODIFIER LETTER BEGIN HIGH TONE; \textopencorner (tipa)
16379 \DeclareTextCommand{\textopencorner}{PU}{\82\371}% U+02F9
16380 % U+02FA MODIFIER LETTER END HIGH TONE; \textcorner (tipa)
16381 \DeclareTextCommand{\textcorner}{PU}{\82\372}% U+02FA

```

47.2.8 Combining Diacritical Marks: U+0300 to U+036F

```

16382 % U+030F COMBINING DOUBLE GRAVE ACCENT; dblgravecmb
16383 \DeclareTextCommand{\textdoublegrave}{PU}{\83\017}% U+030F
16384 % U+0311 COMBINING INVERTED BREVE; breveinvertedcmb
16385 \DeclareTextCommand{\textnewtie}{PU}{\83\021}% U+0311
16386 % U+0323 COMBINING DOT BELOW; dotbelowcmb, *dotbelowcmb
16387 \DeclareTextCommand{\textdotbelow}{PU}{\83\043}% U+0323
16388 % U+0331 COMBINING MACRON BELOW; macronbelowcmb
16389 \DeclareTextCommand{\textmacronbelow}{PU}{\83\061}% U+0331
16390 % U+0361 COMBINING DOUBLE INVERTED BREVE; breveinverteddou-
    blecmb
16391 \DeclareTextCommand{\texttie}{PU}{\83\141}% U+0361

```

47.2.9 Greek and Coptic: U+0370 to U+03FF

Greek is only loaded if `\textBeta` is defined.

```

16392 \ifx\textBeta\@undefined \else
16393 \input{puenc-greek.def}
16394 \fi
16395 </puenc>

```

47.2.10 Cyrillic: U+0400 to U+04FF

Thanks to Vladimir Volovich (vov@vov.vsu.ru) for the help with the Cyrillic glyph names. Cyrillic only loaded if `\CYRDZE` is defined.

```

16396 <*puenc>
16397 \ifx\CYRDZE\@undefined \else
16398 % U+0400 CYRILLIC CAPITAL LETTER IE WITH GRAVE
16399 \DeclareTextCompositeCommand{\`}{PU}{\CYRE}{\84\000}% U+0400
16400 % U+0401 CYRILLIC CAPITAL LETTER IO; Iocyrillic, *afi10023
16401 \DeclareTextCommand{\CYRYO}{PU}{\84\001}% U+0401
16402 \DeclareTextCompositeCommand{\"}{PU}{\CYRE}{\84\001}% U+0401
16403 % U+0402 CYRILLIC CAPITAL LETTER DJE; Djecyrillic, *afi10051
16404 \DeclareTextCommand{\CYRDJE}{PU}{\84\002}% U+0402
16405 % U+0403 CYRILLIC CAPITAL LETTER GJE; Gjecyrillic, *afi10052
16406 \DeclareTextCompositeCommand{\'}{PU}{\CYRG}{\84\003}% U+0403
16407 % U+0404 CYRILLIC CAPITAL LETTER UKRAINIAN IE; Ecyrillic, *afi10053

```

16408 \DeclareTextCommand{\CYRIE}{PU}{\84\004}% U+0404
16409 % U+0405 CYRILLIC CAPITAL LETTER DZE; Dzecyrillic, *afii10054
16410 \DeclareTextCommand{\CYRDZE}{PU}{\84\005}% U+0405
16411 % U+0406 CYRILLIC CAPITAL LETTER BYELORUSSIAN-UKRAINIAN I;
16412 % Icyrillic, *afii10055
16413 \DeclareTextCommand{\CYRII}{PU}{\84\006}% U+0406
16414 % U+0407 CYRILLIC CAPITAL LETTER YI; Yicyrillic, *afii10056
16415 \DeclareTextCommand{\CYRYI}{PU}{\84\007}% U+0407
16416 \DeclareTextCompositeCommand{\CYRII}{PU}{\84\007}% U+0407
16417 % U+0408 CYRILLIC CAPITAL LETTER JE; Jecyrillic, *afii10057
16418 \DeclareTextCommand{\CYRJE}{PU}{\84\010}% U+0408
16419 % U+0409 CYRILLIC CAPITAL LETTER LJE; Ljecyrillic, *afii10058
16420 \DeclareTextCommand{\CYRLJE}{PU}{\84\011}% U+0409
16421 % U+040A CYRILLIC CAPITAL LETTER NJE; Njecyrillic, *afii10059
16422 \DeclareTextCommand{\CYRNJE}{PU}{\84\012}% U+040A
16423 % U+040B CYRILLIC CAPITAL LETTER TSHE; Tshecyrillic, *afii10060
16424 \DeclareTextCommand{\CYRTSHE}{PU}{\84\013}% U+040B
16425 % U+040C CYRILLIC CAPITAL LETTER KJE; Kjecyrillic, *afii10061
16426 \DeclareTextCompositeCommand{\CYRK}{PU}{\84\014}% U+040C
16427 % U+040D CYRILLIC CAPITAL LETTER I WITH GRAVE
16428 \DeclareTextCompositeCommand{\CYRI}{PU}{\84\015}% U+040D
16429 % U+040E CYRILLIC CAPITAL LETTER SHORT U; Ushortcyrillic, *afii10062
16430 \DeclareTextCommand{\CYRUSHRT}{PU}{\84\016}% U+040E
16431 \DeclareTextCompositeCommand{\CYRU}{PU}{\84\016}% U+040E
16432 % U+040F CYRILLIC CAPITAL LETTER DZHE; Dzhecyrillic, *afii10145
16433 \DeclareTextCommand{\CYRDZHE}{PU}{\84\017}% U+040F
16434 % U+0410 CYRILLIC CAPITAL LETTER A; Acyrillic, *afii10017
16435 \DeclareTextCommand{\CYRA}{PU}{\84\020}% U+0410
16436 % U+0411 CYRILLIC CAPITAL LETTER BE; Becyrillic, *afii10018
16437 \DeclareTextCommand{\CYRB}{PU}{\84\021}% U+0411
16438 % U+0412 CYRILLIC CAPITAL LETTER VE; Vecyrillic, *afii10019
16439 \DeclareTextCommand{\CYRV}{PU}{\84\022}% U+0412
16440 % U+0413 CYRILLIC CAPITAL LETTER GHE; Gecyrillic, *afii10020
16441 \DeclareTextCommand{\CYRG}{PU}{\84\023}% U+0413
16442 % U+0414 CYRILLIC CAPITAL LETTER DE; Decyrillic, *afii10021
16443 \DeclareTextCommand{\CYRD}{PU}{\84\024}% U+0414
16444 % U+0415 CYRILLIC CAPITAL LETTER IE; Iecyrillic, *afii10022
16445 \DeclareTextCommand{\CYRE}{PU}{\84\025}% U+0415
16446 % U+0416 CYRILLIC CAPITAL LETTER ZHE; Zhecyrillic, *afii10024
16447 \DeclareTextCommand{\CYRZH}{PU}{\84\026}% U+0416
16448 % U+0417 CYRILLIC CAPITAL LETTER ZE; Zecyrillic, *afii10025
16449 \DeclareTextCommand{\CYRZ}{PU}{\84\027}% U+0417
16450 % U+0418 CYRILLIC CAPITAL LETTER I; Iicyrillic, *afii10026
16451 \DeclareTextCommand{\CYRI}{PU}{\84\030}% U+0418
16452 % U+0419 CYRILLIC CAPITAL LETTER SHORT I; Ishortcyrillic, *afii10027
16453 \DeclareTextCommand{\CYRISHRT}{PU}{\84\031}% U+0419
16454 \DeclareTextCompositeCommand{\CYRI}{PU}{\84\031}% U+0419
16455 % U+041A CYRILLIC CAPITAL LETTER KA; Kacyrillic, *afii10028
16456 \DeclareTextCommand{\CYRK}{PU}{\84\032}% U+041A
16457 % U+041B CYRILLIC CAPITAL LETTER EL; Elcyrillic, *afii10029
16458 \DeclareTextCommand{\CYRL}{PU}{\84\033}% U+041B
16459 % U+041C CYRILLIC CAPITAL LETTER EM; Emcyrillic, *afii10030
16460 \DeclareTextCommand{\CYRM}{PU}{\84\034}% U+041C
16461 % U+041D CYRILLIC CAPITAL LETTER EN; Encyrillic, *afii10031

16462 \DeclareTextCommand{\CYRN}{PU}{\84\035}% U+041D
16463 % U+041E CYRILLIC CAPITAL LETTER O; Ocyrillic, *afii10032
16464 \DeclareTextCommand{\CYRO}{PU}{\84\036}% U+041E
16465 % U+041F CYRILLIC CAPITAL LETTER PE; Pecyrillic, *afii10033
16466 \DeclareTextCommand{\CYRP}{PU}{\84\037}% U+041F
16467 % U+0420 CYRILLIC CAPITAL LETTER ER; Ercyrillic, *afii10034
16468 \DeclareTextCommand{\CYRR}{PU}{\84\040}% U+0420
16469 % U+0421 CYRILLIC CAPITAL LETTER ES; Escyrillic, *afii10035
16470 \DeclareTextCommand{\CYRS}{PU}{\84\041}% U+0421
16471 % U+0422 CYRILLIC CAPITAL LETTER TE; Tecyrillic, *afii10036
16472 \DeclareTextCommand{\CYRT}{PU}{\84\042}% U+0422
16473 % U+0423 CYRILLIC CAPITAL LETTER U; Ucyrillic, *afii10037
16474 \DeclareTextCommand{\CYRU}{PU}{\84\043}% U+0423
16475 % U+0424 CYRILLIC CAPITAL LETTER EF; Efcyrillic, *afii10038
16476 \DeclareTextCommand{\CYRF}{PU}{\84\044}% U+0424
16477 % U+0425 CYRILLIC CAPITAL LETTER HA; Khacyrillic, *afii10039
16478 \DeclareTextCommand{\CYRH}{PU}{\84\045}% U+0425
16479 % U+0426 CYRILLIC CAPITAL LETTER TSE; Tsecyrillic, *afii10040
16480 \DeclareTextCommand{\CYRC}{PU}{\84\046}% U+0426
16481 % U+0427 CYRILLIC CAPITAL LETTER CHE; Checyrillic, *afii10041
16482 \DeclareTextCommand{\CYRCH}{PU}{\84\047}% U+0427
16483 % U+0428 CYRILLIC CAPITAL LETTER SHA; Shacyrillic, *afii10042
16484 \DeclareTextCommand{\CYRSH}{PU}{\84\050}% U+0428
16485 % U+0429 CYRILLIC CAPITAL LETTER SHCHA; Shchacyrillic, *afii10043
16486 \DeclareTextCommand{\CYRSHCH}{PU}{\84\051}% U+0429
16487 % U+042A CYRILLIC CAPITAL LETTER HARD SIGN;
16488 % Hardsigncyrillic, *afii10044
16489 \DeclareTextCommand{\CYRHRDSN}{PU}{\84\052}% U+042A
16490 % U+042B CYRILLIC CAPITAL LETTER YERU; Yericyrillic, *afii10045
16491 \DeclareTextCommand{\CYRERY}{PU}{\84\053}% U+042B
16492 % U+042C CYRILLIC CAPITAL LETTER SOFT SIGN;
16493 % Softsigncyrillic, *afii10046
16494 \DeclareTextCommand{\CYRSFTSN}{PU}{\84\054}% U+042C
16495 % U+042D CYRILLIC CAPITAL LETTER E; Eversedcyrillic, *afii10047
16496 \DeclareTextCommand{\CYREREV}{PU}{\84\055}% U+042D
16497 % U+042E CYRILLIC CAPITAL LETTER YU; IUcyrillic, *afii10048
16498 \DeclareTextCommand{\CYRYU}{PU}{\84\056}% U+042E
16499 % U+042F CYRILLIC CAPITAL LETTER YA; IAcyrillic, *afii10049
16500 \DeclareTextCommand{\CYRYA}{PU}{\84\057}% U+042F
16501 % U+0430 CYRILLIC SMALL LETTER A; acyrillic, *afii10065
16502 \DeclareTextCommand{\cyra}{PU}{\84\060}% U+0430
16503 % U+0431 CYRILLIC SMALL LETTER BE; *afii10066, becyrillic
16504 \DeclareTextCommand{\cyrb}{PU}{\84\061}% U+0431
16505 % U+0432 CYRILLIC SMALL LETTER VE; *afii10067, vecyrillic
16506 \DeclareTextCommand{\cyrv}{PU}{\84\062}% U+0432
16507 % U+0433 CYRILLIC SMALL LETTER GHE; *afii10068, gecyrillic
16508 \DeclareTextCommand{\cyrg}{PU}{\84\063}% U+0433
16509 % U+0434 CYRILLIC SMALL LETTER DE; *afii10069, decyrillic
16510 \DeclareTextCommand{\cyrd}{PU}{\84\064}% U+0434
16511 % U+0435 CYRILLIC SMALL LETTER IE; *afii10070, iecyrillic
16512 \DeclareTextCommand{\cyre}{PU}{\84\065}% U+0435
16513 % U+0436 CYRILLIC SMALL LETTER ZHE; *afii10072, zhecyrillic
16514 \DeclareTextCommand{\cyrzh}{PU}{\84\066}% U+0436
16515 % U+0437 CYRILLIC SMALL LETTER ZE; *afii10073, zecyrillic

16516 \DeclareTextCommand{\cyrz}{PU}{\84\067}% U+0437
16517 % U+0438 CYRILLIC SMALL LETTER I; *afii10074, iicyrillic
16518 \DeclareTextCommand{\cyri}{PU}{\84\070}% U+0438
16519 % U+0439 CYRILLIC SMALL LETTER SHORT I; *afii10075, iishortcyrillic
16520 \DeclareTextCommand{\cyrishrt}{PU}{\84\071}% U+0439
16521 \DeclareTextCompositeCommand{\U}{PU}{\cyri}{\84\071}% U+0439
16522 % U+043A CYRILLIC SMALL LETTER KA; *afii10076, kacyrillic
16523 \DeclareTextCommand{\cyrk}{PU}{\84\072}% U+043A
16524 % U+043B CYRILLIC SMALL LETTER EL; *afii10077, elcyrillic
16525 \DeclareTextCommand{\cyrll}{PU}{\84\073}% U+043B
16526 % U+043C CYRILLIC SMALL LETTER EM; *afii10078, emcyrillic
16527 \DeclareTextCommand{\cyrmm}{PU}{\84\074}% U+043C
16528 % U+043D CYRILLIC SMALL LETTER EN; *afii10079, encyrillic
16529 \DeclareTextCommand{\cyrnn}{PU}{\84\075}% U+043D
16530 % U+043E CYRILLIC SMALL LETTER O; *afii10080, ocyrillic
16531 \DeclareTextCommand{\cyrro}{PU}{\84\076}% U+043E
16532 % U+043F CYRILLIC SMALL LETTER PE; *afii10081, pecyrillic
16533 \DeclareTextCommand{\cyrp}{PU}{\84\077}% U+043F
16534 % U+0440 CYRILLIC SMALL LETTER ER; *afii10082, ercyrillic
16535 \DeclareTextCommand{\cyrre}{PU}{\84\100}% U+0440
16536 % U+0441 CYRILLIC SMALL LETTER ES; *afii10083, escyrillic
16537 \DeclareTextCommand{\cyrse}{PU}{\84\101}% U+0441
16538 % U+0442 CYRILLIC SMALL LETTER TE; *afii10084, tecyrillic
16539 \DeclareTextCommand{\cyrte}{PU}{\84\102}% U+0442
16540 % U+0443 CYRILLIC SMALL LETTER U; *afii10085, ucyrillic
16541 \DeclareTextCommand{\cyrur}{PU}{\84\103}% U+0443
16542 % U+0444 CYRILLIC SMALL LETTER EF; *afii10086, efcyrillic
16543 \DeclareTextCommand{\cyrfe}{PU}{\84\104}% U+0444
16544 % U+0445 CYRILLIC SMALL LETTER HA; *afii10087, khacyrillic
16545 \DeclareTextCommand{\cyrhe}{PU}{\84\105}% U+0445
16546 % U+0446 CYRILLIC SMALL LETTER TSE; *afii10088, tsecyrillic
16547 \DeclareTextCommand{\cyrte}{PU}{\84\106}% U+0446
16548 % U+0447 CYRILLIC SMALL LETTER CHE; *afii10089, checyrillic
16549 \DeclareTextCommand{\cyrche}{PU}{\84\107}% U+0447
16550 % U+0448 CYRILLIC SMALL LETTER SHA; *afii10090, shacyrillic
16551 \DeclareTextCommand{\cyrsh}{PU}{\84\110}% U+0448
16552 % U+0449 CYRILLIC SMALL LETTER SHCHA; *afii10091, shchacyrillic
16553 \DeclareTextCommand{\cyrshch}{PU}{\84\111}% U+0449
16554 % U+044A CYRILLIC SMALL LETTER HARD SIGN; *afii10092, hardsigncyrillic
16555 \DeclareTextCommand{\cyrhrdsn}{PU}{\84\112}% U+044A
16556 %* \cyrhrdsn -> \hardsign (tipa)
16557 % U+044B CYRILLIC SMALL LETTER YERU; *afii10093, yericyrillic
16558 \DeclareTextCommand{\cyrery}{PU}{\84\113}% U+044B
16559 % U+044C CYRILLIC SMALL LETTER SOFT SIGN; *afii10094, softsigncyrillic
16560 \DeclareTextCommand{\cyrseftsn}{PU}{\84\114}% U+044C
16561 %* \cyrseftsn -> \softsign (tipa)
16562 % U+044D CYRILLIC SMALL LETTER E; *afii10095, ereversedcyrillic
16563 \DeclareTextCommand{\cyrerev}{PU}{\84\115}% U+044D
16564 % U+044E CYRILLIC SMALL LETTER YU; *afii10096, iucyrillic
16565 \DeclareTextCommand{\cyrury}{PU}{\84\116}% U+044E
16566 % U+044F CYRILLIC SMALL LETTER YA; *afii10097, iacyrillic
16567 \DeclareTextCommand{\cyrurya}{PU}{\84\117}% U+044F
16568 % U+0450 CYRILLIC SMALL LETTER IE WITH GRAVE

16569 \DeclareTextCompositeCommand{\`}{PU}{\cyre}{\84\120}% U+0450
16570 % U+0451 CYRILLIC SMALL LETTER IO; *afii10071, iocyrillic
16571 \DeclareTextCommand{\cyryo}{PU}{\84\121}% U+0451
16572 \DeclareTextCompositeCommand{\"}{PU}{\cyre}{\84\121}% U+0451
16573 % U+0452 CYRILLIC SMALL LETTER DJE; *afii10099, djecyrillic
16574 \DeclareTextCommand{\cyrdje}{PU}{\84\122}% U+0452
16575 % U+0453 CYRILLIC SMALL LETTER GJE; *afii10100, gjecyrillic
16576 \DeclareTextCompositeCommand{\'}{PU}{\cyrg}{\84\123}% U+0453
16577 % U+0454 CYRILLIC SMALL LETTER UKRAINIAN IE; *afii10101, ecyrillic
16578 \DeclareTextCommand{\cyrie}{PU}{\84\124}% U+0454
16579 % U+0455 CYRILLIC SMALL LETTER DZE; *afii10102, dzecyrillic
16580 \DeclareTextCommand{\cyrdze}{PU}{\84\125}% U+0455
16581 % U+0456 CYRILLIC SMALL LETTER BYELORUSSIAN-UKRAINIAN I;
16582 % *afii10103, icyrillic
16583 \DeclareTextCommand{\cyrii}{PU}{\84\126}% U+0456
16584 % U+0457 CYRILLIC SMALL LETTER YI; *afii10104, yicyrillic
16585 \DeclareTextCommand{\cyryi}{PU}{\84\127}% U+0457
16586 \DeclareTextCompositeCommand{\"}{PU}{\cyrii}{\84\127}% U+0457
16587 % U+0458 CYRILLIC SMALL LETTER JE; *afii10105, jecyrillic
16588 \DeclareTextCommand{\cyrje}{PU}{\84\130}% U+0458
16589 % U+0459 CYRILLIC SMALL LETTER LJE; *afii10106, ljecyrillic
16590 \DeclareTextCommand{\cyrlje}{PU}{\84\131}% U+0459
16591 % U+045A CYRILLIC SMALL LETTER NJE; *afii10107, njecyrillic
16592 \DeclareTextCommand{\cyrnje}{PU}{\84\132}% U+045A
16593 % U+045B CYRILLIC SMALL LETTER TSHE; *afii10108, tshecyrillic
16594 \DeclareTextCommand{\cyrtshe}{PU}{\84\133}% U+045B
16595 % U+045C CYRILLIC SMALL LETTER KJE; *afii10109, kjecyrillic
16596 \DeclareTextCompositeCommand{\'}{PU}{\cyrk}{\84\134}% U+045C
16597 % U+045D CYRILLIC SMALL LETTER I WITH GRAVE
16598 \DeclareTextCompositeCommand{\`}{PU}{\cyri}{\84\135}% U+045D
16599 % U+045E CYRILLIC SMALL LETTER SHORT U; *afii10110, ushortcyrillic
16600 \DeclareTextCommand{\cyrushrt}{PU}{\84\136}% U+045E
16601 \DeclareTextCompositeCommand{\U}{PU}{\curu}{\84\136}% U+045E
16602 % U+045F CYRILLIC SMALL LETTER DZHE; *afii10193, dzhecyrillic
16603 \DeclareTextCommand{\cyrdzhe}{PU}{\84\137}% U+045F
16604 % U+0460 CYRILLIC CAPITAL LETTER OMEGA; Omegacyrillic
16605 \DeclareTextCommand{\CYROMEGA}{PU}{\84\140}% U+0460
16606 % U+0461 CYRILLIC SMALL LETTER OMEGA; omegacyrillic
16607 \DeclareTextCommand{\cyromega}{PU}{\84\141}% U+0461
16608 % U+0462 CYRILLIC CAPITAL LETTER YAT; Yatcyrillic, *afii10146
16609 \DeclareTextCommand{\CYRYAT}{PU}{\84\142}% U+0462
16610 % U+0463 CYRILLIC SMALL LETTER YAT; *afii10194, yatcyrillic
16611 \DeclareTextCommand{\cyryat}{PU}{\84\143}% U+0463
16612 % U+0464 CYRILLIC CAPITAL LETTER IOTIFIED E; Eiotifiedcyrillic
16613 \DeclareTextCommand{\CYRIOTE}{PU}{\84\144}% U+0464
16614 % U+0465 CYRILLIC SMALL LETTER IOTIFIED E; eiotifiedcyrillic
16615 \DeclareTextCommand{\cyriote}{PU}{\84\145}% U+0465
16616 % U+0466 CYRILLIC CAPITAL LETTER LITTLE YUS; Yuslittlecyrillic
16617 \DeclareTextCommand{\CYRLYUS}{PU}{\84\146}% U+0466
16618 % U+0467 CYRILLIC SMALL LETTER LITTLE YUS; yuslittlecyrillic
16619 \DeclareTextCommand{\cyrlyus}{PU}{\84\147}% U+0467
16620 % U+0468 CYRILLIC CAPITAL LETTER IOTIFIED LITTLE YUS; Yuslittlei-
otifiedcyrillic
16621 \DeclareTextCommand{\CYRIOTLYUS}{PU}{\84\150}% U+0468

16622 % U+0469 CYRILLIC SMALL LETTER IOTIFIED LITTLE YUS; yuslittleiotedcyrillic
16623 \DeclareTextCommand{\cyriotlyus}{PU}{\84\151}% U+0469
16624 % U+046A CYRILLIC CAPITAL LETTER BIG YUS; Yusbigcyrillic
16625 \DeclareTextCommand{\CYRBYUS}{PU}{\84\152}% U+046A
16626 % U+046B CYRILLIC SMALL LETTER BIG YUS; yusbigcyrillic
16627 \DeclareTextCommand{\cyrbyus}{PU}{\84\153}% U+046B
16628 % U+046C CYRILLIC CAPITAL LETTER IOTIFIED BIG YUS; Yusbigiotifiedcyrillic
16629 \DeclareTextCommand{\CYRIOTBYUS}{PU}{\84\154}% U+046C
16630 % U+046D CYRILLIC SMALL LETTER IOTIFIED BIG YUS; yusbigiotifiedcyrillic
16631 \DeclareTextCommand{\cyriotbyus}{PU}{\84\155}% U+046D
16632 % U+046E CYRILLIC CAPITAL LETTER KSI; Ksicyrillic
16633 \DeclareTextCommand{\CYRKSI}{PU}{\84\156}% U+046E
16634 % U+046F CYRILLIC SMALL LETTER KSI; ksicyrillic
16635 \DeclareTextCommand{\cyrksi}{PU}{\84\157}% U+046F
16636 % U+0470 CYRILLIC CAPITAL LETTER PSI; Psicyrillic
16637 \DeclareTextCommand{\CYRPSI}{PU}{\84\160}% U+0470
16638 % U+0471 CYRILLIC SMALL LETTER PSI; psicyrillic
16639 \DeclareTextCommand{\cyrpsi}{PU}{\84\161}% U+0471
16640 % U+0472 CYRILLIC CAPITAL LETTER FITA; Fitacyrillic, *afii10147
16641 \DeclareTextCommand{\CYRFITA}{PU}{\84\162}% U+0472
16642 % U+0473 CYRILLIC SMALL LETTER FITA; *afii10195, fitacyrillic
16643 \DeclareTextCommand{\cyrfita}{PU}{\84\163}% U+0473
16644 % U+0474 CYRILLIC CAPITAL LETTER IZHITSA; Izhitsacyrillic, *afii10148
16645 \DeclareTextCommand{\CYRIZH}{PU}{\84\164}% U+0474
16646 % U+0475 CYRILLIC SMALL LETTER IZHITSA; *afii10196, izhitsacyrillic
16647 \DeclareTextCommand{\cyrizh}{PU}{\84\165}% U+0475
16648 % U+0476 CYRILLIC CAPITAL LETTER IZHITSA WITH DOUBLE GRAVE ACCENT; Izhitsadblgravecyrillic
16649 % GRAVE ACCENT; Izhitsadblgravecyrillic
16650 \DeclareTextCompositeCommand{\C}{PU}{\CYRIZH}{\84\166}% U+0476
16651 % U+0477 CYRILLIC SMALL LETTER IZHITSA WITH DOUBLE GRAVE ACCENT; izhitsadblgravecyrillic
16652 % GRAVE ACCENT; izhitsadblgravecyrillic
16653 \DeclareTextCompositeCommand{\C}{PU}{\cyrizh}{\84\167}% U+0477
16654 % U+0478 CYRILLIC CAPITAL LETTER UK; Ukcyrillic
16655 \DeclareTextCommand{\CYRUK}{PU}{\84\170}% U+0478
16656 % U+0479 CYRILLIC SMALL LETTER UK; ukcyrillic
16657 \DeclareTextCommand{\cyruk}{PU}{\84\171}% U+0479
16658 % U+047A CYRILLIC CAPITAL LETTER ROUND OMEGA; Omegaroundcyrillic
16659 \DeclareTextCommand{\CYROMEGARND}{PU}{\84\172}% U+047A
16660 % U+047B CYRILLIC SMALL LETTER ROUND OMEGA; omegaroundcyrillic
16661 \DeclareTextCommand{\cyromegarnd}{PU}{\84\173}% U+047B
16662 % U+047C CYRILLIC CAPITAL LETTER OMEGA WITH TITLO; Omegatitlocyrillic
16663 \DeclareTextCommand{\CYROMEGATITLO}{PU}{\84\174}% U+047C
16664 % U+047D CYRILLIC SMALL LETTER OMEGA WITH TITLO; omegatitlocyrillic
16665 \DeclareTextCommand{\cyromegatitlo}{PU}{\84\175}% U+047D
16666 % U+047E CYRILLIC CAPITAL LETTER OT; Otcyrillic
16667 \DeclareTextCommand{\CYROT}{PU}{\84\176}% U+047E
16668 % U+047F CYRILLIC SMALL LETTER OT; otcyrillic
16669 \DeclareTextCommand{\cyrot}{PU}{\84\177}% U+047F

16670 % U+0480 CYRILLIC CAPITAL LETTER KOPPA; Koppacyrillic
16671 \DeclareTextCommand{\CYRKOPPA}{PU}{\84\200}% U+0480
16672 % U+0481 CYRILLIC SMALL LETTER KOPPA; koppacyrillic
16673 \DeclareTextCommand{\cyrkoppa}{PU}{\84\201}% U+0481
16674 % U+0482 CYRILLIC THOUSANDS SIGN; thousandcyrillic
16675 \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; dasiapneu-
matacyrilliccmb
\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
16676 % U+048A CYRILLIC CAPITAL LETTER SHORT I WITH TAIL
16677 \DeclareTextCommand{\CYRISHRTDSC}{PU}{\84\212}% U+048A
16678 % U+048B CYRILLIC SMALL LETTER SHORT I WITH TAIL
16679 \DeclareTextCommand{\cyrishrtdsc}{PU}{\84\213}% U+048B
16680 % U+048C CYRILLIC CAPITAL LETTER SEMISOFT SIGN
16681 \DeclareTextCommand{\CYRSEMISFTSN}{PU}{\84\214}% U+048C
16682 % U+048D CYRILLIC SMALL LETTER SEMISOFT SIGN
16683 \DeclareTextCommand{\cyrsemisftsn}{PU}{\84\215}% U+048D
16684 % U+048E CYRILLIC CAPITAL LETTER ER WITH TICK
16685 \DeclareTextCommand{\CYRRTICK}{PU}{\84\216}% U+048E
16686 % U+048F CYRILLIC SMALL LETTER ER WITH TICK
16687 \DeclareTextCommand{\cyrrtick}{PU}{\84\217}% U+048F
16688 % U+0490 CYRILLIC CAPITAL LETTER GHE WITH UPTURN; Gheupturn-
cyrillic, *afii10050
16689 \DeclareTextCommand{\CYRGUP}{PU}{\84\220}% U+0490
16690 % U+0491 CYRILLIC SMALL LETTER GHE WITH UPTURN; *afii10098, ghe-
upturncyrillic
16691 \DeclareTextCommand{\cyrgup}{PU}{\84\221}% U+0491
16692 % U+0492 CYRILLIC CAPITAL LETTER GHE WITH STROKE; Ghestroke-
cyrillic
16693 \DeclareTextCommand{\CYRGHCRS}{PU}{\84\222}% U+0492
16694 % U+0493 CYRILLIC SMALL LETTER GHE WITH STROKE; ghestrokecyrillic
16695 \DeclareTextCommand{\cyrghcrs}{PU}{\84\223}% U+0493
16696 % U+0494 CYRILLIC CAPITAL LETTER GHE WITH MIDDLE HOOK;
16697 % Ghemiddlehookcyrillic
16698 \DeclareTextCommand{\CYRGHK}{PU}{\84\224}% U+0494
16699 % U+0495 CYRILLIC SMALL LETTER GHE WITH MIDDLE HOOK;
16700 % ghemiddlehookcyrillic
16701 \DeclareTextCommand{\cyrghk}{PU}{\84\225}% U+0495
16702 % U+0496 CYRILLIC CAPITAL LETTER ZHE WITH DESCENDER;
16703 % Zhedescendercyrillic
16704 \DeclareTextCommand{\CYRZHDSC}{PU}{\84\226}% U+0496
16705 % U+0497 CYRILLIC SMALL LETTER ZHE WITH DESCENDER;
16706 % zhedescendercyrillic
16707 \DeclareTextCommand{\cyrzhdsc}{PU}{\84\227}% U+0497
16708 % U+0498 CYRILLIC CAPITAL LETTER ZE WITH DESCENDER; Zedescen-
deryrillic

16709 \DeclareTextCommand{\CYRZDSC}{PU}{\84\230}% U+0498
16710 \DeclareTextCompositeCommand{c}{PU}{\CYRZ}{\84\230}% U+0498
16711 % U+0499 CYRILLIC SMALL LETTER ZE WITH DESCENDER; zedescender-cyrillic
16712 \DeclareTextCommand{\cyrzdsc}{PU}{\84\231}% U+0499
16713 \DeclareTextCompositeCommand{c}{PU}{\cyrz}{\84\231}% U+0499
16714 % U+049A CYRILLIC CAPITAL LETTER KA WITH DESCENDER; Kadescendercyrillic
16715 \DeclareTextCommand{\CYRKDSC}{PU}{\84\232}% U+049A
16716 % U+049B CYRILLIC SMALL LETTER KA WITH DESCENDER; kadescendercyrillic
16717 \DeclareTextCommand{\cyrkdsc}{PU}{\84\233}% U+049B
16718 % U+049C CYRILLIC CAPITAL LETTER KA WITH VERTICAL STROKE;
16719 % Kavertikalstrokecyrillic
16720 \DeclareTextCommand{\CYRKVCRS}{PU}{\84\234}% U+049C
16721 % U+049D CYRILLIC SMALL LETTER KA WITH VERTICAL STROKE;
16722 % kavertikalstrokecyrillic
16723 \DeclareTextCommand{\cyrkvcrs}{PU}{\84\235}% U+049D
16724 % U+049E CYRILLIC CAPITAL LETTER KA WITH STROKE; Kastrokecyrillic
16725 \DeclareTextCommand{\CYRKHCRS}{PU}{\84\236}% U+049E
16726 % U+049F CYRILLIC SMALL LETTER KA WITH STROKE; kastrokecyrillic
16727 \DeclareTextCommand{\cyrkhcrs}{PU}{\84\237}% U+049F
16728 % U+04A0 CYRILLIC CAPITAL LETTER BASHKIR KA; Kabashkircyrillic
16729 \DeclareTextCommand{\CYRKBEAK}{PU}{\84\240}% U+04A0
16730 % U+04A1 CYRILLIC SMALL LETTER BASHKIR KA; kabashkircyrillic
16731 \DeclareTextCommand{\cyrkbeak}{PU}{\84\241}% U+04A1
16732 % U+04A2 CYRILLIC CAPITAL LETTER EN WITH DESCENDER; Endescendercyrillic
16733 \DeclareTextCommand{\CYRNDSC}{PU}{\84\242}% U+04A2
16734 % U+04A3 CYRILLIC SMALL LETTER EN WITH DESCENDER; endescendercyrillic
16735 \DeclareTextCommand{\cyrndsc}{PU}{\84\243}% U+04A3
16736 % U+04A4 CYRILLIC CAPITAL LIGATURE EN GHE; Enghecyrillic
16737 \DeclareTextCommand{\CYRNG}{PU}{\84\244}% U+04A4
16738 % U+04A5 CYRILLIC SMALL LIGATURE EN GHE; enghecyrillic
16739 \DeclareTextCommand{\cyrng}{PU}{\84\245}% U+04A5
16740 % U+04A6 CYRILLIC CAPITAL LETTER PE WITH MIDDLE HOOK; Pemiddlehookcyrillic
16741 \DeclareTextCommand{\CYRPHK}{PU}{\84\246}% U+04A6
16742 % U+04A7 CYRILLIC SMALL LETTER PE WITH MIDDLE HOOK; pemiddlehookcyrillic
16743 \DeclareTextCommand{\cyrphk}{PU}{\84\247}% U+04A7
16744 % U+04A8 CYRILLIC CAPITAL LETTER ABKHASIAN HA; Haabkhasiancyrillic
16745 \DeclareTextCommand{\CYRABHHA}{PU}{\84\250}% U+04A8
16746 % U+04A9 CYRILLIC SMALL LETTER ABKHASIAN HA; haabkhasiancyrillic
16747 \DeclareTextCommand{\cyrabhha}{PU}{\84\251}% U+04A9
16748 % U+04AA CYRILLIC CAPITAL LETTER ES WITH DESCENDER; Esdescendercyrillic
16749 \DeclareTextCommand{\CYRSDSC}{PU}{\84\252}% U+04AA
16750 \DeclareTextCompositeCommand{k}{PU}{\CYRS}{\84\252}% U+04AA
16751 % U+04AB CYRILLIC SMALL LETTER ES WITH DESCENDER; esdescendercyrillic
16752 \DeclareTextCommand{\cyrsdsc}{PU}{\84\253}% U+04AB

16753 \DeclareTextCompositeCommand{\k}{PU}{\cyr}{\84\253}% U+04AB
16754 % U+04AC CYRILLIC CAPITAL LETTER TE WITH DESCENDER; Tedescendercyrillic
16755 \DeclareTextCommand{\CYRTDSC}{PU}{\84\254}% U+04AC
16756 % U+04AD CYRILLIC SMALL LETTER TE WITH DESCENDER; tedescendercyrillic
16757 \DeclareTextCommand{\cyrt dsc}{PU}{\84\255}% U+04AD
16758 % U+04AE CYRILLIC CAPITAL LETTER STRAIGHT U; Ustraightcyrillic
16759 \DeclareTextCommand{\CYRY}{PU}{\84\256}% U+04AE
16760 % U+04AF CYRILLIC SMALL LETTER STRAIGHT U; ustraightcyrillic
16761 \DeclareTextCommand{\cyry}{PU}{\84\257}% U+04AF
16762 % U+04B0 CYRILLIC CAPITAL LETTER STRAIGHT U WITH STROKE; Ustraightstrokecyrillic
16763 \DeclareTextCommand{\CYRYHCRS}{PU}{\84\260}% U+04B0
16764 % U+04B1 CYRILLIC SMALL LETTER STRAIGHT U WITH STROKE; ustraightstrokecyrillic
16765 \DeclareTextCommand{\cyryhcrs}{PU}{\84\261}% U+04B1
16766 % U+04B2 CYRILLIC CAPITAL LETTER HA WITH DESCENDER; Hdescendercyrillic
16767 \DeclareTextCommand{\CYRHDSC}{PU}{\84\262}% U+04B2
16768 % U+04B3 CYRILLIC SMALL LETTER HA WITH DESCENDER; hadescendercyrillic
16769 \DeclareTextCommand{\cyrhdsc}{PU}{\84\263}% U+04B3
16770 % U+04B4 CYRILLIC CAPITAL LIGATURE TE TSE; Tetsecyrillic
16771 \DeclareTextCommand{\CYRTETSE}{PU}{\84\264}% U+04B4
16772 % U+04B5 CYRILLIC SMALL LIGATURE TE TSE; tetsecyrillic
16773 \DeclareTextCommand{\cyrtetse}{PU}{\84\265}% U+04B5
16774 % U+04B6 CYRILLIC CAPITAL LETTER CHE WITH DESCENDER;
16775 % Chedescendercyrillic
16776 \DeclareTextCommand{\CYRCHRDSC}{PU}{\84\266}% U+04B6
16777 % U+04B7 CYRILLIC SMALL LETTER CHE WITH DESCENDER; chedescendercyrillic
16778 \DeclareTextCommand{\cyrchr dsc}{PU}{\84\267}% U+04B7
16779 % U+04B8 CYRILLIC CAPITAL LETTER CHE WITH VERTICAL STROKE;
16780 % Cheverticalstrokecyrillic
16781 \DeclareTextCommand{\CYRCHVCRS}{PU}{\84\270}% U+04B8
16782 % U+04B9 CYRILLIC SMALL LETTER CHE WITH VERTICAL STROKE;
16783 % cheverticalstrokecyrillic
16784 \DeclareTextCommand{\cyrchvcrs}{PU}{\84\271}% U+04B9
16785 % U+04BA CYRILLIC CAPITAL LETTER SHHA; Shhacyrillic
16786 \DeclareTextCommand{\CYRSHHA}{PU}{\84\272}% U+04BA
16787 % U+04BB CYRILLIC SMALL LETTER SHHA; shhacyrillic
16788 \DeclareTextCommand{\cyrshha}{PU}{\84\273}% U+04BB
16789 % U+04BC CYRILLIC CAPITAL LETTER ABKHASIAN CHE; Cheabkhasiancyrillic
16790 \DeclareTextCommand{\CYRABHCH}{PU}{\84\274}% U+04BC
16791 % U+04BD CYRILLIC SMALL LETTER ABKHASIAN CHE; cheabkhasiancyrillic
16792 \DeclareTextCommand{\cyrabhch}{PU}{\84\275}% U+04BD
16793 % U+04BE CYRILLIC CAPITAL LETTER ABKHASIAN CHE WITH DESCENDER; Chedescenderabkhasiancyrillic
16794 \DeclareTextCommand{\CYRABHCHDSC}{PU}{\84\276}% U+04BE
16795 \DeclareTextCompositeCommand{\k}{PU}{\CYRABHCH}{\84\276}% U+04BE
16796 % U+04BF CYRILLIC SMALL LETTER ABKHASIAN CHE WITH DESCEN-

DER; chedescenderabkhasiancyrillic
 16797 \DeclareTextCommand{\cyrahchdsc}{PU}{\84\277}% U+04BF
 16798 \DeclareTextCompositeCommand{\k}{PU}{\cyrahch}{\84\277}% U+04BF
 16799 % U+04C0 CYRILLIC LETTER PALOCHKA; palochkacyrillic
 16800 \DeclareTextCommand{\CYRpalochka}{PU}{\84\300}% U+04C0
 16801 % U+04C1 CYRILLIC CAPITAL LETTER ZHE WITH BREVE; Zhebrevecyrillic
 16802 \DeclareTextCompositeCommand{\U}{PU}{\CYRZH}{\84\301}% U+04C1
 16803 % U+04C2 CYRILLIC SMALL LETTER ZHE WITH BREVE; zhebrevecyrillic
 16804 \DeclareTextCompositeCommand{\U}{PU}{\cyrzh}{\84\302}% U+04C2
 16805 % U+04C3 CYRILLIC CAPITAL LETTER KA WITH HOOK; Kahookcyrillic
 16806 \DeclareTextCommand{\CYRKHK}{PU}{\84\303}% U+04C3
 16807 % U+04C4 CYRILLIC SMALL LETTER KA WITH HOOK; kahookcyrillic
 16808 \DeclareTextCommand{\cyrkhk}{PU}{\84\304}% U+04C4
 16809 % U+04C5 CYRILLIC CAPITAL LETTER EL WITH TAIL
 16810 \DeclareTextCommand{\CYRLDSC}{PU}{\84\305}% U+04C5
 16811 % U+04C6 CYRILLIC SMALL LETTER EL WITH TAIL
 16812 \DeclareTextCommand{\cyrldsc}{PU}{\84\306}% U+04C6
 16813 % U+04C7 CYRILLIC CAPITAL LETTER EN WITH HOOK; Enhookcyrillic
 16814 \DeclareTextCommand{\CYRNHK}{PU}{\84\307}% U+04C7
 16815 % U+04C8 CYRILLIC SMALL LETTER EN WITH HOOK; enhookcyrillic
 16816 \DeclareTextCommand{\cyrnhk}{PU}{\84\310}% U+04C8
 16817 % U+04CB CYRILLIC CAPITAL LETTER KHAKASSIAN CHE; Chekhakas-
 siancyrillic
 16818 \DeclareTextCommand{\CYRCHLDSC}{PU}{\84\313}% U+04CB
 16819 % U+04CC CYRILLIC SMALL LETTER KHAKASSIAN CHE; chekhakassian-
 cyrillic
 16820 \DeclareTextCommand{\cyrchldsc}{PU}{\84\314}% U+04CC
 16821 % U+04CD CYRILLIC CAPITAL LETTER EM WITH TAIL
 16822 \DeclareTextCommand{\CYRMDSC}{PU}{\84\315}% U+04CD
 16823 % U+04CE CYRILLIC SMALL LETTER EM WITH TAIL
 16824 \DeclareTextCommand{\cyrmdsc}{PU}{\84\316}% U+04CE
 \84\317: U+04CF CYRILLIC SMALL LETTER PALOCHKA
 16825 % U+04D0 CYRILLIC CAPITAL LETTER A WITH BREVE; Abrevecyrillic
 16826 \DeclareTextCompositeCommand{\U}{PU}{\CYRA}{\84\320}% U+04D0
 16827 % U+04D1 CYRILLIC SMALL LETTER A WITH BREVE; abrevecyrillic
 16828 \DeclareTextCompositeCommand{\U}{PU}{\cyra}{\84\321}% U+04D1
 16829 % U+04D2 CYRILLIC CAPITAL LETTER A WITH DIAERESIS; Adieresiscyril-
 lic
 16830 \DeclareTextCompositeCommand{\"}{PU}{\CYRA}{\84\322}% U+04D2
 16831 % U+04D3 CYRILLIC SMALL LETTER A WITH DIAERESIS; adieresiscyrillic
 16832 \DeclareTextCompositeCommand{\"}{PU}{\cyra}{\84\323}% U+04D3
 16833 % U+04D4 CYRILLIC CAPITAL LIGATURE A IE; Aiecyrillic
 16834 \DeclareTextCommand{\CYRAE}{PU}{\84\324}% U+04D4
 16835 % U+04D5 CYRILLIC SMALL LIGATURE A IE; aiecyrillic
 16836 \DeclareTextCommand{\cyrae}{PU}{\84\325}% U+04D5
 16837 % U+04D6 CYRILLIC CAPITAL LETTER IE WITH BREVE; Iebrevecyrillic
 16838 \DeclareTextCompositeCommand{\U}{PU}{\CYRE}{\84\326}% U+04D6
 16839 % U+04D7 CYRILLIC SMALL LETTER IE WITH BREVE; iebrevecyrillic
 16840 \DeclareTextCompositeCommand{\U}{PU}{\cyre}{\84\327}% U+04D7
 16841 % U+04D8 CYRILLIC CAPITAL LETTER SCHWA; Schwacyrillic
 16842 \DeclareTextCommand{\CYRSCHWA}{PU}{\84\330}% U+04D8
 16843 % U+04D9 CYRILLIC SMALL LETTER SCHWA; *afii10846, schwacyrillic
 16844 \DeclareTextCommand{\cyrschwa}{PU}{\84\331}% U+04D9
 16845 % U+04DA CYRILLIC CAPITAL LETTER SCHWA WITH DIAERESIS;

16846 % Schwadieresiscyrillic
16847 \DeclareTextCompositeCommand{"}{PU}{\CYRSCHWA}{\84\332}% U+04DA
16848 % U+04DB CYRILLIC SMALL LETTER SCHWA WITH DIAERESIS;
16849 % schwadieresiscyrillic
16850 \DeclareTextCompositeCommand{"}{PU}{\cyrschwa}{\84\333}% U+04DB
16851 % U+04DC CYRILLIC CAPITAL LETTER ZHE WITH DIAERESIS; Zhedieresiscyrillic
16852 \DeclareTextCompositeCommand{"}{PU}{\CYRZH}{\84\334}% U+04DC
16853 % U+04DD CYRILLIC SMALL LETTER ZHE WITH DIAERESIS; zhedieresiscyrillic
16854 \DeclareTextCompositeCommand{"}{PU}{\cyrz}{\84\335}% U+04DD
16855 % U+04DE CYRILLIC CAPITAL LETTER ZE WITH DIAERESIS; Zedieresiscyrillic
16856 \DeclareTextCompositeCommand{"}{PU}{\CYRZ}{\84\336}% U+04DE
16857 % U+04DF CYRILLIC SMALL LETTER ZE WITH DIAERESIS; zedieresiscyrillic
16858 \DeclareTextCompositeCommand{"}{PU}{\cyrz}{\84\337}% U+04DF
16859 % U+04E0 CYRILLIC CAPITAL LETTER ABKHASIAN DZE; Dzeabkhasiancyrillic
16860 \DeclareTextCommand{\CYRABHDZE}{PU}{\84\340}% U+04E0
16861 % U+04E1 CYRILLIC SMALL LETTER ABKHASIAN DZE; dzeabkhasiancyrillic
16862 \DeclareTextCommand{\cyrabhdze}{PU}{\84\341}% U+04E1
16863 % U+04E2 CYRILLIC CAPITAL LETTER I WITH MACRON; Imacroncyrillic
16864 \DeclareTextCompositeCommand{=} {PU}{\CYRI}{\84\342}% U+04E2
16865 % U+04E3 CYRILLIC SMALL LETTER I WITH MACRON; imacroncyrillic
16866 \DeclareTextCompositeCommand{=} {PU}{\cyri}{\84\343}% U+04E3
16867 % U+04E4 CYRILLIC CAPITAL LETTER I WITH DIAERESIS; Idieresiscyrillic
16868 \DeclareTextCompositeCommand{"}{PU}{\CYRI}{\84\344}% U+04E4
16869 % U+04E5 CYRILLIC SMALL LETTER I WITH DIAERESIS; idieresiscyrillic
16870 \DeclareTextCompositeCommand{"}{PU}{\cyri}{\84\345}% U+04E5
16871 % U+04E6 CYRILLIC CAPITAL LETTER O WITH DIAERESIS; Odieresiscyrillic
16872 \DeclareTextCompositeCommand{"}{PU}{\CYRO}{\84\346}% U+04E6
16873 % U+04E7 CYRILLIC SMALL LETTER O WITH DIAERESIS; odieresiscyrillic
16874 \DeclareTextCompositeCommand{"}{PU}{\cyro}{\84\347}% U+04E7
16875 % U+04E8 CYRILLIC CAPITAL LETTER BARRED O; Obarredcyrillic
16876 \DeclareTextCommand{\CYROTLD}{PU}{\84\350}% U+04E8
16877 % U+04E9 CYRILLIC SMALL LETTER BARRED O; obarredcyrillic
16878 \DeclareTextCommand{\cyrotld}{PU}{\84\351}% U+04E9
16879 % U+04EA CYRILLIC CAPITAL LETTER BARRED O WITH DIAERESIS;
16880 % Obarreddieresiscyrillic
16881 \DeclareTextCompositeCommand{"}{PU}{\CYROTLD}{\84\352}% U+04EA
16882 % U+04EB CYRILLIC SMALL LETTER BARRED O WITH DIAERESIS;
16883 % obarreddieresiscyrillic
16884 \DeclareTextCompositeCommand{"}{PU}{\cyrotld}{\84\353}% U+04EB
16885 % U+04EC CYRILLIC CAPITAL LETTER E WITH DIAERESIS
16886 \DeclareTextCompositeCommand{"}{PU}{\CYREREV}{\84\354}% U+04EC
16887 % U+04ED CYRILLIC SMALL LETTER E WITH DIAERESIS
16888 \DeclareTextCompositeCommand{"}{PU}{\cyrerev}{\84\355}% U+04ED
16889 % U+04EE CYRILLIC CAPITAL LETTER U WITH MACRON; Umacroncyrillic
16890 \DeclareTextCompositeCommand{=} {PU}{\CYRU}{\84\356}% U+04EE
16891 % U+04EF CYRILLIC SMALL LETTER U WITH MACRON; umacroncyrillic
16892 \DeclareTextCompositeCommand{=} {PU}{\cyru}{\84\357}% U+04EF

16893 % U+04F0 CYRILLIC CAPITAL LETTER U WITH DIAERESIS; Udieresiscyrillic
 16894 \DeclareTextCompositeCommand{"}{PU}{\CYRU}{\84\360}% U+04F0
 16895 % U+04F1 CYRILLIC SMALL LETTER U WITH DIAERESIS; udieresiscyrillic
 16896 \DeclareTextCompositeCommand{"}{PU}{\cyru}{\84\361}% U+04F1
 16897 % U+04F2 CYRILLIC CAPITAL LETTER U WITH DOUBLE ACUTE; Uhungarumlautcyrillic
 16898 \DeclareTextCompositeCommand{H}{PU}{\CYRU}{\84\362}% U+04F2
 16899 % U+04F3 CYRILLIC SMALL LETTER U WITH DOUBLE ACUTE; uhungarumlautcyrillic
 16900 \DeclareTextCompositeCommand{H}{PU}{\cyru}{\84\363}% U+04F3
 16901 % U+04F4 CYRILLIC CAPITAL LETTER CHE WITH DIAERESIS; Chedieresiscyrillic
 16902 \DeclareTextCompositeCommand{"}{PU}{\CYRCH}{\84\364}% U+04F4
 16903 % U+04F5 CYRILLIC SMALL LETTER CHE WITH DIAERESIS; chedieresiscyrillic
 16904 \DeclareTextCompositeCommand{"}{PU}{\cyrch}{\84\365}% U+04F5
 16905 % U+04F6 CYRILLIC CAPITAL LETTER GHE WITH DESCENDER
 16906 \DeclareTextCommand{\CYRGDSC}{PU}{\84\366}% U+04F6
 16907 % U+04F7 CYRILLIC SMALL LETTER GHE WITH DESCENDER
 16908 \DeclareTextCommand{\cyrgdsc}{PU}{\84\367}% U+04F7
 16909 % U+04F8 CYRILLIC CAPITAL LETTER YERU WITH DIAERESIS; Yerudieresiscyrillic
 16910 \DeclareTextCompositeCommand{"}{PU}{\CYRERY}{\84\370}% U+04F8
 16911 % U+04F9 CYRILLIC SMALL LETTER YERU WITH DIAERESIS; yerudieresiscyrillic
 16912 \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
 16913 % U+04FC CYRILLIC CAPITAL LETTER HA WITH HOOK
 16914 \DeclareTextCommand{\CYRHHK}{PU}{\84\374}% U+04FC
 16915 % U+04FD CYRILLIC SMALL LETTER HA WITH HOOK
 16916 \DeclareTextCommand{\cyrhkh}{PU}{\84\375}% U+04FD
 16917 \fi
 \84\376: U+04FE CYRILLIC CAPITAL LETTER HA WITH STROKE
 \84\377: U+04FF CYRILLIC SMALL LETTER HA WITH STROKE

47.2.11 Hebrew: U+0590 to U+05FF

Macro names are taken from `he8enc.def`. `hebrew` is only loaded if `\hebdalet` is defined

16918 \ifx\hebdalet\@undefined\else
 16919 % U+05C3 HEBREW PUNCTUATION SOF PASUQ
 16920 \DeclareTextCommand{\sofpasuq}{PU}{\85\303}% U+05C3
 16921 % U+05D0 HEBREW LETTER ALEF
 16922 \DeclareTextCommand{\hebalef}{PU}{\85\320}% U+05D0
 16923 % U+05D1 HEBREW LETTER BET
 16924 \DeclareTextCommand{\hebbet}{PU}{\85\321}% U+05D1
 16925 % U+05D2 HEBREW LETTER GIMEL
 16926 \DeclareTextCommand{\hebgimel}{PU}{\85\322}% U+05D2

16927 % U+05D3 HEBREW LETTER DALET
16928 \DeclareTextCommand{\hebdalet}{PU}{\85\323}% U+05D3
16929 % U+05D4 HEBREW LETTER HE
16930 \DeclareTextCommand{\hebhe}{PU}{\85\324}% U+05D4
16931 % U+05D5 HEBREW LETTER VAV
16932 \DeclareTextCommand{\hebvav}{PU}{\85\325}% U+05D5
16933 % U+05D6 HEBREW LETTER ZAYIN
16934 \DeclareTextCommand{\hebzayin}{PU}{\85\326}% U+05D6
16935 % U+05D7 HEBREW LETTER HET
16936 \DeclareTextCommand{\hebhet}{PU}{\85\327}% U+05D7
16937 % U+05D8 HEBREW LETTER TET
16938 \DeclareTextCommand{\hebtet}{PU}{\85\330}% U+05D8
16939 % U+05D9 HEBREW LETTER YOD
16940 \DeclareTextCommand{\hebyod}{PU}{\85\331}% U+05D9
16941 % U+05DA HEBREW LETTER FINAL KAF
16942 \DeclareTextCommand{\hebfinalkaf}{PU}{\85\332}% U+05DA
16943 % U+05DB HEBREW LETTER KAF
16944 \DeclareTextCommand{\hebkaf}{PU}{\85\333}% U+05DB
16945 % U+05DC HEBREW LETTER LAMED
16946 \DeclareTextCommand{\heblamed}{PU}{\85\334}% U+05DC
16947 % U+05DD HEBREW LETTER FINAL MEM
16948 \DeclareTextCommand{\hebfinalmem}{PU}{\85\335}% U+05DD
16949 % U+05DE HEBREW LETTER MEM
16950 \DeclareTextCommand{\hebmem}{PU}{\85\336}% U+05DE
16951 % U+05DF HEBREW LETTER FINAL NUN
16952 \DeclareTextCommand{\hebfinalnun}{PU}{\85\337}% U+05DF
16953 % U+05E0 HEBREW LETTER NUN
16954 \DeclareTextCommand{\hebnun}{PU}{\85\340}% U+05E0
16955 % U+05E1 HEBREW LETTER SAMEKH
16956 \DeclareTextCommand{\hebsamekh}{PU}{\85\341}% U+05E1
16957 % U+05E2 HEBREW LETTER AYIN
16958 \DeclareTextCommand{\hebayin}{PU}{\85\342}% U+05E2
16959 % U+05E3 HEBREW LETTER FINAL PE
16960 \DeclareTextCommand{\hebfinalpe}{PU}{\85\343}% U+05E3
16961 % U+05E4 HEBREW LETTER PE
16962 \DeclareTextCommand{\hebpe}{PU}{\85\344}% U+05E4
16963 % U+05E5 HEBREW LETTER FINAL TSADI
16964 \DeclareTextCommand{\hebfinaltsadi}{PU}{\85\345}% U+05E5
16965 % U+05E6 HEBREW LETTER TSADI
16966 \DeclareTextCommand{\hebtsadi}{PU}{\85\346}% U+05E6
16967 % U+05E7 HEBREW LETTER QOF
16968 \DeclareTextCommand{\hebqof}{PU}{\85\347}% U+05E7
16969 % U+05E8 HEBREW LETTER RESH
16970 \DeclareTextCommand{\hebresh}{PU}{\85\350}% U+05E8
16971 % U+05E9 HEBREW LETTER SHIN
16972 \DeclareTextCommand{\hebshin}{PU}{\85\351}% U+05E9
16973 %* \hebshin -> \hebsin (he8)
16974 % U+05EA HEBREW LETTER TAV
16975 \DeclareTextCommand{\hebtav}{PU}{\85\352}% U+05EA
16976 % U+05F0 HEBREW LIGATURE YIDDISH DOUBLE VAV
16977 \DeclareTextCommand{\doublevav}{PU}{\85\360}% U+05F0
16978 % U+05F1 HEBREW LIGATURE YIDDISH VAV YOD
16979 \DeclareTextCommand{\vavyod}{PU}{\85\361}% U+05F1
16980 % U+05F2 HEBREW LIGATURE YIDDISH DOUBLE YOD

16981 \DeclareTextCommand{\doubleyod}{PU}{\85\362}% U+05F2
16982 \fi

47.2.12 Thai: U+0E00 to U+0E7F

16983 % U+0E3F THAI CURRENCY SYMBOL BAHT; bahtthai
16984 \DeclareTextCommand{\textbaht}{PU}{\9016\077}% U+0E3F

47.2.13 Phonetic Extensions: U+1D00 to U+1D7F

16985 % U+1D00 LATIN LETTER SMALL CAPITAL A; \textscA (tipa)
16986 \DeclareTextCommand{\textscA}{PU}{\9035\000}% U+1D00
16987 % U+1D05 LATIN LETTER SMALL CAPITAL D; \scd (wsuipa)
16988 \DeclareTextCommand{\textscd}{PU}{\9035\005}% U+1D05
16989 % U+1D07 LATIN LETTER SMALL CAPITAL E; \textscE (tipa)
16990 \DeclareTextCommand{\textscE}{PU}{\9035\007}% U+1D07
16991 % U+1D0A LATIN LETTER SMALL CAPITAL J; \textscJ (tipa)
16992 \DeclareTextCommand{\textscJ}{PU}{\9035\012}% U+1D0A
16993 % U+1D0B LATIN LETTER SMALL CAPITAL K; \textscK (tipx)
16994 \DeclareTextCommand{\textPUSck}{PU}{\9035\013}% U+1D0B
16995 %* \textPUSck -> \textscK (tipx)
16996 % U+1D0D LATIN LETTER SMALL CAPITAL M; \textscM (tipx)
16997 \DeclareTextCommand{\textPUScm}{PU}{\9035\015}% U+1D0D
16998 %* \textPUScm -> \textscM (tipx)
16999 % U+1D18 LATIN LETTER SMALL CAPITAL P; \textscP (tipx)
17000 \DeclareTextCommand{\textPUScp}{PU}{\9035\030}% U+1D18
17001 %* \textPUScp -> \textscP (tipx)
17002 % U+1D19 LATIN LETTER SMALL CAPITAL REVERSED R; \textrevscr (tipx)
17003 \DeclareTextCommand{\textPUrevscr}{PU}{\9035\031}% U+1D19
17004 %* \textPUrevscr -> \textrevscr (tipx)
17005 % U+1D1C LATIN LETTER SMALL CAPITAL U; \textscU (tipa), \scu (wsuipa)
17006 \DeclareTextCommand{\textscU}{PU}{\9035\034}% U+1D1C
17007 % U+1D62 LATIN SUBSCRIPT SMALL LETTER I
17008 \DeclareTextCommand{\textiinferior}{PU}{\9035\142}% U+1D62
17009 % U+1D63 LATIN SUBSCRIPT SMALL LETTER R
17010 \DeclareTextCommand{\extrinferior}{PU}{\9035\143}% U+1D63
17011 % U+1D64 LATIN SUBSCRIPT SMALL LETTER U
17012 \DeclareTextCommand{\textuinferior}{PU}{\9035\144}% U+1D64
17013 % U+1D65 LATIN SUBSCRIPT SMALL LETTER V
17014 \DeclareTextCommand{\textvinferior}{PU}{\9035\145}% U+1D65
17015 % U+1D66 GREEK SUBSCRIPT SMALL LETTER BETA
17016 \DeclareTextCommand{\textbetainferior}{PU}{\9035\146}% U+1D66
17017 % U+1D67 GREEK SUBSCRIPT SMALL LETTER GAMMA
17018 \DeclareTextCommand{\textgammainferior}{PU}{\9035\147}% U+1D67
17019 % U+1D68 GREEK SUBSCRIPT SMALL LETTER RHO
17020 \DeclareTextCommand{\textrhoinferior}{PU}{\9035\150}% U+1D68
17021 % U+1D69 GREEK SUBSCRIPT SMALL LETTER PHI
17022 \DeclareTextCommand{\textphiinferior}{PU}{\9035\151}% U+1D69
17023 % U+1D6A GREEK SUBSCRIPT SMALL LETTER CHI
17024 \DeclareTextCommand{\textchiinferior}{PU}{\9035\152}% U+1D6A
17025 % U+1D7B LATIN SMALL CAPITAL LETTER I WITH STROKE;
17026 % \barsci (wsuipa)
17027 \DeclareTextCommand{\textbarsci}{PU}{\9035\173}% U+1D7B
17028 % U+1D7D LATIN SMALL LETTER P WITH STROKE; \barp (wsuipa)
17029 \DeclareTextCommand{\textbarp}{PU}{\9035\175}% U+1D7D

17030 % U+1D7E LATIN SMALL CAPITAL LETTER U WITH STROKE;
 17031 % \barscu (wsuipa)
 17032 \DeclareTextCommand{\textbarscu}{PU}{\9035\176}%* U+1D7E

47.2.14 Phonetic Extensions Supplement: U+1D80 to U+1DBF

17033 % U+1D8F LATIN SMALL LETTER A WITH RETROFLEX HOOK; \texttrhooka (tipx)
 17034 \DeclareTextCommand{\textPurhooka}{PU}{\9035\217}% U+1D8F
 17035 %* \textPurhooka -> \texttrhooka (tipx)
 17036 % U+1D91 LATIN SMALL LETTER D WITH HOOK AND TAIL; \texthtrtaild (tipa)
 17037 \DeclareTextCommand{\texthtrtaild}{PU}{\9035\221}%* U+1D91
 17038 % U+1D92 LATIN SMALL LETTER E WITH RETROFLEX HOOK; \texttrhooke (tipx)
 17039 \DeclareTextCommand{\textPurhooke}{PU}{\9035\222}% U+1D92
 17040 %* \textPurhooke -> \texttrhooke (tipx)
 17041 % U+1D93 LATIN SMALL LETTER OPEN E WITH RETROFLEX HOOK;
 17042 % \textrhookepsilon (tipx)
 17043 \DeclareTextCommand{\textPurhookepsilon}{PU}{\9035\223}% U+1D93
 17044 %* \textPurhookepsilon -> \textrhookepsilon (tipx)
 17045 % U+1D97 LATIN SMALL LETTER OPEN O WITH RETROFLEX HOOK;
 17046 % \textrhookopeno (tipx)
 17047 \DeclareTextCommand{\textPurhookopeno}{PU}{\9035\227}% U+1D97
 17048 %* \textPurhookopeno -> \textrhookopeno (tipx)

47.2.15 Latin Extended Additional: U+1E00 to U+1EFF

17049 % U+1E00 LATIN CAPITAL LETTER A WITH RING BELOW; Aringbelow
 17050 \DeclareTextCompositeCommand{\textsubring}{PU}{A}{\9036\000}% U+1E00
 17051 % U+1E01 LATIN SMALL LETTER A WITH RING BELOW; aringbelow
 17052 \DeclareTextCompositeCommand{\textsubring}{PU}{a}{\9036\001}% U+1E01
 17053 % U+1E02 LATIN CAPITAL LETTER B WITH DOT ABOVE; Bdotaccent
 17054 \DeclareTextCompositeCommand{\.}{PU}{B}{\9036\002}% U+1E02
 17055 % U+1E03 LATIN SMALL LETTER B WITH DOT ABOVE; bdotaccent
 17056 \DeclareTextCompositeCommand{\.}{PU}{b}{\9036\003}% U+1E03
 17057 % U+1E04 LATIN CAPITAL LETTER B WITH DOT BELOW; Bdotbelow
 17058 \DeclareTextCompositeCommand{\d}{PU}{B}{\9036\004}% U+1E04
 17059 % U+1E05 LATIN SMALL LETTER B WITH DOT BELOW; bdotbelow
 17060 \DeclareTextCompositeCommand{\d}{PU}{b}{\9036\005}% U+1E05
 17061 % U+1E06 LATIN CAPITAL LETTER B WITH LINE BELOW; Blinebelow
 17062 \DeclareTextCompositeCommand{\b}{PU}{B}{\9036\006}% U+1E06
 17063 % U+1E07 LATIN SMALL LETTER B WITH LINE BELOW; blinebelow
 17064 \DeclareTextCompositeCommand{\b}{PU}{b}{\9036\007}% U+1E07
 17065 % U+1E0A LATIN CAPITAL LETTER D WITH DOT ABOVE; Ddotaccent
 17066 \DeclareTextCompositeCommand{\.}{PU}{D}{\9036\012}% U+1E0A
 17067 % U+1E0B LATIN SMALL LETTER D WITH DOT ABOVE; ddotaccent
 17068 \DeclareTextCompositeCommand{\.}{PU}{d}{\9036\013}% U+1E0B
 17069 % U+1E0C LATIN CAPITAL LETTER D WITH DOT BELOW; Ddotbelow
 17070 \DeclareTextCompositeCommand{\d}{PU}{D}{\9036\014}% U+1E0C
 17071 % U+1E0D LATIN SMALL LETTER D WITH DOT BELOW; ddotbelow
 17072 \DeclareTextCompositeCommand{\d}{PU}{d}{\9036\015}% U+1E0D
 17073 % U+1E0E LATIN CAPITAL LETTER D WITH LINE BELOW; Dlinebelow
 17074 \DeclareTextCompositeCommand{\b}{PU}{D}{\9036\016}% U+1E0E
 17075 % U+1E0F LATIN SMALL LETTER D WITH LINE BELOW; dlinebelow
 17076 \DeclareTextCompositeCommand{\b}{PU}{d}{\9036\017}% U+1E0F

17077 % U+1E10 LATIN CAPITAL LETTER D WITH CEDILLA; Dcedilla
17078 \DeclareTextCompositeCommand{\c}{PU}{D}{\9036\020}% U+1E10
17079 % U+1E11 LATIN SMALL LETTER D WITH CEDILLA; dcedilla
17080 \DeclareTextCompositeCommand{\c}{PU}{d}{\9036\021}% U+1E11
17081 % U+1E12 LATIN CAPITAL LETTER D WITH CIRCUMFLEX BELOW; Dcircumflexbelow
17082 \DeclareTextCompositeCommand{\textsubcircum}{PU}{D}{\9036\022}% U+1E12
17083 % U+1E13 LATIN SMALL LETTER D WITH CIRCUMFLEX BELOW; dircumflexbelow
17084 \DeclareTextCompositeCommand{\textsubcircum}{PU}{d}{\9036\023}% U+1E13
17085 % U+1E14 LATIN CAPITAL LETTER E WITH MACRON AND GRAVE; Emacrongrave
17086 % Emacrongrave
17087 \DeclareTextCompositeCommand{\textgravemacron}{PU}{E}{\9036\024}% U+1E14
17088 % U+1E15 LATIN SMALL LETTER E WITH MACRON AND GRAVE; emacrongrave
17089 % emacrongrave
17090 \DeclareTextCompositeCommand{\textgravemacron}{PU}{e}{\9036\025}% U+1E15
17091 % U+1E16 LATIN CAPITAL LETTER E WITH MACRON AND ACUTE; Emacronacute
17092 % Emacronacute
17093 \DeclareTextCompositeCommand{\textacutemacron}{PU}{E}{\9036\026}% U+1E16
17094 % U+1E17 LATIN SMALL LETTER E WITH MACRON AND ACUTE; emacronacute
17095 % emacronacute
17096 \DeclareTextCompositeCommand{\textacutemacron}{PU}{e}{\9036\027}% U+1E17
17097 % U+1E18 LATIN CAPITAL LETTER E WITH CIRCUMFLEX BELOW; Ecircumflexbelow
17098 \DeclareTextCompositeCommand{\textsubcircum}{PU}{E}{\9036\030}% U+1E18
17099 % U+1E19 LATIN SMALL LETTER E WITH CIRCUMFLEX BELOW; eircumflexbelow
17100 \DeclareTextCompositeCommand{\textsubcircum}{PU}{e}{\9036\031}% U+1E19
17101 % U+1E1A LATIN CAPITAL LETTER E WITH TILDE BELOW; Etildebelow
17102 \DeclareTextCompositeCommand{\textsubtilde}{PU}{E}{\9036\032}% U+1E1A
17103 % U+1E1B LATIN SMALL LETTER E WITH TILDE BELOW; etildebelow
17104 \DeclareTextCompositeCommand{\textsubtilde}{PU}{e}{\9036\033}% U+1E1B
17105 % U+1E1E LATIN CAPITAL LETTER F WITH DOT ABOVE; Fdotaccent
17106 \DeclareTextCompositeCommand{\.}{PU}{F}{\9036\036}% U+1E1E
17107 % U+1E1F LATIN SMALL LETTER F WITH DOT ABOVE; fdotaccent
17108 \DeclareTextCompositeCommand{\.}{PU}{f}{\9036\037}% U+1E1F
17109 % U+1E20 LATIN CAPITAL LETTER G WITH MACRON; Gmacron
17110 \DeclareTextCompositeCommand{\=} {PU}{G}{\9036\040}% U+1E20
17111 % U+1E21 LATIN SMALL LETTER G WITH MACRON; gmacron
17112 \DeclareTextCompositeCommand{\=} {PU}{g}{\9036\041}% U+1E21
17113 % U+1E22 LATIN CAPITAL LETTER H WITH DOT ABOVE; Hdotaccent
17114 \DeclareTextCompositeCommand{\.}{PU}{H}{\9036\042}% U+1E22
17115 % U+1E23 LATIN SMALL LETTER H WITH DOT ABOVE; hdotaccent
17116 \DeclareTextCompositeCommand{\.}{PU}{h}{\9036\043}% U+1E23
17117 % U+1E24 LATIN CAPITAL LETTER H WITH DOT BELOW; Hdotbelow
17118 \DeclareTextCompositeCommand{\d}{PU}{H}{\9036\044}% U+1E24
17119 % U+1E25 LATIN SMALL LETTER H WITH DOT BELOW; hdotbelow
17120 \DeclareTextCompositeCommand{\d}{PU}{h}{\9036\045}% U+1E25
17121 % U+1E26 LATIN CAPITAL LETTER H WITH DIAERESIS; Hdieresis
17122 \DeclareTextCompositeCommand{\"}{PU}{H}{\9036\046}% U+1E26
17123 % U+1E27 LATIN SMALL LETTER H WITH DIAERESIS; hdieresis
17124 \DeclareTextCompositeCommand{\"}{PU}{h}{\9036\047}% U+1E27
17125 % U+1E28 LATIN CAPITAL LETTER H WITH CEDILLA; Hcedilla
17126 \DeclareTextCompositeCommand{\c}{PU}{H}{\9036\050}% U+1E28

17127 % U+1E29 LATIN SMALL LETTER H WITH CEDILLA; hcedilla
17128 \DeclareTextCompositeCommand{\c}{PU}{h}{\9036\051}% U+1E29
17129 % U+1E2A LATIN CAPITAL LETTER H WITH BREVE BELOW; Hbrevebelow
17130 \DeclareTextCompositeCommand{\textsubbreve}{PU}{H}{\9036\052}% U+1E2A
17131 % U+1E2B LATIN SMALL LETTER H WITH BREVE BELOW; hbrevebelow
17132 \DeclareTextCompositeCommand{\textsubbreve}{PU}{h}{\9036\053}% U+1E2B
17133 % U+1E2C LATIN CAPITAL LETTER I WITH TILDE BELOW; Itildebelow
17134 \DeclareTextCompositeCommand{\textsubtilde}{PU}{I}{\9036\054}% U+1E2C
17135 % U+1E2D LATIN SMALL LETTER I WITH TILDE BELOW; itildebelow
17136 \DeclareTextCompositeCommand{\textsubtilde}{PU}{i}{\9036\055}% U+1E2D
17137 % U+1E30 LATIN CAPITAL LETTER K WITH ACUTE; Kacute
17138 \DeclareTextCompositeCommand{\'}{PU}{K}{\9036\060}% U+1E30
17139 % U+1E31 LATIN SMALL LETTER K WITH ACUTE; kacute
17140 \DeclareTextCompositeCommand{\'}{PU}{k}{\9036\061}% U+1E31
17141 % U+1E32 LATIN CAPITAL LETTER K WITH DOT BELOW; Kdotbelow
17142 \DeclareTextCompositeCommand{\d}{PU}{K}{\9036\062}% U+1E32
17143 % U+1E33 LATIN SMALL LETTER K WITH DOT BELOW; kdotbelow
17144 \DeclareTextCompositeCommand{\d}{PU}{k}{\9036\063}% U+1E33
17145 % U+1E34 LATIN CAPITAL LETTER K WITH LINE BELOW; Klinebelow
17146 \DeclareTextCompositeCommand{\b}{PU}{K}{\9036\064}% U+1E34
17147 % U+1E35 LATIN SMALL LETTER K WITH LINE BELOW; klinebelow
17148 \DeclareTextCompositeCommand{\b}{PU}{k}{\9036\065}% U+1E35
17149 % U+1E36 LATIN CAPITAL LETTER L WITH DOT BELOW; Ldotbelow
17150 \DeclareTextCompositeCommand{\d}{PU}{L}{\9036\066}% U+1E36
17151 % U+1E37 LATIN SMALL LETTER L WITH DOT BELOW; ldotbelow
17152 \DeclareTextCompositeCommand{\d}{PU}{l}{\9036\067}% U+1E37
17153 % U+1E3A LATIN CAPITAL LETTER L WITH LINE BELOW; Llinebelow
17154 \DeclareTextCompositeCommand{\b}{PU}{L}{\9036\072}% U+1E3A
17155 % U+1E3B LATIN SMALL LETTER L WITH LINE BELOW; llinebelow
17156 \DeclareTextCompositeCommand{\b}{PU}{l}{\9036\073}% U+1E3B
17157 % U+1E3C LATIN CAPITAL LETTER L WITH CIRCUMFLEX BELOW; Lcir-
cumflexbelow
17158 \DeclareTextCompositeCommand{\textsubcircum}{PU}{L}{\9036\074}% U+1E3C
17159 % U+1E3D LATIN SMALL LETTER L WITH CIRCUMFLEX BELOW; lcir-
cumflexbelow
17160 \DeclareTextCompositeCommand{\textsubcircum}{PU}{l}{\9036\075}% U+1E3D
17161 % U+1E3E LATIN CAPITAL LETTER M WITH ACUTE; Macute
17162 \DeclareTextCompositeCommand{\'}{PU}{M}{\9036\076}% U+1E3E
17163 % U+1E3F LATIN SMALL LETTER M WITH ACUTE; macute
17164 \DeclareTextCompositeCommand{\'}{PU}{m}{\9036\077}% U+1E3F
17165 % U+1E40 LATIN CAPITAL LETTER M WITH DOT ABOVE; Mdotaccent
17166 \DeclareTextCompositeCommand{\.}{PU}{M}{\9036\100}% U+1E40
17167 % U+1E41 LATIN SMALL LETTER M WITH DOT ABOVE; mdotaccent
17168 \DeclareTextCompositeCommand{\.}{PU}{m}{\9036\101}% U+1E41
17169 % U+1E42 LATIN CAPITAL LETTER M WITH DOT BELOW; Mdotbelow
17170 \DeclareTextCompositeCommand{\d}{PU}{M}{\9036\102}% U+1E42
17171 % U+1E43 LATIN SMALL LETTER M WITH DOT BELOW; mdotbelow
17172 \DeclareTextCompositeCommand{\d}{PU}{m}{\9036\103}% U+1E43
17173 % U+1E44 LATIN CAPITAL LETTER N WITH DOT ABOVE; Ndotaccent
17174 \DeclareTextCompositeCommand{\.}{PU}{N}{\9036\104}% U+1E44
17175 % U+1E45 LATIN SMALL LETTER N WITH DOT ABOVE; ndotaccent
17176 \DeclareTextCompositeCommand{\.}{PU}{n}{\9036\105}% U+1E45
17177 % U+1E46 LATIN CAPITAL LETTER N WITH DOT BELOW; Ndotbelow
17178 \DeclareTextCompositeCommand{\d}{PU}{N}{\9036\106}% U+1E46

17179 % U+1E47 LATIN SMALL LETTER N WITH DOT BELOW; ndotbelow
17180 \DeclareTextCompositeCommand{\d}{PU}{n}{\9036\107}% U+1E47
17181 % U+1E48 LATIN CAPITAL LETTER N WITH LINE BELOW; Nlinebelow
17182 \DeclareTextCompositeCommand{\b}{PU}{N}{\9036\110}% U+1E48
17183 % U+1E49 LATIN SMALL LETTER N WITH LINE BELOW; nlinebelow
17184 \DeclareTextCompositeCommand{\b}{PU}{n}{\9036\111}% U+1E49
17185 % U+1E4A LATIN CAPITAL LETTER N WITH CIRCUMFLEX BELOW; Ncircumflexbelow
17186 \DeclareTextCompositeCommand{\textsubcircum}{PU}{N}{\9036\112}% U+1E4A
17187 % U+1E4B LATIN SMALL LETTER N WITH CIRCUMFLEX BELOW; ncircumflexbelow
17188 \DeclareTextCompositeCommand{\textsubcircum}{PU}{n}{\9036\113}% U+1E4B
17189 % U+1E50 LATIN CAPITAL LETTER O WITH MACRON AND GRAVE; Omacrongrave
17190 % Omacrongrave
17191 \DeclareTextCompositeCommand{\textgravemacron}{PU}{O}{\9036\120}% U+1E50
17192 % U+1E51 LATIN SMALL LETTER O WITH MACRON AND GRAVE; omacrongrave
17193 % omacrongrave
17194 \DeclareTextCompositeCommand{\textgravemacron}{PU}{o}{\9036\121}% U+1E51
17195 % U+1E52 LATIN CAPITAL LETTER O WITH MACRON AND ACUTE; Omacronacute
17196 % Omacronacute
17197 \DeclareTextCompositeCommand{\textacutemacron}{PU}{O}{\9036\122}% U+1E52
17198 % U+1E53 LATIN SMALL LETTER O WITH MACRON AND ACUTE; omacronacute
17199 % omacronacute
17200 \DeclareTextCompositeCommand{\textacutemacron}{PU}{o}{\9036\123}% U+1E53
17201 % U+1E54 LATIN CAPITAL LETTER P WITH ACUTE; Pacute
17202 \DeclareTextCompositeCommand{\'}{PU}{P}{\9036\124}% U+1E54
17203 % U+1E55 LATIN SMALL LETTER P WITH ACUTE; pacute
17204 \DeclareTextCompositeCommand{\'}{PU}{p}{\9036\125}% U+1E55
17205 % U+1E56 LATIN CAPITAL LETTER P WITH DOT ABOVE; Pdotaccent
17206 \DeclareTextCompositeCommand{\.}{PU}{P}{\9036\126}% U+1E56
17207 % U+1E57 LATIN SMALL LETTER P WITH DOT ABOVE; pdotaccent
17208 \DeclareTextCompositeCommand{\.}{PU}{p}{\9036\127}% U+1E57
17209 % U+1E58 LATIN CAPITAL LETTER R WITH DOT ABOVE; Rdotaccent
17210 \DeclareTextCompositeCommand{\.}{PU}{R}{\9036\130}% U+1E58
17211 % U+1E59 LATIN SMALL LETTER R WITH DOT ABOVE; rdotaccent
17212 \DeclareTextCompositeCommand{\.}{PU}{r}{\9036\131}% U+1E59
17213 % U+1E5A LATIN CAPITAL LETTER R WITH DOT BELOW; Rdotbelow
17214 \DeclareTextCompositeCommand{\d}{PU}{R}{\9036\132}% U+1E5A
17215 % U+1E5B LATIN SMALL LETTER R WITH DOT BELOW; rdotbelow
17216 \DeclareTextCompositeCommand{\d}{PU}{r}{\9036\133}% U+1E5B
17217 % U+1E5E LATIN CAPITAL LETTER R WITH LINE BELOW; Rlinebelow
17218 \DeclareTextCompositeCommand{\b}{PU}{R}{\9036\136}% U+1E5E
17219 % U+1E5F LATIN SMALL LETTER R WITH LINE BELOW; rlinebelow
17220 \DeclareTextCompositeCommand{\b}{PU}{r}{\9036\137}% U+1E5F
17221 % U+1E60 LATIN CAPITAL LETTER S WITH DOT ABOVE; Sdotaccent
17222 \DeclareTextCompositeCommand{\.}{PU}{S}{\9036\140}% U+1E60
17223 % U+1E61 LATIN SMALL LETTER S WITH DOT ABOVE; sdotaccent
17224 \DeclareTextCompositeCommand{\.}{PU}{s}{\9036\141}% U+1E61
17225 % U+1E62 LATIN CAPITAL LETTER S WITH DOT BELOW; Sdotbelow
17226 \DeclareTextCompositeCommand{\d}{PU}{S}{\9036\142}% U+1E62
17227 % U+1E63 LATIN SMALL LETTER S WITH DOT BELOW; sdotbelow
17228 \DeclareTextCompositeCommand{\d}{PU}{s}{\9036\143}% U+1E63
17229 % U+1E6A LATIN CAPITAL LETTER T WITH DOT ABOVE; Tdotaccent
17230 \DeclareTextCompositeCommand{\.}{PU}{T}{\9036\152}% U+1E6A

17231 % U+1E6B LATIN SMALL LETTER T WITH DOT ABOVE; tdotaccent
17232 \DeclareTextCompositeCommand{.}{PU}{t}{\9036\153}% U+1E6B
17233 % U+1E6C LATIN CAPITAL LETTER T WITH DOT BELOW; Tdotbelow
17234 \DeclareTextCompositeCommand{d}{PU}{T}{\9036\154}% U+1E6C
17235 % U+1E6D LATIN SMALL LETTER T WITH DOT BELOW; tdotbelow
17236 \DeclareTextCompositeCommand{d}{PU}{t}{\9036\155}% U+1E6D
17237 % U+1E6E LATIN CAPITAL LETTER T WITH LINE BELOW; Tlinebelow
17238 \DeclareTextCompositeCommand{b}{PU}{T}{\9036\156}% U+1E6E
17239 % U+1E6F LATIN SMALL LETTER T WITH LINE BELOW; tlinebelow
17240 \DeclareTextCompositeCommand{b}{PU}{t}{\9036\157}% U+1E6F
17241 % U+1E70 LATIN CAPITAL LETTER T WITH CIRCUMFLEX BELOW; Tcircumflexbelow
17242 \DeclareTextCompositeCommand{\textsubcircum}{PU}{T}{\9036\160}% U+1E70
17243 % U+1E71 LATIN SMALL LETTER T WITH CIRCUMFLEX BELOW; tcircumflexbelow
17244 \DeclareTextCompositeCommand{\textsubcircum}{PU}{t}{\9036\161}% U+1E71
17245 % U+1E72 LATIN CAPITAL LETTER U WITH DIAERESIS BELOW; Udiere-sisbelow
17246 \DeclareTextCompositeCommand{\textsubumlaut}{PU}{U}{\9036\162}% U+1E72
17247 % U+1E73 LATIN SMALL LETTER U WITH DIAERESIS BELOW; udiere-sisbelow
17248 \DeclareTextCompositeCommand{\textsubumlaut}{PU}{u}{\9036\163}% U+1E73
17249 % U+1E74 LATIN CAPITAL LETTER U WITH TILDE BELOW; Utildebelow
17250 \DeclareTextCompositeCommand{\textsubtilde}{PU}{U}{\9036\164}% U+1E74
17251 % U+1E75 LATIN SMALL LETTER U WITH TILDE BELOW; utildebelow
17252 \DeclareTextCompositeCommand{\textsubtilde}{PU}{u}{\9036\165}% U+1E75
17253 % U+1E76 LATIN CAPITAL LETTER U WITH CIRCUMFLEX BELOW; Ucircumflexbelow
17254 \DeclareTextCompositeCommand{\textsubcircum}{PU}{U}{\9036\166}% U+1E76
17255 % U+1E77 LATIN SMALL LETTER U WITH CIRCUMFLEX BELOW; ucircumflexbelow
17256 \DeclareTextCompositeCommand{\textsubcircum}{PU}{u}{\9036\167}% U+1E77
17257 % U+1E7C LATIN CAPITAL LETTER V WITH TILDE; Vtilde
17258 \DeclareTextCompositeCommand{~}{PU}{V}{\9036\174}% U+1E7C
17259 % U+1E7D LATIN SMALL LETTER V WITH TILDE; vtilde
17260 \DeclareTextCompositeCommand{~}{PU}{v}{\9036\175}% U+1E7D
17261 % U+1E7E LATIN CAPITAL LETTER V WITH DOT BELOW; Vdotbelow
17262 \DeclareTextCompositeCommand{d}{PU}{V}{\9036\176}% U+1E7E
17263 % U+1E7F LATIN SMALL LETTER V WITH DOT BELOW; vdotbelow
17264 \DeclareTextCompositeCommand{d}{PU}{v}{\9036\177}% U+1E7F
17265 % U+1E80 LATIN CAPITAL LETTER W WITH GRAVE; Wgrave
17266 \DeclareTextCompositeCommand{`}{PU}{W}{\9036\200}% U+1E80
17267 % U+1E81 LATIN SMALL LETTER W WITH GRAVE; wgrave
17268 \DeclareTextCompositeCommand{`}{PU}{w}{\9036\201}% U+1E81
17269 % U+1E82 LATIN CAPITAL LETTER W WITH ACUTE; Wacute
17270 \DeclareTextCompositeCommand{'}{PU}{W}{\9036\202}% U+1E82
17271 % U+1E83 LATIN SMALL LETTER W WITH ACUTE; wacute
17272 \DeclareTextCompositeCommand{'}{PU}{w}{\9036\203}% U+1E83
17273 % U+1E84 LATIN CAPITAL LETTER W WITH DIAERESIS; Wdieresis
17274 \DeclareTextCompositeCommand{"}{PU}{W}{\9036\204}% U+1E84
17275 % U+1E85 LATIN SMALL LETTER W WITH DIAERESIS; wdieresis
17276 \DeclareTextCompositeCommand{"}{PU}{w}{\9036\205}% U+1E85
17277 % U+1E86 LATIN CAPITAL LETTER W WITH DOT ABOVE; Wdotaccent
17278 \DeclareTextCompositeCommand{.}{PU}{W}{\9036\206}% U+1E86

17279 % U+1E87 LATIN SMALL LETTER W WITH DOT ABOVE; wdotaccent
17280 \DeclareTextCompositeCommand{\.}{PU}{w}{\9036\207}% U+1E87
17281 % U+1E88 LATIN CAPITAL LETTER W WITH DOT BELOW; wdotbelow
17282 \DeclareTextCompositeCommand{\d}{PU}{W}{\9036\210}% U+1E88
17283 % U+1E89 LATIN SMALL LETTER W WITH DOT BELOW; wdotbelow
17284 \DeclareTextCompositeCommand{\d}{PU}{w}{\9036\211}% U+1E89
17285 % U+1E8A LATIN CAPITAL LETTER X WITH DOT ABOVE; Xdotaccent
17286 \DeclareTextCompositeCommand{\.}{PU}{X}{\9036\212}% U+1E8A
17287 % U+1E8B LATIN SMALL LETTER X WITH DOT ABOVE; xdotaccent
17288 \DeclareTextCompositeCommand{\.}{PU}{x}{\9036\213}% U+1E8B
17289 % U+1E8C LATIN CAPITAL LETTER X WITH DIAERESIS; Xdieresis
17290 \DeclareTextCompositeCommand{"}{PU}{X}{\9036\214}% U+1E8C
17291 % U+1E8D LATIN SMALL LETTER X WITH DIAERESIS; xdieresis
17292 \DeclareTextCompositeCommand{"}{PU}{x}{\9036\215}% U+1E8D
17293 % U+1E8E LATIN CAPITAL LETTER Y WITH DOT ABOVE; Ydotaccent
17294 \DeclareTextCompositeCommand{\.}{PU}{Y}{\9036\216}% U+1E8E
17295 % U+1E8F LATIN SMALL LETTER Y WITH DOT ABOVE; ydotaccent
17296 \DeclareTextCompositeCommand{\.}{PU}{y}{\9036\217}% U+1E8F
17297 % U+1E90 LATIN CAPITAL LETTER Z WITH CIRCUMFLEX; Zcircumflex
17298 \DeclareTextCompositeCommand{\^}{PU}{Z}{\9036\220}% U+1E90
17299 % U+1E91 LATIN SMALL LETTER Z WITH CIRCUMFLEX; zcircumflex
17300 \DeclareTextCompositeCommand{\^}{PU}{z}{\9036\221}% U+1E91
17301 % U+1E92 LATIN CAPITAL LETTER Z WITH DOT BELOW; Zdotbelow
17302 \DeclareTextCompositeCommand{\d}{PU}{Z}{\9036\222}% U+1E92
17303 % U+1E93 LATIN SMALL LETTER Z WITH DOT BELOW; zdotbelow
17304 \DeclareTextCompositeCommand{\d}{PU}{z}{\9036\223}% U+1E93
17305 % U+1E94 LATIN CAPITAL LETTER Z WITH LINE BELOW; Zlinebelow
17306 \DeclareTextCompositeCommand{\b}{PU}{Z}{\9036\224}% U+1E94
17307 % U+1E95 LATIN SMALL LETTER Z WITH LINE BELOW; zlinebelow
17308 \DeclareTextCompositeCommand{\b}{PU}{z}{\9036\225}% U+1E95
17309 % U+1E96 LATIN SMALL LETTER H WITH LINE BELOW; hlinebelow
17310 \DeclareTextCompositeCommand{\b}{PU}{h}{\9036\226}% U+1E96
17311 % U+1E97 LATIN SMALL LETTER T WITH DIAERESIS; tdieresis
17312 \DeclareTextCompositeCommand{"}{PU}{t}{\9036\227}% U+1E97
17313 % U+1E98 LATIN SMALL LETTER W WITH RING ABOVE; wring
17314 \DeclareTextCompositeCommand{\r}{PU}{w}{\9036\230}% U+1E98
17315 % U+1E99 LATIN SMALL LETTER Y WITH RING ABOVE; yring
17316 \DeclareTextCompositeCommand{\r}{PU}{y}{\9036\231}% U+1E99
17317 % U+1E9B LATIN SMALL LETTER LONG S WITH DOT ABOVE; slongdo-
taccent
17318 \DeclareTextCompositeCommand{\.}{PU}{\textlongs}{\9036\233}% U+1E9B
17319 % U+1EA0 LATIN CAPITAL LETTER A WITH DOT BELOW; Adotbelow
17320 \DeclareTextCompositeCommand{\d}{PU}{A}{\9036\240}% U+1EA0
17321 % U+1EA1 LATIN SMALL LETTER A WITH DOT BELOW; adotbelow
17322 \DeclareTextCompositeCommand{\d}{PU}{a}{\9036\241}% U+1EA1
17323 % U+1EB8 LATIN CAPITAL LETTER E WITH DOT BELOW; Edotbelow
17324 \DeclareTextCompositeCommand{\d}{PU}{E}{\9036\270}% U+1EB8
17325 % U+1EB9 LATIN SMALL LETTER E WITH DOT BELOW; edotbelow
17326 \DeclareTextCompositeCommand{\d}{PU}{e}{\9036\271}% U+1EB9
17327 % U+1EBC LATIN CAPITAL LETTER E WITH TILDE; Etilde
17328 \DeclareTextCompositeCommand{\~}{PU}{E}{\9036\274}% U+1EBC
17329 % U+1EBD LATIN SMALL LETTER E WITH TILDE; etilde
17330 \DeclareTextCompositeCommand{\~}{PU}{e}{\9036\275}% U+1EBD
17331 % U+1ECA LATIN CAPITAL LETTER I WITH DOT BELOW; Idotbelow

17332 \DeclareTextCompositeCommand{\d}{PU}{i}{\9036\312}% U+1ECA
17333 % U+1ECB LATIN SMALL LETTER I WITH DOT BELOW; idotbelow
17334 \DeclareTextCompositeCommand{\d}{PU}{i}{\9036\313}% U+1ECB
17335 % U+1ECC LATIN CAPITAL LETTER O WITH DOT BELOW; Odotbelow
17336 \DeclareTextCompositeCommand{\d}{PU}{O}{\9036\314}% U+1ECC
17337 % U+1ECD LATIN SMALL LETTER O WITH DOT BELOW; odotbelow
17338 \DeclareTextCompositeCommand{\d}{PU}{o}{\9036\315}% U+1ECD
17339 % U+1EE4 LATIN CAPITAL LETTER U WITH DOT BELOW; Udotbelow
17340 \DeclareTextCompositeCommand{\d}{PU}{U}{\9036\344}% U+1EE4
17341 % U+1EE5 LATIN SMALL LETTER U WITH DOT BELOW; udotbelow
17342 \DeclareTextCompositeCommand{\d}{PU}{u}{\9036\345}% U+1EE5
17343 % U+1EF2 LATIN CAPITAL LETTER Y WITH GRAVE; Ygrave
17344 \DeclareTextCompositeCommand{\`}{PU}{Y}{\9036\362}% U+1EF2
17345 % U+1EF3 LATIN SMALL LETTER Y WITH GRAVE; ygrave
17346 \DeclareTextCompositeCommand{\`}{PU}{y}{\9036\363}% U+1EF3
17347 % U+1EF4 LATIN CAPITAL LETTER Y WITH DOT BELOW; Ydotbelow
17348 \DeclareTextCompositeCommand{\d}{PU}{Y}{\9036\364}% U+1EF4
17349 % U+1EF5 LATIN SMALL LETTER Y WITH DOT BELOW; ydotbelow
17350 \DeclareTextCompositeCommand{\d}{PU}{y}{\9036\365}% U+1EF5
17351 % U+1EF8 LATIN CAPITAL LETTER Y WITH TILDE; Ytilde
17352 \DeclareTextCompositeCommand{\~}{PU}{Y}{\9036\370}% U+1EF8
17353 % U+1EF9 LATIN SMALL LETTER Y WITH TILDE; ytilde
17354 \DeclareTextCompositeCommand{\~}{PU}{y}{\9036\371}% U+1EF9

47.2.16 General Punctuation: U+2000 to U+206F

17355 % U+200C ZERO WIDTH NON-JOINER; *afii61664, zerowidthnonjoiner
17356 \DeclareTextCommand{\textcompwordmark}{PU}{\9040\014}% U+200C
17357 % U+2013 EN DASH; endash
17358 \DeclareTextCommand{\textendash}{PU}{\9040\023}% U+2013
17359 % U+2014 EM DASH; emdash
17360 \DeclareTextCommand{\textemdash}{PU}{\9040\024}% U+2014
17361 % U+2016 DOUBLE VERTICAL LINE; dblverticalbar
17362 \DeclareTextCommand{\textbardbl}{PU}{\9040\026}% U+2016
17363 %* \textbardbl -> \textdoublevertline (tipa)
17364 % U+2018 LEFT SINGLE QUOTATION MARK; quoteleft
17365 \DeclareTextCommand{\textquoteleft}{PU}{\9040\030}% U+2018
17366 % U+2019 RIGHT SINGLE QUOTATION MARK; quoteright
17367 \DeclareTextCommand{\textquoteright}{PU}{\9040\031}% U+2019
17368 % U+201A SINGLE LOW-9 QUOTATION MARK; quotesinglbase
17369 \DeclareTextCommand{\quotesinglbase}{PU}{\9040\032}% U+201A
17370 % U+201C LEFT DOUBLE QUOTATION MARK; quotedblleft
17371 \DeclareTextCommand{\textquotedblleft}{PU}{\9040\034}% U+201C
17372 % U+201D RIGHT DOUBLE QUOTATION MARK; quotedblright
17373 \DeclareTextCommand{\textquotedblright}{PU}{\9040\035}% U+201D
17374 % U+201E DOUBLE LOW-9 QUOTATION MARK; quotedblbase
17375 \DeclareTextCommand{\quotedblbase}{PU}{\9040\036}% U+201E
17376 % U+2020 DAGGER; dagger
17377 \DeclareTextCommand{\textdagger}{PU}{\9040\040}%* U+2020
17378 %* \textdagger -> \dag (LaTeX)
17379 % U+2021 DOUBLE DAGGER; daggerdbl; \ddagger (LaTeX)
17380 \DeclareTextCommand{\textdaggerdbl}{PU}{\9040\041}% U+2021
17381 %* \textdaggerdbl -> \ddagger (LaTeX)
17382 %* \textdaggerdbl -> \ddag (LaTeX)
17383 % U+2022 BULLET; bullet

17384 \DeclareTextCommand{\textbullet}{PU}{\9040\042}%* U+2022
17385 % U+2025 TWO DOT LEADER; \hdotfor (MnSymbol)
17386 \DeclareTextCommand{\textthdotfor}{PU}{\9040\045}%* U+2025
17387 % U+2026 HORIZONTAL ELLIPSIS; ellipsis
17388 \DeclareTextCommand{\textellipsis}{PU}{\9040\046}% U+2026
17389 %* \textellipsis -> \mathellipsis
17390 % U+2030 PER MILLE SIGN; perthousand
17391 \DeclareTextCommand{\textperthousand}{PU}{\9040\060}% U+2030
17392 % U+2031 PER TEN THOUSAND SIGN
17393 \DeclareTextCommand{\textpertenthousand}{PU}{\9040\061}% U+2031
17394 % U+2032 PRIME; minute; \prime (MnSymbol)
17395 \DeclareTextCommand{\textprime}{PU}{\9040\062}%* U+2032
17396 % U+2033 DOUBLE PRIME; \second (mathabx)
17397 \DeclareTextCommand{\textsecond}{PU}{\9040\063}%* U+2033
17398 % U+2034 TRIPLE PRIME; \third (mathabx)
17399 \DeclareTextCommand{\textthird}{PU}{\9040\064}%* U+2034
17400 % U+2035 REVERSED PRIME; \backprime (AmS)
17401 \DeclareTextCommand{\textbackprime}{PU}{\9040\065}%* U+2035
17402 % U+2039 SINGLE LEFT-POINTING ANGLE QUOTATION MARK; guil-
ingleft
17403 \DeclareTextCommand{\guilsingleft}{PU}{\9040\071}% U+2039
17404 % U+203A SINGLE RIGHT-POINTING ANGLE QUOTATION MARK; guil-
ingright
17405 \DeclareTextCommand{\guilsingright}{PU}{\9040\072}% U+203A
17406 % U+203B REFERENCE MARK; referencemark
17407 \DeclareTextCommand{\textreferencemark}{PU}{\9040\073}% U+203B
17408 % U+203D INTERROBANG
17409 \DeclareTextCommand{\textinterrobang}{PU}{\9040\075}% U+203D
17410 % U+2044 FRACTION SLASH; fraction
17411 \DeclareTextCommand{\textfractionsolidus}{PU}{\9040\104}% U+2044
17412 % U+2045 LEFT SQUARE BRACKET WITH QUILL
17413 \DeclareTextCommand{\textlquill}{PU}{\9040\105}% U+2045
17414 % U+2046 RIGHT SQUARE BRACKET WITH QUILL
17415 \DeclareTextCommand{\textrquill}{PU}{\9040\106}% U+2046
17416 % U+2052 COMMERCIAL MINUS SIGN
17417 \DeclareTextCommand{\textdiscount}{PU}{\9040\122}% U+2052
17418 % U+2056 THREE DOT PUNCTUATION; \lefttherefore (MnSymbol)
17419 \DeclareTextCommand{\textlefttherefore}{PU}{\9040\126}%* U+2056
17420 % U+2057 QUADRUPLE PRIME; \fourth (mathabx)
17421 \DeclareTextCommand{\textfourth}{PU}{\9040\127}%* U+2057
17422 % U+2058 FOUR DOT PUNCTUATION; \diamonddots (MnSymbol)
17423 \DeclareTextCommand{\textdiamonddots}{PU}{\9040\130}%* U+2058

47.2.17 Superscripts and Subscripts: U+2070 to U+209F

17424 % U+2070 SUPERSCRIPT ZERO; zerosuperior
17425 \DeclareTextCommand{\textzerosuperior}{PU}{\9040\160}%* U+2070
17426 % U+2071 SUPERSCRIPT LATIN SMALL LETTER I
17427 \DeclareTextCommand{\textisuperior}{PU}{\9040\161}%* U+2071
17428 % U+2074 SUPERSCRIPT FOUR; foursuperior
17429 \DeclareTextCommand{\textfoursuperior}{PU}{\9040\164}%* U+2074
17430 % U+2075 SUPERSCRIPT FIVE; fivesuperior
17431 \DeclareTextCommand{\textfivesuperior}{PU}{\9040\165}%* U+2075
17432 % U+2076 SUPERSCRIPT SIX; sixsuperior
17433 \DeclareTextCommand{\textsixsuperior}{PU}{\9040\166}%* U+2076

17434 % U+2077 SUPERSCRIPT SEVEN; sevensuperior
17435 \DeclareTextCommand{\textsevensuperior}{PU}{\9040\167}%* U+2077
17436 % U+2078 SUPERSCRIPT EIGHT; eightsuperior
17437 \DeclareTextCommand{\texteightsuperior}{PU}{\9040\170}%* U+2078
17438 % U+2079 SUPERSCRIPT NINE; ninesuperior
17439 \DeclareTextCommand{\textninesuperior}{PU}{\9040\171}%* U+2079
17440 % U+207A SUPERSCRIPT PLUS SIGN; plussuperior
17441 \DeclareTextCommand{\textplussuperior}{PU}{\9040\172}%* U+207A
17442 % U+207B SUPERSCRIPT MINUS
17443 \DeclareTextCommand{\textminussuperior}{PU}{\9040\173}%* U+207B
17444 % U+207C SUPERSCRIPT EQUALS SIGN; equalsuperior
17445 \DeclareTextCommand{\textequalsuperior}{PU}{\9040\174}%* U+207C
17446 % U+207D SUPERSCRIPT LEFT PARENTHESIS; parenleftsuperior
17447 \DeclareTextCommand{\textparenleftsuperior}{PU}{\9040\175}%* U+207D
17448 % U+207E SUPERSCRIPT RIGHT PARENTHESIS; parenrightsuperior
17449 \DeclareTextCommand{\textparenrightsuperior}{PU}{\9040\176}%* U+207E
17450 % U+207F SUPERSCRIPT LATIN SMALL LETTER N; nsuperior
17451 \DeclareTextCommand{\textnsuperior}{PU}{\9040\177}%* U+207F
17452 % U+2080 SUBSCRIPT ZERO; zeroinferior
17453 \DeclareTextCommand{\textzeroinferior}{PU}{\9040\200}%* U+2080
17454 % U+2081 SUBSCRIPT ONE; oneinferior
17455 \DeclareTextCommand{\textoneinferior}{PU}{\9040\201}%* U+2081
17456 % U+2082 SUBSCRIPT TWO; twoinferior
17457 \DeclareTextCommand{\texttwoinferior}{PU}{\9040\202}%* U+2082
17458 % U+2083 SUBSCRIPT THREE; threeminferior
17459 \DeclareTextCommand{\textthreeminferior}{PU}{\9040\203}%* U+2083
17460 % U+2084 SUBSCRIPT FOUR; fourinferior
17461 \DeclareTextCommand{\textfourinferior}{PU}{\9040\204}%* U+2084
17462 % U+2085 SUBSCRIPT FIVE; fiveinferior
17463 \DeclareTextCommand{\textfiveinferior}{PU}{\9040\205}%* U+2085
17464 % U+2086 SUBSCRIPT SIX; sixinferior
17465 \DeclareTextCommand{\textsixinferior}{PU}{\9040\206}%* U+2086
17466 % U+2087 SUBSCRIPT SEVEN; seveninferior
17467 \DeclareTextCommand{\textseveninferior}{PU}{\9040\207}%* U+2087
17468 % U+2088 SUBSCRIPT EIGHT; eightinferior
17469 \DeclareTextCommand{\texteightinferior}{PU}{\9040\210}%* U+2088
17470 % U+2089 SUBSCRIPT NINE; nineinferior
17471 \DeclareTextCommand{\textnineinferior}{PU}{\9040\211}%* U+2089
17472 % U+208A SUBSCRIPT PLUS SIGN
17473 \DeclareTextCommand{\textplusinferior}{PU}{\9040\212}%* U+208A
17474 % U+208B SUBSCRIPT MINUS
17475 \DeclareTextCommand{\textminusinferior}{PU}{\9040\213}%* U+208B
17476 % U+208C SUBSCRIPT EQUALS SIGN
17477 \DeclareTextCommand{\textequalsinferior}{PU}{\9040\214}%* U+208C
17478 % U+208D SUBSCRIPT LEFT PARENTHESIS; parenleftinferior
17479 \DeclareTextCommand{\textparenleftinferior}{PU}{\9040\215}%* U+208D
17480 % U+208E SUBSCRIPT RIGHT PARENTHESIS; parenrightinferior
17481 \DeclareTextCommand{\textparenrightinferior}{PU}{\9040\216}%* U+208E
17482 % U+2090 LATIN SUBSCRIPT SMALL LETTER A
17483 \DeclareTextCommand{\textainferior}{PU}{\9040\220}%* U+2090
17484 % U+2091 LATIN SUBSCRIPT SMALL LETTER E
17485 \DeclareTextCommand{\texteinferior}{PU}{\9040\221}%* U+2091
17486 % U+2092 LATIN SUBSCRIPT SMALL LETTER O
17487 \DeclareTextCommand{\textoinferior}{PU}{\9040\222}%* U+2092

17488 % U+2093 LATIN SUBSCRIPT SMALL LETTER X
 17489 \DeclareTextCommand{\textxinferior}{PU}{\9040\223}%* U+2093
 17490 % U+2094 LATIN SUBSCRIPT SMALL LETTER SCHWA
 17491 \DeclareTextCommand{\textschwainferior}{PU}{\9040\224}%* U+2094
 17492 % U+2095 LATIN SUBSCRIPT SMALL LETTER H
 17493 \DeclareTextCommand{\texthinferior}{PU}{\9040\225}%* U+2095
 17494 % U+2096 LATIN SUBSCRIPT SMALL LETTER K
 17495 \DeclareTextCommand{\textkinferior}{PU}{\9040\226}%* U+2096
 17496 % U+2097 LATIN SUBSCRIPT SMALL LETTER L
 17497 \DeclareTextCommand{\textlinferior}{PU}{\9040\227}%* U+2097
 17498 % U+2098 LATIN SUBSCRIPT SMALL LETTER M
 17499 \DeclareTextCommand{\textminferior}{PU}{\9040\230}%* U+2098
 17500 % U+2099 LATIN SUBSCRIPT SMALL LETTER N
 17501 \DeclareTextCommand{\textninferior}{PU}{\9040\231}%* U+2099
 17502 % U+209A LATIN SUBSCRIPT SMALL LETTER P
 17503 \DeclareTextCommand{\textpinferior}{PU}{\9040\232}%* U+209A
 17504 % U+209B LATIN SUBSCRIPT SMALL LETTER S
 17505 \DeclareTextCommand{\textsinferior}{PU}{\9040\233}%* U+209B
 17506 % U+209C LATIN SUBSCRIPT SMALL LETTER T
 17507 \DeclareTextCommand{\texttinferior}{PU}{\9040\234}%* U+209C

47.2.18 Currency Symbols: U+20A0 to U+20CF

17508 % U+20A1 COLON SIGN; *colonmonetary, colonsign
 17509 \DeclareTextCommand{\textcolonmonetary}{PU}{\9040\241}% U+20A1
 17510 % U+20A4 LIRA SIGN; afi08941, *lira
 17511 \DeclareTextCommand{\textlira}{PU}{\9040\244}% U+20A4
 17512 % U+20A6 NAIRA SIGN
 17513 \DeclareTextCommand{\textnaira}{PU}{\9040\246}% U+20A6
 17514 % U+20A7 PESETA SIGN; peseta
 17515 \DeclareTextCommand{\textpeseta}{PU}{\9040\247}% U+20A7
 17516 % U+20A9 WON SIGN; won
 17517 \DeclareTextCommand{\textwon}{PU}{\9040\251}% U+20A9
 17518 % U+20AB DONG SIGN; dong
 17519 \DeclareTextCommand{\textdong}{PU}{\9040\253}% U+20AB
 17520 % U+20AC EURO SIGN; *Euro, euro
 17521 \DeclareTextCommand{\texteuro}{PU}{\9040\254}% U+20AC
 17522 %* \texteuro -> \EurDig (marvosym)
 17523 %* \texteuro -> \EURdig (marvosym)
 17524 %* \texteuro -> \EurHv (marvosym)
 17525 %* \texteuro -> \EURhv (marvosym)
 17526 %* \texteuro -> \EurCr (marvosym)
 17527 %* \texteuro -> \EURcr (marvosym)
 17528 %* \texteuro -> \EurTm (marvosym)
 17529 %* \texteuro -> \EURtm (marvosym)
 17530 %* \texteuro -> \Eur (marvosym)
 17531 % U+20B0 GERMAN PENNY SIGN; \Deleatur (marvosym)
 17532 \DeclareTextCommand{\textDeleatur}{PU}{\9040\260}%* U+20B0
 17533 %* \textDeleatur -> \Denarius (marvosym)
 17534 % U+20B1 PESO SIGN
 17535 \DeclareTextCommand{\textpeso}{PU}{\9040\261}% U+20B1
 17536 % U+20B2 GUARANI SIGN
 17537 \DeclareTextCommand{\textguarani}{PU}{\9040\262}% U+20B2

47.2.19 Letterlike Symbols: U+2100 to U+214F

17538 % U+2103 DEGREE CELSIUS; centigrade
17539 \DeclareTextCommand{\textcelsius}{PU}{\9041\003}% U+2103
17540 % U+210F PLANCK CONSTANT OVER TWO PI; \hslash (AmS)
17541 \DeclareTextCommand{\texthslash}{PU}{\9041\017}%* U+210F
17542 % U+2111 BLACK-LETTER CAPITAL I (=imaginary part); Ifraktur; \Im (LaTeX)
17543 \DeclareTextCommand{\textIm}{PU}{\9041\021}%* U+2111
17544 % U+2113 SCRIPT SMALL L (=ell, liter); afi61289, lsquare; \ell (LaTeX)
17545 \DeclareTextCommand{\textell}{PU}{\9041\023}%* U+2113
17546 % U+2116 NUMERO SIGN; *afi61352, numero
17547 \DeclareTextCommand{\textnumero}{PU}{\9041\026}% U+2116
17548 % U+2117 SOUND RECORDING COPYRIGHT
17549 \DeclareTextCommand{\textcircledP}{PU}{\9041\027}% U+2117
17550 % U+2118 SCRIPT CAPITAL P (=Weierstrass elliptic function);
17551 % weierstrass; \wp (LaTeX)
17552 \DeclareTextCommand{\textwp}{PU}{\9041\030}%* U+2118
17553 % U+211C BLACK-LETTER CAPITAL R (=real part); Rfraktur; \Re (LaTeX)
17554 \DeclareTextCommand{\textRe}{PU}{\9041\034}%* U+211C
17555 % U+211E PRESCRIPTION TAKE; prescription
17556 \DeclareTextCommand{\textrecipe}{PU}{\9041\036}% U+211E
17557 % U+2120 SERVICE MARK
17558 \DeclareTextCommand{\textservicemark}{PU}{\9041\040}% U+2120
17559 % U+2122 TRADE MARK SIGN; trademark
17560 \DeclareTextCommand{\texttrademark}{PU}{\9041\042}% U+2122
17561 % U+2126 OHM SIGN; Ohm, Omega
17562 \DeclareTextCommand{\textohm}{PU}{\9041\046}% U+2126
17563 % U+2127 INVERTED OHM SIGN
17564 \DeclareTextCommand{\textmho}{PU}{\9041\047}%* U+2127
17565 %* \textmho -> \agemO (wasysym)
17566 % U+2129 TURNED GREEK SMALL LETTER IOTA; \riota (phonetic)
17567 \DeclareTextCommand{\textriota}{PU}{\9041\051}%* U+2129
17568 % U+212B ANGSTROM SIGN; angstrom
17569 \DeclareTextCommand{\textangstrom}{PU}{\9041\053}% U+212B
17570 % U+212E ESTIMATED SYMBOL; estimated
17571 \DeclareTextCommand{\textestimated}{PU}{\9041\056}% U+212E
17572 %* \textestimated -> \EstimatedSign (marvosym)
17573 %* \textestimated -> \Ecommerce (marvosym)
17574 % U+2132 TURNED CAPITAL F; \Finv (AmS)
17575 \DeclareTextCommand{\textFinv}{PU}{\9041\062}%* U+2132
17576 % U+2135 ALEF SYMBOL; aleph; \aleph (LaTeX)
17577 \DeclareTextCommand{\textaleph}{PU}{\9041\065}%* U+2135
17578 % U+2136 BET SYMBOL; \beth (AmS, MnSymbol)
17579 \DeclareTextCommand{\textbeth}{PU}{\9041\066}%* U+2136
17580 % U+2137 GIMEL SYMBOL; \gimel (AmS, MnSymbol)
17581 \DeclareTextCommand{\textgimel}{PU}{\9041\067}%* U+2137
17582 % U+2138 DALET SYMBOL; \daleth (AmS, MnSymbol)
17583 \DeclareTextCommand{\textdaleth}{PU}{\9041\070}%* U+2138
17584 % U+213B FACSIMILE SIGN; \fax (marvosym)
17585 \DeclareTextCommand{\textfax}{PU}{\9041\073}%* U+213B
17586 % U+2141 TURNED SANS-SERIF CAPITAL G (=game); \Game
17587 \DeclareTextCommand{\textGame}{PU}{\9041\101}%* U+2141
17588 % U+214B TURNED AMPERSAND; \invamp (txfonts/pxfonts)
17589 \DeclareTextCommand{\textinvamp}{PU}{\9041\113}% U+214B
17590 %* \textinvamp -> \bindnasrepma (stmaryrd)

17591 %* \textinvamp -> \parr (cml)

47.2.20 Number Forms: U+2150 to U+218F

17592 % U+2150 VULGAR FRACTION ONE SEVENTH
17593 \DeclareTextCommand{\textoneseventh}{PU}{\9041\120}% U+2150
17594 % U+2151 VULGAR FRACTION ONE NINTH
17595 \DeclareTextCommand{\textoneninth}{PU}{\9041\121}% U+2151
17596 % U+2152 VULGAR FRACTION ONE TENTH
17597 \DeclareTextCommand{\textonetenth}{PU}{\9041\122}% U+2152
17598 % U+2153 VULGAR FRACTION ONE THIRD; onethird
17599 \DeclareTextCommand{\textonethird}{PU}{\9041\123}% U+2153
17600 % U+2154 VULGAR FRACTION TWO THIRDS; twothirds
17601 \DeclareTextCommand{\texttwothirds}{PU}{\9041\124}% U+2154
17602 % U+2155 VULGAR FRACTION ONE FIFTH
17603 \DeclareTextCommand{\textonefifth}{PU}{\9041\125}% U+2155
17604 % U+2156 VULGAR FRACTION TWO FIFTHS
17605 \DeclareTextCommand{\texttwofifths}{PU}{\9041\126}% U+2156
17606 % U+2157 VULGAR FRACTION THREE FIFTHS
17607 \DeclareTextCommand{\textthreefifths}{PU}{\9041\127}% U+2157
17608 % U+2158 VULGAR FRACTION FOUR FIFTHS
17609 \DeclareTextCommand{\textfourfifths}{PU}{\9041\130}% U+2158
17610 % U+2159 VULGAR FRACTION ONE SIXTH
17611 \DeclareTextCommand{\textonesixth}{PU}{\9041\131}% U+2159
17612 % U+215A VULGAR FRACTION FIVE SIXTHS
17613 \DeclareTextCommand{\textfivesixths}{PU}{\9041\132}% U+215A
17614 % U+215B VULGAR FRACTION ONE EIGHTH; oneeighth
17615 \DeclareTextCommand{\textoneeighth}{PU}{\9041\133}% U+215B
17616 % U+215C VULGAR FRACTION THREE EIGHTHS; threeeighths
17617 \DeclareTextCommand{\textthreeeighths}{PU}{\9041\134}% U+215C
17618 % U+215D VULGAR FRACTION FIVE EIGHTHS; fiveeighths
17619 \DeclareTextCommand{\textfiveeighths}{PU}{\9041\135}% U+215D
17620 % U+215E VULGAR FRACTION SEVEN EIGHTHS; seveneighths
17621 \DeclareTextCommand{\textseveneighths}{PU}{\9041\136}% U+215E
17622 % U+2184 LATIN SMALL LETTER REVERSED C
17623 \DeclareTextCommand{\textrevc}{PU}{\9041\204}% U+2184
17624 % U+2189 VULGAR FRACTION ZERO THIRDS
17625 \DeclareTextCommand{\textzerthirds}{PU}{\9041\211}% U+2189

47.2.21 Arrows: U+2190 to U+21FF

17626 % U+2190 LEFTWARDS ARROW; arrowleft
17627 \DeclareTextCommand{\textleftarrow}{PU}{\9041\220}%* U+2190
17628 % U+2191 UPWARDS ARROW; arrowup
17629 \DeclareTextCommand{\textuparrow}{PU}{\9041\221}%* U+2191
17630 % U+2192 RIGHTWARDS ARROW; arrowright
17631 \DeclareTextCommand{\textrightarrow}{PU}{\9041\222}%* U+2192
17632 %* \textrightarrow -> \MVRightArrow (marvosym)
17633 %* \textrightarrow -> \MVRightarrow (marvosym)
17634 % U+2193 DOWNWARDS ARROW; arrowdown
17635 \DeclareTextCommand{\textdownarrow}{PU}{\9041\223}%* U+2193
17636 %* \textdownarrow -> \MVArrowDown (marvosym)
17637 %* \textdownarrow -> \Force (marvosym)
17638 % U+2194 LEFT RIGHT ARROW; arrowboth; \leftrightarrow (LaTeX)
17639 \DeclareTextCommand{\textleftrightarrow}{PU}{\9041\224}%* U+2194
17640 % U+2195 UP DOWN ARROW; arrowupdn; \updownarrow (LaTeX)

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17641 \DeclareTextCommand{\textupdownarrow}{PU}{\9041\225}%* U+2195
17642 % U+2196 NORTH WEST ARROW; arrowupleft; \nwarrow (LaTeX)
17643 \DeclareTextCommand{\textnwarrow}{PU}{\9041\226}%* U+2196
17644 % U+2197 NORTH EAST ARROW; arrowupright; \nearrow (LaTeX)
17645 \DeclareTextCommand{\textnearrow}{PU}{\9041\227}%* U+2197
17646 %* \textnearrow -> \textglobrise (tipa)
17647 % U+2198 SOUTH EAST ARROW; arrowdownright; \searrow (LaTeX)
17648 \DeclareTextCommand{\textsearrow}{PU}{\9041\230}%* U+2198
17649 %* \textsearrow -> \textglobfall (tipa)
17650 % U+2199 SOUTH WEST ARROW; arrowdownleft; \swarrow (LaTeX)
17651 \DeclareTextCommand{\textswarrow}{PU}{\9041\231}%* U+2199
17652 % U+219A LEFTWARDS ARROW WITH STROKE; \leftarrow (AmS)
17653 \DeclareTextCommand{\textnleftarrow}{PU}{\9041\232}%* U+219A
17654 % U+219B RIGHTWARDS ARROW WITH STROKE; \rightarrow (AmS)
17655 \DeclareTextCommand{\textnrightarrow}{PU}{\9041\233}%* U+219B
17656 % U+219E LEFTWARDS TWO HEADED ARROW; \twoheadleftarrow (AmS)
17657 \DeclareTextCommand{\texttwoheadleftarrow}{PU}{\9041\236}%* U+219E
17658 % \ntwoheadleftarrow (txfonts/pxfonts)
17659 \DeclareTextCommand{\textntwoheadleftarrow}{PU}{\9041\236\83\070}%* U+219E U+0338
17660 % U+219F UPWARDS TWO HEADED ARROW; \twoheaduparrow (MnSymbol)
17661 \DeclareTextCommand{\texttwoheaduparrow}{PU}{\9041\237}%* U+219F
17662 % U+21A0 RIGHTWARDS TWO HEADED ARROW;
17663 % \twoheadrightarrow (AmS)
17664 \DeclareTextCommand{\texttwoheadrightarrow}{PU}{\9041\240}%* U+21A0
17665 % \ntwoheadrightarrow (txfonts/pxfonts)
17666 \DeclareTextCommand{\textntwoheadrightarrow}{PU}{\9041\240\83\070}%* U+21A0 U+0338
17667 % U+21A1 DOWNWARDS TWO HEADED ARROW; \twoheaddownarrow (Mn-
Symbol)
17668 \DeclareTextCommand{\texttwoheaddownarrow}{PU}{\9041\241}%* U+21A1
17669 % U+21A2 LEFTWARDS ARROW WITH TAIL; \leftarrowtail (AmS)
17670 \DeclareTextCommand{\textleftarrowtail}{PU}{\9041\242}%* U+21A2
17671 % U+21A3 RIGHTWARDS ARROW WITH TAIL; \rightarrowtail (AmS)
17672 \DeclareTextCommand{\textrightarrowtail}{PU}{\9041\243}%* U+21A3
17673 % U+21A6 RIGHTWARDS ARROW FROM BAR; \mapsto (LaTeX)
17674 \DeclareTextCommand{\textmapsto}{PU}{\9041\246}%* U+21A6
17675 % U+21A9 LEFTWARDS ARROW WITH HOOK; \hookleftarrow (LaTeX)
17676 \DeclareTextCommand{\texthookleftarrow}{PU}{\9041\251}%* U+21A9
17677 % U+21AA RIGHTWARDS ARROW WITH HOOK; \hookrightarrow (LaTeX)
17678 \DeclareTextCommand{\texthookrightarrow}{PU}{\9041\252}%* U+21AA
17679 % U+21AB LEFTWARDS ARROW WITH LOOP; \looparrowleft (AmS)
17680 \DeclareTextCommand{\textlooparrowleft}{PU}{\9041\253}%* U+21AB
17681 % U+21AC RIGHTWARDS ARROW WITH LOOP; \looparrowright (AmS)
17682 \DeclareTextCommand{\textlooparrowright}{PU}{\9041\254}%* U+21AC
17683 % U+21AE LEFT RIGHT ARROW WITH STROKE; \leftrightarrow (AmS)
17684 \DeclareTextCommand{\textnleftrightarrow}{PU}{\9041\256}%* U+21AE
17685 % U+21AF DOWNWARDS ZIGZAG ARROW; \lightning (stmaryrd)
17686 \DeclareTextCommand{\textlightning}{PU}{\9041\257}%* U+21AF
17687 %* \textlightning -> \Lightning (marvosym)
17688 % U+21B5 DOWNWARDS ARROW WITH CORNER LEFTWARDS;
17689 % \dlsH (mathabx)
17690 \DeclareTextCommand{\textdlsH}{PU}{\9041\265}%* U+21B5
17691 % U+21B6 ANTICLOCKWISE TOP SEMICIRCLE ARROW;
17692 % \curvearrowleft (AmS)
17693 \DeclareTextCommand{\textcurvearrowleft}{PU}{\9041\266}%* U+21B6

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17694 % U+21B7 CLOCKWISE TOP SEMICIRCLE ARROW; \curvearrowright (AmS)
17695 \DeclareTextCommand{\textcurvearrowright}{PU}{\9041\267}%* U+21B7
17696 % U+21BC LEFTWARDS HARPOON WITH BARB UPWARDS; harpoonleft-
    barbup;
17697 % \leftharpoonup (LaTeX)
17698 \DeclareTextCommand{\textleftharpoonup}{PU}{\9041\274}%* U+21BC
17699 % U+21BD LEFTWARDS HARPOON WITH BARB DOWNWARDS;
17700 % \leftharpoondown (LaTeX)
17701 \DeclareTextCommand{\textleftharpoondown}{PU}{\9041\275}%* U+21BD
17702 % U+21BE UPWARDS HARPOON WITH BARB RIGHTWARDS;
17703 % \upharpoonright (AmS)
17704 \DeclareTextCommand{\textupharpoonright}{PU}{\9041\276}%* U+21BE
17705 % U+21BF UPWARDS HARPOON WITH BARB LEFTWARDS;
17706 % \upharpoonleft (AmS)
17707 \DeclareTextCommand{\textupharpoonleft}{PU}{\9041\277}%* U+21BF
17708 % U+21C0 RIGHTWARDS HARPOON WITH BARB UPWARDS; harpoonright-
    barbup
17709 % \rightharpoonup (LaTeX)
17710 \DeclareTextCommand{\textrightharpoonup}{PU}{\9041\300}%* U+21C0
17711 % U+21C1 RIGHTWARDS HARPOON WITH BARB DOWNWARDS;
17712 % \rightharpoondown (LaTeX)
17713 \DeclareTextCommand{\textrightharpoondown}{PU}{\9041\301}%* U+21C1
17714 % U+21C2 DOWNWARDS HARPOON WITH BARB RIGHTWARDS;
17715 % \downharpoonright (AmS)
17716 \DeclareTextCommand{\textdownharpoonright}{PU}{\9041\302}%* U+21C2
17717 % U+21C3 DOWNWARDS HARPOON WITH BARB LEFTWARDS;
17718 % \downharpoonleft (AmS)
17719 \DeclareTextCommand{\textdownharpoonleft}{PU}{\9041\303}%* U+21C3
17720 % U+21C4 RIGHTWARDS ARROW OVER LEFTWARDS ARROW;
17721 % arrowrightoverleft; \rightleftarrows (MnSymbol)
17722 \DeclareTextCommand{\textrightleftarrows}{PU}{\9041\304}%* U+21C4
17723 % U+21C5 UPWARDS ARROW LEFTWARDS OF DOWNWARDS ARROW; ar-
    rowupleftofdown;
17724 % \updownarrows (MnSymbol)
17725 \DeclareTextCommand{\textupdownarrows}{PU}{\9041\305}%* U+21C5
17726 % U+21C6 LEFTWARDS ARROW OVER RIGHTWARDS ARROW; arrowleft-
    overright;
17727 % \leftrightharpoons (AmS)
17728 \DeclareTextCommand{\textleftrightharpoons}{PU}{\9041\306}%* U+21C6
17729 % U+21C7 LEFTWARDS PAIRED ARROWS; \leftleftarrows (AmS)
17730 \DeclareTextCommand{\textleftleftarrows}{PU}{\9041\307}%* U+21C7
17731 % U+21C8 UPWARDS PAIRED ARROWS; \upuparrows (AmS)
17732 \DeclareTextCommand{\textupuparrows}{PU}{\9041\310}%* U+21C8
17733 % U+21C9 RIGHTWARDS PAIRED ARROWS; \rightrightarrows (AmS)
17734 \DeclareTextCommand{\textrightarrows}{PU}{\9041\311}%* U+21C9
17735 % U+21CA DOWNWARDS PAIRED ARROWS; \downdownarrows (AmS)
17736 \DeclareTextCommand{\textdowndownarrows}{PU}{\9041\312}%* U+21CA
17737 % U+21CB LEFTWARDS HARPOON OVER RIGHTWARDS HARPOON;
17738 % \leftrightharpoons (AmS);
17739 \DeclareTextCommand{\textleftrightharpoons}{PU}{\9041\313}%* U+21CB
17740 % U+21CC RIGHTWARDS HARPOON OVER LEFTWARDS HARPOON;
17741 % \rightleftharpoons (LaTeX, AmS)
17742 \DeclareTextCommand{\textrightleftharpoons}{PU}{\9041\314}%* U+21CC
17743 % U+21CD LEFTWARDS DOUBLE ARROW WITH STROKE; arrowleft-

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        blstroke;
17744 % \nLeftarrow (AmS)
17745 \DeclareTextCommand{\textnLeftarrow}{PU}{\9041\315}%* U+21CD
17746 % U+21CE LEFT RIGHT DOUBLE ARROW WITH STROKE; \Leftrightarrow
        row (AmS)
17747 \DeclareTextCommand{\textnLeftrightarrow}{PU}{\9041\316}%* U+21CE
17748 % U+21CF RIGHTWARDS DOUBLE ARROW WITH STROKE; arrowrightd-
        blstroke;
17749 % \nrightarrow (AmS)
17750 \DeclareTextCommand{\textnrightarrow}{PU}{\9041\317}%* U+21CF
17751 % U+21D0 LEFTWARDS DOUBLE ARROW; arrowdblleft, arrowleftdbl;
17752 % \Leftarrow (LaTeX)
17753 \DeclareTextCommand{\textLeftarrow}{PU}{\9041\320}%* U+21D0
17754 % U+21D1 UPWARDS DOUBLE ARROW; arrowdblup; \Uparrow (LaTeX)
17755 \DeclareTextCommand{\textUparrow}{PU}{\9041\321}%* U+21D1
17756 % U+21D2 RIGHTWARDS DOUBLE ARROW; arrowdblright, dblarrowright;
17757 % \rightarrow (LaTeX)
17758 \DeclareTextCommand{\textrightarrow}{PU}{\9041\322}%* U+21D2
17759 %* \textrightarrow -> \Conclusion (marvosym)
17760 % U+21D3 DOWNWARDS DOUBLE ARROW; arrowdblDOWN; \Downarrow (La-
        TeX)
17761 \DeclareTextCommand{\textDownarrow}{PU}{\9041\323}%* U+21D3
17762 % U+21D4 LEFT RIGHT DOUBLE ARROW; arrowdblboth;
17763 % \Leftrightarrow (LaTeX)
17764 \DeclareTextCommand{\textLeftrightarrow}{PU}{\9041\324}%* U+21D4
17765 %* \textLeftrightarrow -> \Equivalence (marvosym)
17766 % U+21D5 UP DOWN DOUBLE ARROW; \Updownarrow (LaTeX)
17767 \DeclareTextCommand{\textUpdownarrow}{PU}{\9041\325}%* U+21D5
17768 % U+21D6 NORTH WEST DOUBLE ARROW; \Nwarrow (MnSymbol)
17769 \DeclareTextCommand{\textNwarrow}{PU}{\9041\326}%* U+21D6
17770 % U+21D7 NORTH EAST DOUBLE ARROW; \Nearrow (MnSymbol)
17771 \DeclareTextCommand{\textNearrow}{PU}{\9041\327}%* U+21D7
17772 % U+21D8 SOUTH EAST DOUBLE ARROW; \Searrow (MnSymbol)
17773 \DeclareTextCommand{\textSearrow}{PU}{\9041\330}%* U+21D8
17774 % U+21D9 SOUTH WEST DOUBLE ARROW; \Swarrow (MnSymbol)
17775 \DeclareTextCommand{\textSwarrow}{PU}{\9041\331}%* U+21D9
17776 % U+21DA LEFTWARDS TRIPLE ARROW; \Leftarrow (AmS)
17777 \DeclareTextCommand{\textLLeftarrow}{PU}{\9041\332}%* U+21DA
17778 % U+21DB RIGHTWARDS TRIPLE ARROW; \Rrightarrow (MnSymbol)
17779 \DeclareTextCommand{\textRrightarrow}{PU}{\9041\333}%* U+21DB
17780 % U+21DC LEFTWARDS SQUIGGLE ARROW; \leftsquigarrow (mathabx)
17781 \DeclareTextCommand{\textleftsquigarrow}{PU}{\9041\334}%* U+21DC
17782 % U+21DD RIGHTWARDS SQUIGGLE ARROW; \rightsquigarrow (mathabx)
17783 \DeclareTextCommand{\textright squigarrow}{PU}{\9041\335}%* U+21DD
17784 % U+21E0 LEFTWARDS DASHED ARROW; arrowdashleft;
17785 % \dashleftarrow (AmS)
17786 \DeclareTextCommand{\textdashleftarrow}{PU}{\9041\340}%* U+21E0
17787 %* \textdashleftarrow -> \dashedleftarrow (MnSymbol)
17788 % U+21E1 UPWARDS DASHED ARROW; arrowdashup; \dasheduparrow (Mn-
        Symbol)
17789 \DeclareTextCommand{\textdasheduparrow}{PU}{\9041\341}%* U+21E1
17790 % U+21E2 RIGHTWARDS DASHED ARROW; arrowdashright; \dashrightarrow
        row (AmS)
17791 \DeclareTextCommand{\textdashrightarrow}{PU}{\9041\342}%* U+21E2

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17792 %* \textdashrightarrow -> \dashedrightarrow (MnSymbol)
17793 % U+21E3 DOWNWARDS DASHED ARROW; arrowdashdown; \dasheddownarrow (MnSymbol)
17794 \DeclareTextCommand{\textdasheddownarrow}{PU}{\9041\343}%* U+21E3
17795 % U+21E8 RIGHTWARDS WHITE ARROW; \pointer (wasysym)
17796 \DeclareTextCommand{\textpointer}{PU}{\9041\350}%* U+21E8
17797 % U+21F5 DOWNWARDS ARROW LEFTWARDS OF UPWARDS ARROW;
17798 % \downuparrows (MnSymbol)
17799 \DeclareTextCommand{\textdownuparrows}{PU}{\9041\365}%* U+21F5
17800 % U+21FD LEFTWARDS OPEN-HEADED ARROW; \leftarrowtriangle (stmaryrd)
17801 \DeclareTextCommand{\textleftarrowtriangle}{PU}{\9041\375}%* U+21FD
17802 % U+21FE RIGHTWARDS OPEN-HEADED ARROW; \rightarrowtriangle (stmaryrd)
17803 \DeclareTextCommand{\textrightarrowtriangle}{PU}{\9041\376}%* U+21FE
17804 % U+21FF LEFT RIGHT OPEN-HEADED ARROW; \leftrightarrowtriangle (stmaryrd)
17805 \DeclareTextCommand{\textleftrightarrowtriangle}{PU}{\9041\377}%* U+21FF

47.2.22 Mathematical Operators: U+2200 to U+22FF

17806 % U+2200 FOR ALL; forall; \forall (LaTeX)
17807 \DeclareTextCommand{\textforall}{PU}{\9042\000}%* U+2200
17808 % U+2201 COMPLEMENT; \complement (AmS)
17809 \DeclareTextCommand{\textcomplement}{PU}{\9042\001}%* U+2201
17810 % U+2202 PARTIAL DIFFERENTIAL; partialdiff; \partial (LaTeX)
17811 \DeclareTextCommand{\textpartial}{PU}{\9042\002}%* U+2202
17812 % U+2203 THERE EXISTS; existential; \exists (LaTeX)
17813 \DeclareTextCommand{\textexists}{PU}{\9042\003}%* U+2203
17814 % U+2204 THERE DOES NOT EXIST; \nexists (AmS)
17815 \DeclareTextCommand{\textnexists}{PU}{\9042\004}%* U+2204
17816 % U+2205 EMPTY SET; emptyset; \emptyset (LaTeX), \varnothing (AmS)
17817 \DeclareTextCommand{\textemptyset}{PU}{\9042\005}%* U+2205
17818 %* \textemptyset -> \varnothing (AmS)
17819 % U+2206 INCREMENT; increment, Delta; \triangle (LaTeX)
17820 \DeclareTextCommand{\texttriangle}{PU}{\9042\006}%* U+2206
17821 % U+2207 NABLA; nabla, gradient; \nabla (LaTeX)
17822 \DeclareTextCommand{\textnabla}{PU}{\9042\007}%* U+2207
17823 % U+2208 ELEMENT OF; element; \in (LaTeX)
17824 \DeclareTextCommand{\textinsymbol}{PU}{\9042\010}%* U+2208
17825 % U+2209 NOT AN ELEMENT OF; notelement, notelementof; \notin (LaTeX)
17826 \DeclareTextCommand{\textnotin}{PU}{\9042\011}%* U+2209
17827 % U+220A SMALL ELEMENT OF; \smallin (mathdesign)
17828 \DeclareTextCommand{\textsmallin}{PU}{\9042\012}%* U+220A
17829 % U+220B CONTAINS AS MEMBER; suchthat; \ni (LaTeX)
17830 \DeclareTextCommand{\textni}{PU}{\9042\013}%* U+220B
17831 %* \textni -> \owns (mathabx)
17832 % U+220C DOES NOT CONTAIN AS MEMBER; \notowner (mathabx)
17833 \DeclareTextCommand{\textnotowner}{PU}{\9042\014}%* U+220C
17834 %* \textnotowner -> \notni (txfonts/pxfonts)
17835 % U+220D SMALL CONTAINS AS MEMBER; \smallowns (mathdesign)
17836 \DeclareTextCommand{\textsmallowns}{PU}{\9042\015}%* U+220D
17837 % U+220F N-ARY PRODUCT; \prod (LaTeX)
17838 \DeclareTextCommand{\textprod}{PU}{\9042\017}%* U+220F
17839 % U+2210 N-ARY COPRODUCT; \amalg (LaTeX)
17840 \DeclareTextCommand{\textamalg}{PU}{\9042\020}%* U+2210
17841 % U+2211 N-ARY SUMMATION; summation; \sum (LaTeX)

17842 \DeclareTextCommand{\textsum}{PU}{\9042\021}%* U+2211
17843 % U+2212 MINUS SIGN; minus
17844 \DeclareTextCommand{\textminus}{PU}{\9042\022}% U+2212
17845 % U+2213 MINUS-OR-PLUS SIGN; minusplus; \mp (LaTeX)
17846 \DeclareTextCommand{\textmp}{PU}{\9042\023}%* U+2213
17847 % U+2214 DOT PLUS; \dotplus (AmS)
17848 \DeclareTextCommand{\textdotplus}{PU}{\9042\024}%* U+2214
17849 % U+2215 DIVISION SLASH; divisionslash; \Divides (marvosym)
17850 \DeclareTextCommand{\textDivides}{PU}{\9042\025}%* U+2215
17851 % \DividesNot (marvosym)
17852 \DeclareTextCommand{\textDividesNot}{PU}{\9042\025\9040\322}%* U+2215 U+20D2
17853 % U+2216 SET MINUS; \setminus (LaTeX)
17854 \DeclareTextCommand{\textsetminus}{PU}{\9042\026}%* U+2216
17855 % U+2217 ASTERISK OPERATOR; asteriskmath; \ast (LaTeX)
17856 \DeclareTextCommand{\textast}{PU}{\9042\027}%* U+2217
17857 % U+2218 RING OPERATOR; \circ (LaTeX)
17858 \DeclareTextCommand{\textcirc}{PU}{\9042\030}%* U+2218
17859 % U+2219 BULLET OPERATOR; bulletoperator; \bullet (LaTeX)
17860 \DeclareTextCommand{\textbulletoperator}{PU}{\9042\031}% U+2219
17861 % U+221A SQUARE ROOT; radical
17862 \DeclareTextCommand{\textsqrt}{PU}{\9042\032}%* U+221A
17863 % U+221D PROPORTIONAL TO; proportional; \propto (LaTeX)
17864 \DeclareTextCommand{\textpropto}{PU}{\9042\035}%* U+221D
17865 %* \textpropto -> \varprop (wasysym)
17866 % U+221E INFINITY; infinity; \infty (LaTeX)
17867 \DeclareTextCommand{\textinfty}{PU}{\9042\036}%* U+221E
17868 % U+2220 ANGLE; angle; \angle (LaTeX)
17869 \DeclareTextCommand{\textangle}{PU}{\9042\040}%* U+2220
17870 % U+2221 MEASURED ANGLE; \measuredangle (mathabx, MnSymbol)
17871 \DeclareTextCommand{\textmeasuredangle}{PU}{\9042\041}%* U+2221
17872 % U+2222 SPHERICAL ANGLE; \sphericalangle (AmS)
17873 \DeclareTextCommand{\textsphericalangle}{PU}{\9042\042}%* U+2222
17874 %* \textsphericalangle -> \varangle (wasysym)
17875 %* \textsphericalangle -> \Anglesign (marvosym)
17876 %* \textsphericalangle -> \AngleSign (marvosym)
17877 % U+2223 DIVIDES; divides; \mid (LaTeX)
17878 \DeclareTextCommand{\textmid}{PU}{\9042\043}%* U+2223
17879 % U+2224 DOES NOT DIVIDE; \nmid (AmS)
17880 \DeclareTextCommand{\textnmid}{PU}{\9042\044}%* U+2224
17881 %* \textnmid -> \notdivides (mathabx)
17882 % U+2225 PARALLEL TO; parallel; \parallel (LaTeX)
17883 \DeclareTextCommand{\textparallel}{PU}{\9042\045}%* U+2225
17884 % U+2226 NOT PARALLEL TO; notparallel; \nparallel (AmS)
17885 \DeclareTextCommand{\textnparallel}{PU}{\9042\046}%* U+2226
17886 %* \textnparallel -> nUpdownline (MnSymbol)
17887 % U+2227 LOGICAL AND; logicaland; \wedge (LaTeX)
17888 \DeclareTextCommand{\textwedge}{PU}{\9042\047}%* U+2227
17889 % \owedge (stmaryrd)
17890 \DeclareTextCommand{\textowedge}{PU}{\9042\047\9040\335}%* U+2227 U+20DD
17891 %* \textowedge -> \varowedge (stmaryrd)
17892 % U+2228 LOGICAL OR; logicalor; \vee (LaTeX)
17893 \DeclareTextCommand{\textvee}{PU}{\9042\050}%* U+2228
17894 % \ovee (stmaryrd)
17895 \DeclareTextCommand{\textovee}{PU}{\9042\050\9040\335}%* U+2228 U+20DD

17896 %* \textovee -> \varovee (stmaryrd)
17897 % U+2229 INTERSECTION; intersection; \cap (LaTeX)
17898 \DeclareTextCommand{\textcap}{PU}{\9042\051}%* U+2229
17899 % U+222A UNION; union; \cup (LaTeX)
17900 \DeclareTextCommand{\textcup}{PU}{\9042\052}%* U+222A
17901 % U+222B INTEGRAL; integral; \int (LaTeX)
17902 \DeclareTextCommand{\textint}{PU}{\9042\053}%* U+222B
17903 %* \textint -> \varint (wasysym)
17904 % U+222C DOUBLE INTEGRAL; dblintegral; \iint (AmS)
17905 \DeclareTextCommand{\textiint}{PU}{\9042\054}%* U+222C
17906 % U+222D TRIPLE INTEGRAL; \iiint (AmS)
17907 \DeclareTextCommand{\textiiiint}{PU}{\9042\055}%* U+222D
17908 % U+222E CONTOUR INTEGRAL; contourintegral; \oint (LaTeX)
17909 \DeclareTextCommand{\textoint}{PU}{\9042\056}%* U+222E
17910 %* \textoint -> \varoint (wasysym)
17911 % U+222F SURFACE INTEGRAL; \oiint (wasysym)
17912 \DeclareTextCommand{\textoiint}{PU}{\9042\057}%* U+222F
17913 % U+2232 CLOCKWISE CONTOUR INTEGRAL;
17914 % \ointclockwise (txfonts/pxfonts)
17915 \DeclareTextCommand{\textointclockwise}{PU}{\9042\062}%* U+2232
17916 % U+2233 ANTICLOCKWISE CONTOUR INTEGRAL; \ointctrclockwise (tx-
fonts/pxfonts)
17917 \DeclareTextCommand{\textointctrclockwise}{PU}{\9042\063}%* U+2233
17918 % U+2234 THEREFORE; therefore; \therefore (AmS)
17919 \DeclareTextCommand{\texttherefore}{PU}{\9042\064}%* U+2234
17920 %* \texttherefore -> uptherefore (MnSymbol)
17921 % U+2235 BECAUSE; because; \because (AmS)
17922 \DeclareTextCommand{\textbecause}{PU}{\9042\065}%* U+2235
17923 %* \textbecause -> \downtherefore (MnSymbol)
17924 % U+2236 RATIO; \vdotdot (MnSymbol)
17925 \DeclareTextCommand{\textvdotdot}{PU}{\9042\066}%* U+2236
17926 % U+2237 PROPORTION; \squaredots (MnSymbol)
17927 \DeclareTextCommand{\textsquaredots}{PU}{\9042\067}%* U+2237
17928 % U+2238 DOT MINUS; \dotminus (MnSymbol)
17929 \DeclareTextCommand{\textdotminus}{PU}{\9042\070}%* U+2238
17930 %* \textdotminus -> \textdotdiv (mathabx)
17931 % U+2239 EXCESS; \eqcolon (txfonts/pxfonts)
17932 \DeclareTextCommand{\texteqcolon}{PU}{\9042\071}%* U+2239
17933 % U+223C TILDE OPERATOR; similar; \sim (LaTeX)
17934 \DeclareTextCommand{\textsim}{PU}{\9042\074}%* U+223C
17935 %* \textsim -> \AC (wasysym)
17936 % U+223D REVERSED TILDE; reverseditilde; \backsim (AmS)
17937 \DeclareTextCommand{\textbacksim}{PU}{\9042\075}%* U+223D
17938 % \nbacksim (txfonts/pxfonts)
17939 \DeclareTextCommand{\textnbacksim}{PU}{\9042\075\83\070}%* U+223D U+0338
17940 % U+2240 WREATH PRODUCT; \wr (LaTeX)
17941 \DeclareTextCommand{\textwr}{PU}{\9042\100}%* U+2240
17942 %* \textwr -> \wreath (MnSymbol)
17943 % U+2241 NOT TILDE; \nsim (AmS)
17944 \DeclareTextCommand{\textnsim}{PU}{\9042\101}%* U+2241
17945 % U+2242 MINUS TILDE; \eqsim (MnSymbol)
17946 \DeclareTextCommand{\texteqsim}{PU}{\9042\102}%* U+2242
17947 % \neqsim (MnSymbol)
17948 \DeclareTextCommand{\textneqsim}{PU}{\9042\102\83\070}%* U+2242 U+0338

17949 % U+2243 ASYMPTOTICALLY EQUAL TO; asymptoticallyequal; \simeq (LaTeX)

17950 \DeclareTextCommand{\textsimeq}{PU}{\9042\103}%* U+2243

17951 % U+2244 NOT ASYMPTOTICALLY EQUAL TO; \nsimeq (txfonts/pxfonts)

17952 \DeclareTextCommand{\textnsimeq}{PU}{\9042\104}%* U+2244

17953 % U+2245 APPROXIMATELY EQUAL TO; approximatelyequal; \cong (LaTeX)

17954 \DeclareTextCommand{\textcong}{PU}{\9042\105}%* U+2245

17955 % U+2247 NEITHER APPROXIMATELY NOR ACTUALLY EQUAL TO;

17956 % \ncong (AmS)

17957 \DeclareTextCommand{\textncong}{PU}{\9042\107}%* U+2247

17958 % U+2248 ALMOST EQUAL TO; approxequal; \approx (LaTeX)

17959 \DeclareTextCommand{\textapprox}{PU}{\9042\110}%* U+2248

17960 % U+2249 NOT ALMOST EQUAL TO; \napprox (txfonts/pxfonts)

17961 \DeclareTextCommand{\textnapprox}{PU}{\9042\111}%* U+2249

17962 %* \textnapprox -> \nthickapprox (txfonts/pxfonts)

17963 % U+224A ALMOST EQUAL OR EQUAL TO; \approxeq (AmS)

17964 \DeclareTextCommand{\textapproxeq}{PU}{\9042\112}%* U+224A

17965 % \napproxeq (txfonts/pxfonts)

17966 \DeclareTextCommand{\textnapproxeq}{PU}{\9042\112\83\070}%* U+224A U+0338

17967 % U+224B TRIPLE TILDE; \triplesim (MnSymbol)

17968 \DeclareTextCommand{\texttriplesim}{PU}{\9042\113}%* U+224B

17969 %* \texttriplesim -> \VHF (wasysym)

17970 % \ntriplesim (MnSymbol)

17971 \DeclareTextCommand{\textntriplesim}{PU}{\9042\113\83\070}%* U+224B U+0338

17972 % U+224C ALL EQUAL TO; allequal; \backcong (MnSymbol)

17973 \DeclareTextCommand{\textbackcong}{PU}{\9042\114}%* U+224C

17974 % \nbackcong (MnSymbol)

17975 \DeclareTextCommand{\textnbackcong}{PU}{\9042\114\83\070}%* U+224C U+0338

17976 % U+224D EQUIVALENT TO; \asymp (LaTeX)

17977 \DeclareTextCommand{\textasymp}{PU}{\9042\115}%* U+224D

17978 % \nasymp (txfonts/pxfonts)

17979 \DeclareTextCommand{\textnasymp}{PU}{\9042\115\83\070}%* U+224D U+0338

17980 %* \textnasymp -> \notasymp (mathabx)

17981 % U+224E GEOMETRICALLY EQUIVALENT TO; \Bumpeq (AmS)

17982 \DeclareTextCommand{\textBumpeq}{PU}{\9042\116}%* U+224E

17983 % \nBumpeq (txfonts/pxfonts)

17984 \DeclareTextCommand{\textnBumpeq}{PU}{\9042\116\83\070}%* U+224E U+0338

17985 % U+224F DIFFERENCE BETWEEN; \bumpeq (AmS)

17986 \DeclareTextCommand{\textbumpeq}{PU}{\9042\117}%* U+224F

17987 % \nbumpeq (txfonts/pxfonts)

17988 \DeclareTextCommand{\textnbumpeq}{PU}{\9042\117\83\070}%* U+224F U+0338

17989 % U+2250 APPROACHES THE LIMIT; approaches; \doteq (LaTeX)

17990 \DeclareTextCommand{\textdoteq}{PU}{\9042\120}%* U+2250

17991 % \ndoteq (MnSymbol)

17992 \DeclareTextCommand{\textndoteq}{PU}{\9042\120\83\070}%* U+2250 U+0338

17993 % U+2251 GEOMETRICALLY EQUAL TO; geometricallyequal;

17994 % \doteqdot (AmS)

17995 \DeclareTextCommand{\textdoteqdot}{PU}{\9042\121}%* U+2251

17996 %* \textdoteqdot -> \Doteq (MnSymbol)

17997 % \nDoteq (MnSymbol)

17998 \DeclareTextCommand{\textnDoteq}{PU}{\9042\121\83\070}%* U+2251 U+0338

17999 % U+2252 APPROXIMATELY EQUAL TO OR THE IMAGE OF; approx-equalorimage;

18000 % \fallingdotseq (AmS)

18001 \DeclareTextCommand{\textfallingdoteq}{PU}{\9042\122}%* U+2252
18002 % \nfallingdotseq (MnSymbol)
18003 \DeclareTextCommand{\textnfallingdoteq}{PU}{\9042\122\83\070}%* U+2252 U+0338
18004 % U+2253 IMAGE OF OR APPROXIMATELY EQUAL TO; imageorapproximatelyequal;
18005 % \risingdotseq (AmS)
18006 \DeclareTextCommand{\textrisingdoteq}{PU}{\9042\123}%* U+2253
18007 % \nrisingdoteq (MnSymbol)
18008 \DeclareTextCommand{\textnrisingdoteq}{PU}{\9042\123\83\070}%* U+2253 U+0338
18009 % U+2254 COLON EQUALS; \colonequals (colonequals)
18010 \DeclareTextCommand{\textcolonequals}{PU}{\9042\124}%* U+2254
18011 % U+2255 EQUALS COLON; \equalscolon (colonequals)
18012 \DeclareTextCommand{\textequalscolon}{PU}{\9042\125}%* U+2255
18013 % U+2256 RING IN EQUAL TO; \eqcirc (AmS)
18014 \DeclareTextCommand{\texteqcirc}{PU}{\9042\126}%* U+2256
18015 % \neqcirc (MnSymbol)
18016 \DeclareTextCommand{\textneqcirc}{PU}{\9042\126\83\070}%* U+2256 U+0338
18017 % U+2257 RING EQUAL TO; \circeq (AmS)
18018 \DeclareTextCommand{\textcirceq}{PU}{\9042\127}%* U+2257
18019 % \ncirceq (MnSymbol)
18020 \DeclareTextCommand{\textncirceq}{PU}{\9042\127\83\070}%* U+2257 U+0338
18021 % U+2259 ESTIMATES; \hateq (MnSymbol)
18022 \DeclareTextCommand{\texthateq}{PU}{\9042\131}%* U+2259
18023 %* \texthateq -> \corresponds (mathabx)
18024 %* \texthateq -> \Corresponds (marvosym)
18025 % \nhateq (MnSymbol)
18026 \DeclareTextCommand{\textnhateq}{PU}{\9042\131\83\070}%* U+2259 U+0338
18027 % U+225C DELTA EQUAL TO; \triangleeq (AmS)
18028 \DeclareTextCommand{\texttriangleeq}{PU}{\9042\134}%* U+225C
18029 % U+2260 NOT EQUAL TO; notequal; \ne (LaTeX), \neq (LaTeX)
18030 \DeclareTextCommand{\textneq}{PU}{\9042\140}%* U+2260
18031 \DeclareTextCommand{\textne}{PU}{\9042\140}%* U+2260
18032 %* \textneq -> \nequal (MnSymbol)
18033 % U+2261 IDENTICAL TO; equivalence; \equiv (LaTeX)
18034 \DeclareTextCommand{\textequiv}{PU}{\9042\141}%* U+2261
18035 %* \textequiv -> \Congruent (marvosym)
18036 % U+2262 NOT IDENTICAL TO; notidentical; \notequiv (txfonts/pxfonts)
18037 \DeclareTextCommand{\textnequiv}{PU}{\9042\142}%* U+2262
18038 %* \textnequiv -> \NotCongruent (marvosym)
18039 %* \textnequiv -> \notequiv (mathabx)
18040 % U+2264 LESS-THAN OR EQUAL TO; lessequal; \le (LaTeX), \leq (LaTeX)
18041 \DeclareTextCommand{\textleq}{PU}{\9042\144}%* U+2264
18042 \DeclareTextCommand{\texttle}{PU}{\9042\144}%* U+2264
18043 %* \textleq -> \LessOrEqual (marvosym)
18044 % U+2265 GREATER-THAN OR EQUAL TO; greaterequal;
18045 % \ge (LaTeX), \geq (LaTeX)
18046 \DeclareTextCommand{\texttgeq}{PU}{\9042\145}%* U+2265
18047 \DeclareTextCommand{\texttge}{PU}{\9042\145}%* U+2265
18048 %* \texttgeq -> \LargerOrEqual (marvosym)
18049 % U+2266 LESS-THAN OVER EQUAL TO; lessoverequal; \leqq (AmS)
18050 \DeclareTextCommand{\textleqq}{PU}{\9042\146}%* U+2266
18051 % \nleqq (txfonts/pxfonts)
18052 \DeclareTextCommand{\textnleqq}{PU}{\9042\146\83\070}%* U+2266 U+0338
18053 % U+2267 GREATER-THAN OVER EQUAL TO; greateroverequal; \geqq (AmS)

18054 \DeclareTextCommand{\textgeqq}{PU}{\9042\147}%* U+2267
18055 % \ngeqq (txfonts/pxfonts)
18056 \DeclareTextCommand{\textngeqq}{PU}{\9042\147\83\070}%* U+2267 U+0338
18057 % U+2268 LESS-THAN BUT NOT EQUAL TO; \lneqq (AmS)
18058 \DeclareTextCommand{\textlneqq}{PU}{\9042\150}%* U+2268
18059 % U+2269 GREATER-THAN BUT NOT EQUAL TO; \gneqq (AmS)
18060 \DeclareTextCommand{\textgneqq}{PU}{\9042\151}%* U+2269
18061 % U+226A MUCH LESS-THAN; muchless; \ll (LaTeX)
18062 \DeclareTextCommand{\textll}{PU}{\9042\152}%* U+226A
18063 % \null (txfonts/pxfonts)
18064 \DeclareTextCommand{\textnll}{PU}{\9042\152\83\070}%* U+226A U+0338
18065 % U+226B MUCH GREATER-THAN; muchgreater; \gg (LaTeX)
18066 \DeclareTextCommand{\textgg}{PU}{\9042\153}%* U+226B
18067 % \ngg (txfonts/pxfonts)
18068 \DeclareTextCommand{\textngg}{PU}{\9042\153\83\070}%* U+226B U+0338
18069 % U+226C BETWEEN; \between (AmS)
18070 \DeclareTextCommand{\textbetween}{PU}{\9042\154}%* U+226C
18071 % U+226E NOT LESS-THAN; notless; \nless (AmS)
18072 \DeclareTextCommand{\textnless}{PU}{\9042\156}%* U+226E
18073 % U+226F NOT GREATER-THAN; notgreater; \ngtr (AmS)
18074 \DeclareTextCommand{\textngtr}{PU}{\9042\157}%* U+226F
18075 % U+2270 NEITHER LESS-THAN NOR EQUAL TO; notlessnorequal;
18076 % \nleq (AmS)
18077 \DeclareTextCommand{\textnleq}{PU}{\9042\160}%* U+2270
18078 % U+2271 NEITHER GREATER-THAN NOR EQUAL TO; notgreaternorequal;
18079 % \ngeq (AmS)
18079 \DeclareTextCommand{\textngeq}{PU}{\9042\161}%* U+2271
18080 % U+2272 LESS-THAN OR EQUIVALENT TO; lessorequivalent; \lessim (AmS)
18081 \DeclareTextCommand{\textlessim}{PU}{\9042\162}%* U+2272
18082 %* \textlessim -> \apprle (wasysym)
18083 % U+2273 GREATER-THAN OR EQUIVALENT TO; greaterorequivalent; \gtrsim
18084 % (AmS)
18084 \DeclareTextCommand{\textgtrsim}{PU}{\9042\163}%* U+2273
18085 %* \textgtrsim -> \apprge (wasysym)
18086 % U+2274 NEITHER LESS-THAN NOR EQUIVALENT TO; \nlessim (tx-
18087 % fonts/pxfonts)
18087 \DeclareTextCommand{\textnlessim}{PU}{\9042\164}%* U+2274
18088 % U+2275 NEITHER GREATER-THAN NOR EQUIVALENT TO; \ngtrsim (tx-
18089 % fonts/pxfonts)
18089 \DeclareTextCommand{\textngtrsim}{PU}{\9042\165}%* U+2275
18090 % U+2276 LESS-THAN OR GREATER-THAN; lessorgreater; \lessgtr (AmS)
18091 \DeclareTextCommand{\textlessgtr}{PU}{\9042\166}%* U+2276
18092 % U+2277 GREATER-THAN OR LESS-THAN; greaterorless; \gtrless (AmS)
18093 \DeclareTextCommand{\textgtrless}{PU}{\9042\167}%* U+2277
18094 % U+2278 NEITHER LESS-THAN NOR GREATER-THAN; \ngtrless (tx-
18095 % fonts/pxfonts)
18095 \DeclareTextCommand{\textngtrless}{PU}{\9042\170}%* U+2278
18096 % U+2279 NEITHER GREATER-THAN NOR LESS-THAN; \nlessgtr (tx-
18097 % fonts/pxfonts)
18097 \DeclareTextCommand{\textnlessgtr}{PU}{\9042\171}%* U+2279
18098 % U+227A PRECEDES; precedes; \prec (LaTeX)
18099 \DeclareTextCommand{\textprec}{PU}{\9042\172}%* U+227A
18100 % U+227B SUCCEEDS; succeeds; \succ (LaTeX)
18101 \DeclareTextCommand{\textsucc}{PU}{\9042\173}%* U+227B

18102 % U+227C PRECEDES OR EQUAL TO; \preccurlyeq (AmS)
18103 \DeclareTextCommand{\textpreccurlyeq}{PU}{\9042\174}%* U+227C
18104 % U+227D SUCCEEDS OR EQUAL TO; \succcurlyeq (AmS)
18105 \DeclareTextCommand{\textsuccurlyeq}{PU}{\9042\175}%* U+227D
18106 % U+227E PRECEDES OR EQUIVALENT TO; \precsim (AmS)
18107 \DeclareTextCommand{\textprecsim}{PU}{\9042\176}%* U+227E
18108 % \nprecsim (txfonts/pxfonts)
18109 \DeclareTextCommand{\textnprecsim}{PU}{\9042\176\83\070}%* U+227E U+0338
18110 % U+227F SUCCEEDS OR EQUIVALENT TO; \succsim (AmS)
18111 \DeclareTextCommand{\textsuccsim}{PU}{\9042\177}%* U+227F
18112 % \nsuccsim (txfonts/pxfonts)
18113 \DeclareTextCommand{\textnsuccsim}{PU}{\9042\177\83\070}%* U+227F U+0338
18114 % U+2280 DOES NOT PRECEDE; notprecedes; \nprec (AmS)
18115 \DeclareTextCommand{\textnprec}{PU}{\9042\200}%* U+2280
18116 % U+2281 DOES NOT SUCCEED; notsucceds; \nsucc (AmS)
18117 \DeclareTextCommand{\textnsucc}{PU}{\9042\201}%* U+2281
18118 % U+2282 SUBSET OF; propersubset; \subset (LaTeX)
18119 \DeclareTextCommand{\textsubset}{PU}{\9042\202}%* U+2282
18120 % U+2283 SUPERSET OF; propersuperset; \supset (LaTeX)
18121 \DeclareTextCommand{\textsupset}{PU}{\9042\203}%* U+2283
18122 % U+2284 NOT A SUBSET OF; notsubset; \nsubset (mathabx)
18123 \DeclareTextCommand{\textnsubset}{PU}{\9042\204}%* U+2284
18124 % U+2285 NOT A SUPERSET OF; notsuperset; \nsupset (mathabx)
18125 \DeclareTextCommand{\textnsupset}{PU}{\9042\205}%* U+2285
18126 % U+2286 SUBSET OF OR EQUAL TO; reflexsubset; \subseteq (LaTeX)
18127 \DeclareTextCommand{\textsubseteq}{PU}{\9042\206}%* U+2286
18128 % U+2287 SUPERSET OF OR EQUAL TO; reflexsuperset; \supseteq (LaTeX)
18129 \DeclareTextCommand{\textsupseteq}{PU}{\9042\207}%* U+2287
18130 % U+2288 NEITHER A SUBSET OF NOR EQUAL TO; \nsubseteq (AmS)
18131 \DeclareTextCommand{\textnsubseteq}{PU}{\9042\210}%* U+2288
18132 % U+2289 NEITHER A SUPERSET OF NOR EQUAL TO; \nsupseteq (AmS)
18133 \DeclareTextCommand{\textnsupseteq}{PU}{\9042\211}%* U+2289
18134 % U+228A SUBSET OF WITH NOT EQUAL TO; subsetnotequal; \subsetneq (AmS)
18135 \DeclareTextCommand{\textsubsetneq}{PU}{\9042\212}%* U+228A
18136 % U+228B SUPERSET OF WITH NOT EQUAL TO; supersetnotequal; \supsetneq (AmS)
18137 \DeclareTextCommand{\textsupsetneq}{PU}{\9042\213}%* U+228B
18138 % U+228D MULTISSET MULTIPLICATION; \cupdot (MnSymbol)
18139 \DeclareTextCommand{\textcupdot}{PU}{\9042\215}%* U+228D
18140 % U+228E MULTISSET UNION; \cupplus (MnSymbol)
18141 \DeclareTextCommand{\textcupplus}{PU}{\9042\216}%* U+228E
18142 % U+228F SQUARE IMAGE OF; \sqsubset (latexsym, ...)
18143 \DeclareTextCommand{\textsqsubset}{PU}{\9042\217}%* U+228F
18144 % \nsqsubset (txfonts/pxfonts)
18145 \DeclareTextCommand{\textnsqsubset}{PU}{\9042\217\83\070}%* U+228F U+0338
18146 % U+2290 SQUARE ORIGINAL OF; \sqsupset (latexsym, ...)
18147 \DeclareTextCommand{\textsqsupset}{PU}{\9042\220}%* U+2290
18148 % \nsqsupset (txfonts/pxfonts)
18149 \DeclareTextCommand{\textnsqsupset}{PU}{\9042\220\83\070}%* U+2290 U+0338
18150 % U+2291 SQUARE IMAGE OF OR EQUAL TO; \sqsubseteq (LaTeX)
18151 \DeclareTextCommand{\textsqsubseteq}{PU}{\9042\221}%* U+2291
18152 % \nsqsubseteq (txfonts/pxfonts)
18153 \DeclareTextCommand{\textnsqsubseteq}{PU}{\9042\221\83\070}%* U+2291 U+0338

18154 % U+2292 SQUARE ORIGINAL OF OR EQUAL TO; \sqsupseteq (LaTeX)
18155 \DeclareTextCommand{\textsqsupseteq}{PU}{\9042\222}%* U+2292
18156 % \nsqsupseteq (txfonts/pxfonts)
18157 \DeclareTextCommand{\textnsqsupseteq}{PU}{\9042\222\83\070}%* U+2292 U+0338
18158 % U+2293 SQUARE CAP; \sqcap (LaTeX)
18159 \DeclareTextCommand{\textsqcap}{PU}{\9042\223}%* U+2293
18160 % U+2294 SQUARE CUP; \sqcup (LaTeX)
18161 \DeclareTextCommand{\textsqcup}{PU}{\9042\224}%* U+2294
18162 % U+2295 CIRCLED PLUS; circleplus; \oplus (LaTeX)
18163 \DeclareTextCommand{\textoplus}{PU}{\9042\225}%* U+2295
18164 %* \textoplus -> \varoplus (stmaryrd)
18165 % U+2296 CIRCLED MINUS; minuscircle; \ominus (LaTeX)
18166 \DeclareTextCommand{\textominus}{PU}{\9042\226}%* U+2296
18167 %* \textominus -> \varominus (stmaryrd)
18168 % U+2297 CIRCLED TIMES; circlemultiply; \otimes (LaTeX)
18169 \DeclareTextCommand{\textotimes}{PU}{\9042\227}%* U+2297
18170 %* \textotimes -> \varotimes (stmaryrd)
18171 % U+2298 CIRCLED DIVISION SLASH; \oslash (LaTeX)
18172 \DeclareTextCommand{\textoslash}{PU}{\9042\230}%* U+2298
18173 %* \textoslash -> \varoslash (stmaryrd)
18174 % U+2299 CIRCLED DOT OPERATOR; circle(d?)ot; \odot (LaTeX)
18175 \DeclareTextCommand{\textodot}{PU}{\9042\231}%* U+2299
18176 %* \textodot -> \varodot (stmaryrd)
18177 % U+229A CIRCLED RING OPERATOR; \circledcirc (AmS)
18178 \DeclareTextCommand{\textcircledcirc}{PU}{\9042\232}%* U+229A
18179 %* \textcircledcirc -> \ocirc (mathabx)
18180 %* \textcircledcirc -> \varocircle (stmaryrd)
18181 % U+229B CIRCLED ASTERISK OPERATOR; \circledast (AmS)
18182 \DeclareTextCommand{\textcircledast}{PU}{\9042\233}%* U+229B
18183 %* \textcircledast -> \varoast (stmaryrd)
18184 %* \textcircledast -> \oasterisk (mathabx)
18185 % U+229D CIRCLED DASH; \circleddash (AmS)
18186 \DeclareTextCommand{\textcircleddash}{PU}{\9042\235}%* U+229D
18187 % U+229E SQUARED PLUS; \boxplus (AmS)
18188 \DeclareTextCommand{\textboxplus}{PU}{\9042\236}%* U+229E
18189 % U+229F SQUARED MINUS; \boxminus (AmS)
18190 \DeclareTextCommand{\textboxminus}{PU}{\9042\237}%* U+229F
18191 % U+22A0 SQUARED TIMES; \boxtimes (AmS)
18192 \DeclareTextCommand{\textboxtimes}{PU}{\9042\240}%* U+22A0
18193 % U+22A1 SQUARED DOT OPERATOR; \boxdot (AmS)
18194 \DeclareTextCommand{\textboxdot}{PU}{\9042\241}%* U+22A1
18195 % U+22A2 RIGHT TACK; \vdash (LaTeX)
18196 \DeclareTextCommand{\textvdash}{PU}{\9042\242}%* U+22A2
18197 %* \textvdash -> \rightvdash (MnSymbol)
18198 % U+22A3 LEFT TACK; \dashv; \dashv (LaTeX)
18199 \DeclareTextCommand{\textdashv}{PU}{\9042\243}%* U+22A3
18200 %* \textdashv -> \leftvdash (MnSymbol)
18201 % \ndashv (mathabx)
18202 \DeclareTextCommand{\textndashv}{PU}{\9042\243\83\070}%* U+22A3 U+0338
18203 %* \textndashv -> \nleftvdash (MnSymbol)
18204 % U+22A4 DOWN TACK (=top); \tackdown; \top (LaTeX)
18205 \DeclareTextCommand{\texttop}{PU}{\9042\244}%* U+22A4
18206 %* \texttop -> \downvdash (MnSymbol)
18207 % \ndownvdash (MnSymbol)

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18208 \DeclareTextCommand{\textndowndash}{PU}{\9042\244\83\070}%* U+22A4 U+0338
18209 % U+22A5 UP TACK (=base, bottom); \bot (LaTeX)
18210 \DeclareTextCommand{\textbot}{PU}{\9042\245}%* U+22A5
18211 %* \textbot -> \upvdash (MnSymbol)
18212 % \nupvdash (MnSymbol)
18213 \DeclareTextCommand{\textnupvdash}{PU}{\9042\245\83\070}%* U+22A5 U+0338
18214 %* \textnupvdash -> \nperp (MnSymbol)
18215 % U+22A8 TRUE; \vDash (AmS)
18216 \DeclareTextCommand{\textvDash}{PU}{\9042\250}%* U+22A8
18217 %* \textvDash -> \models (LaTeX)
18218 %* \textvDash -> \rightmodels (MnSymbol)
18219 % U+22A9 FORCES; \Vdash (AmS)
18220 \DeclareTextCommand{\textVdash}{PU}{\9042\251}%* U+22A9
18221 %* \textVdash -> \rightVdash (MnSymbol)
18222 % U+22AA TRIPLE VERTICAL BAR RIGHT TURNSTILE; \Vvdash (AmS)
18223 \DeclareTextCommand{\textVvdash}{PU}{\9042\252}%* U+22AA
18224 % \nVvdash (mathabx)
18225 \DeclareTextCommand{\textnVvdash}{PU}{\9042\252\83\070}%* U+22AA U+0338
18226 % U+22AB DOUBLE VERTICAL BAR DOUBLE RIGHT TURNSTILE;
18227 % \VDash (mathabx)
18228 \DeclareTextCommand{\textVDash}{PU}{\9042\253}%* U+22AB
18229 %* \textVDash -> \rightModels (MnSymbol)
18230 % U+22AC DOES NOT PROVE; \nvdash (AmS)
18231 \DeclareTextCommand{\textnvdash}{PU}{\9042\254}%* U+22AC
18232 %* \textnvdash -> \nrightvdash (MnSymbol)
18233 % U+22AD NOT TRUE; \nvDash (AmS)
18234 \DeclareTextCommand{\textnvDash}{PU}{\9042\255}%* U+22AD
18235 %* \textnvDash -> \nrightmodels (MnSymbol)
18236 %* \textnvDash -> \nmodels (MnSymbol)
18237 % U+22AE DOES NOT FORCE; \nVdash (txfonts/pxfonts)
18238 \DeclareTextCommand{\textnVdash}{PU}{\9042\256}%* U+22AE
18239 %* \textnVdash -> \nrightVdash (MnSymbol)
18240 % U+22AF NEGATED DOUBLE VERTICAL BAR DOUBLE RIGHT TURN-
      STILE; \nVDash (AmS)
18241 \DeclareTextCommand{\textnVDash}{PU}{\9042\257}%* U+22AF
18242 %* \textnVDash -> \nrightModels (MnSymbol)
18243 % U+22B2 NORMAL SUBGROUP OF; \lhd (latexsym, ...)
18244 \DeclareTextCommand{\textlhd}{PU}{\9042\262}%* U+22B2
18245 %* \textlhd -> \lessclosed (MnSymbol)
18246 % U+22B3 CONTAINS AS NORMAL SUBGROUP; \rhd (latexsym, ...)
18247 \DeclareTextCommand{\textrhd}{PU}{\9042\263}%* U+22B3
18248 %* \textrhd -> \gtrclosed (MnSymbol)
18249 % U+22B4 NORMAL SUBGROUP OF OR EQUAL TO; \unlhd (latexsym, ...)
18250 \DeclareTextCommand{\textunlhd}{PU}{\9042\264}%* U+22B4
18251 %* \textunlhd -> \leqclosed (MnSymbol)
18252 %* \textunlhd -> \trianglelefteq (MnSymbol)
18253 % U+22B5 CONTAINS AS NORMAL SUBGROUP OR EQUAL TO; \unrhd (la-
      texsym, ...)
18254 \DeclareTextCommand{\textunrhd}{PU}{\9042\265}%* U+22B5
18255 %* \textunrhd -> \geqclosed (MnSymbol)
18256 %* \textunrhd -> \trianglerighteq (MnSymbol)
18257 % U+22B6 ORIGINAL OF; \multimapdotbothA (txfonts/pxfonts)
18258 \DeclareTextCommand{\textmultimapdotbothA}{PU}{\9042\266}%* U+22B6
18259 % U+22B7 IMAGE OF; \multimapdotbothB (txfonts/pxfonts)

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18260 \DeclareTextCommand{\textmultimapdotbothB}{PU}{\9042\267}%* U+22B7
18261 % U+22B8 MULTIMAP; \multimap (AmS, txfonts/pxfonts)
18262 \DeclareTextCommand{\textmultimap}{PU}{\9042\270}%* U+22B8
18263 % U+22BB XOR; \veebar (AmS)
18264 \DeclareTextCommand{\textveebar}{PU}{\9042\273}%* U+22BB
18265 % U+22BC NAND; \barwedge (mathabx)
18266 \DeclareTextCommand{\textbarwedge}{PU}{\9042\274}%* U+22BC
18267 % U+22C6 STAR OPERATOR; \star (LaTeX)
18268 \DeclareTextCommand{\textstar}{PU}{\9042\306}%* U+22C6
18269 % U+22C7 DIVISION TIMES; \divideontimes (AmS)
18270 \DeclareTextCommand{\textdivideontimes}{PU}{\9042\307}%* U+22C7
18271 % U+22C8 BOWTIE; \bowtie (LaTeX)
18272 \DeclareTextCommand{\textbowtie}{PU}{\9042\310}%* U+22C8
18273 %* \textbowtie -> \Bowtie (wasysym)
18274 % U+22C9 LEFT NORMAL FACTOR SEMIDIRECT PRODUCT; \ltimes (AmS)
18275 \DeclareTextCommand{\textltimes}{PU}{\9042\311}%* U+22C9
18276 % U+22CA RIGHT NORMAL FACTOR SEMIDIRECT PRODUCT;
18277 % \rtimes (AmS)
18278 \DeclareTextCommand{\textrtimes}{PU}{\9042\312}%* U+22CA
18279 % U+22CB LEFT SEMIDIRECT PRODUCT; \leftthreetimes (AmS)
18280 \DeclareTextCommand{\textleftthreetimes}{PU}{\9042\313}%* U+22CB
18281 % U+22CC RIGHT SEMIDIRECT PRODUCT; \rightthreetimes (AmS)
18282 \DeclareTextCommand{\textrightthreetimes}{PU}{\9042\314}%* U+22CC
18283 % U+22CD REVERSED TILDE EQUALS; \backsimeq (AmS)
18284 \DeclareTextCommand{\textbacksimeq}{PU}{\9042\315}%* U+22CD
18285 % \nbacksimeq (txfonts/pxfonts)
18286 \DeclareTextCommand{\textnbacksimeq}{PU}{\9042\315\83\070}%* U+22CD U+0338
18287 % U+22CE CURLY LOGICAL OR; curlyor; \curlyvee (AmS)
18288 \DeclareTextCommand{\textcurlyvee}{PU}{\9042\316}%* U+22CE
18289 %* \textcurlyvee -> \varcurlyvee (stmaryrd)
18290 % U+22CF CURLY LOGICAL AND; curlyand; \curlywedge (AmS)
18291 \DeclareTextCommand{\textcurlywedge}{PU}{\9042\317}%* U+22CF
18292 %* \textcurlywedge -> \varcurlywedge (stmaryrd)
18293 % U+22D0 DOUBLE SUBSET; \Subset (AmS)
18294 \DeclareTextCommand{\textSubset}{PU}{\9042\320}%* U+22D0
18295 % \nSubset (txfonts/pxfonts)
18296 \DeclareTextCommand{\textnSubset}{PU}{\9042\320\83\070}%* U+22D0 U+0338
18297 % U+22D1 DOUBLE SUPERSET; \Supset (AmS)
18298 \DeclareTextCommand{\textSupset}{PU}{\9042\321}%* U+22D1
18299 % \nSupset (txfonts/pxfonts)
18300 \DeclareTextCommand{\textnSupset}{PU}{\9042\321\83\070}%* U+22D1 U+0338
18301 % U+22D2 DOUBLE INTERSECTION; \Cap (AmS)
18302 \DeclareTextCommand{\textCap}{PU}{\9042\322}%* U+22D2
18303 %* \textCap -> \doublecap (mathabx)
18304 % U+22D3 DOUBLE UNION; \Cup (AmS)
18305 \DeclareTextCommand{\textCup}{PU}{\9042\323}%* U+22D3
18306 %* \textCup -> \doublecup (mathabx)
18307 % U+22D4 PITCHFORK; \pitchfork (mathabx)
18308 \DeclareTextCommand{\textpitchfork}{PU}{\9042\324}%* U+22D4
18309 % U+22D6 LESS-THAN WITH DOT; \lessdot (AmS)
18310 \DeclareTextCommand{\textlessdot}{PU}{\9042\326}%* U+22D6
18311 % U+22D7 GREATER-THAN WITH DOT; \gtrdot (AmS)
18312 \DeclareTextCommand{\textgtrdot}{PU}{\9042\327}%* U+22D7
18313 % U+22D8 VERY MUCH LESS-THAN; \lll (AmS)

18314 \DeclareTextCommand{\textlll}{PU}{\9042\330}%* U+22D8
18315 % U+22D9 VERY MUCH GREATER-THAN; \ggg (AmS)
18316 \DeclareTextCommand{\textggg}{PU}{\9042\331}%* U+22D9
18317 % U+22DA LESS-THAN EQUAL TO OR GREATER-THAN; lessequalorgreater;
18318 % \lesseqgtr (AmS)
18319 \DeclareTextCommand{\textlesseqgtr}{PU}{\9042\332}%* U+22DA
18320 % U+22DB GREATER-THAN EQUAL TO OR LESS-THAN; greaterequalorless;
18321 % \gtreqless (AmS)
18322 \DeclareTextCommand{\textgtreqless}{PU}{\9042\333}%* U+22DB
18323 % U+22DE EQUAL TO OR PRECEDES; \curlyeqprec (MnSymbol)
18324 \DeclareTextCommand{\textcurlyeqprec}{PU}{\9042\336}%* U+22DE
18325 % \ncurlyeqprec (mathabx)
18326 \DeclareTextCommand{\textncurlyeqprec}{PU}{\9042\336\83\070}%* U+22DE U+0338
18327 % U+22DF EQUAL TO OR SUCCEEDS; \curlyeqsucc (MnSymbol)
18328 \DeclareTextCommand{\textcurlyeqsucc}{PU}{\9042\337}%* U+22DF
18329 % \ncurlyeqsucc (mathabx)
18330 \DeclareTextCommand{\textncurlyeqsucc}{PU}{\9042\337\83\070}%* U+22DF U+0338
18331 % U+22E0 DOES NOT PRECEDE OR EQUAL; \npreccurlyeq (txfonts/pxfonts)
18332 \DeclareTextCommand{\textnpreccurlyeq}{PU}{\9042\340}%* U+22E0
18333 % U+22E1 DOES NOT SUCCEED OR EQUAL; \nsucccurlyeq (txfonts/pxfonts)
18334 \DeclareTextCommand{\textnsucccurlyeq}{PU}{\9042\341}%* U+22E1
18335 % U+22E2 NOT SQUARE IMAGE OF OR EQUAL TO; \nqssubseteq (tx-
fonts/pxfonts)
18336 \DeclareTextCommand{\textnqssubseteq}{PU}{\9042\342}%* U+22E2
18337 % U+22E3 NOT SQUARE ORIGINAL OF OR EQUAL TO; \nqsupseteq (tx-
fonts/pxfonts)
18338 \DeclareTextCommand{\textnqsupseteq}{PU}{\9042\343}%* U+22E3
18339 % U+22E4 SQUARE IMAGE OF OR NOT EQUAL TO; \sqsubseteq (mathabx)
18340 \DeclareTextCommand{\textsqsubseteq}{PU}{\9042\344}%* U+22E4
18341 %* \textsqsubseteq -> \varsqsubseteq (mathabx)
18342 % U+22E5 SQUARE ORIGINAL OF OR NOT EQUAL TO; \sqsupseteq (math-
abx)
18343 \DeclareTextCommand{\textsqsupseteq}{PU}{\9042\345}%* U+22E5
18344 %* \textsqsupseteq -> \varsqsupseteq (mathabx)
18345 % U+22E6 LESS-THAN BUT NOT EQUIVALENT TO; \lnsim (AmS)
18346 \DeclareTextCommand{\textlnsim}{PU}{\9042\346}%* U+22E6
18347 % U+22E7 GREATER-THAN BUT NOT EQUIVALENT TO; \gnsim (AmS)
18348 \DeclareTextCommand{\textgnsim}{PU}{\9042\347}%* U+22E7
18349 % U+22E8 PRECEDES BUT NOT EQUIVALENT TO; \preccsim (AmS)
18350 \DeclareTextCommand{\textpreccsim}{PU}{\9042\350}%* U+22E8
18351 % U+22E9 SUCCEEDS BUT NOT EQUIVALENT TO; \succsim (AmS)
18352 \DeclareTextCommand{\textsuccsim}{PU}{\9042\351}%* U+22E9
18353 % U+22EA NOT NORMAL SUBGROUP OF; \ntriangleleft (AmS)
18354 \DeclareTextCommand{\textntriangleleft}{PU}{\9042\352}%* U+22EA
18355 %* \textntriangleleft -> \nlessclosed (MnSymbol)
18356 % U+22EB DOES NOT CONTAIN AS NORMAL SUBGROUP; \ntriangleright (AmS)
18357 \DeclareTextCommand{\textntriangleright}{PU}{\9042\353}%* U+22EB
18358 %* \textntriangleright -> \ngtrclosed (MnSymbol)
18359 % U+22EC NOT NORMAL SUBGROUP OF OR EQUAL TO;
18360 % \ntrianglelefteq (AmS)
18361 \DeclareTextCommand{\textntrianglelefteq}{PU}{\9042\354}%* U+22EC
18362 % U+22ED DOES NOT CONTAIN AS NORMAL SUBGROUP OR EQUAL;
18363 % \ntrianglerighteq (AmS)

18364 \DeclareTextCommand{\textntrianglerighteq}{PU}{\9042\355}%* U+22ED
18365 %* \textntrianglerighteq -> textngeqclosed
18366 % U+22EE VERTICAL ELLIPSIS; ellipsisvertical; \vdots (LaTeX)
18367 \DeclareTextCommand{\textvdots}{PU}{\9042\356}%* U+22EE
18368 % U+22EF MIDLINE HORIZONTAL ELLIPSIS; \cdots (LaTeX)
18369 \DeclareTextCommand{\textcdots}{PU}{\9042\357}%* U+22EF
18370 % U+22F0 UP RIGHT DIAGONAL ELLIPSIS; \udots (MnSymbol)
18371 \DeclareTextCommand{\textudots}{PU}{\9042\360}%* U+22F0
18372 % U+22F1 DOWN RIGHT DIAGONAL ELLIPSIS; \ddots (LaTeX)
18373 \DeclareTextCommand{\textddots}{PU}{\9042\361}%* U+22F1
18374 % U+22F6 ELEMENT OF WITH OVERBAR; \barin (mathabx)
18375 \DeclareTextCommand{\textbarin}{PU}{\9042\366}%* U+22F6

47.2.23 Miscellaneous Technical: U+2300 to U+23FF

18376 % U+2300 DIAMETER SIGN; \diameter (mathabx,wasysym)
18377 \DeclareTextCommand{\textdiameter}{PU}{\9043\000}%* U+2300
18378 % U+2310 REVERSED NOT SIGN; \backneg (MnSymbol)
18379 \DeclareTextCommand{\textbackneg}{PU}{\9043\020}%* U+2310
18380 % U+2311 SQUARE LOZENGE; \wasylozenge (wasysym)
18381 \DeclareTextCommand{\textwasylozenge}{PU}{\9043\021}%* U+2311
18382 % U+2319 TURNED NOT SIGN; \invbackneg (MnSymbol)
18383 \DeclareTextCommand{\textinvbackneg}{PU}{\9043\031}%* U+2319
18384 % U+231A WATCH; \clock (wasysym)
18385 \DeclareTextCommand{\textclock}{PU}{\9043\032}%* U+231A
18386 %* \textclock -> \Clocklogo (marvosym)
18387 %* \textclock -> \ClockLogo (marvosym)
18388 % U+231C TOP LEFT CORNER; \ulcorner (AmS)
18389 \DeclareTextCommand{\textulcorner}{PU}{\9043\034}%* U+231C
18390 % U+231D TOP RIGHT CORNER; \urcorner (AmS)
18391 \DeclareTextCommand{\texturcorner}{PU}{\9043\035}%* U+231D
18392 % U+231E BOTTOM LEFT CORNER; \llcorner (AmS)
18393 \DeclareTextCommand{\textllcorner}{PU}{\9043\036}%* U+231E
18394 % U+231F BOTTOM RIGHT CORNER; \lrcorner (AmS)
18395 \DeclareTextCommand{\textlrcorner}{PU}{\9043\037}%* U+231F
18396 % U+2322 FROWN; \frown (LaTeX)
18397 \DeclareTextCommand{\textfrown}{PU}{\9043\042}%* U+2322
18398 % U+2323 SMILE; \smile (LaTeX)
18399 \DeclareTextCommand{\textsmile}{PU}{\9043\043}%* U+2323
18400 % U+2328 KEYBOARD; \Keyboard (marvosym)
18401 \DeclareTextCommand{\textKeyboard}{PU}{\9043\050}%* U+2328
18402 % U+2329 LEFT-POINTING ANGLE BRACKET; \angleleft; \langle (LaTeX)
18403 \DeclareTextCommand{\textlangle}{PU}{\9043\051}%* U+2329
18404 % U+232A RIGHT-POINTING ANGLE BRACKET; \angleright; \rangle (LaTeX)
18405 \DeclareTextCommand{\textrangle}{PU}{\9043\052}%* U+232A
18406 % U+2339 APL FUNCTIONAL SYMBOL QUAD DIVIDE; \APLinv (wasysym)
18407 \DeclareTextCommand{\textAPLinv}{PU}{\9043\071}%* U+2339
18408 % U+233C APL FUNCTIONAL SYMBOL QUAD CIRCLE; \Tumbler (marvosym)
18409 \DeclareTextCommand{\textTumbler}{PU}{\9043\074}%* U+233C
18410 % U+233D APL FUNCTIONAL SYMBOL CIRCLE STILE; \baro (stmaryrd)
18411 \DeclareTextCommand{\textstmaryrdbaro}{PU}{\9043\075}%* U+233D
18412 %* \textstmaryrdbaro -> \baro (stmaryrd)
18413 % U+233F APL FUNCTIONAL SYMBOL SLASH BAR; \notslash (wasysym)
18414 \DeclareTextCommand{\textnotslash}{PU}{\9043\077}%* U+233F

18415 % U+2340 APL FUNCTIONAL SYMBOL BACKSLASH BAR;
 18416 % \notbackslash (wasysym)
 18417 \DeclareTextCommand{\textnotbackslash}{PU}{\9043\100}%* U+2340
 18418 % U+2342 APL FUNCTIONAL SYMBOL QUAD BACKSLASH; \boxback-
 slash (mathabx)
 18419 \DeclareTextCommand{\textboxbackslash}{PU}{\9043\102}%* U+2342
 18420 % U+2347 APL FUNCTIONAL SYMBOL QUAD LEFTWARDS ARROW;
 18421 % \APLleftarrowbox (wasysym)
 18422 \DeclareTextCommand{\textAPLleftarrowbox}{PU}{\9043\107}%* U+2347
 18423 % U+2348 APL FUNCTIONAL SYMBOL QUAD RIGHTWARDS ARROW;
 18424 % \APLrightarrowbox (wasysym)
 18425 \DeclareTextCommand{\textAPLrightarrowbox}{PU}{\9043\110}%* U+2348
 18426 % U+2350 APL FUNCTIONAL SYMBOL QUAD UPWARDS ARROW; \APLu-
 pparrowbox (wasysym)
 18427 \DeclareTextCommand{\textAPLuparrowbox}{PU}{\9043\120}%* U+2350
 18428 % U+2357 APL FUNCTIONAL SYMBOL QUAD DOWNWARDS ARROW;
 18429 % \APLdownarrowbox (wasysym)
 18430 \DeclareTextCommand{\textAPLdownarrowbox}{PU}{\9043\127}%* U+2357
 18431 % U+235E APL FUNCTIONAL SYMBOL QUOTE QUAD;
 18432 % \APLinput (wasysym)
 18433 \DeclareTextCommand{\textAPLinput}{PU}{\9043\136}%* U+235E
 18434 % U+2370 APL FUNCTIONAL SYMBOL QUAD QUESTION; \Request (china2e)
 18435 \DeclareTextCommand{\textRequest}{PU}{\9043\160}%* U+2370
 18436 % U+2393 DIRECT CURRENT SYMBOL FORM TWO; \Beam (marvosym)
 18437 \DeclareTextCommand{\textBeam}{PU}{\9043\223}%* U+2393
 18438 % U+2394 SOFTWARE-FUNCTION SYMBOL; \hexagon (wasysym)
 18439 \DeclareTextCommand{\texthexagon}{PU}{\9043\224}%* U+2394
 18440 % U+2395 APL FUNCTIONAL SYMBOL QUAD; \APLbox (wasysym)
 18441 \DeclareTextCommand{\textAPLbox}{PU}{\9043\225}%* U+2395
 18442 % U+23ED BLACK RIGHT-POINTING DOUBLE TRIANGLE WITH VERTI-
 CAL BAR;
 18443 % \ForwardToIndex (marvosym)
 18444 \DeclareTextCommand{\textForwardToIndex}{PU}{\9043\355}%* U+23ED
 18445 % U+23EE BLACK LEFT-POINTING DOUBLE TRIANGLE WITH VERTI-
 CAL BAR;
 18446 % \RewindToIndex (marvosym)
 18447 \DeclareTextCommand{\textRewindToIndex}{PU}{\9043\356}%* U+23EE

47.2.24 Control Pictures: U+2400 to U+243F

18448 % U+2422 BLANK SYMBOL
 18449 \DeclareTextCommand{\textblank}{PU}{\9044\042}% U+2422
 18450 % U+2423 OPEN BOX; blank
 18451 \DeclareTextCommand{\textvisiblespace}{PU}{\9044\043}% U+2423

47.2.25 Optical Character Recognition: U+2440 to U+245F

18452 % U+244A OCR DOUBLE BACKSLASH; \bbslash (stmaryrd)
 18453 \DeclareTextCommand{\textbbslash}{PU}{\9044\112}%* U+244A
 18454 %* \textbbslash -> \varparallelinv (txfonts/pxfonts)

47.2.26 Enclosed Alphanumerics: U+2460 to U+24FF

18455 % U+2460 CIRCLED DIGIT ONE; onecircle
 18456 \DeclareTextCompositeCommand{\textcircled}{PU}{1}{\9044\140}% U+2460
 18457 % U+2461 CIRCLED DIGIT TWO; twocircle
 18458 \DeclareTextCompositeCommand{\textcircled}{PU}{2}{\9044\141}% U+2461

18459 % U+2462 CIRCLED DIGIT THREE; threecircle
18460 \DeclareTextCompositeCommand{\textcircled}{PU}{3}{\9044\142}% U+2462
18461 % U+2463 CIRCLED DIGIT FOUR; fourcircle
18462 \DeclareTextCompositeCommand{\textcircled}{PU}{4}{\9044\143}% U+2463
18463 % U+2464 CIRCLED DIGIT FIVE; fivecircle
18464 \DeclareTextCompositeCommand{\textcircled}{PU}{5}{\9044\144}% U+2464
18465 % U+2465 CIRCLED DIGIT SIX; sixcircle
18466 \DeclareTextCompositeCommand{\textcircled}{PU}{6}{\9044\145}% U+2465
18467 % U+2466 CIRCLED DIGIT SEVEN; sevencircle
18468 \DeclareTextCompositeCommand{\textcircled}{PU}{7}{\9044\146}% U+2466
18469 % U+2467 CIRCLED DIGIT EIGHT; eightcircle
18470 \DeclareTextCompositeCommand{\textcircled}{PU}{8}{\9044\147}% U+2467
18471 % U+2468 CIRCLED DIGIT NINE; ninecircle
18472 \DeclareTextCompositeCommand{\textcircled}{PU}{9}{\9044\150}% U+2468
18473 % U+2469 CIRCLED NUMBER TEN; tencircle
18474 \DeclareTextCompositeCommand{\textcircled}{PU}{10}{\9044\151}% U+2469
18475 % U+246A CIRCLED NUMBER ELEVEN; elevencircle
18476 \DeclareTextCompositeCommand{\textcircled}{PU}{11}{\9044\152}% U+246A
18477 % U+246B CIRCLED NUMBER TWELVE; twelvecircle
18478 \DeclareTextCompositeCommand{\textcircled}{PU}{12}{\9044\153}% U+246B
18479 % U+246C CIRCLED NUMBER THIRTEEN; thirteencircle
18480 \DeclareTextCompositeCommand{\textcircled}{PU}{13}{\9044\154}% U+246C
18481 % U+246D CIRCLED NUMBER FOURTEEN; fourteencircle
18482 \DeclareTextCompositeCommand{\textcircled}{PU}{14}{\9044\155}% U+246D
18483 % U+246E CIRCLED NUMBER FIFTEEN; fifteencircle
18484 \DeclareTextCompositeCommand{\textcircled}{PU}{15}{\9044\156}% U+246E
18485 % U+246F CIRCLED NUMBER SIXTEEN; sixteencircle
18486 \DeclareTextCompositeCommand{\textcircled}{PU}{16}{\9044\157}% U+246F
18487 % U+2470 CIRCLED NUMBER SEVENTEEN; seventeencircle
18488 \DeclareTextCompositeCommand{\textcircled}{PU}{17}{\9044\160}% U+2470
18489 % U+2471 CIRCLED NUMBER EIGHTEEN; eighteencircle
18490 \DeclareTextCompositeCommand{\textcircled}{PU}{18}{\9044\161}% U+2471
18491 % U+2472 CIRCLED NUMBER NINETEEN; nineteencircle
18492 \DeclareTextCompositeCommand{\textcircled}{PU}{19}{\9044\162}% U+2472
18493 % U+2473 CIRCLED NUMBER TWENTY; twentycircle
18494 \DeclareTextCompositeCommand{\textcircled}{PU}{20}{\9044\163}% U+2473
18495 % U+24B6 CIRCLED LATIN CAPITAL LETTER A; Acircle
18496 \DeclareTextCompositeCommand{\textcircled}{PU}{A}{\9044\266}% U+24B6
18497 % \CircledA (marvosym)
18498 \DeclareTextCommand{\textCircledA}{PU}{\9044\266}%* U+24B6
18499 %* \textCircledA -> \CleaningA
18500 % U+24B7 CIRCLED LATIN CAPITAL LETTER B; Bcircle
18501 \DeclareTextCompositeCommand{\textcircled}{PU}{B}{\9044\267}% U+24B7
18502 % U+24B8 CIRCLED LATIN CAPITAL LETTER C; Ccircle
18503 \DeclareTextCompositeCommand{\textcircled}{PU}{C}{\9044\270}% U+24B8
18504 % U+24B9 CIRCLED LATIN CAPITAL LETTER D; Dcircle
18505 \DeclareTextCompositeCommand{\textcircled}{PU}{D}{\9044\271}% U+24B9
18506 % U+24BA CIRCLED LATIN CAPITAL LETTER E; Ecircle
18507 \DeclareTextCompositeCommand{\textcircled}{PU}{E}{\9044\272}% U+24BA
18508 % U+24BB CIRCLED LATIN CAPITAL LETTER F; Fcircle
18509 \DeclareTextCompositeCommand{\textcircled}{PU}{F}{\9044\273}% U+24BB
18510 % \CleaningF (marvosym)
18511 \DeclareTextCommand{\textCleaningF}{PU}{\9044\273}%* U+24BB
18512 % \CleaningFF (marvosym)

18513 \DeclareTextCommand{\textCleaningFF}{PU}{\9044\273\83\062}%* U+24BB U+0332
18514 % U+24BC CIRCLED LATIN CAPITAL LETTER G; Gcircle
18515 \DeclareTextCompositeCommand{\textcircled}{PU}{G}{\9044\274}% U+24BC
18516 % U+24BD CIRCLED LATIN CAPITAL LETTER H; Hcircle
18517 \DeclareTextCompositeCommand{\textcircled}{PU}{H}{\9044\275}% U+24BD
18518 % U+24BE CIRCLED LATIN CAPITAL LETTER I; Icircle
18519 \DeclareTextCompositeCommand{\textcircled}{PU}{I}{\9044\276}% U+24BE
18520 % U+24BF CIRCLED LATIN CAPITAL LETTER J; Jcircle
18521 \DeclareTextCompositeCommand{\textcircled}{PU}{J}{\9044\277}% U+24BF
18522 % U+24C0 CIRCLED LATIN CAPITAL LETTER K; Kcircle
18523 \DeclareTextCompositeCommand{\textcircled}{PU}{K}{\9044\300}% U+24C0
18524 % U+24C1 CIRCLED LATIN CAPITAL LETTER L; Lcircle
18525 \DeclareTextCompositeCommand{\textcircled}{PU}{L}{\9044\301}% U+24C1
18526 % U+24C2 CIRCLED LATIN CAPITAL LETTER M; Mcircle
18527 \DeclareTextCompositeCommand{\textcircled}{PU}{M}{\9044\302}% U+24C2
18528 % U+24C3 CIRCLED LATIN CAPITAL LETTER N; Ncircle
18529 \DeclareTextCompositeCommand{\textcircled}{PU}{N}{\9044\303}% U+24C3
18530 % U+24C4 CIRCLED LATIN CAPITAL LETTER O; Ocircle
18531 \DeclareTextCompositeCommand{\textcircled}{PU}{O}{\9044\304}% U+24C4
18532 % U+24C5 CIRCLED LATIN CAPITAL LETTER P; Pcircle
18533 \DeclareTextCompositeCommand{\textcircled}{PU}{P}{\9044\305}% U+24C5
18534 % \CleaningP (marvosym)
18535 \DeclareTextCommand{\textCleaningP}{PU}{\9044\305}%* U+24C5
18536 % \CleaningPP (marvosym)
18537 \DeclareTextCommand{\textCleaningPP}{PU}{\9044\305\83\062}%* U+24C5 U+0332
18538 % U+24C6 CIRCLED LATIN CAPITAL LETTER Q; Qcircle
18539 \DeclareTextCompositeCommand{\textcircled}{PU}{Q}{\9044\306}% U+24C6
18540 % U+24C7 CIRCLED LATIN CAPITAL LETTER R; Rcircle
18541 \DeclareTextCompositeCommand{\textcircled}{PU}{R}{\9044\307}% U+24C7
18542 % U+24C8 CIRCLED LATIN CAPITAL LETTER S; Scircle
18543 \DeclareTextCompositeCommand{\textcircled}{PU}{S}{\9044\310}% U+24C8
18544 % U+24C9 CIRCLED LATIN CAPITAL LETTER T; Tcircle
18545 \DeclareTextCompositeCommand{\textcircled}{PU}{T}{\9044\311}% U+24C9
18546 % U+24CA CIRCLED LATIN CAPITAL LETTER U; Ucircle
18547 \DeclareTextCompositeCommand{\textcircled}{PU}{U}{\9044\312}% U+24CA
18548 % U+24CB CIRCLED LATIN CAPITAL LETTER V; Vcircle
18549 \DeclareTextCompositeCommand{\textcircled}{PU}{V}{\9044\313}% U+24CB
18550 % U+24CC CIRCLED LATIN CAPITAL LETTER W; Wcircle
18551 \DeclareTextCompositeCommand{\textcircled}{PU}{W}{\9044\314}% U+24CC
18552 % U+24CD CIRCLED LATIN CAPITAL LETTER X; Xcircle
18553 \DeclareTextCompositeCommand{\textcircled}{PU}{X}{\9044\315}% U+24CD
18554 % U+24CE CIRCLED LATIN CAPITAL LETTER Y; Ycircle
18555 \DeclareTextCompositeCommand{\textcircled}{PU}{Y}{\9044\316}% U+24CE
18556 % U+24CF CIRCLED LATIN CAPITAL LETTER Z; Zcircle
18557 \DeclareTextCompositeCommand{\textcircled}{PU}{Z}{\9044\317}% U+24CF
18558 % U+24D0 CIRCLED LATIN SMALL LETTER A; acircle
18559 \DeclareTextCompositeCommand{\textcircled}{PU}{a}{\9044\320}% U+24D0
18560 % U+24D1 CIRCLED LATIN SMALL LETTER B; bcircle
18561 \DeclareTextCompositeCommand{\textcircled}{PU}{b}{\9044\321}% U+24D1
18562 % U+24D2 CIRCLED LATIN SMALL LETTER C; ccircle
18563 \DeclareTextCompositeCommand{\textcircled}{PU}{c}{\9044\322}% U+24D2
18564 % U+24D3 CIRCLED LATIN SMALL LETTER D; dcircle
18565 \DeclareTextCompositeCommand{\textcircled}{PU}{d}{\9044\323}% U+24D3
18566 % U+24D4 CIRCLED LATIN SMALL LETTER E; ecircle

18567 \DeclareTextCompositeCommand{\textcircled}{PU}{e}{\9044\324}% U+24D4
18568 % U+24D5 CIRCLED LATIN SMALL LETTER F; fcircle
18569 \DeclareTextCompositeCommand{\textcircled}{PU}{f}{\9044\325}% U+24D5
18570 % U+24D6 CIRCLED LATIN SMALL LETTER G; gcircle
18571 \DeclareTextCompositeCommand{\textcircled}{PU}{g}{\9044\326}% U+24D6
18572 % U+24D7 CIRCLED LATIN SMALL LETTER H; hcircle
18573 \DeclareTextCompositeCommand{\textcircled}{PU}{h}{\9044\327}% U+24D7
18574 % U+24D8 CIRCLED LATIN SMALL LETTER I; icircle
18575 \DeclareTextCompositeCommand{\textcircled}{PU}{i}{\9044\330}% U+24D8
18576 % U+24D9 CIRCLED LATIN SMALL LETTER J; jcircle
18577 \DeclareTextCompositeCommand{\textcircled}{PU}{j}{\9044\331}% U+24D9
18578 % U+24DA CIRCLED LATIN SMALL LETTER K; kcircle
18579 \DeclareTextCompositeCommand{\textcircled}{PU}{k}{\9044\332}% U+24DA
18580 % U+24DB CIRCLED LATIN SMALL LETTER L; lcircle
18581 \DeclareTextCompositeCommand{\textcircled}{PU}{l}{\9044\333}% U+24DB
18582 % U+24DC CIRCLED LATIN SMALL LETTER M; mcircle
18583 \DeclareTextCompositeCommand{\textcircled}{PU}{m}{\9044\334}% U+24DC
18584 % U+24DD CIRCLED LATIN SMALL LETTER N; ncircle
18585 \DeclareTextCompositeCommand{\textcircled}{PU}{n}{\9044\335}% U+24DD
18586 % U+24DE CIRCLED LATIN SMALL LETTER O; ocircle
18587 \DeclareTextCompositeCommand{\textcircled}{PU}{o}{\9044\336}% U+24DE
18588 % U+24DF CIRCLED LATIN SMALL LETTER P; pcircle
18589 \DeclareTextCompositeCommand{\textcircled}{PU}{p}{\9044\337}% U+24DF
18590 % U+24E0 CIRCLED LATIN SMALL LETTER Q; qcircle
18591 \DeclareTextCompositeCommand{\textcircled}{PU}{q}{\9044\340}% U+24E0
18592 % U+24E1 CIRCLED LATIN SMALL LETTER R; rcircle
18593 \DeclareTextCompositeCommand{\textcircled}{PU}{r}{\9044\341}% U+24E1
18594 % U+24E2 CIRCLED LATIN SMALL LETTER S; scircle
18595 \DeclareTextCompositeCommand{\textcircled}{PU}{s}{\9044\342}% U+24E2
18596 % U+24E3 CIRCLED LATIN SMALL LETTER T; tcircle
18597 \DeclareTextCompositeCommand{\textcircled}{PU}{t}{\9044\343}% U+24E3
18598 % U+24E4 CIRCLED LATIN SMALL LETTER U; ucircle
18599 \DeclareTextCompositeCommand{\textcircled}{PU}{u}{\9044\344}% U+24E4
18600 % U+24E5 CIRCLED LATIN SMALL LETTER V; vcircle
18601 \DeclareTextCompositeCommand{\textcircled}{PU}{v}{\9044\345}% U+24E5
18602 % U+24E6 CIRCLED LATIN SMALL LETTER W; wcircle
18603 \DeclareTextCompositeCommand{\textcircled}{PU}{w}{\9044\346}% U+24E6
18604 % U+24E7 CIRCLED LATIN SMALL LETTER X; xcircle
18605 \DeclareTextCompositeCommand{\textcircled}{PU}{x}{\9044\347}% U+24E7
18606 % U+24E8 CIRCLED LATIN SMALL LETTER Y; ycircle
18607 \DeclareTextCompositeCommand{\textcircled}{PU}{y}{\9044\350}% U+24E8
18608 % U+24E9 CIRCLED LATIN SMALL LETTER Z; zcircle
18609 \DeclareTextCompositeCommand{\textcircled}{PU}{z}{\9044\351}% U+24E9
18610 % U+24EA CIRCLED DIGIT ZERO
18611 \DeclareTextCompositeCommand{\textcircled}{PU}{0}{\9044\352}% U+24EA

47.2.27 Box Drawing: U+2500 to 257F

18612 % U+2504 BOX DRAWINGS LIGHT TRIPLE DASH HORIZONTAL; \Cutting-
Line (marvosym)
18613 \DeclareTextCommand{\textCuttingLine}{PU}{\9045\004}%* U+2504
18614 %* \textCuttingLine -> \Kutline (marvosym)
18615 %* \textCuttingLine -> \CutLine (marvosym)
18616 %* \textCuttingLine -> \Cutline (marvosym)

47.2.28 Geometric Shapes: U+25A0 to U+25FF

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18617 % U+25B2 BLACK UP-POINTING TRIANGLE; \UParrow (wasysym)
18618 \DeclareTextCommand{\textUParrow}{PU}{\9045\262}%* U+25B2
18619 %* \textUParrow -> \MoveUp (marvosym)
18620 % U+25B3 WHITE UP-POINTING TRIANGLE; whiteuppointingtriangle;
18621 % \bigtriangleup (LaTeX)
18622 \DeclareTextCommand{\textbigtriangleup}{PU}{\9045\263}%* U+25B3
18623 %* \textbigtriangleup -> \APLup (wasysym)
18624 %* \textbigtriangleup -> \Bleech (marvosym)
18625 % U+25B6 BLACK RIGHT-POINTING TRIANGLE; \Forward (marvosym)
18626 \DeclareTextCommand{\textForward}{PU}{\9045\266}%* U+25B6
18627 % U+25B7 WHITE RIGHT-POINTING TRIANGLE (= z notation range restric-
tion);
18628 % whiterightpointingtriangle; \triangleright (LaTeX)
18629 \DeclareTextCommand{\texttriangleright}{PU}{\9045\267}%* U+25B7
18630 % U+25BA BLACK RIGHT-POINTING POINTER; \RHD (wasysym)
18631 \DeclareTextCommand{\textRHD}{PU}{\9045\272}%* U+25BA
18632 % U+25BC BLACK DOWN-POINTING TRIANGLE; \DOWNarrow (wasysym)
18633 \DeclareTextCommand{\textDOWNarrow}{PU}{\9045\274}%* U+25BC
18634 %* \textDOWNarrow -> \MoveDown (marvosym)
18635 % U+25BD WHITE DOWN-POINTING TRIANGLE; whitedownpointingtrian-
gle;
18636 % \bigtriangledown (LaTeX)
18637 \DeclareTextCommand{\textbigtriangledown}{PU}{\9045\275}%* U+25BD
18638 %* \textbigtriangledown -> \APLdown (wasysym)
18639 % U+25C0 BLACK LEFT-POINTING TRIANGLE; \Rewind (marvosym)
18640 \DeclareTextCommand{\textRewind}{PU}{\9045\300}%* U+25C0
18641 % U+25C1 WHITE RIGHT-POINTING TRIANGLE (= z notation domain re-
striction);
18642 % whiteleftpointingtriangle; \triangleleft (LaTeX)
18643 \DeclareTextCommand{\texttriangleleft}{PU}{\9045\301}%* U+25C1
18644 % U+25C4 BLACK LEFT-POINTING POINTER; \LHD (wasysym)
18645 \DeclareTextCommand{\textLHD}{PU}{\9045\304}%* U+25C4
18646 % U+25C7 WHITE DIAMOND; whitediamond; \diamond (LaTeX)
18647 \DeclareTextCommand{\textdiamond}{PU}{\9045\307}%* U+25C7
18648 %* \textdiamond -> \Diamond (wasysym)
18649 % U+25CA LOZENGE; lozenge; \lozenge (AmS)
18650 \DeclareTextCommand{\textlozenge}{PU}{\9045\312}%* U+25CA
18651 % U+25D6 LEFT HALF BLACK CIRCLE; \LEFTCIRCLE (wasysym)
18652 \DeclareTextCommand{\textLEFTCIRCLE}{PU}{\9045\326}%* U+25D6
18653 % U+25D7 RIGHT HALF BLACK CIRCLE; \RIGHTCIRCLE (wasysym)
18654 \DeclareTextCommand{\textRIGHTCIRCLE}{PU}{\9045\327}%* U+25D7
18655 % U+25E6 WHITE BULLET; *openbullet, whitebullet
18656 \DeclareTextCommand{\textopenbullet}{PU}{\9045\346}%* U+25E6
18657 % U+25EB WHITE SQUARE WITH VERTICAL BISECTING LINE;
18658 % \boxbar (stmaryrd)
18659 \DeclareTextCommand{\textboxbar}{PU}{\9045\353}%* U+25EB
18660 % U+25EF LARGE CIRCLE; largecircle
18661 \DeclareTextCommand{\textbigcircle}{PU}{\9045\357}%* U+25EF
18662 %* \textbigcircle -> \varbigcirc (stmaryrd)
18663 %
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47.2.29 Miscellaneous Symbols: U+2600 to U+26FF

18664 % U+2601 CLOUD; \Cloud (ifsym)
18665 \DeclareTextCommand{\textCloud}{PU}{\9046\001}%* U+2601
18666 % U+2605 BLACK STAR; \FiveStar (bding)
18667 \DeclareTextCommand{\textFiveStar}{PU}{\9046\005}%* U+2605
18668 % U+2606 WHITE STAR; \FiveStarOpen (bding)
18669 \DeclareTextCommand{\textFiveStarOpen}{PU}{\9046\006}%* U+2606
18670 % U+260E BLACK TELEPHONE; telephoneblack; \Phone (bding)
18671 \DeclareTextCommand{\textPhone}{PU}{\9046\016}%* U+260E
18672 %* \textPhone -> \Telefon (marvosym)
18673 % U+2610 BALLOT BOX; \boxempty (stmaryrd)
18674 \DeclareTextCommand{\textboxempty}{PU}{\9046\020}%* U+2610
18675 %* \textboxempty -> \Box (wasysym)
18676 % U+2611 BALLOT BOX WITH CHECK; \Checkedbox (marvosym)
18677 \DeclareTextCommand{\textCheckedbox}{PU}{\9046\021}%* U+2611
18678 %* \textCheckedbox -> \CheckedBox (marvosym)
18679 % U+2612 BALLOT BOX WITH X; \Crossedbox (marvosym)
18680 \DeclareTextCommand{\textCrossedbox}{PU}{\9046\022}%* U+2612
18681 %* \textCrossedbox -> \XBox (wasysym)
18682 %* \textCrossedbox -> \CrossedBox (marvosym)
18683 % U+2615 HOT BEVERAGE; \Coffeecup (marvosym)
18684 \DeclareTextCommand{\textCoffeecup}{PU}{\9046\025}%* U+2615
18685 % U+261A BLACK LEFT POINTING INDEX; \HandCuffLeft (bding)
18686 \DeclareTextCommand{\textHandCuffLeft}{PU}{\9046\032}%* U+261A
18687 % U+261B BLACK RIGHT POINTING INDEX; \HandCuffRight (bding)
18688 \DeclareTextCommand{\textHandCuffRight}{PU}{\9046\033}%* U+261B
18689 % U+261C WHITE LEFT POINTING INDEX; \HandLeft (bding)
18690 \DeclareTextCommand{\textHandLeft}{PU}{\9046\034}%* U+261C
18691 %* \textHandLeft -> \rightpointleft (fourier)
18692 % U+261E WHITE RIGHT POINTING INDEX; \HandRight (bding)
18693 \DeclareTextCommand{\textHandRight}{PU}{\9046\036}%* U+261E
18694 %* \textHandRight -> \leftpointright (fourier)
18695 %* \textHandRight -> \PointingHand (marvosym)
18696 %* \textHandRight -> \Pointinghand (marvosym)
18697 % U+2622 RADIOACTIVE SIGN; \Radioactivity (marvosym)
18698 \DeclareTextCommand{\textRadioactivity}{PU}{\9046\042}%* U+2622
18699 %* \textRadioactivity -> \Radiation (ifsym)
18700 % U+2623 BIOHAZARD SIGN; \Biohazard (marvosym)
18701 \DeclareTextCommand{\textBiohazard}{PU}{\9046\043}%* U+2623
18702 % U+2625 ANKH; \Ankh (marvosym)
18703 \DeclareTextCommand{\textAnkh}{PU}{\9046\045}%* U+2625
18704 % U+262F YIN YANG; \YinYang (marvosym)
18705 \DeclareTextCommand{\textYinYang}{PU}{\9046\057}%* U+262F
18706 %* \textYinYang -> \Yinyang (marvosym)
18707 %* \textYinYang -> \YingYang (marvosym)
18708 %* \textYinYang -> \Yingyang (marvosym)
18709 % U+2639 WHITE FROWNING FACE; \frownie (wasysym)
18710 \DeclareTextCommand{\textfrownie}{PU}{\9046\071}%* U+2639
18711 %* \textfrownie -> \Frownly (marvosym)
18712 % U+263A WHITE SMILING FACE; \smiley (wasysym)
18713 \DeclareTextCommand{\textsmiley}{PU}{\9046\072}%* U+263A
18714 %* \textsmiley -> \Smiley (marvosym)
18715 % U+263B BLACK SMILING FACE; \blacksmiley (wasysym)
18716 \DeclareTextCommand{\textblacksmiley}{PU}{\9046\073}%* U+263B
18717 % U+263C WHITE SUN WITH RAYS; \sun (wasysym)

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18718 \DeclareTextCommand{\textsun}{PU}{\9046\074}%* U+263C
18719 %* \textsun -> \Sun (marvosym)
18720 % U+263D FIRST QUARTER MOON; \leftmoon (wasysym, mathabx)
18721 \DeclareTextCommand{\textleftmoon}{PU}{\9046\075}%* U+263D
18722 % U+263E LAST QUARTER MOON; \rightmoon (wasysym, mathabx)
18723 \DeclareTextCommand{\textrightmoon}{PU}{\9046\076}%* U+263E
18724 % U+263F MERCURY; \mercury (wasysym)
18725 \DeclareTextCommand{\textmercury}{PU}{\9046\077}%* U+263F
18726 %* \textmercury -> \Mercury (marvosym)
18727 % U+2640 FEMALE SIGN; female; \female (wasysym)
18728 \DeclareTextCommand{\textPUfemale}{PU}{\9046\100}% U+2640
18729 %* \textPUfemale -> \textfemale (tipx)
18730 %* \textPUfemale -> \female (wasysym)
18731 %* \textPUfemale -> \venus (wasysym)
18732 %* \textPUfemale -> \Venus (marvosym)
18733 %* \textPUfemale -> \Female (marvosym)
18734 % U+2641 EARTH; \earth (wasysym)
18735 \DeclareTextCommand{\textearth}{PU}{\9046\101}%* U+2641
18736 %* \textearth -> \Earth (marvosym)
18737 % U+2642 MALE SIGN; male, mars; \male (wasysym)
18738 \DeclareTextCommand{\textmale}{PU}{\9046\102}%* U+2642
18739 %* \textmale -> \mars (wasysym)
18740 %* \textmale -> \Mars (marvosym)
18741 %* \textmale -> \Male (marvosym)
18742 % U+2643 JUPITER; \jupiter (wasysym)
18743 \DeclareTextCommand{\textjupiter}{PU}{\9046\103}%* U+2643
18744 %* \textjupiter -> \Jupiter (marvosym)
18745 % U+2644 SATURN; \saturn (wasysym)
18746 \DeclareTextCommand{\textsaturn}{PU}{\9046\104}%* U+2644
18747 %* \textsaturn -> \Saturn (marvosym)
18748 % U+2645 URANUS; \uranus (wasysym)
18749 \DeclareTextCommand{\texturanus}{PU}{\9046\105}%* U+2645
18750 %* \texturanus -> \Uranus (marvosym)
18751 % U+2646 NEPTUNE; \neptune (wasysym)
18752 \DeclareTextCommand{\textneptune}{PU}{\9046\106}%* U+2646
18753 %* \textneptune -> \Neptune (marvosym)
18754 % U+2647 PLUTO; \pluto (wasysym)
18755 \DeclareTextCommand{\textpluto}{PU}{\9046\107}%* U+2647
18756 %* \textpluto -> \Pluto (marvosym)
18757 % U+2648 ARIES; \aries (wasysym)
18758 \DeclareTextCommand{\textaries}{PU}{\9046\110}%* U+2648
18759 %* \textaries -> \Aries (marvosym)
18760 % U+2649 TAURUS; \taurus (wasysym)
18761 \DeclareTextCommand{\texttaurus}{PU}{\9046\111}%* U+2649
18762 %* \texttaurus -> \Taurus (marvosym)
18763 % U+264A GEMINI; \gemini (wasysym)
18764 \DeclareTextCommand{\textgemini}{PU}{\9046\112}%* U+264A
18765 %* \textgemini -> \Gemini (marvosym)
18766 % U+264B CANCER; \cancer (wasysym)
18767 \DeclareTextCommand{\textcancer}{PU}{\9046\113}%* U+264B
18768 %* \textcancer -> \Cancer (marvosym)
18769 % U+264C LEO; \leo (wasysym)
18770 \DeclareTextCommand{\textleo}{PU}{\9046\114}%* U+264C
18771 %* \textleo -> \Leo (marvosym)

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18772 % U+264D VIRGO; \virgo (wasysym)
18773 \DeclareTextCommand{\textvirgo}{PU}{\9046\115}%* U+264D
18774 %* \textvirgo -> \Virgo (marvosym)
18775 % U+264E LIBRA; \libra (wasysym)
18776 \DeclareTextCommand{\textlibra}{PU}{\9046\116}%* U+264E
18777 %* \textlibra -> \Libra (marvosym)
18778 % U+264F SCORPIO; \scorpio (wasysym)
18779 \DeclareTextCommand{\textscorpio}{PU}{\9046\117}%* U+264F
18780 %* \textscorpio -> \Scorpio (marvosym)
18781 % U+2650 SAGITTARIUS; \sagittarius (wasysym)
18782 \DeclareTextCommand{\textsagittarius}{PU}{\9046\120}%* U+2650
18783 %* \textsagittarius -> \Sagittarius (marvosym)
18784 % U+2651 CAPRICORN; \capricornus (wasysym)
18785 \DeclareTextCommand{\textcapricornus}{PU}{\9046\121}%* U+2651
18786 %* \textcapricornus -> \Capricorn (marvosym)
18787 % U+2652 AQUARIUS; \aquarius (wasysym)
18788 \DeclareTextCommand{\textaquarius}{PU}{\9046\122}%* U+2652
18789 %* \textaquarius -> \Aquarius (marvosym)
18790 % U+2653 PISCES; \pisces (wasysym)
18791 \DeclareTextCommand{\textpisces}{PU}{\9046\123}%* U+2653
18792 %* \textpisces -> \Pisces (marvosym)
18793 % U+2660 BLACK SPADE SUIT; spade, spadesuitblack; \spadesuit (LaTeX)
18794 \DeclareTextCommand{\textspadesuitblack}{PU}{\9046\140}% U+2660
18795 %* \textspadesuitblack -> \spadesuit (MnSymbol)
18796 % U+2661 WHITE HEART SUIT; heartsuitwhite; \heartsuit (LaTeX)
18797 \DeclareTextCommand{\textheartsuitwhite}{PU}{\9046\141}% U+2661
18798 %* \textheartsuitwhite -> \Heart (marvosym)
18799 %* \textheartsuitwhite -> \heartsuit (MnSymbol)
18800 % U+2662 WHITE DIAMOND SUIT; diamondsuitwhite; \diamondsuit (LaTeX)
18801 \DeclareTextCommand{\textdiamondsuitwhite}{PU}{\9046\142}% U+2662
18802 %* \textdiamondsuitwhite -> \diamondsuit (MnSymbol)
18803 % U+2663 BLACK CLUB SUIT; club, clubsuitblack; \clubsuit (LaTeX)
18804 \DeclareTextCommand{\textclubsuitblack}{PU}{\9046\143}% U+2663
18805 %* \textclubsuitblack -> \clubsuit (MnSymbol)
18806 % U+2664 WHITE SPADE SUIT; spadesuitwhite
18807 \DeclareTextCommand{\textspadesuitwhite}{PU}{\9046\144}% U+2664
18808 % U+2665 BLACK HEART SUIT; heartsuitblack, heart
18809 \DeclareTextCommand{\textheartsuitblack}{PU}{\9046\145}% U+2665
18810 % U+2666 BLACK DIAMOND SUIT; diamond
18811 \DeclareTextCommand{\textdiamondsuitblack}{PU}{\9046\146}% U+2666
18812 % U+2667 WHITE CLUB SUIT; clubsuitwhite
18813 \DeclareTextCommand{\textclubsuitwhite}{PU}{\9046\147}% U+2667
18814 % U+2669 QUARTER NOTE; quarternote; \quarternote (wasysym, arev)
18815 \DeclareTextCommand{\textquarternote}{PU}{\9046\151}%* U+2669
18816 % U+266A EIGHTH NOTE; musicalnote; \textmusicalnote (textcomp)
18817 \DeclareTextCommand{\textmusicalnote}{PU}{\9046\152}% U+266A
18818 %* \textmusicalnote -> \eighthnote (wasysym, arev)
18819 % U+266B BEAMED EIGHTH NOTES; eighthnotebeamed; \twonotes (wasysym)
18820 \DeclareTextCommand{\texttwonotes}{PU}{\9046\153}%* U+266B
18821 % U+266C BEAMED SIXTEENTH NOTES; beamedsixteenthnotes; \sixteenth-
note (arev)
18822 \DeclareTextCommand{\textsixteenthnote}{PU}{\9046\154}%* U+266C
18823 % U+266D MUSIC FLAT SIGN; musicflatsign; \flat (LaTeX)
18824 \DeclareTextCommand{\textflat}{PU}{\9046\155}%* U+266D

18825 % U+266E MUSIC NATURAL SIGN; \natural (LaTeX)
18826 \DeclareTextCommand{\textnatural}{PU}{\9046\156}%* U+266E
18827 % U+266F MUSIC SHARP SIGN; musicsharpsign; \sharp (LaTeX)
18828 \DeclareTextCommand{\textsharp}{PU}{\9046\157}%* U+266F
18829 % U+2672 UNIVERSAL RECYCLING SYMBOL; \recycle (recycle)
18830 \DeclareTextCommand{\textrecycle}{PU}{\9046\162}%* U+2672
18831 %* \textrecycle -> \Recycling (marvosym)
18832 % U+267F WHEELCHAIR SYMBOL; \Wheelchair (marvosym)
18833 \DeclareTextCommand{\textWheelchair}{PU}{\9046\177}%* U+267F
18834 % U+2691 BLACK FLAG; \Flag (ifsym)
18835 \DeclareTextCommand{\textFlag}{PU}{\9046\221}%* U+2691
18836 %* \textFlag -> \VarFlag (ifsym)
18837 % U+2692 HAMMER AND PICK; \MineSign (marvosym)
18838 \DeclareTextCommand{\textMineSign}{PU}{\9046\222}%* U+2692
18839 % U+2694 CROSSED SWORDS; \dsmilitary (dictsym)
18840 \DeclareTextCommand{\textdsmilitary}{PU}{\9046\224}%* U+2694
18841 %* \textdsmilitary -> \textxswup (fourier)
18842 % U+2695 STAFF OF AESCULAPIUS; \dsmedical (dictsym)
18843 \DeclareTextCommand{\textdsmedical}{PU}{\9046\225}%* U+2695
18844 % U+2696 SCALES; \dsjuridical (dictsym)
18845 \DeclareTextCommand{\textdsjuridical}{PU}{\9046\226}%* U+2696
18846 % U+2697 ALEMBIC; \dschemical (dictsym)
18847 \DeclareTextCommand{\textdschemical}{PU}{\9046\227}%* U+2697
18848 % U+2698 FLOWER; \dsbiological (dictsym)
18849 \DeclareTextCommand{\textdsbiological}{PU}{\9046\230}%* U+2698
18850 % U+269A STAFF OF HERMES; \dscommercial (dictsym)
18851 \DeclareTextCommand{\textdscommercial}{PU}{\9046\232}%* U+269A
18852 % U+269D OUTLINED WHITE STAR; \manstar (manfnt)
18853 \DeclareTextCommand{\textmanstar}{PU}{\9046\235}%* U+269D
18854 % U+26A0 WARNING SIGN; \danger (fourier)
18855 \DeclareTextCommand{\textdanger}{PU}{\9046\240}%* U+26A0
18856 % U+26A2 DOUBLED FEMALE SIGN; \FemaleFemale (marvosym)
18857 \DeclareTextCommand{\textFemaleFemale}{PU}{\9046\242}%* U+26A2
18858 % U+26A3 DOUBLED MALE SIGN; \MaleMale (marvosym)
18859 \DeclareTextCommand{\textMaleMale}{PU}{\9046\243}%* U+26A3
18860 % U+26A4 INTERLOCKED FEMALE AND MALE SIGN; \FemaleMale (marvosym)
18861 \DeclareTextCommand{\textFemaleMale}{PU}{\9046\244}%* U+26A4
18862 % U+26A5 MALE AND FEMALE SIGN; \Hermaphrodite (marvosym)
18863 \DeclareTextCommand{\textHermaphrodite}{PU}{\9046\245}%* U+26A5
18864 % U+26AA MEDIUM WHITE CIRCLE; \Neural (marvosym)
18865 \DeclareTextCommand{\textNeutral}{PU}{\9046\252}%* U+26AA
18866 % U+26AD MARRIAGE SYMBOL
18867 \DeclareTextCommand{\textmarried}{PU}{\9046\255}%* U+26AD
18868 % U+26AE DIVORCE SYMBOL
18869 \DeclareTextCommand{\textdivorced}{PU}{\9046\256}%* U+26AE
18870 % U+26B2 NEUTER; \textunconfemale (tipx)
18871 \DeclareTextCommand{\textPUunconfemale}{PU}{\9046\262}%* U+26B2
18872 %* \textPUunconfemale -> \textunconfemale (tipx)
18873 % U+26B9 SEXTILE; \hexstar (wasysym)
18874 \DeclareTextCommand{\texthexstar}{PU}{\9046\271}%* U+26B9
18875 % U+26BD SOCCER BALL; \Football (marvosym)
18876 \DeclareTextCommand{\textSoccerBall}{PU}{\9046\275}%* U+26BD
18877 %* \textSoccerBall -> \Football (marvosym)

18878 % U+26C5 SUN BEHIND CLOUD; \SunCloud (ifsym)
18879 \DeclareTextCommand{\textSunCloud}{PU}{\9046\305}%* U+26C5
18880 % U+26C6 RAIN; \Rain (ifsym)
18881 \DeclareTextCommand{\textRain}{PU}{\9046\306}%* U+26C6
18882 % U+26D4 NO ENTRY; \noway (fourier)
18883 \DeclareTextCommand{\textnoway}{PU}{\9046\324}%* U+26D4
18884 % U+26F0 MOUNTAIN; \Mountain (ifsym)
18885 \DeclareTextCommand{\textMountain}{PU}{\9046\360}%* U+26F0
18886 % U+26FA TENT; \Tent (ifsym)
18887 \DeclareTextCommand{\textTent}{PU}{\9046\372}%* U+26FA

47.2.30 Dingbats: U+2700 to U+27BF

18888 % U+2701 UPPER BLADE SCISSORS; \ScissorRightBrokenBottom (bding)
18889 \DeclareTextCommand{\textScissorRightBrokenBottom}{PU}{\9047\001}% U+2701
18890 %* \textScissorRightBrokenBottom -> \CutLeft (marvosym)
18891 %* \textScissorRightBrokenBottom -> \Cutright (marvosym)
18892 % U+2702 BLACK SCISSORS; \ScissorRight (bding)
18893 \DeclareTextCommand{\textScissorRight}{PU}{\9047\002}%* U+2702
18894 %* \textScissorRight -> \RightScissors (marvosym)
18895 %* \textScissorRight -> \Leftscissors (marvosym)
18896 % U+2703 LOWER BLADE SCISSORS; \ScissorRightBrokenTop (bding)
18897 \DeclareTextCommand{\textScissorRightBrokenTop}{PU}{\9047\003}%* U+2703
18898 % U+2704 WHITE SCISSORS; \ScissorHollowRight (bding)
18899 \DeclareTextCommand{\textScissorHollowRight}{PU}{\9047\004}%* U+2704
18900 % U+2706 TELEPHONE LOCATION SIGN; \PhoneHandset (bding)
18901 \DeclareTextCommand{\textPhoneHandset}{PU}{\9047\006}%* U+2706
18902 % U+2707 TAPE DRIVE; \Tape (bding)
18903 \DeclareTextCommand{\textTape}{PU}{\9047\007}%* U+2707
18904 % U+2708 AIRPLANE; \Plane (bding)
18905 \DeclareTextCommand{\textPlane}{PU}{\9047\010}%* U+2708
18906 % U+2709 ENVELOPE; \Envelope (bding),
18907 \DeclareTextCommand{\textEnvelope}{PU}{\9047\011}%* U+2709
18908 %* \textEnvelope -> \Letter (marvosym)
18909 % U+270C VICTORY HAND; \Peace (bding)
18910 \DeclareTextCommand{\textPeace}{PU}{\9047\014}%* U+270C
18911 % U+270D WRITING HAND; \WritingHand (marvosym)
18912 \DeclareTextCommand{\textWritingHand}{PU}{\9047\015}%* U+270D
18913 %* \textWritingHand -> \Writinghand (marvosym)
18914 % U+270E LOWER RIGHT PENCIL; \PencilRightDown (bding)
18915 \DeclareTextCommand{\textPencilRightDown}{PU}{\9047\016}%* U+270E
18916 % U+270F PENCIL; \PencilRight (bding)
18917 \DeclareTextCommand{\textPencilRight}{PU}{\9047\017}%* U+270F
18918 % U+2710 UPPER RIGHT PENCIL; \PencilRightUp (bding)
18919 \DeclareTextCommand{\textPencilRightUp}{PU}{\9047\020}%* U+2710
18920 % U+2711 WHITE NIB; \NibRight (bding)
18921 \DeclareTextCommand{\textNibRight}{PU}{\9047\021}%* U+2711
18922 % U+2712 BLACK NIB; \NibSolidRight (bding)
18923 \DeclareTextCommand{\textNibSolidRight}{PU}{\9047\022}%* U+2712
18924 % U+2713 CHECK MARK; checkmark; \Checkmark (bding)
18925 \DeclareTextCommand{\textCheckmark}{PU}{\9047\023}%* U+2713
18926 %* \textCheckmark -> \checkmark (MnSymbol)
18927 % U+2714 HEAVY CHECK MARK; \CheckmarkBold (bding)
18928 \DeclareTextCommand{\textCheckmarkBold}{PU}{\9047\024}%* U+2714
18929 % U+2715 MULTIPLICATION X; \XSolid (bding)

18930 \DeclareTextCommand{\textXSolid}{PU}{\9047\025}%* U+2715
18931 % U+2716 HEAVY MULTIPLICATION X; \XSolidBold (bding)
18932 \DeclareTextCommand{\textXSolidBold}{PU}{\9047\026}%* U+2716
18933 % U+2717 BALLOT X; \XSolidBrush (bding)
18934 \DeclareTextCommand{\textXSolidBrush}{PU}{\9047\027}%* U+2717
18935 % U+2719 OUTLINED GREEK CROSS; \PlusOutline (bding)
18936 \DeclareTextCommand{\textPlusOutline}{PU}{\9047\031}%* U+2719
18937 % U+271A HEAVY GREEK CROSS; \Plus (bding)
18938 \DeclareTextCommand{\textPlus}{PU}{\9047\032}%* U+271A
18939 % U+271B OPEN CENTRE CROSS; \PlusThinCenterOpen (bding)
18940 \DeclareTextCommand{\textPlusThinCenterOpen}{PU}{\9047\033}%* U+271B
18941 % U+271C HEAVY OPEN CENTRE CROSS; \PlusCenterOpen (bding)
18942 \DeclareTextCommand{\textPlusCenterOpen}{PU}{\9047\034}%* U+271C
18943 % U+271D LATIN CROSS; \Cross (bding)
18944 \DeclareTextCommand{\textCross}{PU}{\9047\035}%* U+271D
18945 % U+271E SHADOWED WHITE LATIN CROSS; \CrossOpenShadow (bding)
18946 \DeclareTextCommand{\textCrossOpenShadow}{PU}{\9047\036}%* U+271E
18947 % U+271F OUTLINED LATIN CROSS; \CrossOutline (bding)
18948 \DeclareTextCommand{\textCrossOutline}{PU}{\9047\037}%* U+271F
18949 % U+2720 MALTESE CROSS; \CrossMaltese (bding)
18950 \DeclareTextCommand{\textCrossMaltese}{PU}{\9047\040}%* U+2720
18951 % U+2721 STAR OF DAVID; \DavidStar (bding)
18952 \DeclareTextCommand{\textDavidStar}{PU}{\9047\041}%* U+2721
18953 %* \textDavidStar -> \davidstar (wasysym)
18954 % U+2722 FOUR TEARDROP-SPOKED ASTERISK; \FourAsterisk (bding)
18955 \DeclareTextCommand{\textFourAsterisk}{PU}{\9047\042}%* U+2722
18956 % U+2723 FOUR BALLOON-SPOKED ASTERISK; \JackStar (bding)
18957 \DeclareTextCommand{\textJackStar}{PU}{\9047\043}%* U+2723
18958 % U+2724 HEAVY FOUR BALLOON-SPOKED ASTERISK; \JackStarBold (bding)
18959 \DeclareTextCommand{\textJackStarBold}{PU}{\9047\044}%* U+2724
18960 % U+2725 FOUR CLUB-SPOKED ASTERISK; \CrossClowerTips (bding)
18961 \DeclareTextCommand{\textClowerTips}{PU}{\9047\045}%* U+2725
18962 % U+2726 BLACK FOUR POINTED STAR; \FourStar (bding)
18963 \DeclareTextCommand{\textFourStar}{PU}{\9047\046}%* U+2726
18964 % U+2727 WHITE FOUR POINTED STAR; \FourStarOpen (bding)
18965 \DeclareTextCommand{\textFourStarOpen}{PU}{\9047\047}%* U+2727
18966 % U+272A CIRCLED WHITE STAR; \FiveStarOpenCircled (bding)
18967 \DeclareTextCommand{\textFiveStarOpenCircled}{PU}{\9047\052}%* U+272A
18968 % U+272B OPEN CENTRE BLACK STAR; \FiveStarCenterOpen (bding)
18969 \DeclareTextCommand{\textFiveStarCenterOpen}{PU}{\9047\053}%* U+272B
18970 % U+272C BLACK CENTRE WHITE STAR; \FiveStarOpenDotted (bding)
18971 \DeclareTextCommand{\textFiveStarOpenDotted}{PU}{\9047\054}%* U+272C
18972 % U+272D OUTLINED BLACK STAR; \FiveStarOutline (bding)
18973 \DeclareTextCommand{\textFiveStarOutline}{PU}{\9047\055}%* U+272D
18974 % U+272E HEAVY OUTLINED BLACK STAR; \FiveStarOutlineHeavy (bding)
18975 \DeclareTextCommand{\textFiveStarOutlineHeavy}{PU}{\9047\056}%* U+272E
18976 % U+272F PINWHEEL STAR; \FiveStarConvex (bding)
18977 \DeclareTextCommand{\textFiveStarConvex}{PU}{\9047\057}%* U+272F
18978 % U+2730 SHADOWED WHITE STAR; \FiveStarShadow (bding)
18979 \DeclareTextCommand{\textFiveStarShadow}{PU}{\9047\060}%* U+2730
18980 % U+2731 HEAVY ASTERISK; \AsteriskBold (bding)
18981 \DeclareTextCommand{\textAsteriskBold}{PU}{\9047\061}%* U+2731
18982 % U+2732 OPEN CENTRE ASTERISK; \AsteriskCenterOpen (bding)

18983 \DeclareTextCommand{\textAsteriskCenterOpen}{PU}{\9047\062}%* U+2732
18984 % U+2734 EIGHT POINTED BLACK STAR; \EightStarTaper (bding)
18985 \DeclareTextCommand{\textEightStarTaper}{PU}{\9047\064}%* U+2734
18986 % U+2735 EIGHT POINTED PINWHEEL STAR; \EightStarConvex (bding)
18987 \DeclareTextCommand{\textEightStarConvex}{PU}{\9047\065}%* U+2735
18988 % U+2736 SIX POINTED BLACK STAR; \SixStar (bding)
18989 \DeclareTextCommand{\textSixStar}{PU}{\9047\066}%* U+2736
18990 % U+2737 EIGHT POINTED RECTILINEAR BLACK STAR; \EightStar (bding)
18991 \DeclareTextCommand{\textEightStar}{PU}{\9047\067}%* U+2737
18992 % U+2738 HEAVY EIGHT POINTED RECTILINEAR BLACK STAR; \EightStarBold (bding)
18993 \DeclareTextCommand{\textEightStarBold}{PU}{\9047\070}%* U+2738
18994 % U+2739 TWELVE POINTED BLACK STAR; \TwelveStar (bding)
18995 \DeclareTextCommand{\textTwelveStar}{PU}{\9047\071}%* U+2739
18996 % U+273A SIXTEEN POINTED ASTERISK; \SixteenStarLight (bding)
18997 \DeclareTextCommand{\textSixteenStarLight}{PU}{\9047\072}%* U+273A
18998 % U+273B TEARDROP-SPOKED ASTERISK; \SixFlowerPetalRemoved (bding)
18999 \DeclareTextCommand{\textSixFlowerPetalRemoved}{PU}{\9047\073}%* U+273B
19000 % U+273C OPEN CENTRE TEARDROP-SPOKED ASTERISK;
19001 % \SixFlowerOpenCenter (bding)
19002 \DeclareTextCommand{\textSixFlowerOpenCenter}{PU}{\9047\074}%* U+273C
19003 % U+273D HEAVY TEARDROP-SPOKED ASTERISK; \Asterisk (bding)
19004 \DeclareTextCommand{\textAsterisk}{PU}{\9047\075}%* U+273D
19005 % U+273E SIX PETALLED BLACK AND WHITE FLORETTE; \SixFlowerAlternate (bding)
19006 \DeclareTextCommand{\textSixFlowerAlternate}{PU}{\9047\076}%* U+273E
19007 % U+273F BLACK FLORETTE; \FiveFlowerPetal (bding)
19008 \DeclareTextCommand{\textFiveFlowerPetal}{PU}{\9047\077}%* U+273F
19009 % U+2740 WHITE FLORETTE; \FiveFlowerOpen (bding)
19010 \DeclareTextCommand{\textFiveFlowerOpen}{PU}{\9047\100}%* U+2740
19011 % U+2741 EIGHT PETALLED OUTLINED BLACK FLORETTE; \EightFlowerPetal (bding)
19012 \DeclareTextCommand{\textEightFlowerPetal}{PU}{\9047\101}%* U+2741
19013 % U+2742 CIRCLED OPEN CENTRE EIGHT POINTED STAR; \SunshineOpenCircled (bding)
19014 \DeclareTextCommand{\textSunshineOpenCircled}{PU}{\9047\102}%* U+2742
19015 % U+2743 HEAVY TEARDROP-SPOKED PINWHEEL ASTERISK; \SixFlowerAltPetal (bding)
19016 \DeclareTextCommand{\textSixFlowerAltPetal}{PU}{\9047\103}%* U+2743
19017 % U+2744 SNOWFLAKE; \SnowflakeChevron (bding)
19018 \DeclareTextCommand{\textSnowflakeChevron}{PU}{\9047\104}%* U+2744
19019 % U+2745 TIGHT TRIFOLIATE SNOWFLAKE; \Snowflake (bding)
19020 \DeclareTextCommand{\textSnowflake}{PU}{\9047\105}%* U+2745
19021 % U+2746 HEAVY CHEVRON SNOWFLAKE; \SnowflakeChevronBold (bding)
19022 \DeclareTextCommand{\textSnowflakeChevronBold}{PU}{\9047\106}%* U+2746
19023 % U+2747 SPARKLE; \Sparkle (bding)
19024 \DeclareTextCommand{\textSparkle}{PU}{\9047\107}%* U+2747
19025 % U+2748 HEAVY SPARKLE; \SparkleBold (bding)
19026 \DeclareTextCommand{\textSparkleBold}{PU}{\9047\110}%* U+2748
19027 % U+2749 BALLOON-SPOKED ASTERISK; \AsteriskRoundedEnds (bding)
19028 \DeclareTextCommand{\textAsteriskRoundedEnds}{PU}{\9047\111}%* U+2749
19029 % U+274A EIGHT TEARDROP-SPOKED PROPELLER ASTERISK;

19030 % \EightFlowerPetalRemoved (bbding)
 19031 \DeclareTextCommand{\textEightFlowerPetalRemoved}{PU}{\9047\112}%* U+274A
 19032 % U+274B HEAVY EIGHT TEARDROP-SPOKED PROPELLER ASTERISK;
 19033 % \EightAsterisk (bbding)
 19034 \DeclareTextCommand{\textEightAsterisk}{PU}{\9047\113}%* U+274B
 19035 % U+274D SHADOWED WHITE CIRCLE; \CircleShadow (bbding)
 19036 \DeclareTextCommand{\textCircleShadow}{PU}{\9047\115}%* U+274D
 19037 % U+274F LOWER RIGHT DROP-SHADOWED WHITE SQUARE;
 19038 % \SquareShadowBottomRight (bbding)
 19039 \DeclareTextCommand{\textSquareShadowBottomRight}{PU}{\9047\117}%* U+274F
 19040 % U+2750 UPPER RIGHT DROP-SHADOWED WHITE SQUARE;
 19041 % \SquareShadowTopRight (bbding)
 19042 \DeclareTextCommand{\textSquareTopRight}{PU}{\9047\120}%* U+2750
 19043 % U+2751 LOWER RIGHT SHADOWED WHITE SQUARE;
 19044 % \SquareCastShadowBottomRight (bbding)
 19045 \DeclareTextCommand{\textSquareCastShadowBottomRight}{PU}{\9047\121}%* U+2751
 19046 % U+2752 UPPER RIGHT SHADOWED WHITE SQUARE;
 19047 % \SquareCastShadowTopRight (bbding)
 19048 \DeclareTextCommand{\textSquareCastShadowTopRight}{PU}{\9047\122}%* U+2752
 19049 % U+2756 BLACK DIAMOND MINUS WHITE X; \OrnamentDiamondSolid (bbding)
 19050 \DeclareTextCommand{\textDiamondSolid}{PU}{\9047\126}%* U+2756
 19051 % U+2758 LIGHT VERTICAL BAR; \RectangleThin (bbding)
 19052 \DeclareTextCommand{\textRectangleThin}{PU}{\9047\130}%* U+2758
 19053 % U+2759 MEDIUM VERTICAL BAR; \Rectangle (bbding)
 19054 \DeclareTextCommand{\textRectangle}{PU}{\9047\131}%* U+2759
 19055 % U+275A HEAVY VERTICAL BAR; \RectangleBold (bbding)
 19056 \DeclareTextCommand{\textRectangleBold}{PU}{\9047\132}%* U+275A

47.2.31 Miscellaneous Mathematical Symbols-A: U+27C0 to U+27EF

19057 % U+27C2 PERPENDICULAR; perpendicular; \perp (LaTeX)
 19058 \DeclareTextCommand{\textperp}{PU}{\9047\302}%* U+27C2
 19059 % \notperp (mathabx)
 19060 \DeclareTextCommand{\textnotperp}{PU}{\9047\302\83\070}%* U+27C2 U+0338
 19061 % U+27C7 OR WITH DOT INSIDE; \veedot (MnSymbol)
 19062 \DeclareTextCommand{\textveedot}{PU}{\9047\307}%* U+27C7
 19063 % U+27D1 AND WITH DOT; \wedgedot (MnSymbol)
 19064 \DeclareTextCommand{\textwedgedot}{PU}{\9047\321}%* U+27D1
 19065 % U+27DC LEFT MULTIMAP; \leftspoon (MnSymbol)
 19066 \DeclareTextCommand{\textleftspoon}{PU}{\9047\334}%* U+27DC
 19067 % U+27E6 MATHEMATICAL LEFT WHITE SQUARE BRACKET
 19068 \DeclareTextCommand{\textlbrackdbl}{PU}{\9047\346}%* U+27E6
 19069 %* \textlbrackdbl -> \lbracket (stmaryrd)
 19070 % U+27E7 MATHEMATICAL RIGHT WHITE SQUARE BRACKET
 19071 \DeclareTextCommand{\textrbrackdbl}{PU}{\9047\347}%* U+27E7
 19072 %* \textrbrackdbl -> \rrbracket (stmaryrd)

47.2.32 Supplemental Arrows-A: U+27F0 to U+27FF

19073 % U+27F2 ANTICLOCKWISE GAPPED CIRCLE ARROW;
 19074 % \circlearrowleft (AmS)
 19075 \DeclareTextCommand{\textcirclearrowleft}{PU}{\9047\362}%* U+27F2
 19076 % U+27F3 CLOCKWISE GAPPED CIRCLE ARROW; \circlearrowright (AmS)
 19077 \DeclareTextCommand{\textcirclearrowright}{PU}{\9047\363}%* U+27F3
 19078 % U+27F5 LONG LEFTWARDS ARROW; \longleftarrow (AmS)

19079 \DeclareTextCommand{\textlongleftarrow}{PU}{\9047\365}%* U+27F5
 19080 % U+27F6 LONG RIGHTWARDS ARROW; \longrightarrow (AmS)
 19081 \DeclareTextCommand{\textlongrightarrow}{PU}{\9047\366}%* U+27F6
 19082 % U+27F7 LONG LEFT RIGHT ARROW; \longleftrightarrow (AmS)
 19083 \DeclareTextCommand{\textlongleftrightarrow}{PU}{\9047\367}%* U+27F7
 19084 % U+27F8 LONG LEFTWARDS DOUBLE ARROW; \Longleftarrow (AmS)
 19085 \DeclareTextCommand{\textLongleftarrow}{PU}{\9047\370}%* U+27F8
 19086 % U+27F9 LONG RIGHTWARDS DOUBLE ARROW; \Longrightarrow (AmS)
 19087 \DeclareTextCommand{\textLongrightarrow}{PU}{\9047\371}%* U+27F9
 19088 % U+27FA LONG LEFT RIGHT DOUBLE ARROW; \Longleftrightarrow (AmS)
 19089 \DeclareTextCommand{\textLongleftrightarrow}{PU}{\9047\372}%* U+27FA
 19090 % U+27FC LONG RIGHTWARDS ARROW FROM BAR; \longmapsto (AmS)
 19091 \DeclareTextCommand{\textlongmapsto}{PU}{\9047\374}%* U+27FC
 19092 % U+27FD LONG LEFTWARDS DOUBLE ARROW FROM BAR; \Longmaps-
 from (stmaryrd)
 19093 \DeclareTextCommand{\textLongmapsfrom}{PU}{\9047\375}%* U+27FD
 19094 % U+27FE LONG RIGHTWARDS DOUBLE ARROW FROM BAR; \Longmap-
 sto (stmaryrd)
 19095 \DeclareTextCommand{\textLongmapsto}{PU}{\9047\376}%* U+27FE

47.2.33 Supplemental Arrows-B: U+2900 to U+297F

19096 % U+2921 NORTH WEST AND SOUTH EAST ARROW; \nwsearrow (MnSym-
 bol)
 19097 \DeclareTextCommand{\textnwsearrow}{PU}{\9051\041}%* U+2921
 19098 % U+2922 NORTH EAST AND SOUTH WEST ARROW; \neswarrow (MnSym-
 bol)
 19099 \DeclareTextCommand{\textneswarrow}{PU}{\9051\042}%* U+2922
 19100 % U+2923 NORTH WEST ARROW WITH HOOK; \hooknwarrow (MnSymbol)
 19101 \DeclareTextCommand{\textlhooknwarrow}{PU}{\9051\043}%* U+2923
 19102 % U+2924 NORTH EAST ARROW WITH HOOK; \rhooknearrow (MnSymbol)
 19103 \DeclareTextCommand{\textrhooknearrow}{PU}{\9051\044}%* U+2924
 19104 % U+2925 SOUTH EAST ARROW WITH HOOK; \hooksearrow (MnSymbol)
 19105 \DeclareTextCommand{\textlhooksearrow}{PU}{\9051\045}%* U+2925
 19106 % U+2926 SOUTH WEST ARROW WITH HOOK; \rhookswarrow (MnSymbol)
 19107 \DeclareTextCommand{\textrhookswarrow}{PU}{\9051\046}%* U+2926
 19108 % U+2933 WAVE ARROW POINTING DIRECTLY RIGHT; \leadsto (wasysym)
 19109 \DeclareTextCommand{\textleadsto}{PU}{\9051\063}%* U+2933
 19110 % U+2934 ARROW POINTING RIGHTWARDS THEN CURVING UPWARDS;
 19111 % \rcurvearrowne (MnSymbol)
 19112 \DeclareTextCommand{\textrcurvearrowne}{PU}{\9051\064}%* U+2934
 19113 % U+2935 ARROW POINTING RIGHTWARDS THEN CURVING DOWN-
 WARDS;
 19114 % \lcurvearrowse (MnSymbol)
 19115 \DeclareTextCommand{\textlcurvearrowse}{PU}{\9051\065}%* U+2935
 19116 % U+2936 ARROW POINTING DOWNWARDS THEN CURVING LEFT-
 WARDS;
 19117 % \lcurvearrowsw (MnSymbol)
 19118 \DeclareTextCommand{\textlcurvearrowsw}{PU}{\9051\066}%* U+2936
 19119 % U+2937 ARROW POINTING DOWNWARDS THEN CURVING RIGHT-
 WARDS;
 19120 % \rcurvearrowse (MnSymbol)
 19121 \DeclareTextCommand{\textrcurvearrowse}{PU}{\9051\067}%* U+2937
 19122 % U+2938 RIGHT-SIDE ARC CLOCKWISE ARROW; \lcurvearrowdown (Mn-
 Symbol)

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19123 \DeclareTextCommand{\textlcurvearrowdown}{PU}{\9051\070}%* U+2938
19124 %* \textlcurvearrowdown -> \RightTorque (marvosym)
19125 %* \textlcurvearrowdown -> \Righttorque (marvosym)
19126 % U+2939 LEFT-SIDE ARC ANTICLOCKWISE ARROW;
19127 % \rcurvearrowdown (MnSymbol)
19128 \DeclareTextCommand{\textrcurvearrowdown}{PU}{\9051\071}%* U+2939
19129 %* \textrcurvearrowdown -> \LeftTorque (marvosym)
19130 %* \textrcurvearrowdown -> \Lefttorque (marvosym)
19131 % U+293A TOP ARC ANTICLOCKWISE ARROW; \rcurvearrowleft (MnSym-
bol)
19132 \DeclareTextCommand{\textrcurvearrowleft}{PU}{\9051\072}%* U+293A
19133 % U+293B BOTTOM ARC ANTICLOCKWISE ARROW;
19134 % \rcurvearrowright (MnSymbol)
19135 \DeclareTextCommand{\textrcurvearrowright}{PU}{\9051\073}%* U+293B
19136 % U+294A LEFT BARB UP RIGHT BARB DOWN HARPOON; \leftrighthar-
poon (mathabx)
19137 \DeclareTextCommand{\textleftrightharpoon}{PU}{\9051\112}%* U+294A
19138 % U+294B LEFT BARB DOWN RIGHT BARB UP HARPOON; \rightlefthar-
poon (mathabx)
19139 \DeclareTextCommand{\textrightleftharpoon}{PU}{\9051\113}%* U+294B
19140 % U+294C UP BARB RIGHT DOWN BARB LEFT HARPOON;
19141 % \updownharpoonrightleft (MnSymbol)
19142 \DeclareTextCommand{\textupdownharpoonrightleft}{PU}{\9051\114}%* U+294C
19143 % U+294D UP BARB LEFT DOWN BARB RIGHT HARPOON;
19144 % \updownharpoonleftright (MnSymbol)
19145 \DeclareTextCommand{\textupdownharpoonleftright}{PU}{\9051\115}%* U+294D
19146 % U+2962 LEFTWARDS HARPOON WITH BARB UP ABOVE LEFTWARDS
19147 % HARPOON WITH BARB DOWN; \leftleftharpoons (mathabx)
19148 \DeclareTextCommand{\textleftleftharpoons}{PU}{\9051\142}%* U+2962
19149 % U+2963 UPWARDS HARPOON WITH BARB LEFT BESIDE UPWARDS
19150 % HARPOON WITH BARB RIGHT; \upupharpoons (mathabx)
19151 \DeclareTextCommand{\textupupharpoons}{PU}{\9051\143}%* U+2963
19152 % U+2964 RIGHTWARDS HARPOON WITH BARB UP ABOVE RIGHT-
WARDS HARPOON
19153 % WITH BARB DOWN; \rightrightarpoons (mathabx)
19154 \DeclareTextCommand{\textrightarpoons}{PU}{\9051\144}%* U+2964
19155 % U+2965 DOWNWARDS HARPOON WITH BARB LEFT BESIDE DOWN-
WARDS HARPOON
19156 % WITH BARB RIGHT; \downdownharpoons (mathabx)
19157 \DeclareTextCommand{\textdowndownharpoons}{PU}{\9051\145}%* U+2965
19158 % U+296A LEFTWARDS HARPOON WITH BARB UP ABOVE LONG DASH;
19159 % \leftbarharpoon (mathabx)
19160 \DeclareTextCommand{\textleftbarharpoon}{PU}{\9051\152}%* U+296A
19161 % U+296B LEFTWARDS HARPOON WITH BARB DOWN BELOW
19162 % LONG DASH; \barleftharpoon (mathabx)
19163 \DeclareTextCommand{\textbarleftharpoon}{PU}{\9051\153}%* U+296B
19164 % U+296C RIGHTWARDS HARPOON WITH BARB UP ABOVE
19165 % LONG DASH; \rightbarharpoon (mathabx)
19166 \DeclareTextCommand{\textrightbarharpoon}{PU}{\9051\154}%* U+296C
19167 % U+296D RIGHTWARDS HARPOON WITH BARB DOWN BELOW
19168 % LONG DASH; \barrightharpoon (mathabx)
19169 \DeclareTextCommand{\textbarrightharpoon}{PU}{\9051\155}%* U+296D
19170 % U+296E UPWARDS HARPOON WITH BARB LEFT BESIDE DOWN-
WARDS HARPOON

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19171 % WITH BARB RIGHT; \updownharpoons (mathabx)
19172 \DeclareTextCommand{\textupdownharpoons}{PU}{\9051\156}%* U+296E
19173 % U+296F DOWNWARDS HARPOON WITH BARB LEFT BESIDE UP-
WARDS HARPOON
19174 % WITH BARB RIGHT; \downupharpoons (mathabx)
19175 \DeclareTextCommand{\textdownupharpoons}{PU}{\9051\157}%* U+296F
19176 % U+297F DOWN FISH TAIL
19177 \DeclareTextCommand{\textmoo}{PU}{\9051\177\83\066}%* U+297F U+0336

47.2.34 Miscellaneous Mathematical Symbols-B: U+2980 to U+29FF

19178 % U+2987 Z NOTATION LEFT IMAGE BRACKET; \lparentthesis (stmaryrd)
19179 \DeclareTextCommand{\textllparentthesis}{PU}{\9051\207}%* U+2987
19180 % U+2988 Z NOTATION RIGHT IMAGE BRACKET; \rparentthesis (stmaryrd)
19181 \DeclareTextCommand{\textrrparentthesis}{PU}{\9051\210}%* U+2988
19182 % U+29B0 REVERSED EMPTY SET; \invdiameter (wasysym)
19183 \DeclareTextCommand{\textinvdiameter}{PU}{\9051\260}%* U+29B0
19184 % U+29B6 CIRCLED VERTICAL BAR; \obar (stmaryrd)
19185 \DeclareTextCommand{\textobar}{PU}{\9051\266}%* U+29B6
19186 %* \textobar -> \textvarobar (stmaryrd)
19187 % U+29B8 CIRCLED REVERSE SOLIDUS; \obslash (stmaryrd)
19188 \DeclareTextCommand{\textobslash}{PU}{\9051\270}%* U+29B8
19189 %* \textobslash -> \circledbslash (txfonts/pxfonts)
19190 %* \textobslash -> \obackslash (mathabx)
19191 %* \textobslash -> \varobslash (stmaryrd)
19192 % U+29BA CIRCLE DIVIDED BY HORIZONTAL BAR AND TOP HALF
DIVIDED BY VERTICAL BAR; \obot (mathabx)
19194 \DeclareTextCommand{\textobot}{PU}{\9051\272}%* U+29BA
19195 %* \textobot -> \odplus (ulsy)
19196 % U+29BB CIRCLE WITH SUPERIMPOSED X; \NoChemicalCleaning (mar-
vosym)
19197 \DeclareTextCommand{\textNoChemicalCleaning}{PU}{\9051\273}%* U+29BB
19198 % U+29C0 CIRCLED LESS-THAN; \olessthan (stmaryrd)
19199 \DeclareTextCommand{\textolessthan}{PU}{\9051\300}%* U+29C0
19200 %* \textolessthan -> \varolessthan (stmaryrd)
19201 % U+29C1 CIRCLED GREATER-THAN; \ogreaterthan (stmaryrd)
19202 \DeclareTextCommand{\textogreaterthan}{PU}{\9051\301}%* U+29C1
19203 %* \textogreaterthan -> \varogreaterthan (stmaryrd)
19204 % U+29C4 SQUARED RISING DIAGONAL SLASH; \boxslash (mathabx, stmaryrd)
19205 \DeclareTextCommand{\textboxslash}{PU}{\9051\304}%* U+29C4
19206 % U+29C5 SQUARED FALLING DIAGONAL SLASH; \boxbslash (stmaryrd)
19207 \DeclareTextCommand{\textboxbslash}{PU}{\9051\305}%* U+29C5
19208 % U+29C6 SQUARED ASTERISK; \boxast (stmaryrd)
19209 \DeclareTextCommand{\textboxast}{PU}{\9051\306}%* U+29C6
19210 % U+29C7 SQUARED SMALL CIRCLE; \boxcircle (stmaryrd)
19211 \DeclareTextCommand{\textboxcircle}{PU}{\9051\307}%* U+29C7
19212 % U+29C8 SQUARED SQUARE; \boxbox (stmaryrd)
19213 \DeclareTextCommand{\textboxbox}{PU}{\9051\310}%* U+29C8
19214 % U+29D3 BLACK BOWTIE; \Valve (marvosym)
19215 \DeclareTextCommand{\textValve}{PU}{\9051\323}%* U+29D3
19216 % U+29DF DOUBLE-ENDED MULTIMAP; \multimapboth (txfonts/pxfonts)
19217 \DeclareTextCommand{\textmultimapboth}{PU}{\9051\337}%* U+29DF
19218 % U+29E2 SHUFFLE PRODUCT; \shuffle (shuffle)
19219 \DeclareTextCommand{\textshuffle}{PU}{\9051\342}%* U+29E2

47.2.35 Supplemental Mathematical Operators: U+2A00 to U+2AFF

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19220 % U+2A04 N-ARY UNION OPERATOR WITH PLUS; \uplus (LaTeX)
19221 \DeclareTextCommand{\textuplus}{PU}{\9052\004}%* U+2A04
19222 % U+2A07 TWO LOGICAL AND OPERATOR; \bigdoublewedge (MnSymbol)
19223 \DeclareTextCommand{\textbigdoublewedge}{PU}{\9052\007}%* U+2A07
19224 % U+2A08 TWO LOGICAL OR OPERATOR; \bigdoublevee (MnSymbol)
19225 \DeclareTextCommand{\textbigdoublevee}{PU}{\9052\010}%* U+2A08
19226 % U+2A1D JOIN; \Join (latexsym, amsfonts, amssymb, mathabx, txfonts,
19227 %   pxfonts, wasysym)
19228 \DeclareTextCommand{\textJoin}{PU}{\9052\035}%* U+2A1D
19229 % U+2A1F Z NOTATION SCHEMA COMPOSITION; \fatsemi (stmaryrd)
19230 \DeclareTextCommand{\textfatsemi}{PU}{\9052\037}%* U+2A1F
19231 % U+2A22 PLUS SIGN WITH SMALL CIRCLE ABOVE; \circplus (mathabx)
19232 \DeclareTextCommand{\textcircplus}{PU}{\9052\042}%* U+2A22
19233 % U+2A2A MINUS SIGN WITH DOT BELOW; \minusdot (MnSymbol)
19234 \DeclareTextCommand{\textminusdot}{PU}{\9052\052}%* U+2A2A
19235 %* \textminusdot -> \divdot (mathabx)
19236 % U+2A30 MULTIPLICATION SIGN WITH DOT ABOVE; \dottimes (mathabx)
19237 \DeclareTextCommand{\textdottimes}{PU}{\9052\060}%* U+2A30
19238 % U+2A32 SEMIDIRECT PRODUCT WITH BOTTOM CLOSED;
19239 %   \dtimes (mathdesign)
19240 \DeclareTextCommand{\textdtimes}{PU}{\9052\062}%* U+2A32
19241 % U+2A38 CIRCLED DIVISION SIGN; \odiv (mathabx)
19242 \DeclareTextCommand{\textodiv}{PU}{\9052\070}%* U+2A38
19243 % U+2A3C INTERIOR PRODUCT; \invneg (MnSymbol)
19244 \DeclareTextCommand{\textinvneg}{PU}{\9052\074}%* U+2A3C
19245 % U+2A4E DOUBLE SQUARE INTERSECTION; \sqdoublecap (mathabx)
19246 \DeclareTextCommand{\textsqdoublecap}{PU}{\9052\116}%* U+2A4E
19247 %* \textsqdoublecap -> \doublesqcap (MnSymbol)
19248 % U+2A40 INTERSECTION WITH DOT; \capdot (MnSymbol)
19249 \DeclareTextCommand{\textcapdot}{PU}{\9052\100}%* U+2A40
19250 % U+2A4F DOUBLE SQUARE UNION; \sqdoublecup (mathabx)
19251 \DeclareTextCommand{\textsqdoublecup}{PU}{\9052\117}%* U+2A4F
19252 %* \textsqdoublecup -> \doublesqcup (MnSymbol)
19253 % U+2A55 TWO INTERSECTING LOGICAL AND; \doublewedge (MnSymbol)
19254 \DeclareTextCommand{\textdoublewedge}{PU}{\9052\125}%* U+2A55
19255 % U+2A56 TWO INTERSECTING LOGICAL OR; \doublevee (MnSymbol)
19256 \DeclareTextCommand{\textdoublevee}{PU}{\9052\126}%* U+2A56
19257 %* \textdoublevee -> \merge (stmaryrd)
19258 % U+2A5E LOGICAL AND WITH DOUBLE OVERBAR;
19259 %   \doublebarwedge (AmS)
19260 \DeclareTextCommand{\textdoublebarwedge}{PU}{\9052\136}%* U+2A5E
19261 % U+2A63 LOGICAL OR WITH DOUBLE UNDERBAR;
19262 %   \veedoublebar (mahtabx)
19263 \DeclareTextCommand{\textveedoublebar}{PU}{\9052\143}%* U+2A63
19264 % U+2A66 EQUALS SIGN WITH DOT BELOW; \eqdot (MnSymbol)
19265 \DeclareTextCommand{\texteqdot}{PU}{\9052\146}%* U+2A66
19266 % \neqdot (MnSymbol)
19267 \DeclareTextCommand{\textneqdot}{PU}{\9052\146\83\070}%* U+2A66 U+0338
19268 % U+2A74 DOUBLE COLON EQUAL; \coloncolonequals (colonequals)
19269 \DeclareTextCommand{\textcoloncolonequals}{PU}{\9052\164}%* U+2A74
19270 % U+2A7D LESS-THAN OR SLANTED EQUAL TO; \leqslant (AmS)
19271 \DeclareTextCommand{\textleqslant}{PU}{\9052\175}%* U+2A7D

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19272 % \nleqslant (txfonts/pxfonts)
19273 \DeclareTextCommand{\textnleqslant}{PU}{\9052\175\83\070}%* U+2A7D U+0338
19274 % U+2A7E GREATER-THAN OR SLANTED EQUAL TO; \geqslant (AmS)
19275 \DeclareTextCommand{\textgeqslant}{PU}{\9052\176}%* U+2A7E
19276 % \ngeqslant (txfonts/pxfonts)
19277 \DeclareTextCommand{\textngeqslant}{PU}{\9052\176\83\070}%* U+2A7E U+0338
19278 % U+2A85 LESS-THAN OR APPROXIMATE; \lessapprox (AmS)
19279 \DeclareTextCommand{\textlessapprox}{PU}{\9052\205}%* U+2A85
19280 % \nlessapprox (txfonts/pxfonts)
19281 \DeclareTextCommand{\textnlessapprox}{PU}{\9052\205\83\070}%* U+2A85 U+0338
19282 % U+2A86 GREATER-THAN OR APPROXIMATE; \gtrapprox (AmS)
19283 \DeclareTextCommand{\textgtrapprox}{PU}{\9052\206}%* U+2A86
19284 % \ngtrapprox (txfonts/pxfonts)
19285 \DeclareTextCommand{\textngtrapprox}{PU}{\9052\206\83\070}%* U+2A86 U+0338
19286 % U+2A87 LESS-THAN AND SINGLE-LINE NOT EQUAL TO; \lneq (AmS)
19287 \DeclareTextCommand{\textlneq}{PU}{\9052\207}%* U+2A87
19288 % U+2A88 GREATER-THAN AND SINGLE-LINE NOT EQUAL TO;
19289 % \gneq (AmS)
19290 \DeclareTextCommand{\textgneq}{PU}{\9052\210}%* U+2A88
19291 % U+2A89 LESS-THAN AND NOT APPROXIMATE; \lnapprox (AmS)
19292 \DeclareTextCommand{\textlnapprox}{PU}{\9052\211}%* U+2A89
19293 % U+2A8A GREATER-THAN AND NOT APPROXIMATE; \gnapprox (AmS)
19294 \DeclareTextCommand{\textgnapprox}{PU}{\9052\212}%* U+2A8A
19295 % U+2A8B LESS-THAN ABOVE DOUBLE-LINE EQUAL ABOVE GREATER-
THAN;
19296 % \lesseqgtr (AmS)
19297 \DeclareTextCommand{\textlesseqgtr}{PU}{\9052\213}%* U+2A8B
19298 % U+2A8C GREATER-THAN ABOVE DOUBLE-LINE EQUAL ABOVE LESS-
THAN;
19299 % \gtreqless (AmS)
19300 \DeclareTextCommand{\textgtreqless}{PU}{\9052\214}%* U+2A8C
19301 % U+2A95 SLANTED EQUAL TO OR LESS-THAN; \eqslantless (AmS)
19302 \DeclareTextCommand{\texteqslantless}{PU}{\9052\225}%* U+2A95
19303 % U+2A96 SLANTED EQUAL TO OR GREATER-THAN; \eqslantgtr (AmS)
19304 \DeclareTextCommand{\texteqslantgtr}{PU}{\9052\226}%* U+2A96
19305 % U+2AA6 LESS-THAN CLOSED BY CURVE; \leftslice (stmaryrd)
19306 \DeclareTextCommand{\textleftslice}{PU}{\9052\246}%* U+2AA6
19307 % U+2AA7 GREATER-THAN CLOSED BY CURVE; \rightslice (stmaryrd)
19308 \DeclareTextCommand{\textrightslice}{PU}{\9052\247}%* U+2AA7
19309 % U+2AAF PRECEDES ABOVE SINGLE-LINE EQUALS SIGN; \preceq (Mn-
Symbol)
19310 \DeclareTextCommand{\textpreceq}{PU}{\9052\257}%* U+2AAF
19311 % \npreceq (txfonts/pxfonts)
19312 \DeclareTextCommand{\textnpreceq}{PU}{\9052\257\83\070}%* U+2AAF U+0338
19313 % U+2AB0 SUCCEEDS ABOVE SINGLE-LINE EQUALS SIGN; \succeq (Mn-
Symbol)
19314 \DeclareTextCommand{\textsucceq}{PU}{\9052\260}%* U+2AB0
19315 % \nsucceq (txfonts/pxfonts)
19316 \DeclareTextCommand{\textnsucceq}{PU}{\9052\260\83\070}%* U+2AB0 U+0338
19317 % U+2AB1 PRECEDES ABOVE SINGLE-LINE NOT EQUAL TO; \precneq
(mathabx)
19318 \DeclareTextCommand{\textprecneq}{PU}{\9052\261}%* U+2AB1
19319 % U+2AB2 SUCCEEDS ABOVE SINGLE-LINE NOT EQUAL TO; \succneq
(mathabx)

19320 \DeclareTextCommand{\textsuccneq}{PU}{\9052\262}%* U+2AB2
19321 % U+2AB3 PRECEDES ABOVE EQUALS SIGN; \preceqq (txfonts/pxfonts)
19322 \DeclareTextCommand{\textpreceqq}{PU}{\9052\263}%* U+2AB3
19323 % \npreceqq (txfonts/pxfonts)
19324 \DeclareTextCommand{\textnpreceqq}{PU}{\9052\263\83\070}%* U+2AB3 U+0338
19325 % U+2AB4 SUCCEEDS ABOVE EQUALS SIGN; \succeqq (txfonts/pxfonts)
19326 \DeclareTextCommand{\textsucceqq}{PU}{\9052\264}%* U+2AB4
19327 % \nsucceqq (txfonts/pxfonts)
19328 \DeclareTextCommand{\textnsucceqq}{PU}{\9052\264\83\070}%* U+2AB4 U+0338
19329 % U+2AB5 PRECEDES ABOVE NOT EQUAL TO; \precneqq (txfonts/pxfonts)
19330 \DeclareTextCommand{\textprecneqq}{PU}{\9052\265}%* U+2AB5
19331 % U+2AB6 SUCCEEDS ABOVE NOT EQUAL TO; \succneqq (txfonts/pxfonts)
19332 \DeclareTextCommand{\textsuccneqq}{PU}{\9052\266}%* U+2AB6
19333 % U+2AB7 PRECEDES ABOVE ALMOST EQUAL TO; \precapprox (AmS)
19334 \DeclareTextCommand{\textprecapprox}{PU}{\9052\267}%* U+2AB7
19335 % \nprecapprox (txfonts/pxfonts)
19336 \DeclareTextCommand{\textnprecapprox}{PU}{\9052\267\83\070}%* U+2AB7 U+0338
19337 % U+2AB8 SUCCEEDS ABOVE ALMOST EQUAL TO; \succapprox (AmS)
19338 \DeclareTextCommand{\textsuccapprox}{PU}{\9052\270}%* U+2AB8
19339 % \nsuccapprox (txfonts/pxfonts)
19340 \DeclareTextCommand{\textnsuccapprox}{PU}{\9052\270\83\070}%* U+2AB8 U+0338
19341 % U+2AB9 PRECEDES ABOVE NOT ALMOST EQUAL TO; \precnapprox (AmS)
19342 \DeclareTextCommand{\textprecnapprox}{PU}{\9052\271}%* U+2AB9
19343 % U+2ABA SUCCEEDS ABOVE NOT ALMOST EQUAL TO; \succnapprox (AmS)
19344 \DeclareTextCommand{\textsuccnapprox}{PU}{\9052\272}%* U+2ABA
19345 % U+2AC5 SUBSET OF ABOVE EQUALS SIGN; \subseteqq (AmS)
19346 \DeclareTextCommand{\textsubseteqq}{PU}{\9052\305}%* U+2AC5
19347 % \nsubseteqq (txfonts/pxfonts, mathabx)
19348 \DeclareTextCommand{\textnsubseteqq}{PU}{\9052\305\83\070}%* U+2AC5 U+0338
19349 % U+2AC6 SUPERSET OF ABOVE EQUALS SIGN; \supseteqq (AmS)
19350 \DeclareTextCommand{\textsupseteqq}{PU}{\9052\306}%* U+2AC6
19351 % \nsupseteqq (mathabx)
19352 \DeclareTextCommand{\textnsupseteqq}{PU}{\9052\306\83\070}%* U+2AC6 U+0338
19353 % U+2AE3 DOUBLE VERTICAL BAR LEFT TURNSTILE
19354 \DeclareTextCommand{\textdashV}{PU}{\9052\343}%* U+2AE3
19355 %* \textdashV -> \leftVdash (MnSymbol)
19356 % \ndashV (mathabx)
19357 \DeclareTextCommand{\textndashV}{PU}{\9052\343\83\070}%* U+2AE3 U+0338
19358 %* \textndashV -> \nleftVdash (MnSymbol)
19359 % U+2AE4 VERTICAL BAR DOUBLE LEFT TURNSTILE; \Dashv (mathabx)
19360 \DeclareTextCommand{\textDashv}{PU}{\9052\344}%* U+2AE4
19361 %* \textDashv -> \leftmodels (MnSymbol)
19362 % \nDashv (mathabx)
19363 \DeclareTextCommand{\textnDashv}{PU}{\9052\344\83\070}%* U+2AE4 U+0338
19364 %* \textnDashv -> \nleftmodels (MnSymbol)
19365 % U+2AE5 DOUBLE VERTICAL BAR DOUBLE LEFT TURNSTILE;
19366 % \DashV (mathabx)
19367 \DeclareTextCommand{\textDashV}{PU}{\9052\345}%* U+2AE5
19368 %* \textDashV -> \leftModels (MnSymbol)
19369 % \nDashV (mathabx)
19370 \DeclareTextCommand{\textnDashV}{PU}{\9052\345\83\070}%* U+2AE5 U+0338
19371 %* \textnDashV -> \nleftModels (MnSymbol)

19372 % U+2AEA DOUBLE DOWN TACK; \downmodels (MnSymbol)
 19373 \DeclareTextCommand{\textdownmodels}{PU}{\9052\352}%* U+2AEA
 19374 % \ndownmodels (MnSymbol)
 19375 \DeclareTextCommand{\textndownmodels}{PU}{\9052\352\83\070}%* U+2AEA U+0338
 19376 % U+2AEB DOUBLE UP TACK; \upmodels (MnSymbol)
 19377 \DeclareTextCommand{\textupmodels}{PU}{\9052\353}%* U+2AEB
 19378 % \nupmodels (MnSymbol)
 19379 \DeclareTextCommand{\textnupmodels}{PU}{\9052\353\83\070}%* U+2AEB U+0338
 19380 % U+2AEF VERTICAL LINE WITH CIRCLE ABOVE; \upspoon (MnSymbol)
 19381 \DeclareTextCommand{\textupspoon}{PU}{\9052\357}%* U+2AEF
 19382 % U+2AF4 TRIPLE VERTICAL BAR BINARY RELATION;
 19383 % \interleave (stmaryrd)
 19384 \DeclareTextCommand{\textinterleave}{PU}{\9052\364}%* U+2AF4
 19385 % U+2AFD DOUBLE SOLIDUS OPERATOR; \sslash (stmaryrd)
 19386 \DeclareTextCommand{\textsslash}{PU}{\9052\375}%* U+2AFD
 19387 %* \textsslash -> \varparallel (txfonts\pxfonts)

47.2.36 Miscellaneous Symbols and Arrows: U+2B00 to U+2BFF

19388 % U+2B20 WHITE PENTAGON; \pentagon (wasysym)
 19389 \DeclareTextCommand{\textpentagon}{PU}{\9053\040}%* U+2B20
 19390 % U+2B21 WHITE HEXAGON; \varhexagon (wasysym)
 19391 \DeclareTextCommand{\textvarhexagon}{PU}{\9053\041}%* U+2B21

47.2.37 Latin Extended-C: U+2C60 to U+2C7F

19392 % U+2C7C LATIN SUBSCRIPT SMALL LETTER J
 19393 \DeclareTextCommand{\textjinferior}{PU}{\9054\174}%* U+2C7C

47.2.38 Supplemental Punctuation: U+2E00 to U+2E7F

19394 % U+2E13 DOTTED OBELOS; \slashdiv (MnSymbol)
 19395 \DeclareTextCommand{\textslashdiv}{PU}{\9056\023}%* U+2E13
 19396 % U+2E18 INVERTED INTERROBANG; \textinterrobangdown (textcomp)
 19397 \DeclareTextCommand{\textinterrobangdown}{PU}{\9056\030}% U+2E18
 19398 % U+2E2D FIVE DOT MARK; \fivedots (MnSymbol)
 19399 \DeclareTextCommand{\textfivedots}{PU}{\9056\055}%* U+2E2D

47.2.39 Modifier Tone Letters: U+A700 to U+A71F

19400 % U+A71B MODIFIER LETTER RAISED UP ARROW; \textupstep (tipa)
 19401 \DeclareTextCommand{\textupstep}{PU}{\9247\033}% U+A71B
 19402 % U+A71C MODIFIER LETTER RAISED DOWN ARROW;
 19403 % \textdownstep (tipa)
 19404 \DeclareTextCommand{\textdownstep}{PU}{\9247\034}% U+A71C

47.2.40 Latin Extended-D: U+A720 to U+A7FF

19405 % U+A727 LATIN SMALL LETTER HENG; \textheng (tipx)
 19406 \DeclareTextCommand{\textPUheng}{PU}{\9247\047}% U+A727
 19407 %* \textPUheng -> \textheng (tipx)
 19408 % U+A72C LATIN CAPITAL LETTER CUATRILLO; \textlhookfour (tipx)
 19409 \DeclareTextCommand{\textPULhookfour}{PU}{\9247\054}% U+A72C
 19410 %* \textPULhookfour -> \textlhookfour (tipx)
 19411 % U+A730 LATIN LETTER SMALL CAPITAL F; \textscf (tipx)
 19412 \DeclareTextCommand{\textPUScf}{PU}{\9247\060}% U+A730
 19413 %* \textPUScf -> \textscf (tipx)
 19414 % U+A735 LATIN SMALL LETTER AO; \textaoilig (tipx)
 19415 \DeclareTextCommand{\textPUaolig}{PU}{\9247\065}% U+A735

19416 %* \textPUaolig -> \textaoilig (tipx)
 19417 % U+A74F LATIN SMALL LETTER OO; \oo (wsuipa)
 19418 \DeclareTextCommand{\textoo}{PU}{\9247\117}%* U+A74F
 19419 % U+A788 MODIFIER LETTER LOW CIRCUMFLEX ACCENT
 19420 \DeclareTextCommand{\textcircumlw}{PU}{\9247\210}% U+A788

47.2.41 Alphabetic Presentation Forms: U+FB00 to U+FB4F

19421 % U+FB01 LATIN SMALL LIGATURE FI; fi
 19422 \DeclareTextCommand{\textfi}{PU}{\9373\001}% U+FB01
 19423 % U+FB02 LATIN SMALL LIGATURE FL; fl
 19424 \DeclareTextCommand{\textfl}{PU}{\9373\002}% U+FB02

47.2.42 Musical Symbols: U+1D100 to U+1D1FF

19425 % U+1D13B MUSICAL SYMBOL WHOLE REST; \GaPa (harmony)
 19426 \DeclareTextCommand{\textGaPa}{PU}{\9330\064\9335\073}%* U+1D13B
 19427 % U+1D13C MUSICAL SYMBOL HALF REST; \HaPa (harmony)
 19428 \DeclareTextCommand{\textHaPa}{PU}{\9330\064\9335\074}%* U+1D13C
 19429 % U+1D13D MUSICAL SYMBOL QUARTER REST; \ViPa (harmony)
 19430 \DeclareTextCommand{\textViPa}{PU}{\9330\064\9335\075}%* U+1D13D
 19431 % U+1D13E MUSICAL SYMBOL EIGHTH REST; \AcPa (harmony)
 19432 \DeclareTextCommand{\textAcPa}{PU}{\9330\064\9335\076}%* U+1D13E
 19433 % U+1D13F MUSICAL SYMBOL SIXTEENTH REST; \SePa (harmony)
 19434 \DeclareTextCommand{\textSePa}{PU}{\9330\064\9335\077}%* U+1D13F
 19435 % U+1D140 MUSICAL SYMBOL THIRTY-SECOND REST; \ZwPa (harmony)
 19436 \DeclareTextCommand{\textZwPa}{PU}{\9330\064\9335\100}%* U+1D140
 19437 % U+1D15D MUSICAL SYMBOL WHOLE NOTE; \fullnote (wasysym)
 19438 \DeclareTextCommand{\textfullnote}{PU}{\9330\064\9335\135}%* U+1D15D
 19439 %* \textfullnote -> \Ganz (harmony)
 19440 % U+1D15E MUSICAL SYMBOL HALF NOTE; \halfnote (wasysym)
 19441 \DeclareTextCommand{\texthalfnote}{PU}{\9330\064\9335\136}%* U+1D15E
 19442 %* \texthalfnote -> \Halb (harmony)
 19443 % U+1D15F MUSICAL SYMBOL QUARTER NOTE; \Vier (harmony)
 19444 \DeclareTextCommand{\textVier}{PU}{\9330\064\9335\137}%* U+1D15F
 19445 % U+1D160 MUSICAL SYMBOL EIGHTH NOTE; \Acht (harmony)
 19446 \DeclareTextCommand{\textAcht}{PU}{\9330\064\9335\140}%* U+1D160
 19447 % U+1D161 MUSICAL SYMBOL SIXTEENTH NOTE; \Sech (harmony)
 19448 \DeclareTextCommand{\textSech}{PU}{\9330\064\9335\141}%* U+1D161
 19449 % U+1D162 MUSICAL SYMBOL THIRTY-SECOND NOTE; \Zwdr (harmony)
 19450 \DeclareTextCommand{\textZwdr}{PU}{\9330\064\9335\142}%* U+1D162

47.2.43 Miscellaneous Symbols and Pictographs: U+1F300 to U+1F5FF

19451 % U+1F30D EARTH GLOBE EUROPE-AFRICA; \Mundus (marvosym)
 19452 \DeclareTextCommand{\textMundus}{PU}{\9330\074\9337\015}%* U+1F30D
 19453 % U+1F319 CRESCENT MOON; \Moon (marvosym)
 19454 \DeclareTextCommand{\textMoon}{PU}{\9330\074\9337\031}%* U+1F319
 19455 % U+1F468 MAN; \ManFace (marvosym)
 19456 \DeclareTextCommand{\textManFace}{PU}{\9330\075\9334\150}%* U+1F468
 19457 % U+1F469 WOMAN; \WomanFace (marvosym)
 19458 \DeclareTextCommand{\textWomanFace}{PU}{\9330\075\9334\151}%* U+1F469
 19459 %* \textWomanFace -> \Womanface (marvosym)
 19460 % U+1F4E0 FAX MACHINE; \Fax (marvosym)
 19461 \DeclareTextCommand{\textFax}{PU}{\9330\075\9334\340}%* U+1F4E0
 19462 %* \textFax -> \Faxmachine (marvosym)
 19463 % U+1F525 FIRE; \Fire (ifsym)

19464 \DeclareTextCommand{\textFire}{PU}{\9330\075\9335\045}%* U+1F525

47.2.44 Transport and Map Symbols: U+1F680 to U+1F6FF

19465 % U+1F6B2 BICYCLE; \Bicycle (marvosym)
19466 \DeclareTextCommand{\textBicycle}{PU}{\9330\075\9336\262}%* U+1F6B2
19467 % U+1F6B9 MENS SYMBOL; \Gentsroom (marvosym)
19468 \DeclareTextCommand{\textGentsroom}{PU}{\9330\075\9336\271}%* U+1F6B9
19469 % U+1F6BA WOMENS SYMBOL; \Ladiesroom (marvosym)
19470 \DeclareTextCommand{\textLadiesroom}{PU}{\9330\075\9336\272}%* U+1F6BA

47.2.45 Miscellaneous

19471 \DeclareTextCommand{\SS}{PU}{SS}%
19472 % \textcopyleft (textcomp)
19473 \DeclareTextCommand{\textcopyleft}{PU}{\9041\204\9040\335}% U+2184 U+20DD
19474 % \ccnc (cclicens)
19475 \DeclareTextCommand{\textccnc}{PU}{\80\044\9040\340}%* U+0024 U+20E0
19476 % \ccnd (cclicens)
19477 \DeclareTextCommand{\textccnd}{PU}{=\9040\335}%* U+003D U+20DD
19478 % \ccsa (cclicens)
19479 \DeclareTextCommand{\textccsa}{PU}{\9047\362\9040\335}%* U+27F2 U+20DD
19480 % \Info (marvosym, china2e)
19481 \DeclareTextCommand{\textInfo}{PU}{\9330\065\9334\042\9040\336}%* U+1D422 U+20DE
19482 % \CESign (marvosym)
19483 \DeclareTextCommand{\textCESign}{PU}{\80\103\80\105}%* U+0043 U+0045
19484 %* \textCESign -> \CEsign (marvosym)

47.2.46 Aliases

Aliases (german.sty)

19485 \DeclareTextCommand{\textglqq}{PU}{\quotedblbase}%
19486 \DeclareTextCommand{\textgrqq}{PU}{\textquotedblleft}%
19487 \DeclareTextCommand{\textglq}{PU}{\quotesinglbase}%
19488 \DeclareTextCommand{\textgrq}{PU}{\textquoteleft}%
19489 \DeclareTextCommand{\textflqq}{PU}{\guillemetleft}%
19490 \DeclareTextCommand{\textfrqq}{PU}{\guillemetright}%
19491 \DeclareTextCommand{\textflq}{PU}{\guilsinglleft}%
19492 \DeclareTextCommand{\textfrq}{PU}{\guilsinglright}%
Aliases (math names)

19493 \DeclareTextCommand{\textneg}{PU}{\textlogicalnot}%*
19494 \DeclareTextCommand{\texttimes}{PU}{\textmultiply}%*
19495 \DeclareTextCommand{\textdiv}{PU}{\textdivide}%*
19496 \DeclareTextCommand{\textpm}{PU}{\textplusminus}%*
19497 \DeclareTextCommand{\textcdot}{PU}{\textperiodcentered}%*
19498 (/puenc)

47.3 PU encoding, additions for VnTeX

This file is provided by Han The Thanh.

19499 (*puvnenc)
19500 \DeclareTextCommand{\abreve}{PU}{\81\003}% U+0103
19501 \DeclareTextCommand{\acircumflex}{PU}{\80\342}% U+00E2
19502 \DeclareTextCommand{\ecircumflex}{PU}{\80\352}% U+00EA

19503 \DeclareTextCommand{\ocircumflex}{PU}{\80\364}% U+00F4
19504 \DeclareTextCommand{\ohorn}{PU}{\81\241}% U+01A1
19505 \DeclareTextCommand{\uhorn}{PU}{\81\260}% U+01B0
19506 \DeclareTextCommand{\ABREVE}{PU}{\81\002}% U+0102
19507 \DeclareTextCommand{\ACIRCUMFLEX}{PU}{\80\302}% U+00C2
19508 \DeclareTextCommand{\ECIRCUMFLEX}{PU}{\80\312}% U+00CA
19509 \DeclareTextCommand{\OCIRCUMFLEX}{PU}{\80\324}% U+00D4
19510 \DeclareTextCommand{\OHORN}{PU}{\81\240}% U+01A0
19511 \DeclareTextCommand{\UHORN}{PU}{\81\257}% U+01AF

19512 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\341}% U+00E1
19513 \DeclareTextCompositeCommand{\d}{PU}{a}{\9036\241}% U+1EA1
19514 \DeclareTextCompositeCommand{\`}{PU}{a}{\80\340}% U+00E0
19515 \DeclareTextCompositeCommand{\h}{PU}{a}{\9036\243}% U+1EA3
19516 \DeclareTextCompositeCommand{\~}{PU}{a}{\80\343}% U+00E3
19517 \DeclareTextCompositeCommand{\'}{PU}{\abreve}{\9036\257}% U+1EAF
19518 \DeclareTextCompositeCommand{\d}{PU}{\abreve}{\9036\267}% U+1EB7
19519 \DeclareTextCompositeCommand{\`}{PU}{\abreve}{\9036\261}% U+1EB1
19520 \DeclareTextCompositeCommand{\h}{PU}{\abreve}{\9036\263}% U+1EB3
19521 \DeclareTextCompositeCommand{\~}{PU}{\abreve}{\9036\265}% U+1EB5
19522 \DeclareTextCompositeCommand{\'}{PU}{\acircumflex}{\9036\245}% U+1EA5
19523 \DeclareTextCompositeCommand{\d}{PU}{\acircumflex}{\9036\255}% U+1EAD
19524 \DeclareTextCompositeCommand{\`}{PU}{\acircumflex}{\9036\247}% U+1EA7
19525 \DeclareTextCompositeCommand{\h}{PU}{\acircumflex}{\9036\251}% U+1EA9
19526 \DeclareTextCompositeCommand{\~}{PU}{\acircumflex}{\9036\253}% U+1EAB
19527 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\351}% U+00E9
19528 \DeclareTextCompositeCommand{\d}{PU}{e}{\9036\271}% U+1EB9
19529 \DeclareTextCompositeCommand{\`}{PU}{e}{\80\350}% U+00E8
19530 \DeclareTextCompositeCommand{\h}{PU}{e}{\9036\273}% U+1EBB
19531 \DeclareTextCompositeCommand{\~}{PU}{e}{\9036\275}% U+1EBD
19532 \DeclareTextCompositeCommand{\'}{PU}{\ecircumflex}{\9036\277}% U+1EBF
19533 \DeclareTextCompositeCommand{\d}{PU}{\ecircumflex}{\9036\307}% U+1EC7
19534 \DeclareTextCompositeCommand{\`}{PU}{\ecircumflex}{\9036\301}% U+1EC1
19535 \DeclareTextCompositeCommand{\h}{PU}{\ecircumflex}{\9036\303}% U+1EC3
19536 \DeclareTextCompositeCommand{\~}{PU}{\ecircumflex}{\9036\305}% U+1EC5
19537 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}% U+00ED
19538 \DeclareTextCompositeCommand{\d}{PU}{i}{\9036\313}% U+1ECB
19539 \DeclareTextCompositeCommand{\`}{PU}{i}{\80\354}% U+00EC
19540 \DeclareTextCompositeCommand{\h}{PU}{i}{\9036\311}% U+1EC9
19541 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}% U+0129
19542 \DeclareTextCompositeCommand{\'}{PU}{o}{\80\363}% U+00F3
19543 \DeclareTextCompositeCommand{\d}{PU}{o}{\9036\315}% U+1ECD
19544 \DeclareTextCompositeCommand{\`}{PU}{o}{\80\362}% U+00F2
19545 \DeclareTextCompositeCommand{\h}{PU}{o}{\9036\317}% U+1ECF
19546 \DeclareTextCompositeCommand{\~}{PU}{o}{\80\365}% U+00F5
19547 \DeclareTextCompositeCommand{\'}{PU}{\ocircumflex}{\9036\321}% U+1ED1
19548 \DeclareTextCompositeCommand{\d}{PU}{\ocircumflex}{\9036\331}% U+1ED9
19549 \DeclareTextCompositeCommand{\`}{PU}{\ocircumflex}{\9036\323}% U+1ED3
19550 \DeclareTextCompositeCommand{\h}{PU}{\ocircumflex}{\9036\325}% U+1ED5
19551 \DeclareTextCompositeCommand{\~}{PU}{\ocircumflex}{\9036\327}% U+1ED7
19552 \DeclareTextCompositeCommand{\'}{PU}{\ohorn}{\9036\333}% U+1EDB
19553 \DeclareTextCompositeCommand{\d}{PU}{\ohorn}{\9036\343}% U+1EE3
19554 \DeclareTextCompositeCommand{\`}{PU}{\ohorn}{\9036\335}% U+1EDD
19555 \DeclareTextCompositeCommand{\h}{PU}{\ohorn}{\9036\337}% U+1EDF
19556 \DeclareTextCompositeCommand{\~}{PU}{\ohorn}{\9036\341}% U+1EE1

19557 \DeclareTextCompositeCommand{\'}{PU}{u}{\80\372}% U+00FA
19558 \DeclareTextCompositeCommand{\d}{PU}{u}{\9036\345}% U+1EE5
19559 \DeclareTextCompositeCommand{\`}{PU}{u}{\80\371}% U+00F9
19560 \DeclareTextCompositeCommand{\h}{PU}{u}{\9036\347}% U+1EE7
19561 \DeclareTextCompositeCommand{\~}{PU}{u}{\81\151}% U+0169
19562 \DeclareTextCompositeCommand{\'}{PU}{\uhorn}{\9036\351}% U+1EE9
19563 \DeclareTextCompositeCommand{\d}{PU}{\uhorn}{\9036\361}% U+1EF1
19564 \DeclareTextCompositeCommand{\`}{PU}{\uhorn}{\9036\353}% U+1EEB
19565 \DeclareTextCompositeCommand{\h}{PU}{\uhorn}{\9036\355}% U+1EED
19566 \DeclareTextCompositeCommand{\~}{PU}{\uhorn}{\9036\357}% U+1EEF
19567 \DeclareTextCompositeCommand{\'}{PU}{y}{\80\375}% U+00FD
19568 \DeclareTextCompositeCommand{\d}{PU}{y}{\9036\365}% U+1EF5
19569 \DeclareTextCompositeCommand{\`}{PU}{y}{\9036\363}% U+1EF3
19570 \DeclareTextCompositeCommand{\h}{PU}{y}{\9036\367}% U+1EF7
19571 \DeclareTextCompositeCommand{\~}{PU}{y}{\9036\371}% U+1EF9
19572 \DeclareTextCompositeCommand{\'}{PU}{A}{\80\301}% U+00C1
19573 \DeclareTextCompositeCommand{\d}{PU}{A}{\9036\240}% U+1EA0
19574 \DeclareTextCompositeCommand{\`}{PU}{A}{\80\300}% U+00C0
19575 \DeclareTextCompositeCommand{\h}{PU}{A}{\9036\242}% U+1EA2
19576 \DeclareTextCompositeCommand{\~}{PU}{A}{\80\303}% U+00C3
19577 \DeclareTextCompositeCommand{\'}{PU}{\ABREVE}{\9036\256}% U+1EAE
19578 \DeclareTextCompositeCommand{\d}{PU}{\ABREVE}{\9036\266}% U+1EB6
19579 \DeclareTextCompositeCommand{\`}{PU}{\ABREVE}{\9036\260}% U+1EB0
19580 \DeclareTextCompositeCommand{\h}{PU}{\ABREVE}{\9036\262}% U+1EB2
19581 \DeclareTextCompositeCommand{\~}{PU}{\ABREVE}{\9036\264}% U+1EB4
19582 \DeclareTextCompositeCommand{\'}{PU}{\ACIRCUMFLEX}{\9036\244}% U+1EA4
19583 \DeclareTextCompositeCommand{\d}{PU}{\ACIRCUMFLEX}{\9036\254}% U+1EAC
19584 \DeclareTextCompositeCommand{\`}{PU}{\ACIRCUMFLEX}{\9036\246}% U+1EA6
19585 \DeclareTextCompositeCommand{\h}{PU}{\ACIRCUMFLEX}{\9036\250}% U+1EA8
19586 \DeclareTextCompositeCommand{\~}{PU}{\ACIRCUMFLEX}{\9036\252}% U+1EAA
19587 \DeclareTextCompositeCommand{\'}{PU}{E}{\80\311}% U+00C9
19588 \DeclareTextCompositeCommand{\d}{PU}{E}{\9036\270}% U+1EB8
19589 \DeclareTextCompositeCommand{\`}{PU}{E}{\80\310}% U+00C8
19590 \DeclareTextCompositeCommand{\h}{PU}{E}{\9036\272}% U+1EBA
19591 \DeclareTextCompositeCommand{\~}{PU}{E}{\9036\274}% U+1EBC
19592 \DeclareTextCompositeCommand{\'}{PU}{\ECIRCUMFLEX}{\9036\276}% U+1EBE
19593 \DeclareTextCompositeCommand{\d}{PU}{\ECIRCUMFLEX}{\9036\306}% U+1EC6
19594 \DeclareTextCompositeCommand{\`}{PU}{\ECIRCUMFLEX}{\9036\300}% U+1EC0
19595 \DeclareTextCompositeCommand{\h}{PU}{\ECIRCUMFLEX}{\9036\302}% U+1EC2
19596 \DeclareTextCompositeCommand{\~}{PU}{\ECIRCUMFLEX}{\9036\304}% U+1EC4
19597 \DeclareTextCompositeCommand{\'}{PU}{I}{\80\315}% U+00CD
19598 \DeclareTextCompositeCommand{\d}{PU}{I}{\9036\312}% U+1ECA
19599 \DeclareTextCompositeCommand{\`}{PU}{I}{\80\314}% U+00CC
19600 \DeclareTextCompositeCommand{\h}{PU}{I}{\9036\310}% U+1EC8
19601 \DeclareTextCompositeCommand{\~}{PU}{I}{\81\050}% U+0128
19602 \DeclareTextCompositeCommand{\'}{PU}{O}{\80\323}% U+00D3
19603 \DeclareTextCompositeCommand{\d}{PU}{O}{\9036\314}% U+1ECC
19604 \DeclareTextCompositeCommand{\`}{PU}{O}{\80\322}% U+00D2
19605 \DeclareTextCompositeCommand{\h}{PU}{O}{\9036\316}% U+1ECE
19606 \DeclareTextCompositeCommand{\~}{PU}{O}{\80\325}% U+00D5
19607 \DeclareTextCompositeCommand{\'}{PU}{\OCIRCUMFLEX}{\9036\320}% U+1ED0
19608 \DeclareTextCompositeCommand{\d}{PU}{\OCIRCUMFLEX}{\9036\330}% U+1ED8
19609 \DeclareTextCompositeCommand{\`}{PU}{\OCIRCUMFLEX}{\9036\322}% U+1ED2
19610 \DeclareTextCompositeCommand{\h}{PU}{\OCIRCUMFLEX}{\9036\324}% U+1ED4

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19611 \DeclareTextCompositeCommand{\~}{PU}{\OCIRCUMFLEX}{\9036\326}% U+1ED6
19612 \DeclareTextCompositeCommand{\'}{PU}{\OHORN}{\9036\332}% U+1EDA
19613 \DeclareTextCompositeCommand{\d}{PU}{\OHORN}{\9036\342}% U+1EE2
19614 \DeclareTextCompositeCommand{\`}{PU}{\OHORN}{\9036\334}% U+1EDC
19615 \DeclareTextCompositeCommand{\h}{PU}{\OHORN}{\9036\336}% U+1EDE
19616 \DeclareTextCompositeCommand{\~}{PU}{\OHORN}{\9036\340}% U+1EE0
19617 \DeclareTextCompositeCommand{\'}{PU}{U}{\80\332}% U+00DA
19618 \DeclareTextCompositeCommand{\d}{PU}{U}{\9036\344}% U+1EE4
19619 \DeclareTextCompositeCommand{\`}{PU}{U}{\80\331}% U+00D9
19620 \DeclareTextCompositeCommand{\h}{PU}{U}{\9036\346}% U+1EE6
19621 \DeclareTextCompositeCommand{\~}{PU}{U}{\81\150}% U+0168
19622 \DeclareTextCompositeCommand{\'}{PU}{\UHORN}{\9036\350}% U+1EE8
19623 \DeclareTextCompositeCommand{\d}{PU}{\UHORN}{\9036\360}% U+1EF0
19624 \DeclareTextCompositeCommand{\`}{PU}{\UHORN}{\9036\352}% U+1EEA
19625 \DeclareTextCompositeCommand{\h}{PU}{\UHORN}{\9036\354}% U+1EEC
19626 \DeclareTextCompositeCommand{\~}{PU}{\UHORN}{\9036\356}% U+1EEE
19627 \DeclareTextCompositeCommand{\'}{PU}{Y}{\80\335}% U+00DD
19628 \DeclareTextCompositeCommand{\d}{PU}{Y}{\9036\364}% U+1EF4
19629 \DeclareTextCompositeCommand{\`}{PU}{Y}{\9036\362}% U+1EF2
19630 \DeclareTextCompositeCommand{\h}{PU}{Y}{\9036\366}% U+1EF6
19631 \DeclareTextCompositeCommand{\~}{PU}{Y}{\9036\370}% U+1EF8
19632 </puvnenc>

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47.4 PU encoding, additions for Arabi

This file is provided and maintained by Youssef Jabri.

```

19633 (*puarenc)
19634 % U+0621;afii57409;ARABIC LETTER HAMZA
19635 \DeclareTextCommand{\hamza}{PU}{\86\041}% U+0621
19636 % U+0622;afii57410;ARABIC LETTER ALEF WITH MADDA ABOVE
19637 \DeclareTextCommand{\alefmadda}{PU}{\86\042}% U+0622
19638 % U+0623;afii57411;ARABIC LETTER ALEF WITH HAMZA ABOVE
19639 \DeclareTextCommand{\alefhamza}{PU}{\86\043}% U+0623
19640 % U+0624;afii57412;ARABIC LETTER WAW WITH HAMZA ABOVE
19641 \DeclareTextCommand{\wawhamza}{PU}{\86\044}% U+0624
19642 % U+0625;afii57413;ARABIC LETTER ALEF WITH HAMZA BELOW
19643 \DeclareTextCommand{\aleflowerhamza}{PU}{\86\045}% U+0625
19644 % U+0626;afii57414;ARABIC LETTER YEH WITH HAMZA ABOVE
19645 \DeclareTextCommand{\yahamza}{PU}{\86\046}% U+0626
19646 % U+0627;afii57415;ARABIC LETTER ALEF
19647 \DeclareTextCommand{\alef}{PU}{\86\047}% U+0627
19648 % U+0628;afii57416;ARABIC LETTER BEH
19649 \DeclareTextCommand{\baa}{PU}{\86\050}% U+0628
19650 % U+0629;afii57417;ARABIC LETTER TEH MARBUTA
19651 \DeclareTextCommand{\T}{PU}{\86\051}% U+0629
19652 % U+062A;afii57418;ARABIC LETTER TEH
19653 \DeclareTextCommand{\taa}{PU}{\86\052}% U+062A
19654 % U+062B;afii57419;ARABIC LETTER THEH
19655 \DeclareTextCommand{\thaa}{PU}{\86\053}% U+062B
19656 % U+062C;afii57420;ARABIC LETTER JEEM
19657 \DeclareTextCommand{\jeem}{PU}{\86\054}% U+062C
19658 % U+062D;afii57421;ARABIC LETTER HAH
19659 \DeclareTextCommand{\Haa}{PU}{\86\055}% U+062D

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19660 % U+062E;afii57422;ARABIC LETTER KHAH
19661 \DeclareTextCommand{\kha}{PU}{\86\056}% U+062E
19662 % U+062F;afii57423;ARABIC LETTER DAL
19663 \DeclareTextCommand{\dal}{PU}{\86\057}% U+062F
19664 % U+0630;afii57424;ARABIC LETTER THAL
19665 \DeclareTextCommand{\dhal}{PU}{\86\060}% U+0630
19666 % U+0631;afii57425;ARABIC LETTER REH
19667 \DeclareTextCommand{\ra}{PU}{\86\061}% U+0631
19668 % U+0632;afii57426;ARABIC LETTER ZAIN
19669 \DeclareTextCommand{\zay}{PU}{\86\062}% U+0632
19670 % U+0633;afii57427;ARABIC LETTER SEEN
19671 \DeclareTextCommand{\seen}{PU}{\86\063}% U+0633
19672 % U+0634;afii57428;ARABIC LETTER SHEEN
19673 \DeclareTextCommand{\sheen}{PU}{\86\064}% U+0634
19674 % U+0635;afii57429;ARABIC LETTER SAD
19675 \DeclareTextCommand{\sad}{PU}{\86\065}% U+0635
19676 % U+0636;afii57430;ARABIC LETTER DAD
19677 \DeclareTextCommand{\dad}{PU}{\86\066}% U+0636
19678 % U+0637;afii57431;ARABIC LETTER TAH
19679 \DeclareTextCommand{\Ta}{PU}{\86\067}% U+0637
19680 % U+0638;afii57432;ARABIC LETTER ZAH
19681 \DeclareTextCommand{\za}{PU}{\86\070}% U+0638
19682 % U+0639;afii57433;ARABIC LETTER AIN
19683 \DeclareTextCommand{\ayn}{PU}{\86\071}% U+0639
19684 % U+063A;afii57434;ARABIC LETTER GHAIN
19685 \DeclareTextCommand{\ghayn}{PU}{\86\072}% U+063A
19686 % U+0640;afii57440;ARABIC TATWEEL
19687 \DeclareTextCommand{\tatweel}{PU}{\86\100}% U+0640
19688 % U+0641;afii57441;ARABIC LETTER FEH
19689 \DeclareTextCommand{\fa}{PU}{\86\101}% U+0641
19690 % U+0642;afii57442;ARABIC LETTER QAF
19691 \DeclareTextCommand{\qaf}{PU}{\86\102}% U+0642
19692 % U+0643;afii57443;ARABIC LETTER KAF
19693 \DeclareTextCommand{\kaf}{PU}{\86\103}% U+0643
19694 % U+0644;afii57444;ARABIC LETTER LAM
19695 \DeclareTextCommand{\lam}{PU}{\86\104}% U+0644
19696 % U+0645;afii57445;ARABIC LETTER MEEM
19697 \DeclareTextCommand{\meem}{PU}{\86\105}% U+0645
19698 % U+0646;afii57446;ARABIC LETTER NOON
19699 \DeclareTextCommand{\nun}{PU}{\86\106}% U+0646
19700 % U+0647;afii57470;ARABIC LETTER HEH
19701 \DeclareTextCommand{\ha}{PU}{\86\107}% U+0647
19702 % U+0648;afii57448;ARABIC LETTER WAW
19703 \DeclareTextCommand{\waw}{PU}{\86\110}% U+0648
19704 % U+0649;afii57449;ARABIC LETTER ALEF MAKSURA
19705 \DeclareTextCommand{\alefmaqsura}{PU}{\86\111}% U+0649
19706 % U+064A;afii57450;ARABIC LETTER YEH
19707 \DeclareTextCommand{\ya}{PU}{\86\112}% U+064A

19708 % U+064B;afii57451;ARABIC FATHATAN
19709 \DeclareTextCommand{\nasb}{PU}{\86\113}% U+064B
19710 % U+064C;afii57452;ARABIC DAMMATAN
19711 \DeclareTextCommand{\raff}{PU}{\86\114}% U+064C
19712 % U+064D;afii57453;ARABIC KASRATAN
19713 \DeclareTextCommand{\jarr}{PU}{\86\115}% U+064D

19714 % U+064E;afii57454;ARABIC FATHA
19715 \DeclareTextCommand{\fatha}{PU}{\86\116}% U+064E
19716 % U+064F;afii57455;ARABIC DAMMA
19717 \DeclareTextCommand{\damma}{PU}{\86\117}% U+064F
19718 % U+0650;afii57456;ARABIC KASRA
19719 \DeclareTextCommand{\kasra}{PU}{\86\120}% U+0650
19720 % U+0651;afii57457;ARABIC SHADDA
19721 \DeclareTextCommand{\shadda}{PU}{\86\121}% U+0651
19722 % U+0652;afii57458;ARABIC SUKUN
19723 \DeclareTextCommand{\sukun}{PU}{\86\122}% U+0652

Farsi

19724 % U+067E ARABIC LETTER PEH; afii57506
19725 \DeclareTextCommand{\peh}{PU}{\86\176}% U+067E
19726 % U+0686 ARABIC LETTER TCHEH; afii57507
19727 \DeclareTextCommand{\tcheh}{PU}{\86\206}% U+0686
19728 % U+0698 ARABIC LETTER JEH; afii57508
19729 \DeclareTextCommand{\jeh}{PU}{\86\230}% U+0698
19730 % U+06A9 ARABIC LETTER KEHEH
19731 \DeclareTextCommand{\farsikaf}{PU}{\86\251}% U+06A9
19732 % U+06AF ARABIC LETTER GAF; afii57509
19733 \DeclareTextCommand{\gaf}{PU}{\86\257}% U+06AF
19734 % U+06CC ARABIC LETTER FARSI YEH
19735 \DeclareTextCommand{\farsiya}{PU}{\86\314}% U+06CC

19736 % U+200C ZERO WIDTH NON-JOINER; afii61664
19737 \DeclareTextCommand{\ZWNJ}{PU}{\9040\014}% U+200C
19738 % U+200D ZERO WIDTH JOINER; afii301
19739 \DeclareTextCommand{\textEncodingNoboundary}{PU}{\9040\015}% U+200D

19740 $\langle \! \! \rangle$ (puarenc)

19741 $\langle *psdextra \rangle$
19742 \Hy@VersionCheck{psdextra.def}
19743 \DeclareTextCommand{\textGamma}{PU}{\83\223}%* U+0393
19744 \DeclareTextCommand{\textDelta}{PU}{\83\224}%* U+0394
19745 \DeclareTextCommand{\textTheta}{PU}{\83\230}%* U+0398
19746 \DeclareTextCommand{\textLambda}{PU}{\83\233}%* U+039E
19747 \DeclareTextCommand{\textXi}{PU}{\83\236}%* U+039F
19748 \DeclareTextCommand{\textPi}{PU}{\83\240}%* U+03A0
19749 \DeclareTextCommand{\textSigma}{PU}{\83\243}%* U+03A3
19750 \DeclareTextCommand{\textUpsilon}{PU}{\83\245}%* U+03A5
19751 \DeclareTextCommand{\textPhi}{PU}{\83\246}%* U+03A6
19752 \DeclareTextCommand{\textChi}{PU}{\83\247}% U+03A7
19753 \DeclareTextCommand{\textPsi}{PU}{\83\250}%* U+03A8
19754 \DeclareTextCommand{\textOmega}{PU}{\83\251}%* U+03A9
19755 \DeclareTextCommand{\textalpha}{PU}{\83\261}%* U+03B1
19756 \DeclareTextCommand{\textbeta}{PU}{\83\262}%* U+03B2
19757 \DeclareTextCommand{\textgamma}{PU}{\83\263}%* U+03B3
19758 \DeclareTextCommand{\textdelta}{PU}{\83\264}%* U+03B4
19759 \DeclareTextCommand{\textepsilon}{PU}{\83\265}%* U+03B5
19760 \DeclareTextCommand{\textzeta}{PU}{\83\266}%* U+03B6
19761 \DeclareTextCommand{\texteta}{PU}{\83\267}%* U+03B7
19762 \DeclareTextCommand{\texttheta}{PU}{\83\270}%* U+03B8
19763 \DeclareTextCommand{\textiota}{PU}{\83\271}%* U+03B9
19764 \DeclareTextCommand{\textkappa}{PU}{\83\272}%* U+03BA

19765 \DeclareTextCommand{\textlambda}{PU}{\83\273}%* U+03BB
19766 \DeclareTextCommand{\textmugreek}{PU}{\83\274}%* U+03BC
19767 \DeclareTextCommand{\textnu}{PU}{\83\275}%* U+03BD
19768 \DeclareTextCommand{\textxi}{PU}{\83\276}%* U+03BE
19769 \DeclareTextCommand{\textpi}{PU}{\83\300}%* U+03C0
19770 \DeclareTextCommand{\textrho}{PU}{\83\301}%* U+03C1
19771 \DeclareTextCommand{\textvarsigma}{PU}{\83\302}%* U+03C2
19772 \DeclareTextCommand{\textsigma}{PU}{\83\303}%* U+03C3
19773 \DeclareTextCommand{\texttau}{PU}{\83\304}%* U+03C4
19774 \DeclareTextCommand{\textupsilon}{PU}{\83\305}%* U+03C5
19775 \DeclareTextCommand{\textphi}{PU}{\83\306}%* U+03C6
19776 \DeclareTextCommand{\textchi}{PU}{\83\307}%* U+03C7
19777 \DeclareTextCommand{\textpsi}{PU}{\83\310}%* U+03C8
19778 \DeclareTextCommand{\textomega}{PU}{\83\311}%* U+03C9
19779 \newcommand*{\psdmapshortnames}{%
19780 \let\MVPlus\textMVPlus
19781 \let\MVComma\textMVComma
19782 \let\MVMinus\textMVMinus
19783 \let\MVPeriod\textMVPeriod
19784 \let\MVDivision\textMVDivision
19785 \let\MVZero\textMVZero
19786 \let\MVOne\textMVOne
19787 \let\MVTwo\textMVTwo
19788 \let\MVThree\textMVThree
19789 \let\MVFour\textMVFour
19790 \let\MVFive\textMVFive
19791 \let\MVSix\textMVSix
19792 \let\MVSeven\textMVSeven
19793 \let\MVEight\textMVEight
19794 \let\MVNine\textMVNine
19795 \let\MVAt\textMVAt
19796 \let\copyright\textcopyright
19797 \let\twosuperior\texttwosuperior
19798 \let\threesuperior\textthreesuperior
19799 \let\onesuperior\textonesuperior
19800 \let\Thorn\textThorn
19801 \let\thorn\textthorn
19802 \let\hbar\texthbar
19803 \let\hausA\texthausA
19804 \let\hausB\texthausB
19805 \let\hausC\texthausC
19806 \let\hausD\texthausD
19807 \let\hausE\texthausE
19808 \let\hausF\texthausF
19809 \let\hausG\texthausG
19810 \let\hausH\texthausH
19811 \let\hausI\texthausI
19812 \let\hausJ\texthausJ
19813 \let\hausK\texthausK
19814 \let\hausL\texthausL
19815 \let\hausM\texthausM
19816 \let\hausN\texthausN
19817 \let\hausO\texthausO
19818 \let\hausP\texthausP
19819 \let\hausQ\texthausQ
19820 \let\hausR\texthausR
19821 \let\hausS\texthausS
19822 \let\hausT\texthausT
19823 \let\hausU\texthausU
19824 \let\hausV\texthausV
19825 \let\hausW\texthausW
19826 \let\hausX\texthausX
19827 \let\hausY\texthausY
19828 \let\hausZ\texthausZ
19829 \let\barl\textbarl
19830 \let\inve\textinve
19831 \let\slashc\textslashc
19832 \let\scripta\textscripta
19833 \let\openo\textopeno
19834 \let\rtaild\textrtaild
19835 \let\reve\textreve
19836 \let\schwa\textschwa
19837 \let\niepsilon\textniepsilon
19838 \let\repsilon\textrepsilon
19839 \let\rhookrepsilon\text\rhookrepsilon
19840 \let\scriptg\textscriptg
19841 \let\scg\textscg

19819 \let\ipagamma\textipagamma
19820 \let\babygamma\textbabygamma
19821 \let\bari\textbari
19822 \let\niota\textniota
19823 \let\sci\textsci
19824 \let\scn\textscn
19825 \let\niphi\textniphi
19826 \let\longlegr\textlonglegr
19827 \let\scr\textscr
19828 \let\invscr\textinvscr
19829 \let\esh\textesh
19830 \let\baru\textbaru
19831 \let\niupsilon\textniupsilon
19832 \let\scriptv\textscriptv
19833 \let\turnv\textturnv
19834 \let\turnw\textturnw
19835 \let\turny\textturny
19836 \let\scy\textscy
19837 \let\yogh\textyogh
19838 \let\glotstop\textglotstop
19839 \let\revglotstop\textrevglotstop
19840 \let\invglotstop\textinvglotstop
19841 \let\Gamma\textGamma
19842 \let\Delta\textDelta
19843 \let\Theta\textTheta
19844 \let\Lambda\textLambda
19845 \let\Xi\textXi
19846 \let\Pi\textPi
19847 \let\Sigma\textSigma
19848 \let\Upsilon\textUpsilon
19849 \let\Phi\textPhi
19850 \let\Psi\textPsi
19851 \let\Omega\textOmega
19852 \let\alpha\textalpha
19853 \let\beta\textbeta
19854 \let\gamma\textgamma
19855 \let\delta\textdelta
19856 \let\epsilon\textepsilon
19857 \let\zeta\textzeta
19858 \let\eta\texteta
19859 \let\theta\texttheta
19860 \let\iota\textiota
19861 \let\kappa\textkappa
19862 \let\lambda\textlambda
19863 \let\mu\textmu
19864 \let\mugreek\textmugreek
19865 \let\nu\textnu
19866 \let\xi\textxi
19867 \let\pi\textpi
19868 \let\rho\textrho
19869 \let\varsigma\textvarsigma
19870 \let\sigma\textsigma
19871 \let\tau\texttau
19872 \let\upsilon\textupsilon

19873 \let\phi\textphi
19874 \let\chi\textchi
19875 \let\psi\textpsi
19876 \let\omega\textomega
19877 \let\scd\textscd
19878 \let\scu\textscu
19879 \let\iinferior\textiinferior
19880 \let\rinferior\extrinferior
19881 \let\uinferior\textuinferior
19882 \let\vinferior\textvinferior
19883 \let\betainferior\textbetainferior
19884 \let\gammainferior\textgammainferior
19885 \let\rhoinferior\textrhoinferior
19886 \let\phiinferior\textphiinferior
19887 \let\chiinferior\textchiinferior
19888 \let\barsci\textbarsci
19889 \let\barp\textbarp
19890 \let\barscu\textbarscu
19891 \let\htrtaild\texthtrtaild
19892 \let\dagger\textdagger
19893 \let\bullet\textbullet
19894 \let\hdotfor\texthdotfor
19895 \let\prime\textprime
19896 \let\second\textsecond
19897 \let\third\textthird
19898 \let\backprime\textbackprime
19899 \let\lefttherefore\textlefttherefore
19900 \let\fourth\textfourth
19901 \let\diamonddots\textdiamonddots
19902 \let\zerosuperior\textzerosuperior
19903 \let\isuperior\textisuperior
19904 \let\foursuperior\textfoursuperior
19905 \let\fivesuperior\textfivesuperior
19906 \let\sixsuperior\textsixsuperior
19907 \let\sevensuperior\textsevensuperior
19908 \let\eightsuperior\texteightsuperior
19909 \let\ninesuperior\textninesuperior
19910 \let\plussuperior\textplussuperior
19911 \let\minussuperior\textminussuperior
19912 \let\equalsuperior\textequalsuperior
19913 \let\parenleftsuperior\textparenleftsuperior
19914 \let\parenrightsuperior\textparenrightsuperior
19915 \let\nsuperior\textnsuperior
19916 \let\zeroinferior\textzeroinferior
19917 \let\oneinferior\textoneinferior
19918 \let\twoinferior\texttwoinferior
19919 \let\threeinferior\textthreeinferior
19920 \let\fourinferior\textfourinferior
19921 \let\fiveinferior\textfiveinferior
19922 \let\sixinferior\textsixinferior
19923 \let\seveninferior\textseveninferior
19924 \let\eightinferior\texteightinferior
19925 \let\nineinferior\textnineinferior
19926 \let\plusinferior\textplusinferior

19927 `\let\minusinferior\textminusinferior`
19928 `\let\equalsinferior\textequalsinferior`
19929 `\let\parenleftinferior\textparenleftinferior`
19930 `\let\parenrightinferior\textparenrightinferior`
19931 `\let\ainferior\textainferior`
19932 `\let\einferior\texteinferior`
19933 `\let\oinferior\textoinferior`
19934 `\let\xinferior\textxinferior`
19935 `\let\schwainferior\textschwainferior`
19936 `\let\hinferior\texthinferior`
19937 `\let\kinferior\textkinferior`
19938 `\let\linferior\textlinferior`
19939 `\let\minferior\textminferior`
19940 `\let\ninferior\textninferior`
19941 `\let\pinferior\textpinferior`
19942 `\let\sinferior\textsinferior`
19943 `\let\tinferior\texttinferior`
19944 `\let\Deleatur\textDeleatur`
19945 `\let\hslash\texthslash`
19946 `\let\Im\textIm`
19947 `\let\ell\textell`
19948 `\let\wp\textwp`
19949 `\let\Re\textRe`
19950 `\let\mho\textmho`
19951 `\let\riota\textriota`
19952 `\let\Finv\textFinv`
19953 `\let\aleph\textaleph`
19954 `\let\beth\textbeth`
19955 `\let\gimel\textgimel`
19956 `\let\daleth\textdaleth`
19957 `\let\xfax\textfax`
19958 `\let\Game\textGame`
19959 `\let\leftarrow\textleftarrow`
19960 `\let\uparrow\textuparrow`
19961 `\let\rightarrow\textrightarrow`
19962 `\let\downarrow\textdownarrow`
19963 `\let\leftrightarrow\textleftrightarrow`
19964 `\let\updownarrow\textupdownarrow`
19965 `\let\nwarrow\textnwarrow`
19966 `\let\nearrow\textnearrow`
19967 `\let\searrow\textsearrow`
19968 `\let\swarrow\textswarrow`
19969 `\let\nleftarrow\textnleftarrow`
19970 `\let\nrightarrow\textnrightarrow`
19971 `\let\twoheadleftarrow\texttwoheadleftarrow`
19972 `\let\ntwoheadleftarrow\textntwoheadleftarrow`
19973 `\let\twoheaduparrow\texttwoheaduparrow`
19974 `\let\twoheadrightarrow\texttwoheadrightarrow`
19975 `\let\ntwoheadrightarrow\textntwoheadrightarrow`
19976 `\let\twoheaddownarrow\texttwoheaddownarrow`
19977 `\let\leftarrowtail\textleftarrowtail`
19978 `\let\rightarrowtail\textrightarrowtail`
19979 `\let\mapsto\textmapsto`
19980 `\let\hookleftarrow\texthookleftarrow`

19981 `\let\hookrightarrow\texthookrightarrow`
19982 `\let\looparrowleft\textlooparrowleft`
19983 `\let\looparrowright\textlooparrowright`
19984 `\let\leftrightharpoonrightarrow\textnleftrightharpoonrightarrow`
19985 `\let\lightning\textlightning`
19986 `\let\dLsh\textdLsh`
19987 `\let\curvearrowleft\textcurvearrowleft`
19988 `\let\curvearrowright\textcurvearrowright`
19989 `\let\leftharpoonup\textleftharpoonup`
19990 `\let\leftharpoondown\textleftharpoondown`
19991 `\let\upharpoonright\textupharpoonright`
19992 `\let\upharpoonleft\textupharpoonleft`
19993 `\let\rightharpoonup\textrightharpoonup`
19994 `\let\rightharpoondown\textrightharpoondown`
19995 `\let\downharpoonright\textdownharpoonright`
19996 `\let\downharpoonleft\textdownharpoonleft`
19997 `\let\rightleftarrows\textrightleftarrows`
19998 `\let\updownarrows\textupdownarrows`
19999 `\let\leftrightharpoons\textleftrightharpoons`
20000 `\let\leftleftarrows\textleftleftarrows`
20001 `\let\upuparrows\textupuparrows`
20002 `\let\righttrightarrows\textrighttrightarrows`
20003 `\let\downnarrowarrows\textdownnarrowarrows`
20004 `\let\leftrightharpoons\textleftrightharpoons`
20005 `\let\rightleftharpoons\textrightleftharpoons`
20006 `\let\Leftarrow\textnLeftarrow`
20007 `\let\Leftarrow\textnLeftarrow`
20008 `\let\rightarrow\textnrightarrow`
20009 `\let\Leftarrow\textLeftarrow`
20010 `\let\Uparrow\textUparrow`
20011 `\let\rightarrow\textrightarrow`
20012 `\let\Downarrow\textDownarrow`
20013 `\let\Leftarrow\textLeftarrow`
20014 `\let\Updownarrow\textUpdownarrow`
20015 `\let\Narrow\textNarrow`
20016 `\let\Narrow\textNarrow`
20017 `\let\searrow\textsearrow`
20018 `\let\searrow\textsearrow`
20019 `\let\Lleftarrow\textLleftarrow`
20020 `\let\Rrightarrow\textRrightarrow`
20021 `\let\leftsquigarrow\textleftsquigarrow`
20022 `\let\rightsquigarrow\textrightsquigarrow`
20023 `\let\dashleftarrow\textdashleftarrow`
20024 `\let\dasheduparrow\textdasheduparrow`
20025 `\let\dashrightarrow\textdashrightarrow`
20026 `\let\dasheddownarrow\textdasheddownarrow`
20027 `\let\pointer\textpointer`
20028 `\let\downuparrows\textdownuparrows`
20029 `\let\leftarrowtriangle\textleftarrowtriangle`
20030 `\let\rightarrowtriangle\textrightarrowtriangle`
20031 `\let\leftrightharpoonrightarrowtriangle\textleftrightharpoonrightarrowtriangle`
20032 `\let\forall\textforall`
20033 `\let\complement\textcomplement`
20034 `\let\partial\textpartial`

20035 \let\exists\textexists
20036 \let\nexists\textnexists
20037 \let\emptyset\textemptyset
20038 \let\triangle\texttriangle
20039 \let\nabla\textnabla
20040 \let\in\textinsymbol
20041 \let\notin\textnotin
20042 \let\smallin\textsmallin
20043 \let\ni\textni
20044 \let\notowner\textnotowner
20045 \let\smallowns\textsmallowns
20046 \let\prod\textprod
20047 \let\amalg\textamalg
20048 \let\sum\textsum
20049 \let\mp\textmp
20050 \let\dotplus\textdotplus
20051 \let\Divides\textDivides
20052 \let\DividesNot\textDividesNot
20053 \let\setminus\textsetminus
20054 \let\ast\textast
20055 \let\circ\textcirc
20056 \let\sqrt\textsqrt
20057 \let\propto\textpropto
20058 \let\infty\textinfty
20059 \let\angle\textangle
20060 \let\measuredangle\textmeasuredangle
20061 \let\sphericalangle\textsphericalangle
20062 \let\mid\textmid
20063 \let\nmid\textnmid
20064 \let\parallel\textparallel
20065 \let\nparallel\textnparallel
20066 \let\wedge\textwedge
20067 \let\owedge\textowedge
20068 \let\vee\textvee
20069 \let\ovee\textovee
20070 \let\cap\textcap
20071 \let\cup\textcup
20072 \let\int\textint
20073 \let\iint\textiint
20074 \let\iiint\textiiint
20075 \let\oint\textoint
20076 \let\oiint\textoiint
20077 \let\ointclockwise\textointclockwise
20078 \let\ointctrlockwise\textointctrlockwise
20079 \let\therefore\texttherefore
20080 \let\because\textbecause
20081 \let\vdots\textvdots
20082 \let\squaredots\textsquaredots
20083 \let\dotminus\textdotminus
20084 \let\eqcolon\texteqcolon
20085 \let\sim\textsim
20086 \let\backsim\textbacksim
20087 \let\nbacksim\textnbacksim
20088 \let\wr\textwr

20089 \let\nsim\textnsim
20090 \let\eqsim\texteqsim
20091 \let\neqsim\textneqsim
20092 \let\simeq\textsimeq
20093 \let\nsimeq\textnsimeq
20094 \let\cong\textcong
20095 \let\ncong\textncong
20096 \let\approx\textapprox
20097 \let\napprox\textnapprox
20098 \let\approxeq\textapproxeq
20099 \let\napproxeq\textnapproxeq
20100 \let\triplesim\texttriplesim
20101 \let\ntriplesim\textntriplesim
20102 \let\backcong\textbackcong
20103 \let\nbackcong\textnbackcong
20104 \let\asympt\textasympt
20105 \let\nasympt\textnasympt
20106 \let\Bumpeq\textBumpeq
20107 \let\nBumpeq\textnBumpeq
20108 \let\bumpeq\textbumpeq
20109 \let\nbumpeq\textnbumpeq
20110 \let\doteq\textdoteq
20111 \let\ndoteq\textndoteq
20112 \let\doteqdot\textdoteqdot
20113 \let\ndoteq\textndoteq
20114 \let\fallingdoteq\textfallingdoteq
20115 \let\nfallingdoteq\textnfallingdoteq
20116 \let\risingdoteq\textrisingdoteq
20117 \let\nrisingdoteq\textnrisingdoteq
20118 \let\colonequals\textcolonequals
20119 \let\equalscolon\textequalscolon
20120 \let\eqcirc\texteqcirc
20121 \let\neqcirc\textneqcirc
20122 \let\circeq\textcirceq
20123 \let\ncirceq\textncirceq
20124 \let\hateq\texthateq
20125 \let\nhateq\textnhateq
20126 \let\triangleq\texttriangleq
20127 \let\neq\textneq
20128 \let\ne\textne
20129 \let\equiv\textequiv
20130 \let\nequiv\textnequiv
20131 \let\leq\textleq
20132 \let\le\textle
20133 \let\geq\textgeq
20134 \let\ge\textge
20135 \let\leqq\textleqq
20136 \let\nleqq\textnleqq
20137 \let\geqq\textgeqq
20138 \let\ngeqq\textngeqq
20139 \let\lneqq\textlneqq
20140 \let\gneqq\textgneqq
20141 \let\ll\textll
20142 \let\nll\textnll

20143 \let\gg\textgg
 20144 \let\ngg\textngg
 20145 \let\between\textbetween
 20146 \let\nless\textnless
 20147 \let\ngtr\textngtr
 20148 \let\nleq\textnleq
 20149 \let\nggeq\textngeq
 20150 \let\lesssim\textlessim
 20151 \let\gtrsim\textgtrsim
 20152 \let\nlessim\textnlessim
 20153 \let\ngtrsim\textngtrsim
 20154 \let\lessgtr\textlessgtr
 20155 \let\gtrless\textgtrless
 20156 \let\ngtrless\textngtrless
 20157 \let\nlessgtr\textnlessgtr
 20158 \let\prec\textprec
 20159 \let\succ\textsucc
 20160 \let\preccurlyeq\textpreccurlyeq
 20161 \let\succcurlyeq\textsucccurlyeq
 20162 \let\precsim\textprecsim
 20163 \let\nprecsim\textnprecsim
 20164 \let\succsim\textsuccsim
 20165 \let\nsuccsim\textnsuccsim
 20166 \let\nprec\textnprec
 20167 \let\nsucc\textnsucc
 20168 \let\subset\textsubset
 20169 \let\supset\textsupset
 20170 \let\nsubset\textnsubset
 20171 \let\nsupset\textnsupset
 20172 \let\subseteq\textsubseteq
 20173 \let\supseteq\textsupseteq
 20174 \let\nsubseteq\textnsubseteq
 20175 \let\nsupseteq\textnsupseteq
 20176 \let\subsetneq\textsubsetneq
 20177 \let\supsetneq\textsupsetneq
 20178 \let\cupdot\textcupdot
 20179 \let\cupplus\textcupplus
 20180 \let\sqssubset\textsqssubset
 20181 \let\nsqssubset\textnsqssubset
 20182 \let\sqsupset\textsqsupset
 20183 \let\nsqsupset\textnsqsupset
 20184 \let\sqssubseteq\textsqssubseteq
 20185 \let\nsqssubseteq\textnsqssubseteq
 20186 \let\sqsupseteq\textsqsupseteq
 20187 \let\nsqsupseteq\textnsqsupseteq
 20188 \let\sqcap\textsqcap
 20189 \let\sqcup\textsqcup
 20190 \let\oplus\textoplus
 20191 \let\ominus\textominus
 20192 \let\otimes\textotimes
 20193 \let\oslash\textoslash
 20194 \let\odot\textodot
 20195 \let\circledcirc\textcircledcirc
 20196 \let\circledast\textcircledast

20197 `\let\circleddash\textcircleddash`
20198 `\let\boxplus\textboxplus`
20199 `\let\boxminus\textboxminus`
20200 `\let\boxtimes\textboxtimes`
20201 `\let\boxdot\textboxdot`
20202 `\let\vdash\textvdash`
20203 `\let\dashv\textdashv`
20204 `\let\ndashv\textndashv`
20205 `\let\top\texttop`
20206 `\let\ndownvdash\textndownvdash`
20207 `\let\bot\textbot`
20208 `\let\nupvdash\textnupvdash`
20209 `\let\VDash\textVDash`
20210 `\let\vdash\textvdash`
20211 `\let\VVdash\textVVdash`
20212 `\let\NVdash\textNVdash`
20213 `\let\VDash\textVDash`
20214 `\let\Nvdash\textNvdash`
20215 `\let\NVDash\textNVDash`
20216 `\let\NVdash\textNVdash`
20217 `\let\NVDash\textNVDash`
20218 `\let\lhd\textlhd`
20219 `\let\rhd\textrhd`
20220 `\let\unlhd\textunlhd`
20221 `\let\unrhd\textunrhd`
20222 `\let\multimapdotbothA\textmultimapdotbothA`
20223 `\let\multimapdotbothB\textmultimapdotbothB`
20224 `\let\multimap\textmultimap`
20225 `\let\veebar\textveebar`
20226 `\let\barwedge\textbarwedge`
20227 `\let\star\textstar`
20228 `\let\divideontimes\textdivideontimes`
20229 `\let\bowtie\textbowtie`
20230 `\let\ltimes\textltimes`
20231 `\let\rtimes\textrtimes`
20232 `\let\leftthreetimes\textleftthreetimes`
20233 `\let\rightthreetimes\textrightthreetimes`
20234 `\let\backsimeq\textbacksimeq`
20235 `\let\Nbacksimeq\textNbacksimeq`
20236 `\let\curlyvee\textcurlyvee`
20237 `\let\curlywedge\textcurlywedge`
20238 `\let\Subset\textSubset`
20239 `\let\NSubset\textNSubset`
20240 `\let\Supset\textSupset`
20241 `\let\NSupset\textNSupset`
20242 `\let\Cap\textCap`
20243 `\let\Cup\textCup`
20244 `\let\pitchfork\textpitchfork`
20245 `\let\lessdot\textlessdot`
20246 `\let\gtrdot\textgtrdot`
20247 `\let\lll\textlll`
20248 `\let\ggg\textggg`
20249 `\let\lesseqgtr\textlesseqgtr`
20250 `\let\gtreqless\textgtreqless`

20251 \let\curlyeqprec\textcurlyeqprec
20252 \let\ncurlyeqprec\textncurlyeqprec
20253 \let\curlyeqsucc\textcurlyeqsucc
20254 \let\ncurlyeqsucc\textncurlyeqsucc
20255 \let\mpreccurlyeq\textmpreccurlyeq
20256 \let\msucccurlyeq\textmsucccurlyeq
20257 \let\nqsubseteq\textnqsubseteq
20258 \let\nqsupseteq\textnqsupseteq
20259 \let\sqsubsetneq\textsqsubsetneq
20260 \let\sqsupsetneq\textsqsupsetneq
20261 \let\lnsim\textlnsim
20262 \let\gnsim\textgnsim
20263 \let\precnsim\textprecnsim
20264 \let\succnsim\textsuccnsim
20265 \let\ntriangleleft\textntriangleleft
20266 \let\ntriangleright\textntriangleright
20267 \let\ntrianglelefteq\textntrianglelefteq
20268 \let\ntrianglerighteq\textntrianglerighteq
20269 \let\vdots\textvdots
20270 \let\cdots\textcdots
20271 \let\udots\textudots
20272 \let\ddots\textddots
20273 \let\barin\textbarin
20274 \let\diameter\textdiameter
20275 \let\backneg\textbackneg
20276 \let\wasylozenge\textwasylozenge
20277 \let\invbackneg\textinvbackneg
20278 \let\clock\textclock
20279 \let\ulcorner\textulcorner
20280 \let\urcorner\texturcorner
20281 \let\llcorner\textllcorner
20282 \let\lrcorner\textlrcorner
20283 \let\frown\textfrown
20284 \let\smile\textsmile
20285 \let\Keyboard\textKeyboard
20286 \let\langle\textlangle
20287 \let\rangle\textrangle
20288 \let\APLin\textAPLin
20289 \let\Tumbler\textTumbler
20290 \let\notslash\textnotslash
20291 \let\notbackslash\textnotbackslash
20292 \let\boxbackslash\textboxbackslash
20293 \let\APLleftarrowbox\textAPLleftarrowbox
20294 \let\APLrightarrowbox\textAPLrightarrowbox
20295 \let\APLuparrowbox\textAPLuparrowbox
20296 \let\APLdownarrowbox\textAPLdownarrowbox
20297 \let\APLinput\textAPLinput
20298 \let\Request\textRequest
20299 \let\Beam\textBeam
20300 \let\hexagon\texthexagon
20301 \let\APLbox\textAPLbox
20302 \let\ForwardToIndex\textForwardToIndex
20303 \let\RewindToIndex\textRewindToIndex
20304 \let\bbslash\textbbslash

20305 \let\CircledA\textCircledA
20306 \let\CleaningF\textCleaningF
20307 \let\CleaningFF\textCleaningFF
20308 \let\CleaningP\textCleaningP
20309 \let\CleaningPP\textCleaningPP
20310 \let\CuttingLine\textCuttingLine
20311 \let\UParrow\textUParrow
20312 \let\bigtriangleup\textbigtriangleup
20313 \let\Forward\textForward
20314 \let\triangleright\texttriangleright
20315 \let\RHD\textRHD
20316 \let\DOWNarrow\textDOWNarrow
20317 \let\bigtriangledown\textbigtriangledown
20318 \let\Rewind\textRewind
20319 \let\triangleleft\texttriangleleft
20320 \let\LHD\textLHD
20321 \let\diamond\textdiamond
20322 \let\lozenge\textlozenge
20323 \let\LEFTCIRCLE\textLEFTCIRCLE
20324 \let\RIGHTCIRCLE\textRIGHTCIRCLE
20325 \let\openbullet\textopenbullet
20326 \let\boxbar\textboxbar
20327 \let\bigcircle\textbigcircle
20328 \let\Cloud\textCloud
20329 \let\FiveStar\textFiveStar
20330 \let\FiveStarOpen\textFiveStarOpen
20331 \let\Phone\textPhone
20332 \let\boxempty\textboxempty
20333 \let\Checkedbox\textCheckedbox
20334 \let\Crossedbox\textCrossedbox
20335 \let\Coffeecup\textCoffeecup
20336 \let\HandCuffLeft\textHandCuffLeft
20337 \let\HandCuffRight\textHandCuffRight
20338 \let\HandLeft\textHandLeft
20339 \let\HandRight\textHandRight
20340 \let\Radioactivity\textRadioactivity
20341 \let\Biohazard\textBiohazard
20342 \let\Ankh\textAnkh
20343 \let\YinYang\textYinYang
20344 \let\frownie\textfrownie
20345 \let\smiley\textsmiley
20346 \let\blacksmiley\textblacksmiley
20347 \let\sun\textsun
20348 \let\leftmoon\textleftmoon
20349 \let\rightmoon\textrightmoon
20350 \let\mercury\textmercury
20351 \let\earth\textearth
20352 \let\male\textmale
20353 \let\jupiter\textjupiter
20354 \let\saturn\textsaturn
20355 \let\uranus\texturanus
20356 \let\neptune\textneptune
20357 \let\pluto\textpluto
20358 \let\aries\textaries

20359 \let\taurus\texttaurus
 20360 \let\gemini\textgemini
 20361 \let\cancer\textcancer
 20362 \let\leo\textleo
 20363 \let\virgo\textvirgo
 20364 \let\libra\textlibra
 20365 \let\scorpio\textscorpio
 20366 \let\sagittarius\textsagittarius
 20367 \let\capricornus\textcapricornus
 20368 \let\aquarius\textaquarius
 20369 \let\pisces\textpisces
 20370 \let\quarternote\textquarternote
 20371 \let\twonotes\texttwonotes
 20372 \let\sixteenthnote\textsixteenthnote
 20373 \let\flat\textflat
 20374 \let\natural\textnatural
 20375 \let\sharp\textsharp
 20376 \let\recycle\textrecycle
 20377 \let\Wheelchair\textWheelchair
 20378 \let\Flag\textFlag
 20379 \let\MineSign\textMineSign
 20380 \let\ds\textds
 20381 \let\dsmedical\textdsmedical
 20382 \let\dsjuridical\textdsjuridical
 20383 \let\dschemical\textdschemical
 20384 \let\dsbiological\textdsbiological
 20385 \let\dscommercial\textdscommercial
 20386 \let\manstar\textmanstar
 20387 \let\danger\textdanger
 20388 \let\FemaleFemale\textFemaleFemale
 20389 \let\MaleMale\textMaleMale
 20390 \let\FemaleMale\textFemaleMale
 20391 \let\Hermaphrodite\textHermaphrodite
 20392 \let\Neutral\textNeutral
 20393 \let\hexstar\texthexstar
 20394 \let\SunCloud\textSunCloud
 20395 \let\Rain\textRain
 20396 \let\noway\textnoway
 20397 \let\Mountain\textMountain
 20398 \let\Tent\textTent
 20399 \let\ScissorRight\textScissorRight
 20400 \let\ScissorRightBrokenTop\textScissorRightBrokenTop
 20401 \let\ScissorHollowRight\textScissorHollowRight
 20402 \let\PhoneHandset\textPhoneHandset
 20403 \let\Tape\textTape
 20404 \let\Plane\textPlane
 20405 \let\Envelope\textEnvelope
 20406 \let\Peace\textPeace
 20407 \let\WritingHand\textWritingHand
 20408 \let\PencilRightDown\textPencilRightDown
 20409 \let\PencilRight\textPencilRight
 20410 \let\PencilRightUp\textPencilRightUp
 20411 \let\NibRight\textNibRight
 20412 \let\NibSolidRight\textNibSolidRight

20413 \let\Checkmark\textCheckmark
20414 \let\CheckmarkBold\textCheckmarkBold
20415 \let\XSolid\textXSolid
20416 \let\XSolidBold\textXSolidBold
20417 \let\XSolidBrush\textXSolidBrush
20418 \let\PlusOutline\textPlusOutline
20419 \let\Plus\textPlus
20420 \let\PlusThinCenterOpen\textPlusThinCenterOpen
20421 \let\PlusCenterOpen\textPlusCenterOpen
20422 \let\Cross\textCross
20423 \let\CrossOpenShadow\textCrossOpenShadow
20424 \let\CrossOutline\textCrossOutline
20425 \let\CrossMaltese\textCrossMaltese
20426 \let\DavidStar\textDavidStar
20427 \let\FourAsterisk\textFourAsterisk
20428 \let\JackStar\textJackStar
20429 \let\JackStarBold\textJackStarBold
20430 \let\ClowerTips\textClowerTips
20431 \let\FourStar\textFourStar
20432 \let\FourStarOpen\textFourStarOpen
20433 \let\FiveStarOpenCircled\textFiveStarOpenCircled
20434 \let\FiveStarCenterOpen\textFiveStarCenterOpen
20435 \let\FiveStarOpenDotted\textFiveStarOpenDotted
20436 \let\FiveStarOutline\textFiveStarOutline
20437 \let\FiveStarOutlineHeavy\textFiveStarOutlineHeavy
20438 \let\FiveStarConvex\textFiveStarConvex
20439 \let\FiveStarShadow\textFiveStarShadow
20440 \let\AsteriskBold\textAsteriskBold
20441 \let\AsteriskCenterOpen\textAsteriskCenterOpen
20442 \let\EightStarTaper\textEightStarTaper
20443 \let\EightStarConvex\textEightStarConvex
20444 \let\SixStar\textSixStar
20445 \let\EightStar\textEightStar
20446 \let\EightStarBold\textEightStarBold
20447 \let\TwelveStar\textTwelveStar
20448 \let\SixteenStarLight\textSixteenStarLight
20449 \let\SixFlowerPetalRemoved\textSixFlowerPetalRemoved
20450 \let\SixFlowerOpenCenter\textSixFlowerOpenCenter
20451 \let\Asterisk\textAsterisk
20452 \let\SixFlowerAlternate\textSixFlowerAlternate
20453 \let\FiveFlowerPetal\textFiveFlowerPetal
20454 \let\FiveFlowerOpen\textFiveFlowerOpen
20455 \let\EightFlowerPetal\textEightFlowerPetal
20456 \let\SunshineOpenCircled\textSunshineOpenCircled
20457 \let\SixFlowerAltPetal\textSixFlowerAltPetal
20458 \let\SnowflakeChevron\textSnowflakeChevron
20459 \let\Snowflake\textSnowflake
20460 \let\SnowflakeChevronBold\textSnowflakeChevronBold
20461 \let\Sparkle\textSparkle
20462 \let\SparkleBold\textSparkleBold
20463 \let\AsteriskRoundedEnds\textAsteriskRoundedEnds
20464 \let\EightFlowerPetalRemoved\textEightFlowerPetalRemoved
20465 \let\EightAsterisk\textEightAsterisk
20466 \let\CircleShadow\textCircleShadow

20467 `\let\SquareShadowBottomRight\textSquareShadowBottomRight`
 20468 `\let\SquareTopRight\textSquareTopRight`
 20469 `\let\SquareCastShadowBottomRight\textSquareCastShadowBottomRight`
 20470 `\let\SquareCastShadowTopRight\textSquareCastShadowTopRight`
 20471 `\let\DiamondSolid\textDiamondSolid`
 20472 `\let\RectangleThin\textRectangleThin`
 20473 `\let\Rectangle\textRectangle`
 20474 `\let\RectangleBold\textRectangleBold`
 20475 `\let\perp\textperp`
 20476 `\let\notperp\textnotperp`
 20477 `\let\veedot\textveedot`
 20478 `\let\wedgedot\textwedgedot`
 20479 `\let\leftspoon\textleftspoon`
 20480 `\let\lbrackdbl\textlbrackdbl`
 20481 `\let\rbrackdbl\textrbrackdbl`
 20482 `\let\circlearrowleft\textcirclearrowleft`
 20483 `\let\circlearrowright\textcirclearrowright`
 20484 `\let\longleftarrow\textlongleftarrow`
 20485 `\let\longrightarrow\textlongrightarrow`
 20486 `\let\longleftrightarrow\textlongleftrightarrow`
 20487 `\let\Longleftarrow\textLongleftarrow`
 20488 `\let\Longrightarrow\textLongrightarrow`
 20489 `\let\Longleftrightarrow\textLongleftrightarrow`
 20490 `\let\longmapsto\textlongmapsto`
 20491 `\let\Longmapsfrom\textLongmapsfrom`
 20492 `\let\Longmapsto\textLongmapsto`
 20493 `\let\nwsearrow\textnwsearrow`
 20494 `\let\neswarrow\textneswarrow`
 20495 `\let\lhooknwarrow\textlhooknwarrow`
 20496 `\let\rhooknearrow\textrhooknearrow`
 20497 `\let\lhooksearrow\textlhooksearrow`
 20498 `\let\rhookswarrow\textrhookswarrow`
 20499 `\let\leadsto\textleadsto`
 20500 `\let\rcurvearrowne\textrcurvearrowne`
 20501 `\let\lcurvearrowse\textlcurvearrowse`
 20502 `\let\lcurvearrowsw\textlcurvearrowsw`
 20503 `\let\rcurvearrowse\textrcurvearrowse`
 20504 `\let\lcurvearrowdown\textlcurvearrowdown`
 20505 `\let\rcurvearrowdown\textrcurvearrowdown`
 20506 `\let\rcurvearrowleft\textrcurvearrowleft`
 20507 `\let\rcurvearrowright\textrcurvearrowright`
 20508 `\let\leftrightharpoon\textleftrightharpoon`
 20509 `\let\rightleftharpoon\textrightleftharpoon`
 20510 `\let\updownharpoonrightleft\textupdownharpoonrightleft`
 20511 `\let\updownharpoonleftright\textupdownharpoonleftright`
 20512 `\let\leftleftharpoons\textleftleftharpoons`
 20513 `\let\upupharpoons\textupupharpoons`
 20514 `\let\rightightharpoons\textrightightharpoons`
 20515 `\let\downdownharpoons\textdowndownharpoons`
 20516 `\let\leftbarharpoon\textleftbarharpoon`
 20517 `\let\barleftharpoon\textbarleftharpoon`
 20518 `\let\rightbarharpoon\textrightbarharpoon`
 20519 `\let\barriightharpoon\textbarriightharpoon`
 20520 `\let\updownharpoons\textupdownharpoons`

20521 `\let\downupharpoons\textdownupharpoons`
 20522 `\let\moo\textmoo`
 20523 `\let\llparenthesis\textllparenthesis`
 20524 `\let\rrparenthesis\textrrparenthesis`
 20525 `\let\invdiameter\textinvdiameter`
 20526 `\let\obar\textobar`
 20527 `\let\obslash\textobslash`
 20528 `\let\obot\textobot`
 20529 `\let\NoChemicalCleaning\textNoChemicalCleaning`
 20530 `\let\olessthan\textolessthan`
 20531 `\let\ogreaterthan\textogreaterthan`
 20532 `\let\boxslash\textboxslash`
 20533 `\let\boxbslash\textboxbslash`
 20534 `\let\boxast\textboxast`
 20535 `\let\boxcircle\textboxcircle`
 20536 `\let\boxbox\textboxbox`
 20537 `\let\Valve\textValve`
 20538 `\let\multimapboth\textmultimapboth`
 20539 `\let\shuffle\textshuffle`
 20540 `\let\uplus\textuplus`
 20541 `\let\bigdoublewedge\textbigdoublewedge`
 20542 `\let\bigdoublevee\textbigdoublevee`
 20543 `\let\Join\textJoin`
 20544 `\let\fatsemi\textfatsemi`
 20545 `\let\circlplus\textcirclplus`
 20546 `\let\minusdot\textminusdot`
 20547 `\let\dottimes\textdottimes`
 20548 `\let\dtimes\textdtimes`
 20549 `\let\odiv\textodiv`
 20550 `\let\invneg\textinvneg`
 20551 `\let\sqdoublecap\textsqdoublecap`
 20552 `\let\capdot\textcapdot`
 20553 `\let\sqdoublecup\textsqdoublecup`
 20554 `\let\doublewedge\textdoublewedge`
 20555 `\let\doublevee\textdoublevee`
 20556 `\let\doublebarwedge\textdoublebarwedge`
 20557 `\let\veedoublebar\textveedoublebar`
 20558 `\let\eqdot\texteqdot`
 20559 `\let\neqdot\textneqdot`
 20560 `\let\coloncolonequals\textcoloncolonequals`
 20561 `\let\leqslant\textleqslant`
 20562 `\let\nleqslant\textnleqslant`
 20563 `\let\geqslant\textgeqslant`
 20564 `\let\ngeqslant\textngeqslant`
 20565 `\let\lessapprox\textlessapprox`
 20566 `\let\nlessapprox\textnlessapprox`
 20567 `\let\gtrapprox\textgtrapprox`
 20568 `\let\ngtrapprox\textngtrapprox`
 20569 `\let\lneq\textlneq`
 20570 `\let\gneq\textgneq`
 20571 `\let\lnapprox\textlnapprox`
 20572 `\let\gnapprox\textgnapprox`
 20573 `\let\lesseqqgtr\textlesseqqgtr`
 20574 `\let\gtreqqless\textgtreqqless`

20575 `\let\eqslantless\texteqslantless`
 20576 `\let\eqslantgtr\texteqslantgtr`
 20577 `\let\leftslice\textleftslice`
 20578 `\let\rightslice\textrightslice`
 20579 `\let\preceq\textpreceq`
 20580 `\let\npreceq\textnpreceq`
 20581 `\let\succeq\textsucceq`
 20582 `\let\nsucceq\textnsucceq`
 20583 `\let\precneq\textprecneq`
 20584 `\let\succneq\textsuccneq`
 20585 `\let\preceqq\textpreceqq`
 20586 `\let\npreceqq\textnpreceqq`
 20587 `\let\succeqq\textsucceqq`
 20588 `\let\nsucceqq\textnsucceqq`
 20589 `\let\precneqq\textprecneqq`
 20590 `\let\succneqq\textsuccneqq`
 20591 `\let\precapprox\textprecapprox`
 20592 `\let\nprecapprox\textnprecapprox`
 20593 `\let\succapprox\textsuccapprox`
 20594 `\let\nsuccapprox\textnsuccapprox`
 20595 `\let\precnapprox\textprecnapprox`
 20596 `\let\succnapprox\textsuccnapprox`
 20597 `\let\subseteqq\textsubseteqq`
 20598 `\let\nsubseteqq\textnsubseteqq`
 20599 `\let\supseteqq\textsupseteqq`
 20600 `\let\nsupseteqq\textnsupseteqq`
 20601 `\let\dashV\textdashV`
 20602 `\let\ndashV\textndashV`
 20603 `\let\Dashv\textDashv`
 20604 `\let\ndashv\textndashv`
 20605 `\let\DashV\textDashV`
 20606 `\let\ndashV\textndashV`
 20607 `\let\downmodels\textdownmodels`
 20608 `\let\ndownmodels\textndownmodels`
 20609 `\let\upmodels\textupmodels`
 20610 `\let\nupmodels\textnupmodels`
 20611 `\let\upspoon\textupspoon`
 20612 `\let\interleave\textinterleave`
 20613 `\let\slash\textslash`
 20614 `\let\pentagon\textpentagon`
 20615 `\let\varhexagon\textvarhexagon`
 20616 `\let\jinferior\textjinferior`
 20617 `\let\slashdiv\textslashdiv`
 20618 `\let\fivedots\textfivedots`
 20619 `\let\oo\textoo`
 20620 `\let\GaPa\textGaPa`
 20621 `\let\HaPa\textHaPa`
 20622 `\let\ViPa\textViPa`
 20623 `\let\AcPa\textAcPa`
 20624 `\let\SePa\textSePa`
 20625 `\let\ZwPa\textZwPa`
 20626 `\let\fullnote\textfullnote`
 20627 `\let\halfnote\texthalfnote`
 20628 `\let\Vier\textVier`

20629 \let\Acht\textAcht
20630 \let\Sech\textSech
20631 \let\Zwdr\textZwdr
20632 \let\Mundus\textMundus
20633 \let\Moon\textMoon
20634 \let\ManFace\textManFace
20635 \let\WomanFace\textWomanFace
20636 \let\Fax\textFax
20637 \let\Fire\textFire
20638 \let\Bicycle\textBicycle
20639 \let\Gentsroom\textGentsroom
20640 \let\Ladiesroom\textLadiesroom
20641 \let\ccnc\textccnc
20642 \let\ccsa\textccsa
20643 \let\Info\textInfo
20644 \let\CESign\textCESign
20645 \let\neg\textneg
20646 \let\times\texttimes
20647 \let\div\textdiv
20648 \let\pm\textpm
20649 \let\cdot\textcdot
20650 }% \psdmapshortnames
20651 \newcommand*{\psdaliasnames}{%
20652 \let\epsdice\HyPsd@DieFace
20653 \let\fcdice\HyPsd@DieFace
20654 \let\MoonPha\HyPsd@MoonPha
20655 \let\mathdollar\textdollar
20656 \let\EyesDollar\textdollar
20657 \let\binampersand\textampersand
20658 \let\with\textampersand
20659 \let\mathunderscore\textunderscore
20660 \let\textvertline\textbar
20661 \let\mathsterling\textsterling
20662 \let\pounds\textsterling
20663 \let\brokenvert\textbrokenbar
20664 \let\mathsection\textsection
20665 \let\S\textsection
20666 \let\mathparagraph\textparagraph
20667 \let\MultiplicationDot\textperiodcentered
20668 \let\Squaredot\textperiodcentered
20669 \let\vartimes\textmultiply
20670 \let\MVMultiplication\textmultiply
20671 \let\eth\dh
20672 \let\crossd\textcrd
20673 \let\textbard\textcrd
20674 \let\bard\textcrd
20675 \let\textcrh\texthbar
20676 \let\crossh\texthbar
20677 \let\planck\texthbar
20678 \let\eng\ng
20679 \let\engma\ng
20680 \let\crossb\textcrb
20681 \let\textbarb\textcrb
20682 \let\barb\textcrb

20683 \let\Florin\textflorin
20684 \let\hv\textvlig
20685 \let\hausak\texthtk
20686 \let\crossnilambda\textcrlambda
20687 \let\barlambda\textcrlambda
20688 \let\lambdabar\textcrlambda
20689 \let\lambdaslash\textcrlambda
20690 \let\textnrleg\textPUnrleg
20691 \let\textpipevar\textpipe
20692 \let\textdoublepipevar\textdoublepipe
20693 \let\textdoublebarpipevar\textdoublebarpipe
20694 \let\textcrg\textgslash
20695 \let\textdblig\textPUdblig
20696 \let\textqplig\textPUqplig
20697 \let\textcentoldstyle\textslashc
20698 \let\textbarc\textslashc
20699 \let\inva\textturna
20700 \let\vara\textscripta
20701 \let\invscripta\textturnscripta
20702 \let\rotvara\textturnscripta
20703 \let\hookb\texthtb
20704 \let\hausab\texthtb
20705 \let\varopeno\textopeno
20706 \let\curlyc\textctc
20707 \let\taild\textrtaild
20708 \let\hookd\texthtd
20709 \let\hausad\texthtd
20710 \let\er\textrhookschwa
20711 \let\epsi\textniepsilon
20712 \let\hookrepsilon\textrhookrepsilon
20713 \let\closedrepsilon\textcloserepsilon
20714 \let\barj\textbardotlessj
20715 \let\hookg\texthtg
20716 \let\varg\textscriptg
20717 \let\vod\textipagamma
20718 \let\invh\textturnh
20719 \let\udesc\textturnh
20720 \let\hookh\texthth
20721 \let\voicedh\texthth
20722 \let\hookheng\texththeng
20723 \let\ibar\textbari
20724 \let\vari\textniota
20725 \let\tildel\texttilde
20726 \let\latfric\textbeltl
20727 \let\taill\textrtail
20728 \let\lz\textlyoghlig
20729 \let\invm\textturnm
20730 \let\rotm\textturnm
20731 \let\legm\textturnmrlleg
20732 \let\labdentalnas\textltailm
20733 \let\emgma\textltailm
20734 \let\nj\textltailn
20735 \let\enya\textltailn
20736 \let\tailn\textrtailn

20737 \let\closedniomega\textcloseomega
20738 \let\varomega\textcloseomega
20739 \let\invr\textturnr
20740 \let\rotr\textturnr
20741 \let\invlegr\textturnlonglegr
20742 \let\tailinvr\textturnrrtail
20743 \let\legr\textlonglegr
20744 \let\tailr\textrtailr
20745 \let\flapr\textfishhookr
20746 \let\flap\textfishhookr
20747 \let\tails\textrtails
20748 \let\curlyesh\textctesh
20749 \let\clickt\textturnt
20750 \let\tailt\textrtailt
20751 \let\ubar\textbaru
20752 \let\rotOmega\textniupsilon
20753 \let\invv\textturnv
20754 \let\pwedge\textturnv
20755 \let\invw\textturnw
20756 \let\rotw\textturnw
20757 \let\invy\textturny
20758 \let\roty\textturny
20759 \let\tailz\textrtailz
20760 \let\curlyz\textctz
20761 \let\curlyyogh\textctyogh
20762 \let\ejective\textglotstop
20763 \let\glottal\textglotstop
20764 \let\reject\textrevglotstop
20765 \let\clickc\textstretchc
20766 \let\textstretchcvar\textstretchc
20767 \let\clickb\textbullseye
20768 \let\textObullseye\textbullseye
20769 \let\textctjvar\textctj
20770 \let\textturnsck\textturnk
20771 \let\dz\textdzlig
20772 \let\tesh\textteshlig
20773 \let\digamma\textdigammagreek
20774 \let\hardsign\cyrrhdsn
20775 \let\softsign\cyrsftsn
20776 \let\hebsin\hebshin
20777 \let\textsck\textPUscck
20778 \let\textscm\textPUscm
20779 \let\textscp\textPUscp
20780 \let\textrevscr\textPUrevscr
20781 \let\textrhooca\textPURhooka
20782 \let\textrhooke\textPURhooke
20783 \let\textrhookepsilon\textPURhookepsilon
20784 \let\textrhookopeno\textPURhookopeno
20785 \let\textdoublevertline\textbardbl
20786 \let\dag\textdagger
20787 \let\ddagger\textdaggerdbl
20788 \let\ddag\textdaggerdbl
20789 \let\mathellipsis\textellipsis
20790 \let\EurDig\texteuro

20791 $\backslash\text{let}\EURdig\text{teuro}$
20792 $\backslash\text{let}\EurHv\text{teuro}$
20793 $\backslash\text{let}\EURhv\text{teuro}$
20794 $\backslash\text{let}\EurCr\text{teuro}$
20795 $\backslash\text{let}\EURcr\text{teuro}$
20796 $\backslash\text{let}\EurTm\text{teuro}$
20797 $\backslash\text{let}\EURtm\text{teuro}$
20798 $\backslash\text{let}\Eur\text{teuro}$
20799 $\backslash\text{let}\Denarius\text{Deleatur}$
20800 $\backslash\text{let}\agemO\text{tmho}$
20801 $\backslash\text{let}\EstimatedSign\text{testimated}$
20802 $\backslash\text{let}\Ecommerce\text{testimated}$
20803 $\backslash\text{let}\bindnasrepma\text{textinvamp}$
20804 $\backslash\text{let}\parr\text{textinvamp}$
20805 $\backslash\text{let}\MVRightArrow\text{textrightarrow}$
20806 $\backslash\text{let}\MVRightarrow\text{textrightarrow}$
20807 $\backslash\text{let}\MVArrowDown\text{textdownarrow}$
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20813 $\backslash\text{let}\dashedleftarrow\text{texdashleftarrow}$
20814 $\backslash\text{let}\dashedrightarrow\text{texdashrightarrow}$
20815 $\backslash\text{let}\varnothing\text{textemptyset}$
20816 $\backslash\text{let}\owns\text{tni}$
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20840 $\backslash\text{let}\notequiv\text{textnequiv}$
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20842 $\backslash\text{let}\LargerOrEqual\text{textgeq}$
20843 $\backslash\text{let}\apprle\text{textlesssim}$
20844 $\backslash\text{let}\apprge\text{textgtrsim}$

20845 `\let\varoplus\textoplus`
20846 `\let\varominus\textominus`
20847 `\let\varotimes\textotimes`
20848 `\let\varoslash\textoslash`
20849 `\let\varodot\textodot`
20850 `\let\ocirc\textcircledcirc`
20851 `\let\varocircle\textcircledcirc`
20852 `\let\varoast\textcircledast`
20853 `\let\oasterisk\textcircledast`
20854 `\let\rightvdash\textvdash`
20855 `\let\leftvdash\textdashv`
20856 `\let\leftvdash\textdashv`
20857 `\let\downvdash\texttop`
20858 `\let\upvdash\textbot`
20859 `\let\nperp\textnupvdash`
20860 `\let\models\textvDash`
20861 `\let\rightmodels\textvDash`
20862 `\let\rightVdash\textVdash`
20863 `\let\rightModels\textVDash`
20864 `\let\rightvdash\textnvdash`
20865 `\let\rightmodels\textnvDash`
20866 `\let\models\textnvDash`
20867 `\let\rightVdash\textnVdash`
20868 `\let\rightModels\textnVDash`
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20870 `\let\gtrclosed\textrhd`
20871 `\let\leqclosed\textunlhd`
20872 `\let\trianglelefteq\textunlhd`
20873 `\let\geqclosed\textunrhd`
20874 `\let\trianglerighteq\textunrhd`
20875 `\let\Bowtie\textbowtie`
20876 `\let\varcurlyvee\textcurlyvee`
20877 `\let\varcurlywedge\textcurlywedge`
20878 `\let\doublecap\textCap`
20879 `\let\doublecup\textCup`
20880 `\let\varsubsetneq\textsubsetneq`
20881 `\let\varsupsetneq\textsupsetneq`
20882 `\let\lessclosed\texttriangleleft`
20883 `\let\gtrclosed\texttriangleright`
20884 `\let\Clocklogo\textclock`
20885 `\let\ClockLogo\textclock`
20886 `\let\baro\textstmaryrdbaro`
20887 `\let\varparallelinv\textbbslash`
20888 `\let\CleaningA\textCircledA`
20889 `\let\Kutline\textCuttingLine`
20890 `\let\CutLine\textCuttingLine`
20891 `\let\Cutline\textCuttingLine`
20892 `\let\MoveUp\textUParrow`
20893 `\let\APLup\textbigtriangleup`
20894 `\let\Bleech\textbigtriangleup`
20895 `\let\MoveDown\textDOWNarrow`
20896 `\let\APLdown\textbigtriangledown`
20897 `\let\Diamond\textdiamond`
20898 `\let\varbigcirc\textbigcircle`

20899 \let\Telefon\textPhone
 20900 \let\Box\textboxempty
 20901 \let\CheckedBox\textCheckedbox
 20902 \let\XBox\textCrossedbox
 20903 \let\CrossedBox\textCrossedbox
 20904 \let\rightpointleft\textHandLeft
 20905 \let\leftpointright\textHandRight
 20906 \let\PointingHand\textHandRight
 20907 \let\Pointinghand\textHandRight
 20908 \let\Radiation\textRadioactivity
 20909 \let\Yinyang\textYinYang
 20910 \let\YingYang\textYinYang
 20911 \let\Yingyang\textYinYang
 20912 \let\Frowny\textfrownie
 20913 \let\Smiley\textsmiley
 20914 \let\Sun\textsun
 20915 \let\Mercury\textmercury
 20916 \let\textfemale\textPUfemale
 20917 \let\female\textPUfemale
 20918 \let\venus\textPUfemale
 20919 \let\Venus\textPUfemale
 20920 \let\Female\textPUfemale
 20921 \let\Earth\textearth
 20922 \let\mars\textmale
 20923 \let\Mars\textmale
 20924 \let\Male\textmale
 20925 \let\Jupiter\textjupiter
 20926 \let\Saturn\textsaturn
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 20929 \let\Pluto\textpluto
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 20931 \let\Taurus\texttaurus
 20932 \let\Gemini\textgemini
 20933 \let\Cancer\textcancer
 20934 \let\Leo\textleo
 20935 \let\Virgo\textvirgo
 20936 \let\Libra\textlibra
 20937 \let\Scorpio\textscorpio
 20938 \let\Sagittarius\textsagittarius
 20939 \let\Capricorn\textcapricornus
 20940 \let\Aquarius\textaquarius
 20941 \let\Pisces\textpisces
 20942 \let\spadesuit\textspadesuitblack
 20943 \let\Heart\textheartsuitwhite
 20944 \let\heartsuit\textheartsuitwhite
 20945 \let\diamondsuit\textdiamondsuitwhite
 20946 \let\clubsuit\textclubsuitblack
 20947 \let\eighthnote\textmusicalnote
 20948 \let\Recycling\textrecycle
 20949 \let\VarFlag\textFlag
 20950 \let\textxswup\textdsmilitary
 20951 \let\textuncrfemale\textPUuncrfemale
 20952 \let\Football\textSoccerBall

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20953 \let\CutLeft\textScissorRightBrokenBottom
20954 \let\Cutright\textScissorRightBrokenBottom
20955 \let\RightScissors\textScissorRight
20956 \let\Leftscissors\textScissorRight
20957 \let\Letter\textEnvelope
20958 \let\Writinghand\textWritingHand
20959 \let\checkmark\textCheckmark
20960 \let\daavidstar\textDavidStar
20961 \let\llbracket\textlbrackdbl
20962 \let\rrbracket\textrrbrackdbl
20963 \let\RightTorque\textlcurvearrowdown
20964 \let\Righttorque\textlcurvearrowdown
20965 \let\LeftTorque\textrcurvearrowdown
20966 \let\Lefttorque\textrcurvearrowdown
20967 \let\textvarobar\textobar
20968 \let\circledbslash\textobslash
20969 \let\obackslash\textobslash
20970 \let\varobslash\textobslash
20971 \let\odplus\textobot
20972 \let\varolessthan\textolessthan
20973 \let\varogreaterthan\textogreaterthan
20974 \let\divdot\textminusdot
20975 \let\doublesqcap\textsqdoublecap
20976 \let\doublesqcup\textsqdoublecup
20977 \let\merge\textdoublevee
20978 \let\leftVdash\textdashV
20979 \let\nleftVdash\textndashV
20980 \let\leftmodels\textDashv
20981 \let\nleftmodels\textnDashv
20982 \let\leftModels\textDashV
20983 \let\nleftModels\textnDashV
20984 \let\varparallel\textsslash
20985 \let\textheng\textPUheng
20986 \let\textlhookfour\textPUhookfour
20987 \let\textscf\textPUscf
20988 \let\texttaolig\textPUaolig
20989 \let\Ganz\textfullnote
20990 \let\Halb\texthalfnote
20991 \let\Womanface\textWomanFace
20992 \let\Faxmachine\textFax
20993 \let\CEsign\textCESign
20994 }% \psdaliasnames
20995 </psdextra>

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48 End of file hyccheck.tex

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20996 (*check)
20997 \typeout{}
20998 \begin{document}
20999 \end{document}
21000 </check>

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