

Hypertext marks in L^AT_EX

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

2024-07-10 v7.01j

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

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)

```

232 \RequirePackage{iftex}[2019/10/24]
233 \RequirePackage{keyval}[1997/11/10]
234 \RequirePackage{kvsetkeys}[2007/09/29]
235 \RequirePackage{kvdefinekeys}[2011/04/07]
236 \RequirePackage{pdfescape}[2007/11/11]
237 \RequirePackage{hycolor}
238 \RequirePackage{nameref}[2012/07/28]
239 \RequirePackage{etoolbox}
240 \RequirePackage{stringenc}[2009/12/15]%
241 \def\Hy@Error{\PackageError{hyperref}}
242 \def\Hy@Warning{\PackageWarning{hyperref}}

```

```

243 \def\Hy@WarningNoLine{\PackageWarningNoLine{hyperref}}
244 \def\Hy@Info{\PackageInfo{hyperref}}
245 \def\Hy@InfoNoLine#1{\PackageInfo{hyperref}{#1\@gobble}}
246 \def\Hy@Message#1{%
247   \GenericWarning{%
248     (hyperref)\@spaces\@spaces\@spaces\@spaces
249   }{%
250     Package hyperref Message: #1\@gobble
251   }%
252 }

```

4.2 Version check

\Hy@VersionChecked

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

\Hy@VersionCheck

```

254 \def\Hy@VersionCheck#1{%
255   \begingroup
256   \@ifundefined{ver@hyperref.sty}{%
257     \Hy@Error{%
258       This should not happen!\MessageBreak
259       Missing hyperref version%
260     }\@ehd
261   }{%
262     \@ifundefined{ver@#1}{%
263       \Hy@Error{%
264         This should not happen!\MessageBreak
265         Missing version of `#1'%
266       }\@ehd
267     }{%
268       \def\x##1##2##3{%
269         \expandafter\expandafter\expandafter\Hy@@VersionCheck
270         \expandafter\expandafter\expandafter##2%
271         \csname ver@##3\endcsname##1##1\@nil
272       }%
273       \x{ }\y{hyperref.sty}%
274       \x{ }\z{#1}%
275       \ifx\y\z
276       \else
277         \edef\a{#1}%
278         \edef\b{\HyOpt@CustomDriver.def}%
279         \ifx\a\b
280           \Hy@WarningNoLine{%
281             Version mismatch (custom driver)!\MessageBreak
282             * \y: hyperref.sty\MessageBreak
283             * \z: \a
284           }%
285         \else
286           \Hy@Error{%
287             Version mismatch!\MessageBreak
288             * \y: hyperref.sty\MessageBreak
289             * \z: \a
290           }\@ehd

```

```

291     \fi
292     \fi
293   }%
294 }%
295 \endgroup
296 \chardef\Hy@VersionChecked=1 %
297 }

```

\Hy@@VersionCheck

```

298 \def\Hy@@VersionCheck #1#2 #3 #4\@nil{%
299 \def#1{#2 #3}%
300 }

```

4.3 Checks with regular expressions

```

301 \edef\Hy@leftbracechar{\string{ }
302 \edef\Hy@rightbracechar{\string} }
303 \@ifundefined{pdfmatch}{%
304 \def\Hy@Match#1#2#3#4#5{%
305 }{%
306 \def\Hy@Match#1#2#3{%
307 \begingroup
308 \edef\^{\@backslashchar\string^}%
309 \edef\.\{\@backslashchar.}%
310 \edef\[\{\@backslashchar[}%
311 \edef\${\@backslashchar$}%
312 \edef\(\{\@backslashchar(%
313 \edef\)\{\@backslashchar)%}
314 \edef\|{\@backslashchar|}%
315 \edef\*{\@backslashchar*}%
316 \edef\+{\@backslashchar+}%
317 \edef\?{\@backslashchar?}%
318 \edef\{\{\@backslashchar\Hy@leftbracechar}%
319 \edef\}\{\Hy@rightbracechar}%
320 \edef\\{\@backslashchar\@backslashchar}%
321 \let\ \Hy@space
322 \ifcase\pdfmatch#2{#3}{#1} %
323 \endgroup
324 \expandafter\@secondoftwo
325 \or
326 \endgroup
327 \expandafter\@firstoftwo
328 \else
329 \Hy@Warning{%
330 Internal error: Wrong pattern!\MessageBreak
331 --> #3 <--\MessageBreak
332 Pattern check ignored%
333 }%
334 \endgroup
335 \expandafter\@firstoftwo
336 \fi
337 }%
338 }

```

4.4 Compatibility with format dumps

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

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

```
339 \@ifundefined{AfterBeginDocument}{%
340   \def\AfterBeginDocument{\AtBeginDocument}%
341 }{}%
```

`\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.

```
342 \ExplSyntaxOn
343 \let\Hy@LocalAppendToMacro\tl_put_right:Nn
344 \let\Hy@GlobalAppendToMacro\tl_gput_right:Nn
345 \let\Hy@ifempty\tl_if_empty:nTF
346 \ExplSyntaxOff
347 \def\Hy@AtBeginDocument{%
348   \Hy@LocalAppendToMacro\Hy@AtBeginDocumentHook
349 }
```

`\Hy@AtEndOfPackage`

```
350 \def\Hy@AtEndOfPackage{%
351   \Hy@LocalAppendToMacro\Hy@AtEndOfPackageHook
352 }
```

`\Hy@AtBeginDocumentHook`

```
353 \let\Hy@AtBeginDocumentHook\@empty
```

`\Hy@AtEndOfPackageHook`

```
354 \let\Hy@AtEndOfPackageHook\@empty
```

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

```
355 \AtEndOfPackage{%
356   \Hy@AtEndOfPackageHook
357   \let\Hy@AtEndOfPackageHook\@undefined
358   \AfterBeginDocument{%
359     \Hy@AtBeginDocumentHook}%
360   \let\Hy@AtBeginDocumentHook\@undefined
361 }%
362 }
```

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

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

4.5 Switches

```
364 \newif\ifHy@stoppedearly
365 \newif\ifHy@typexml
366 \newif\ifHy@activeanchor
367 \newif\ifHy@backref
368 \newif\ifHy@bookmarks
369 \newif\ifHy@bookmarksnumbered
370 \newif\ifHy@bookmarksopen
371 \newif\ifHy@breaklinks
372 \newif\ifHy@pdfcenterwindow
373 \newif\ifHy@CJKbookmarks
374 \newif\ifHy@colorlinks
375 \newif\ifHy@destlabel
376 \newif\ifHy@draft
377 \let\Hy@finaltrue\Hy@draftfalse
378 \let\Hy@finalfalse\Hy@drafttrue
379 \newif\ifHy@pdfescapeform
380 \newif\ifHy@hyperfigures
381 \newif\ifHy@pdffitwindow
382 \newif\ifHy@frenchlinks
383 \newif\ifHy@hyperfootnotes
384 \newif\ifHy@hyperindex
385 \newif\ifHy@hypertextnames
386 \newif\ifHy@implicit
387 \newif\ifHy@linktopage
388 \newif\ifHy@localanchorname
389 \newif\ifHy@pdfmenubar
390 \newif\ifHy@naturalnames
391 \newif\ifHy@nesting
392 \newif\ifHy@pdfnewwindowset
393 \newif\ifHy@pdfnewwindow
394 \newif\ifHy@ocgcolorlinks
395 \newif\ifHy@pageanchor
396 \newif\ifHy@pdfpagelabels
397 \newif\ifHy@pdfstring
398 \newif\ifHy@plainpages
399 \newif\ifHy@psize
400 \newif\ifHy@raiselinks
401 \newif\ifHy@seminarslides
402 \newif\ifHy@setpagesize
403 \newif\ifHy@texht
404 \newif\ifHy@psdextra
405 \newif\ifHy@pdftoolbar
406 \newif\ifHy@unicode
407 \newif\ifHy@pdfusetitle
408 \newif\ifHy@verbose
409 \let\Hy@debugtrue\Hy@verbosetrue
410 \let\Hy@debugfalse\Hy@verbosefalse
411 \newif\ifHy@pdfwindowui
412 \newif\ifHy@pdfdisplaydoctitle
413 \newif\ifHy@pdfa
```

Defaults for the switches are now set.

```
414 \Hy@backreffalse
```



```

415 \Hy@bookmarksnumberedfalse
416 \Hy@bookmarksopenfalse
417 \Hy@bookmarkstrue
418 \Hy@breaklinksfalse
419 \Hy@pdfcenterwindowfalse
420 \Hy@CJKbookmarksfalse
421 \Hy@destlabelfalse
422 \Hy@pdfescapeformfalse
423 \Hy@hyperfiguresfalse
424 \Hy@pdffitwindowfalse
425 \Hy@hyperfootnotesttrue
426 \Hy@hyperindextrue
427 \Hy@hypertextnamestrue
428 \Hy@implicittrue
429 \Hy@linktocpagefalse
430 \Hy@localanchornamefalse
431 \Hy@pdfmenubartrue
432 \Hy@naturalnamesfalse
433 \Hy@nestingfalse
434 \Hy@pdfnewwindowsetfalse
435 \Hy@pdfnewwindowfalse
436 \Hy@pageanchortrue
437 \Hy@pdfpagelabelstrue
438 \Hy@pdfstringfalse
439 \Hy@plainpagesfalse
440 \Hy@raiselinksfalse
441 \Hy@setpagesizetrue
442 \Hy@texhtfalse
443 \Hy@psdextrafalse
444 \Hy@pdftoolbartrue
445 \Hy@unicodetrue
446 \ifx\kanjiskip\@undefined
447 \else
448 \ifx\forcecjktoken\@undefined
449 \Hy@unicodefalse
450 \fi
451 \fi
452 \Hy@pdfusetitlefalse
453 \Hy@verbosefalse
454 \Hy@pdfwindowuitrue
455 \Hy@pdfdisplaydoctitlefalse
456 \Hy@pdfafalse

```

5 Common help macros

\Hy@StepCount

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

\Hy@GlobalStepCount

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

```
459 \newdimen\@linkdim
```

```
460 \let\Hy@driver\@empty
```

```
461 \let\MaybeStopEarly\relax
```

```

462 \newcount\Hy@linkcounter
463 \newcount\Hy@pagecounter
464 \Hy@linkcounter0
465 \Hy@pagecounter0
466 \def\Hy@space{ }

```

5.1 Macros for recursions

```

467 \let\Hy@ReturnEnd\@empty
468 \long\def\Hy@ReturnAfterFi#1\fi{\fi#1}
469 \long\def\Hy@ReturnAfterElseFi#1\else#2\fi{\fi#1}
470 \long\def\Hy@ReturnAfterFiFiEnd#1\fi#2\Hy@ReturnEnd{\fi\fi#1}
471 \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.

```

472 \def\Hy@safe@activestru{\csname @safe@activestru\endcsname}
473 \def\Hy@safe@activesfal{\csname @safe@activesfal\endcsname}

```

5.3 Coordinate transformations

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

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

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

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

Example (TeX):

```

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

```

`\hypercalcbp`

```

474 \def\hypercalcbp#1{%
475   \strip@pt\dimexpr 0.99626401\dimexpr(#1)\relax\relax
476 }%
477 \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:
 - `\\` the backslash itself
 - `\), \()` unbalanced parentheses
 - `\n, \r, \t, \b, \f` special white space escape sequences
 - `\ddd` octal character code `ddd`
- 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 T_EX 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`
`owercaseUnsupportedInPdfStrings`

```
478 \providecommand*\BCPdata[1]{}
479 \ExplSyntaxOn
480 \@ifundefined{text_uppercase:n}{}
481 {
482   \def\MakeUppercaseUnsupportedInPdfStrings#1
483     {\use:e
484       {\exp_args:Ne
485         \text_uppercase:nn{\BCPdata { casing }}{#1}
486       }
487     }
```

```

488 \def\MakeLowercaseUnsupportedInPdfStrings#1
489     {\use:e
490      {\exp_args:Ne
491       \text_lowercase:nn{\BCPdata { casing }}{#1}
492      }
493     }
494 }
495 \ExplSyntaxOff

```

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

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

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

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

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

```
497 \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.

```
498 \escapechar`\\%
```

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

```

499 \edef\0{\string\0}%
500 \edef\1{\string\1}%
501 \edef\2{\string\2}%
502 \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.

```

503 \ifHy@unicode
504 \edef\8{\string\8}%
505 \edef\9{\string\9}%
506 \fontencoding{PU}%
507 \HyPsd@UTFviii
508 \def\ifpdfstringunicode###1##2{##1}%
509 \else
510 \fontencoding{PD1}%
511 \def\ifpdfstringunicode###1##2{##2}%
512 \fi
513 \let\utf@viii@undeferr\HyPsd@utf@viii@undeferr
514 \enc@update

```

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

```

515 \@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).

```

516 \let\@inmathwarn\HyPsd@inmathwarn

```

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

```

517 \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.

```

518 \let\{\textbraceleft
519 \let\}\textbraceright
520 \let\\\textbackslash
521 \let#\textnumbersign
522 \let$\textdollar
523 \let%\textpercent
524 \let&\textampersand
525 % \let~\textasciitilde
526 \let\_ \textunderscore

```

```

527 \let\P\textparagraph
528 \let\ldots\textellipsis
529 \let\dots\textellipsis
530 \@ifundefined{textEncodingNoboundary}%
531   {}{\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.

```

532 \def\\\{\pdfstringdefWarn\\}%
533 \def\newline{\pdfstringdefWarn\newline}%

```

Logos. Because the box shifting used in the \TeX logo does not work while writing to a file, the standard \TeX logos are redefined. We use the direct PU code to avoid problems if `\textepsilon` is not defined.

```

534 \def\TeX{\TeX}%
535 \def\LaTeX{La\TeX}%
536 \def\LaTeXe{%
537   \LaTeX2%
538   \ifHy@unicode\83\265\else e\fi
539 }%
540 \def\eTeX{%
541   \ifHy@unicode\83\265\else e\fi
542   -\TeX%
543 }%
544 \def\SliTeX{Sli\TeX}%
545 \def\MF{Metafont}%
546 \def\MP{Metapost}%

```

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

```

547 \let\fontencoding\@gobble
548 \let\fontfamily\@gobble
549 \let\fontseries\@gobble
550 \let\fontshape\@gobble
551 \let\fontsize\@gobbletwo
552 \let\selectfont\@empty
553 \let\usefont\@gobblefour
554 \let\emph\@firstofone
555 \let\textnormal\@firstofone
556 \let\textrm\@firstofone
557 \let\textsf\@firstofone
558 \let\texttt\@firstofone

```

```

559 \let\textbf\@firstofone
560 \let\textmd\@firstofone
561 \let\textit\@firstofone
562 \let\textsc\@firstofone
563 \let\textsl\@firstofone
564 \let\textup\@firstofone
565 \let\normalfont\@empty
566 \let\rmfamily\@empty
567 \let\sffamily\@empty
568 \let\ttfamily\@empty
569 \let\bfseries\@empty
570 \let\mdseries\@empty
571 \let\itshape\@empty
572 \let\scshape\@empty
573 \let\slshape\@empty
574 \let\upshape\@empty
575 \let\em\@empty
576 \let\rm\@empty
577 \let\Huge\@empty
578 \let\LARGE\@empty
579 \let\Large\@empty
580 \let\footnotesize\@empty
581 \let\huge\@empty
582 \let\large\@empty
583 \let\normalsize\@empty
584 \let\scriptsize\@empty
585 \let\small\@empty
586 \let\tiny\@empty
587 \let\mathversion\@gobble
588 \let\phantom\@gobble
589 \let\vphantom\@gobble
590 \let\hphantom\@gobble

```

Package pifont.

```

591 \let\ding\HyPsd@ding
592 \let\Cube\HyPsd@DieFace
593 %* \HyPsd@DieFace -> \epsdice (epsdice)
594 %* \HyPsd@DieFace -> \fcdice (hhcount)

```

Environments.

```

595 \def\begin##1{\csname##1\endcsname}%
596 \def\end##1{\csname end##1\endcsname}%

```

Package color.

```

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

```

Upper- and lowercase.

```

598 \def\MakeUppercase{\MakeUppercaseUnsupportedInPdfStrings}%
599 \def\MakeLowercase{\MakeLowercaseUnsupportedInPdfStrings}%

```

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

```
600 \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.

```
601 \ifHy@psdextra
602 \ifHy@unicode
603 \csname psdmapshortnames\endcsname
604 \csname psdaliasnames\endcsname
605 \fi
606 \fi
```

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

```
607 \let\foreignlanguage\@secondoftwo
608 \let\textlatin\@firstofone
609 \@ifundefined{language@group}{}{%
610 \let\bbl@info\@gobble
611 \csname HyPsd@babel@\language@group\endcsname
612 }%
```

```
613 \let\@safe@activetrue\relax
614 \let\@safe@activesfalse\relax
```

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

```
615 \let\cyr\relax
```

Package german.

```
616 \let\glqq\textglqq
617 \let\grqq\textgrqq
618 \let\glq\textglq
619 \let\grq\textgrq
620 \let\flqq\textflqq
621 \let\frqq\textfrqq
622 \let\flq\textflq
623 \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}
```

```
624 \let\if@mid@expandable\@firstoftwo
```

AMS classes.

```
625 \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.

```
626 \let\hspace\HyPsd@hspace
```

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

```
627 \let\label\@gobble
628 \let\index\@gobble
629 \let\glossary\@gobble
630 \let\href\HyPsd@href
631 \let\@mkboth\@gobbletwo
```

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

```
632 \let\ref\HyPsd@ref
633 \let\pageref\HyPsd@pageref
634 \let\nameref\HyPsd@nameref
635 \let\autoref\HyPsd@autoref
```

Miscellaneous commands.

```
636 \let\leavevmode\@empty
637 \let\mbox\@empty
```

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

```
638 \def\halign{\pdfstringdefWarn\halign\@gobble}%
639 \let\ignorespaces\HyPsd@ignorespaces
640 \let\Hy@SectionAnchorHref\@gobble
641 \let\ensuremath\@firstofone
```

Patch for `cjk` bookmarks.

```
642 \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@tostopt`, and `\@ifnextchar` for `\renewcommand`).

```
643 \Hy@pdfstringtrue
644 \pdfstringdefPreHook
```

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

```
645 \HyPsd@LetUnexpandableSpace\space
646 \HyPsd@LetUnexpandableSpace\ %
647 \HyPsd@LetUnexpandableSpace-%
648 \HyPsd@LetUnexpandableSpace\nobreakspace
```

Package xspace.

```
649 \ifundefined{xspace}{%
650 \let\xspace\HyPsd@ITALCORR
651 }{%
652 \let\xspace\HyPsd@XSPACE
653 }%
654 \let\HyPsd@ITALCORR
655 \let\bgroup\%
656 \let\egroup\%
```

Redefinitions of miscellaneous commands. Hyphenation does not make sense.

```
657 \let\discretionary@gobbletwo
```

\@ifstar is defined in L^AT_EX 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:

```
658 \def\@ifnextchar{\HyPsd@ifnextchar\@ifnextchar}%
659 \def\kernel@ifnextchar{\HyPsd@ifnextchar\kernel@ifnextchar}%
660 \def\new@ifnextchar{\HyPsd@ifnextchar\new@ifnextchar}%
661 \let\@protected@testopt\HyPsd@protected@testopt
```

Support for package 'xargs':

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

6.2.2 Expansion

There are several possibilities to expand tokens within L^AT_EX:

\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 T_EX 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. T_EX 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 L^AT_EX'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 L^AT_EX 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 T_EX, so these tokens are viewed verbatim. So this version detects them now, and removes them with a descriptive warning for the user. As additional features xspace support is possible and grouping characters can be used without problems, because they are removed silently.

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

```
663 \begingroup
664 \let\GenericError@gobblefour
665 \let\GenericWarning@gobbletwo
666 \let\GenericInfo@gobbletwo
```

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

```
667 \ifx\nofrenchguillemets\@undefined
668 \else
669 \nofrenchguillemets
670 \fi
```

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

```
671 \let\Hy@temp\xdef
672 \let\def\HyPsd@DefCommand
673 \let\gdef\HyPsd@DefCommand
674 \let\edef\HyPsd@DefCommand
675 \let\xdef\HyPsd@DefCommand
676 \let\futurelet\HyPsd@LetCommand
677 \let\let\HyPsd@LetCommand
678 \Hy@temp#1{#2}%
679 \endgroup
```

6.2.3 Postprocessing

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

```
680 \ifx#1\@empty
681 \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 litte more complicate:

- \TeX does not accept a space as an undelimited argument, it cancels space tokens while looking for an undelimited argument. Therefore we must protect the spaces now.
- An argument can be a single token or a group of many tokens. And within curly braces tokens aren't 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.

```
682 \HyPsd@ProtectSpaces#1%
683 \let\HyPsd@String\@empty
684 \expandafter\HyPsd@RemoveBraces\expandafter{#1|}%
685 \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 $\backslash\text{HyPsd@CheckCatcodes}$ the command $\backslash\text{HyPsd@RemoveMask}$ is reused to remove the group protection character |. This character is needed to ensure that the string at least consists of one token if $\backslash\text{HyPsd@CheckCatcodes}$ is called.

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

```
686 \let\HyPsd@SPACEOPTI\relax
687 {%
688 \let\HyPsd@String\@empty
689 \expandafter\HyPsd@CheckCatcodes#1\HyPsd@End
690 \global\let#1\HyPsd@String
691 }%
692 \expandafter\HyPsd@RemoveMask\expandafter
693 |\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.

```
694 \expandafter
695 \HyPsd@Subst\expandafter{\HyPsd@GLYPHERR}{\relax}#1%
696 \let\HyPsd@String\@empty
697 \expandafter\HyPsd@GlyphProcess#1\relax\@empty
698 \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.

```
699 \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.

```
700 \ifHy@unicode
701 \expandafter\HyPsd@StringSubst\csname 80\040\endcsname
702 \HyPsd@SPACEOPTI#1%
703 \edef\Hy@temp@A{\HyPsd@SPACEOPTI\HyPsd@SPACEOPTI\80\273}%
704 \expandafter\HyPsd@Subst\expandafter{\Hy@temp@A}%
705 {\HyPsd@SPACEOPTI\80\273}#1%
706 \else
707 \HyPsd@StringSubst{\040}\HyPsd@SPACEOPTI#1%
708 \expandafter\HyPsd@Subst\expandafter{%
709 \expandafter\HyPsd@SPACEOPTI\expandafter\HyPsd@SPACEOPTI
710 \string\273}\HyPsd@SPACEOPTI\273}#1%
711 \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.

```
712 \ifHy@unicode
713 \HyPsd@StringSubst{\)}{\80\051}#1%
714 \HyPsd@Subst){\80\051}#1%
```

```

715     \let\HyPsd@empty\relax
716     \expandafter\HyPsd@StringSubst\csname 80\051\endcsname
717         {\HyPsd@empty\80\051}#1%
718     \else
719     \HyPsd@StringSubst{\}\{051}#1%
720     \HyPsd@Subst{\051}#1%
721     \let\HyPsd@empty\relax
722     \HyPsd@StringSubst{051}{\HyPsd@empty\string\}\}#1%
723     \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`.

```

724     \expandafter\HyPsd@Subst\expandafter{\}\HyPsd@empty#1%
725     \@ifundefined{@xspace}{%
726     }{%
727     \let\HyPsd@xspace\relax
728     \expandafter\HyPsd@Subst\expandafter
729         {\HyPsd@XSPACE}\HyPsd@xspace#1%
730     \let\HyPsd@xspace\HyPsd@doxspace
731     }%
732     \xdef#1{#1\HyPsd@empty}%

```

Ligatures. \TeX forms ligatures in its stomach, but the PDF strings are treated only by \TeX 's mouth. The PDFDocEncoding contains some ligatures, but the current version 3 of the AcrobatReader lacks the `fi` and `fl` glyphs, and the Linux version lacks the `emdash` and `endash` glyphs. So the necessary code is provided here, but currently disabled, hoping that version 4 of the AcrobatReader is better. To break the ligatures the user can use an empty group, because it leads to an insertion of an `\HyPsd@empty`. If this ligature code will be enabled some day, then the italic correction should also break the ligatures. Currently this occurs only, if package `xspace` is loaded.

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

```

733     \HyPsd@Subst{---}\textemdash#1%
734     \HyPsd@Subst{--}\textendash#1%
735 %     \HyPsd@Subst{fi}\textfi#1%
736 %     \HyPsd@Subst{fl}\textfl#1%
737     \HyPsd@Subst{!^}\textexclamdown#1%
738     \HyPsd@Subst{?^}\textquestiondown#1%

```

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

```
739 \let\HyPsd@empty\@empty
```

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

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

```
740 \ifHy@unicode
741 \HyPsd@StringSubst\(\textparenleft#1%
742 \HyPsd@Subst(\textparenleft#1%
743 \else
744 \HyPsd@StringSubst\({\050}#1%
745 \HyPsd@Subst({\050}#1%
746 \HyPsd@StringSubst{\050}{\string\{ }#1%
747 \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.

```
748 \ifHy@unicode
749 \edef\HyPsd@SPACEOPTI{\80\040}%
750 \else
751 \let\HyPsd@SPACEOPTI\HyPsd@spaceopti
752 \fi
753 \xdef#1{#1\@empty}%
754 \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.

```
755 \endgroup
756 \begingroup
757 \ifHy@unicode
758 \HyPsd@ConvertToUnicode#1%
```

Try conversion back to `PDFDocEncoding`.

```
759 \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
760 \EdefUnescapeString\HyPsd@temp#1%
761 \iftutex
762 \let\HyPsd@UnescapedString\HyPsd@temp
763 \StringEncodingConvertTest\HyPsd@temp\HyPsd@temp
764 {utf16be}{ascii-print}{%
765 \EdefEscapeString\HyPsd@temp\HyPsd@temp
766 \global\let#1\HyPsd@temp
767 \HyPsd@EscapeTeX#1%
768 \Hy@unicodefalse
769 }{%
770 \HyPsd@EscapeTeX#1%
771 }%
```

```

772     \else
773     \StringEncodingConvertTest\HyPsd@temp\HyPsd@temp
774         {utf16be}{pdfdoc}{%
775     \EdefEscapeString\HyPsd@temp\HyPsd@temp
776     \global\let#1\HyPsd@temp
777     \HyPsd@EscapeTeX#1%
778     \Hy@unicodetfalse
779     }{}}%
780     \fi
781 \fi
782 \fi

```

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

```

783 \pdfstringdefPostHook#1%
784 \endgroup
785 }

```

`\Hy@pdfstringdef`

```

786 \def\Hy@pdfstringdef#1#2{%
787 \pdfstringdef\Hy@gtemp{#2}%
788 \let#1\Hy@gtemp
789 }

```

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

```

790 \@ifpackageloaded{linguex}{%
791 \let\HyLinguex@OrgB\b
792 \let\HyLinguex@OrgC\c
793 \let\HyLinguex@OrgD\d
794 \def\HyLinguex@Restore{%
795 \let\b\HyLinguex@OrgB
796 \let\c\HyLinguex@OrgC
797 \let\d\HyLinguex@OrgD
798 }%
799 \Hy@AtEndOfPackage{%
800 \pdfstringdefDisableCommands{%
801 \@ifundefined{oldb}{-}{\let\b\oldb}%
802 \@ifundefined{oldc}{-}{\let\c\oldc}%
803 \@ifundefined{oldd}{-}{\let\d\oldd}%
804 }%
805 }%
806 }{%
807 \let\HyLinguex@Restore\relax
808 }%

```


6.3.3 Catcodes saving and restoring for .def files

\Hy@SaveCatcodeSettings

```
809 \def\Hy@SaveCatcodeSettings#1{%
810 \expandafter\edef\csname Hy@cat@#1\endcsname{%
811 \endlinechar=\the\endlinechar\relax
812 \catcode32 \the\catcode32\relax % (space)
813 \catcode34 \the\catcode34\relax % "
814 \catcode35 \the\catcode35\relax % #
815 \catcode37 \the\catcode37\relax % (percent)
816 \catcode40 \the\catcode40\relax % (
817 \catcode41 \the\catcode41\relax % )
818 \catcode42 \the\catcode42\relax % *
819 \catcode46 \the\catcode46\relax % .
820 \catcode58 \the\catcode58\relax % :
821 \catcode60 \the\catcode60\relax % <
822 \catcode61 \the\catcode61\relax % =
823 \catcode62 \the\catcode62\relax % >
824 \catcode64 \the\catcode64\relax % @
825 \catcode91 \the\catcode91\relax % [
826 \catcode92 \the\catcode92\relax % (backslash)
827 \catcode93 \the\catcode93\relax % ]
828 \catcode123 \the\catcode123\relax % {
829 \catcode124 \the\catcode124\relax % |
830 \catcode125 \the\catcode125\relax % }
831 }%
832 \endlinechar=-1 %
833 \catcode32 10 % (space)
834 \catcode34 12 % "
835 \catcode35 6 % #
836 \catcode37 14 % (percent)
837 \catcode40 12 % (
838 \catcode41 12 % )
839 \catcode42 12 % *
840 \catcode46 12 % .
841 \catcode58 12 % :
842 \catcode60 12 % <
843 \catcode61 12 % =
844 \catcode62 12 % >
845 \catcode91 12 % [
846 \catcode92 0 % (backslash)
847 \catcode93 12 % ]
848 \catcode123 1 % {
849 \catcode124 12 % |
850 \catcode125 2 % }
851 \makeatletter
852 }
```

\Hy@RestoreCatcodeSettings

```
853 \def\Hy@RestoreCatcodeSettings#1{%
854 \csname Hy@cat@#1\endcsname
855 \expandafter\let\csname Hy@cat@#1\endcsname\relax
856 }
```

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.

```
857 \@ifundefined{T@PD1}{%
858   \Hy@SaveCatcodeSettings{pd1}%
859   \input{pd1enc.def}%
860   \Hy@RestoreCatcodeSettings{pd1}%
861   \HyLinguex@Restore
862 }{}
863 \DeclareFontFamily{PD1}{pdf}{}
864 \DeclareFontShape{PD1}{pdf}{m}{n}{ <-> cmr10 }{}
865 \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`.

```
866 \def\HyPsd@LoadUnicode{%
867   \@ifundefined{T@PU}{%
868     \Hy@SaveCatcodeSettings{pu}%
869     \input{puenc.def}%
870     \Hy@RestoreCatcodeSettings{pu}%
871     \HyLinguex@Restore
872   }{}%
873   \DeclareFontFamily{PU}{pdf}{}%
874   \DeclareFontShape{PU}{pdf}{m}{n}{ <-> cmr10 }{}%
875   \DeclareFontSubstitution{PU}{pdf}{m}{n}%
876   \HyPsd@LoadExtra
877   \let\HyPsd@LoadUnicode\relax
878 }
```

`\HyPsd@LoadExtra`

```
879 \def\Hy@iffileloaded#1{%
880   \@ifundefined{ver@#1}\@secondoftwo\@firstoftwo
881 }
882 \def\HyPsd@LoadExtra{%
883   \ifHy@psdextra
884     \Hy@iffileloaded{puenc.def}{}%
885     \Hy@SaveCatcodeSettings{psdextra}%
886     \input{psdextra.def}%
887     \Hy@RestoreCatcodeSettings{psdextra}%
888 }
```

```

888   \let\HyPsd@LoadExtra\relax
889   }{}%
890   \fi
891 }

```

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.

```

892 \def\texorpdfstring{%
893   \ifHy@pdfstring
894     \expandafter\@secondoftwo
895   \else
896     \expandafter\@firstoftwo
897   \fi
898 }

```

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`.

```

899 \@ifundefined{pdfstringdefPreHook}{%
900   \let\pdfstringdefPreHook\@empty
901 }{}
902 \@ifundefined{pdfstringdefPostHook}{%
903   \let\pdfstringdefPostHook\@gobble
904 }{}

```

`\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`.

```

905 \def\pdfstringdefDisableCommands{%
906   \begingroup
907   \makeatletter
908   \HyPsd@DisableCommands
909 }

```

`\HyPsd@DisableCommands`

```
910 \long\def\HyPsd@DisableCommands#1{%
911   \Hy@GlobalAppendToMacro\pdfstringdefPreHook{#1}%
912   \endgroup
913 }
```

`\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`.

```
914 \def\pdfstringdefWarn#1{%
915   \expandafter\noexpand\csname<>\string#1\endcsname
916 }
```

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.

```
917 \begingroup
918   \catcode0=12 %
919   \def\x{\endgroup
920     \def\HyPsd@ignorespaces{%
921       \romannumeral\expandafter`\expandafter^^@%
922       \romannumeral^^@%
923     }%
924   }%
925 \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.

```
926 \newif\ifHy@next
927 </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.

```
928 <*package>
```

6.5.3 CJK patch

```
929 \RequirePackage{intcalc}[2007/09/27]
```

```
\HyPsd@CJKhook
```

```
930 \def\HyPsd@CJKhook{%
931   \@ifpackageloaded{CJK}{%
932     \let\CJK@kern\relax
933     \let\CJKkern\relax
934     \let\CJK@CJK\relax
935     \ifHy@CJKbookmarks
936       \HyPsd@CJKhook@bookmarks
937     \fi
938     \HyPsd@CJKhook@unicode
939   }{ }%
940 }
```

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 ($\geq 0x40$).

```
941 \begingroup
942 \catcode"7F=\active
943 \toks@{%
944   \let\CJK@ignorespaces\empty
945   \def\CJK@char#1{\@gobbletwo}%
946   \let\CJK@charx\@gobblefour
947   \let\CJK@punctchar\@gobblefour
948   \def\CJK@punctcharx#1{\@gobblefour}%
949   \catcode"7F=\active
950   \def^^7f#1^^7f#2^^7f{%
951     \string #1\HyPsd@DecimalToOctal{#2}%
```

```

952 }%
953 % ... ?
954 \ifHy@unicode
955 \def\Hy@cjku{\80}%
956 \else
957 \let\Hy@cjku\@empty
958 \fi
959 \HyPsd@CJKActiveChars
960 }%
961 \count@=127 %
962 \@whilenum\count@<255 \do{%
963 \advance\count@ by 1 %
964 \lccode\~=\count@
965 \lowercase{%
966 \toks@\expandafter{\the\toks@ ~}%
967 }%
968 }%
969 \toks@\expandafter{\the\toks@ !}%
970 \xdef\HyPsd@CJKhook@bookmarks{%
971 \the\toks@
972 }%
973 \endgroup

```

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

```

974 \def\HyPsd@CJKActiveChars#1{%
975 \ifx#1!%
976 \let\HyPsd@CJKActiveChars\relax
977 \else
978 \edef#1{\noexpand\Hy@cjku\string#1}%
979 \fi
980 \HyPsd@CJKActiveChars
981 }

```

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

```

982 \def\HyPsd@DecimalToOctal#1{%
983 \ifcase #1 %
984 \000\or \001\or \002\or \003\or \004\or \005\or \006\or \007%
985 \or \010\or \011\or \012\or \013\or \014\or \015\or \016\or \017%
986 \or \020\or \021\or \022\or \023\or \024\or \025\or \026\or \027%
987 \or \030\or \031\or \032\or \033\or \034\or \035\or \036\or \037%
988 \or \040\or \041\or \042\or \043\or \044\or \045\or \046\or \047%
989 \or \050\or \051\or \052\or \053\or \054\or \055\or \056\or \057%
990 \or 0\or 1\or 2\or 3\or 4\or 5\or 6\or 7%
991 \or 8\or 9\or \072\or \073\or \074\or \075\or \076\or \077%
992 \or @\or A\or B\or C\or D\or E\or F\or G%
993 \or H\or I\or J\or K\or L\or M\or N\or O%
994 \or P\or Q\or R\or S\or T\or U\or V\or W%
995 \or X\or Y\or Z\or \133\or \134\or \135\or \136\or \137%
996 \or \140\or a\or b\or c\or d\or e\or f\or g%
997 \or h\or i\or j\or k\or l\or m\or n\or o%
998 \or p\or q\or r\or s\or t\or u\or v\or w%
999 \or x\or y\or z\or \173\or \174\or \175\or \176\or \177%
1000 \or \200\or \201\or \202\or \203\or \204\or \205\or \206\or \207%

```

```

1001 \or \210\or \211\or \212\or \213\or \214\or \215\or \216\or \217%
1002 \or \220\or \221\or \222\or \223\or \224\or \225\or \226\or \227%
1003 \or \230\or \231\or \232\or \233\or \234\or \235\or \236\or \237%
1004 \or \240\or \241\or \242\or \243\or \244\or \245\or \246\or \247%
1005 \or \250\or \251\or \252\or \253\or \254\or \255\or \256\or \257%
1006 \or \260\or \261\or \262\or \263\or \264\or \265\or \266\or \267%
1007 \or \270\or \271\or \272\or \273\or \274\or \275\or \276\or \277%
1008 \or \300\or \301\or \302\or \303\or \304\or \305\or \306\or \307%
1009 \or \310\or \311\or \312\or \313\or \314\or \315\or \316\or \317%
1010 \or \320\or \321\or \322\or \323\or \324\or \325\or \326\or \327%
1011 \or \330\or \331\or \332\or \333\or \334\or \335\or \336\or \337%
1012 \or \340\or \341\or \342\or \343\or \344\or \345\or \346\or \347%
1013 \or \350\or \351\or \352\or \353\or \354\or \355\or \356\or \357%
1014 \or \360\or \361\or \362\or \363\or \364\or \365\or \366\or \367%
1015 \or \370\or \371\or \372\or \373\or \374\or \375\or \376\or \377%
1016 \fi
1017 }

```

6.5.5 CJK unicode

\HyPsd@CJKhook@unicode

```

1018 \def\HyPsd@CJKhook@unicode{%
1019 \let\Unicode\HyPsd@CJK@Unicode
1020 \let\CJKnumber\HyPsd@CJKnumber
1021 \let\CJKdigits\HyPsd@CJKdigits
1022 }

```

\HyPsd@CJK@Unicode

```

1023 \def\HyPsd@CJK@Unicode#1#2{%
1024 \ifnum#1<256 %
1025 \HyPsd@DecimalToOctalFirst{#1}%
1026 \HyPsd@DecimalToOctalSecond{#2}%
1027 \else
1028 \933%
1029 \expandafter\expandafter\expandafter\HyPsd@HighA
1030 \intcalcDiv{#1}{4}!%
1031 \933%
1032 \ifcase\intcalcMod{#1}{4} %
1033 4\or 5\or 6\or 7%
1034 \fi
1035 \HyPsd@DecimalToOctalSecond{#2}%
1036 \fi
1037 }

1038 \def\HyPsd@HighA#1!{%
1039 \expandafter\expandafter\expandafter\HyPsd@HighB
1040 \IntCalcDiv#1!64!!%
1041 \expandafter\expandafter\expandafter\HyPsd@HighD
1042 \IntCalcMod#1!64!!%
1043 }

1044 \def\HyPsd@HighB#1!{%
1045 \expandafter\expandafter\expandafter\HyPsd@HighC
1046 \IntCalcDec#1!!%
1047 }

```

```

1048 \def\HyPsd@HighC#1!{%
1049 \IntCalcDiv#1!4!%
1050 \@backslashchar
1051 \IntCalcMod#1!4!%
1052 }
1053 \def\HyPsd@HighD#1!{%
1054 \ifcase\IntCalcDiv#1!8! %
1055 0\or 1\or 2\or 3\or 4\or 5\or 6\or 7%
1056 \fi
1057 \ifcase\IntCalcMod#1!8! %
1058 0\or 1\or 2\or 3\or 4\or 5\or 6\or 7%
1059 \fi
1060 }
1061 \def\HyPsd@DecimalToOctalFirst#1{%
1062 \9%
1063 \ifcase#1 %
1064 000\or 001\or 002\or 003\or 004\or 005\or 006\or 007%
1065 \or 010\or 011\or 012\or 013\or 014\or 015\or 016\or 017%
1066 \or 020\or 021\or 022\or 023\or 024\or 025\or 026\or 027%
1067 \or 030\or 031\or 032\or 033\or 034\or 035\or 036\or 037%
1068 \or 040\or 041\or 042\or 043\or 044\or 045\or 046\or 047%
1069 \or 050\or 051\or 052\or 053\or 054\or 055\or 056\or 057%
1070 \or 060\or 061\or 062\or 063\or 064\or 065\or 066\or 067%
1071 \or 070\or 071\or 072\or 073\or 074\or 075\or 076\or 077%
1072 \or 100\or 101\or 102\or 103\or 104\or 105\or 106\or 107%
1073 \or 120\or 111\or 112\or 113\or 114\or 115\or 116\or 117%
1074 \or 120\or 121\or 122\or 123\or 124\or 125\or 126\or 127%
1075 \or 130\or 131\or 132\or 133\or 134\or 135\or 136\or 137%
1076 \or 140\or 141\or 142\or 143\or 144\or 145\or 146\or 147%
1077 \or 150\or 151\or 152\or 153\or 154\or 155\or 156\or 157%
1078 \or 160\or 161\or 162\or 163\or 164\or 165\or 166\or 167%
1079 \or 170\or 171\or 172\or 173\or 174\or 175\or 176\or 177%
1080 \or 200\or 201\or 202\or 203\or 204\or 205\or 206\or 207%
1081 \or 210\or 211\or 212\or 213\or 214\or 215\or 216\or 217%
1082 \or 220\or 221\or 222\or 223\or 224\or 225\or 226\or 227%
1083 \or 230\or 231\or 232\or 233\or 234\or 235\or 236\or 237%
1084 \or 240\or 241\or 242\or 243\or 244\or 245\or 246\or 247%
1085 \or 250\or 251\or 252\or 253\or 254\or 255\or 256\or 257%
1086 \or 260\or 261\or 262\or 263\or 264\or 265\or 266\or 267%
1087 \or 270\or 271\or 272\or 273\or 274\or 275\or 276\or 277%
1088 \or 300\or 301\or 302\or 303\or 304\or 305\or 306\or 307%
1089 \or 310\or 311\or 312\or 313\or 314\or 315\or 316\or 317%
1090 \or 320\or 321\or 322\or 323\or 324\or 325\or 326\or 327%
1091 \or 330\or 331\or 332\or 333\or 334\or 335\or 336\or 337%
1092 \or 340\or 341\or 342\or 343\or 344\or 345\or 346\or 347%
1093 \or 350\or 351\or 352\or 353\or 354\or 355\or 356\or 357%
1094 \or 360\or 361\or 362\or 363\or 364\or 365\or 366\or 367%
1095 \or 370\or 371\or 372\or 373\or 374\or 375\or 376\or 377%
1096 \fi
1097 }
1098 \def\HyPsd@DecimalToOctalSecond#1{%
1099 \ifcase #1 %
1100 \000\or \001\or \002\or \003\or \004\or \005\or \006\or \007%
1101 \or \010\or \011\or \012\or \013\or \014\or \015\or \016\or \017%

```



```

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

1134 \def\HyPsd@CJKnumber#1{%
1135 \ifnum#1<\z@
1136 \CJK@minus
1137 \expandafter\HyPsd@@CJKnumber\expandafter{\number-\number#1}%
1138 \else
1139 \expandafter\HyPsd@@CJKnumber\expandafter{\number#1}%
1140 \fi
1141 }

1142 \def\HyPsd@@CJKnumber#1{%
1143 \ifcase#1 %
1144 \CJK@zero\or\CJK@one\or\CJK@two\or\CJK@three\or\CJK@four\or
1145 \CJK@five\or\CJK@six\or\CJK@seven\or\CJK@eight\or\CJK@nine\or
1146 \CJK@ten\or\CJK@ten\CJK@one\or\CJK@ten\CJK@two\or
1147 \CJK@ten\CJK@three\or\CJK@ten\CJK@four\or\CJK@ten\CJK@five\or
1148 \CJK@ten\CJK@six\or\CJK@ten\CJK@seven\or\CJK@ten\CJK@eight\or
1149 \CJK@ten\CJK@nine
1150 \else
1151 \ifnum#1<10000 %
1152 \HyPsd@CJKnumberFour#1!\@empty{20}%
1153 \@empty
1154 \else
1155 \ifnum#1<100000000 %

```

```

1156 \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1157 \IntCalcDiv#1!10000!%
1158 !\CJK@zero{20}%
1159 \CJK@tenthousand
1160 \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1161 \IntCalcMod#1!10000!%
1162 !\CJK@zero{10}%
1163 \@empty
1164 \else
1165 \expandafter\HyPsd@CJKnumberLarge
1166 \number\IntCalcDiv#1!100000000!\expandafter!%
1167 \number\IntCalcMod#1!100000000!!%
1168 \fi
1169 \fi
1170 \fi
1171 }
1172 \def\HyPsd@CJKnumberLarge#1!#2!{%
1173 \HyPsd@CJKnumberFour#1!\CJK@zero{20}%
1174 \CJK@hundredmillion
1175 \ifnum#2=\z@
1176 \else
1177 \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1178 \IntCalcDiv#2!10000!%
1179 !\CJK@zero{10}%
1180 \CJK@tenthousand
1181 \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1182 \IntCalcMod#2!10000!%
1183 !\CJK@zero{10}%
1184 \@empty
1185 \fi
1186 }
1187 \def\HyPsd@CJKnumberFour#1!#2#3{%
1188 \ifnum#1=\z@
1189 \expandafter\@gobble
1190 \else
1191 \ifnum#1<1000 %
1192 #2%
1193 \HyPsd@CJKnumberThree#1!\CJK@zero{3}%
1194 \else
1195 \HyPsd@@@CJKnumber{\IntCalcDiv#1!1000!}%
1196 \CJK@thousand
1197 \expandafter\expandafter\expandafter\HyPsd@CJKnumberThree
1198 \IntCalcMod#1!1000!%
1199 !\CJK@zero{10}%
1200 \fi
1201 \fi
1202 }
1203 \def\HyPsd@CJKnumberThree#1!#2#3{%
1204 \ifnum#1=\z@
1205 \else
1206 \ifnum#1<100 %
1207 #2%
1208 \HyPsd@CJKnumberTwo#1!\CJK@zero{3}%
1209 \else

```

```

1210 \HyPsd@@CJKnumber{\IntCalcDiv#1!100!}%
1211 \CJK@hundred
1212 \expandafter\expandafter\expandafter\HyPsd@CJKnumberTwo
1213 \IntCalcMod#1!100!%
1214 !\CJK@zero{10}%
1215 \fi
1216 \fi
1217 }
1218 \def\HyPsd@CJKnumberTwo#1!#2#3{%
1219 \ifnum#1=\z@
1220 \else
1221 \ifnum#1<#3 %
1222 #2%
1223 \HyPsd@@CJKnumber{#1}%
1224 \else
1225 \HyPsd@@CJKnumber{\IntCalcDiv#1!10!}%
1226 \CJK@ten
1227 \ifnum\IntCalcMod#1!10!=\z@
1228 \else
1229 \HyPsd@@CJKnumber{\IntCalcMod#1!10!}%
1230 \fi
1231 \fi
1232 }
1233 }

1234 \def\HyPsd@CJKdigits#1{%
1235 \ifx*#1\relax
1236 \expandafter\HyPsd@@CJKdigits\expandafter\CJK@zero
1237 \else
1238 \HyPsd@@CJKdigits\CJK@null{#1}%
1239 \fi
1240 }
1241 \def\HyPsd@@CJKdigits#1#2{%
1242 \ifx\#2\%
1243 \else
1244 \HyPsd@@@CJKdigits#1#2\@nil
1245 \fi
1246 }%
1247 \def\HyPsd@@@CJKdigits#1#2#3\@nil{%
1248 \HyPsd@CJKdigit#1{#2}%
1249 \ifx\#3\%
1250 \expandafter\@gobble
1251 \else
1252 \expandafter\@firstofone
1253 \fi
1254 {%
1255 \HyPsd@@@CJKdigits#1#3\@nil
1256 }%
1257 }
1258 \def\HyPsd@CJKdigit#1#2{%
1259 \ifcase#2 %
1260 #1\or
1261 \CJK@one\or\CJK@two\or\CJK@three\or\CJK@four\or
1262 \CJK@five\or\CJK@six\or\CJK@seven\or\CJK@eight\or\CJK@nine
1263 \fi

```

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\expandafter\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}

1265 \def\HyPsd@inmathwarn#1#2{%
1266   \ifx#2\expandafter
1267     \expandafter\ifx\csname\cf@encoding\string#1\endcsname\relax
1268       \HyPsd@GLYPHERR
1269       \expandafter\@gobble\string#1%
1270     >%
1271     \expandafter\expandafter\expandafter\HyPsd@EndWithElse

```

```

1272 \else
1273 \expandafter\expandafter\expandafter\HyPsd@GobbleFiFi
1274 \fi
1275 \else
1276 \expandafter#2%
1277 \fi
1278 }
1279 \def\HyPsd@GobbleFiFi#1\fi#2\fi{}
1280 \def\HyPsd@EndWithElse#1\else{\else}

```

`\HyPsd@add@accent`

```

1281 \def\HyPsd@add@accent#1#2{%
1282 \HyPsd@GLYPHERR\expandafter\@gobble\string#1+\string#2>%
1283 #2%
1284 }%

```

6.5.7 Unexpandable spaces

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

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

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

```

1285 \def\HyPsd@LetUnexpandableSpace#1{%
1286 \expandafter\futurelet\expandafter#1\expandafter\@gobble\space\relax
1287 }

```

`\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.

```

1288 \HyPsd@LetUnexpandableSpace\HyPsd@UnexpandableSpace

```

6.5.8 Marker for commands

`\HyPsd@XSPACE` Some commands and informations 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.

```

1289 \edef\HyPsd@XSPACE{\string#\string X}
1290 \edef\HyPsd@ITALCORR{\string#\string I}
1291 \edef\HyPsd@GLYPHERR{\string#\string G}

```

6.5.9 `\hspace` fix

`\HyPsd@hspace`

```

1292 \def\HyPsd@hspace#1{\HyPsd@@hspace#1*END}

```

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

```

1293 \def\HyPsd@@hspace#1*#2END{%
1294 \ifx\#2\%

```

```

1295 \HyPsd@hspacetest{#1}%
1296 \else
1297 \expandafter\HyPsd@hspacetest
1298 \fi
1299 }

```

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

```

1300 \def\HyPsd@hspacetest#1{\ifdim\dimexpr#1\relax>\z@\space\fi}

```

6.5.10 Fix for AMS classes

```

1301 \@ifundefined{tocsection}{%
1302 \let\HyPsd@AMSclassfix\relax
1303 }{%
1304 \def\HyPsd@AMSclassfix{%
1305 \let\tocpart\HyPsd@tocsection
1306 \let\tocchapter\HyPsd@tocsection
1307 \let\tocappendix\HyPsd@tocsection
1308 \let\tocsection\HyPsd@tocsection
1309 \let\tocsubsection\HyPsd@tocsection
1310 \let\tocsubsubsection\HyPsd@tocsection
1311 \let\tocparagraph\HyPsd@tocsection
1312 }%
1313 \def\HyPsd@tocsection#1#2#3{%
1314 \if @#2@\else\if @#1@\else#1 \fi#2. \fi
1315 #3%
1316 }%
1317 }

```

6.5.11 Reference commands

`\HyPsd@href`

```

1318 \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.

```

1319 \def\HyPsd@ref#1{\HyPsd@@ref#1*\END}%

```

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

```

1320 \def\HyPsd@@ref#1*#2\END{%
1321 \ifx\#2\%
1322 \HyPsd@@@ref{#1}%
1323 \else
1324 \expandafter\HyPsd@@@ref
1325 \fi
1326 }%

```

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

```

1327 \def\HyPsd@@@ref#1{%
1328 \expandafter\ifx\csname r@#1\endcsname\relax
1329 ??%
1330 \else
1331 \expandafter\expandafter\expandafter

```

```

1332 \car\csname r@#1\endcsname\@nil
1333 \fi
1334 }

```

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

```

1335 \def\HyPsd@pageref#1{\HyPsd@@pageref#1*\END}

```

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

```

1336 \def\HyPsd@@pageref#1*#2\END{%
1337 \ifx\#2\%
1338 \HyPsd@@@pageref{#1}%
1339 \else
1340 \expandafter\HyPsd@@@pageref
1341 \fi
1342 }

```

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

```

1343 \def\HyPsd@@@pageref#1{%
1344 \expandafter\ifx\csname r@#1\endcsname\relax
1345 ??%
1346 \else
1347 \expandafter\expandafter\expandafter\expandafter
1348 \expandafter\expandafter\expandafter\@car
1349 \expandafter\expandafter\expandafter\@gobble
1350 \csname r@#1\endcsname{}\@nil
1351 \fi
1352 }

```

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

```

1353 \def\HyPsd@nameref#1{\HyPsd@@nameref#1*\END}

```

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

```

1354 \def\HyPsd@@nameref#1*#2\END{%
1355 \ifx\#2\%
1356 \HyPsd@@@nameref{#1}%
1357 \else
1358 \expandafter\HyPsd@@@nameref
1359 \fi
1360 }

```

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

```

1361 \def\HyPsd@@@nameref#1{%
1362 \expandafter\ifx\csname r@#1\endcsname\relax
1363 ??%
1364 \else
1365 \expandafter\expandafter\expandafter\expandafter
1366 \expandafter\expandafter\expandafter\@car
1367 \expandafter\expandafter\expandafter\@gobbletwo
1368 \csname r@#1\endcsname{}\@nil
1369 \fi
1370 }

```

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

```
1371 \def\HyPsd@autoref#1{\HyPsd@@autoref#1*\END}
```

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

```
1372 \def\HyPsd@@autoref#1*#2\END{%
1373   \ifx\#2\%
1374     \HyPsd@@@autoref{#1}%
1375   \else
1376     \expandafter\HyPsd@@@autoref
1377   \fi
1378 }
```

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

```
1379 \def\HyPsd@@@autoref#1{%
1380   \expandafter\ifx\csname r@#1\endcsname\relax
1381     ??%
1382   \else
1383     \expandafter\expandafter\expandafter\HyPsd@autorefname
1384       \csname r@#1\endcsname{}{}{}{}\@nil
1385     \expandafter\expandafter\expandafter
1386       \@car\csname r@#1\endcsname\@nil
1387   \fi
1388 }
```

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

```
1389 \def\HyPsd@autorefname#1#2#3#4#5\@nil{%
1390   \ifx\#4\%
1391     \else
1392       \HyPsd@@autorefname#4.\@nil
1393     \fi
1394 }
```

`\HyPsd@@@autorefname`

```
1395 \def\HyPsd@@@autorefname#1.#2\@nil{%
1396   \@ifundefined{#1autorefname}{%
1397     \@ifundefined{#1name}{%
1398       }{%
1399         \csname#1name\endcsname\space
1400       }%
1401     }{%
1402       \csname#1autorefname\endcsname\space
1403     }%
1404 }
```

6.5.12 Redefining the defining commands

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

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

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

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

The difference between `\HyPsd@DefCommand` and `\HyPsdLetCommand` 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 1405 \begingroup
1406 \def\x#1#2{%
1407 \endgroup
1408 \let#1\def
1409 \def\HyPsd@DefCommand##1##2###{%
1410 #1%
1411 \expandafter\noexpand
1412 \csname\expandafter\@gobble\string##1\@empty\endcsname
1413 \@gobble
1414 }%
1415 \let#2\let
1416 \def\HyPsd@@@LetCommand##1{%
1417 \expandafter\ifx\csname##1\expandafter\endcsname
1418 \csname iftrue\endcsname
1419 \pdfstringdefWarn\let
1420 \expandafter\@gobble
1421 \else
1422 \expandafter\ifx\csname##1\expandafter\endcsname
1423 \csname iffalse\endcsname
1424 \pdfstringdefWarn\let
1425 \expandafter\expandafter\expandafter\@gobble
1426 \else
1427 #2%
1428 \expandafter\noexpand
1429 \csname##1\expandafter\expandafter\expandafter\endcsname
1430 \fi
1431 \fi
1432 }%
1433 }%

```

```

1434 \expandafter\x\csname <def>-command\expandafter\endcsname
1435         \csname <let>-command\endcsname
1436 \def\HyPsd@LetCommand#1{%
1437 \expandafter\expandafter\expandafter\HyPsd@@LetCommand
1438 \expandafter\expandafter\expandafter{%
1439 \expandafter\@gobble\string#1\@empty
1440 }%
1441 }

```

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).

```

1442 \def\HyPsd@ifnextchar#1{%
1443 \pdfstringdefWarn#1%
1444 \expandafter\@gobbletwo\@gobble
1445 }

```

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`.

```

1446 \def\HyPsd@protected@testopt#1{%
1447 \pdfstringdefWarn#1%
1448 \@gobbletwo
1449 }

```

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:

```

1450 \def\HyPsd@Warning#1{%
1451 \begingroup
1452 \let\space\Hy@space
1453 \Hy@Warning{#1}%
1454 \endgroup
1455 }

```

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`.

```
1456 \let\HyPsd@fi\fi
1457 \def\HyPsd@ProtectSpaces#1{%
1458   \xdef#1{%
1459     \iftrue
1460       \expandafter\HyPsd@@ProtectSpacesFi
1461       \expandafter|\expandafter\@empty#1| %
1462     \HyPsd@fi
1463   }%
1464   \expandafter\HyPsd@RemoveMask#1\HyPsd@End#1%
1465 }%
```

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

```
1466 \def\HyPsd@@ProtectSpacesFi#1 #2\HyPsd@fi{%
1467   \fi
1468   \unexpanded{#1}%
1469   \ifx\scrollmode#2\scrollmode
1470   \else
1471     \HyPsd@@ProtectSpacesFi\HyPsd@UnexpandableSpace#2%
1472   \HyPsd@fi
1473 }%
```

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.

```
1474 \def\HyPsd@RemoveMask|#1|\HyPsd@End#2{%
1475   \xdef#2{\unexpanded\expandafter{#1}}%
1476 }%
```

6.6.3 Remove grouping braces

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

```
1477 \def\HyPsd@RemoveBraces#1{%
1478   \ifx\scrollmode#1\scrollmode
1479   \else
1480     \HyPsd@@RemoveBracesFi#1\HyPsd@End{#1}%
1481   \fi
1482 }
```

`\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`.

```

1483 \def\HyPsd@@RemoveBracesFi#1#2\HyPsd@End#3\fi{%
1484   \fi
1485   \def\Hy@temp@A{#1#2}%
1486   \def\Hy@temp@B{#3}%
1487   \ifx\Hy@temp@A\Hy@temp@B
1488     \expandafter\def\expandafter\HyPsd@String\expandafter{%
1489       \HyPsd@String#1%
1490     }%
1491     \ifx\scrollmode#2\scrollmode
1492     \else
1493       \Hy@ReturnAfterFiFiEnd{%
1494         \HyPsd@RemoveBraces{#2}%
1495       }%
1496     \fi
1497   \else
1498     \def\Hy@temp@A{#1}%
1499     \HyPsd@AppendItalcorr\HyPsd@String
1500     \ifx\Hy@temp@A\@empty
1501       \Hy@ReturnAfterElseFiFiEnd{%
1502         \HyPsd@RemoveBraces{#2}%
1503       }%
1504     \else
1505       \HyPsd@ProtectSpaces\Hy@temp@A
1506       \HyPsd@AppendItalcorr\Hy@temp@A
1507       \Hy@ReturnAfterFiFiEnd{%
1508         \expandafter\HyPsd@RemoveBraces\expandafter
1509           {\Hy@temp@A#2}%
1510       }%
1511     \fi
1512   \fi
1513   \Hy@ReturnEnd
1514 }
```

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

```

1515 \def\HyPsd@AppendItalcorr#1{%
1516   \expandafter\HyPsd@@AppendItalcorr\expandafter{\}/#1%
1517 }
1518 \def\HyPsd@@AppendItalcorr#1#2{%
1519   \expandafter\def\expandafter#2\expandafter{#2#1}%
1520 }
```

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>.

```

1521 \@ifundefined{directlua}{%
1522 }{%
1523   \expandafter\ifx\csname\endcsname\relax\fi
1524 }

```

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`.

```

1525 \begingroup
1526   \catcode`\Q=\active
1527   \let Q\@empty
1528   \gdef\HyPsd@CheckCatcodes#1#2\HyPsd@End{%
1529     \global\let\HyPsd@Rest\relax
1530     \ifcat\relax\noexpand#1\relax
1531       \ifx#1\protect
1532         \else
1533           \ifx#1\penalty
1534             \setbox\z@=\hbox{%
1535               \afterassignment\HyPsd@AfterCountRemove
1536               \count@=#2\HyPsd@End
1537             }%
1538           \else
1539             \ifx#1\kern
1540               \setbox\z@=\hbox{%
1541                 \afterassignment\HyPsd@AfterDimenRemove
1542                 \dimen@=#2\HyPsd@End
1543               }%
1544             \else
1545               \ifx#1\hskip
1546                 \setbox\z@=\hbox{%
1547                   \afterassignment\HyPsd@AfterSkipRemove
1548                   \skip@=#2\HyPsd@End
1549                 }%
1550             \else
1551               \HyPsd@CatcodeWarning{#1}%
1552             \fi
1553           \fi
1554         \fi
1555       \fi
1556     \else
1557       \ifcat\noexpand#1\noexpandQ% active character
1558       \expandafter\expandafter\expandafter\def

```

```

1559     \expandafter\expandafter\expandafter\HyPsd@String
1560     \expandafter\expandafter\expandafter{%
1561     \expandafter\HyPsd@String\string#1%
1562     }%
1563   \else
1564     \ifcat#1A% letter
1565     \expandafter\def\expandafter\HyPsd@String\expandafter{%
1566     \HyPsd@String#1%
1567     }%
1568   \else
1569     \ifcat#1 % SPACE
1570     \expandafter\def\expandafter\HyPsd@String\expandafter{%
1571     \HyPsd@String\HyPsd@SPACEOPTI
1572     }%
1573   \else
1574     \ifcat$#1%
1575     \HyPsd@CatcodeWarning{math shift}%
1576   \else
1577     \ifcat&#1%
1578     \HyPsd@CatcodeWarning{alignment tab}%
1579   \else
1580     \ifcat^#1%
1581     \HyPsd@CatcodeWarning{superscript}%
1582   \else
1583     \ifcat_#1%
1584     \HyPsd@CatcodeWarning{subscript}%
1585   \else
1586     \expandafter\def\expandafter\HyPsd@String\expandafter{%
1587     \HyPsd@String#1%
1588     }%
1589     \fi
1590   \fi
1591 \fi
1592 \fi
1593 \fi
1594 \fi
1595 \fi
1596 \fi
1597 \ifx\HyPsd@Rest\relax
1598 \ifx\scrollmode#2\scrollmode
1599 \else
1600 \Hy@ReturnAfterFiFiEnd{%
1601 \HyPsd@CheckCatcodes#2\HyPsd@End
1602 }%
1603 \fi
1604 \else
1605 \ifx\HyPsd@Rest\@empty
1606 \else
1607 \Hy@ReturnAfterFiFiEnd{%
1608 \expandafter\HyPsd@CheckCatcodes\HyPsd@Rest\HyPsd@End
1609 }%
1610 \fi
1611 \fi
1612 \Hy@ReturnEnd

```

```

1613 }%
1614 \endgroup

```

Remove counts, dimens, skips.

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

```

1615 \def\HyPsd@AfterCountRemove#1\HyPsd@End{%
1616 \gdef\HyPsd@Rest{#1}%
1617 }

```

`\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.

```

1618 \def\HyPsd@AfterDimenRemove#1\HyPsd@End{%
1619 \ifdim\ifx\HyPsd@String\@empty\z@\else\dimen@\fi>1ex %
1620 \HyPsd@ReplaceSpaceWarning{\string\kern\space\the\dimen@}%
1621 \gdef\HyPsd@Rest{\HyPsd@UnexpandableSpace #1}%
1622 \else
1623 \ifdim\dimen@=\z@
1624 \else
1625 \HyPsd@RemoveSpaceWarning{\string\kern\space\the\dimen@}%
1626 \fi
1627 \gdef\HyPsd@Rest{#1}%
1628 \fi
1629 }

```

`\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).

```

1630 \def\HyPsd@AfterSkipRemove#1\HyPsd@End{%
1631 \ifdim\ifx\HyPsd@String\@empty\z@\else\skip@\fi>1ex %
1632 \HyPsd@ReplaceSpaceWarning{\string\hskip\space\the\skip@}%
1633 \gdef\HyPsd@Rest{\HyPsd@UnexpandableSpace #1}%
1634 \else
1635 \ifdim\skip@=\z@
1636 \else
1637 \HyPsd@RemoveSpaceWarning{\string\kern\space\the\skip@}%
1638 \fi
1639 \gdef\HyPsd@Rest{#1}%
1640 \fi
1641 }

```

Catcode warnings.

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

```

1642 \def\HyPsd@CatcodeWarning#1{%
1643 \HyPsd@Warning{%
1644 Token not allowed in a PDF string (%
1645 \ifHy@unicode
1646 Unicode%
1647 \else
1648 PDFDocEncoding%
1649 \fi

```

```

1650 ):%
1651 \MessageBreak removing `\'HyPsd@RemoveCmdPrefix#1'%
1652 }%
1653 }
1654 \begingroup
1655 \catcode`\|=0 %
1656 \catcode`\|=12 %
1657 |gdef|HyPsd@RemoveCmdPrefix#1{%
1658 |expandafter|HyPsd@@RemoveCmdPrefix
1659 |string#1|@empty\<>-|@empty|@empty
1660 }%
1661 |gdef|HyPsd@@RemoveCmdPrefix#1\<>-#2|@empty#3|@empty{#1#2}%
1662 |endgroup

```

\HyPsd@RemoveSpaceWarning

```

1663 \def\HyPsd@RemoveSpaceWarning#1{%
1664 \HyPsd@Warning{%
1665 Token not allowed in a PDF string (%
1666 \ifHy@unicode
1667 Unicode%
1668 \else
1669 PDFDocEncoding%
1670 \fi
1671 ):%
1672 \MessageBreak #1\MessageBreak
1673 removed%
1674 }%
1675 }

```

\HyPsd@ReplaceSpaceWarning

```

1676 \def\HyPsd@ReplaceSpaceWarning#1{%
1677 \HyPsd@Warning{%
1678 Token not allowed in a PDF string (%
1679 \ifHy@unicode
1680 Unicode%
1681 \else
1682 PDFDocEncoding%
1683 \fi
1684 ):%
1685 \MessageBreak #1\MessageBreak
1686 replaced by space%
1687 }%
1688 }

```

6.6.5 Check for wrong glyphs

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

```

1689 \def\HyPsd@GlyphProcess#1\relax#2\@empty{%
1690 \expandafter\def\expandafter\HyPsd@String\expandafter{%
1691 \HyPsd@String#1%
1692 }%
1693 \ifx\|#2\%
1694 \else

```



```

1695 \Hy@ReturnAfterFi{%
1696 \HyPsd@GlyphProcessWarning#2\@empty
1697 }%
1698 \fi
1699 }
1700 \def\HyPsd@GlyphProcessWarning#1>#2\@empty{%
1701 \HyPsd@@GlyphProcessWarning#1++>%
1702 \HyPsd@GlyphProcess#2\@empty
1703 }
1704 \def\HyPsd@@GlyphProcessWarning#1+#2+#3>{%
1705 \ifx\#2\%
1706 \HyPsd@Warning{%
1707 Glyph not defined in %
1708 P\ifHy@unicode U\else D1\fi\space encoding,\MessageBreak
1709 removing \@backslashchar#1'%
1710 }%
1711 \else
1712 \HyPsd@Warning{%
1713 Composite letter \@backslashchar#1+#2'\MessageBreak
1714 not defined in P\ifHy@unicode U\else D1\fi\space encoding,%
1715 \MessageBreak
1716 removing \@backslashchar#1'%
1717 }%
1718 \fi
1719 }

```

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`.

```

1720 \def\HyPsd@spaceopti#1{ % first space
1721 \ifx\HyPsd@spaceopti#1%
1722 \040%
1723 \else
1724 #1%
1725 \fi
1726 }%

```

6.6.6 Replacing tokens

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

```

#1 Exact the tokens that should be replaced.
#2 The replacement (don't need to be expanded).
#3 Command with the string.
1727 \def\HyPsd@Subst#1#2#3{%
1728 \def\HyPsd@@ReplaceFi##1##2\END\fi{%
1729 \fi
1730 ##1%
1731 \ifx\scrollmode##2\scrollmode

```

```

1732 \else
1733 #2%
1734 \HyPsd@@ReplaceFi##2\END
1735 \fi
1736 }%
1737 \xdef#3{%
1738 \iftrue
1739 \expandafter\HyPsd@@ReplaceFi#3#1\END
1740 \fi
1741 }%
1742 }

```

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

```

1743 \def\HyPsd@StringSubst#1{%
1744 \expandafter\HyPsd@Subst\expandafter{\string#1}%
1745 }

```

`\HyPsd@EscapeTeX`

```

1746 \begingroup
1747 \lccode`!\!=`\%%
1748 \lccode`||=\%%
1749 \lccode`\(=\{
1750 \lccode`\)=\}
1751 \lccode`0=\z@
1752 \lccode`1=\z@
1753 \lccode`3=\z@
1754 \lccode`4=\z@
1755 \lccode`5=\z@
1756 \lccode`7=\z@
1757 \lowercase{\endgroup
1758 \def\HyPsd@EscapeTeX#1{%
1759 \HyPsd@Subst!{|045}#1%
1760 \HyPsd@Subst({|173}#1%
1761 \HyPsd@Subst){|175}#1%
1762 }%
1763 }

```

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.

```

1764 \def\HyPsd@doxspace#1{%
1765 \ifx#1\relax\else
1766 \ifx#1.\else
1767 \ifx#1:\else
1768 \ifx#1,\else
1769 \ifx#1;\else
1770 \ifx#1!\else
1771 \ifx#1?\else
1772 \ifx#1/\else

```

```

1773     \ifx#1-\else
1774     \ifx#1'\else
1775         \HyPsd@SPACEOPTI
1776     \fi
1777     \fi
1778     \fi
1779     \fi
1780     \fi
1781     \fi
1782     \fi
1783     \fi
1784     \fi
1785     \fi
1786     #1%
1787 }%

```

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.

```

1788 \begingroup
1789 \catcode`\|=0 %
1790 \catcode`\|=12 %

```

\HyPsd@ConvertToUnicode

```

1791 |gdef|HyPsd@ConvertToUnicode#1{%
1792 |xdef#1{%
1793 |expandafter|HyPsd@DoConvert#1|@empty|@empty|@empty
1794 }%
1795 |ifx#1|@empty
1796 |else
1797 |xdef#1{%
1798     \376\377%
1799     #1%
1800 }%
1801 |fi
1802 }%

```

\HyPsd@DoConvert

```

1803 |gdef|HyPsd@DoConvert#1{%
1804 |ifx#1|@empty
1805 |else
1806 |Hy@ReturnAfterFi{%
1807 |ifx#1\%%
1808     \%%
1809 |expandafter|HyPsd@DoEscape
1810 |else
1811 |HyPsd@Char{#1}%
1812 |expandafter|HyPsd@DoConvert
1813 |fi
1814 }%
1815 |fi
1816 }%

```

\HyPsd@DoEscape

```
1817 |gdef|HyPsd@DoEscape#1{%
1818   |ifx#19%
1819   |expandafter|HyPsd@GetTwoBytes
1820   |else
1821   |Hy@ReturnAfterFi{%
1822     |ifx#18%
1823       00%
1824     |expandafter|HyPsd@GetTwoBytes
1825     |else
1826       #1%
1827     |expandafter|HyPsd@GetOneByte
1828   |fi
1829 }%
1830 |fi
1831 }%
```

\HyPsd@GetTwoBytes

```
1832 |gdef|HyPsd@GetTwoBytes#1\#2#3#4{%
1833   #1\#2#3#4%
1834   |HyPsd@DoConvert
1835 }%
```

\HyPsd@GetOneByte

```
1836 |gdef|HyPsd@GetOneByte#1#2{%
1837   #1#2%
1838   |HyPsd@DoConvert
1839 }%
1840 |endgroup
```

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

```
1841 \def\HyPsd@GetNextTwoTokens#1#2#3\END#4{%
1842   \xdef#4{#4#1#2}%
1843   \HyPsd@@ConvertToUnicode#3\END#4%
1844 }
```

\HyPsd@Char

```
1845 \begingroup
1846 \catcode0=9 %
1847 \catcode`\^=7 %
1848 \catcode`\^^=12 %
1849 \def\x{^^^0000}%
1850 \expandafter\endgroup
1851 \ifx\x\@empty
1852 \def\HyPsd@Char#1{%
1853   \ifnum`#1<128 %
1854     \@backslashchar 000#1%
1855   \else
1856     \ifnum`#1<65536 %
1857       \expandafter\HyPsd@CharTwoByte\number`#1!%
1858     \else
1859       \expandafter\expandafter\expandafter\HyPsd@CharSurrogate
```

```

1860     \intcalcSub{`#1}{65536}!%
1861     \fi
1862 \fi
1863 }%
1864 \def\HyPsd@CharTwoByte#1!{%
1865   \expandafter\expandafter\expandafter\HyPsd@CharOctByte
1866   \IntCalcDiv#1!256!!%
1867   \expandafter\expandafter\expandafter\HyPsd@CharOctByte
1868   \IntCalcMod#1!256!!%
1869 }%
1870 \def\HyPsd@CharOctByte#1!{%
1871   \@backslashchar
1872   \IntCalcDiv#1!64!%
1873   \intcalcDiv{\IntCalcMod#1!64!}{8}%
1874   \IntCalcMod#1!8!%
1875 }%
1876 \def\HyPsd@CharSurrogate#1!{%
1877   \@backslashchar 33%
1878   \IntCalcDiv#1!262144!%
1879   \expandafter\expandafter\expandafter\HyPsd@CharOctByte
1880   \intcalcDiv{\IntCalcMod#1!262144!}{1024}!%
1881   \@backslashchar 33%
1882   \expandafter\expandafter\expandafter\IntCalcAdd
1883   \intcalcDiv{\IntCalcMod#1!1024!}{256}!4!%
1884   \expandafter\expandafter\expandafter\HyPsd@CharOctByte
1885   \IntCalcMod#1!256!!%
1886 }%
1887 \else
1888 \def\HyPsd@Char#1{%
1889   \@backslashchar 000#1%
1890 }%
1891 \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.

```

1892 \ifcsname UTFviii@loop\endcsname
1893 \def\HyPsd@expand@utfviii {%
1894   \count@"C2
1895   \@tempcnta"F5
1896   \def\UTFviii@tmp{\expandafter\def\expandafter~\expandafter{~}}%
1897   \UTFviii@loop
1898 }
1899 \else
1900 \def\HyPsd@expand@utfviii {}
1901 \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

1902 \begingroup
1903   \lccode\~=\^^f4\relax
1904 \lowercase{\endgroup
1905   \def\HyPsd@UTFviii{%
1906     \HyPsd@expand@utfviii
1907     \let\UTFviii@two@octets\HyPsd@UTFviii@two
1908     \let\UTFviii@three@octets\HyPsd@UTFviii@three
1909     \let\UTFviii@four@octets\HyPsd@UTFviii@four
1910     \ifx~\HyPsd@UTFviii@cccxiv@undef
1911       \let~\HyPsd@UTFviii@cccxiv@def
1912     \fi
1913     \let\unichar\HyPsd@unichar
1914   }%
1915 }%
1916 \def\HyPsd@UTFviii@cccxiv@undef{\@inpenc@undefined@{utf8}}%
1917 \edef\HyPsd@UTFviii@cccxiv@def{%
1918   \noexpand\UTFviii@four@octets\string ^^f4%
1919 }%

```

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.

$$a := A/4 - 48 \tag{1}$$

$$b := A - 4 * (A/4) \tag{2}$$

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

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

$$\tag{5}$$

```

1920 \def\HyPsd@UTFviii@two#1#2{%
1921   \expandafter\HyPsd@UTFviii@two
1922   \number\dimexpr.25\dimexpr`#1sp\expandafter\relax\expandafter| %
1923   \number`#1\expandafter| %
1924   \number\dimexpr.125\dimexpr`#2sp\expandafter\relax\expandafter| %
1925   \number`#2 \@nil
1926 }%
1927 \def\HyPsd@UTFviii@two#1|#2|#3|#4\@nil{%
1928   \expandafter\8%
1929   \number\numexpr #1-48\expandafter\relax
1930   \csname\number\numexpr #2-4*#1\relax\expandafter\endcsname
1931   \number\numexpr #3-8*%
1932   \number\dimexpr.125\dimexpr#3sp\relax\relax\expandafter\relax
1933   \number\numexpr #4-8*#3\relax
1934 }%

```

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

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

$$\begin{aligned}
b &:= 2 * (A - 4 * (A/4)) + ((B - 128 < 32)?0 : 1) & (7) \\
c &:= B/4 - 32 - ((B - 128 < 32)?0 : 8) & (8) \\
d &:= B - 4 * (B/4) & (9) \\
e &:= C/8 - 16 & (10) \\
f &:= C - 8 * (C/8) & (11) \\
& & (12)
\end{aligned}$$

```

1935 \def\HyPsd@UTFviii@three#1#2#3{%
1936   \expandafter\HyPsd@UTFviii@@three
1937   \number\dimexpr.25\dimexpr`#1sp\expandafter\relax\expandafter| %
1938   \number`#1\expandafter| %
1939   \number\ifnum\numexpr`#2-128\relax <32 0\else 1\fi\expandafter| %
1940   \number\dimexpr.25\dimexpr`#2sp\expandafter\relax\expandafter| %
1941   \number`#2\expandafter| %
1942   \number\dimexpr.125\dimexpr`#3sp\expandafter\relax\expandafter| %
1943   \number`#3 \@nil
1944 }%
1945 \def\HyPsd@UTFviii@@three#1|#2|#3|#4|#5|#6|#7\@nil{%
1946   \expandafter\9%
1947   \number\numexpr #1-56\expandafter\relax
1948   \number\numexpr 2*(#2-4*#1)+#3\expandafter\relax
1949   \number\numexpr #4 - 32 -\ifcase#3 0\else 8\fi\expandafter\relax
1950   \csname\number\numexpr #5-4*#4\relax\expandafter\endcsname
1951   \number\numexpr #6-16\expandafter\relax
1952   \number\numexpr #7-8*#6\relax
1953 }%

```

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 = uuuuu - 1
UTF-16: 110110ww wwzzzzyy 110111yy yyxxxxxx
octal: 011 011 0ww 0ww zzz zyy 011 011 1yy 0yy xxx xxx

```

```

1954 \def\HyPsd@UTFviii@four#1#2{%
1955   \expandafter\HyPsd@@UTFviii@four\number
1956   \numexpr-1+(\`#1-240)*4+\dimexpr.0625\dimexpr`#2sp-128sp%
1957   \expandafter|\number
1958   \numexpr`#2-16*\dimexpr.0625\dimexpr`#2sp| %
1959 }%
1960 \def\HyPsd@@UTFviii@four#1|#2|#3{%
1961   \933\number\dimexpr.25\dimexpr#1sp\relax\relax
1962   \csname\number\numexpr#1-4*\dimexpr.25\dimexpr#1sp\endcsname
1963   \ifodd#2 %
1964     \number\numexpr(#2-1)/2\relax
1965   \else
1966     \number\numexpr#2/2\relax
1967   \fi
1968   \number\numexpr\ifodd#2 4+\fi
1969   \dimexpr.0625\dimexpr`#3sp-128sp\relax\relax\relax
1970   \933%
1971   \expandafter\HyPsd@@@UTFviii@four\number
1972   \numexpr`#3-16*\dimexpr.0625\dimexpr`#3sp| %

```

```

1973 }%
1974 \def\HyPsd@@@UTFviii@four#1|#2{%
1975   \number\numexpr4+\dimexpr.25\dimexpr#1sp\relax\relax\relax
1976   \csname\number\numexpr#1-4*\dimexpr.25\dimexpr#1sp\endcsname
1977   \number\dimexpr.125\dimexpr`#2sp-128sp\relax\relax
1978   \number\numexpr`#2-8*\dimexpr.125\dimexpr`#2sp\relax\relax\relax
1979 }%

```

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

```

1980 \def\HyPsd@unichar#1{%
1981   \ifHy@unicode
1982     \ifnum#1>"10FFFF %
1983     \HyPsd@UnicodeReplacementCharacter % illegal
1984   \else
1985     \ifnum#1>"FFFF %

```

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

```

1986   \expandafter\HyPsd@unichar\expandafter{%
1987     \number\numexpr 55296+%
1988     \dimexpr.0009765625\dimexpr\number#1sp-\p@
1989     \relax\relax\relax
1990   }%

```

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

```

1991   \expandafter\HyPsd@unichar\expandafter{%
1992     \number\numexpr#1-9216%
1993     -1024*\dimexpr.0009765625\dimexpr\number#1sp-\p@
1994     \relax\relax\relax
1995   }%
1996   \else
1997     \ifnum#1>"7FF %
1998     \9%
1999     \expandafter\HyPsd@unichar@first@byte\expandafter{%
2000       \number
2001       \dimexpr.00390625\dimexpr\number#1sp\relax\relax
2002     }%
2003     \else
2004     \8%
2005     \number\dimexpr.00390625\dimexpr\number#1sp\relax\relax
2006     \fi
2007     \expandafter\HyPsd@unichar@second@byte\expandafter{%
2008       \number
2009       \numexpr#1-256*\number
2010       \dimexpr.00390625\dimexpr\number#1sp\relax\relax\relax
2011     }%
2012     \fi
2013     \fi
2014   \else
2015     .% unsupported (Unicode -> PDF Doc Encoding)
2016     \fi
2017   }%
2018 \def\HyPsd@UnicodeReplacementCharacter{\9377\375}%
2019 \def\HyPsd@unichar@first@byte#1{%
2020   \number\dimexpr.015625\dimexpr#1sp\relax\relax

```



```

2021 \expandafter\HyPsd@unichar@octtwo\expandafter{%
2022 \number
2023 \numexpr#1-64*\number\dimexpr.015625\dimexpr#1sp%
2024 \relax\relax\relax
2025 }%
2026 }%
2027 \def\HyPsd@unichar@second@byte#1{%
2028 \csname\number\dimexpr.015625\dimexpr#1sp\relax\relax\endcsname
2029 \expandafter\HyPsd@unichar@octtwo\expandafter{%
2030 \number
2031 \numexpr#1-64*\number\dimexpr.015625\dimexpr#1sp%
2032 \relax\relax\relax
2033 }%
2034 }%
2035 \def\HyPsd@unichar@octtwo#1{%
2036 \number\dimexpr.125\dimexpr#1sp\relax\relax
2037 \number\numexpr#1-8*\number\dimexpr.125\dimexpr#1sp%
2038 \relax\relax\relax
2039 }%

```

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

```

2040 \def\HyPsd@utf@viii@undeferr#1#2#3#4#5#6{%
2041 \ifx\@gobble#1%
2042 \else
2043 [Please insert \textbackslash PrerenderUnicode%
2044 \textbraceleft#1\textbraceright\space
2045 into preamble]%
2046 \fi
2047 }%

```

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

`\HyPsd@DieFace` Die faces are provided by

Package	Macro
<code>ifsym</code>	<code>\Cube</code>
<code>epsdice</code>	<code>\epsdice</code>
<code>hhcount</code>	<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`.

```

2048 \def\HyPsd@DieFace#1{%
2049 \ifHy@unicode
2050 \ifnum#1<1 %
2051 \HyPsd@UnicodeReplacementCharacter
2052 \else
2053 \ifnum#1>6 %
2054 \9046\205%
2055 \expandafter\expandafter\expandafter
2056 \HyPsd@DieFaceLarge\intcalcSub{#1}{6}!%
2057 \else
2058 \9046\20\intcalcDec{#1}%
2059 \fi

```

```

2060 \fi
2061 \else
2062 .% Die faces are not part of PDFDocEncoding
2063 \fi
2064 }

```

`\HyPsd@DieFaceLarge`

```

2065 \def\HyPsd@DieFaceLarge#1{%
2066 \ifnum#1>6 %
2067 \expandafter\@firstoftwo
2068 \else
2069 \expandafter\@secondoftwo
2070 \fi
2071 {%
2072 \9046\205%
2073 \expandafter\expandafter\expandafter
2074 \HyPsd@DieFaceLarge\IntCalcSub#1!6!!%
2075 }{%
2076 \9046\20\IntCalcDec#1!%
2077 }%
2078 }

```

6.6.11 Support for moon phases of package china2e

```

2079 \def\HyPsd@MoonPha#1{%
2080 \ifcase\intcalcNum{#1} %
2081 \HyPsd@UnicodeReplacementCharacter
2082 \or % 1
2083 % U+1F31A NEW MOON WITH FACE; \MoonPha{1} (china2e)
2084 \9330\074\9337\032%
2085 \or % 2
2086 \HyPsd@UnicodeReplacementCharacter
2087 \or % 3
2088 % U+1F31D FULL MOON WITH FACE; \MoonPha{3} (china2e)
2089 \9330\074\9337\035%
2090 \or % 4
2091 % U+1F31C LAST QUARTER MOON WITH FACE; \MoonPha{4} (china2e)
2092 \9330\074\9337\034%
2093 \else
2094 \HyPsd@UnicodeReplacementCharacter
2095 \fi
2096 }
2097 %* \HyPsd@MoonPha -> \MoonPha

```

6.6.12 Support for package pifont

`\HyPsd@ding`

```

2098 \def\HyPsd@ding#1{%
2099 \ifHy@unicode
2100 \ifnum#1<32 %
2101 \HyPsd@UnicodeReplacementCharacter
2102 \else
2103 \ifnum#1>254 %
2104 \HyPsd@UnicodeReplacementCharacter
2105 \else

```

```

2106     \ifnum#1<127 %
2107     \expandafter\expandafter\expandafter
2108     \HyPsd@@ding\intcalcNum{#1}!%
2109     \else
2110     \ifnum#1>160 %
2111     \expandafter\expandafter\expandafter
2112     \HyPsd@@ding\intcalcNum{#1}!%
2113     \else
2114     \HyPsd@UnicodeReplacementCharacter
2115     \fi
2116     \fi
2117     \fi
2118     \fi
2119     \else
2120     .% Dingbats are not part of PDFDocEncoding
2121     \fi
2122 }

```

\HyPsd@@ding

```

2123 \def\HyPsd@@ding#1!{%
2124 \@ifundefined{HyPsd@ding@#1}{%
2125 \ifnum#1<127 %
2126 \9047%
2127 \HyPsd@DecimalToOctalSecond{\IntCalcSub#1!32!}%
2128 \else
2129 \ifnum#1<168 %
2130 \9047\14\IntCalcSub#1!160!%
2131 \else
2132 \ifnum#1>181 %
2133 \9047\HyPsd@DecimalToOctalSecond{\IntCalcSub#1!64!}%
2134 \else
2135 % 172..181 -> U+2460..U+2469
2136 \9044\HyPsd@DecimalToOctalSecond{\IntCalcSub#1!76!}%
2137 \fi
2138 \fi
2139 \fi
2140 }{%
2141 \csname HyPsd@ding@#1\endcsname
2142 }%
2143 }

2144 \@namedef{HyPsd@ding@32}{\space}
2145 % U+260E BLACK TELEPHONE
2146 \@namedef{HyPsd@ding@37}{\9046\016}% U+260E
2147 % U+261B BLACK RIGHT POINTING INDEX
2148 \@namedef{HyPsd@ding@42}{\9046\033}% U+261B
2149 % U+261E WHITE RIGHT POINTING INDEX
2150 \@namedef{HyPsd@ding@43}{\9046\036}% U+261E
2151 % U+2605 BLACK STAR
2152 \@namedef{HyPsd@ding@72}{\9046\005}% U+2605
2153 % U+25CF BLACK CIRCLE
2154 \@namedef{HyPsd@ding@108}{\9045\317}% U+25CF
2155 % U+25A0 BLACK SQUARE
2156 \@namedef{HyPsd@ding@110}{\9045\240}% U+25A0

```

```

2157 % U+25B2 BLACK UP-POINTING TRIANGLE
2158 \@namedef{HyPsd@ding@115}{\9045\262}% U+25B2
2159 % U+25BC BLACK DOWN-POINTING TRIANGLE
2160 \@namedef{HyPsd@ding@116}{\9045\274}% U+25BC
2161 % U+25C6 BLACK DIAMOND
2162 \@namedef{HyPsd@ding@117}{\9045\306}% U+25C6
2163 % U+25D7 RIGHT HALF BLACK CIRCLE
2164 \@namedef{HyPsd@ding@119}{\9045\327}% U+25D7
2165 \@namedef{HyPsd@ding@168}{\textclubsuitblack}%
2166 \@namedef{HyPsd@ding@169}{\textdiamondsuitblack}%
2167 \@namedef{HyPsd@ding@170}{\textheartsuitblack}%
2168 \@namedef{HyPsd@ding@171}{\textspadesuitblack}%
2169 \@namedef{HyPsd@ding@213}{\textrightarrow}%
2170 \@namedef{HyPsd@ding@214}{\textleftarrow}%
2171 \@namedef{HyPsd@ding@215}{\textupdownarrow}%
2172 \@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.

```

2173 \@ifpackageloaded{subfigure}{%
2174   \@ifundefined{sub@label}{%
2175     \Hy@hypertexnamesfalse
2176   }{%
2177     \renewcommand*{\sub@label}[1]{%
2178       \@bsphack
2179       \subfig@oldlabel{#1}%
2180       \if@filesw
2181         \begingroup
2182           \edef\@currentlabstr{%
2183             \expandafter\strip@prefix\meaning\@currentlabelname
2184           }%
2185           \protected@write\@auxout{}{%
2186             \string\newlabel{sub@#1}{%
2187               {\@nameuse{@@thesub\@capttype}}%
2188               {\thepage}%
2189             }%
2190             \expandafter\strip@period\@currentlabstr
2191             \relax.\relax\@@@%
2192           }%
2193           {\@currentHref}%
2194           {}%
2195         }%
2196       }%
2197     \endgroup
2198   \fi
2199   \@esphack
2200 }%
2201 }%
2202 }{}

```

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.

```
2203 \def\Hy@true{true}
2204 \def\Hy@false{false}

    Providing dummy definitions.
2205 \let\literalps@out\@gobble
2206 \newcommand\pdfbookmark[3][]{ }
2207 \def\Acrobatmenu#1#2{\leavevmode#2}
2208 \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

```
2209 \let\HyperRaiseLinkHook\@empty
2210 \def\HyperRaiseLinkDefault{\baselineskip}
```

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

```
2211 \newcount\Hy@SavedSpaceFactor
2212 \def\Hy@SaveSpaceFactor{%
2213   \global\Hy@SavedSpaceFactor=\ifhmode\spacefactor\else\z@\fi
2214 }
2215 \def\Hy@RestoreSpaceFactor{%
2216   \relax
2217   \ifhmode
2218     \ifnum\Hy@SavedSpaceFactor>\z@
2219       \spacefactor=\Hy@SavedSpaceFactor
2220     \fi
2221   \fi
2222 }
2223 \def\Hy@SaveSavedSpaceFactor{%
2224   \edef\Hy@RestoreSavedSpaceFactor{%
2225     \global\Hy@SavedSpaceFactor=\the\Hy@SavedSpaceFactor\relax
2226   }%
2227 }
```

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

```

2228 \@ift@t@r\fmtversion{2023-11-01}
2229 {\NewSocket{hyp/raisedlink}{1}}
2230 {\providecommand\UseSocket[2]{#2}}
2231 \def\Hy@raisedlink#1{%
2232   \ifvmode
2233     \UseSocket{hyp/raisedlink}{#1}%
2234   \else
2235     \Hy@SaveSpaceFactor
2236     \penalty\@M
2237     \smash{%
2238       \begingroup
2239         \let\HyperRaiseLinkLength\@tempdima
2240         \setlength\HyperRaiseLinkLength\HyperRaiseLinkDefault
2241         \HyperRaiseLinkHook
2242         \expandafter\endgroup
2243         \expandafter\raise\the\HyperRaiseLinkLength\hbox{%
2244           \Hy@RestoreSpaceFactor
2245           #1%
2246           \Hy@SaveSpaceFactor
2247         }%
2248       }%
2249     \Hy@RestoreSpaceFactor
2250   \fi
2251 }

```

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

```

\Hy@RestoreLastskip 2252 \def\Hy@SaveLastskip{%
2253   \let\Hy@RestoreLastskip\relax
2254   \ifvmode
2255     \ifdim\lastskip=\z@
2256       \ifnum\lastnodetype=1 %
2257         \let\Hy@RestoreLastskip\relax
2258       \else
2259         \let\Hy@RestoreLastskip\nobreak
2260       \fi
2261     \else
2262       \begingroup
2263         \skip@=-\lastskip
2264         \edef\x{%
2265           \endgroup
2266           \def\noexpand\Hy@RestoreLastskip{%
2267             \noexpand\ifvmode
2268             \noexpand\nobreak
2269             \vskip\the\skip@
2270             \vskip\the\lastskip\relax
2271             \noexpand\fi
2272           }%
2273         }%
2274       \x
2275     \fi
2276   \else
2277     \ifhmode
2278       \ifdim\lastskip=\z@
2279       \let\Hy@RestoreLastskip\nobreak

```

```

2280 \else
2281 \begingroup
2282 \skip@=-\lastskip
2283 \edef\x{%
2284 \endgroup
2285 \def\noexpand\Hy@RestoreLastskip{%
2286 \noexpand\ifhmode
2287 \noexpand\nobreak
2288 \hskip\the\skip@
2289 \hskip\the\lastskip\relax
2290 \noexpand\fi
2291 }%
2292 }%
2293 \x
2294 \fi
2295 \fi
2296 \fi
2297 }%

```

9 Options

```

2298 \SetupKeyvalOptions{%
2299 family=Hyp,%
2300 prefix=HyOpt%
2301 }

```

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 pdfmanagement/ltdocinit if it doesn't exist.

```

\AddToDocumentProperties
\GetDocumentProperties 2302 \ExplSyntaxOn
2303 \@ifundefined{AddToDocumentProperties}
2304 {
2305 \prop_new:N \g__hyp_documentproperties_prop
2306 \NewDocumentCommand\AddToDocumentProperties{O{\@currname}mm}
2307 {
2308 \exp_args:NNx
2309 \prop_gput:Nnn \g__hyp_documentproperties_prop
2310 {
2311 \tl_if_blank:eTF {#1}{top-level/}{#1/} #2
2312 }
2313 { #3}
2314 }
2315 \NewExpandableDocumentCommand\GetDocumentProperties{m}
2316 {
2317 \prop_item:Nn \g__hyp_documentproperties_prop {#1}
2318 }
2319 }{}
2320 \ExplSyntaxOff

\IfHyperBooleanExists

```

```

2321 \def\IfHyperBooleanExists#1{%
2322   \@ifundefined{Hy@#1false}\@secondoftwo{%
2323     \@ifundefined{KV@Hyp@#1@default}\@secondoftwo\@firstoftwo
2324   }%
2325 }

2326 \@namedef{KV@Hyp@stoppedearly@default}{ }

```

\IfHyperBoolean

```

2327 \def\IfHyperBoolean#1{%
2328   \IfHyperBooleanExists{#1}{%
2329     \csname ifHy@#1\endcsname
2330     \expandafter\@firstoftwo
2331   \else
2332     \expandafter\@secondoftwo
2333   \fi
2334 } \@secondoftwo
2335 }

```

\Hy@boolkey

```

2336 \def\Hy@boolkey#1#2{%
2337   \edef\Hy@tempa{#2}%
2338   \lowercase\expandafter{%
2339     \expandafter\def\expandafter\Hy@tempa\expandafter{\Hy@tempa}%
2340   }%
2341   \ifx\Hy@tempa\@empty
2342     \let\Hy@tempa\Hy@true
2343   \fi
2344   \ifx\Hy@tempa\Hy@true
2345   \else
2346     \ifx\Hy@tempa\Hy@false
2347     \else
2348       \let\Hy@tempa\relax
2349     \fi
2350   \fi
2351   \ifx\Hy@tempa\relax
2352     \Hy@WarnOptionValue{#2}{#1}{`true' or `false'}%
2353   \else
2354     \Hy@Info{Option `#1' set `\Hy@tempa'}%
2355     \csname Hy@#1\Hy@tempa\endcsname
2356   \fi
2357 }

```

\Hy@WarnOptionValue

```

2358 \def\Hy@WarnOptionValue#1#2#3{%
2359   \Hy@Warning{%
2360     Unexpected value `#1'\MessageBreak
2361     of option `#2' instead of\MessageBreak
2362     #3%
2363   }%
2364 }

```

\Hy@DisableOption

```

2365 \def\Hy@DisableOption#1{%

```



```

2366 \@ifundefined{KV@Hyp@#1@default}{%
2367   \define@key{Hyp}{#1}%
2368 }{%
2369   \define@key{Hyp}{#1}[]%
2370 }%
2371 {\Hy@WarnOptionDisabled{#1}}%
2372 }
2373

```

`\Hy@WarnOptionDisabled`

```

2374 \def\Hy@WarnOptionDisabled#1{%
2375   \Hy@Warning{%
2376     Option `#1' has already been used,\MessageBreak
2377     setting the option has no effect%
2378   }%
2379 }

```

`\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`.

```

2380 \def\Hy@CheckOptionValue#1#2#3{%
2381   \begingroup
2382   \edef\x{#1}%
2383   \@onelevel@sanitize\x
2384   \let\y=y%
2385   \def\do##1##2{%
2386     \def\z{##1}%
2387     \@onelevel@sanitize\z
2388     \ifx\x\z
2389       \let\y=n%
2390       \let\do\@gobbletwo
2391     \fi
2392   }%
2393   #3%
2394   \ifx\y y%
2395     \def\do##1##2{%
2396       * `##1'%
2397       \ifx\##2\else\space(##2)\fi
2398     \MessageBreak
2399   }%
2400   \Hy@Warning{%
2401     Values of option `#2':\MessageBreak
2402     #3%
2403     * An empty value disables the option.\MessageBreak
2404     Unknown value `x'%
2405   }%
2406   \fi
2407 \endgroup
2408 }

```

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

```

2409 \def\Hy@DefNameKey#1{%
2410 \expandafter\Hy@@DefNameKey\csname @#1\endcsname{#1}%
2411 }

```

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

```

2412 \def\Hy@@DefNameKey#1#2#3{%
2413 \define@key{Hyp}{#2}{%
2414 \edef#1{##1}%
2415 \ifx#1\@empty
2416 \else
2417 \Hy@CheckOptionValue{##1}{#2}{#3}%
2418 \fi
2419 }%
2420 \let#1\@empty
2421 }

```

\Hy@UseNameKey

```

2422 \def\Hy@UseNameKey#1#2{%
2423 \ifx#2\@empty
2424 \else
2425 /#1/#2%
2426 \fi
2427 }

```

9.2 Defining the options

```

2428 \define@key{Hyp}{implicit}[true]{%
2429 \Hy@boolkey{implicit}{#1}%
2430 }
2431 \define@key{Hyp}{draft}[true]{%
2432 \Hy@boolkey{draft}{#1}%
2433 }
2434 \define@key{Hyp}{final}[true]{%
2435 \Hy@boolkey{final}{#1}%
2436 }
2437 \let\KV@Hyp@nolinks\KV@Hyp@draft
2438 \def\Hy@ObsoletePaperOption#1{%
2439 \Hy@WarningNoLine{%
2440 Option `#1' is no longer used%
2441 }%
2442 \define@key{Hyp}{#1}[true]{}%
2443 }
2444 \def\Hy@temp#1{%
2445 \define@key{Hyp}{#1}[true]{%
2446 \Hy@ObsoletePaperOption{#1}%
2447 }%
2448 }
2449 \Hy@temp{a4paper}
2450 \Hy@temp{a5paper}
2451 \Hy@temp{b5paper}
2452 \Hy@temp{letterpaper}

```

```

2453 \Hy@temp{legalpaper}
2454 \Hy@temp{executivepaper}

2455 \define@key{Hyp}{setpagesize}[true]{%
2456   \Hy@boolkey{setpagesize}{#1}%
2457 }
2458 \define@key{Hyp}{debug}[true]{%
2459   \Hy@boolkey{debug}{#1}%
2460 }
2461 \define@key{Hyp}{linktopage}[true]{%
2462   \Hy@boolkey{linktopage}{#1}%
2463   \ifHy@linktopage
2464     \let\Hy@linktoc\Hy@linktoc@page
2465   \else
2466     \let\Hy@linktoc\Hy@linktoc@section
2467   \fi
2468 }
2469 \chardef\Hy@linktoc@none=0 %
2470 \chardef\Hy@linktoc@section=1 %
2471 \chardef\Hy@linktoc@page=2 %
2472 \chardef\Hy@linktoc@all=3 %
2473 \ifHy@linktopage
2474   \let\Hy@linktoc\Hy@linktoc@page
2475 \else
2476   \let\Hy@linktoc\Hy@linktoc@section
2477 \fi
2478 \define@key{Hyp}{linktoc}{%
2479   \@ifundefined{Hy@linktoc@#1}{%
2480     \Hy@Warning{%
2481       Unexpected value `#1' of \MessageBreak
2482       option `linktoc' instead of `none', \MessageBreak
2483       `section', `page' or `all'%
2484     }%
2485   }{%
2486     \expandafter\let\expandafter\Hy@linktoc
2487     \csname Hy@linktoc@#1\endcsname
2488   }%
2489 }
2490 \define@key{Hyp}{extension}{\def\XR@ext{#1}}
2491 \let\XR@ext\relax
2492 \define@key{Hyp}{verbose}[true]{%
2493   \Hy@boolkey{verbose}{#1}%
2494 }

```

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.

```

2495 \define@key{Hyp}{raiselinks}[true]{%
2496   \Hy@boolkey{raiselinks}{#1}%
2497 }

```

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

```

2498 \def\Hy@setbreaklinks#1{%
2499   \csname breaklinks#1\endcsname
2500 }

```

```

2501 \def\Hy@breaklinks@unsupported{%
2502   \ifx\Hy@setbreaklinks@gobble
2503     \ifHy@breaklinks
2504       \Hy@WarningNoLine{%
2505         You have enabled option `breaklinks'.\MessageBreak
2506         But driver ``Hy@driver.def' does not support this.\MessageBreak
2507         Expect trouble with the link areas of broken links%
2508       }%
2509     \fi
2510   \fi
2511 }

2512 \define@key{Hyp}{breaklinks}[true]{%
2513   \Hy@boolkey{breaklinks}{#1}%
2514   \let\Hy@setbreaklinks@gobble
2515 }

2516 \define@key{Hyp}{localanchorname}[true]{%
2517   \Hy@WarningNoLine{%
2518     Option `localanchorname' is deprecated%
2519   }%
2520   \Hy@boolkey{localanchorname}{#1}%
2521 }

Determines whether an automatic anchor is put on each page
2522 \define@key{Hyp}{pageanchor}[true]{%
2523   \Hy@boolkey{pageanchor}{#1}%
2524 }

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.
2525 \define@key{Hyp}{plainpages}[true]{%
2526   \Hy@boolkey{plainpages}{#1}%
2527 }

Are the names for anchors made as per the HyperTeX system, or do they simply
use what LATEX provides?
2528 \define@key{Hyp}{naturalnames}[true]{%
2529   \Hy@boolkey{naturalnames}{#1}%
2530 }

Completely ignore the names as per the HyperTeX system, and use unique coun-
ters.
2531 \define@key{Hyp}{hypertexnames}[true]{%
2532   \Hy@boolkey{hypertexnames}{#1}%
2533 }

Currently, dvips doesn't allow anchors nested within targets, so this option tries
to stop that happening. Other processors may be able to cope.
2534 \define@key{Hyp}{nesting}[true]{%
2535   \Hy@boolkey{nesting}{#1}%
2536 }

2537 \define@key{Hyp}{destlabel}[true]{%
2538   \Hy@boolkey{destlabel}{#1}%
2539 }

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

```

```

2542 \ifHy@unicode
2543   \def\HyPsd@pdfencoding{unicode}%
2544   \HyPsd@LoadUnicode
2545 \else
2546   \def\HyPsd@pdfencoding{pdfdoc}%
2547 \fi
2548 }
2549 \Hy@AtBeginDocument{%
2550 \ifx\HyPsd@LoadUnicode\relax
2551 \else
2552   \def\HyPsd@LoadUnicode{%
2553     \Hy@Error{%
2554       Unicode support for bookmarks is not available.\MessageBreak
2555       Activate unicode support by using one of the options\MessageBreak
2556       `unicode', `pdfencoding=unicode', `pdfencoding=auto'\MessageBreak
2557       in the preamble%
2558     } \@ehc
2559     \global\let\HyPsd@LoadUnicode\relax
2560     \global\Hy@unicodedefalse
2561     \global\let\Hy@unicodetrue\Hy@unicodedefalse
2562   }%
2563 \fi
2564 }

2565 \define@key{Hyp}{pdfencoding}{%
2566   \edef\HyPsd@temp{#1}%
2567   \ifx\HyPsd@temp\HyPsd@pdfencoding@pdfdoc
2568     \let\HyPsd@pdfencoding\HyPsd@temp
2569     \Hy@unicodedefalse
2570 \else
2571   \ifcase\ifx\HyPsd@temp\HyPsd@pdfencoding@unicode
2572     \z@
2573   \else
2574     \ifx\HyPsd@temp\HyPsd@pdfencoding@auto
2575       \z@
2576     \else
2577       \@ne
2578     \fi
2579   \fi
2580   \let\HyPsd@pdfencoding\HyPsd@temp
2581   \hypersetup{unicode}%
2582   \ifHy@unicode
2583     \def\HyPsd@pdfencoding{#1}%
2584   \else
2585     \Hy@Warning{Cannot switch to unicode bookmarks}%
2586     \let\HyPsd@pdfencoding\HyPsd@pdfencoding@pdfdoc
2587   \fi
2588 \else
2589   \@onelevel@sanitize\HyPsd@temp
2590   \Hy@Warning{%
2591     Values of option `pdfencoding':\MessageBreak
2592     `pdfdoc', `unicode', `auto'.\MessageBreak
2593     Ignoring unknown value ``\HyPsd@temp'%
2594   }%
2595 \fi

```

```

2596 \fi
2597 }
2598 \def\HyPsd@pdfencoding@auto{auto}
2599 \def\HyPsd@pdfencoding@pdfdoc{pdfdoc}
2600 \def\HyPsd@pdfencoding@unicode{unicode}

```

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

```

2601 \let\HyPsd@pdfencoding\HyPsd@pdfencoding@unicode
2602 \HyPsd@LoadUnicode
2603 \define@key{Hyp}{psdextra}[true]{%
2604   \Hy@boolkey{psdextra}{#1}%
2605   \HyPsd@LoadExtra
2606 }
2607 \def\hypersetup{\kvsetkeys{Hyp}}
2608 \newif\ifHy@setpdfversion
2609 \define@key{Hyp}{pdfversion}{%
2610   \@ifundefined{Hy@pdfversion@#1}{%
2611     \PackageWarning{hyperref}{%
2612       Unsupported PDF version `#1'.\MessageBreak
2613       Valid values: 1.2-1.7, 2.0%
2614     }%
2615   }%
2616   \Hy@setpdfversiontrue
2617   \@nameuse{Hy@pdfversion@#1}%
2618 }%
2619 }

```

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

```

2620 \@namedef{Hy@pdfversion@1.2}{\def\Hy@pdf@majorversion{1}\def\Hy@pdf@mi-
  norversion{2}}%
2621 \@namedef{Hy@pdfversion@1.3}{\def\Hy@pdf@majorversion{1}\def\Hy@pdf@mi-
  norversion{3}}%
2622 \@namedef{Hy@pdfversion@1.4}{\def\Hy@pdf@majorversion{1}\def\Hy@pdf@mi-
  norversion{4}}%
2623 \@namedef{Hy@pdfversion@1.5}{\def\Hy@pdf@majorversion{1}\def\Hy@pdf@mi-
  norversion{5}}%
2624 \@namedef{Hy@pdfversion@1.6}{\def\Hy@pdf@majorversion{1}\def\Hy@pdf@mi-
  norversion{6}}%
2625 \@namedef{Hy@pdfversion@1.7}{\def\Hy@pdf@majorversion{1}\def\Hy@pdf@mi-
  norversion{7}}%
2626 \@namedef{Hy@pdfversion@2.0}{\def\Hy@pdf@majorversion{2}\def\Hy@pdf@mi-
  norversion{0}}%
2627 \def\Hy@pdf@majorversion{1}\def\Hy@pdf@minorversion{5}

```

Legacy name, earlier releases assumed 1.x

```

2628 \let\Hy@pdfversion\Hy@pdf@minorversion
2629 \def\Hy@pdf@majorminor@version{\numexpr100*\Hy@pdf@majorversion+\Hy@pdf@mi-
  norversion\relax}
2630 \def\Hy@pdfmajorminor@version{\numexpr100*\Hy@pdfmajorversion+\Hy@pdfmi-
  norversion\relax}

```

if pdfminorversion is defined, make sure pdfmajorversion is too.

```

2631 \@ifundefined{pdfminorversion}{}{%
2632 \@ifundefined{pdfmajorversion}{}%

```

```

2633 \newcount\pdfmajorversion
2634 \pdfmajorversion=1
2635 }-{}%
2636 }
2637 \ifx\pdfmajorversion\@undefined\else
2638 \def\Hy@pdfmajorversion{\pdfmajorversion}
2639 \fi

```

10 Options for different drivers

```

2640 \newif\ifHy@DviMode
2641 \let\Hy@DviErrMsg\@empty
2642 \ifpdf
2643 \def\Hy@DviErrMsg{pdfTeX or LuaTeX is running in PDF mode}%
2644 \else
2645 \ifxetex
2646 \def\Hy@DviErrMsg{XeTeX is running}%
2647 \else
2648 \ifvtex
2649 \ifnum\OpMode=\z@
2650 \Hy@DviModetrue
2651 \else
2652 \def\Hy@DviErrMsg{VTeX is running, but not in DVI mode}%
2653 \fi
2654 \else
2655 \Hy@DviModetrue
2656 \fi
2657 \fi
2658 \fi
2659 \def\HyOpt@CheckDvi#1{%
2660 \ifHy@DviMode
2661 \expandafter\@firstofone
2662 \else
2663 \Hy@Error{%
2664 Wrong DVI mode driver option `#1',\MessageBreak
2665 because \Hy@DviErrMsg
2666 }\@ehc
2667 \expandafter\@gobble
2668 \fi
2669 }

2670 \DeclareVoidOption{tex4ht}{%
2671 \Hy@texhttrue
2672 \kvsetkeys{Hyp}{colorlinks=true}%
2673 \def\BeforeTeXIVht{\RequirePackage{color}}%
2674 \def\Hy@driver{htex4ht}%
2675 \def\MaybeStopEarly{%
2676 \Hy@Message{Stopped early}%
2677 \Hy@AtBeginDocument{%
2678 \PDF@FinishDoc
2679 \gdef\PDF@FinishDoc{}}%
2680 }%
2681 \endinput
2682 }%
2683 }

```

```

2684 \DeclareVoidOption{pdftex}{%
2685   \ifpdf
2686   \def\Hy@driver{hpdftex}%
2687   \PassOptionsToPackage{pdftex}{color}%
2688   \else
2689   \Hy@Error{%
2690     Wrong driver option `pdftex',\MessageBreak
2691     because pdfTeX in PDF mode is not detected%
2692   }\@ehc
2693   \fi
2694 }
2695 \DeclareVoidOption{luatex}{%
2696   \ifpdf
2697   \ifx\pdfextension\@undefined
2698   \def\Hy@driver{hpdftex}%
2699   \PassOptionsToPackage{pdftex}{color}%
2700   \else
2701   \def\Hy@driver{hluatex}%
2702   \PassOptionsToPackage{luatex}{color}%
2703   \fi
2704   \else
2705   \Hy@Error{%
2706     Wrong driver option `luatex',\MessageBreak
2707     because luaTeX in PDF mode is not detected%
2708   }\@ehc
2709   \fi
2710 }
2711 \DeclareVoidOption{nativepdf}{%
2712   \HyOpt@CheckDvi{nativepdf}{%
2713     \def\Hy@driver{hdvips}%
2714     \PassOptionsToPackage{dvips}{color}%
2715   }%
2716 }
2717 \DeclareVoidOption{dvipdfm}{%
2718   \HyOpt@CheckDvi{dvipdfm}{%
2719     \def\Hy@driver{hdvipdfm}%
2720   }%
2721 }
2722 \DeclareVoidOption{dvipdfmx}{%
2723   \HyOpt@CheckDvi{dvipdfmx}{%
2724     \def\Hy@driver{hdvipdfm}%
2725     \PassOptionsToPackage{dvipdfmx}{color}%
2726   }%
2727 }
2728 \define@key{Hyp}{dvipdfmx-outline-open}[true]{%
2729   \expandafter\ifx\csname if#1\expandafter\endcsname
2730     \csname iftrue\endcsname
2731   \chardef\SpecialDvipdfmxOutlineOpen\@ne
2732   \else
2733   \chardef\SpecialDvipdfmxOutlineOpen\z@
2734   \fi
2735 }
2736 \DeclareVoidOption{xetex}{%
2737   \ifxetex

```



```

2738 \def\Hy@driver{hxtex}%
2739 \else
2740 \Hy@Error{%
2741   Wrong driver option `xetex',\MessageBreak
2742   because XeTeX is not detected%
2743 } \@ehc
2744 \fi
2745 }
2746 \DeclareVoidOption{pdfmark}{%
2747 \HyOpt@CheckDvi{pdfmark}{%
2748 \def\Hy@driver{hdvips}%
2749 }%
2750 }
2751 \DeclareVoidOption{dvips}{%
2752 \HyOpt@CheckDvi{dvips}{%
2753 \def\Hy@driver{hdvips}%
2754 \PassOptionsToPackage{dvips}{color}%
2755 }%
2756 }
2757 \DeclareVoidOption{hypertex}{%
2758 \HyOpt@CheckDvi{hypertex}{%
2759 \def\Hy@driver{hypertex}%
2760 }%
2761 }
2762 \let\Hy@MaybeStopNow\relax
2763 \DeclareVoidOption{vtex}{%
2764 \ifvtex
2765 \ifnum 0\ifnum\OpMode<1 1\fi \ifnum\OpMode>3 1\fi =0 %
2766 \def\Hy@driver{hvtex}%
2767 \else
2768 \ifnum\OpMode=10\relax
2769 \def\Hy@driver{hvtexhtm}%
2770 \def\MaybeStopEarly{%
2771 \Hy@Message{Stopped early}%
2772 \Hy@AtBeginDocument{%
2773 \PDF@FinishDoc
2774 \gdef\PDF@FinishDoc{}}%
2775 }%
2776 \endinput
2777 }%
2778 \else
2779 \Hy@Error{%
2780   Wrong driver option `vtex',\MessageBreak
2781   because of wrong OpMode (\the\OpMode)%
2782 } \@ehc
2783 \fi
2784 \fi
2785 \else
2786 \Hy@Error{%
2787   Wrong driver option `vtex',\MessageBreak
2788   because VTeX is not running%
2789 } \@ehc
2790 \fi
2791 }

```

```

2792 \DeclareVoidOption{vtxpdfmark}{%
2793   \ifvtex
2794     \ifnum 0\ifnum\OpMode<1 1\fi \ifnum\OpMode>3 1\fi =0 %
2795     \def\Hy@driver{hvtexmrk}%
2796   \else
2797     \Hy@Error{%
2798       Wrong driver option `vtxpdfmark',\MessageBreak
2799       because of wrong OpMode (\the\OpMode)%
2800     }\@ehc
2801   \fi
2802 \else
2803   \Hy@Error{%
2804     Wrong driver option `vtxpdfmark',\MessageBreak
2805     because VTeX is not running%
2806   }\@ehc
2807 \fi
2808 }
2809 \DeclareVoidOption{dviwindo}{%
2810   \HyOpt@CheckDvi{dviwindo}{%
2811     \def\Hy@driver{hdvwind}%
2812     \kvsetkeys{Hyp}{colorlinks}%
2813     \PassOptionsToPackage{dviwindo}{color}%
2814   }%
2815 }
2816 \DeclareVoidOption{dvipsone}{%
2817   \HyOpt@CheckDvi{dvipsone}{%
2818     \def\Hy@driver{hdvipson}%
2819     \PassOptionsToPackage{dvipsone}{color}%
2820   }%
2821 }
2822 \DeclareVoidOption{textures}{%
2823   \HyOpt@CheckDvi{textures}{%
2824     \def\Hy@driver{htexture}%
2825   }%
2826 }
2827 \DeclareVoidOption{latex2html}{%
2828   \Hy@Warning{Option `latex2html` is obsolete. \MessageBreak
2829   A current html.sty will do all necessary (re)definitions%
2830 }%
2831 }
2832 \DeclareVoidOption{hitex}{%
2833   \ifhint
2834     \IfFileExists{hhitex.def}
2835     {\def\Hy@driver{hhitex}}%
2836     {\Hy@Warning{%
2837       Missing driver file `hhitex.def',\MessageBreak
2838       ignoring hitex driver%
2839     }}%
2840   \else
2841     \Hy@Error{%
2842       Wrong driver option `hitex',\MessageBreak
2843       because HiTeX is not detected%
2844     }\@ehc
2845   \fi

```

```

2846 }

No more special treatment for ps2pdf. Let it sink or swim.
2847 \DeclareVoidOption{ps2pdf}{%
2848   \HyOpt@CheckDvi{ps2pdf}{%
2849     \def\Hy@driver{hdvips}%
2850     \PassOptionsToPackage{dvips}{color}%
2851   }%
2852 }

2853 \let\HyOpt@DriverFallback\@empty
2854 \define@key{Hyp}{driverfallback}{%
2855   \ifHy@DviMode
2856     \def\HyOpt@DriverFallback{#1}%
2857     \Hy@Match\HyOpt@DriverFallback{}{%
2858       ~(|dvipdfm|dvipdfmx|dvips|dvipsone|dviwindo|hypertex|ps2pdf|%
2859         latex2html|tex4ht)$%
2860     }{}{%
2861       \Hy@Warning{%
2862         Invalid driver `#1' for option\MessageBreak
2863         `driverfallback'%
2864       }%
2865       \let\HyOpt@DriverFallback\@empty
2866     }%
2867   \fi
2868 }

2869 \let\HyOpt@CustomDriver\@empty
2870 \define@key{Hyp}{customdriver}{%
2871   \IfFileExists{#1.def}{%
2872     \def\HyOpt@CustomDriver{#1}%
2873   }{%
2874     \Hy@Warning{%
2875       Missing driver file `#1.def',\MessageBreak
2876       ignoring custom driver%
2877     }%
2878   }%
2879 }

```

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.

```

2880 \define@key{Hyp}{hyperfigures}[true]{%
2881   \Hy@boolkey{hyperfigures}{#1}%
2882 }

```

The automatic footnote linking can be disabled by option hyperfootnotes.

```

2883 \define@key{Hyp}{hyperfootnotes}[true]{%
2884   \Hy@boolkey{hyperfootnotes}{#1}%
2885 }

```

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

```

2886 \def\back@none{none}
2887 \def\back@section{section}
2888 \def\back@page{page}

```

```

2889 \def\back@slide{slide}
2890 \define@key{Hyp}{backref}[section]{%
2891 \lowercase{\def\Hy@tempa{#1}}%
2892 \ifx\Hy@tempa\@empty
2893 \let\Hy@tempa\back@section
2894 \fi
2895 \ifx\Hy@tempa\Hy@false
2896 \let\Hy@tempa\back@none
2897 \fi
2898 \ifx\Hy@tempa\back@slide
2899 \let\Hy@tempa\back@section
2900 \fi
2901 \ifx\Hy@tempa\back@page
2902 \PassOptionsToPackage{hyperpageref}{backref}%
2903 \Hy@backreftrue
2904 \else
2905 \ifx\Hy@tempa\back@section
2906 \PassOptionsToPackage{hyperref}{backref}%
2907 \Hy@backreftrue
2908 \else
2909 \ifx\Hy@tempa\back@none
2910 \Hy@backreffalse
2911 \else
2912 \Hy@WarnOptionValue{#1}{backref}{%
2913 `section', `slide', `page', `none',\MessageBreak
2914 or `false'}%
2915 \fi
2916 \fi
2917 \fi
2918 }
2919 \define@key{Hyp}{pagebackref}[true]{%
2920 \edef\Hy@tempa{#1}%
2921 \lowercase\expandafter{%
2922 \expandafter\def\expandafter\Hy@tempa\expandafter{\Hy@tempa}%
2923 }%
2924 \ifx\Hy@tempa\@empty
2925 \let\Hy@tempa\Hy@true
2926 \fi
2927 \ifx\Hy@tempa\Hy@true
2928 \PassOptionsToPackage{hyperpageref}{backref}%
2929 \Hy@backreftrue
2930 \else
2931 \ifx\Hy@tempa\Hy@false
2932 \Hy@backreffalse
2933 \else
2934 \Hy@WarnOptionValue{#1}{pagebackref}{`true' or `false'}%
2935 \fi
2936 \fi
2937 }

```

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

```

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

```

```

2940 }
Configuration of encap char.
2941 \define@key{Hyp}{encap}{\|}{%
2942 \def\HyInd@EncapChar{#1}%
2943 }

```

12 Language options

The \autoref feature depends on the language.

```

2944 \def\HyLang@afrikaans{%
2945 \def\equationautorefname{Vergelyking}%
2946 \def\footnoteautorefname{Voetnota}%
2947 \def\itemautorefname{Item}%
2948 \def\figureautorefname{Figuur}%
2949 \def\tableautorefname{Tabel}%
2950 \def\partautorefname{Deel}%
2951 \def\appendixautorefname{Bylae}%
2952 \def\chapterautorefname{Hoofstuk}%
2953 \def\sectionautorefname{Afdeling}%
2954 \def\subsectionautorefname{Subafdeling}%
2955 \def\subsubsectionautorefname{Subsubafdeling}%
2956 \def\paragraphautorefname{Paragraaf}%
2957 \def\subparagraphautorefname{Subparagraaf}%
2958 \def\FancyVerbLineautorefname{Lyn}%
2959 \def\theoremautorefname{Teorema}%
2960 \def\pageautorefname{Bladsy}%
2961 }
2962 \def\HyLang@english{%
2963 \def\equationautorefname{Equation}%
2964 \def\footnoteautorefname{footnote}%
2965 \def\itemautorefname{item}%
2966 \def\figureautorefname{Figure}%
2967 \def\tableautorefname{Table}%
2968 \def\partautorefname{Part}%
2969 \def\appendixautorefname{Appendix}%
2970 \def\chapterautorefname{chapter}%
2971 \def\sectionautorefname{section}%
2972 \def\subsectionautorefname{subsection}%
2973 \def\subsubsectionautorefname{subsubsection}%
2974 \def\paragraphautorefname{paragraph}%
2975 \def\subparagraphautorefname{subparagraph}%
2976 \def\FancyVerbLineautorefname{line}%
2977 \def\theoremautorefname{Theorem}%
2978 \def\pageautorefname{page}%
2979 }
2980 \def\HyLang@french{%
2981 \def\equationautorefname{\'equation}%
2982 \def\footnoteautorefname{note}%
2983 \def\itemautorefname{item}%
2984 \def\figureautorefname{figure}%
2985 \def\tableautorefname{tableau}%
2986 \def\partautorefname{partie}%

```

```

2987 \def\appendixautorefname{annexe}%
2988 \def\chapterautorefname{chapitre}%
2989 \def\sectionautorefname{section}%
2990 \def\subsectionautorefname{sous-section}%
2991 \def\subsubsectionautorefname{sous-sous-section}%
2992 \def\paragraphautorefname{paragraphe}%
2993 \def\subparagraphautorefname{sous-paragraphe}%
2994 \def\FancyVerbLineautorefname{ligne}%
2995 \def\theoremautorefname{th\`eor\`eme}%
2996 \def\pageautorefname{page}%
2997 }
2998 \def\HyLang@german{%
2999 \def\equationautorefname{Gleichung}%
3000 \def\footnoteautorefname{Fu\`uss note}%
3001 \def\itemautorefname{Punkt}%
3002 \def\figureautorefname{Abbildung}%
3003 \def\tableautorefname{Tabelle}%
3004 \def\partautorefname{Teil}%
3005 \def\appendixautorefname{Anhang}%
3006 \def\chapterautorefname{Kapitel}%
3007 \def\sectionautorefname{Abschnitt}%
3008 \def\subsectionautorefname{Unterabschnitt}%
3009 \def\subsubsectionautorefname{Unterunterabschnitt}%
3010 \def\paragraphautorefname{Absatz}%
3011 \def\subparagraphautorefname{Unterabsatz}%
3012 \def\FancyVerbLineautorefname{Zeile}%
3013 \def\theoremautorefname{Theorem}%
3014 \def\pageautorefname{Seite}%
3015 }
3016 \def\HyLang@italian{%
3017 \def\equationautorefname{Equazione}%
3018 \def\footnoteautorefname{nota}%
3019 \def\itemautorefname{punto}%
3020 \def\figureautorefname{Figura}%
3021 \def\tableautorefname{Tabella}%
3022 \def\partautorefname{Parte}%
3023 \def\appendixautorefname{Appendice}%
3024 \def\chapterautorefname{Capitolo}%
3025 \def\sectionautorefname{sezione}%
3026 \def\subsectionautorefname{sottosezione}%
3027 \def\subsubsectionautorefname{sottosottosezione}%
3028 \def\paragraphautorefname{paragrafo}%
3029 \def\subparagraphautorefname{sottoparagrafo}%
3030 \def\FancyVerbLineautorefname{linea}%
3031 \def\theoremautorefname{Teorema}%
3032 \def\pageautorefname{Pag.\@}%
3033 }
3034 \def\HyLang@magyar{%
3035 \def\equationautorefname{Egyenlet}%
3036 \def\footnoteautorefname{1\`abjegyzet}%
3037 \def\itemautorefname{Elem}%
3038 \def\figureautorefname{\`Abra}%
3039 \def\tableautorefname{T\`abl\`azat}%
3040 \def\partautorefname{R\`esz}%

```

```

3041 \def\appendixautorefname{F\"uggel\'ek}%
3042 \def\chapterautorefname{fejezet}%
3043 \def\sectionautorefname{szakasz}%
3044 \def\subsectionautorefname{alszakasz}%
3045 \def\subsubsectionautorefname{alalszakasz}%
3046 \def\paragraphautorefname{bekezd\'es}%
3047 \def\subparagraphautorefname{albekezd\'es}%
3048 \def\FancyVerbLineautorefname{sor}%
3049 \def\theoremautorefname{T\'etel}%
3050 \def\pageautorefname{oldal}%
3051 }
3052 \def\HyLang@portuges{%
3053 \def\equationautorefname{Equa\c c\~ao}%
3054 \def\footnoteautorefname{Nota de rodap\'e}%
3055 \def\itemautorefname{Item}%
3056 \def\figureautorefname{Figura}%
3057 \def\tableautorefname{Tabela}%
3058 \def\partautorefname{Parte}%
3059 \def\appendixautorefname{Ap\^endice}%
3060 \def\chapterautorefname{Cap\'itulo}%
3061 \def\sectionautorefname{Se\c c\~ao}%
3062 \def\subsectionautorefname{Subse\c c\~ao}%
3063 \def\subsubsectionautorefname{Subsubse\c c\~ao}%
3064 \def\paragraphautorefname{par\'agrafo}%
3065 \def\subparagraphautorefname{subpar\'agrafo}%
3066 \def\FancyVerbLineautorefname{linha}%
3067 \def\theoremautorefname{Teorema}%
3068 \def\pageautorefname{P\'agina}%
3069 }

```

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`.

```
3070 \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`?

```
3071 \def\equationautorefname{\cyr\cyrv\cyrery\cyr.}%
```

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

```
3072 % \def\equationautorefname{%
3073 % \cyr\cyrv\cyrery\cyr\cyrz\cyr\cyrn\cyr\cyr
3074 % }%
```

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

```
3075 \def\footnoteautorefname{%
```

```

3076 \cyr\cyrp\cyro\cyrd\cyrs\cyrt\cyrr.\ \cyrp\cyrr\cyri\cyrm.%
3077 }%

```

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}”

```

3078 % \def\footnoteautorefname{%
3079 % \cyr\cyrp\cyro\cyrd\cyrs\cyrt\cyrr\cyro\cyrch\cyrn\cyro\cyre\ %
3080 % \cyrp\cyrr\cyri\cyrm\cyre\cyrch\cyra\cyrn\cyri\cyre
3081 % }%

```

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

```

3082 % \def\Nomfootnoteautorefname{\cyr\cyrs\cyrn\cyro\cyrs\cyrk\cyra}%
3083 % \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.

```

3084 \def\itemautorefname{\cyr\cyrp.}%
3085 % \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.

```

3086 \def\figureautorefname{\cyr\cyrr\cyri\cyrs.}%
3087 \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.

```

3088 \def\partautorefname{\cyr\cyrch.}%
3089 \def\chapterautorefname{\cyr\cyrg\cyrl.}%
3090 \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.

```

3091 \def\appendixautorefname{\cyr\cyrp\cyrr\cyri\cyrl.}%
3092 % \def\appendixautorefname{%
3093 % \cyr\cyrp\cyrr\cyri\cyrl\cyro\cyrz\cyre\cyrn\cyri\cyre
3094 % }%

```

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.

```

3095 \def\subsectionautorefname{\cyr\cyrr\cyra\cyrz\cyrd.}%
3096 \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.

```

3097 \def\paragraphautorefname{\cyr\cyrp.}%
3098 \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.


```

3099 % \def\paragraphautorefname{\cyr\cyrp\cyru\cyrn\cyrk\cyrt}%
3100 % \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.

```

3101 \def\FancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr.}%

```

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

```

3102 % \def\NomFancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr\cyro\cyrk\cyra}%
3103 % \def\AccFancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr\cyro\cyrk\cyru}%

```

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

```

3104 % \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 ...

```

3105 \def\theoremautorefname{\cyr\cyrt\cyre\cyro\cyrr.}%

```

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

```

3106 % \def\Nomtheoremautorefname{\cyr\cyrt\cyre\cyro\cyrr\cyre\cyrm\cyra}%
3107 % \def\Acctheoremautorefname{\cyr\cyrt\cyre\cyro\cyrr\cyre\cyrm\cyru}%

```

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

```

3108 \def\pageautorefname{\cyr\cyrs.}%
3109 }

```

```

3110 \def\HyLang@spanish{%
3111 \def\equationautorefname{Ecuaci\`on}%
3112 \def\footnoteautorefname{Nota a pie de p\`agina}%
3113 \def\itemautorefname{Elemento}%
3114 \def\figureautorefname{Figura}%
3115 \def\tableautorefname{Tabla}%
3116 \def\partautorefname{Parte}%
3117 \def\appendixautorefname{Ap\`endice}%
3118 \def\chapterautorefname{Cap\`itulo}%
3119 \def\sectionautorefname{Secci\`on}%
3120 \def\subsectionautorefname{Subsecci\`on}%
3121 \def\subsubsectionautorefname{Subsubsecci\`on}%
3122 \def\paragraphautorefname{P\`arrafo}%
3123 \def\subparagraphautorefname{Subp\`arrafo}%
3124 \def\FancyVerbLineautorefname{L\`inea}%
3125 \def\theoremautorefname{Teorema}%
3126 \def\pageautorefname{P\`agina}%
3127 }

```

```

3128 \def\HyLang@catalan{%
3129 \def\equationautorefname{Equaci\`o}%
3130 \def\footnoteautorefname{Nota al peu de p\`agina}%
3131 \def\itemautorefname{Element}%
3132 \def\figureautorefname{Figura}%
3133 \def\tableautorefname{Taula}%
3134 \def\partautorefname{Part}%

```

```

3135 \def\appendixautorefname{Ap\`endix}%
3136 \def\chapterautorefname{Cap\`itol}%
3137 \def\sectionautorefname{Secci\`o}%
3138 \def\subsectionautorefname{Subsecci\`o}%
3139 \def\subsubsectionautorefname{Subsubsecci\`o}%
3140 \def\paragraphautorefname{Par\`agraf}%
3141 \def\subparagraphautorefname{Subpar\`agraf}%
3142 \def\FancyVerbLineautorefname{L\`inia}%
3143 \def\theoremautorefname{Teorema}%
3144 \def\pageautorefname{P\`agina}%
3145 }

3146 \def\HyLang@vietnamese{%
3147 \def\equationautorefname{Ph\`uhorn}\ohorn{}ng tr\`inh}%
3148 \def\footnoteautorefname{Ch\`u th\`ich}%
3149 \def\itemautorefname{m\`d{u}c}%
3150 \def\figureautorefname{H\`inh}%
3151 \def\tableautorefname{B\`h{a}ng}%
3152 \def\partautorefname{Ph\`acircumflex{}n}%
3153 \def\appendixautorefname{Ph\`d{u}l\`d{u}c}%
3154 \def\chapterautorefname{ch\`uhorn}\ohorn{}ng}%
3155 \def\sectionautorefname{m\`d{u}c}%
3156 \def\subsectionautorefname{m\`d{u}c}%
3157 \def\subsubsectionautorefname{m\`d{u}c}%
3158 \def\paragraphautorefname{\`dj{o}d{a}n}%
3159 \def\subparagraphautorefname{\`dj{o}d{a}n}%
3160 \def\FancyVerbLineautorefname{d\`ong}%
3161 \def\theoremautorefname{\`DJ}\`d{i}nh l\`y}%
3162 \def\pageautorefname{Trang}%
3163 }

```

Greek, see github issue 52

```

3164 \def\HyLang@greek{%
3165 \def\equationautorefname{\textEpsilon\textxi\acconos\textiota\textsigma\textomega\textsigma\texteta}%
3166 \def\footnoteautorefname{\textupsilon\textpi\textomicron\textsigma\texteta\textmu\textepsilon\acconos\textiota\textomega\textsigma\texteta}%
3167 \def\itemautorefname{\textalpha\textnu\texttau\textiota\textkappa\textepsilon\acconos\textiota\textmu\textepsilon\textnu\textomicron}%
3168 \def\figureautorefname{\textSigma\textchi\acconos\texteta\textmu\textalpha}%
3169 \def\tableautorefname{\textPi\acconos\textiota\textnu\textalpha\textkappa\textalpha}%
3170 \def\partautorefname{\textMu\acconos\textepsilon\textrho\textomicron\textvarsigma}%
3171 \def\appendixautorefname{\textPi\textalpha\textrho\acconos\textalpha\textrho\texttau\texteta\textmu\textalpha}%
3172 \def\chapterautorefname{\textkappa\textepsilon\textphi\acconos\textalpha\textlambda\textalpha\textiota\textomicron}%
3173 \def\sectionautorefname{\textepsilon\textnu\acconos\textomicron\texttau\texteta\texttau\textalpha}%
3174 \def\subsectionautorefname{\textupsilon\textpi\textomicron\textepsilon\textnu\acconos\textomicron\texttau\texteta\texttau\textalpha}%
3175 \def\subsubsectionautorefname{\textupsilon\textpi\textomicron-\textupsilon\textpi\textomicron\texteta\texttau\textalpha}%
3176 \def\paragraphautorefname{\textpi\textalpha\textrho\acconos\textalpha\textgamma\texteta\textomega\textsigma\texteta\textmu\textalpha}

```

```

trho\textalpha\textphi\textomicron\textvarsigma}%
3177 \def\subparagraphautorefname{\textupsilon\textpi\textomicron\textpi\textalpha\textrho\acctonos\textalpha\textgamma\textrho\textalpha\textphi\textomicron\textvarsigma}%
3178 \def\FancyVerbLineautorefname{\textgamma\textrho\textalpha\textmu\textmu\acctonos\texteta}%
3179 \def\theoremautorefname{\textTheta\textepsilon\acctonos\textomega\textrho\texteta\textmu\textalpha}%
3180 \def\pageautorefname{\textsigma\textepsilon\textlambda\acctonos\textiota\textdelta\textalpha}%
3181 }

3182 \def\HyLang@dutch{%
3183 \def\equationautorefname{Vergelijking}%
3184 \def\footnoteautorefname{voetnoot}%
3185 \def\itemautorefname{punt}%
3186 \def\figureautorefname{Figuur}%
3187 \def\tableautorefname{Tabel}%
3188 \def\partautorefname{Deel}%
3189 \def\appendixautorefname{Bijlage}%
3190 \def\chapterautorefname{hoofdstuk}%
3191 \def\sectionautorefname{paragraaf}%
3192 \def\subsectionautorefname{deelparagraaf}%
3193 \def\subsubsectionautorefname{deel-deelparagraaf}%
3194 \def\paragraphautorefname{alinea}%
3195 \def\subparagraphautorefname{deelalinea}%
3196 \def\FancyVerbLineautorefname{regel}%
3197 \def\theoremautorefname{Stelling}%
3198 \def\pageautorefname{pagina}%
3199 }

3200 \def\HyLang@norsk{%
3201 \def\equationautorefname{Ligning}%
3202 \def\footnoteautorefname{fotnote}%
3203 \def\itemautorefname{element}%
3204 \def\figureautorefname{Figur}%
3205 \def\tableautorefname{Tabell}%
3206 \def\partautorefname{Del}%
3207 \def\appendixautorefname{Tillegg}%
3208 \def\chapterautorefname{kapittel}%
3209 \def\sectionautorefname{seksjon}%
3210 \def\subsectionautorefname{underseksjon}%
3211 \def\subsubsectionautorefname{under-underseksjon}%
3212 \def\paragraphautorefname{avsnitt}%
3213 \def\subparagraphautorefname{underavsnitt}%
3214 \def\FancyVerbLineautorefname{Linje}%
3215 \def\theoremautorefname{Teorem}%
3216 \def\pageautorefname{side}%
3217 }

3218 \def\HyLang@danish{%
3219 \def\equationautorefname{Ligning}%
3220 \def\footnoteautorefname{fodnote}%
3221 \def\itemautorefname{element}%
3222 \def\figureautorefname{Figur}%
3223 \def\tableautorefname{Tabel}%
3224 \def\partautorefname{Del}%

```

```

3225 \def\appendixautorefname{Bilag}%
3226 \def\chapterautorefname{kapitel}%
3227 \def\sectionautorefname{sektion}%
3228 \def\subsectionautorefname{under-sektion}%
3229 \def\subsubsectionautorefname{under-under-sektion}%
3230 \def\paragraphautorefname{afsnit}%
3231 \def\subparagraphautorefname{underafsnit}%
3232 \def\FancyVerbLineautorefname{linje}%
3233 \def\theoremautorefname{Teorem}%
3234 \def\pageautorefname{side}%
3235 }
3236 \def\HyLang@swedish{%
3237 \def\equationautorefname{Ekvation}%
3238 \def\footnoteautorefname{fotnot}%
3239 \def\itemautorefname{punkt}%
3240 \def\figureautorefname{Figur}%
3241 \def\tableautorefname{Tabell}%
3242 \def\partautorefname{Del}%
3243 \def\appendixautorefname{Bilaga}%
3244 \def\chapterautorefname{kapitel}%
3245 \def\sectionautorefname{avsnitt}%
3246 \def\subsectionautorefname{underavsnitt}%
3247 \def\subsubsectionautorefname{under-underavsnitt}%
3248 \def\paragraphautorefname{paragraf}%
3249 \def\subparagraphautorefname{underparagraf}%
3250 \def\FancyVerbLineautorefname{linje}%
3251 \def\theoremautorefname{Teorem}%
3252 \def\pageautorefname{sida}%
3253 }

```

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

```

3254 \def\HyLang@addto#1#2{%
3255 #2%
3256 \@temptokena{#2}%
3257 \ifx#1\relax
3258 \let#1\@empty
3259 \fi
3260 \ifx#1\@undefined
3261 \edef#1{\the\@temptokena}%
3262 \else
3263 \toks@\expandafter{#1}%
3264 \edef#1{\the\toks@\the\@temptokena}%
3265 \fi
3266 \@temptokena{\toks@\@temptokena}
3267 }
3268 \def\HyLang@DeclareLang#1#2#3{%
3269 \ifcsname extras#1\endcsname
3270 \expandafter\HyLang@addto
3271 \csname extras#1\expandafter\endcsname
3272 \csname HyLang@#2\endcsname
3273 \begingroup
3274 \edef\x{\endgroup
3275 #3%

```

```

3276 }%
3277 \x
3278 \@namedef{HyLang@#1@done}{}%
3279 \fi
3280 \begingroup
3281 \edef\x##1##2{%
3282 \noexpand\ifx##2\relax
3283 \errmessage{No definitions for language #2' found!}%
3284 \noexpand\fi
3285 \endgroup
3286 \noexpand\define@key{Hyp}{#1}[]{}%
3287 \noexpand\@ifundefined{HyLang@#1@done}{%
3288 \noexpand\HyLang@addto{\noexpand##1}{\noexpand##2}%
3289 #3%
3290 \noexpand\@namedef{HyLang@#1@done}{}%
3291 }{}%
3292 }%
3293 }%
3294 \expandafter\x\csname extras#1\expandafter\endcsname
3295 \csname HyLang@#2\endcsname
3296 }
3297 \HyLang@DeclareLang{english}{english}{-}
3298 \HyLang@DeclareLang{UKenglish}{english}{-}
3299 \HyLang@DeclareLang{british}{english}{-}
3300 \HyLang@DeclareLang{USenglish}{english}{-}
3301 \HyLang@DeclareLang{american}{english}{-}
3302 \HyLang@DeclareLang{german}{german}{-}
3303 \HyLang@DeclareLang{austrian}{german}{-}
3304 \HyLang@DeclareLang{ngerman}{german}{-}
3305 \HyLang@DeclareLang{naustrian}{german}{-}
3306 \HyLang@DeclareLang{nswissgerman}{german}{-}
3307 \HyLang@DeclareLang{swissgerman}{german}{-}
3308 \HyLang@DeclareLang{russian}{russian}{\noexpand\hypersetup{unicode}}
3309 \HyLang@DeclareLang{brazil}{portuges}{-}
3310 \HyLang@DeclareLang{brazilian}{portuges}{-}
3311 \HyLang@DeclareLang{portuguese}{portuges}{-}
3312 \HyLang@DeclareLang{spanish}{spanish}{-}
3313 \HyLang@DeclareLang{catalan}{catalan}{-}
3314 \HyLang@DeclareLang{afrikaans}{afrikaans}{-}
3315 \HyLang@DeclareLang{french}{french}{-}
3316 \HyLang@DeclareLang{frenchb}{french}{-}
3317 \HyLang@DeclareLang{français}{french}{-}
3318 \HyLang@DeclareLang{acadian}{french}{-}
3319 \HyLang@DeclareLang{canadien}{french}{-}
3320 \HyLang@DeclareLang{italian}{italian}{-}
3321 \HyLang@DeclareLang{magyar}{magyar}{-}
3322 \HyLang@DeclareLang{hungarian}{magyar}{-}
3323 \HyLang@DeclareLang{greek}{greek}{-}
3324 \HyLang@DeclareLang{dutch}{dutch}{-}
3325 \HyLang@DeclareLang{norsk}{norsk}{-}
3326 \HyLang@DeclareLang{norwegian}{norsk}{-}
3327 \HyLang@DeclareLang{danish}{danish}{-}
3328 \HyLang@DeclareLang{swedish}{swedish}{-}

```

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

```
3329 \DeclareVoidOption{vietnamese}{%
3330   \HyLang@addto\extrasvietnamese\HyLang@vietnamese
3331   \Hy@AtEndOfPackage{%
3332     \@ifundefined{T@PU}{}{%
3333       \input{puvnenc.def}%
3334     }%
3335   }%
3336 }
3337 \DeclareVoidOption{vietnam}{%
3338   \HyLang@addto\extrasvietnam\HyLang@vietnamese
3339   \Hy@AtEndOfPackage{%
3340     \@ifundefined{T@PU}{}{%
3341       \input{puvnenc.def}%
3342     }%
3343   }%
3344 }
```

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

```
3345 \DeclareVoidOption{arabic}{%
3346   \Hy@AtEndOfPackage{%
3347     \@ifundefined{T@PU}{}{%
3348       \input{puarenc.def}%
3349     }%
3350   }%
3351 }
```

13 Options to change appearance of links

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

```
3352 \define@key{Hyp}{colorlinks}[true]{%
3353   \Hy@boolkey{colorlinks}{#1}%
3354 }
3355 \DeclareVoidOption{hidelinks}{%
3356   \Hy@colorlinksfalse
3357   \Hy@ocgcolorlinksfalse
3358   \Hy@frenchlinksfalse
3359   \def\Hy@colorlink##1{\begingroup}%
3360   \def\Hy@endcolorlink{\endgroup}%
3361   \def\@pdfborder{0 0 0}%
3362   \let\@pdfborderstyle\@empty
3363 }
3364 \define@key{Hyp}{ocgcolorlinks}[true]{%
3365   \Hy@boolkey{ocgcolorlinks}{#1}%
3366 }
3367 \Hy@AtBeginDocument{%
3368   \begingroup
3369   \@ifundefined{OBJ@OCG@view}{%
3370     \ifHy@ocgcolorlinks
3371       \Hy@Warning{%
3372         Driver does not support `ocgcolorlinks',\MessageBreak
3373         using `colorlinks' instead%
3374       }%

```

```

3375     \fi
3376   }{}%
3377 \endgroup
3378 }
3379 \define@key{Hyp}{frenchlinks}[true]{%
3380   \Hy@boolkey{frenchlinks}{#1}%
3381 }

```

14 Bookmarking

```

3382 \begingroup\expandafter\expandafter\expandafter\endgroup
3383 \expandafter\ifx\csname chapter\endcsname\relax
3384   \def\toclevel@part{0}%
3385 \else
3386   \def\toclevel@part{-1}%
3387 \fi
3388 \def\toclevel@chapter{0}
3389 \def\toclevel@section{1}
3390 \def\toclevel@subsection{2}
3391 \def\toclevel@subsubsection{3}
3392 \def\toclevel@paragraph{4}
3393 \def\toclevel@subparagraph{5}
3394 \def\toclevel@figure{0}
3395 \def\toclevel@table{0}

3396 \define@key{Hyp}{bookmarks}[true]{%
3397   \Hy@boolkey{bookmarks}{#1}%
3398 }

3399 \define@key{Hyp}{bookmarksopen}[true]{%
3400   \Hy@boolkey{bookmarksopen}{#1}%
3401 }

```

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.

```

3402 \let\Hy@bookmarksdepth\c@tocdepth
3403 \define@key{Hyp}{bookmarksdepth}[]{}%
3404 \begingroup
3405   \edef\x{#1}%
3406   \ifx\x\empty
3407     \global\let\Hy@bookmarksdepth\c@tocdepth
3408   \else
3409     \@ifundefined{toclevel@\x}{%
3410       \@onelevel@sanitize\x
3411       \edef\y{\expandafter\@car\x\@nil}%
3412       \ifcase 0\expandafter\ifx\y-1\fi

```

```

3413         \expandafter\ifnum\expandafter`\y>47 %
3414         \expandafter\ifnum\expandafter`\y<58 1\fi\fi\relax
3415     \Hy@Warning{Unknown document division name (\x)}%
3416 \else
3417     \setbox\z@=\hbox{%
3418         \count@=\x
3419         \xdef\Hy@bookmarksdepth{\the\count@}%
3420     }%
3421 \fi
3422 }{%
3423     \setbox\z@=\hbox{%
3424         \count@=\csname toplevel@\x\endcsname
3425         \xdef\Hy@bookmarksdepth{\the\count@}%
3426     }%
3427 }%
3428 \fi
3429 \endgroup
3430 }

```

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

```

3431 \define@key{Hyp}{bookmarksopenlevel}{%
3432 \def\@bookmarksopenlevel{#1}%
3433 }
3434 \def\@bookmarksopenlevel{\maxdimen}
3435 % `bookmarkstype' to specify which `toc' file to mimic
3436 \define@key{Hyp}{bookmarkstype}{%
3437 \def\Hy@bookmarkstype{#1}%
3438 }
3439 \def\Hy@bookmarkstype{toc}

```

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

```

3440 \define@key{Hyp}{bookmarksnumbered}[true]{%
3441 \Hy@boolkey{bookmarksnumbered}{#1}%
3442 }

```

Option CJKbookmarks enables the patch for CJK bookmarks.

```

3443 \define@key{Hyp}{CJKbookmarks}[true]{%
3444 \Hy@boolkey{CJKbookmarks}{#1}%
3445 }

3446 \def\Hy@temp#1{%
3447 \expandafter\Hy@@temp\csname @#1color\endcsname{#1}%
3448 }
3449 \def\Hy@@temp#1#2#3{%
3450 \define@key{Hyp}{#2color}{%
3451 \HyColor@HyperrefColor{##1}#1%
3452 }%
3453 \def#1{#3}%
3454 }
3455 \Hy@temp{link}{red}
3456 \Hy@temp{anchor}{black}
3457 \Hy@temp{cite}{green}
3458 \Hy@temp{file}{cyan}
3459 \Hy@temp{url}{magenta}
3460 \Hy@temp{menu}{red}

```



```

3461 \Hy@temp{run}{\@filecolor}
3462 \define@key{Hyp}{pagecolor}{%
3463   \Hy@WarningPageColor
3464 }
3465 \def\Hy@WarningPageColor{%
3466   \Hy@WarningNoLine{Option `pagecolor' is not available anymore}%
3467   \global\let\Hy@WarningPageColor\relax
3468 }
3469 \define@key{Hyp}{allcolors}{%
3470   \HyColor@HyperrefColor{#1}\@linkcolor
3471   \HyColor@HyperrefColor{#1}\@anchorcolor
3472   \HyColor@HyperrefColor{#1}\@citecolor
3473   \HyColor@HyperrefColor{#1}\@filecolor
3474   \HyColor@HyperrefColor{#1}\@urlcolor
3475   \HyColor@HyperrefColor{#1}\@menucolor
3476   \HyColor@HyperrefColor{#1}\@runcolor
3477 }

3478 \def\hyperbaseurl#1{\def\@baseurl{#1}}
3479 \define@key{Hyp}{baseurl}{\hyperbaseurl{#1}}
3480 \let\@baseurl\@empty
3481 \def\hyperlinkfileprefix#1{\def\Hy@linkfileprefix{#1}}
3482 \define@key{Hyp}{linkfileprefix}{\hyperlinkfileprefix{#1}}
3483 \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.

```

3484 \let\@pdfpagetransition\relax
3485 \define@key{Hyp}{pdfpagetransition}{%
3486   \def\@pdfpagetransition{#1}%
3487 }

```

`\@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.

```

3488 \let\@pdfpageduration\relax
3489 \define@key{Hyp}{pdfpageduration}{%
3490   \def\@pdfpageduration{#1}%
3491   \Hy@Match\@pdfpageduration{}{%
3492     ^(|[0-9]+\.[0-9]*|[0-9]*\.[0-9]+)$%
3493   }{}{%
3494     \Hy@Warning{%
3495       Invalid value `'\@pdfpageduration'\MessageBreak
3496       of option `pdfpageduration'\MessageBreak
3497       is replaced by an empty value%
3498     }%
3499     \let\@pdfpageduration\@empty
3500   }%
3501 }

```

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).

```

3502 \def\Hy@ColorList{cite,file,link,menu,run,url}
3503 \@for\Hy@temp:=\Hy@ColorList\do{%
3504   \edef\Hy@temp{%
3505     \noexpand\define@key{Hyp}{\Hy@temp bordercolor}{%
3506       \noexpand\HyColor@HyperrefBorderColor
3507         {##1}%
3508       \expandafter\noexpand\csname @\Hy@temp bordercolor\endcsname
3509         {hyperref}%
3510       {\Hy@temp bordercolor}%
3511     }%
3512   }%
3513   \Hy@temp
3514 }
3515 \define@key{Hyp}{pagebordercolor}{%
3516   \Hy@WarningPageBorderColor
3517 }
3518 \def\Hy@WarningPageBorderColor{%
3519   \Hy@WarningNoLine{Option `pagebordercolor' is not available anymore}%
3520   \global\let\Hy@WarningPageBorderColor\relax
3521 }
3522 \define@key{Hyp}{allbordercolors}{%
3523   \def\Hy@temp##1##2{%
3524     \HyColor@HyperrefBorderColor{##1}##1{hyperref}{##2bordercolor}%
3525   }%
3526   \Hy@temp\@citebordercolor{cite}%
3527   \Hy@temp\@filebordercolor{file}%
3528   \Hy@temp\@linkbordercolor{link}%
3529   \Hy@temp\@menubordercolor{menu}%
3530   \Hy@temp\@runbordercolor{run}%
3531   \Hy@temp\@urlbordercolor{url}%
3532 }
3533 \define@key{Hyp}{pdfhighlight}{\def\@pdfhighlight{##1}}
3534 \Hy@DefNameKey{pdfhighlight}{%
3535   \do{/I}{Invert}%
3536   \do{/N}{None}%
3537   \do{/O}{Outline}%
3538   \do{/P}{Push}%
3539 }
3540 \def\Hy@setpdfhighlight{%
3541   \ifx\@pdfhighlight\@empty
3542     \else
3543       /H\@pdfhighlight
3544     \fi
3545 }
3546 \define@key{Hyp}{pdfborder}{%

```

```

3547 \let\Hy@temp\@pdfborder
3548 \def\@pdfborder{#1}%
3549 \Hy@Match\@pdfborder{ }{%
3550   ^\HyPat@NonNegativeReal/ %
3551   \HyPat@NonNegativeReal/ %
3552   \HyPat@NonNegativeReal/%
3553   ( ?\[\HyPat@NonNegativeReal/( \HyPat@NonNegativeReal/)*]?$%
3554   }{ }{%
3555   \Hy@Warning{%
3556     Invalid value ` \@pdfborder'\MessageBreak
3557     for option `pdfborder'.\MessageBreak
3558     Option setting is ignored%
3559   }%
3560   \let\@pdfborder\Hy@temp
3561 }%
3562 }
3563 \define@key{Hyp}{pdfborderstyle}{%
3564 \let\Hy@temp\@pdfborderstyle
3565 \def\@pdfborderstyle{#1}%
3566 \Hy@Match\@pdfborderstyle{ }{%
3567   ^%
3568   ( */Type */Border%
3569   | */W +\HyPat@NonNegativeReal/%
3570   | */S */[SDBIU]%
3571   | */D *\[ *(\HyPat@NonNegativeReal/( \HyPat@NonNegativeReal/)?)?]%
3572   )* *$%
3573 }{ }{%
3574   \Hy@Warning{%
3575     Invalid value ` \@pdfborderstyle'\MessageBreak
3576     for option `pdfborderstyle'.\MessageBreak
3577     Option setting is ignored%
3578   }%
3579   \let\@pdfborderstyle\Hy@temp
3580 }%
3581 }
3582 \def\Hy@setpdfborder{%
3583 \ifx\@pdfborder\@empty
3584 \else
3585   /Border[\@pdfborder]%
3586 \fi
3587 \ifx\@pdfborderstyle\@empty
3588 \else
3589   /BS<<\@pdfborderstyle>>%
3590 \fi
3591 }
3592 \Hy@DefNameKey{pdfpagemode}{%
3593 \do{UseNone}{ }%
3594 \do{UseOutlines}{ }%
3595 \do{UseThumbs}{ }%
3596 \do{FullScreen}{ }%
3597 \do{UseOC}{PDF 1.5}%
3598 \do{UseAttachments}{PDF 1.6}%
3599 }
3600 \Hy@DefNameKey{pdfnonfullscreenpagemode}{%

```

```

3601 \do{UseNone}{}%
3602 \do{UseOutlines}{}%
3603 \do{UseThumbs}{}%
3604 \do{FullScreen}{}%
3605 \do{UseOC}{PDF 1.5}%
3606 \do{UseAttachments}{PDF 1.6}%
3607 }
3608 \Hy@DefNameKey{pdfdirection}{}%
3609 \do{L2R}{Left to right}%
3610 \do{R2L}{Right to left}%
3611 }
3612 \Hy@DefNameKey{pdfviewarea}{}%
3613 \do{MediaBox}{}%
3614 \do{CropBox}{}%
3615 \do{BleedBox}{}%
3616 \do{TrimBox}{}%
3617 \do{ArtBox}{}%
3618 }
3619 \Hy@DefNameKey{pdfviewclip}{}%
3620 \do{MediaBox}{}%
3621 \do{CropBox}{}%
3622 \do{BleedBox}{}%
3623 \do{TrimBox}{}%
3624 \do{ArtBox}{}%
3625 }
3626 \Hy@DefNameKey{pdfprintarea}{}%
3627 \do{MediaBox}{}%
3628 \do{CropBox}{}%
3629 \do{BleedBox}{}%
3630 \do{TrimBox}{}%
3631 \do{ArtBox}{}%
3632 }
3633 \Hy@DefNameKey{pdfprintclip}{}%
3634 \do{MediaBox}{}%
3635 \do{CropBox}{}%
3636 \do{BleedBox}{}%
3637 \do{TrimBox}{}%
3638 \do{ArtBox}{}%
3639 }
3640 \Hy@DefNameKey{pdfprintscaling}{}%
3641 \do{AppDefault}{}%
3642 \do{None}{}%
3643 }
3644 \Hy@DefNameKey{pdfduplex}{}%
3645 \do{Simplex}{}%
3646 \do{DuplexFlipShortEdge}{}%
3647 \do{DuplexFlipLongEdge}{}%
3648 }
3649 \Hy@DefNameKey{pdfpicktraybypdfsize}{}%
3650 \do{true}{}%
3651 \do{false}{}%
3652 }
3653 \define@key{Hyp}{pdfprintpagerange}{}%
3654 \def\@pdfprintpagerange{#1}%

```

```

3655 }
3656 \Hy@DefNameKey{pdfnumcopies}{%
3657   \do{2}{two copies}%
3658   \do{3}{three copies}%
3659   \do{4}{four copies}%
3660   \do{5}{five copies}%
3661 }

3662 \define@key{Hyp}{pdfusetitle}[true]{%
3663   \Hy@boolkey{pdfusetitle}{#1}%
3664 }
3665 \def\HyXeTeX@CheckUnicode{%
3666   \ifxetex
3667     \ifHy@unicode
3668     \else
3669       \Hy@WarningNoLine{%
3670         XeTeX driver only supports unicode.\MessageBreak
3671         Enabling option `unicode'%
3672       }%
3673       \kvsetkeys{Hyp}{unicode}%
3674     \fi
3675   \else
3676     \let\HyXeTeX@CheckUnicode\relax
3677   \fi
3678 }
3679 \def\HyPsd@PrerenderUnicode#1{%
3680   \begingroup
3681     \expandafter\ifx\csname PrerenderUnicode\endcsname\relax
3682     \else
3683       \sbox0{%
3684         \let\GenericInfo@gobbletwo
3685         \let\GenericWarning@gobbletwo
3686         \let\GenericError@gobblefour
3687         \PrerenderUnicode{#1}%
3688       }%
3689     \fi
3690   \endgroup
3691 }
3692 \define@key{Hyp}{pdftitle}{%
3693   \AddToDocumentProperties[hyperref]{pdftitle}{#1}%
3694   \HyXeTeX@CheckUnicode
3695   \HyPsd@PrerenderUnicode{#1}%
3696   \pdfstringdef\@pdftitle{#1}%
3697 }
3698 \define@key{Hyp}{pdfauthor}{%
3699   \AddToDocumentProperties[hyperref]{pdfauthor}{#1}%
3700   \HyXeTeX@CheckUnicode
3701   \HyPsd@PrerenderUnicode{#1}%
3702   \pdfstringdef\@pdfauthor{#1}%
3703 }
3704 \define@key{Hyp}{pdfproducer}{%
3705   \AddToDocumentProperties[hyperref]{pdfproducer}{#1}%
3706   \HyXeTeX@CheckUnicode
3707   \HyPsd@PrerenderUnicode{#1}%
3708   \pdfstringdef\@pdfproducer{#1}%

```

```

3709 }
3710 \define@key{Hyp}{pdfcreator}{%
3711 \AddToDocumentProperties[hyperref]{pdfcreator}{#1}%
3712 \HyXeTeX@CheckUnicode
3713 \HyPsd@PrerenderUnicode{#1}%
3714 \pdfstringdef\@pdfcreator{#1}%
3715 }
3716 \define@key{Hyp}{addtopdfcreator}{%
3717 \HyXeTeX@CheckUnicode
3718 \HyPsd@PrerenderUnicode{#1}%
3719 \pdfstringdef\@pdfcreator{\@pdfcreator, #1}%
3720 }
3721 \define@key{Hyp}{pdfcreationdate}{%
3722 \begingroup
3723 \Hy@unicodedefalse
3724 \pdfstringdef\@pdfcreationdate{#1}%
3725 \endgroup
3726 }
3727 \define@key{Hyp}{pdfmoddate}{%
3728 \begingroup
3729 \Hy@unicodedefalse
3730 \pdfstringdef\@pdfmoddate{#1}%
3731 \endgroup
3732 }
3733 \define@key{Hyp}{pdfsubject}{%
3734 \AddToDocumentProperties[hyperref]{pdfsubject}{#1}%
3735 \HyXeTeX@CheckUnicode
3736 \HyPsd@PrerenderUnicode{#1}%
3737 \pdfstringdef\@pdfsubject{#1}%
3738 }
3739 \define@key{Hyp}{pdfkeywords}{%
3740 \AddToDocumentProperties[hyperref]{pdfkeywords}{#1}%
3741 \HyXeTeX@CheckUnicode
3742 \HyPsd@PrerenderUnicode{#1}%
3743 \pdfstringdef\@pdfkeywords{#1}%
3744 }
3745 \define@key{Hyp}{pdftrapped}{%
3746 \lowercase{\edef\Hy@temp{#1}}%
3747 \ifx\Hy@temp\HyInfo@trapped@true
3748 \def\@pdftrapped{True}%
3749 \else
3750 \ifx\Hy@temp\HyInfo@trapped@false
3751 \def\@pdftrapped{False}%
3752 \else
3753 \ifx\Hy@temp\HyInfo@trapped@unknown
3754 \def\@pdftrapped{Unknown}%
3755 \else
3756 \ifx\Hy@temp\@empty
3757 \else
3758 \Hy@Warning{%
3759 Unsupported value `#1'\MessageBreak
3760 for option `pdftrapped'%
3761 }%
3762 \fi

```

```

3763     \def\@pdftrapped{}%
3764     \fi
3765     \fi
3766     \fi
3767 }
3768 \def\HyInfo@trapped@true{true}
3769 \def\HyInfo@trapped@false{false}
3770 \def\HyInfo@trapped@unknown{unknown}
3771 \def\HyInfo@TrappedUnsupported{%
3772     \ifx\@pdftrapped\@empty
3773     \else
3774     \Hy@WarningNoLine{\pdftrapped' is not supported by this driver}%
3775     \gdef\HyInfo@TrappedUnsupported{}%
3776     \fi
3777 }
3778 \define@key{Hyp}{pdfinfo}{%
3779     \kvsetkeys{pdfinfo}{#1}%
3780 }
3781 \def\Hy@temp#1{%
3782     \lowercase{\Hy@temp@A{#1}}{#1}%
3783 }
3784 \def\Hy@temp@A#1#2{%
3785     \define@key{pdfinfo}{#2}{%
3786         \hypersetup{pdf#1={##1}}%
3787     }%
3788 }
3789 \Hy@temp{Title}
3790 \Hy@temp{Author}
3791 \Hy@temp{Keywords}
3792 \Hy@temp{Subject}
3793 \Hy@temp{Creator}
3794 \Hy@temp{Producer}
3795 \Hy@temp{CreationDate}
3796 \Hy@temp{ModDate}
3797 \Hy@temp{Trapped}
3798 \newif\ifHyInfo@AddonUnsupported
3799 \kv@set@family@handler{pdfinfo}{%
3800     \HyInfo@AddonHandler{#1}{#2}%
3801 }
3802 \let\HyInfo@do\relax
3803 \def\HyInfo@AddonHandler#1#2{%
3804     \ifx\kv@value\relax
3805     \Hy@Warning{%
3806         Option `pdfinfo': ignoring key `\'kv@key' without value%
3807     }%
3808     \else
3809     \EdefEscapeName\HyInfo@KeyEscaped{\kv@key}%
3810     \EdefUnescapeName\HyInfo@Key{\HyInfo@KeyEscaped}%
3811     \expandafter\ifx\csname KV@pdfinfo@\HyInfo@Key\endcsname\relax
3812     \ifHyInfo@AddonUnsupported
3813     \Hy@Warning{%
3814         This driver does not support additional\MessageBreak
3815         information entries, therefore\MessageBreak
3816         `\'kv@key' is ignored%

```

```

3817 }%
3818 \else
3819 \def\HyInfo@tmp###1{%
3820 \kv@define@key{pdfinfo}{##1}{%
3821 \HyXeTeX@CheckUnicode
3822 \HyPsd@PrerenderUnicode{###1}%
3823 \pdfstringdef\HyInfo@Value{###1}%
3824 \global\expandafter
3825 \let\csname HyInfo@Value@##1\endcsname
3826 \HyInfo@Value
3827 }%
3828 }%
3829 \expandafter\HyInfo@tmp\expandafter{\HyInfo@Key}%
3830 \global\expandafter
3831 \let\csname KV@pdfinfo@\HyInfo@Key\expandafter\endcsname
3832 \csname KV@pdfinfo@\HyInfo@Key\endcsname
3833 \xdef\HyInfo@AddonList{%
3834 \HyInfo@AddonList
3835 \HyInfo@do{\HyInfo@Key}%
3836 }%
3837 \expandafter\kv@parse@normalized\expandafter{%
3838 \HyInfo@Key={#2}%
3839 }{%
3840 \kv@processor@default{pdfinfo}%
3841 }%
3842 \fi
3843 \else
3844 \expandafter\kv@parse@normalized\expandafter{%
3845 \HyInfo@Key={#2}%
3846 }{%
3847 \kv@processor@default{pdfinfo}%
3848 }%
3849 \fi
3850 \fi
3851 }
3852 \def\HyInfo@GenerateAddons{%
3853 \ifHyInfo@AddonUnsupported
3854 \def\HyInfo@Addons{}%
3855 \else
3856 \begingroup
3857 \toks@{}%
3858 \def\HyInfo@do##1{%
3859 \EdefEscapeName\HyInfo@Key{##1}%
3860 \edef\x{%
3861 \toks@{%
3862 \the\toks@
3863 /\HyInfo@Key(\csname HyInfo@Value@##1\endcsname)%
3864 }%
3865 }%
3866 \x
3867 }%
3868 \HyInfo@AddonList
3869 \edef\x{\endgroup
3870 \def\noexpand\HyInfo@Addons{\the\toks@}%

```



```

3871 }%
3872 \x
3873 \fi
3874 }
3875 \global\let\HyInfo@AddonList\@empty

3876 \define@key{Hyp}{pdfview}{\calculate@pdfview#1 \}
3877 \define@key{Hyp}{pdflinkmargin}{\setpdflinkmargin{#1}}
3878 \let\setpdflinkmargin\@gobble
3879 \def\calculate@pdfview#1 #2\{%
3880 \def\@pdfview{#1}%
3881 \ifx\#2\%
3882 \def\@pdfviewparams{-32768}%
3883 \else
3884 \def\@pdfviewparams{#2}%
3885 \fi
3886 }
3887 \def\Hy@number#1{%
3888 \the\numexpr#1\relax
3889 }%
3890 \define@key{Hyp}{pdfstartpage}{%
3891 \ifx\#1\%
3892 \let\@pdfstartpage\@empty
3893 \else
3894 \edef\@pdfstartpage{\Hy@number{#1}}%
3895 \fi
3896 }%
3897 \define@key{Hyp}{pdfstartview}{%
3898 \ifx\#1\%
3899 \let\@pdfstartview\@empty
3900 \else
3901 \def\@pdfstartview{/#1}%
3902 \fi
3903 }
3904 \def\HyPat@NonNegativeReal/{%
3905 \ *([0-9]+\.[0-9]*|[0-9]*\.[0-9]+) *%
3906 }
3907 \define@key{Hyp}{pdfremotestartview}{%
3908 \ifx\#1\%
3909 \def\@pdfremotestartview{/Fit}%
3910 \else
3911 \edef\@pdfremotestartview{#1}%
3912 \Hy@Match\@pdfremotestartview}{%
3913 ^{XYZ(%
3914 ()| %
3915 (null|-\HyPat@NonNegativeReal/) %
3916 (null|-\HyPat@NonNegativeReal/) %
3917 (null|\HyPat@NonNegativeReal/) %
3918 )| % end of "XYZ"
3919 Fit(%
3920 ()| %
3921 B| %
3922 (H|V|BH|BV)(%
3923 ()| %
3924 (null|\HyPat@NonNegativeReal/) %

```

```

3925         )|%
3926     R %
3927         \HyPat@NonNegativeReal/ %
3928         \HyPat@NonNegativeReal/ %
3929         \HyPat@NonNegativeReal/ %
3930         \HyPat@NonNegativeReal/%
3931     )% end of "Fit"
3932 )$%
3933 }-}{%
3934 \Hy@Warning{%
3935     Invalid value ` \@pdfremotestartview'\MessageBreak
3936     of `pdfremotestartview'\MessageBreak
3937     is replaced by `Fit'%
3938 }%
3939 \let\@pdfremotestartview\@empty
3940 }%
3941 \ifx\@pdfremotestartview\@empty
3942 \def\@pdfremotestartview{/Fit}%
3943 \else
3944 \edef\@pdfremotestartview{/ \@pdfremotestartview}%
3945 \fi
3946 \fi
3947 }
3948 \define@key{Hyp}{pdfpagescrop}{\edef\@pdfpagescrop{#1}}
3949 \define@key{Hyp}{pdftoolbar}[true]{%
3950 \Hy@boolkey{pdftoolbar}{#1}%
3951 }
3952 \define@key{Hyp}{pdfmenubar}[true]{%
3953 \Hy@boolkey{pdfmenubar}{#1}%
3954 }
3955 \define@key{Hyp}{pdfwindowui}[true]{%
3956 \Hy@boolkey{pdfwindowui}{#1}%
3957 }
3958 \define@key{Hyp}{pdffitwindow}[true]{%
3959 \Hy@boolkey{pdffitwindow}{#1}%
3960 }
3961 \define@key{Hyp}{pdfcenterwindow}[true]{%
3962 \Hy@boolkey{pdfcenterwindow}{#1}%
3963 }
3964 \define@key{Hyp}{pdfdisplaydoctitle}[true]{%
3965 \Hy@boolkey{pdfdisplaydoctitle}{#1}%
3966 }
3967 \define@key{Hyp}{pdffa}[true]{%
3968 \Hy@boolkey{pdffa}{#1}%
3969 }
3970 \define@key{Hyp}{pdfnewwindow}[true]{%
3971 \def\Hy@temp{#1}%
3972 \ifx\Hy@temp\@empty
3973 \Hy@pdfnewwindowsetfalse
3974 \else
3975 \Hy@pdfnewwindowsettrue
3976 \Hy@boolkey{pdfnewwindow}{#1}%
3977 \fi
3978 }

```

```

3979 \def\Hy@SetNewWindow{%
3980   \ifHy@pdfnewwindowset
3981     /NewWindow %
3982     \ifHy@pdfnewwindow true\else false\fi
3983   \fi
3984 }
3985 \Hy@DefNameKey{pdfpagelayout}{%
3986   \do{SinglePage}{}%
3987   \do{OneColumn}{}%
3988   \do{TwoColumnLeft}{}%
3989   \do{TwoColumnRight}{}%
3990   \do{TwoPageLeft}{PDF 1.5}%
3991   \do{TwoPageRight}{PDF 1.5}%
3992 }
3993 \define@key{Hyp}{pdflang}{%
3994   \edef\@pdflang{#1}%
3995   \def\Hy@temp{\relax}%
3996   \ifx\@pdflang\Hy@temp
3997     \let\@pdflang\relax
3998   \fi
3999   \ifx\@pdflang\relax
4000     \else
4001       \ifx\@pdflang\@empty
4002         \else

```

Test according to ABNF of RFC 3066.

```

4003   \Hy@Match\@pdflang{icase}{%
4004     ~%
4005     [a-z]{1,8}%
4006     (-[a-z0-9]{1,8})*%
4007     $%
4008   }%

```

Test according to ABNF of RFC 5646.

```

4009   \Hy@Match\@pdflang{icase}{%
4010     ~%
4011     (%
4012     % langtag
4013     (% language
4014       [a-z]{2,3}%
4015       ([a-z]{3}(-[a-z]{3}){0,2})?% extlang
4016       |[a-z]{4}% reserved for future use
4017       |[a-z]{5,8}% registered language subtag
4018     )%
4019     (-[a-z]{4})?% script
4020     (-([a-z]{2}|[0-9]{3}))?% region
4021     (-([a-z]{5,8}|[0-9][a-z0-9]{3}))?% variant
4022     (-[0-9a-wyz](-[a-z0-9]{2,8})+)% extension
4023     (-x(-[a-z0-9]{1,8})+)?% privateuse
4024     % privateuse
4025     |x-([a-z0-9]{1,8})+%
4026     % grandfathered/irregular
4027     |en-GB-oed%
4028     |i-(ami|bnn|default|enochian|hak|klinton|lux|%
4029       mingo|navajo|pwn|tao|tay|tsu)%

```

```

4030     |sgn-(BE-FR|BE-NL|CH-DE)%
4031     % grandfathered/regular
4032     |art-lojban%
4033     |cel-gaulish%
4034     |no-(bok|nyn)%
4035     |zh-(guoyu|hakka|min|min-nan|xiang)%
4036     )%
4037     $%
4038     }{%

```

Test for unique extensions.

```

4039     \Hy@Match{-\@pdflang}{icase}{-[a-wyz0-9]-}{%
4040     \Hy@Match\@pdflang{icase}{~x-}{}{%
4041     % remove privateuse
4042     \edef\Hy@temp{-\@pdflang}%
4043     \Hy@Match\Hy@temp{icase}{%
4044     ~%
4045     (%
4046     (-[a-wyz0-9]|-[a-z0-9]{2,8})*%
4047     )%
4048     -x-%
4049     }{%
4050     \edef\Hy@temp{%
4051     \expandafter\strip@prefix\pdfastmatch1%
4052     }%
4053     }{}%
4054     \Hy@Match\Hy@temp{icase}{%
4055     (-[a-wyz0-9]-).*\@backslashchar1%
4056     }{%
4057     \Hy@Warning{%
4058     Invalid language identifier `#1'\MessageBreak
4059     for option `pdflang', because it violates\MessageBreak
4060     well-formedness defined in RFC 4646\MessageBreak
4061     by duplicate singleton subtags%
4062     }%
4063     \let\@pdflang\relax
4064     }{}%
4065     }%
4066     }{}%

```

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

```

4067     \ifx\@pdflang\relax
4068     \else
4069     \Hy@Match\@pdflang{icase}{%
4070     ~%
4071     [a-zA-Z]{2}-%
4072     (%
4073     aa|AA|%
4074     [qQ][m-zM-Z]|%
4075     [xX][a-zA-Z]|%
4076     zz|ZZ%
4077     )%
4078     (-|)$)%
4079     }{%
4080     \Hy@Warning{%

```

```

4081         Invalid language identifier `#1'\MessageBreak
4082         for option `pdflang' because of invalid country code%
4083         \MessageBreak
4084         in second subtag (RFC 3066)%
4085     }%
4086     \let\@pdflang\relax
4087 }{}%
4088 \fi
4089 }{%
4090 \Hy@Warning{%
4091     Invalid language identifier `#1'\MessageBreak
4092     for option `pdflang', because it violates\MessageBreak
4093     well-formedness defined in RFC 5646%
4094 }%
4095 \let\@pdflang\relax
4096 }%
4097 }{%
4098 \Hy@Warning{%
4099     Invalid language identifier `#1'\MessageBreak
4100     for option `pdflang' (RFC 3066)%
4101 }%
4102 \let\@pdflang\relax
4103 }%
4104 \fi
4105 \fi
4106 }
4107 \define@key{Hyp}{pdfpagelabels}[true]{%
4108 \Hy@boolkey{pdfpagelabels}{#1}%
4109 }
4110 \define@key{Hyp}{pdfescapeform}[true]{%
4111 \Hy@boolkey{pdfescapeform}{#1}%
4112 }

```

Default values:

```

4113 \def\@linkbordercolor{1 0 0}
4114 \def\@urlbordercolor{0 1 1}
4115 \def\@menubordercolor{1 0 0}
4116 \def\@filebordercolor{0 .5 .5}
4117 \def\@runbordercolor{0 .7 .7}
4118 \def\@citebordercolor{0 1 0}
4119 \def\@pdfhighlight{/I}
4120 \let\@pdftitle\@empty
4121 \let\@pdfauthor\@empty
4122 \let\@pdfproducer\relax
4123 \def\@pdfcreator{LaTeX with hyperref}
4124 \let\@pdfcreationdate\@empty
4125 \let\@pdfmoddate\@empty
4126 \let\@pdfsubject\@empty
4127 \let\@pdfkeywords\@empty
4128 \let\@pdftrapped\@empty
4129 \let\@pdfpagescrop\@empty
4130 \def\@pdfstartview{/Fit}
4131 \def\@pdfremotestartview{/Fit}
4132 \def\@pdfstartpage{1}
4133 \let\@pdfprintpagerange\@empty

```

```

4134 \let\@pdfdiag\relax
4135 \let\PDF@SetupDoc\@empty
4136 \let\PDF@FinishDoc\@empty
4137 \let\phantomsection\@empty
4138 \let\special@paper\@empty
4139 \def\HyperDestNameFilter#1{#1}
4140 \Hy@AtBeginDocument{%
4141   \begingroup
4142     \edef\x{\ifdim\stockheight>z@ \stockheight\else\paperheight\fi}%
4143     \dimen@=\x\relax
4144     \ifdim\dimen@>z@
4145       \else
4146         \dimen@=11in\relax
4147         \Hy@WarningNoLine{%
4148           Height of page (\expandafter\string\x) %
4149           is invalid (\the\x),\MessageBreak
4150           using 11in%
4151         }%
4152       \fi
4153       \dimen@=0.99626401\dimen@
4154       \xdef\Hy@pageheight{\strip@pt\dimen@}%
4155     \endgroup
4156 }
4157 \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.

```

4158 \let\hyper@normalise\ExecuteOptions
4159 \let\ExecuteOptions\hypersetup
4160 \Hy@RestoreCatcodes
4161 \InputIfFileExists{hyperref.cfg}{-}{-}
4162 \Hy@SetCatcodes
4163 \let\ExecuteOptions\hyper@normalise
4164 \ifx\Hy@MaybeStopNow\relax
4165 \else
4166   \Hy@stoppedearlytrue
4167   \expandafter\Hy@MaybeStopNow
4168 \fi
4169 \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.

```

4170 \SetupKeyvalOptions{family=Hyp}
4171 \DeclareLocalOptions{%
4172   a4paper,a5paper,b5paper,letterpaper,legalpaper,executivepaper%
4173 }

```

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

```

4174 \@ifpackagewith{hyperref}{tex4ht}{%
4175 }{%
4176   \@ifpackageloaded{tex4ht}{%
4177     \PassOptionsToPackage{tex4ht}{hyperref}%
4178   }{%
4179     \@ifundefined{HCode}{%

```

```

4180 }{%
4181 \begingroup
4182 \def\Hy@pkg{tex4ht}%
4183 \def\Hy@temp@A#1\RequirePackage[#2]#3#4\Hy@NIL{%
4184 \def\Hy@param{#2#3}%
4185 \ifx\Hy@param\@empty
4186 \expandafter\@gobble
4187 \else
4188 \def\Hy@param{#3}%
4189 \ifx\Hy@param\Hy@pkg
4190 \PassOptionsToPackage{#2}{tex4ht}%
4191 \expandafter\expandafter\expandafter\@gobble
4192 \else
4193 \expandafter\expandafter\expandafter\@firstofone
4194 \fi
4195 \fi
4196 {\Hy@temp@A#4\Hy@NIL}%
4197 }%
4198 \expandafter
4199 \Hy@temp@A\@documentclasshook\RequirePackage[]{\Hy@NIL
4200 \endgroup
4201 \PassOptionsToPackage{tex4ht}{hyperref}%
4202 }%
4203 }%
4204 }

4205 \let\ReadBookmarks\relax
4206 \ProcessKeyvalOptions{Hyp}

```

After processing options.

15.1 Package xspace support

```

4207 \def\Hy@xspace@end{}
4208 \@ifundefined{xspaceaddexceptions}{%
4209 \Hy@AtBeginDocument{%
4210 \@ifundefined{xspaceaddexceptions}{%
4211 }{%
4212 \def\Hy@xspace@end{%
4213 \@gobble{end for xspace}%
4214 }%
4215 \xspaceaddexceptions{%
4216 \Hy@xspace@end,\hyper@linkend,\hyper@anchorend
4217 }%
4218 }%
4219 }%
4220 }{%
4221 \def\Hy@xspace@end{%
4222 \@gobble{end for xspace}%
4223 }%
4224 \xspaceaddexceptions{\Hy@xspace@end,\hyper@linkend,\hyper@anchorend}%
4225 }

```

15.2 Option draft

```

4226 \Hy@AtBeginDocument{%

```

```

4227 \ifHy@draft
4228 \let\hyper@@anchor\@gobble
4229 \gdef\hyper@link#1#2#3{#3\Hy@xspace@end}%
4230 \def\hyper@anchorstart#1#2{#2\Hy@xspace@end}%
4231 \def\hyper@anchorend{\Hy@xspace@end}%
4232 \let\hyper@linkstart\@gobbletwo
4233 \def\hyper@linkend{\Hy@xspace@end}%
4234 \def\hyper@linkurl#1#2{#1\Hy@xspace@end}%
4235 \def\hyper@linkfile#1#2#3{#1\Hy@xspace@end}%
4236 \def\hyper@link@[#1]#2#3#4{#4\Hy@xspace@end}%
4237 \def\Acrobatmenu#1#2{\leavevmode#2\Hy@xspace@end}%
4238 \let\PDF@SetupDoc\@empty
4239 \let\PDF@FinishDoc\@empty
4240 \let\ReadBookmarks\relax
4241 \let\WriteBookmarks\relax
4242 \Hy@WarningNoLine{Draft mode on}%
4243 \fi
4244 \Hy@DisableOption{draft}%
4245 \Hy@DisableOption{nolinks}%
4246 \Hy@DisableOption{final}%
4247 }

```

15.3 PDF/A

```

4248 \Hy@DisableOption{pdfa}
4249 \ifHy@pdfa
4250 \ifnum \Hy@pdf@majorminor@version < 104
4251 \kvsetkeys{Hyp}{pdfversion=1.4}%
4252 \fi
4253 \Hy@DisableOption{pdfversion}%
4254 \def\Hy@Acrobatmenu#1#2{%
4255 \leavevmode
4256 \begingroup
4257 \edef\x{#1}%
4258 \@onelevel@sanitize\x
4259 \ifx\x\Hy@NextPage
4260 \let\y=Y%
4261 \else
4262 \ifx\x\Hy@PrevPage
4263 \let\y=Y%
4264 \else
4265 \ifx\x\Hy@FirstPage
4266 \let\y=Y%
4267 \else
4268 \ifx\x\Hy@LastPage
4269 \let\y=Y%
4270 \else
4271 \let\y=N%
4272 \fi
4273 \fi
4274 \fi
4275 \fi
4276 \expandafter\endgroup
4277 \ifx\y Y%
4278 \else

```



```

4279 \Hy@Error{%
4280 PDF/A: Named action `#1' is not permitted%
4281 }\@ehc
4282 {#2}%
4283 \expandafter\@gobble
4284 \fi
4285 }%
4286 \def\Hy@temp#1{%
4287 \expandafter\def\csname Hy@#1\endcsname{#1}%
4288 \expandafter\@onelevel@sanitize\csname Hy@#1\endcsname
4289 }%
4290 \Hy@temp{NextPage}%
4291 \Hy@temp{PrevPage}%
4292 \Hy@temp{FirstPage}%
4293 \Hy@temp{LastPage}%
4294 \else
4295 \def\Hy@Acrobatmenu#1#2{\leavevmode}%
4296 \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.

```

4297 \def\Hy@wrapper@babel#1#2{%
4298 \begingroup
4299 \Hy@safe@activetrue
4300 \set@display@protect
4301 \edef\x{#2}%
4302 \@onelevel@sanitize\x
4303 \toks@{#1}%
4304 \edef\x{\endgroup\the\toks@{\x}}%
4305 \x
4306 }
4307 \def\Hy@WrapperDef#1{%
4308 \begingroup
4309 \escapechar=\m@ne
4310 \xdef\Hy@gtemp{%
4311 \expandafter\noexpand\csname HyWrap@\string#1\endcsname
4312 }%
4313 \endgroup
4314 \edef#1{%
4315 \noexpand\Hy@wrapper@babel
4316 \expandafter\noexpand\Hy@gtemp
4317 }%
4318 \expandafter\def\Hy@gtemp
4319 }
4320 \ifHy@hyperfigures
4321 \Hy@Info{Hyper figures ON}%
4322 \else
4323 \Hy@Info{Hyper figures OFF}%
4324 \fi

```

```

4325 \ifHy@nesting
4326 \Hy@Info{Link nesting ON}%
4327 \else
4328 \Hy@Info{Link nesting OFF}%
4329 \fi
4330 \ifHy@hyperindex
4331 \Hy@Info{Hyper index ON}%
4332 \else
4333 \Hy@Info{Hyper index OFF}%
4334 \fi
4335 \ifHy@plainpages
4336 \Hy@Info{Plain pages ON}%
4337 \else
4338 \Hy@Info{Plain pages OFF}%
4339 \fi
4340 \ifHy@backref
4341 \Hy@Info{Backreferencing ON}%
4342 \else
4343 \Hy@Info{Backreferencing OFF}%
4344 \fi
4345 \ifHy@implicit
4346 \Hy@InfoNoLine{Implicit mode ON; LaTeX internals redefined}%
4347 \else
4348 \Hy@InfoNoLine{Implicit mode OFF; no redefinition of LaTeX internals}%
4349 \def\MaybeStopEarly{%
4350 \Hy@Message{Stopped early}%
4351 \Hy@AtBeginDocument{%
4352 \PDF@FinishDoc
4353 \gdef\PDF@FinishDoc{}%
4354 }%
4355 \endinput
4356 }%
4357 \Hy@AtBeginDocument{%
4358 \let\autoref\ref
4359 \let\autopageref\pageref
4360 \ifx\@pdfpagemode\@empty
4361 \gdef\@pdfpagemode{UseNone}%
4362 \fi
4363 \global\Hy@backreffalse
4364 }%
4365 \Hy@AtEndOfPackage{%
4366 \global\let\ReadBookmarks\relax
4367 \global\let\WriteBookmarks\relax
4368 }%
4369 \fi
4370 \Hy@DisableOption{implicit}

```

15.4.1 Driver loading

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

```

4371 \@ifundefined{stockwidth}{\newdimen\stockwidth}{}
4372 \@ifundefined{stockheight}{\newdimen\stockheight}{}
4373 \Hy@AtEndOfPackage{%

```

```

4374 \@ifpackageloaded{tex4ht}{%
4375   \def\Hy@driver{htex4ht}%
4376   \Hy@texhttrue
4377 }{}%

```

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.

```

4378 \ifx\Hy@driver\@empty
4379 \else
4380   \ifx\pdfextension\@undefined
4381     \def\Hy@temp{hpdfTeX}%
4382   \else
4383     \def\Hy@temp{hluatex}%
4384   \fi
4385 \ifpdf
4386   \ifx\Hy@driver\Hy@temp
4387   \else
4388     \Hy@WarningNoLine{%
4389       Wrong driver `\'Hy@driver.def';\MessageBreak
4390       pdfTeX is running in PDF mode.\MessageBreak
4391       Forcing driver `\'Hy@temp.def'%
4392     }%
4393     \let\Hy@driver\Hy@temp
4394   \fi
4395 \else
4396   \ifx\Hy@driver\Hy@temp
4397     \Hy@WarningNoLine{%
4398       Wrong driver `\'Hy@driver.def';\MessageBreak
4399       pdfTeX is not running in PDF mode.\MessageBreak
4400       Using default driver%
4401     }%
4402     \let\Hy@driver\@empty
4403   \fi
4404 \fi
4405 \fi
4406 \ifHy@texht
4407 \else
4408   \ifx\Hy@driver\@empty
4409   \else
4410     \def\Hy@temp{hxetex}%
4411     \ifxetex
4412       \ifx\Hy@driver\Hy@temp
4413       \else
4414         \Hy@WarningNoLine{%
4415           Wrong driver `\'Hy@driver.def';\MessageBreak
4416           XeTeX is running.\MessageBreak
4417           Forcing driver `\'Hy@temp.def' for XeTeX%
4418         }%
4419         \let\Hy@driver\Hy@temp
4420       \fi
4421     \fi
4422   \fi
4423 \fi
4424 \ifx\Hy@driver\@empty

```

```

4425 \else
4426 \def\Hy@temp{hhitex}%
4427 \ifhint
4428 \ifx\Hy@driver\Hy@temp
4429 \else
4430 \Hy@WarningNoLine{%
4431   Wrong driver `\'Hy@driver.def';\MessageBreak
4432   hitex is running.\MessageBreak
4433   Forcing driver `\'Hy@temp.def'%
4434 }%
4435 \let\Hy@driver\Hy@temp
4436 \fi
4437 \fi
4438 \fi
4439 \ifx\Hy@driver\@empty
4440 \else
4441 \def\Hy@temp{hvtexhtm}%
4442 \ifnum\ifvtex\OpMode\else\m@ne\fi=10 %
4443 \ifx\Hy@driver\Hy@temp
4444 \else
4445 \Hy@WarningNoLine{%
4446   Wrong driver `\'Hy@driver.def';\MessageBreak
4447   VTeX is running in HTML mode.\MessageBreak
4448   Forcing driver `\'Hy@temp.def'%
4449 }%
4450 \let\Hy@driver\Hy@temp
4451 \fi
4452 \else
4453 \ifx\Hy@driver\Hy@temp
4454 \Hy@WarningNoLine{%
4455   Wrong driver `\'Hy@driver.def';\MessageBreak
4456   VTeX is not running in HTML mode.\MessageBreak
4457   Using default driver%
4458 }%
4459 \let\Hy@driver\@empty
4460 \fi
4461 \fi
4462 \fi

```

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

```

4463 \let\HyOpt@DriverType\@empty
4464 \ifx\HyOpt@CustomDriver\@empty
4465 \ifx\Hy@driver\@empty
4466 \def\HyOpt@DriverType{ (autodetected)}%
4467 \providecommand*{\Hy@defaultdriver}{hdvips}%
4468 \ifpdf
4469 \ifx\pdfextension\@undefined
4470 \def\Hy@driver{hpdfTEX}%
4471 \else
4472 \def\Hy@driver{hluatex}%
4473 \fi
4474 \else
4475 \ifxetex
4476 \def\Hy@driver{hxetex}%
4477 \else

```

```

4478     \ifnum\ifvtex\OpMode\else\m@ne\fi=10 %
4479     \def\Hy@driver{hvtexhtm}%
4480     \def\MaybeStopEarly{%
4481     \Hy@Message{Stopped early}%
4482     \Hy@AtBeginDocument{%
4483     \PDF@FinishDoc
4484     \gdef\PDF@FinishDoc{}}%
4485     }%
4486     \endinput
4487     }%
4488     \else
4489     \ifhint
4490     \def\Hy@driver{hhitex}
4491     \else
4492     \ifnum\ifvtex\OpMode\else\m@ne\fi=\@ne
4493     \def\Hy@driver{hvtex}%
4494     \else
4495     \ifnum\ifvtex\OpMode\else\m@ne\fi=\tw@
4496     \def\Hy@driver{hvtex}%
4497     \else
4498     \ifx\HyOpt@DriverFallback@empty
4499     \let\Hy@driver\Hy@defaultdriver
4500     \def\HyOpt@DriverType{ (default)}%
4501     \else
4502     \begingroup
4503     \toks@\expandafter{\HyOpt@DriverFallback}%
4504     \edef\x{\endgroup
4505     \noexpand\kvsetkeys{Hyp}{\the\toks@}}%
4506     }%
4507     \x
4508     \ifx\Hy@driver@empty
4509     \let\Hy@driver\Hy@defaultdriver
4510     \def\HyOpt@DriverType{ (default)}%
4511     \else
4512     \def\HyOpt@DriverType{ (fallback)}%
4513     \fi
4514     \fi
4515     \fi
4516     \fi
4517     \fi
4518     \fi
4519     \fi
4520     \fi
4521     \ifx\Hy@driver\Hy@defaultdriver
4522     \def\Hy@temp{hdviwind}%
4523     \ifx\Hy@temp\Hy@driver
4524     \kvsetkeys{Hyp}{colorlinks}%
4525     \PassOptionsToPackage{dviwindo}{color}%
4526     \fi
4527     \fi
4528     \fi
4529     \else
4530     \def\HyOpt@DriverType{ (custom)}%
4531     \let\Hy@driver\HyOpt@CustomDriver

```

```

4532 \fi
4533 \Hy@InfoNoLine{Driver\HyOpt@DriverType: \Hy@driver}%
4534 \chardef\Hy@VersionChecked=0 %
4535 \input{\Hy@driver.def}%
4536 \ifcase\Hy@VersionChecked
4537   \Hy@VersionCheck{\Hy@driver.def}%
4538 \fi
4539 \let\@unprocessedoptions\relax
4540 \Hy@RestoreCatcodes
4541 \Hy@DisableOption{tex4ht}%
4542 \Hy@DisableOption{pdftex}%
4543 \Hy@DisableOption{nativepdf}%
4544 \Hy@DisableOption{dviPDFm}%
4545 \Hy@DisableOption{dviPDFmx}%
4546 \Hy@DisableOption{dviPDFmx-outline-open}%
4547 \Hy@DisableOption{pdfmark}%
4548 \Hy@DisableOption{dvips}%
4549 \Hy@DisableOption{hypertext}%
4550 \Hy@DisableOption{vtex}%
4551 \Hy@DisableOption{vtexpdfmark}%
4552 \Hy@DisableOption{dviwindo}%
4553 \Hy@DisableOption{dvipsone}%
4554 \Hy@DisableOption{textures}%
4555 \Hy@DisableOption{latex2html}%
4556 \Hy@DisableOption{ps2pdf}%
4557 \Hy@DisableOption{xetex}%
4558 \Hy@DisableOption{driverfallback}%
4559 \Hy@DisableOption{customdriver}%
4560 \Hy@DisableOption{pdfversion}%
4561 }

```

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.

```

4562 \newif\ifHy@dviPDFmxOutlineOpen
4563 \ifxetex
4564   \ifdim\number\XeTeXversion\XeTeXrevision in<0.9995in %
4565     \else
4566       \chardef\SpecialDviPDFmxOutlineOpen\@ne
4567       \Hy@dviPDFmxOutlineOpen>true
4568     \fi
4569 \fi
4570 \begingroup\expandafter\expandafter\expandafter\endgroup
4571 \expandafter\ifx\csname SpecialDviPDFmxOutlineOpen\endcsname\relax
4572 \else
4573   \ifnum\SpecialDviPDFmxOutlineOpen>\z@
4574     \Hy@dviPDFmxOutlineOpen>true
4575   \fi
4576 \fi

```

15.4.2 Bookmarks

```

4577 \def\WriteBookmarks{0}
4578 \def\@bookmarkopenstatus#1{%

```

```
4579 \ifHy@bookmarksopen
```

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

```
4580 \ifnum#1<\expandafter\@firstofone\expandafter
4581     {\number\@bookmarksopenlevel} % explicit space
4582 \else
4583     -%
4584 \fi
4585 \else
4586     -%
4587 \fi
4588 }
4589 \ifHy@bookmarks
4590 \Hy@Info{Bookmarks ON}%
4591 \ifx\@pdfpagemode\@empty
4592 \def\@pdfpagemode{UseOutlines}%
4593 \fi
4594 \else
4595 \let\@bookmarkopenstatus\@gobble
4596 \Hy@Info{Bookmarks OFF}%
4597 \Hy@AtEndOfPackage{%
4598 \global\let\ReadBookmarks\relax
4599 \global\let\WriteBookmarks\relax
4600 }%
4601 \ifx\@pdfpagemode\@empty
4602 \def\@pdfpagemode{UseNone}%
4603 \fi
4604 \fi
4605 \Hy@DisableOption{bookmarks}
```

Add wrapper for setting standard catcodes (babel's shorthands).

```
4606 \def\Hy@CatcodeWrapper#1{%
4607 \let\Hy@endWrap\@empty
4608 \def\TMP@EnsureCode##1##2{%
4609 \edef\Hy@endWrap{%
4610 \Hy@endWrap
4611 \catcode##1 \the\catcode##1\relax
4612 }%
4613 \catcode##1 ##2\relax
4614 }%
4615 \TMP@EnsureCode{10}{12}% ^^J
4616 \TMP@EnsureCode{33}{12}% !
4617 \TMP@EnsureCode{34}{12}% "
4618 \TMP@EnsureCode{36}{3}% $ (math)
4619 \TMP@EnsureCode{38}{4}% & (alignment)
4620 \TMP@EnsureCode{39}{12}% '
4621 \TMP@EnsureCode{40}{12}% (
4622 \TMP@EnsureCode{41}{12}% )
4623 \TMP@EnsureCode{42}{12}% *
4624 \TMP@EnsureCode{43}{12}% +
4625 \TMP@EnsureCode{44}{12}% ,
4626 \TMP@EnsureCode{45}{12}% -
4627 \TMP@EnsureCode{46}{12}% .
4628 \TMP@EnsureCode{47}{12}% /
```

```

4629 \TMP@EnsureCode{58}{12}% :
4630 \TMP@EnsureCode{59}{12}% ;
4631 \TMP@EnsureCode{60}{12}% <
4632 \TMP@EnsureCode{61}{12}% =
4633 \TMP@EnsureCode{62}{12}% >
4634 \TMP@EnsureCode{63}{12}% ?
4635 \TMP@EnsureCode{91}{12}% [
4636 \TMP@EnsureCode{93}{12}% ]
4637 \TMP@EnsureCode{94}{7}% ^ (superscript)
4638 \TMP@EnsureCode{95}{8}% _ (subscript)
4639 \TMP@EnsureCode{96}{12}% `
4640 \TMP@EnsureCode{124}{12}% |
4641 \TMP@EnsureCode{126}{13}% ~ (active)
4642 #1\relax
4643 \Hy@EndWrap
4644 }

```

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

```

4645 \Hy@AtBeginDocument{%
4646   \ifHy@ocgcolorlinks
4647     \kvsetkeys{Hyp}{colorlinks}%
4648     \ifHy@pdfa
4649       \Hy@Warning{%
4650         PDF/A: Optional Content Groups are prohibited,\MessageBreak
4651         using `colorlinks' instead of `ocgcolorlinks'%
4652       }%
4653     \Hy@ocgcolorlinksfalse
4654   \fi
4655 \fi
4656 \ifHy@ocgcolorlinks
4657 \else
4658   \Hy@DisableOption{ocgcolorlinks}%
4659 \fi
4660 \ifHy@colorlinks
4661   \def\@pdfborder{0 0 0}%
4662   \let\@pdfborderstyle\@empty
4663   \Hy@CatcodeWrapper{%
4664     \RequirePackage{color}%
4665   }%
4666   \def\Hy@colorlink#1{%
4667     \begingroup
4668     \HyColor@UseColor#1%
4669   }%
4670   \def\Hy@endcolorlink{\endgroup}%
4671   \Hy@Info{Link coloring ON}%
4672 \else
4673   \ifHy@frenchlinks
4674     \def\Hy@colorlink#1{\begingroup\fontshape{\scdefault}\selectfont}%
4675     \def\Hy@endcolorlink{\endgroup}%
4676     \Hy@Info{French linking ON}%
4677   \else
4678     \def\Hy@colorlink#1{\begingroup}%

```



```

4679 \def\Hy@endcolorlink{\endgroup}%
4680 \Hy@Info{Link coloring OFF}%
4681 \fi
4682 \fi
4683 \Hy@DisableOption{colorlinks}%
4684 \Hy@DisableOption{frenchlinks}%
4685 \ifHy@texht
4686 \else

```

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

```

4687 \ifHy@implicit
4688 \let \T@Ref\HyRef@Ref
4689 \def\@refstar#1{%
4690 \NR@ref@showkeys{#1}%
4691 \HyRef@StarSetRef{#1}\@firstoffive
4692 }
4693 \def\@pagerefstar#1{%
4694 \NR@ref@showkeys{#1}%
4695 \HyRef@StarSetRef{#1}\@secondoffive
4696 }
4697 \def\@namerefstar#1{%
4698 \NR@ref@showkeys{#1}%
4699 \HyRef@StarSetRef{#1}\@thirdoffive
4700 }
4701 \def\@Refstar#1{%
4702 \NR@ref@showkeys{#1}%
4703 \HyRef@StarSetRef{#1}\HyRef@MakeUppercaseFirstOfFive
4704 }%
4705 \else
4706 \fi
4707 \fi
4708 }
4709 \Hy@AtBeginDocument{%
4710 \ifx\ReadBookmarks\relax
4711 \else
4712 \Hy@CatcodeWrapper\ReadBookmarks
4713 \fi
4714 }
4715 \ifHy@backref
4716 \RequirePackage{backref}%
4717 \else
4718 \let\Hy@backout\@gobble
4719 \fi
4720 \Hy@DisableOption{backref}
4721 \Hy@DisableOption{pagebackref}
4722 \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.

```

4723 \begingroup
4724 \endlinechar=-1 %
4725 \catcode\^^A=14 %
4726 \catcode\^^M\active
4727 \catcode\%\active
4728 \catcode\#\active
4729 \catcode\_ \active
4730 \catcode\$\active
4731 \catcode\&\active
4732 \gdef\hyper@normalise{^^A
4733 \begingroup
4734 \@makeother{:}^^A
4735 \catcode\^^M\active
4736 \def^^M{ }^^A
4737 \catcode\%\active
4738 \let%\@percentchar
4739 \let%\@percentchar
4740 \catcode\#\active
4741 \def#{\hyper@hash}^^A
4742 \def#\{\hyper@hash}^^A
4743 \@makeother\&^^A
4744 \edef&{\string&}^^A
4745 \edef\&{\string&}^^A
4746 \edef\textunderscore{\string_}^^A
4747 \let\_ \textunderscore
4748 \catcode\_ \active
4749 \let\_ \textunderscore
4750 \let~\hyper@tilde
4751 \let\~\hyper@tilde
4752 \let\textasciitilde\hyper@tilde
4753 \let\\\@backslashchar
4754 \edef$\{\string$}^^A
4755 \Hy@safe@activestrue
4756 \hyper@n@rmalise
4757 }^^A
4758 \catcode\#=6 ^^A
4759 \gdef\Hy@ActiveCarriageReturn{^^M}^^A
4760 \gdef\hyper@n@rmalise#1#2{^^A
4761 \def\Hy@tempa{#2}^^A
4762 \ifx\Hy@tempa\Hy@ActiveCarriageReturn
4763 \Hy@ReturnAfterElseFi{^^A
4764 \hyper@@normalise{#1}^^A
4765 }^^A
4766 \else
4767 \Hy@ReturnAfterFi{^^A
4768 \hyper@@normalise{#1}{#2}^^A
4769 }^^A
4770 \fi
4771 }^^A
4772 \gdef\hyper@@normalise#1#2{^^A
4773 \edef\Hy@tempa{^^A

```

```

4774 \endgroup
4775 \noexpand#1{\Hy@RemovePercentCr#2%^^M\@nil}^^A
4776 }^^A
4777 \Hy@tempa
4778 }^^A
4779 \gdef\Hy@RemovePercentCr#1%^^M#2\@nil{^^A
4780 #1^^A
4781 \ifx\limits#2\limits
4782 \else
4783 \Hy@ReturnAfterFi{^^A
4784 \Hy@RemovePercentCr #2\@nil
4785 }^^A
4786 \fi
4787 }^^A
4788 \endgroup
4789 \providecommand*\hyper@chars{%
4790 \let\#\hyper@hash
4791 \let\%\@percentchar
4792 \Hy@safe@activestrue
4793 }

4794 \def\hyperlink#1#2{%
4795 \hyper@@link{}{#1}{#2}%
4796 }

4797 \def\Hy@VerboseLinkStart#1#2{%
4798 \ifHy@verbose
4799 \begingroup
4800 \Hy@safe@activestrue
4801 \xdef\Hy@VerboseGlobalTemp{(#1) `#2'}%
4802 \Hy@Info{Reference \Hy@VerboseGlobalTemp}%
4803 \xdef\Hy@VerboseGlobalTemp{%
4804 \Hy@VerboseGlobalTemp, %
4805 line \the\inputlineno
4806 }%
4807 \endgroup
4808 \let\Hy@VerboseLinkInfo\Hy@VerboseGlobalTemp
4809 \@onelevel@sanitize\Hy@VerboseLinkInfo
4810 \fi
4811 }

4812 \def\Hy@VerboseLinkInfo{<VerboseLinkInfo>}
4813 \def\Hy@VerboseLinkStop{%
4814 \ifHy@verbose
4815 \begingroup
4816 \edef\x{\endgroup
4817 \write\m@ne{%
4818 Package `hyperref' Info: %
4819 End of reference \Hy@VerboseLinkInfo.%
4820 }%
4821 }%
4822 \x
4823 \fi
4824 }

4825 \def\Hy@VerboseAnchor#1{%
4826 \ifHy@verbose

```

```

4827 \begingroup
4828 \Hy@safe@activestruer
4829 \Hy@Info{Anchor ``\HyperDestNameFilter{#1}'}%
4830 \endgroup
4831 \fi
4832 }

4833 \def\Hy@AllowHyphens{%
4834 \relax
4835 \ifhmode
4836 \penalty\@M
4837 \hskip\z@skip
4838 \fi
4839 }

4840 \DeclareRobustCommand*\href[1][]{%
4841 \begingroup
4842 \setkeys{href}{#1}%
4843 \@ifnextchar\bgroup\Hy@href{\hyper@normalise\href@}%
4844 }
4845 \def\Hy@href#{%
4846 \hyper@normalise\href@
4847 }
4848 \begingroup
4849 \catcode`\$=6 %
4850 \catcode`\#=12 %
4851 \gdef\href$1{\expandafter\href@split$1##\}%
4852 \gdef\href@split$1##$2##$3\\$4{%
4853 \hyper@@link{$1}{$2}{$3}{$4}%
4854 \endgroup
4855 }%
4856 \endgroup

Option 'page'.
4857 \define@key{href}{page}{%
4858 \def\Hy@href@page{#1}%
4859 }
4860 \let\Hy@href@page\@empty
4861 \newcount\c@Hy@tempcnt
4862 \def\theHy@tempcnt{\the\c@Hy@tempcnt}
4863 \def\Hy@MakeRemoteAction{%
4864 \ifx\Hy@href@page\@empty
4865 \def\Hy@href@page{0}%
4866 \else
4867 \setcounter{Hy@tempcnt}{\Hy@href@page}%
4868 \ifnum\c@Hy@tempcnt<\@ne
4869 \Hy@Warning{%
4870 Invalid page number (\theHy@tempcnt)\MessageBreak
4871 for remote PDF file.\MessageBreak
4872 Using page 1%
4873 }%
4874 \def\Hy@href@page{0}%
4875 \else
4876 \global\advance\c@Hy@tempcnt\m@ne
4877 \edef\Hy@href@page{\theHy@tempcnt}%
4878 \fi

```

4879 \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.

```
4880 \ifx\Hy@href@nextactionraw\@empty
4881 \else
4882 \Hy@pdfnewwindowsettrue
4883 \Hy@pdfnewwindowtrue
4884 \fi
4885 }
```

Option ‘pdfremotestartview’.

```
4886 \define@key{href}{pdfremotestartview}{%
4887 \setkeys{Hyp}{pdfremotestartview={#1}}%
4888 }
```

Option ‘pdfnewwindow’.

```
4889 \let\KV@href@pdfnewwindow\KV@Hyp@pdfnewwindow
4890 \let\KV@href@pdfnewwindow@default\KV@Hyp@pdfnewwindow@default
```

Option ‘ismap’.

```
4891 \newif\ifHy@href@ismap
4892 \define@key{href}{ismap}[true]{%
4893 \@ifundefined{Hy@href@ismap#1}{%
4894 \Hy@Error{%
4895 Invalid value (#1) for key `ismap'.\MessageBreak
4896 Permitted values are `true' or `false'.\MessageBreak
4897 Ignoring `ismap'%
4898 } \@ehc
4899 }{%
4900 \csname Hy@href@ismap#1\endcsname
4901 }%
4902 }
```

Option ‘nextactionraw’.

```
4903 \let\Hy@href@nextactionraw\@empty
4904 \define@key{href}{nextactionraw}{%
4905 \edef\Hy@href@nextactionraw{#1}%
4906 \ifx\Hy@href@nextactionraw\@empty
4907 \else
4908 \Hy@Match\Hy@href@nextactionraw{}%
4909 ^(\HyPat@ObjRef/|<<.*[/S[/].+>>|)%
4910 \[( ?\HyPat@ObjRef/|<<.*[/S[/].+>>)+ ?)]$%
4911 }{-%
4912 \Hy@Warning{Invalid value for `nextactionraw':\MessageBreak
4913 \Hy@href@nextactionraw\MessageBreak
4914 The action is discarded%
4915 }%
4916 }%
4917 \ifx\Hy@href@nextactionraw\@empty
4918 \else
4919 \edef\Hy@href@nextactionraw{/Next \Hy@href@nextactionraw}%
4920 \fi
4921 \fi
4922 }
4923 \def\HyPat@ObjRef/{.+}
```

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

```

4924 \RequirePackage{url}
4925 \let\HyOrg@url\url
4926 \def\Hurl{\begingroup \Url}
4927 \DeclareRobustCommand*\nolinkurl{\hyper@normalise\nolinkurl@}
4928 \def\nolinkurl@#1{\Hurl{#1}}
4929 \DeclareRobustCommand*\url{\hyper@normalise\url@}
4930 \def\url@#1{\hyper@linkurl{\Hurl{#1}}{#1}}

4931 \DeclareRobustCommand*\hyperimage{\hyper@normalise\hyper@image}
4932 \providecommand\hyper@image[2]{#2}

4933 \def\hypertarget#1#2{%
4934   \ifHy@nesting
4935     \hyper@@anchor{#1}{#2}%
4936   \else
4937     \hyper@@anchor{#1}{\relax}#2%
4938   \fi
4939 }

```

`\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.

```

4940 \DeclareRobustCommand*\hyperref{%
4941   \@ifnextchar{\Hy@babelnormalise\label@hyperref}\@hyperref
4942 }
4943 \def\Hy@babelnormalise#1[#2]{%
4944   \begingroup
4945     \Hy@safe@activestrue
4946     \let\protect\@unexpandable@protect
4947     \edef\Hy@tempa{%
4948       \endgroup
4949       \noexpand#1[#2]}%
4950   }%
4951   \Hy@tempa
4952 }
4953 \def\@hyperref{\hyper@normalise\@hyperref}
4954 \def\@hyperref#1#2#3{%
4955   \edef\ref@one{\ifx\#2\else#2.\fi#3}%
4956   \expandafter\tryhyper@link\ref@one\{#1}%
4957 }
4958 \def\tryhyper@link#1\#2{%
4959   \hyper@@link{#2}{#1}%
4960 }

4961 \def\hyperdef{\@ifnextchar{\label@hyperdef}\@hyperdef}
4962 \def\@hyperdef#1#2#3{%, category, name, text
4963   \ifx\#1\%
4964     \def\Hy@AnchorName{#2}%
4965   \else
4966     \def\Hy@AnchorName{#1.#2}%

```

```

4967 \fi
4968 \ifHy@nesting
4969 \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{#3}%
4970 \else
4971 \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{\relax}#3%
4972 \fi
4973 }

```

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.

```

4974 \let\hyperrefundefinedlink\@firstofone
4975 \def\label@hyperref[#1]{%
4976 \expandafter\label@@hyperref\csname r@#1\endcsname{#1}%
4977 }%
4978 \def\label@@hyperref#1#2#3{%
4979 \ifx#1\relax
4980 \protect\G@refundefinedtrue
4981 \@latex@warning{%
4982 Hyper reference `#2' on page \thepage \space undefined%
4983 }%
4984 \begingroup
4985 \hyperrefundefinedlink{#3}%
4986 \endgroup
4987 \else
4988 \hyper@@link{\expandafter\@fifthoffive#1}%
4989 {\expandafter\@fourthoffive#1\@empty\@empty}{#3}%
4990 \fi
4991 }
4992 \def\label@hyperdef[#1]#2#3#4{% label name, category, name,
4993 % anchor text
4994 \@bsphack
4995 \ifx\#2\%
4996 \def\Hy@AnchorName{#3}%
4997 \else
4998 \def\Hy@AnchorName{#2.#3}%
4999 \fi
5000 \if@filesw
5001 \protected@write\@auxout{}{%
5002 \string\newlabel{#1}{#2}{#3}{\Hy@AnchorName}}%
5003 }%
5004 \fi
5005 \@esphack
5006 \ifHy@nesting
5007 \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{#4}%
5008 \else
5009 \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{\relax}#4%
5010 \fi
5011 }

```

`\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`

```
5012 \ExplSyntaxOn
5013 \cs_new:Npn \hyperget #1 #2
5014 {
5015   \use:c { ___hyp_get_#1:n } { #2}
5016 }
5017
5018 \cs_new:Npn \___hyp_get_anchor:n #1
5019 {
5020   \HyperDestNameFilter
5021   {
5022     \cs_if_exist:cTF {r@#1}
5023     {
5024       \tl_item:cn {r@#1}{4}
5025     }
5026     {
5027       Doc-Start
5028     }
5029   }
5030 }
5031 \cs_new:Npn \___hyp_get_pageanchor:n #1
5032 {
5033   \HyperDestNameFilter
5034   {
5035     \cs_if_exist:cTF {r@#1}
5036     {
5037       page. \tl_item:cn {r@#1}{2}
5038     }
5039     {
5040       Doc-Start
5041     }
5042   }
5043 }
5044 \cs_new:Npn \___hyp_get_currentanchor:n #1
5045 {
5046   \HyperDestNameFilter { \@currentHref }
5047 }
5048 \ExplSyntaxOff
```

16.1 Link box support for XeTeX

```
5049 \newdimen\XeTeXLinkMargin
5050 \setlength{\XeTeXLinkMargin}{2pt}
5051 \ifxetex
5052   \font\XeTeXLink@font=pzdr at 1sp\relax
5053   \newcommand*{\XeTeXLink@space}{%
5054     \begingroup
5055       \XeTeXLink@font
5056       \@xxxii
5057     \endgroup
5058   }%
5059   \newcommand{\XeTeXLinkBox}[1]{%
```



```

5060 \begingroup
5061 \leavevmode
5062 \sbox\z@{#1}%
5063 \begingroup
5064 \dimen@=\dp\z@
5065 \advance\dimen@\XeTeXLinkMargin
5066 \setbox\tw@=\llap{%
5067 \hb@xt@\XeTeXLinkMargin{%
5068 \lower\dimen@\hbox{\XeTeXLink@space}%
5069 \hss
5070 }%
5071 }%
5072 \dp\tw@=\dp\z@
5073 \ht\tw@=\ht\z@
5074 \copy\tw@
5075 \endgroup
5076 \copy\z@
5077 \dimen@=\ht\z@
5078 \advance\dimen@\XeTeXLinkMargin
5079 \setbox\tw@=\rlap{%
5080 \hb@xt@\XeTeXLinkMargin{%
5081 \hss
5082 \raise\dimen@\hbox{\XeTeXLink@space}%
5083 }%
5084 }%
5085 \dp\tw@=\dp\z@
5086 \ht\tw@=\ht\z@
5087 \copy\tw@
5088 \endgroup
5089 }%
5090 \else
5091 \newcommand*\XeTeXLinkBox}[1]{%
5092 \begingroup
5093 \leavevmode
5094 \sbox\z@{#1}%
5095 \copy\z@
5096 \endgroup
5097 }%
5098 \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.

```

5099 \def\hyper@link{\let\Hy@reserved@a\relax
5100 \@ifnextchar{\hyper@link@}{\hyper@link@[link]}%
5101 }
5102 % #1: type
5103 % #2: URL
5104 % #3: destination name
5105 % #4: text
5106 \def\hyper@link@[#1]#2#3#4{%

```

```

5107 \Hy@ifempty{#4}{% link text
5108   \Hy@Warning{Suppressing empty link}%
5109 }{%
5110   \begingroup
5111     \protected@edef\Hy@tempa{#2}%
5112     \edef\Hy@tempb{#3}%
5113     \ifx\Hy@tempa\@empty
5114       \ifx\Hy@tempb\@empty
5115         \Hy@Warning{Suppressing link with empty target}%
5116         \toks@{%
5117           \endgroup
5118           \@secondoftwo
5119         }%
5120       \else
5121         \toks@{%
5122           \endgroup
5123           \hyper@link{#1}%
5124         }%
5125       \fi
5126     \else
5127       \toks@{%
5128         \endgroup
5129         \expandafter\hyper@readexternallink#2\{\#1}%
5130       }%
5131     \fi
5132     \Hy@safe@activesfalse
5133     \toks@\expandafter{%
5134       \the\expandafter\toks@
5135       \expandafter{\Hy@tempb}{#4}%
5136     }%
5137     \the\toks@
5138   }%
5139 }

```

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.

```

5140 \def\hyper@readexternallink#1\#2#3#4{%
5141   \begingroup
5142   \let\\\relax
5143   \expandafter\endgroup
5144   \expandafter\@chyper@\@readexternallink#1\{#2}{#3}{#4}%
5145 }
5146 \def\@chyper@\@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.

```
5147 \@hyper@readexternallink{#2}{#3}{#4}#1::\{#1}%
5148 }
```

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

```
5149 \def\@pdftempwordfile{file}%
5150 \def\@pdftempwordrun{run}%
5151 \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**:

```
5152 \ifx\#6\%
5153   \@hyper@linkfile file:#7\{#3}{#2}{#7}%
5154 \else
5155   \ifx\#4\%
5156     \@hyper@linkfile file:#7\{#3}{#2}{#7}%
5157   \else
```

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

```
5158   \def\@pdftempa{#4}%
5159   \ifx\@pdftempa\@pdftempwordfile
5160     \@hyper@linkfile#7\{#3}{#2}{#7}%
5161   \else
```

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

```
5162   \ifx\@pdftempa\@pdftempwordrun
5163     \ifHy@pdfa
5164       \Hy@Error{%
5165         PDF/A: Launch action is prohibited%
5166       }\@ehc
5167     \begingroup
5168       \leavevmode
5169       #2%
5170     \endgroup
5171   \else
5172     \@hyper@launch#7\{#3}{#2}%
5173   \fi
5174 \else
```

otherwise its a URL

```
5175     \hyper@linkurl{#3}{#7\ifx\#2\% \else\hyper@hash#2\fi}%
5176   \fi
5177 \fi
5178 \fi
5179 \fi
5180 }
```

By default, turn run: into file:

```
5181 \def\@hyper@launch run:#1\#2#3{% filename, anchor text, linkname
5182   \hyper@linkurl{#2}%
5183   \Hy@linkfileprefix
```

```

5184 #1%
5185 \ifx\\#3\\%
5186 \else
5187 \hyper@hash
5188 #3%
5189 \fi
5190 }%
5191 }

```

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

```

5192 \def\@hyper@linkfile file:#1\\#2#3#4{%
5193 %file url,link string, name, original uri
5194 \filename@parse{#1}%
5195 \ifx\filename@ext\relax
5196 \edef\filename@ext{\XR@ext}%
5197 \fi
5198 \def\use@file{\filename@area\filename@base.\filename@ext}%
5199 \Hy@ifStringEndsWith\filename@ext\XR@ext{%
5200 \hyper@linkfile{#2}{\use@file}{#3}%
5201 }{%
5202 \ifx\@baseurl\@empty
5203 \hyper@linkurl{#2}{%
5204 #4\ifx\\#3\\%
5205 }%
5206 \else
5207 \hyper@linkurl{#2}{\use@file\ifx\\#3\\%
5208 \fi
5209 }%
5210 }

5211 \def\Hy@ifStringEndsWith#1#2{%
5212 \begingroup
5213 \edef\x{#1}%
5214 \@onelevel@sanitize\x
5215 \edef\x{.x$}%
5216 \edef\y{#2}%
5217 \@onelevel@sanitize\y
5218 \edef\y{.y$}%
5219 \expandafter\def\expandafter\z\expandafter##\expandafter1\y##2\@nil{%
5220 \endgroup
5221 \ifx\relax##2\relax
5222 \expandafter\@secondoftwo
5223 \else
5224 \expandafter\@firstoftwo
5225 \fi
5226 }%
5227 \expandafter\expandafter\expandafter\z\expandafter\x\y\@nil
5228 }

5229 \def\Hy@StringLocalhost{localhost}
5230 \@onelevel@sanitize\Hy@StringLocalhost
5231 \def\Hy@CleanupFile#1{%
5232 \edef#1{#1}%
5233 \expandafter\Hy@@CleanupFile#1\hbox{//\hbox\@nil{#1}%
5234 }

```

```

5235 \def\Hy@@CleanupFile#1//#2/#3\hbox#4\@nil#5{%
5236 \begingroup
5237 \toks@{\endgroup}%
5238 \def\x{#1}%
5239 \ifx\x\@empty
5240 \def\x{#2}%
5241 \ifx\x\@empty
5242 \toks@{\endgroup\def#5{/#3}}%
5243 \else
5244 \@onelevel@sanitize\x
5245 \ifx\x\Hy@StringLocalhost
5246 \toks@{\endgroup\def#5{/#3}}%
5247 \fi
5248 \fi
5249 \fi
5250 \the\toks@
5251 }

```

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.

```

5252 \long\def\hyper@@anchor#1#2{\@hyper@@anchor#1\relax#2\relax}
5253 \long\def\@hyper@@anchor#1\relax#2#3\relax{%
5254 \ifx\#1\%
5255 #2\Hy@Warning{Ignoring empty anchor}%
5256 \else
5257 \def\anchor@spot{#2#3}%
5258 \let\put@me@back\@empty
5259 \ifx\relax#2\relax
5260 \else
5261 \ifHy@nesting
5262 \else
5263 \ifcat a\noexpand#2\relax
5264 \else
5265 \ifcat 0\noexpand#2 \relax
5266 \else
5267 % \typeout{Anchor start is not alphanumeric %
5268 % on input line\the\inputlineno%
5269 % }%
5270 \let\anchor@spot\@empty
5271 \def\put@me@back{#2#3}%
5272 \fi
5273 \fi
5274 \fi
5275 \fi
5276 \ifHy@activeanchor
5277 \anchor@spot
5278 \else
5279 \hyper@anchor{#1}%
5280 \fi

```

```

5281 \expandafter\put@me@back
5282 \fi
5283 \let\anchor@spot\@empty
5284 }
5285 \let\anchor@spot\@empty

```

18 Option ‘destlabel’

```
5286 \ifHy@destlabel
```

```
\hyper@newdestlabel
```

```

5287 \def\hyper@newdestlabel#1#2{%
5288 \begingroup
5289 \Hy@safe@activetrue
5290 \edef\x{\endgroup
5291 \noexpand\@newl@bel{HyDL}{#1}{#2}%
5292 }%
5293 \x
5294 }%

```

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

```
5295 \providecommand*\hyper@destlabel@hook{}%
```

```
\Hy@DestRename
```

```

5296 \newcommand*\Hy@DestRename}[2]{%
5297 \@ifundefined{HyDL!#1}{%
5298 \begingroup
5299 \Hy@safe@activetrue
5300 \edef\dest@name{#1}%
5301 \edef\label@name{#2}%
5302 \hyper@destlabel@hook
5303 \Hy@IsNotEmpty{dest@name}{%
5304 \Hy@IsNotEmpty{label@name}{%
5305 \global\expandafter
5306 \let\csname HyDL!#1\endcsname\@empty
5307 \if@filesw
5308 \protected@write\@auxout{}{%
5309 \string\hyper@newdestlabel
5310 {#1}%
5311 {\label@name}%
5312 }%
5313 \fi
5314 }%
5315 }%
5316 \endgroup
5317 }{}%
5318 }%

```

```
\HyperDestRename
```

```

5319 \newcommand*\HyperDestRename}[2]{%
5320 \AtBeginDocument{%
5321 \Hy@DestRename{#1}{#2}%
5322 }%

```

```

5323 }%
5324 \AtBeginDocument{%
5325   \let\HyperDestRename\Hy@DestRename
5326 }%

```

\Hy@IsNotEmpty

```

5327 \def\Hy@IsNotEmpty#1{%
5328   \@ifundefined{#1}\@gobble{%
5329     \expandafter\ifx\csname#1\endcsname\@empty
5330     \expandafter\@gobble
5331   \else
5332     \expandafter\@firstofone
5333   \fi
5334 }%
5335 }%

5336 \Hy@GlobalAppendToMacro\label@hook{%
5337   \HyperDestRename\@currentHref\label@name
5338 }%

```

\HyperDestLabelReplace

```

5339 \def\HyperDestLabelReplace#1{%
5340   \@ifundefined{HyDL@#1}{%
5341     #1%
5342   }{%
5343     \csname HyDL@#1\endcsname
5344   }%
5345 }%

```

\HyperDestNameFilter

```

5346 \let\HyperDestNameFilter\HyperDestLabelReplace

5347 \else

```

\hyper@newdestlabel

```

5348 \let\hyper@newdestlabel\@gobbletwo

```

\HyperDestLabelReplace

```

5349 \let\HyperDestLabelReplace\@firstofone

```

\HyperDestRename

```

5350 \let\HyperDestRename\@gobbletwo

5351 \fi

5352 \Hy@DisableOption{destlabel}

```

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

```

5353 \AddToHook{include/before}
5354 {\immediate\write\@partaux{\string\providecommand\string\hyper@newdest-
5355   label[2]{}}
5355 \AddToHook{begindocument}
5356 {\immediate\write\@mainaux{\string\providecommand\string\hyper@newdest-
5357   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.

```
5357 \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
```

```
5358 \def\HyField@NewFlag#1#2{%
5359   \lowercase{\HyField@NewOption{#2}}%
5360   \lowercase{\HyField@NewBitsetFlag{#2}}{#2}{#1}%
5361 }
```

```
\HyField@NewFlagOnly
```

```
5362 \def\HyField@NewFlagOnly#1#2{%
5363   \lowercase{\HyField@NewBitsetFlag{#2}}{#2}{#1}%
5364 }
```

```
\HyField@NewOption #1: option name
```

```
5365 \def\HyField@NewOption#1{%
5366   \expandafter\newif\csname ifFld@#1\endcsname
5367   \define@key{Field}{#1}[true]{%
5368     \lowercase{\Field@boolkey{##1}}{#1}%
5369   }%
5370 }
```

```
\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
```

```
5371 \def\HyField@NewBitsetFlag#1#2#3#4{%
5372   \begingroup
5373   \count@=#4\relax
5374   \advance\count@\m@ne
5375   \def\x###1{%
5376     \endgroup
5377     \expandafter\def\csname HyField@#3@#1\endcsname{##1}%
5378     \expandafter\ifx\csname HyField@#3@##1\endcsname\relax
```



```

5379     \expandafter\edef\csname HyField@#3@##1\endcsname{%
5380       (\number#4) #2%
5381     }%
5382   \else
5383     \expandafter\edef\csname HyField@#3@##1\endcsname{%
5384       \csname HyField@#3@##1\endcsname
5385       /#2%
5386     }%
5387   \fi
5388 }%
5389 \expandafter\x\expandafter{\the\count@}%
5390 }

```

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

```

5391 \def\HyField@UseFlag#1#2{%
5392   \lowercase{\HyField@@UseFlag{#2}}{#1}%
5393 }

```

\HyField@@UseFlag

```

5394 \def\HyField@@UseFlag#1#2{%
5395   \bitsetSetValue{HyField@#2}{%
5396     \csname HyField@#2@#1\endcsname
5397   }{%
5398     \csname ifFld@#1\endcsname 1\else 0\fi
5399   }%
5400 }

```

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

```

5401 \def\HyField@SetFlag#1#2{%
5402   \lowercase{\HyField@@SetFlag{#2}}{#1}%
5403 }

```

\HyField@@SetFlag

```

5404 \def\HyField@@SetFlag#1#2{%
5405   \bitsetSetValue{HyField@#2}{%
5406     \csname HyField@#2@#1\endcsname
5407   }{1}%
5408 }

```

\HyField@PrintFlags

```

5409 \def\HyField@PrintFlags#1#2{%
5410   \ifHy@verbose
5411     \begingroup
5412       \let\Hy@temp\@empty
5413       \let\MessageBreak\relax
5414       \expandafter\@for\expandafter\x\expandafter:\expandafter=%
5415       \bitsetGetSetBitList{HyField@#1}\do{%
5416         \edef\Hy@temp{%
5417           \Hy@temp
5418           \csname HyField@#1@\x\endcsname\MessageBreak
5419         }%
5420       }%
5421     \edef\x{\endgroup

```

```

5422 \noexpand\Hy@Info{%
5423   Field flags: %
5424   \expandafter\ifx\@car#1\@nil S\else/\fi
5425   #1 %
5426   \bitsetGetDec{HyField@#1} %
5427   (0x\bitsetGetHex{HyField@#1}{32})\MessageBreak
5428   \Hy@temp
5429   for #2%
5430   }%
5431 } \x
5432 \fi
5433 }

```

19.1.1 Declarations of field flags

“Table 8.70 Field flags common to all field types”

```

5434 \HyField@NewFlag{Ff}{ReadOnly}{1}
5435 \HyField@NewFlag{Ff}{Required}{2}
5436 \HyField@NewFlag{Ff}{NoExport}{3}

```

“Table 8.75 Field flags specific to button fields”

```

5437 \HyField@NewFlag{Ff}{NoToggleToOff}{15}
5438 \HyField@NewFlag{Ff}{Radio}{16}
5439 \HyField@NewFlag{Ff}{Pushbutton}{17}
5440 \HyField@NewFlag{Ff}{RadiosInUnison}{26}

```

“Table 8.77 Field flags specific to text fields”

```

5441 \HyField@NewFlag{Ff}{Multiline}{13}
5442 \HyField@NewFlag{Ff}{Password}{14}
5443 \HyField@NewFlag{Ff}{FileSelect}{21}% PDF 1.4
5444 \HyField@NewFlag{Ff}{DoNotSpellCheck}{23}% PDF 1.4
5445 \HyField@NewFlag{Ff}{DoNotScroll}{24}% PDF 1.4
5446 \HyField@NewFlag{Ff}{Comb}{25}% PDF 1.4
5447 \HyField@NewFlag{Ff}{RichText}{26}% PDF 1.5

```

“Table 8.79 field flags specific to choice fields”

```

5448 \HyField@NewFlag{Ff}{Combo}{18}
5449 \HyField@NewFlag{Ff}{Edit}{19}
5450 \HyField@NewFlag{Ff}{Sort}{20}
5451 \HyField@NewFlag{Ff}{MultiSelect}{22}% PDF 1.4
5452 % \HyField@NewFlag{Ff}{DoNotSpellCheck}{23}% PDF 1.4
5453 \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.

```

5454 \newif\ifFld@popdown
5455 \define@key{Field}{popdown}{true}{%
5456   \lowercase{\Field@boolkey{#1}}{popdown}%
5457 }

```

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.

```

5458 \HyField@NewFlag{F}{Invisible}{1}
5459 \HyField@NewFlag{F}{Hidden}{2}% PDF 1.2
5460 \HyField@NewFlag{F}{Print}{3}% PDF 1.2
5461 \HyField@NewFlag{F}{NoZoom}{4}% PDF 1.2
5462 \HyField@NewFlag{F}{NoRotate}{5}% PDF 1.3
5463 \HyField@NewFlag{F}{NoView}{6}% PDF 1.3
5464 \HyField@NewFlag{F}{Locked}{8}% PDF 1.4
5465 \HyField@NewFlag{F}{ToggleNoView}{9}% PDF 1.5
5466 \HyField@NewFlag{F}{LockedContents}{10}% PDF 1.7

5467 \ifHy@pdfa
5468 \def\HyField@PDFAFIWarning#1#2{%
5469   \Hy@Warning{%
5470     PDF/A: Annotation flag `#1' must\MessageBreak
5471     be set to `#2'%
5472   }%
5473 }%
5474 \Fld@invisiblefalse
5475 \def\Fld@invisibletrue{%
5476   \HyField@PDFAFIWarning{invisible}{false}%
5477 }%
5478 \Fld@hiddenfalse
5479 \def\Fld@hiddentrue{%
5480   \HyField@PDFAFIWarning{hidden}{false}%
5481 }%
5482 \Fld@printtrue
5483 \def\Fld@printfalse{%
5484   \HyField@PDFAFIWarning{print}{true}%
5485 }%
5486 \Fld@nozoomtrue
5487 \def\Fld@nozoomfalse{%
5488   \HyField@PDFAFIWarning{nozoom}{true}%
5489 }%
5490 \Fld@norotatetrue
5491 \def\Fld@norotatefalse{%
5492   \HyField@PDFAFIWarning{norotate}{true}%
5493 }%
5494 \Fld@noviewfalse
5495 \def\Fld@noviewtrue{%
5496   \HyField@PDFAFIWarning{noview}{false}%
5497 }%
5498 \fi

```

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

```

5499 \HyField@NewFlag{Submit}{IncludeNoValueFields}{2}
5500 \HyField@NewFlagOnly{Submit}{ExportFormat}{3}
5501 \HyField@NewFlag{Submit}{GetMethod}{4}
5502 \HyField@NewFlag{Submit}{SubmitCoordinates}{5}
5503 \HyField@NewFlagOnly{Submit}{XFDF}{6}
5504 \HyField@NewFlag{Submit}{IncludeAppendSaves}{7}
5505 \HyField@NewFlag{Submit}{IncludeAnnotations}{8}
5506 \HyField@NewFlagOnly{Submit}{SubmitPDF}{9}

```

```

5507 \HyField@NewFlag{Submit}{CanonicalFormat}{10}
5508 \HyField@NewFlag{Submit}{ExclNonUserAnnots}{11}
5509 \HyField@NewFlag{Submit}{ExclFKey}{12}
5510 \HyField@NewFlag{Submit}{EmbedForm}{14}

5511 \define@key{Field}{export}{%
5512   \lowercase{\def\Hy@temp{#1}}%
5513   \@ifundefined{Fld@export@\Hy@temp}{%
5514     \@onelevel@sanitize\Hy@temp
5515     \Hy@Error{%
5516       Unknown export format `'\Hy@temp'.\MessageBreak
5517       Known formats are `FDF', `HTML', `XFDF', and `PDF'%
5518     } \@ehc
5519   }{%
5520     \let\Fld@export\Hy@temp
5521   }%
5522 }
5523 \def\Fld@export{fdf}
5524 \@namedef{Fld@export@fdf}{0}%
5525 \@namedef{Fld@export@html}{1}%
5526 \@namedef{Fld@export@xfdf}{2}%
5527 \@namedef{Fld@export@pdf}{3}%

```

19.1.2 Set submit flags

\HyField@FlagsSubmit

```

5528 \def\HyField@FlagsSubmit{%
5529   \bitsetReset{HyField@Submit}%
5530   \ifcase\@nameuse{Fld@export@\Fld@export} %
5531     % FDF
5532     \HyField@UseFlag{Submit}{IncludeNoValueFields}%
5533     \HyField@UseFlag{Submit}{SubmitCoordinates}%
5534     \HyField@UseFlag{Submit}{IncludeAppendSaves}%
5535     \HyField@UseFlag{Submit}{IncludeAnnotations}%
5536     \HyField@UseFlag{Submit}{CanonicalFormat}%
5537     \HyField@UseFlag{Submit}{ExclNonUserAnnots}%
5538     \HyField@UseFlag{Submit}{ExclFKey}%
5539     \HyField@UseFlag{Submit}{EmbedForm}%
5540   \or % HTML
5541     \HyField@SetFlag{Submit}{ExportFormat}%
5542     \HyField@UseFlag{Submit}{IncludeNoValueFields}%
5543     \HyField@UseFlag{Submit}{GetMethod}%
5544     \HyField@UseFlag{Submit}{SubmitCoordinates}%
5545     \HyField@UseFlag{Submit}{CanonicalFormat}%
5546   \or % XFDF
5547     \HyField@SetFlag{Submit}{XFDF}%
5548     \HyField@UseFlag{Submit}{IncludeNoValueFields}%
5549     \HyField@UseFlag{Submit}{SubmitCoordinates}%
5550     \HyField@UseFlag{Submit}{CanonicalFormat}%
5551   \or % PDF
5552     \HyField@SetFlag{Submit}{SubmitPDF}%
5553     \HyField@UseFlag{Submit}{GetMethod}%
5554   \fi
5555   \HyField@PrintFlags{Submit}{submit button field}%

```

```

5556 \bitsetIsEmpty{HyField@Submit}{%
5557   \let\Fld@submitflags\@empty
5558 }{%
5559   \edef\Fld@submitflags{/Flags \bitsetGetDec{HyField@Submit}}%
5560 }%
5561 }

```

19.1.3 Set annot flags in fields

\HyField@FlagsAnnot

```

5562 \def\HyField@FlagsAnnot#1{%
5563   \bitsetReset{HyField@F}%
5564   \HyField@UseFlag{F}{Invisible}%
5565   \HyField@UseFlag{F}{Hidden}%
5566   \HyField@UseFlag{F}{Print}%
5567   \HyField@UseFlag{F}{NoZoom}%
5568   \HyField@UseFlag{F}{NoRotate}%
5569   \HyField@UseFlag{F}{NoView}%
5570   \HyField@UseFlag{F}{Locked}%
5571   \HyField@UseFlag{F}{ToggleNoView}%
5572   \HyField@UseFlag{F}{LockedContents}%
5573   \HyField@PrintFlags{F}{#1}%
5574   \bitsetIsEmpty{HyField@F}{%
5575     \let\Fld@annotflags\@empty
5576   }{%
5577     \edef\Fld@annotflags{/F \bitsetGetDec{HyField@F}}%
5578   }%
5579 }

```

19.1.4 Pushbutton field

\HyField@FlagsPushButton

```

5580 \def\HyField@FlagsPushButton{%
5581   \HyField@FlagsAnnot{push button field}%
5582   \bitsetReset{HyField@Ff}%
5583   \HyField@UseFlag{Ff}{ReadOnly}%
5584   \HyField@UseFlag{Ff}{Required}%
5585   \HyField@UseFlag{Ff}{NoExport}%
5586   \HyField@SetFlag{Ff}{PushButton}%
5587   \HyField@PrintFlags{Ff}{push button field}%
5588   \bitsetIsEmpty{HyField@Ff}{%
5589     \let\Fld@flags\@empty
5590   }{%
5591     \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
5592   }%
5593 }

```

19.1.5 Check box field

\HyField@FlagsCheckBox

```

5594 \def\HyField@FlagsCheckBox{%
5595   \HyField@FlagsAnnot{check box field}%
5596   \bitsetReset{HyField@Ff}%

```

```

5597 \HyField@UseFlag{Ff}{ReadOnly}%
5598 \HyField@UseFlag{Ff}{Required}%
5599 \HyField@UseFlag{Ff}{NoExport}%
5600 \HyField@PrintFlags{Ff}{checkbox field}%
5601 \bitsetIsEmpty{HyField@Ff}{%
5602   \let\Fld@flags\@empty
5603 }{%
5604   \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
5605 }%
5606 }

```

19.1.6 Radio button field

\HyField@FlagsRadioButton

```

5607 \def\HyField@FlagsRadioButton{%
5608   \HyField@FlagsAnnot{radio button field}%
5609   \bitsetReset{HyField@Ff}%
5610   \HyField@UseFlag{Ff}{ReadOnly}%
5611   \HyField@UseFlag{Ff}{Required}%
5612   \HyField@UseFlag{Ff}{NoExport}%
5613   \HyField@UseFlag{Ff}{NoToggleToOff}%
5614   \HyField@SetFlag{Ff}{Radio}%
5615   \HyField@UseFlag{Ff}{RadiosInUnison}%
5616   \HyField@PrintFlags{Ff}{radio button field}%
5617   \bitsetIsEmpty{HyField@Ff}{%
5618     \let\Fld@flags\@empty
5619   }{%
5620     \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
5621   }%
5622 }

```

19.1.7 Text fields

\HyField@FlagsText

```

5623 \def\HyField@FlagsText{%
5624   \HyField@FlagsAnnot{text field}%
5625   \bitsetReset{HyField@Ff}%
5626   \HyField@UseFlag{Ff}{ReadOnly}%
5627   \HyField@UseFlag{Ff}{Required}%
5628   \HyField@UseFlag{Ff}{NoExport}%
5629   \HyField@UseFlag{Ff}{Multiline}%
5630   \HyField@UseFlag{Ff}{Password}%
5631   \HyField@UseFlag{Ff}{FileSelect}%
5632   \HyField@UseFlag{Ff}{DoNotSpellCheck}%
5633   \HyField@UseFlag{Ff}{DoNotScroll}%
5634   \ifFld@comb
5635     \ifcase0\ifFld@multiline
5636       \else\ifFld@password
5637       \else\ifFld@fileselect
5638       \else 1\fi\fi\fi\relax
5639   \Hy@Error{%
5640     Field option `comb' cannot be used together with\MessageBreak
5641     `multiline', `password', or `fileselect'%

```

```

5642     }\@ehc
5643     \else
5644     \HyField@UseFlag{Ff}{Comb}%
5645     \fi
5646     \fi
5647     \HyField@UseFlag{Ff}{RichText}%
5648     \HyField@PrintFlags{Ff}{text field}%
5649     \bitsetIsEmpty{HyField@Ff}{%
5650     \let\Fld@flags\@empty
5651     }{%
5652     \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
5653     }%
5654 }

```

19.1.8 Choice fields

\HyField@FlagsChoice

```

5655 \def\HyField@FlagsChoice{%
5656 \HyField@FlagsAnnot{choice field}%
5657 \bitsetReset{HyField@Ff}%
5658 \HyField@UseFlag{Ff}{ReadOnly}%
5659 \HyField@UseFlag{Ff}{Required}%
5660 \HyField@UseFlag{Ff}{NoExport}%
5661 \HyField@UseFlag{Ff}{Combo}%
5662 \ifFld@combo
5663 \HyField@UseFlag{Ff}{Edit}%
5664 \fi
5665 \HyField@UseFlag{Ff}{Sort}%
5666 \HyField@UseFlag{Ff}{MultiSelect}%
5667 \ifFld@combo
5668 \ifFld@edit
5669 \HyField@UseFlag{Ff}{DoNotSpellCheck}%
5670 \fi
5671 \fi
5672 \HyField@UseFlag{Ff}{CommitOnSelChange}%
5673 \HyField@PrintFlags{Ff}{choice field}%
5674 \bitsetIsEmpty{HyField@Ff}{%
5675 \let\Fld@flags\@empty
5676 }{%
5677 \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
5678 }%
5679 }

```

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.

```

5680 \def\HyField@PDFChoices#1{%
5681 \begingroup
5682 \global\let\Fld@choices\@empty
5683 \let\HyTmp@optlist\@empty

```

```

5684 \let\HyTmp@optitem\relax
5685 \count@=0 %
5686 \kv@parse{#1}{%
5687   \Hy@pdfstringdef\kv@key\kv@key
5688   \ifx\kv@value\relax
5689   \ifnum\Hy@pdf@majorminor@version<103 % implementation note 122, PDF spec 1.7
5690     \xdef\Fld@choices{\Fld@choices(\kv@key)(\kv@key)}%
5691   \else
5692     \xdef\Fld@choices{\Fld@choices(\kv@key)}%
5693   \fi
5694 \else
5695   \Hy@pdfstringdef\kv@value\kv@value
5696   \xdef\Fld@choices{\Fld@choices(\kv@value)(\kv@key)}%
5697 \fi
5698 \edef\HyTmp@optlist{%
5699   \HyTmp@optlist
5700   \HyTmp@optitem{\the\count@}{\kv@key}0%
5701 }%
5702 \advance\count@ by 1 %
5703 \@gobbletwo
5704 }%
5705 \xdef\Fld@choices{/Opt[\Fld@choices]}%
5706 \ifFld@multiselect
5707   \HyField@@PDFChoices{DV}\Fld@default
5708   \HyField@@PDFChoices{V}\Fld@value
5709 \else
5710   \ifx\Fld@default\relax
5711   \else
5712     \pdfstringdef\Hy@gtemp\Fld@default
5713     \xdef\Fld@choices{\Fld@choices/DV(\Hy@gtemp)}%
5714   \fi
5715   \ifx\Fld@value\relax
5716   \else
5717     \pdfstringdef\Hy@gtemp\Fld@value
5718     \xdef\Fld@choices{\Fld@choices/V(\Hy@gtemp)}%
5719   \fi
5720 \fi
5721 \endgroup
5722 }

```

\HyField@@PDFChoices

```

5723 \def\HyField@@PDFChoices#1#2{%
5724   \ifx#2\relax
5725   \else
5726     \count@=0 %
5727     \def\HyTmp@optitem##1##2##3{%
5728       \def\HyTmp@key{##2}%
5729       \ifx\HyTmp@key\Hy@gtemp
5730         \expandafter\def\expandafter\HyTmp@optlist\expandafter{%
5731           \HyTmp@optlist
5732           \HyTmp@optitem{##1}{##2}1%
5733         }%
5734       \let\HyTmp@found=Y%
5735     \else

```



```

5736 \expandafter\def\expandafter\HyTmp@optlist\expandafter{%
5737 \HyTmp@optlist
5738 \HyTmp@optitem{##1}{##2}##3%
5739 }%
5740 \fi
5741 }%
5742 \expandafter\comma@parse\expandafter{#2}{%
5743 \pdfstringdef\Hy@gtemp\comma@entry
5744 \let\HyTmp@found=N %
5745 \expandafter\let\expandafter\HyTmp@optlist\expandafter\@empty
5746 \HyTmp@optlist
5747 \ifx\HyTmp@found Y%
5748 \advance\count@ by 1 %
5749 \else
5750 \@onelevel@sanitize\comma@entry
5751 \PackageWarning{hyperref}{%
5752 \string\ChoiceBox: Ignoring value `\'comma@entry',%
5753 \MessageBreak
5754 it cannot be found in the choices%
5755 }%
5756 \fi
5757 \@gobble
5758 }%
5759 \def\HyTmp@optitem##1##2##3{%
5760 \ifnum##3=1 %
5761 (##2)%
5762 \fi
5763 }%
5764 \ifcase\count@
5765 \or
5766 \xdef\Fld@choices{\Fld@choices/#1\HyTmp@optlist}%
5767 \else
5768 \xdef\Fld@choices{\Fld@choices/#1[\HyTmp@optlist]}%
5769 \ifx#1V%
5770 \def\HyTmp@optitem##1##2##3{%
5771 \ifnum##3=1 %
5772 \@firstofone{ ##1}%
5773 \fi
5774 }%
5775 \edef\HyTmp@optlist{\HyTmp@optlist}%
5776 \xdef\Fld@choices{%
5777 \Fld@choices
5778 /I[\expandafter\@firstofone\HyTmp@optlist]}%
5779 }%
5780 \fi
5781 \fi
5782 \fi
5783 }

```

19.3 Forms

\HyField@SetKeys

```

5784 \def\HyField@SetKeys{%
5785 \kvsetkeys{Field}%

```

```

5786 }

5787 \newif\ifFld@checked
5788 \newif\ifFld@disabled
5789 \Fld@checkedfalse
5790 \Fld@disabledfalse
5791 \newcount\Fld@menulength
5792 \newdimen\Fld@Width
5793 \newdimen\Fld@charsize
5794 \Fld@charsize=10\p@
5795 \def\Fld@maxlen{0}
5796 \def\Fld@align{0}
5797 \def\Fld@color{0 0 0 rg}
5798 \def\Fld@bcolor{1 1 1}
5799 \def\Fld@bordercolor{1 0 0}
5800 \def\Fld@bordersep{1\p@}
5801 \def\Fld@borderwidth{1}
5802 \def\Fld@borderstyle{S}
5803 \def\Fld@cbsymbol{4}
5804 \def\Fld@radiosymbol{H}
5805 \def\Fld@rotation{0}
5806 \def\Fld@ifnextchar[{\@Form}{\@Form[]}]
5807 \def\Fld@endForm{\endForm}
5808 \newif\ifForm@html
5809 \Form@htmlfalse
5810 \def\Fld@boolkey#1#2{%
5811   \csname Form@#2\ifx\relax#1\relax true\else#1\fi\endcsname
5812 }
5813 \define@key{Form}{action}{%
5814   \hyper@normalise\Hy@DefFormAction{#1}%
5815 }
5816 \def\Hy@DefFormAction{\def\Fld@action}
5817 \def\enc@html{html}
5818 \define@key{Form}{encoding}{%
5819   \def\Hy@tempa{#1}%
5820   \ifx\Hy@tempa\enc@html
5821     \Form@htmltrue
5822     \def\Fld@export{html}%
5823   \else
5824     \Hy@Warning{%
5825       Form `encoding' key with \MessageBreak
5826       unknown value `#1'%
5827     }%
5828   \Form@htmlfalse
5829   \fi
5830 }
5831 \define@key{Form}{method}{%
5832   \lowercase{\def\Hy@temp{#1}}%
5833   \@ifundefined{Form@method@\Hy@temp}{%
5834     \@onelevel@sanitize\Hy@temp
5835     \Hy@Error{%
5836       Unknown method ``\Hy@temp'.\MessageBreak
5837       Known values are `post' and `get'%
5838     }\@ehc

```

```

5839 }{%
5840 \let\Form@method\Hy@temp
5841 \ifcase\@nameuse{Form@method@\Hy@temp} %
5842 \Fld@getmethodfalse
5843 \else
5844 \Fld@getmethodtrue
5845 \fi
5846 }%
5847 }
5848 \def\Form@method{}
5849 \@namedef{Form@method@post}{0}
5850 \@namedef{Form@method@get}{1}

5851 \newif\ifHyField@NeedAppearances
5852 \def\HyField@NeedAppearancesfalse{%
5853 \global\let\ifHyField@NeedAppearances\iffalse
5854 }
5855 \def\HyField@NeedAppearancetrue{%
5856 \global\let\ifHyField@NeedAppearances\iftrue
5857 }
5858 \HyField@NeedAppearancetrue
5859 \define@key{Form}{NeedAppearances}[true]{%
5860 \edef\Hy@tempa{#1}%
5861 \ifx\Hy@tempa\Hy@true
5862 \HyField@NeedAppearancetrue
5863 \else
5864 \ifx\Hy@tempa\Hy@false
5865 \HyField@NeedAppearancesfalse
5866 \else
5867 \Hy@Error{%
5868 Unexpected value ``\Hy@tempa'\MessageBreak
5869 of option `NeedAppearances' instead of\MessageBreak
5870 `true' or `false'%
5871 } \@ehc
5872 \fi
5873 \fi
5874 }
5875 \def\Field@boolkey#1#2{%
5876 \csname Fld@#2\ifx\relax#1\relax true\else#1\fi\endcsname
5877 }
5878 \ifHy@texht
5879 \newtoks\Field@toks
5880 \Field@toks={ }%
5881 \def\Field@addtoks#1#2{%
5882 \edef\@processme{\Field@toks{\the\Field@toks\space #1="#2"}}%
5883 \@processme
5884 }%
5885 \else
5886 \def\Hy@WarnHTMLFieldOption#1{%
5887 \Hy@Warning{%
5888 HTML field option `#1'\MessageBreak
5889 is ignored%
5890 }%
5891 }%
5892 \fi

```

```

5893 \def\Fld@checkequals#1=#2=#3\{\%
5894 \def\@currDisplay{#1}%
5895 \ifx\#2\%
5896 \def\@currValue{#1}%
5897 \else
5898 \def\@currValue{#2}%
5899 \fi
5900 \expandafter\Hy@pdfstringdef\expandafter\@currValue\expandafter{\@currValue}%
5901 }
5902 \define@key{Field}{loc}{%
5903 \def\Fld@loc{#1}%
5904 }
5905 \define@key{Field}{checked}[true]{%
5906 \lowercase{\Field@boolkey{#1}}{checked}%
5907 }
5908 \define@key{Field}{disabled}[true]{%
5909 \lowercase{\Field@boolkey{#1}}{disabled}%
5910 }
5911 \ifHy@texht
5912 \define@key{Field}{accesskey}{%
5913 \Field@addtoks{accesskey}{#1}%
5914 }%
5915 \define@key{Field}{tabkey}{%
5916 \Field@addtoks{tabkey}{#1}%
5917 }%
5918 \else
5919 \define@key{Field}{accesskey}{%
5920 \Hy@WarnHTMLFieldOption{accesskey}%
5921 }%
5922 \define@key{Field}{tabkey}{%
5923 \Hy@WarnHTMLFieldOption{tabkey}%
5924 }%
5925 \fi
5926 \define@key{Field}{name}{%
5927 \def\Fld@name{#1}%
5928 }
5929 \let\Fld@altname\relax
5930 \define@key{Field}{altname}{%
5931 \def\Fld@altname{#1}%
5932 }
5933 \let\Fld@mappingname\relax
5934 \define@key{Field}{mappingname}{%
5935 \def\Fld@mappingname{#1}%
5936 }
5937 \define@key{Field}{width}{%
5938 \def\Fld@width{#1}%
5939 \Field@Width#1\setbox0=\hbox{m}%
5940 }
5941 \define@key{Field}{maxlen}{%
5942 \def\Fld@maxlen{#1}%
5943 }
5944 \define@key{Field}{menulength}{%
5945 \Fld@menulength=#1\relax
5946 }

```

```

5947 \define@key{Field}{height}{%
5948   \def\Fld@height{#1}%
5949 }
5950 \define@key{Field}{charsize}{%
5951   \setlength{\Fld@charsize}{#1}%
5952 }
5953 \define@key{Field}{borderwidth}{%
5954   \Hy@defaultbp\Fld@borderwidth{#1}%
5955 }
5956 \def\Hy@defaultbp#1#2{%
5957   \begingroup
5958   \afterassignment\Hy@defaultbpAux
5959   \dimen@=#2bp\relax{#1}{#2}%
5960 }
5961 \def\Hy@defaultbpAux#1\relax#2#3{%
5962   \ifx!#1!%
5963     \endgroup
5964     \def#2{#3}%
5965   \else
5966     \edef\x{\endgroup
5967       \def\noexpand#2{%
5968         \strip@pt\dimexpr\dimen@*800/803\relax
5969       }%
5970     }\x
5971   \fi
5972 }%
5973 \define@key{Field}{borderstyle}{%
5974   \let\Hy@temp\Fld@borderstyle
5975   \def\Fld@borderstyle{#1}%
5976   \Hy@Match\Fld@borderstyle{}{%
5977     ^[SDBIU]$%
5978   }-}{%
5979   \Hy@Warning{%
5980     Invalid value `@\pdfborderstyle'\MessageBreak
5981     for option `pdfborderstyle'. Valid values:\MessageBreak
5982     \space\space S (Solid), D (Dashed), B (Beveled),\MessageBreak
5983     \space\space I (Inset), U (Underline)\MessageBreak
5984     Option setting is ignored%
5985   }%
5986   \let\Fld@borderstyle\Hy@temp
5987 }%
5988 }
5989 \define@key{Field}{bordersep}{%
5990   \def\Fld@bordersep{#1}%
5991 }
5992 \define@key{Field}{default}{%
5993   \Hy@pdfstringdef\Fld@default{#1}%
5994 }
5995 \define@key{Field}{align}{%
5996   \def\Fld@align{#1}%
5997 }
5998 \define@key{Field}{value}{%
5999   \Hy@pdfstringdef\Fld@value{#1}%
6000 }

```

```

6001 \define@key{Field}{checkboxsymbol}{%
6002   \Fld@DingDef\Fld@cbsymbol{#1}%
6003 }
6004 \define@key{Field}{radiosymbol}{%
6005   \Fld@DingDef\Fld@radiosymbol{#1}%
6006 }
6007 \def\Fld@DingDef#1#2{%
6008   \let\Fld@temp\@empty
6009   \Fld@@DingDef#2\ding{ }\@nil
6010   \let#1\Fld@temp
6011 }
6012 \def\Fld@@DingDef#1\ding#2#3\@nil{%
6013   \expandafter\def\expandafter\Fld@temp\expandafter{%
6014     \Fld@temp
6015     #1%
6016   }%
6017   \ifx\#3\%
6018     \expandafter\@gobble
6019   \else
6020     \begingroup
6021       \lccode`0=#2\relax
6022       \lowercase{\endgroup
6023         \expandafter\def\expandafter\Fld@temp\expandafter{%
6024           \Fld@temp
6025           0%
6026         }%
6027       }%
6028     \expandafter\@firstofone
6029   \fi
6030   {%
6031     \Fld@@DingDef#3\@nil
6032   }%
6033 }

6034 \define@key{Field}{rotation}{%
6035   \def\Fld@rotation{#1}%
6036 }

6037 \define@key{Field}{backgroundcolor}{%
6038   \HyColor@FieldBColor{#1}\Fld@bcolor{hyperref}{backgroundcolor}%
6039 }
6040 \define@key{Field}{bordercolor}{%
6041   \HyColor@FieldBColor{#1}\Fld@bordercolor{hyperref}{bordercolor}%
6042 }
6043 \define@key{Field}{color}{%
6044   \HyColor@FieldColor{#1}\Fld@color{hyperref}{color}%
6045 }

6046 \let\Fld@onclick@code\@empty
6047 \let\Fld@format@code\@empty
6048 \let\Fld@validate@code\@empty
6049 \let\Fld@calculate@code\@empty
6050 \let\Fld@keystroke@code\@empty
6051 \let\Fld@onfocus@code\@empty
6052 \let\Fld@onblur@code\@empty
6053 \let\Fld@onmousedown@code\@empty

```

```

6054 \let\Fld@onmouseup@code\@empty
6055 \let\Fld@onenter@code\@empty
6056 \let\Fld@onexit@code\@empty
6057 \def\Hy@temp#1{%
6058   \expandafter\Hy@@temp\csname Fld@#1@code\endcsname{#1}%
6059 }
6060 \def\Hy@@temp#1#2{%
6061   \ifHy@pdfa
6062     \define@key{Field}{#2}{%
6063       \Hy@Error{%
6064         PDF/A: Additional action `#2' is prohibited%
6065       } \@ehc
6066     }%
6067   \else
6068     \define@key{Field}{#2}{%
6069       \def#1{##1}%
6070     }%
6071   \fi
6072 }
6073 \Hy@temp{keystroke}
6074 \Hy@temp{format}
6075 \Hy@temp{validate}
6076 \Hy@temp{calculate}
6077 \Hy@temp{onfocus}
6078 \Hy@temp{onblur}
6079 \Hy@temp{onmousedown}
6080 \Hy@temp{onmouseup}
6081 \Hy@temp{onenter}
6082 \Hy@temp{onexit}

6083 \let\Fld@calculate@sortkey\@empty
6084 \define@key{Field}{calculatesortkey}[1]{%
6085   \def\Fld@calculate@sortkey{#1}%
6086 }

6087 \ifHy@texht
6088   \def\Hy@temp#1{%
6089     \define@key{Field}{#1}{%
6090       \Field@addtoks{#1}{##1}%
6091     }%
6092   }%
6093 \else
6094   \def\Hy@temp#1{%
6095     \define@key{Field}{#1}{%
6096       \Hy@WarnHTMLFieldOption{#1}%
6097     }%
6098   }%
6099 \fi
6100 \Hy@temp{ondblclick}
6101 \Hy@temp{onmouseover}
6102 \Hy@temp{onmousemove}
6103 \Hy@temp{onmouseout}
6104 \Hy@temp{onkeydown}
6105 \Hy@temp{onkeyup}
6106 \Hy@temp{onselect}

```

```

6107 \Hy@temp{onchange}
6108 \Hy@temp{onkeypress}
6109 \ifHy@texht
6110 \define@key{Field}{onclick}{%
6111   \Field@addtoks{onclick}{#1}%
6112 }%
6113 \else
6114 \ifHy@pdfa
6115 \define@key{Field}{onclick}{%
6116   \Hy@Error{%
6117     PDF/A: Action `onclick' is prohibited%
6118   } \@ehc
6119 }%
6120 \else
6121 \define@key{Field}{onclick}{%
6122   \def\Fld@onclick@code{#1}%
6123 }%
6124 \fi
6125 \fi

6126 \DeclareRobustCommand\TextField{%
6127   \@ifnextchar[{\@TextField}{\@TextField[]}%
6128 }
6129 \DeclareRobustCommand\ChoiceMenu{%
6130   \@ifnextchar[{\@ChoiceMenu}{\@ChoiceMenu[]}%
6131 }
6132 \DeclareRobustCommand\CheckBox{%
6133   \@ifnextchar[{\@CheckBox}{\@CheckBox[]}%
6134 }
6135 \DeclareRobustCommand\PushButton{%
6136   \@ifnextchar[{\@PushButton}{\@PushButton[]}%
6137 }
6138 \DeclareRobustCommand\Gauge{%
6139   \@ifnextchar[{\@Gauge}{\@Gauge[]}%
6140 }
6141 \DeclareRobustCommand\Submit{%
6142   \@ifnextchar[{\@Submit}{\@Submit[]}%
6143 }
6144 \DeclareRobustCommand\Reset{%
6145   \@ifnextchar[{\@Reset}{\@Reset[]}%
6146 }
6147 \def\LayoutTextField#1#2{% label, field
6148   \def\Hy@temp{#1}%
6149   \ifx\Hy@temp\@empty
6150     #2%
6151   \else
6152     #1 #2%
6153   \fi
6154 }
6155 \def\LayoutChoiceField#1#2{% label, field
6156   \def\Hy@temp{#1}%
6157   \ifx\Hy@temp\@empty
6158     #2%
6159   \else
6160     #1 #2%

```



```

6161 \fi
6162 }
6163 \def\LayoutCheckField#1#2{% label, field
6164 \def\Hy@temp{#1}%
6165 \ifx\Hy@temp\@empty
6166 #2%
6167 \else
6168 #1 #2%
6169 \fi
6170 }
6171 \def\LayoutPushButtonField#1{% button
6172 #1%
6173 }
6174 \def\MakeRadioField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
6175 \def\MakeCheckField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
6176 \def\MakeTextField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
6177 \def\MakeChoiceField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
6178 \def\MakeButtonField#1{%
6179 \sbox0{%
6180 \hskip\Fld@borderwidth bp#1\hskip\Fld@borderwidth bp%
6181 }%
6182 \@tempdima\ht0 %
6183 \advance\@tempdima by \Fld@borderwidth bp %
6184 \advance\@tempdima by \Fld@borderwidth bp %
6185 \ht0\@tempdima
6186 \@tempdima\dp0 %
6187 \advance\@tempdima by \Fld@borderwidth bp %
6188 \advance\@tempdima by \Fld@borderwidth bp %
6189 \dp0\@tempdima
6190 \box0\relax
6191 }
6192 \def\DefaultHeightofSubmit{14pt}
6193 \def\DefaultWidthofSubmit{2cm}
6194 \def\DefaultHeightofReset{14pt}
6195 \def\DefaultWidthofReset{2cm}
6196 \def\DefaultHeightofCheckBox{\normalbaselineskip}
6197 \def\DefaultWidthofCheckBox{\normalbaselineskip}
6198 \def\DefaultHeightofChoiceMenu{\normalbaselineskip}
6199 \def\DefaultWidthofChoiceMenu{\normalbaselineskip}
6200 \def\DefaultHeightofText{\normalbaselineskip}
6201 \def\DefaultHeightofTextMultiline{4\normalbaselineskip}
6202 \def\DefaultWidthofText{3cm}
6203 \def\DefaultOptionsofSubmit{print,name=Submit,noexport}
6204 \def\DefaultOptionsofReset{print,name=Reset,noexport}
6205 \def\DefaultOptionsofPushButton{print}
6206 \def\DefaultOptionsofCheckBox{print}
6207 \def\DefaultOptionsofText{print}

```

Default options for the types of \ChoiceMenu.

```

6208 \def\DefaultOptionsofListBox{print}
6209 \def\DefaultOptionsofComboBox{print,edit,sort}
6210 \def\DefaultOptionsofPopdownBox{print}
6211 \def\DefaultOptionsofRadio{print,notoggletooff}

```

20 Setup

```
6212 \ifHy@hyperfigures
6213 \Hy@Info{Hyper figures ON}%
6214 \else
6215 \Hy@Info{Hyper figures OFF}%
6216 \fi
6217 \ifHy@nesting
6218 \Hy@Info{Link nesting ON}%
6219 \else
6220 \Hy@Info{Link nesting OFF}%
6221 \fi
6222 \ifHy@hyperindex
6223 \Hy@Info{Hyper index ON}%
6224 \else
6225 \Hy@Info{Hyper index OFF}%
6226 \fi
6227 \ifHy@backref
6228 \Hy@Info{backreferencing ON}%
6229 \else
6230 \Hy@Info{backreferencing OFF}%
6231 \fi
6232 \ifHy@colorlinks
6233 \Hy@Info{Link coloring ON}%
6234 \else
6235 \Hy@Info{Link coloring OFF}%
6236 \fi
6237 \ifHy@ocgcolorlinks
6238 \Hy@Info{Link coloring with OCG ON}%
6239 \else
6240 \Hy@Info{Link coloring with OCG OFF}%
6241 \fi
6242 \ifHy@pdfa
6243 \Hy@Info{PDF/A mode ON}%
6244 \else
6245 \Hy@Info{PDF/A mode OFF}%
6246 \fi
```

21 Low-level utility macros

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

```
6247 \edef\hyper@hash{\string#}
6248 \edef\hyper@tilde{\string~}
6249 \edef\hyper@quote{\string"}
```

Support \label before \begin{document}.

```
6250 \def\@currentHref{Doc-Start}
6251 \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.

```
6252 \Hy@AtBeginDocument{%
6253 \Hy@pdfstringtrue
6254 \PDF@SetupDoc
```

```

6255 \let\PDF@SetupDoc\@empty
6256 \Hy@DisableOption{pdfpagescrop}%
6257 \Hy@DisableOption{pdfpagemode}%
6258 \Hy@DisableOption{pdfnonfullscreenpagemode}%
6259 \Hy@DisableOption{pdfdirection}%
6260 \Hy@DisableOption{pdfviewarea}%
6261 \Hy@DisableOption{pdfviewclip}%
6262 \Hy@DisableOption{pdfprintarea}%
6263 \Hy@DisableOption{pdfprintclip}%
6264 \Hy@DisableOption{pdfprintscaling}%
6265 \Hy@DisableOption{pdfduplex}%
6266 \Hy@DisableOption{pdfpicktraybypdfsize}%
6267 \Hy@DisableOption{pdfprintpagerange}%
6268 \Hy@DisableOption{pdfnumcopies}%
6269 \Hy@DisableOption{pdfstartview}%
6270 \Hy@DisableOption{pdfstartpage}%
6271 \Hy@DisableOption{pdftoolbar}%
6272 \Hy@DisableOption{pdfmenubar}%
6273 \Hy@DisableOption{pdfwindowui}%
6274 \Hy@DisableOption{pdfitwindow}%
6275 \Hy@DisableOption{pdfcenterwindow}%
6276 \Hy@DisableOption{pdfdisplaydoctitle}%
6277 \Hy@DisableOption{pdfpagelayout}%
6278 \Hy@DisableOption{pdflang}%
6279 \Hy@DisableOption{baseurl}%
6280 \ifHy@texht\else\hyper@anchorstart{Doc-Start}\hyper@anchorend\fi
6281 \Hy@pdfstringfalse
6282 }

```

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.

```

6283 \def\NoHyper{%
6284 \def\hyper@link@[##1]##2##3##4{##4\Hy@xspace@end}%
6285 \def\hyper@@anchor##1##2{##2\Hy@xspace@end}%
6286 \global\let\hyper@livelink\hyper@link
6287 \gdef\hyper@link##1##2##3{##3\Hy@xspace@end}%
6288 \let\hyper@anchor\@gobble
6289 \let\hyper@anchorstart\@gobble
6290 \def\hyper@anchorend{\Hy@xspace@end}%
6291 \let\hyper@linkstart\@gobbletwo
6292 \def\hyper@linkend{\Hy@xspace@end}%
6293 \def\hyper@linkurl##1##2{##1\Hy@xspace@end}%
6294 \def\hyper@linkfile##1##2##3{##1\Hy@xspace@end}%
6295 \let\Hy@backout\@gobble
6296 }
6297 \def\stop@hyper{%
6298 \def\hyper@link@[##1]##2##3##4{##4\Hy@xspace@end}%
6299 \let\Hy@backout\@gobble
6300 \let\hyper@@anchor\@gobble

```

```

6301 \def\hyper@link##1##2##3{##3\Hy@xspace@end}%
6302 \let\hyper@anchor@gobble
6303 \let\hyper@anchorstart@gobble
6304 \def\hyper@anchorend{\Hy@xspace@end}%
6305 \let\hyper@linkstart@gobbletwo
6306 \def\hyper@linkend{\Hy@xspace@end}%
6307 \def\hyper@linkurl##1##2{##1\Hy@xspace@end}%
6308 \def\hyper@linkfile##1##2##3{##1\Hy@xspace@end}%
6309 }
6310 \def\endNoHyper{%
6311 \global\let\hyper@link\hyper@livelink
6312 }
6313 \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:

```

6314 (*nohyperref)
6315 \let\hyper@@anchor@gobble
6316 \def\hyper@link#1#2#3{#3}%
6317 \let\hyper@anchorstart@gobble
6318 \let\hyper@anchorend@empty
6319 \let\hyper@linkstart@gobbletwo
6320 \let\hyper@linkend@empty
6321 \def\hyper@linkurl#1#2{#1}%
6322 \def\hyper@linkfile#1#2#3{#1}%
6323 \def\hyper@link@[#1]#2#3{#1}%
6324 \let\PDF@SetupDoc@empty
6325 \let\PDF@FinishDoc@empty
6326 \def\nohyperpage#1{#1}

```

Some top-level commands:

```

6327 \def\Acrobatmenu#1#2{\leavevmode#2}
6328 \let\pdfstringdefDisableCommands@gobbletwo
6329 \let\texorpdfstring@firstoftwo
6330 \let\pdfbookmark@undefined
6331 \newcommand\pdfbookmark[3]{}
6332 \let\phantomsection@empty
6333 \let\hypersetup@gobble
6334 \let\hyperbaseurl@gobble
6335 \newcommand*{\href}[3]{}
6336 \let\hyperdef@gobbletwo
6337 \let\hyperlink@gobble
6338 \let\hypertarget@gobble
6339 \protected\def\hyperref{%
6340 \ifnextchar\@gobbleopt{\expandafter\@gobbletwo\@gobble}%
6341 }
6342 \long\def\@gobbleopt[#1]{}

```

```
6343 \let\hyperpage\@empty
6344 \</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.

```
6345 \*package
6346 \if@t@r\fmtversion{2023-06-01}{-}
6347 {
6348   \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.

```
6349   \if@filesw
6350     \immediate\write\@auxout{%
6351       \string\providecommand\string\HyperFirstAtBeginDocument{%
6352         \string\AtBeginDocument}^^J%
6353       \string\HyperFirstAtBeginDocument{%
6354         \string\ifx\string\hyper@anchor\string\@undefined^^J%
6355         \string\global\string\let\string\oldnewlabel\string\newlabel^^J%
6356         \string\gdef\string\newlabel\string#1\string#2{%
6357           \string\newlabelxx{\string#1}\string#2}^^J%
6358         \string\gdef\string\newlabelxx%
6359           \string#1\string#2\string#3\string#4\string#5\string#6{%
6360           \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.

```
6361       \string\AtEndDocument{%
6362         \string\ifx\string\hyper@anchor\string\@undefined^^J%
6363         \string\let\string\newlabel\string\oldnewlabel^^J%
6364         \string\fi%
6365       }^^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.

```
6366       \string\fi%
6367     }^^J%
6368     \string\global\string\let\string\hyper@last\relax^^J%
6369     \string\gdef\string\HyperFirstAtBeginDocument\string#1{\string#1}%
6370   }%
6371 \fi
6372 \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.

```

6373 \ifx\hyper@last\@undefined
6374 \def\newlabel#1#2{\@newlabel{#1}{#2}{-}{-}}%
6375 \fi
6376 }
6377 }

```

25 Title strings

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

```

6378 \ifHy@pdfusetitle
6379 \let\HyOrg@title\title
6380 \let\HyOrg@author\author
6381 \def\title{\@ifnextchar{\Hy@scanopttitle}{\Hy@scantitle}}%
6382 \def\Hy@scanopttitle[#1]{%
6383 \gdef\Hy@title{#1}%
6384 \HyOrg@title{#1}%
6385 }%
6386 \def\Hy@scantitle#1{%
6387 \gdef\Hy@title{#1}%
6388 \HyOrg@title{#1}%
6389 }%
6390 \def\author{\@ifnextchar{\Hy@scanoptauthor}{\Hy@scanauthor}}%
6391 \def\Hy@scanoptauthor[#1]{%
6392 \gdef\Hy@author{#1}%
6393 \HyOrg@author{#1}%
6394 }%
6395 \def\Hy@scanauthor#1{%
6396 \gdef\Hy@author{#1}%
6397 \HyOrg@author{#1}%
6398 }%

```

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.

```

6399 \begingroup
6400 \def\process@me#1\@nil#2{%
6401 \expandafter\let\expandafter\x\csname @#2\endcsname
6402 \edef\y{\expandafter\strip@prefix\meaning\x}%
6403 \def\c##1##2\@nil{%
6404 \ifx\##1\%
6405 \else
6406 \expandafter\gdef\csname Hy@#2\expandafter\endcsname
6407 \expandafter{\x}%
6408 \fi
6409 }%
6410 \expandafter\c\y\relax#1\@nil
6411 }%
6412 \expandafter\process@me\string\@latex@\@nil{title}%
6413 \expandafter\process@me\string\@latex@\@nil{author}%
6414 \endgroup

```

```
6415 \fi
6416 \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.

```
6417 \def\Hy@UseMaketitleString#1{%
6418   \@ifundefined{Hy@#1}{}{}%
6419   \begingroup
6420     \let\Hy@saved@hook\pdfstringdefPreHook
6421     \pdfstringdefDisableCommands{%
6422       \expandafter\let\expandafter\\ \csname Hy@newline@#1\endcsname
6423       \let\newline\\}%
6424     \def\and{; }%
6425     \let\thanks\@gobble%
6426   }%
6427   \expandafter\ifx\csname @pdf#1\endcsname\@empty
6428   \expandafter\pdfstringdef\csname @pdf#1\endcsname{%
6429     \csname Hy@#1\endcsname\@empty
6430   }%
6431   \fi
6432   \global\let\pdfstringdefPreHook\Hy@saved@hook
6433   \endgroup
6434 }%
6435 }
6436 \def\Hy@newline@title#1{ #1}
6437 \def\Hy@newline@author#1{, #1}
6438 \def\Hy@UseMaketitleInfos{%
6439   \Hy@UseMaketitleString{title}%
6440   \Hy@UseMaketitleString{author}%
6441 }
```

26 Page numbers

This stuff is done by Heiko Oberdiek.

27 Every page

```
6442 \RequirePackage{atbegshi}[2007/09/09]
6443 \let\Hy@EveryPageHook\@empty
6444 \let\Hy@EveryPageBoxHook\@empty
6445 \let\Hy@FirstPageHook\@empty
6446 \AtBeginShipout{%
6447   \Hy@EveryPageHook
6448   \ifx\Hy@EveryPageBoxHook\@empty
```

```

6449 \else
6450 \setbox\AtBeginShipoutBox=\vbox{%
6451 \offinterlineskip
6452 \Hy@EveryPageBoxHook
6453 \box\AtBeginShipoutBox
6454 }%
6455 \fi
6456 }
6457 \Hy@iffileloaded{hpdftex.def}{-%
6458 \AtBeginShipout{%
6459 \Hy@FirstPageHook
6460 \global\let\Hy@FirstPageHook\@empty
6461 }%
6462 }-%
6463 \AtBeginShipoutFirst{%
6464 \Hy@FirstPageHook
6465 }%
6466 }
6467 \g@addto@macro\Hy@FirstPageHook{%
6468 \PDF@FinishDoc
6469 \global\let\PDF@FinishDoc\@empty
6470 }

```

27.1 PDF /PageLabels

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

```

6471 \ifHy@pdfpagelabels
6472 \begingroup\expandafter\expandafter\expandafter\endgroup
6473 \expandafter\ifx\csname thepage\endcsname\relax
6474 \Hy@pdfpagelabelsfalse
6475 \Hy@WarningNoLine{%
6476 Option `pdfpagelabels' is turned off\MessageBreak
6477 because \string\thepage\space is undefined%
6478 }%
6479 \csname fi\endcsname
6480 \csname iffalse\expandafter\endcsname
6481 \fi

```

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

```

6482 \def\thispdfpagelabel#1{%
6483 \gdef\HyPL@thisLabel{#1}%
6484 }%
6485 \global\let\HyPL@thisLabel\relax

```

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

```

6486 \let\HyPL@Labels\@empty

```

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

```

6487 \newcount\Hy@abspage
6488 \Hy@abspage=0 %

```


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

```
6489 \def\HyPL@LastType{init}%
6490 \def\HyPL@LastNumber{0}%
6491 \let\HyPL@LastPrefix\@empty
```

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

```
6492 \def\HyPL@arabic{D}%
6493 \def\HyPL@Roman{R}%
6494 \def\HyPL@roman{r}%
6495 \def\HyPL@Alph{A}%
6496 \def\HyPL@alph{a}%

6497 \let\HyPL@SlidesSetPage\@empty
6498 \@ifclassloaded{slides}{%
6499   \def\HyPL@SlidesSetPage{%
6500     \advance\c@page\@ne
6501     \ifnum\value{page}>\@ne
6502       \protected@edef\HyPL@SlidesOptionalPage{%
6503         \Hy@SlidesFormatOptionalPage{\thepage}%
6504       }%
6505     \else
6506       \let\HyPL@SlidesOptionalPage\@empty
6507     \fi
6508     \advance\c@page-\@ne
6509     \def\HyPL@page{%
6510       \csname the\Hy@SlidesPage\endcsname
6511       \HyPL@SlidesOptionalPage
6512     }%
6513   }%
6514 }{}
```

`\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.

```
6515 \def\HyPL@EveryPage{%
6516   \begingroup
6517   \ifx\HyPL@thisLabel\relax
6518     \let\HyPL@page\thepage
6519     \HyPL@SlidesSetPage
6520   \else
6521     \let\HyPL@page\HyPL@thisLabel
6522     \global\let\HyPL@thisLabel\relax
6523   \fi
6524   \let\HyPL@Type\relax
6525   \ifnum\c@page>0 %
6526     \ifx\HyPL@SlidesSetPage\@empty
6527       \expandafter\HyPL@CheckThePage\HyPL@page\@nil
6528     \fi
6529   \fi
6530   \let\Hy@temp Y%
6531   \ifx\HyPL@Type\HyPL@LastType
6532   \else
6533     \let\Hy@temp N%
6534   \fi
6535   \ifx\HyPL@Type\relax
6536     \pdfstringdef\HyPL@Prefix{\HyPL@page}%

```

```

6537 \else
6538 \pdfstringdef\HyPL@Prefix\HyPL@Prefix
6539 \fi
6540 \ifx\HyPL@Prefix\HyPL@LastPrefix
6541 \else
6542 \let\Hy@temp N%
6543 \fi
6544 \if Y\Hy@temp
6545 \advance\c@page by -1 %
6546 \ifnum\HyPL@LastNumber=\the\c@page\relax
6547 \else
6548 \let\Hy@temp N%
6549 \fi
6550 \Hy@StepCount\c@page
6551 \fi
6552 \if N\Hy@temp
6553 \ifx\HyPL@Type\relax
6554 \HyPL@StorePageLabel{/P(\HyPL@Prefix)}%
6555 \else
6556 \HyPL@StorePageLabel{%
6557 \ifx\HyPL@Prefix\@empty
6558 \else
6559 /P(\HyPL@Prefix)%
6560 \fi
6561 /S/\csname HyPL\HyPL@Type\endcsname
6562 \ifnum\the\c@page=1 %
6563 \else
6564 \space/St \the\c@page
6565 \fi
6566 }%
6567 \fi
6568 \fi
6569 \xdef\HyPL@LastNumber{\the\c@page}%
6570 \global\let\HyPL@LastType\HyPL@Type
6571 \global\let\HyPL@LastPrefix\HyPL@Prefix
6572 \endgroup
6573 \Hy@GlobalStepCount\Hy@abspage
6574 }%

```

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

```

6575 \def\HyPL@CheckThePage#1\@nil{%
6576 \HyPL@@CheckThePage{#1}#1\csname\endcsname\c@page\@nil
6577 }%

```

`\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 implemenation 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`.

```

6578 \def\HyPL@@CheckThePage#1#2\csname#3\endcsname\c@page#4\@nil{%
6579 \def\Hy@tempa{#4}%
6580 \def\Hy@tempb{\csname\endcsname\c@page}%
6581 \ifx\Hy@tempa\Hy@tempb
6582 \expandafter\ifx\csname HyPL#3\endcsname\relax
6583 \else

```

```

6584     \def\HyPL@Type{#3}%
6585     \def\HyPL@Prefix{#2}%
6586     \fi
6587   \else
6588     \begingroup
6589     \let\Hy@next\endgroup
6590     \let\HyPL@found\@undefined
6591     \def\arabic{\HyPL@Format{arabic}}%
6592     \def\Roman{\HyPL@Format{Roman}}%
6593     \def\roman{\HyPL@Format{roman}}%
6594     \def\Alph{\HyPL@Format{Alph}}%
6595     \def\alph{\HyPL@Format{alph}}%
6596     \protected@edef\Hy@temp{#1}%
6597     \ifx\HyPL@found\relax
6598       \toks@\expandafter{\Hy@temp}%
6599       \edef\Hy@next{\endgroup
6600         \noexpand\HyPL@@@CheckThePage\the\toks@
6601         \noexpand\HyPL@found\relax\noexpand\@nil
6602       }%
6603     \fi
6604     \Hy@next
6605   \fi
6606 }%

```

`\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`.

```

6607 \def\HyPL@Format#1#2{%
6608   \ifx\HyPL@found\@undefined
6609     \expandafter\ifx\csname c@#2\endcsname\c@page
6610       \expandafter\noexpand\csname HyPL@found\endcsname{#1}%
6611     \else
6612       \expandafter\noexpand\csname#1\endcsname{#2}%
6613     \fi
6614   \else
6615     \expandafter\noexpand\csname#1\endcsname{#2}%
6616   \fi
6617 }%

```

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

```

6618 \def\HyPL@@@CheckThePage#1\HyPL@found#2#3\@nil{%
6619   \def\Hy@tempa{#3}%
6620   \def\Hy@tempb{\HyPL@found\relax}%
6621   \ifx\Hy@tempa\Hy@tempb
6622     \def\HyPL@Type{#2}%
6623     \def\HyPL@Prefix{#1}%
6624   \fi
6625 }%

```

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

```

6626 \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`.

```
6627 \def\HyPL@Useless{0<</S/D>>}%
6628 \@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.

```
6629 \def\HyPL@SetPageLabels{%
6630   \@onelevel@sanitize\HyPL@Labels
6631   \ifx\HyPL@Labels\@empty
6632     \else
6633     \ifx\HyPL@Labels\HyPL@Useless
6634     \else
6635     \Hy@PutCatalog{/PageLabels<</Nums{\HyPL@Labels}>>}%
6636     \fi
6637   \fi
6638 }%
```

```
6639 \g@addto@macro\Hy@EveryPageHook{\HyPL@EveryPage}%
6640 \fi
```

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

```
6641 \Hy@DisableOption{pdfpagelabels}
6642 </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`

```
6643 <*pdfTeX>
6644 \pdf@ifdraftmode{%
6645   \let\Hy@PutCatalog\@gobble
6646 }{%
6647   \let\Hy@PutCatalog\pdfcatalog
6648 }
6649 </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.

```
6650 <*vTeX>
6651 \providecommand*\XR@ext}{pdf}
6652 \edef\VTeXversion{%
6653   \ifx\VTeXversion\@undefined
6654     \z@
6655   \else
6656     \ifx\VTeXversion\relax
6657     \z@
```

```

6658 \else
6659 \VTeXversion
6660 \fi
6661 \fi
6662 }
6663 \begingroup
6664 \ifnum\Hy@VTeXversion<660 %
6665 \gdef\Hy@PutCatalog#1{%
6666 \Hy@WarningNoLine{%
6667 VTeX 6.59g or above required for pdfpagelabels%
6668 }%
6669 }%
6670 \else
6671 \gdef\Hy@PutCatalog#1{%
6672 \Hy@vt@PutCatalog#1/PageLabels<<>>\@nil
6673 }%
6674 \gdef\Hy@vt@PutCatalog#1/PageLabels<<#2>>#3\@nil{%
6675 \ifx\#2\%
6676 \else
6677 \immediate\special{!pdfpagelabels #2}%
6678 \fi
6679 }%
6680 \fi
6681 \endgroup
6682 </vtx>

6683 (*pdfTeX | vtx)

```

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

```

6684 \ifHy@pdfpagelabels
6685 \def\HyPL@StorePageLabel#1{%
6686 \toks@\expandafter{\HyPL@Labels}%
6687 \xdef\HyPL@Labels{%
6688 \the\toks@
6689 \the\Hy@abspage<<#1>>%
6690 }%
6691 }%

```

Package `atveryend` is used to get behind the final `\clearpage` and to avoid a `\clearpage` in `\AtEndDocument`. Then the PDF catalog entry for `\PageLabels` is set.

```

6692 \RequirePackage{atveryend}[2009/12/07]%
6693 \AtVeryEndDocument{%
6694 \HyPL@SetPageLabels
6695 }%

6696 \fi
6697 </pdfTeX | vtx>

```

27.1.2 xetex

```

6698 (*xetex)
6699 \HyPsd@LoadUnicode
6700 \Hy@unicodetrue
6701 \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@unicode

```

```

6702 \else
6703 \let\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
6704 \fi
6705 \define@key{Hyp}{unicode}[true]{%
6706 \Hy@boolkey{unicode}{#1}%
6707 \ifHy@unicode
6708 \else
6709 \Hy@Warning{%
6710 XeTeX driver only supports `unicode=true'. Ignoring\MessageBreak
6711 option setting `unicode=false'%
6712 }%
6713 \Hy@unicodetrue
6714 \fi
6715 }
6716 \define@key{Hyp}{pdfencoding}{%
6717 \edef\HyPsd@temp{#1}%
6718 \ifx\HyPsd@temp\HyPsd@pdfencoding@unicode
6719 \let\HyPsd@pdfencoding\HyPsd@temp
6720 \else
6721 \ifx\HyPsd@temp\HyPsd@pdfencoding@auto
6722 \let\HyPsd@pdfencoding\HyPsd@temp
6723 \else
6724 \Hy@Warning{%
6725 XeTeX driver only supports\MessageBreak
6726 `pdfencoding=unicode|auto'. Ignoring option\MessageBreak
6727 setting `pdfencoding=\HyPsd@temp'%
6728 }%
6729 \fi
6730 \fi
6731 }
6732 \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:

```

6733 \def\setpdfinkmargin#1{%
6734 \begingroup
6735 \setlength{\dimen@}{#1}%
6736 \special{dvipdfmx:config g \strip@pt\dimen@}%
6737 \endgroup}
6738 </xetex>

```

set the pdf version

```

6739 < *dvipdfm | xetex>
6740 \special{pdf:majorversion \Hy@pdf@majorversion}
6741 \special{pdf:minorversion \Hy@pdf@minorversion}
6742 </dvipdfm | xetex>

```

27.1.3 pdfmarkbase, dvipdfm, xetex

```

6743 < *pdfmarkbase>
6744 \begingroup
6745 \@ifundefined{headerps@out}{-}{%
6746 \toks@\expandafter{\Hy@FirstPageHook}%
6747 \xdef\Hy@FirstPageHook{%
6748 \noexpand\headerps@out{%
6749 systemdict /pdfmark known%

```

```

6750     {%
6751     userdict /?pdfmark systemdict /exec get put%
6752     }{%
6753     userdict /?pdfmark systemdict /pop get put %
6754     userdict /pdfmark systemdict /cleartomark get put%
6755     }%
6756     ifelse%
6757     }%
6758     \the\toks@
6759     }%
6760 }%
6761 \endgroup
6762 \pdfmarkbase)

```

\Hy@PutCatalog

```

6763 \dvi\pdfm | xetex)\def\Hy@PutCatalog#1{\@pdfm@mark{docview <<#1>>}}
6764 (*pdfmarkbase)
6765 \def\Hy@PutCatalog#1{%
6766 \pdfmark{pdfmark=/PUT,Raw={\string{Catalog\string} <<#1>>}}%
6767 }
6768 \pdfmarkbase)

6769 (*pdfmarkbase | dvi\pdfm | xetex)
6770 \ifHy@pdfpagelabels

```

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

```

6771 \def\HyPL@StorePageLabel#1{%
6772 \if@filesw
6773 \beginpage
6774 \edef\Hy@tempa{\the\Hy@abspage<<#1>>}%
6775 \immediate\write\@mainaux{%
6776 \string\HyPL@Entry{\Hy@tempa}%
6777 }%
6778 \endpage
6779 \fi
6780 }%

```

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.

```

6781 \Hy@AtBeginDocument{%
6782 \if@filesw
6783 \immediate\write\@mainaux{%
6784 \string\providecommand\string*\string\HyPL@Entry[1]{}%
6785 }%
6786 \fi
6787 \ifx\HyPL@Labels\@empty
6788 \Hy@WarningNoLine{Rerun to get /PageLabels entry}%
6789 \else
6790 \HyPL@SetPageLabels
6791 \fi
6792 \let\HyPL@Entry\@gobble
6793 }%

```

`\HyPL@Entry`

```
6794 \def\HyPL@Entry#1{%
6795   \expandafter\gdef\expandafter\HyPL@Labels\expandafter{%
6796     \HyPL@Labels
6797     #1%
6798   }%
6799 }%

6800 \fi
6801 </pdfmarkbase | dvipdfm | xetex>
6802 <*packageEnd>

6803 \ifx\MaybeStopEarly\relax
6804 \else
6805   \Hy@stoppedearlytrue
6806   \expandafter\MaybeStopEarly
6807 \fi
6808 \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 ‘naturalnames’ option uses whatever L^AT_EX provides, which may be useable. But then its up to you to make sure these are legal PDF and HTML names. The ‘hypertextnames=false’ option just makes up arbitrary names.

All the shenanigans is to make sure section numbers etc are always arabic, separated by dots. Who knows how people will set up `\@currentlabel`? If they put spaces in, or brackets (quite legal) then the hypertext processors will get upset.

But this is flaky, and open to abuse. Styles like `subeqn` will mess it up, for starters. Appendices are an issue, too. We just hope to cover most situations. We can at least cope with the standard sectioning structure, allowing for `\part` and `\chapter`.

Start with a fallback for equations

```
6809 \def\Hy@CounterExists#1{%
6810   \begingroup\expandafter\expandafter\expandafter\endgroup
6811   \expandafter\ifx\csname c@#1\endcsname\relax
6812     \expandafter\@gobble
6813   \else
6814     \begingroup\expandafter\expandafter\expandafter\endgroup
6815     \expandafter\ifx\csname the#1\endcsname\relax
6816       \expandafter\expandafter\expandafter\@gobble
6817     \else
6818       \expandafter\expandafter\expandafter\@firstofone
6819     \fi
6820 \fi
```



```

6821 }
6822 \Hy@CounterExists{section}{%
6823 \providecommand\theHequation{\theHsection.\arabic{equation}}%
6824 }
6825 \providecommand\theHequation{\arabic{equation}}%
6826 \Hy@CounterExists{part}{%
6827 \providecommand\theHpart{\arabic{part}}%
6828 }
6829 \@ifundefined{thechapter}{%
6830 \providecommand\theHsection {\arabic{section}}%
6831 \providecommand\theHfigure {\arabic{figure}}%
6832 \providecommand\theHtable {\arabic{table}}%
6833 }{%
6834 \providecommand\theHchapter {\arabic{chapter}}%
6835 \providecommand\theHfigure {\theHchapter.\arabic{figure}}%
6836 \providecommand\theHtable {\theHchapter.\arabic{table}}%
6837 \providecommand\theHsection {\theHchapter.\arabic{section}}%
6838 }
6839 \providecommand\theHsubsection {\theHsection.\arabic{subsection}}
6840 \providecommand\theHsubsubsection{\theHsubsection.\arabic{subsubsection}}
6841 \providecommand\theHparagraph {\theHsubsubsection.\arabic{paragraph}}
6842 \providecommand\theHsubparagraph {\theHparagraph.\arabic{subparagraph}}
6843 \providecommand\theHtheorem {\theHsection.\arabic{theorem}}
6844 \providecommand\theHthm {\theHsection.\arabic{thm}}

```

Thanks to Greta Meyer (gbd@pop.cwru.edu) for making me realize that enumeration starts at 0 for every list! But `\item` occurs inside `\trivlist`, so check if its a real `\item` before incrementing counters.

```

6845 \let\H@item\item
6846 \newcounter{Item}
6847 \def\theHItem{\arabic{Item}}
6848 \def\item{%
6849 \@hyper@itemfalse
6850 \if@nmbrrlist\@hyper@itemtrue\fi
6851 \H@item
6852 }
6853 \providecommand\theHenumi {\theHItem}
6854 \providecommand\theHenumii {\theHItem}
6855 \providecommand\theHenumiii {\theHItem}
6856 \providecommand\theHenumiv {\theHItem}
6857 \providecommand\theHHfootnote {\arabic{Hfootnote}}
6858 \providecommand\theHmpfootnote{\arabic{mpfootnote}}
6859 \@ifundefined{theHHmpfootnote}{%
6860 \let\theHHmpfootnote\theHHfootnote
6861 }{}

```

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.

```

6862 \let\H@refstepcounter\refstepcounter
6863 \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`

```

6864 \newif\if@hyper@item
6865 \newif\if@skiphyperref
6866 \@hyper@itemfalse
6867 \@skiphyperreffalse
6868 \ExplSyntaxOn
6869 \def\refstepcounter#1{%
6870   \legacy_if:nF {Hy@pdfstring}
6871   {
6872     \H@refstepcounter{#1}%
6873     \bool_lazy_and:nnT
6874     { \l__hyp_target_create_bool }
6875     { ! \legacy_if_p:n{@skiphyperref} }
6876     {
6877       \legacy_if:nTF {@hyper@item}
6878       {
6879         \stepcounter{Item}%
6880         \hyper@refstepcounter{Item}%
6881         \@hyper@itemfalse
6882       }
6883       {
6884         \hyper@refstepcounter{#1}%
6885       }
6886     }
6887   }
6888 }
6889 \ExplSyntaxOff
6890 \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.

```

6891 \newif\ifmeasuring@\measuring@false
6892 \newcommand\Hy@ifnotmeasuring[1]{#1}
6893 \AddToHook{package/amsmath/after}
6894 {
6895   \renewcommand\Hy@ifnotmeasuring[1]
6896   {\ifmeasuring@ \else #1\fi}
6897 }

```

`\hyper@refstepcounter`

```

6898 \def\hyper@refstepcounter#1{%
6899   \HyCnt@ProvideTheHCounter{#1}%
6900   \hyper@makecurrent{#1}%
6901   \Hy@ifnotmeasuring
6902   {\Hy@raisedlink{%
6903     \hyper@anchorstart{\@currentHref}\hyper@anchorend
6904   }}%
6905 }

```

`\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 L^AT_EX', substring search `\in@` can be used.

```

6906 \def\HyCnt@ProvideTheHCounter#1{%
6907   \@ifundefined{theH#1}{%
6908     \expandafter\def\csname theH#1\endcsname{%
6909       \def\Hy@temp{\@elt{#1}}%
6910       \@onelevel@sanitize\Hy@temp
6911       \let\HyOrg@elt\@elt
6912       \edef\@elt{%
6913         \noexpand\HyCnt@LookForParentCounter
6914         \expandafter\noexpand\csname theH#1\endcsname
6915       }%
6916       \cl@ckpt
6917       \let\@elt\HyOrg@elt
6918       \expandafter
6919       \Hy@LocalAppendToMacro\csname theH#1\expandafter\endcsname
6920       \expandafter{%
6921         \expandafter\@arabic\csname c@#1\endcsname
6922       }%
6923   }%
6924 }

```

`\Hy@LookForParentCounter`

```

6925 \def\HyCnt@LookForParentCounter#1#2{%
6926   \expandafter\let\expandafter\Hy@temp@A\csname cl@#2\endcsname
6927   \@ifundefined{cl@#2}{%
6928     }{%
6929     \@onelevel@sanitize\Hy@temp@A
6930     \edef\Hy@temp@A{%
6931       \noexpand\in@{\Hy@temp}{\Hy@temp@A}%
6932     }\Hy@temp@A
6933     \ifin@
6934       \@ifundefined{theH#2}{%
6935         \expandafter\Hy@LocalAppendToMacro\expandafter#1%
6936         \expandafter{%
6937           \expandafter\@arabic\csname c@#2\endcsname.%
6938         }%
6939       }{%
6940         \expandafter\Hy@LocalAppendToMacro\expandafter#1%
6941         \expandafter{%
6942           \csname theH#2\endcsname.%
6943         }%
6944       }%
6945     \fi
6946   }%
6947 }

```

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`.

```

6948 \begingroup\expandafter\expandafter\expandafter\endgroup
6949 \expandafter\ifx\csname chapter\endcsname\relax
6950 \def\Hy@chapterstring{section}%
6951 \else
6952 \def\Hy@chapterstring{chapter}%
6953 \fi
6954 \def\Hy@appendixstring{appendix}
6955 \def\Hy@chapapp{\Hy@chapterstring}
6956 \@ifundefined{appendix}{%
6957 }{%
6958 \let\HyOrg@appendix\appendix
6959 \def\Hy@AlphNoErr#1{%
6960 \ifnum\value{#1}>26 %
6961   Alph\number\value{#1}%
6962 \else
6963 \ifnum\value{#1}<1 %
6964   Alph\number\value{#1}%
6965 \else
6966   \Alph{#1}%
6967 \fi
6968 \fi
6969 }%
6970 \def\appendix{%
6971 \@ifundefined{chapter}{%
6972 \gdef\theHsection{\Hy@AlphNoErr{section}}%
6973 }{%
6974 \gdef\theHchapter{\Hy@AlphNoErr{chapter}}%
6975 }%
6976 \xdef\Hy@chapapp{\Hy@appendixstring}%
6977 \HyOrg@appendix
6978 }%
6979 }

```

`\Hy@Test@alph`

```

6980 \def\Hy@Test@alph#1{%
6981 \ifcase#1\or
6982 a\or b\or c\or d\or e\or f\or g\or h\or i\or j\or
6983 k\or l\or m\or n\or o\or p\or q\or r\or s\or t\or
6984 u\or v\or w\or x\or y\or z%
6985 \else
6986 \@ctrerr
6987 \fi
6988 }

```

`\Hy@Test@Alph`

```

6989 \def\Hy@Test@Alph#1{%
6990 \ifcase#1\or
6991 A\or B\or C\or D\or E\or F\or G\or H\or I\or J\or
6992 K\or L\or M\or N\or O\or P\or Q\or R\or S\or T\or
6993 U\or V\or W\or X\or Y\or Z%
6994 \else
6995 \@ctrerr

```

```
6996 \fi
6997 }
```

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

```
6998 \NewHook{__hyp/target/setname }
6999 \define@key{Hyp}{next-anchor}{%
7000   \AddToHookNext{__hyp/target/setname}%
7001   {\Hy@MakeCurrentHref{#1}}%
7002 }
```

`\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.

```
7003 \def\hyper@makecurrent#1{%
7004   \begingroup
7005   \Hy@safe@activestruer
7006   \edef\Hy@param{#1}%
7007   \ifx\Hy@param\Hy@chapterstring
7008     \let\Hy@param\Hy@chapapp
7009   \fi
7010   \ifHy@hypertextnames
7011     \let\@number\@firstofone
7012     \def\@fnsymbol##1{\fnsymbol\number##1}%
7013     \def\@arabic##1{\number##1}%
7014     \ifx\@alph\Hy@Test@alph
7015       \else
7016         \def\@alph{alph\number}%
7017       \fi
7018     \ifx\@Alph\Hy@Test@Alph
7019       \else
7020         \def\@Alph{Alph\number}%
7021       \fi
7022     \ifHy@naturalnames
7023       \let\textlatin\@firstofone
7024       \xdef\HyperGlobalCurrentHref{\csname the#1\endcsname}%
7025     \else
7026       \xdef\HyperGlobalCurrentHref{%
7027         \csname
7028           the%
7029           \expandafter\ifx\csname theH#1\endcsname\relax\else H\fi
7030           #1%
7031         \endcsname
7032       }%
7033     \fi
7034     \xdef\HyperGlobalCurrentHref{%
7035       \Hy@param.\expandafter\strip@prefix\meaning\HyperGlobalCurrentHref
7036     }%
7037     \else
7038       \Hy@GlobalStepCount\Hy@linkcounter
7039       \xdef\HyperGlobalCurrentHref{\Hy@param.\the\Hy@linkcounter}%
7040     \fi
7041   \endgroup
7042   \let\HyperLocalCurrentHref\HyperGlobalCurrentHref
7043   \ifHy@localanchorname
```

```

7044 \let\@currentHref\HyperLocalCurrentHref
7045 \else
7046 \global\let\@currentHref\HyperGlobalCurrentHref
7047 \fi
7048 \UseHook{__hyp/target/setname}%
7049 }

```

`\Hy@MakeCurrentHref`

```

7050 \def\Hy@MakeCurrentHref#1{%
7051 \edef\HyperLocalCurrentHref{#1}%
7052 \@onelevel@sanitize\HyperLocalCurrentHref
7053 \global\let\HyperGlobalCurrentHref\HyperLocalCurrentHref
7054 \let\HyperLocalCurrentHref\HyperGlobalCurrentHref
7055 \ifHy@localanchorname
7056 \let\@currentHref\HyperLocalCurrentHref
7057 \else
7058 \global\let\@currentHref\HyperGlobalCurrentHref
7059 \fi
7060 }

```

`\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.

```

7061 \def\Hy@MakeCurrentHrefAuto#1{%
7062 \Hy@GlobalStepCount\Hy@linkcounter
7063 \Hy@MakeCurrentHref{#1.\the\Hy@linkcounter}%
7064 \UseHook{__hyp/target/setname}}

```

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

```

7065 \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.

```

7066 \def\hypergetref#1{\getrefbykeydefault{#1}{}}{??}}
7067 \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.

```

7068 \@if@t@r\fmtversion{2023-11-01}
7069 {
7070 \AddToHook{package/varwidth/after}
7071 {
7072 \NewSocketPlug{hyp/raisedlink}{varwidth}{\@vwid@wrap{#1}}
7073 \appto\@vwid@setup{\AssignSocketPlug{hyp/raisedlink}{varwidth}}
7074 }
7075 }{}

```

31 Package titlesec and titletoc support

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

Package titlesec support:

```
7076 \@ifpackageloaded{titlesec}{%
7077   \def\ttl@Hy@steplink#1{%
7078     \Hy@MakeCurrentHrefAuto{#1*}%
7079     \edef\ttl@Hy@saveanchor{%
7080       \noexpand\Hy@raisedlink{%
7081         \noexpand\hyper@anchorstart{\@currentHref}%
7082         \noexpand\hyper@anchorend
7083         \def\noexpand\ttl@Hy@SavedCurrentHref{\@currentHref}%
7084         \noexpand\ttl@Hy@PatchSaveWrite
7085       }%
7086     }%
7087   }%
7088   \def\ttl@Hy@PatchSaveWrite{%
7089     \begingroup
7090     \toks@\expandafter{\ttl@savewrite}%
7091     \edef\x{\endgroup
7092       \def\noexpand\ttl@savewrite{%
7093         \let\noexpand\@currentHref
7094           \noexpand\ttl@Hy@SavedCurrentHref
7095         \the\toks@
7096       }%
7097     }%
7098     \x
7099   }%
7100   \def\ttl@Hy@refstepcounter#1{%
7101     \let\ttl@b\Hy@raisedlink
7102     \def\Hy@raisedlink##1{%
7103       \def\ttl@Hy@saveanchor{\Hy@raisedlink{##1}}%
7104     }%
7105     \refstepcounter{#1}%
7106     \let\Hy@raisedlink\ttl@b
7107   }%
7108 }{}
```

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

```
7109 \@ifpackageloaded{longtable}{%
7110   \@ifundefined{hyper@nopatch@longtable}{%
7111     \begingroup
7112     \def\y{\LT@array}%
7113     \@ifundefined{scr@LT@array}{%
7114       \@ifundefined{adl@LT@array}{\def\y{\adl@LT@array}}%
7115     }{\def\y{\scr@LT@array}}%

```

```

7116 \long\def\x\refstepcounter#1#2\@sharp#3#4\@nil{%
7117 \expandafter\endgroup
7118 \expandafter\def\y[##1]##2{%
7119 \H@refstepcounter{#1}%
7120 \hyper@makecurrent{table}%
7121 \let\Hy@LT@currentHref\@currentHref
7122 #2\@sharp###4%
7123 }%
7124 }%
7125 \expandafter\expandafter\expandafter\x\y[##1]{##2}\@nil
Patch of \LT@start: add anchor before first line after \vskip\LTpre
7126 \begingroup
7127 \def\x#1\ifvoid\LT@foot#2\fi#3\@nil{%
7128 \endgroup
7129 \def\LT@start{%
7130 #1%
7131 \ifvoid\LT@foot#2\fi
7132 \let\@currentHref\Hy@LT@currentHref
7133 \Hy@raisedlink{%
7134 \hyper@anchorstart{\@currentHref}\hyper@anchorend
7135 }%
7136 #3%
7137 }%
7138 }%
7139 \expandafter\x\LT@start\@nil
7140 }{}
7141 }{}

```

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`

```

7142 \let\new@refstepcounter\refstepcounter
7143 \let\H@equation\equation
7144 \let\H@endequation\endequation
7145 \@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.

```

7146 \@ifpackageloaded{amsmath}{}{%
7147 \def\equation{%
7148 \let\refstepcounter\H@refstepcounter
7149 \H@equation
7150 \hyper@makecurrent{equation}%

```


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

```

7151   \mathopen{%
7152     \Hy@raisedlink{\hyper@anchorstart{\@currentHref}}}%
7153   }%
7154   \let\refstepcounter\new@refstepcounter
7155 }%
7156 \def\endequation{%
7157   \ifx\Hy@raisedlink\@empty
7158     \hyper@anchorend
7159   \else
7160     \mathclose{\Hy@raisedlink{\hyper@anchorend}}}%
7161   \fi
7162   \H@endequation
7163 }%
7164 }
7165 }{}

```

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.

```

7166 \newif\if@eqnstar
7167 \@eqnstarfalse
7168 \let\H@eqnarray\eqnarray
7169 \let\H@endeqnarray\endeqnarray
7170 \@ifundefined{hyper@nopatch@mathenv}{%
7171   \def\eqnarray{%
7172     \let\Hy@reserved@a\relax
7173     \def\@currentHref{}%
7174     \H@eqnarray
7175     \if@eqnstar
7176     \else
7177       \ifx\\\@currentHref\\%
7178       \else
7179         \hyper@makecurrent{equation}%
7180         \mathopen{%
7181           \Hy@raisedlink{%
7182             \hyper@anchorstart{\@currentHref}\hyper@anchorend
7183           }%
7184         }%
7185       \fi
7186     \fi
7187   }
7188   \def\endeqnarray{%
7189     \H@endeqnarray
7190   }
7191 }{}

```

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.

```

7192 \@namedef{eqnarray*}{%
7193   \protected\def\@eqnrcr{\nonumber\@seqnrcr}\@eqnstartrue\eqnarray

```

```

7194 }
7195 \@namedef{endeqnarray*}{%
7196 \nonumber\endeqnarray\@eqnstarfalse
7197 }

```

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

```

7198 \@ifundefined{subeqnarray}{}{%
7199 \let\H@subeqnarray\subeqnarray
7200 \let\H@endsubeqnarray\endsubeqnarray
7201 \def\subeqnarray{%
7202 \let\Hy@reserved@a\relax
7203 \H@subeqnarray
7204 \hyper@makecurrent{equation}%
7205 \hyper@anchorstart{\@currentHref}{\hyper@anchorend
7206 }%
7207 \def\endsubeqnarray{%
7208 \H@endsubeqnarray
7209 }%
7210 \providecommand\theHsubequation{\theHequation\alph{subequation}}%
7211 }

```

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

```

7212 \def\make@stripped@name#1{%
7213 \begingroup
7214 \escapechar\m@ne
7215 \global\let\newname\@empty
7216 \protected@edef\Hy@tempa{#1}%
7217 \edef\@tempb{%
7218 \noexpand\@tfor\noexpand\Hy@tempa:=%
7219 \expandafter\strip@prefix\meaning\Hy@tempa
7220 }%
7221 \@tempb\do{%
7222 \if\Hy@tempa\else
7223 \if\Hy@tempa\else
7224 \xdef\newname{\newname\Hy@tempa}%
7225 \fi
7226 \fi
7227 }%
7228 \endgroup
7229 }

```

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.

```

7230 \AddToHook{cmd/subequations/before}
7231 {%
7232 \stepcounter{equation}%
7233 \protected@edef\theHparentequation{\theHequation}%
7234 \addtocounter{equation}{-1}%
7235 }
7236
7237 \AddToHook{cmd/subequations/after}
7238 {%

```

```

7239 \def\theHequation{\theHparentequation\alph{equation}}%
7240 \ignorespaces
7241 }

```

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 paragraph 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).

```

7242 \newcommand\Hy@theorem@refstepcounter[1]
7243 {%
7244 \H@refstepcounter{#1}%
7245 \hyper@makecurrent{#1}%
7246 \global\let\Hy@dth@currentHref\@currentHref
7247 \Hy@theorem@makelinktarget{\Hy@dth@currentHref}%
7248 }
7249 \newcommand\Hy@theorem@makelinktarget[1]

```

```

7250 {
7251   \AddToHookNext{cmd/item/before}
7252   {\AddToHookNext{para/begin}
7253    {\let\Hy@tempa\@currentHref
7254     \MakeLinkTarget*{#1}% \Hy@dth@currentHref
7255     \global\let\@currentHref\Hy@tempa
7256    }%
7257   }%
7258 }

```

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.

```

7259 \AddToHook{begindocument}
7260 {%
7261   \@ifundefined{deferred@thm@head}{}
7262   {%
7263     \let\Hy@deferred@thm@head\deferred@thm@head
7264     \def\deferred@thm@head#1{\Hy@deferred@thm@head{#1}}%
7265     \renewcommand\Hy@theorem@makelinktarget[1]
7266     {%
7267       \AddToHookNext{cmd/deferred@thm@head/before}
7268       {\AddToHookNext{para/begin}
7269        {\let\Hy@tempa\@currentHref
7270         \MakeLinkTarget*{#1}%
7271         \global\let\@currentHref\Hy@tempa
7272        }%
7273       }%
7274     }%
7275   }%
7276 }
7277 \@ifundefined{hyper@nopatch@thm}{%
7278 \AtBeginDocument{%
7279 \ifpackageloaded{cleveref}
7280 {\AddToHook{cmd/@thm/before}{\ifhmode\unskip\fi}}
7281 {%
7282 \ifpatchable\@thm{\refstepcounter}
7283 {\patchcmd\@thm{\refstepcounter}{\Hy@theorem@refstepcounter}{}{}}
7284 {}%
7285 }}}{}

```

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.

```

7286 \@ifundefined{hyper@nopatch@footnote}{%
7287 \ifHy@hyperfootnotes
7288 \newcounter{Hfootnote}%
7289 \let\H@@footnotetext\@footnotetext
7290 \let\H@@footnotemark\@footnotemark

```

```

7291 \def\@xfootnotenext[#1]{%
7292   \begingroup
7293   \csname c@\@mpfn\endcsname #1\relax
7294   \unrestored@protected@xdef\@thefnmark{\thempfn}%
7295   \endgroup
7296   \ifx\@footnotetext\@mpfootnotetext
7297     \expandafter\H@\@mpfootnotetext
7298   \else
7299     \expandafter\H@\@footnotetext
7300   \fi
7301 }%
7302 \def\@xfootnotemark[#1]{%
7303   \begingroup
7304   \c@footnote #1\relax
7305   \unrestored@protected@xdef\@thefnmark{\thefootnote}%
7306   \endgroup
7307   \H@\@footnotemark
7308 }%
7309 \let\H@\@mpfootnotetext\@mpfootnotetext
7310 \long\def\@mpfootnotetext#1{%
7311   \H@\@mpfootnotetext{%
7312     \ifHy@nesting
7313       \expandafter\@firstoftwo
7314     \else
7315       \expandafter\@secondoftwo
7316     \fi
7317   }%
7318   \expandafter\hyper@@anchor\expandafter{%
7319     \Hy@footnote@currentHref
7320   }\ignorespaces #1}%
7321 }{%
7322   \Hy@raisedlink{%
7323     \expandafter\hyper@@anchor\expandafter{%
7324       \Hy@footnote@currentHref
7325     }\relax}%
7326   }\ignorespaces #1%
7327 }%
7328 }%
7329 }%
7330 \long\def\@footnotetext#1{%
7331   \H@\@footnotetext{%
7332     \ifHy@nesting
7333       \expandafter\@firstoftwo
7334     \else
7335       \expandafter\@secondoftwo
7336     \fi
7337   }%
7338   \expandafter\hyper@@anchor\expandafter{%
7339     \Hy@footnote@currentHref
7340   }\ignorespaces #1}%
7341 }{%
7342   \Hy@raisedlink{%
7343     \expandafter\hyper@@anchor\expandafter{%
7344       \Hy@footnote@currentHref

```

```

7345     }{\relax}%
7346     }%
7347     \let\@currentHref\Hy@footnote@currentHref
7348     \let\@currentlabelname\@empty
7349     \ignorespaces #1%
7350     }%
7351     }%
7352     }%

```

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.

```

7353 \def\@footnotemark{%
7354 \leavevmode
7355 \ifhmode\edef\@x@sf{\the\spacefactor}\nobreak\fi
7356 \stepcounter{Hfootnote}%
7357 \global\let\Hy@saved@currentHref\@currentHref
7358 \hyper@makecurrent{Hfootnote}%
7359 \global\let\Hy@footnote@currentHref\@currentHref
7360 \global\let\@currentHref\Hy@saved@currentHref
7361 \hyper@linkstart{link}{\Hy@footnote@currentHref}%
7362 \@makefnmark
7363 \hyper@linkend
7364 \ifhmode\spacefactor\@x@sf\fi
7365 \relax
7366 }%

```

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

```

7367 \@ifpackageloaded{tabularx}{%
7368 \let\HyOrg@TX@endtabularx\TX@endtabularx
7369 \def\Hy@tabularx@hook{%
7370 \let\@footnotetext\H@@footnotetext
7371 \let\@footnotemark\H@@footnotemark
7372 \let\@mpfootnotetext\H@@mpfootnotetext
7373 }%
7374 \begingroup
7375 \toks@\expandafter{\TX@endtabularx}%
7376 \xdef\Hy@gtemp{%
7377 \noexpand\Hy@tabularx@hook
7378 \the\toks@
7379 }%
7380 \endgroup
7381 \let\TX@endtabularx\Hy@gtemp
7382 }{}%

```

Support for footnotes in `p` columns of `longtable`. Here `\footnote` commands are splitted into `\footnotemark` and a call of `\footnotetext` with the optional argument, that is not supported by `hyperref`. The result is a link by `\footnotemark` without valid anchor

```

7383 \@ifpackageloaded{longtable}{%
7384 \CheckCommand{\LT@p@ftntext}[1]{%
7385 \edef\@tempa{%

```

```

7386     \the\LT@p@ftn
7387     \noexpand\footnotetext[\the\c@footnote]%
7388   }%
7389   \global\LT@p@ftn\expandafter{\@tempa{#1}}%
7390 }%
7391 \long\def\LT@p@ftntext#1{%
7392   \edef\@tempa{%
7393     \the\LT@p@ftn
7394     \begingroup
7395     \noexpand\c@footnote=\the\c@footnote\relax
7396     \noexpand\protected@xdef\noexpand\@thefnmark{%
7397       \noexpand\thempfn
7398     }%
7399     \noexpand\Hy@LT@footnotetext{%
7400       \Hy@footnote@currentHref
7401     }%
7402   }%
7403   \global\LT@p@ftn\expandafter{%
7404     \@tempa{#1}%
7405   \endgroup
7406   }%
7407 }%
7408 \long\def\Hy@LT@footnotetext#1#2{%
7409   \H@@footnotetext{%
7410     \ifHy@nesting
7411       \hyper@@anchor{#1}{#2}%
7412     \else
7413       \Hy@raisedlink{%
7414         \hyper@@anchor{#1}{\relax}%
7415       }%
7416     \def\@currentHref{#1}%
7417     \let\@currentlabelname\@empty
7418     #2%
7419   \fi
7420   }%
7421 }%
7422 }-}%

```

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

```

7423 \@ifpackageloaded{fancyvrb}{%
7424   \def\V@@footnotetext{%
7425     \insert\footins\bgroup
7426     \csname reset@font\endcsname
7427     \footnotesize
7428     \interlinepenalty\interfootnotelinepenalty
7429     \splittopskip\footnotesep
7430     \splitmaxdepth\dp\strutbox
7431     \floatingpenalty \@MM
7432     \hsize\columnwidth
7433     \@parboxrestore
7434     \def\@currentcounter{footnote}%
7435     \protected@edef\@currentlabel{\csname p@footnote\endcsname\@thefn-
mark}%
7436     \@makefnptext}%
7437   \rule{\z@}{\footnotesep}%

```

```

7438 \bgroup
7439 \aftergroup\V@@@footnotetext
7440 \Hy@raisedlink{%
7441   \expandafter\hyper@@anchor\expandafter{%
7442     \Hy@footnote@currentHref
7443   }\relax}%
7444 }%
7445 \let\@currentHref\Hy@footnote@currentHref
7446 \let\@currentlabelname\@empty
7447 \ignorespaces
7448 }%
7449 }{}%

```

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

```

7450 \def\Hy@temp#1{%
7451   \begingroup
7452   \unrestored@protected@xdef\@thefnmark{\ref{#1}}%
7453   \endgroup
7454   \@footnotemark
7455 }%
7456 \ifx\Hy@temp\footref
7457   \def\footref#1{%
7458     \begingroup
7459     \unrestored@protected@xdef\@thefnmark{\ref{#1}}%
7460     \endgroup
7461     \H@@@footnotemark
7462   }%
7463 \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.

```

7464 \let\HyOrg@maketitle\maketitle
7465 \def\maketitle{%
7466   \let\Hy@saved@footnotemark\@footnotemark
7467   \let\Hy@saved@footnotetext\@footnotetext
7468   \let\@footnotemark\H@@@footnotemark
7469   \let\@footnotetext\H@@@footnotetext
7470   \@ifnextchar[\Hy@maketitle@optarg{% ]
7471     \HyOrg@maketitle
7472     \Hy@maketitle@end
7473   }%
7474 }%
7475 \def\Hy@maketitle@optarg[#1]{%
7476   \HyOrg@maketitle[#{#1}]%
7477   \Hy@maketitle@end
7478 }%
7479 \def\Hy@maketitle@end{%
7480   \ifx\@footnotemark\H@@@footnotemark
7481     \let\@footnotemark\Hy@saved@footnotemark
7482     \fi
7483   \ifx\@footnotetext\H@@@footnotetext
7484     \let\@footnotetext\Hy@saved@footnotetext
7485   \fi

```



```

7486 }%

\realfootnote Does anyone remember the function and purpose of \realfootnote?
7487 \def\realfootnote{%
7488   \ifnextchar[\@xfootnote%
7489     {\stepcounter{\@mpfn}%
7490     \protected@xdef\@thefnmark{\thempfn}%
7491     \H@@footnotemark\H@@footnotetext
7492   }%
7493 }%

7494 \fi
7495 }{}
7496 \Hy@DisableOption{hyperfootnotes}

7497 </packageEnd>
7498 <*check>
7499 \checklatex
7500 \checkcommand\def\@xfootnotenext[#1]{%
7501   \begingroup
7502   \csname c@\@mpfn\endcsname #1\relax
7503   \unrestored@protected@xdef\@thefnmark{\thempfn}%
7504   \endgroup
7505   \@footnotetext
7506 }
7507 \checkcommand\def\@xfootnotemark[#1]{%
7508   \begingroup
7509   \c@footnote #1\relax
7510   \unrestored@protected@xdef\@thefnmark{\thefootnote}%
7511   \endgroup
7512   \@footnotemark
7513 }
7514 \checkcommand\def\@footnotemark{%
7515   \leavevmode
7516   \ifhmode\edef\@x@sf{\the\spacefactor}\nobreak\fi
7517   \@makefnmark
7518   \ifhmode\spacefactor\@x@sf\fi
7519   \relax
7520 }
7521 </check>
7522 <*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.

```

7523 \@ifundefined{hyper@nopatch@caption}{%
7524 \def\caption{%
7525   \ifx\@captive\@undefined
7526     \@latex@error{\noexpand\caption outside float}\@ehd
7527     \expandafter\@gobble
7528   \else
7529     \H@refstepcounter\@captive

```

```

7530 \let\Hy@tempa\@caption
7531 \@ifundefined{float@caption}{%
7532 }{%
7533 \expandafter\ifx\csname @float@c@\@capttype\endcsname
7534 \float@caption
7535 \let\Hy@tempa\Hy@float@caption
7536 \fi
7537 }%
7538 \expandafter\@firstofone
7539 \fi
7540 {\@dblarg{\Hy@tempa\@capttype}}%
7541 }
7542 \long\def\@caption#1[#2]#3{%
7543 \expandafter\ifx\csname if@capstart\expandafter\endcsname
7544 \csname iftrue\endcsname
7545 \global\let\@currentHref\hc@currentHref
7546 \else
7547 \hyper@makecurrent{\@capttype}%
7548 \fi
7549 \@ifundefined{NR@gettitle}{%
7550 \def\@currentlabelname{#2}%
7551 }{%
7552 \NR@gettitle{#2}%
7553 }%
7554 \par\addcontentsline{\csname ext@#1\endcsname}{#1}{%
7555 \protect\numberline{\csname the#1\endcsname}{\ignorespaces #2}%
7556 }%
7557 \begingroup
7558 \@parboxrestore
7559 \if@minipage
7560 \@setminipage
7561 \fi
7562 \normalsize
7563 \expandafter\ifx\csname if@capstart\expandafter\endcsname
7564 \csname iftrue\endcsname
7565 \global\@capstartfalse
7566 \@makecaption{\csname fnum@#1\endcsname}{\ignorespaces#3}%
7567 \else
7568 \@makecaption{\csname fnum@#1\endcsname}{%
7569 \ignorespaces

```

If we cannot have nesting, the anchor is empty.

```

7570 \ifHy@nesting
7571 \expandafter\hyper@@anchor\expandafter{\@currentHref}{#3}%
7572 \else
7573 \Hy@raisedlink{%
7574 \expandafter\hyper@@anchor\expandafter{%
7575 \@currentHref
7576 }{\relax}%
7577 }%
7578 #3%
7579 \fi
7580 }%
7581 \fi
7582 \par

```

```

7583 \endgroup
7584 }}{}}%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’.

```

7585 \let\Hy@float@caption\@caption
7586 \newcommand{\HyNew@float@makebox}[1]{%
7587 \HyOrg@float@makebox{%
7588   #1\relax
7589   \ifx\Hy@float@currentHref\@undefined
7590   \else
7591     \expandafter\hyper@\@anchor\expandafter{%
7592       \Hy@float@currentHref
7593     }\relax}%
7594   \global\let\Hy@float@currentHref\@undefined
7595   \fi
7596 }%
7597 }%
7598 \@ifpackageloaded{float}{%
7599 \def\Hy@float@caption{%
7600   \ifx\Hy@float@currentHref\@undefined
7601     \hyper@makecurrent{\@capttype}%
7602     \global\let\Hy@float@currentHref\@currentHref
7603   \else
7604     \let\@currentHref\Hy@float@currentHref
7605   \fi
7606   \float@caption
7607 }%
7608 \let\HyOrg@float@makebox\float@makebox
7609 \let\float@makebox\HyNew@float@makebox
7610 }}{}}

7611 \endpackage
7612 \check
7613 \checklatex[1999/06/01 - 2000/06/01]
7614 \checkcommand\def\caption{%
7615   \ifx\@capttype\@undefined
7616     \@latex@error{\noexpand\caption outside float}\@ehd
7617     \expandafter\@gobble
7618   \else
7619     \refstepcounter\@capttype
7620     \expandafter\@firstofone
7621     \fi
7622   {\@dblarg{\@caption\@capttype}}%
7623 }
7624 \checkcommand\long\def\@caption#1[#2]#3{%
7625   \par
7626   \addcontentsline{\csname ext@#1\endcsname}{#1}{%
7627     \protect\numberline{\csname the#1\endcsname}{\ignorespaces #2}%
7628   }%
7629   \begingroup
7630   \@parboxrestore

```

```

7631 \if@minipage
7632 \setminipage
7633 \fi
7634 \normalsize
7635 \@makecaption{\csname fnum@#1\endcsname}{\ignorespaces #3}\par
7636 \endgroup
7637 }
7638 </check>
7639 <*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 `\bibcite`; this still breaks some citation packages so we have to work around them. But this remains extremely dangerous. Any or all of *achemso* and *drftcite* may break.

However, lets make an attempt to get *natbib* right, because 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.

```

7640 \def\hyper@natlinkstart#1{%
7641 \Hy@backout{#1}%
7642 \hyper@linkstart{cite}{cite.#1}%
7643 \def\hyper@nat@current{#1}%
7644 }
7645 \def\hyper@natlinkend{%
7646 \hyper@linkend
7647 }
7648 \def\hyper@natlinkbreak#1#2{%
7649 \hyper@linkend#1\hyper@linkstart{cite}{cite.#2}%
7650 }
7651 \def\hyper@natanchorstart#1{%
7652 \Hy@raisedlink{\hyper@anchorstart{cite.#1}}%
7653 }
7654 \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.

```

7655 \@ifundefined{hyper@nopatch@bib}
7656 {%
7657 \ifundefined{NAT@parse}{%
7658 \providecommand*\@extra@binfo{}%
7659 \providecommand*\@extra@b@citeb{}%
7660 \def\bibcite#1#2{%
7661 \@newl@bel{b}{#1\@extra@binfo}{%
7662 \hyper@@link[cite]{}{cite.#1\@extra@b@citeb}{#2}%
7663 }%
7664 }%
7665 \gdef\@extra@binfo{}%

```

Package `babel` redefines `\biblecite` with macro `\bbl@cite@choice`. It needs to be overwritten to avoid the warning “Label(s) may have changed.”.

```

7666 \let\Hy@biblecite\biblecite
7667 \begingroup
7668 \ifundefined{bbl@cite@choice}{%
7669 \g@addto@macro\bbl@cite@choice{%
7670 \let\biblecite\Hy@biblecite
7671 }%
7672 }%
7673 \endgroup

```

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

```

7674 \providecommand*\@BIBLABEL{\@biblabel}%
7675 \def\@bibitem[#1]#2{%
7676 \@skiphyperreftrue
7677 \H@item[%
7678 \ifx\Hy@raisedlink\@empty
7679 \hyper@anchorstart{cite.#2\@extra@b@citeb}%
7680 \@BIBLABEL{#1}%
7681 \hyper@anchorend
7682 \else
7683 \Hy@raisedlink{%
7684 \hyper@anchorstart{cite.#2\@extra@b@citeb}\hyper@anchorend
7685 }%
7686 \@BIBLABEL{#1}%
7687 \fi
7688 \hfill
7689 ]%
7690 \@skiphyperreffalse
7691 \if@filesw
7692 \begingroup
7693 \let\protect\noexpand
7694 \immediate\write\@auxout{%
7695 \string\biblecite{#2}{#1}%
7696 }%
7697 \endgroup
7698 \fi
7699 \ignorespaces
7700 }%

```

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

```

7701 \def\@bibitem#1{%
7702 \@skiphyperreftrue\H@item\@skiphyperreffalse
7703 \Hy@raisedlink{%
7704 \hyper@anchorstart{cite.#1\@extra@b@citeb}\relax\hyper@anchorend
7705 }%
7706 \if@filesw
7707 \begingroup
7708 \let\protect\noexpand
7709 \immediate\write\@auxout{%
7710 \string\biblecite{#1}{\the\value{\@listctr}}%
7711 }%
7712 \endgroup
7713 \fi

```

```

7714     \ignorespaces
7715   }%
7716 }{}%
7717 }{}

7718 </packageEnd>
7719 <*check>
7720 \checklatex
7721 \checkcommand\def\@bibitem[#1]#2{%
7722   \item[\@biblabel{#1}\hfill]%
7723   \if@filesw
7724     {%
7725       \let\protect\noexpand
7726       \immediate\write\@auxout{%
7727         \string\bibcite{#2}{#1}%
7728       }%
7729     }%
7730   \fi
7731   \ignorespaces
7732 }
7733 \checkcommand\def\@bibitem#1{%
7734   \item
7735   \if@filesw
7736     \immediate\write\@auxout{%
7737       \string\bibcite{#1}{\the\value{\@listctr}}%
7738     }%
7739   \fi
7740   \ignorespaces
7741 }
7742 </check>
7743 <*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.

```

7744 \@ifpackageloaded{harvard}{%
7745   \Hy@AtBeginDocument{%
7746     \Hy@Info{*** compatibility with harvard **** }%
7747     \Hy@raiselinksfalse
7748     \def\harvardcite#1#2#3#4{%
7749       \global\@namedef{HAR@fn@#1}{\hyper@@link[cite]{cite.#1}{#2}}%
7750       \global\@namedef{HAR@an@#1}{\hyper@@link[cite]{cite.#1}{#3}}%
7751       \global\@namedef{HAR@yr@#1}{\hyper@@link[cite]{cite.#1}{#4}}%
7752       \global\@namedef{HAR@df@#1}{\csname HAR@fn@#1\endcsname}%
7753     }%
7754     \def\HAR@citetoaux#1{%
7755       \if@filesw\immediate\write\@auxout{\string\citation{#1}}\fi%
7756     \ifHy@backref

```

```

7757 \ifx\@empty\@currentlabel
7758 \else
7759 \@bsphack
7760 \if@filesw
7761 \protected@write\@auxout{}{%
7762 \string\@writefile{brf}{%
7763 \string\backcite{#1}{%
7764 {\thepage}{\@currentlabel}{\@currentHref}%
7765 }%
7766 }%
7767 }%
7768 \fi
7769 \@esphack
7770 \fi
7771 \fi
7772 }%
7773 \def\harvarditem{%
7774 \@ifnextchar[{\@harvarditem}{\@harvarditem[\null]}%
7775 }%
7776 \def\@harvarditem[#1]#2#3#4#5\par{%
7777 \item[]%
7778 \hyper@anchorstart{cite.#4}\relax\hyper@anchorend
7779 \if@filesw
7780 \begingroup
7781 \def\protect##1{\string ##1\space}%
7782 \ifthenelse{\equal{#1}{\null}}%
7783 {\def\next{{#4}{#2}{#2}{#3}}}%
7784 {\def\next{{#4}{#2}{#1}{#3}}}%
7785 \immediate\write\@auxout{\string\harvardcite\codeof\next}%
7786 \endgroup
7787 \fi
7788 \protect\hspace*{-\labelwidth}%
7789 \protect\hspace*{-\labelsep}%
7790 \ignorespaces
7791 #5%
7792 \ifHy@backref
7793 \newblock
7794 \backref{\csname br@#4\endcsname}%
7795 \fi
7796 \par
7797 }%

```

\HAR@checkcitations Package hyperref has added \hyper@@link, so the original test \HAR@checkcitations will fail every time and always will appear the “Changed labels” warning. So we have to redefine \Har@checkcitations:

```

7798 \long\def\HAR@checkcitations#1#2#3#4{%
7799 \def\HAR@tempa{\hyper@@link[cite]{}{cite.#1}{#2}}%
7800 \expandafter\ifx\csname HAR@fn@#1\endcsname\HAR@tempa
7801 \def\HAR@tempa{\hyper@@link[cite]{}{cite.#1}{#3}}%
7802 \expandafter\ifx\csname HAR@an@#1\endcsname\HAR@tempa
7803 \def\HAR@tempa{\hyper@@link[cite]{}{cite.#1}{#4}}%
7804 \expandafter\ifx\csname HAR@yr@#1\endcsname\HAR@tempa
7805 \else
7806 \@tempswatruue

```

```

7807     \fi
7808     \else
7809     \@tempswatru
7810     \fi
7811     \else
7812     \@tempswatru
7813     \fi
7814 }%
7815 }%

7816 }{}

```

37.2 Package chicago

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

```

7817 \@ifpackageloaded{chicago}{%

```

```

\citeN

```

```

7818 \def\citeN{%
7819   \def\@citesep{-1000}%
7820   \def\@cite##1##2{##1}%
7821   \def\citeauthoryear##1##2##3{##1 (##3\@cite@opt)}%
7822   \@citedata@opt
7823 }%

```

```

\shortciteN

```

```

7824 \def\shortciteN{%
7825   \def\@citesep{-1000}%
7826   \def\@cite##1##2{##1}%
7827   \def\citeauthoryear##1##2##3{##2 (##3\@cite@opt)}%
7828   \@citedata@opt
7829 }%

```

```

\@citedata@opt

```

```

7830 \def\@citedata@opt{%
7831   \let\@cite@opt\@empty
7832   \@ifnextchar [{%
7833     \@tempswatru
7834     \@citedatax@opt
7835   }{%
7836     \@tempswafalse
7837     \@citedatax[]%
7838   }%
7839 }%

```

```

\@citedatax@opt

```

```

7840 \def\@citedatax@opt[#1]{%
7841   \def\@cite@opt{, #1}%
7842   \@citedatax[{#1}]%
7843 }%

7844 }{}

```


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.

```
7845 \def\@currentHpage{Doc-Start}
7846 \ifclassloaded{slides}{-%
7847   \def\Hy@SlidesFormatOptionalPage#1{(#1)}%
7848   \def\Hy@PageAnchorSlidesPlain{%
7849     \advance\c@page\@ne
7850     \xdef\@currentHpage{page.\the\c@slide.\the\c@overlay.\the\c@note%
7851       \ifnum\c@page=\@ne
7852         \else
7853           .\the\c@page
7854         \fi}%
7855   \edef\Hy@TempPageAnchor{%
7856     \noexpand\hyper@@anchor{%
7857       \@currentHpage
7858     }%
7859   }%
7860   \advance\c@page-\@ne
7861 }%
7862 \def\Hy@PageAnchorSlide{%
7863   \advance\c@page\@ne
7864   \ifnum\c@page>\@ne
7865     \@ifundefined{theHpage}{-%
7866       \protected@edef\Hy@TheSlideOptionalPage{%
7867         \Hy@SlidesFormatOptionalPage{thepage}%
7868       }%
7869     }{%
7870       \protected@edef\Hy@TheSlideOptionalPage{%
7871         \Hy@SlidesFormatOptionalPage{theHpage}%
7872       }%
7873     }%
7874   \else
7875     \def\Hy@TheSlideOptionalPage{}%
7876   \fi
7877   \advance\c@page-\@ne
7878   \pdfstringdef\@the@H@page{%
7879     \csname
7880       the%
7881       \@ifundefined{theH\Hy@SlidesPage}{H}%
7882       \Hy@SlidesPage
7883     \endcsname
7884   \Hy@TheSlideOptionalPage
7885 }%
7886 \@gobblethree
```

```

7887 }%
7888 \def\Hy@SlidesPage{slide}%
7889 \g@addto@macro\slide{%
7890   \def\Hy@SlidesPage{slide}%
7891 }%
7892 \g@addto@macro\overlay{%
7893   \def\Hy@SlidesPage{overlay}%
7894 }%
7895 \g@addto@macro\note{%
7896   \def\Hy@SlidesPage{note}%
7897 }%
7898 }{%
7899 \def\Hy@PageAnchorSlidesPlain{}}%
7900 \def\Hy@PageAnchorSlide{}}%
7901 }
7902 \def\Hy@EveryPageAnchor{%
7903   \Hy@DistillerDestFix
7904   \ifHy@pageanchor
7905     \ifHy@hypertextnames
7906       \ifHy@plainpages
7907         \def\Hy@TempPageAnchor{\hyper@@anchor{page.\the\c@page}}%
7908         \xdef\@currentHpage{page.\the\c@page}%
7909         \Hy@PageAnchorSlidesPlain
7910       \else
7911         \begingroup
7912         \let\@number\@firstofone
7913         \Hy@unicodefalse
7914         \Hy@PageAnchorSlide
7915         \pdfstringdef\@the@H@page{\thepage}%
7916         \endgroup
7917         \EdefUnescapeString\@the@H@page{\@the@H@page}%
7918         \def\Hy@TempPageAnchor{\hyper@@anchor{page.\@the@H@page}}%
7919         \xdef\@currentHpage{page.\@the@H@page}%
7920       \fi
7921     \else
7922       \Hy@GlobalStepCount\Hy@pagecounter
7923       \def\Hy@TempPageAnchor{%
7924         \hyper@@anchor{page.\the\Hy@pagecounter}%
7925       }%
7926       \xdef\@currentHpage{page.\the\Hy@pagecounter}%
7927     \fi
7928   \vbox to 0pt{%
7929     \kern\voffset
7930     \kern\topmargin
7931     \kern-1bp\relax
7932     \hbox to 0pt{%
7933       \kern\hoffset
7934       \kern\ifodd\value{page}%
7935         \oddsidemargin
7936       \else
7937         \evensidemargin
7938       \fi
7939     \kern-1bp\relax
7940     \Hy@TempPageAnchor\relax

```

```

7941     \hss
7942   }%
7943   \vss
7944 }%
7945 \fi
7946 }
7947 \g@addto@macro\Hy@EveryPageBoxHook{%
7948   \Hy@EveryPageAnchor
7949 }

```

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.

```

7950 \providecommand\protected@file@percent{}
7951 \@ifundefined{hyper@nopatch@toc}{%
7952   \def\addcontentsline#1#2#3{% toc extension, type, tag
7953     \begingroup
7954       \let\label@gobble
7955       \ifx\@currentHref\@empty
7956         \Hy@Warning{%
7957           No destination for bookmark of \string\addcontentsline,%
7958           \MessageBreak destination is added%
7959         }%
7960       \phantomsection
7961     \fi
7962     \expandafter\ifx\csname toplevel@#2\endcsname\relax
7963       \begingroup
7964         \def\Hy@tempa{#1}%
7965         \ifx\Hy@tempa\Hy@bookmarkstype
7966           \Hy@WarningNoLine{%
7967             bookmark level for unknown #2 defaults to 0%
7968           }%
7969         \else
7970           \Hy@Info{bookmark level for unknown #2 defaults to 0}%
7971         \fi
7972       \endgroup
7973       \expandafter\gdef\csname toplevel@#2\endcsname{0}%
7974     \fi
7975     \edef\Hy@toclevel{\csname toplevel@#2\endcsname}%
7976     \Hy@writebookmark{\csname the#2\endcsname}%
7977       {#3}%
7978       {\@currentHref}%
7979       {\Hy@toclevel}%
7980       {#1}%
7981     \ifHy@verbose
7982       \begingroup
7983         \def\Hy@tempa{#3}%
7984         \@onelevel@sanitize\Hy@tempa

```

```

7985 \let\temp@online\on@line
7986 \let\on@line\@empty
7987 \Hy@Info{%
7988   bookmark\temp@online:\MessageBreak
7989   thecounter {\csname the#2\endcsname}\MessageBreak
7990   text {\Hy@tempa}\MessageBreak
7991   reference {\@currentHref}\MessageBreak
7992   toplevel {\Hy@toclevel}\MessageBreak
7993   type {#1}%
7994 }%
7995 \endgroup
7996 \fi
7997 \addtocontents{#1}{%
7998 \protect\contentsline{#2}{#3}{\thepage}{\@currentHref}\protected@file@per-
cent
7999 }%
8000 \endgroup
8001 }
8002 }{}

```

`\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:

```

8003 \protected\def\Hy@toclinkstart{\hyper@linkstart{link}{\Hy@tocdestname}}
8004 \protected\def\Hy@toclinkend{\hyper@linkend}
8005
8006 \@ifundefined{hyper@nopatch@toc}{%
8007 \def\contentsline#1#2#3#4{%
8008 \begingroup
8009 \Hy@safe@activestrue
8010 \edef\x{\endgroup
8011 \def\noexpand\Hy@tocdestname{#4}%
8012 }\x
8013 \ifx\Hy@tocdestname\@empty
8014 \csname l@#1\endcsname{#2}{#3}%
8015 \else
8016 \ifcase\Hy@linktoc % none
8017 \csname l@#1\endcsname{#2}{#3}%
8018 \or % section
8019 \csname l@#1\endcsname{%
8020 \Hy@toclinkstart{#2}\Hy@toclinkend
8021 }{#3}%
8022 \or % page
8023 \def\Hy@temp{#3}%
8024 \ifx\Hy@temp\@empty
8025 \csname l@#1\endcsname{#2}{#3}%
8026 \else
8027 \csname l@#1\endcsname{#2}{#3}%
8028 \Hy@toclinkstart{#3}\Hy@toclinkend
8029 }%
8030 \fi
8031 \else % all
8032 \def\Hy@temp{#3}%

```

```

8033     \ifx\Hy@temp\@empty
8034       \csname l@#1\endcsname{%
8035         \Hy@toclinkstart{#2}\Hy@toclinkend
8036       }{}%
8037     \else
8038       \csname l@#1\endcsname{%
8039         \Hy@toclinkstart{#2}\Hy@toclinkend
8040       }{%
8041         \Hy@toclinkstart{#3}\Hy@toclinkend
8042       }%
8043     \fi
8044   \fi
8045 \fi
8046 }
8047 }{}

8048 \</packageEnd>
8049 \< *check>
8050 \checklatex
8051 \checkcommand\def\addcontentsline#1#2#3{%
8052   \addtocontents{#1}{\protect\contentsline{#2}{#3}{\thepage}}%
8053 }
8054 \checkcommand\def\contentsline#1{\csname l@#1\endcsname}
8055 \</check>
8056 \< *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

```

8057 \@ifundefined{hyper@nopatch@counter}
8058 {
8059   \let\H@definecounter\@definecounter
8060   \def\@definecounter#1{%
8061     \H@definecounter{#1}%
8062     \expandafter
8063     \gdef\csname theH#1\expandafter\endcsname\expandafter
8064       {\expandafter\@arabic\csname c@#1\endcsname}}%
8065   }{}

```

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.

```

8066 \@ifundefined{hyper@nopatch@counter}
8067 {
8068   \let\H@newctr\@newctr
8069   \def\@newctr#1[#2]{%
8070     \H@newctr#1[#2]}%
8071   \expandafter\gdef\csname theH#1\endcsname{%
8072     \csname the\@ifundefined{theH#2}{H}{H}#2\endcsname.\arabic{#1}%
8073   }%
8074   }
8075 }{}

```

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.

```
8076 \ifundefined{hyper@nopatch@amsmath@tag}
8077   {%
8078   \AddToHook{package/amsmath/after}{%
8079     \def\Hy@make@anchor{%
8080       \Hy@MakeCurrentHrefAuto{AMS}%
8081       \Hy@raisedlink{\hyper@anchorstart{\@currentHref}\hyper@anchorend}%
8082     }%
8083     \def\Hy@make@df@tag@#1{%
8084       \gdef\df@tag{%
8085         \maketag@@@{\Hy@make@anchor#1}%
8086         \def\@currentlabel{#1}%
8087       }%
8088     }%
8089     \def\Hy@make@df@tag@@@#1{%
8090       \gdef\df@tag{%
8091         \tagform@{\Hy@make@anchor#1}%
8092         \toks@\@xp{\p@equation{#1}}%
8093         \edef\@currentlabel{the\toks@}%
8094       }%
8095     }%
8096     \let\HyOrg@make@df@tag@@\make@df@tag@@
8097     \let\HyOrg@make@df@tag@@@\make@df@tag@@@
8098     \let\make@df@tag@@\Hy@make@df@tag@@
8099     \let\make@df@tag@@@\Hy@make@df@tag@@@
8100   }%
8101 }
```

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>

```

8102 \def\HyOrg@addtoreset#1#2{\expandafter\@cons\csname cl@#2\endcsname {{#1}}}
8103 \@ifundefined{hyper@nopatch@counter}
8104 {
8105   \let\HyOrg@addtoreset\@addtoreset
8106   \def\@addtoreset#1#2{%
8107     \HyOrg@addtoreset{#1}{#2}%
8108     \expandafter\xdef\csname theH#1\endcsname{%
8109       \expandafter\noexpand
8110         \csname the\@ifundefined{theH#2}{}H#2\endcsname
8111       .\noexpand\the\noexpand\value{#1}%
8112     }%
8113   }
8114 }{}

```

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

```

8115 </packageEnd>
8116 <*check>
8117 \checkpackage{amsmath}[1999/12/14 - 2000/06/06]
8118 \checkcommand\newcommand{\numberwithin}[3][\arabic]{%
8119   \@ifundefined{c@#2}{\@nocounterr{#2}}{%
8120     \@ifundefined{c@#3}{\@nocnterr{#3}}{%
8121       \@addtoreset{#2}{#3}%
8122       \@xp\xdef\csname the#2\endcsname{%
8123         \@xp\@nx\csname the#3\endcsname .\@nx#1{#2}%
8124       }%
8125     }%
8126   }%
8127 }%
8128 </check>

```

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

```

8129 <*packageEnd>
8130 \@ifundefined{hyper@nopatch@counter}
8131 {
8132   \AddToHook{package/amsmath/after}{%
8133     \renewcommand*\numberwithin}[3][\arabic]{%
8134       \@ifundefined{c@#2}{\@nocounterr{#2}}{%
8135         \@ifundefined{c@#3}{\@nocnterr{#3}}{%
8136           \HyOrg@addtoreset{#2}{#3}%
8137           \@xp\xdef\csname the#2\endcsname{%
8138             \@xp\@nx\csname the#3\endcsname .\@nx#1{#2}%
8139           }%
8140           \@xp\xdef\csname theH#2\endcsname{%
8141             \@xp\@nx
8142             \csname the\@ifundefined{theH#3}{}H#3\endcsname
8143             .\@nx#1{#2}%
8144           }%
8145         }%
8146       }%
8147     }%
8148   }{}

```

```
8149 }{}
```

42 Included figures

Simply intercept the low level graphics package macro.

```
8150 \ifHy@hyperfigures
8151 \let\Hy@Gin@setfile\Gin@setfile
8152 \def\Gin@setfile#1#2#3{%
8153   \hyperimage{#3}{\Hy@Gin@setfile{#1}{#2}{#3}}%
8154 }%
8155 \fi
8156 \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.

```
8157 \ifHy@hyperindex
8158 \def\HyInd@ParenLeft{()}%
8159 \def\HyInd@ParenRight{)}%
8160 \def\hyperindexformat#1#2{%
8161   \let\HyOrg@hyperpage\hyperpage
8162   \let\hyperpage\@firstofone
8163   #1{\HyOrg@hyperpage{#2}}%
8164   \let\hyperpage\HyOrg@hyperpage
8165 }%
8166 \Hy@nextfalse
8167 \@ifpackageloaded{multind}{\Hy@nexttrue}{}%
8168 \@ifpackageloaded{index}{\Hy@nexttrue}{}%
8169 \@ifpackageloaded{amsmidx}{\Hy@nexttrue}{}%
8170 \begingroup
8171 \lccode`|= \expandafter`\HyInd@EncapChar\relax
8172 \lccode`\/= `\\ \relax
8173 \lowercase{\endgroup
8174 \ifHy@next
8175   \let\HyInd@org@wrindex\@wrindex
8176   \def\@wrindex#1#2{\HyInd@@wrindex{#1}#2| |}%
8177   \def\HyInd@@wrindex#1#2|#3|#4\\{%
8178     \ifx\\#3\\%
8179       \HyInd@org@wrindex{#1}{#2|hyperpage}%
8180     \else
8181       \HyInd@@@wrindex{#1}{#2}#3\\%
8182     \fi
8183   }%
```



```

8184 \def\HyInd@@@wrindex#1#2#3#4\{\%
8185 \def\Hy@temp@A{#3}%
8186 \ifcase0\ifx\Hy@temp@A\HyInd@ParenLeft 1\fi
8187 \ifx\Hy@temp@A\HyInd@ParenRight 1\fi
8188 \relax
8189 \HyInd@org@wrindex{#1}{%
8190 #2|hyperindexformat{/#3#4}%
8191 }%
8192 \else
8193 \ifx\#4\%
8194 \ifx\Hy@temp@A\HyInd@ParenRight
8195 \HyInd@org@wrindex{#1}{#2|#3}%
8196 \else
8197 \HyInd@org@wrindex{#1}{#2|#3hyperpage}%
8198 \fi
8199 \else
8200 \HyInd@org@wrindex{#1}{%
8201 #2|#3hyperindexformat{/#4}%
8202 }%
8203 \fi
8204 \fi
8205 }%
8206 \else
8207 \def\@wrindex#1{\@wrindex#1||\}%
8208 \def\@wrindex#1|#2|#3\{\%
8209 \if@filesw
8210 \ifx\#2\%
8211 \protected@write\@indexfile{\%
8212 \string\indexentry{#1|hyperpage}{\thepage}%
8213 }%
8214 \else
8215 \HyInd@@@wrindex{#1}#2\%
8216 \fi
8217 \fi
8218 \endgroup
8219 \@esphack
8220 }%
8221 \def\HyInd@@@wrindex#1#2#3\{\%
8222 \def\Hy@temp@A{#2}%
8223 \ifcase0\ifx\Hy@temp@A\HyInd@ParenLeft 1\fi
8224 \ifx\Hy@temp@A\HyInd@ParenRight 1\fi
8225 \relax
8226 \protected@write\@indexfile{\%
8227 \string\indexentry{%
8228 #1|hyperindexformat{/#2#3}%
8229 }{\thepage}%
8230 }%
8231 \else
8232 \ifx\#3\%
8233 \ifx\Hy@temp@A\HyInd@ParenRight
8234 \HyInd@DefKey{#1}%
8235 \@ifundefined{HyInd@(\HyInd@key)}{\%
8236 \let\Hy@temp@empty
8237 }{\%

```

```

8238     \expandafter\let\expandafter\Hy@temp
8239     \csname HyInd@(\HyInd@key)\endcsname
8240     }%
8241     \protected@write\@indexfile{}{%
8242     \string\indexentry{#1|#2\Hy@temp}{\thepage}%
8243     }%
8244     \else
8245     \protected@write\@indexfile{}{%
8246     \string\indexentry{#1|#2hyperpage}{\thepage}%
8247     }%
8248     \HyInd@DefKey{#1}%
8249     \expandafter
8250     \gdef\csname HyInd@(\HyInd@key)\endcsname{%
8251     hyperpage%
8252     }%
8253     \fi
8254     \else
8255     \protected@write\@indexfile{}{%
8256     \string\indexentry{%
8257     #1|#2hyperindexformat{/#3}%
8258     }{\thepage}%
8259     }%
8260     \ifx\Hy@temp@A\HyInd@ParenLeft
8261     \HyInd@DefKey{#1}%
8262     \expandafter
8263     \gdef\csname HyInd@(\HyInd@key)\endcsname{%
8264     hyperindexformat{/#3}%
8265     }%
8266     \fi
8267     \fi
8268     \fi
8269     }%
8270     \def\HyInd@DefKey#1{%
8271     \begingroup
8272     \let\protect\@unexpandable@protect
8273     \edef\Hy@temp{#1}%
8274     \@onelevel@sanitize\Hy@temp
8275     \global\let\HyInd@key\Hy@temp
8276     \endgroup
8277     }%
8278     \fi
8279     }%
8280     \fi
8281     \Hy@DisableOption{hyperindex}
8282     \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.

```
8283 \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.

```
8284 \def\hyperpage#1{%
8285   \HyInd@hyperpage#1\nohyperpage{}\@nil
```

```

8286 }
8287 \def\HyInd@hyperpage#1\nohyperpage#2#3\@nil{%
8288 \HyInd@@hyperpage{#1}%
8289 #2%
8290 \def\Hy@temp{#3}%
8291 \ifx\Hy@temp\@empty
8292 \else
8293 \Hy@ReturnAfterFi{%
8294 \HyInd@hyperpage#3\@nil
8295 }%
8296 \fi
8297 }
8298 \def\HyInd@@hyperpage#1{\@hyperpage#1----\}
8299 \def\@hyperpage#1--#2--#3\{%
8300 \ifx\#2\%
8301 \@commahyperpage{#1}%
8302 \else
8303 \HyInd@pagelink{#1}--\HyInd@pagelink{#2}%
8304 \fi
8305 }
8306 \def\@commahyperpage#1{\@commahyperpage#1, \}
8307 \def\@@commahyperpage#1, #2, #3\{%
8308 \ifx\#2\%
8309 \HyInd@pagelink{#1}%
8310 \else
8311 \HyInd@pagelink{#1}, \HyInd@pagelink{#2}%
8312 \fi
8313 }

```

The argument of `\hyperpage` can be empty. And the line breaking algorithm of `Makeindex` can introduce spaces. So we have to remove them.

```

8314 \def\HyInd@pagelink#1{%
8315 \begingroup
8316 \toks@={}%
8317 \HyInd@removespaces#1 \@nil
8318 \endgroup
8319 }
8320 \def\HyInd@removespaces#1 #2\@nil{%
8321 \toks@=\expandafter{\the\toks@#1}%
8322 \ifx\#2\%
8323 \edef\x{\the\toks@}%
8324 \ifx\x\@empty
8325 \else
8326 \hyperlink{page.\the\toks@}{\the\toks@}%
8327 \fi
8328 \else
8329 \Hy@ReturnAfterFi{%
8330 \HyInd@removespaces#2\@nil
8331 }%
8332 \fi
8333 }

```

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). (`\endinginput` 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.

```
8334 \ifHy@texht
8335 \expandafter\endinput
8336 \fi
8337 \let\real@setref\@setref
8338 \def\@setref#1#2#3{% csname, extract group, refname
8339 \ifx#1\relax
8340 \protect\G@refundefinedtrue
8341 \nfss@text{\reset@font\bfseries ??}%
8342 \@latex@warning{%
8343 Reference `#3' on page \thepage \space undefined%
8344 }%
8345 \else
8346 \expandafter\Hy@setref@link#1\@empty\@empty\@empty\@nil{#2}%
8347 \fi
8348 }
```

\Hy@setref@link extracts the reference information entries, because \hyper@@link does not expand arguments for the automatic link type detection.

```
8349 \def\Hy@setref@link#1#2#3#4#5#6\@nil#7{%
8350 \begingroup
8351 \toks0={\hyper@@link{#5}{#4}}%
8352 \toks1=\expandafter{#7{#1}{#2}{#3}{#4}{#5}}%
8353 \edef\x{\endgroup
8354 \the\toks0 {\the\toks1 }%
8355 }%
8356 \x
8357 }
8358 \def\@pagesetref#1#2#3{% csname, extract macro, ref
8359 \ifx#1\relax
8360 \protect\G@refundefinedtrue
8361 \nfss@text{\reset@font\bfseries ??}%
8362 \@latex@warning{%
8363 Reference `#3' on page \thepage \space undefined%
8364 }%
8365 \else
8366 \protect\hyper@@link
8367 {\expandafter\@fifthoffive#1}%
8368 {page.\expandafter\@secondoffive#1}%
8369 {\expandafter\@secondoffive#1}%
8370 \fi
8371 }
8372 </packageEnd>
8373 <*check>
8374 \checklatex
8375 \checkcommand\def\@setref#1#2#3{%
8376 \ifx#1\relax
8377 \protect\G@refundefinedtrue
8378 \nfss@text{\reset@font\bfseries ??}%
8379 \@latex@warning{%
8380 Reference `#3' on page \thepage\space undefined%
8381 }%
8382 \else
8383 \expandafter#2#1\null
```

```

8384 \fi
8385 }
8386 </check>
8387 <*packageEnd>

```

Now some extended referencing. `\ref*` and `\pageref*` are not linked, and `\autoref` prefixes with a tag based on the type.

```

8388 \def\HyRef@StarSetRef#1{%
8389 \begingroup
8390 \Hy@safe@activestrue
8391 \let\protect\@unexpandable@protect
8392 \edef\x{#1}%
8393 \@onelevel@sanitize\x
8394 \edef\x{\endgroup
8395 \noexpand\HyRef@@StarSetRef
8396 \expandafter\noexpand\csname r@\x\endcsname{\x}%
8397 }%
8398 \x
8399 }
8400 \def\HyRef@@StarSetRef#1#2#3{%
8401 \ifx#1\@undefined
8402 \let#1\relax
8403 \fi
8404 \real@setref#1#3{#2}%
8405 }
8406 \def\@refstar#1{%
8407 \HyRef@StarSetRef{#1}\@firstoffive
8408 }
8409 \def\@pagerefstar#1{%
8410 \HyRef@StarSetRef{#1}\@secondoffive
8411 }
8412 \def\@namerefstar#1{%
8413 \HyRef@StarSetRef{#1}\@thirdoffive
8414 }
8415 \def\@Refstar#1{%
8416 \HyRef@StarSetRef{#1}\HyRef@MakeUppercaseFirstOfFive
8417 }%
8418 \def\HyRef@MakeUppercaseFirstOfFive#1#2#3#4#5{%
8419 \MakeUppercase#1%
8420 }%
8421 \def\HyRef@Ref#1{%
8422 \hyperref[{#1}]{\Ref*{#1}}%
8423 }%
8424 \Hy@AtBeginDocument{%
8425 \@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.

```

8426 \@ifundefined{hyper@nopatch@varioref}
8427 {
8428 \renewcommand\Vref@star[2][]{%
8429 \begingroup
8430 \let\T@pageref\@pagerefstar
8431 \Ref*{#2}

```

```

8432     \vpageref[#1]{#2}%
8433     \endgroup
8434 }%
8435 \renewcommand\Vr@f[2][]{%
8436     \begingroup
8437     \let\T@pageref\@pagerefstar
8438     \hyperref[#2]{%
8439         \Ref*{#2}
8440         \vpageref[#1]{#2}%
8441     }%
8442     \endgroup
8443 }%
8444 \renewcommand\vr@f[2][]{%
8445     \begingroup
8446     \let\T@pageref\@pagerefstar
8447     \hyperref[#2]{%
8448         \ref*{#2}
8449         \vpageref[#1]{#2}%
8450     }%
8451     \endgroup
8452 }%
8453 \renewcommand\vref@star[2][]{%
8454     \begingroup
8455     \let\T@pageref\@pagerefstar
8456     \ref*{#2}
8457     \vpageref[#1]{#2}%
8458     \endgroup
8459 }%
8460 }-{}%
8461 }-{}%
8462 }

8463 \DeclareRobustCommand*\autopageref}{%
8464     \@ifstar{%
8465         \HyRef@autopagerefname\pageref*%
8466     }\HyRef@autopageref
8467 }
8468 \def\HyRef@autopageref#1{%
8469     \hyperref[#1]{\HyRef@autopagerefname\pageref*{#1}}%
8470 }
8471 \def\HyRef@autopagerefname{%
8472     \@ifundefined{pageautorefname}{%
8473         \@ifundefined{pagename}{%
8474             \Hy@Warning{No autoref name for `page'}%
8475         }{%
8476             \pagename\nobreakspace
8477         }%
8478     }-{}%
8479     \pageautorefname\nobreakspace
8480 }%
8481 }

```

\leavevmode is added to make package wrapfigure happy, if \autoref starts a paragraph.

```
8482 \NewDocumentCommand\autoref{s}
```

```

8483   {\leavevmode
8484   \IfBooleanTF{#1}{\HyRef@autoref@gobbletwo}{\HyRef@autoref\hyper@link}}
8485 \def\HyRef@autoref#1#2{%
8486   \begingroup
8487   \Hy@safe@activestru
8488   \expandafter\HyRef@autosetref\csname r@#2\endcsname{#2}{#1}%
8489   \endgroup
8490 }
8491 \def\HyRef@autosetref#1#2#3{% link command, csname, refname
8492   \HyRef@ShowKeysRef{#2}%
8493   \ifcase 0\ifx#1\relax 1\fi\ifx#1\Hy@varioref@undefined 1\fi\relax
8494   \edef\HyRef@thisref{%
8495     \expandafter\@fourthoffive#1\@empty\@empty\@empty
8496   }%
8497   \expandafter\HyRef@testreftype\HyRef@thisref.\.%
8498   \Hy@safe@activesfalse
8499   #3{%
8500     \expandafter\@fifthoffive#1\@empty\@empty\@empty
8501   }{%
8502     \expandafter\@fourthoffive#1\@empty\@empty\@empty
8503   }{%
8504     \HyRef@currentHtag
8505     \expandafter\@firstoffive#1\@empty\@empty\@empty
8506     \null
8507   }%
8508 \else
8509   \protect\G@refundefinedtrue
8510   \nfss@text{\reset@font\bfseries ??}%
8511   \@latex@warning{%
8512     Reference `#2' on page \thepage\space undefined%
8513   }%
8514 \fi
8515 }
8516 \def\HyRef@testreftype#1.#2\{\%
8517   \@ifundefined{#1autorefname}{%
8518     \@ifundefined{#1name}{%
8519       \HyRef@StripStar#1\*\@nil{#1}%
8520       \@ifundefined{\HyRef@name autorefname}{%
8521         \@ifundefined{\HyRef@name name}{%
8522           \def\HyRef@currentHtag{%
8523             \Hy@Warning{No autoref name for `#1'}%
8524           }{%
8525             \edef\HyRef@currentHtag{%
8526               \expandafter\noexpand\csname\HyRef@name name\endcsname
8527               \noexpand~%
8528             }%
8529           }%
8530         }{%
8531           \edef\HyRef@currentHtag{%
8532             \expandafter\noexpand
8533             \csname\HyRef@name autorefname\endcsname
8534             \noexpand~%
8535           }%
8536         }%

```

```

8537 }{%
8538   \edef\HyRef@currentHtag{%
8539     \expandafter\noexpand\csname#1name\endcsname
8540     \noexpand-%
8541   }%
8542 }%
8543 }{%
8544   \edef\HyRef@currentHtag{%
8545     \expandafter\noexpand\csname#1autorefname\endcsname
8546     \noexpand-%
8547   }%
8548 }%
8549 }
8550 \def\HyRef@StripStar#1*\#2\@nil#3{%
8551   \def\HyRef@name{#2}%
8552   \ifx\HyRef@name\HyRef@CaseStar
8553     \def\HyRef@name{#1}%
8554   \else
8555     \def\HyRef@name{#3}%
8556   \fi
8557 }
8558 \def\HyRef@CaseStar{*\\}
8559 \def\HyRef@currentHtag{}

```

Support for package showkeys.

`\HyRef@ShowKeysRef`

```

8560 \let\HyRef@ShowKeysRef@gobble
8561 \def\HyRef@ShowKeysInit{%
8562   \ifundefined{SK@@label}{-}
8563   {%
8564     \ifx\SK@ref\@empty
8565     \else
8566       \def\HyRef@ShowKeysRef{%
8567         \SK@\SK@\@ref
8568       }%
8569     \fi
8570   }%
8571 }
8572 \AddToHook{package/showkeys/after}{\HyRef@ShowKeysInit}

```

Defaults for the names that `\autoref` uses.

```

8573 \providecommand*\AMSautorefname{\equationautorefname}
8574 \providecommand*\Hfootnoteautorefname{\footnoteautorefname}
8575 \providecommand*\Itemautorefname{\itemautorefname}
8576 \providecommand*\itemautorefname{item}
8577 \providecommand*\equationautorefname{Equation}
8578 \providecommand*\footnoteautorefname{footnote}
8579 \providecommand*\itemautorefname{item}
8580 \providecommand*\figureautorefname{Figure}
8581 \providecommand*\tableautorefname{Table}
8582 \providecommand*\partautorefname{Part}
8583 \providecommand*\appendixautorefname{Appendix}
8584 \providecommand*\chapterautorefname{chapter}
8585 \providecommand*\sectionautorefname{section}

```



```

8586 \providecommand*\subsectionautorefname{subsection}
8587 \providecommand*\subsubsectionautorefname{subsubsection}
8588 \providecommand*\paragraphautorefname{paragraph}
8589 \providecommand*\subparagraphautorefname{subparagraph}
8590 \providecommand*\FancyVerbLineautorefname{line}
8591 \providecommand*\theoremautorefname{Theorem}
8592 \providecommand*\pageautorefname{page}
8593 </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_T_E_X offers `\pdfescapestring`.

```

8594 (*pdfTEX | dvipdfm | xetex | vtex | pdfmarkbase | dviwindo)
8595 \begingroup\expandafter\expandafter\expandafter\endgroup
8596 \expandafter\ifx\csname pdf@escapestring\endcsname\relax
8597   \begingroup
8598     \catcode\|=0 %
8599     \@makeother\| %
8600   |@firstofone{ |endgroup
8601   |def|Hy@pstringdef#1#2{%
8602     |begingroup
8603     |edef~{|string~}%
8604     |xdef|Hy@gtemp{#2}%
8605     |endgroup
8606     |let#1|Hy@gtemp
8607     |@onelevel@sanitize#1%
8608     |edef#1{|expandafter|Hy@ExchangeBackslash#1\|@nil}%
8609     |edef#1{|expandafter|Hy@ExchangeLeftParenthesis#1(|@nil}%
8610     |edef#1{|expandafter|Hy@ExchangeRightParenthesis#1)|@nil}%
8611   }%
8612   |def|Hy@ExchangeBackslash#1\#2|@nil{%
8613     #1%
8614     |ifx|\#2|\|%
8615     |else
8616       \| %
8617     |Hy@ReturnAfterFi{%
8618       |Hy@ExchangeBackslash#2|@nil
8619     }%
8620   |fi
8621   }%
8622 }%
8623 \def\Hy@ExchangeLeftParenthesis#1(#2\@nil{%
8624   #1%
8625   \ifx\#2\| %

```

```

8626 \else
8627 \@backslashchar(%
8628 \Hy@ReturnAfterFi{%
8629 \Hy@ExchangeLeftParenthesis#2\@nil
8630 }%
8631 \fi
8632 }%
8633 \def\Hy@ExchangeRightParenthesis#1)#2\@nil{%
8634 #1%
8635 \ifx\#2\%
8636 \else
8637 \@backslashchar)%
8638 \Hy@ReturnAfterFi{%
8639 \Hy@ExchangeRightParenthesis#2\@nil
8640 }%
8641 \fi
8642 }%
8643 \else
8644 \def\Hy@pstringdef#1#2{%
8645 \begingroup
8646 \edef~{\string~}%
8647 \xdef\Hy@gtemp{\pdf@escapestring{#2}}%
8648 \endgroup
8649 \let#1\Hy@gtemp
8650 }%
8651 \fi
8652 </pdfTeX | dvipdfm | xetex | vtex | pdfmarkbase | dviwindo>

```

44.2 pdfTeX

```

8653 (*pdfTeX)
8654 \providecommand*\XR@ext}{pdf}
8655 \Hy@setbreaklinks{true}
8656 \def\HyPat@ObjRef{%
8657 [0-9]*[1-9][0-9]* 0 R%
8658 }

```

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`

```

8659 \def\Hy@pdfminorversion{\pdfoptionpdfminorversion}%
8660 \def\Hy@pdfminorversion{\pdfminorversion}%
8661 \ifHy@ocgcolorlinks
8662 \ifnum\Hy@pdfmajorminor@version<105 %
8663 \kvsetkeys{Hyp}{pdfversion=1.5}%
8664 \fi
8665 \fi
8666 \ifHy@setpdfversion
8667 \ifnum\Hy@pdf@majorminor@version<105 %
8668 \@ifundefined{pdfobjcompresslevel}{%

```

```

8669 }{%
8670 \ifHy@verbose
8671 \Hy@InfoNoLine{%
8672     PDF object streams are disabled, because they are%
8673     \MessageBreak
8674     not supported in requested PDF version %
8675     \Hy@pdf@majorversion.\Hy@pdf@minorversion
8676     }%
8677 \fi
8678 \pdfobjcompresslevel=\z@
8679 }%
8680 \fi
8681 \ifnum\Hy@pdfmajorminor@version=\Hy@pdf@majorminor@version\relax
8682 \else
8683 \let\Hy@temp\@empty
8684 \def\Hy@temp@A#1#2{%
8685     \ifnum#1>\z@
8686     \edef\Hy@temp{%
8687         \Hy@temp
8688         \space\space
8689         \the#1\space #2%
8690     \ifnum#1=\@ne\else s\fi
8691     \MessageBreak
8692     }%
8693 \fi
8694 }%
8695 \Hy@temp@A\pdflastobj{PDF object}%
8696 \Hy@temp@A\pdflastxform{formXObject}%
8697 \Hy@temp@A\pdflastximage{imageXObject}%
8698 \Hy@temp@A\pdflastannot{annotation}%
8699 \@ifundefined{pdflastlink}{%
8700 }{%
8701     \Hy@temp@A\pdflastlink{link}%
8702 }%
8703 \ifx\Hy@temp\@empty
8704 \Hy@pdfmajorversion=\Hy@pdf@majorversion\relax
8705 \Hy@pdfminorversion=\Hy@pdf@minorversion\relax
8706 \else
8707 \let\Hy@temp@A\@empty
8708 \ifnum\Hy@pdf@majorminor@version=104 %
8709 \IfFileExists{pdf14.sty}{%
8710     \def\Hy@temp@A{%
8711         \MessageBreak
8712         Or \string\RequirePackage{pdf14} can be used%
8713         \MessageBreak
8714         before \string\documentclass\space as shortcut%
8715     }%
8716 }{}%
8717 \fi
8718 \Hy@WarningNoLine{%
8719     The PDF version number could not be set,\MessageBreak
8720     because some PDF objects are already written:%
8721     \MessageBreak
8722     \Hy@temp

```

```

8723     The version should be set as early as possible:%
8724     \MessageBreak
8725     \space\space
8726     \expandafter\string\Hy@pdfmajorversion=\Hy@pdf@majorversion, %
8727     \expandafter\string\Hy@pdfminorversion=\Hy@pdf@minorversion
8728     \string\relax
8729     \ifnum\Hy@pdf@majorminor@version<105 %
8730     \@ifundefined{pdfobjcompresslevel}{%
8731     }{%
8732     \MessageBreak
8733     \space\space
8734     \string\pdfobjcompresslevel=0\string\relax
8735     }%
8736     \fi
8737     \Hy@temp@A
8738 }%
8739 \fi
8740 \fi
8741 \PackageInfo{hyperref}{%
8742 \expandafter\string\Hy@pdfmajorversion.%
8743 \expandafter\string\Hy@pdfminorversion
8744 :=\number\Hy@pdf@majorversion.\number\Hy@pdf@minorversion\space
8745 }%
8746 \fi
8747 \edef\Hy@pdf@majorversion{\number\Hy@pdfmajorversion}%
8748 \edef\Hy@pdf@minorversion{\number\Hy@pdfminorversion}%
8749 \Hy@DisableOption{pdfversion}%

8750 \ifHy@ocgcolorlinks
8751 \pdf@ifdraftmode{}{%
8752 \immediate\pdfobj{%
8753 <<%
8754 /Type/OCG%
8755 /Name(View)%
8756 /Usage<<%
8757 /Print<<%
8758 /PrintState/OFF%
8759 >>%
8760 /View<<%
8761 /ViewState/ON%
8762 >>%
8763 >>%
8764 >>%
8765 }%
8766 \edef\OBJ@OCG@view{\the\pdflastobj\space 0 R}%
8767 \immediate\pdfobj{%
8768 <<%
8769 /Type/OCG%
8770 /Name(Print)%
8771 /Usage<<%
8772 /Print<<%
8773 /PrintState/ON%
8774 >>%
8775 /View<<%
8776 /ViewState/OFF%

```

```

8777     >>%
8778     >>%
8779     >>%
8780 }%
8781 \edef\OBJ@OCG@print{\the\pdfastobj\space 0 R}%
8782 \immediate\pdfobj{%
8783 [%
8784   \OBJ@OCG@view\space\OBJ@OCG@print
8785 ]%
8786 }%
8787 \edef\OBJ@OCGs{\the\pdfastobj\space 0 R}%
8788 \pdfcatalog{%
8789   /OCProperties<<%
8790     /OCGs \OBJ@OCGs
8791     /D<<%
8792       /OFF[\OBJ@OCG@print]%
8793       /AS[%
8794         <<%
8795           /Event/View%
8796           /OCGs \OBJ@OCGs
8797           /Category[/View]%
8798         >>%
8799         <<%
8800           /Event/Print%
8801           /OCGs \OBJ@OCGs
8802           /Category[/Print]%
8803         >>%
8804         <<%
8805           /Event/Export%
8806           /OCGs \OBJ@OCGs
8807           /Category[/Print]%
8808         >>%
8809       ]%
8810     >>%
8811   >>%
8812 }%
8813 \begingroup
8814 \edef\x{\endgroup
8815   \pdfpageresources{%
8816     \the\pdfpageresources
8817     /Properties<<%
8818       /OCView \OBJ@OCG@view
8819       /OCPrint \OBJ@OCG@print
8820     >>%
8821   }%
8822 }%
8823 \x
8824 }%
8825 \Hy@AtBeginDocument{%
8826   \def\Hy@colorlink#1{%
8827     \begingroup
8828     \ifHy@ocgcolorlinks
8829     \def\Hy@ocgcolor{#1}%
8830     \setbox0=\hbox\bgroup\color@begingroup

```

```

8831     \else
8832     \HyColor@UseColor#1%
8833     \fi
8834 }%
8835 \def\Hy@endcolorlink{%
8836 \ifHy@ocgcolorlinks
8837 \color@endgroup\egroup
8838 \mbox{%
8839 \pdfliteral page{/OC/OCPrint BDC}%
8840 \rlap{\copy0}%
8841 \pdfliteral page{EMC/OC/OCView BDC}%
8842 \beginingroup
8843 \expandafter\HyColor@UseColor\Hy@ocgcolor
8844 \box0 %
8845 \endgroup
8846 \pdfliteral page{EMC}%
8847 }%
8848 \fi
8849 \endgroup
8850 }%
8851 }%
8852 \else
8853 \Hy@DisableOption{ocgcolorlinks}%
8854 \fi

```

First, allow for some changes and additions to pdftex syntax:

```

8855 \def\setpdfinkmargin#1{%
8856 \beginingroup
8857 \setlength{\dimen@}{#1}%
8858 \expandafter\endgroup
8859 \expandafter\pdfinkmargin\the\dimen@\relax
8860 }
8861 \pdfinkmargin1pt %

```

First set up the default linking

```
8862 \providecommand*\@pdfview{XYZ}
```

First define the anchors:

```

8863 \Hy@WrapperDef\new@pdfink#1{%
8864 \ifhmode
8865 \@savsf\spacefactor
8866 \fi
8867 \Hy@SaveLastskip
8868 \Hy@VerboseAnchor{#1}%
8869 \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
8870 \Hy@DestName\Hy@pstringDest\@pdfview
8871 \Hy@RestoreLastskip
8872 \ifhmode
8873 \spacefactor\@savsf
8874 \fi
8875 }
8876 \let\pdf@endanchor\@empty

```

`\Hy@DestName` Wrap the call of `\pdfdest` name in `\Hy@DestName`. Then it can easier be caught by package `hypdestopt`.

```

8877 \def\Hy@DestName#1#2{%
8878 \pdfdest name{#1}#2\relax
8879 }

```

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.

```

8880 \providecommand*\@pdfborder{0 0 1}
8881 \providecommand*\@pdfborderstyle{}
8882 \def\Hy@undefinedname{UNDEFINED}
8883 \def\find@pdfink#1#2{%
8884 \leavevmode
8885 \protected@edef\Hy@testname{#2}%
8886 \ifx\Hy@testname\@empty
8887 \Hy@Warning{%
8888 Empty destination name,\MessageBreak
8889 using \Hy@undefinedname'%
8890 }%
8891 \let\Hy@testname\Hy@undefinedname
8892 \else
8893 \Hy@pstringdef\Hy@testname{%
8894 \expandafter\HyperDestNameFilter\expandafter{\Hy@testname}%
8895 }%
8896 \fi
8897 \Hy@StartlinkName{%
8898 \ifHy@pdfa /F 4\fi
8899 \Hy@setpdfborder
8900 \Hy@setpdfhighlight
8901 \ifx\CurrentBorderColor\relax
8902 \else
8903 /C[\CurrentBorderColor]%
8904 \fi
8905 }\Hy@testname
8906 \expandafter\Hy@colorlink\csname @#1color\endcsname
8907 }
8908 \def\Hy@StartlinkName#1#2{%
8909 \pdfstartlink attr{#1}goto name{#2}\relax
8910 }
8911 \def\close@pdfink{%
8912 \Hy@endcolorlink
8913 \Hy@VerboseLinkStop
8914 \pdfendlink
8915 }
8916 \def\hyper@anchor#1{%
8917 \new@pdfink{#1}\anchor@spot\pdf@endanchor
8918 }
8919 \def\hyper@anchorstart#1{%
8920 \new@pdfink{#1}%
8921 \Hy@activeanchortrue
8922 }
8923 \def\hyper@anchorend{%
8924 \pdf@endanchor
8925 \Hy@activeanchorfals

```

```

8926 }
8927 \def\hyper@linkstart#1#2{%
8928 \Hy@VerboseLinkStart{#1}{#2}%
8929 \@ifundefined{@#1bordercolor}{%
8930 \let\CurrentBorderColor\relax
8931 }{%
8932 \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
8933 }%
8934 \find@pdfink{#1}{#2}%
8935 }
8936 \def\hyper@linkend{\close@pdfink}
8937 \def\hyper@link#1#2#3{%
8938 \Hy@VerboseLinkStart{#1}{#2}%
8939 \@ifundefined{@#1bordercolor}{%
8940 \let\CurrentBorderColor\relax
8941 }{%
8942 \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
8943 }%
8944 \find@pdfink{#1}{#2}#3\Hy@xspace@end
8945 \close@pdfink
8946 }
8947 \let\CurrentBorderColor\@linkbordercolor
8948 \def\hyper@linkurl#1#2{%
8949 \begingroup
8950 \Hy@pstringdef\Hy@pstringURI{#2}%
8951 \hyper@chars
8952 \leavevmode
8953 \pdfstartlink
8954 attr{%
8955 \Hy@setpdfborder
8956 \Hy@setpdfhighlight
8957 \ifx\@urlbordercolor\relax
8958 \else
8959 /C[\@urlbordercolor]%
8960 \fi
8961 }%
8962 user{%
8963 /Subtype/Link%
8964 \ifHy@pdfa /F 4\fi
8965 /A<<%
8966 /Type/Action%
8967 /S/URI%
8968 /URI(\Hy@pstringURI)%
8969 \ifHy@href@ismap
8970 /IsMap true%
8971 \fi
8972 \Hy@href@nextactionraw
8973 >>%
8974 }%
8975 \relax
8976 \Hy@colorlink\@urlcolor#1\Hy@xspace@end
8977 \close@pdfink
8978 \endgroup
8979 }

```



```

8980 \def\hyper@linkfile#1#2#3{% anchor text, filename, linkname
8981 \begingroup
8982 \def\Hy@pstringF{#2}%
8983 \Hy@CleanupFile\Hy@pstringF
8984 \Hy@pstringdef\Hy@pstringF\Hy@pstringF
8985 \Hy@pstringdef\Hy@pstringD{#3}%
8986 \Hy@MakeRemoteAction
8987 \leavevmode
8988 \pdfstartlink
8989 attr{%
8990 \Hy@setpdfborder
8991 \Hy@setpdfhighlight
8992 \ifx\@filebordercolor\relax
8993 \else
8994 /C[\@filebordercolor]%
8995 \fi
8996 }%
8997 user {%
8998 /Subtype/Link%
8999 \ifHy@pdfa /F 4\fi
9000 /A<<%
9001 /F(\Hy@pstringF)%
9002 /S/GoToR%
9003 \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}

9004 \ifx\#3\%
9005 /D[\Hy@href@page\@pdfremotestartview]%
9006 \else
9007 /D(\Hy@pstringD)%
9008 \fi
9009 \Hy@href@nextactionraw
9010 >>%
9011 }%
9012 \relax
9013 \Hy@colorlink\@filecolor#1\Hy@xspace@end
9014 \close@pdfink
9015 \endgroup
9016 }
9017 \def\@hyper@launch run:#1\#2#3{% filename, anchor text linkname
9018 \begingroup
9019 \Hy@pstringdef\Hy@pstringF{#1}%
9020 \Hy@pstringdef\Hy@pstringP{#3}%
9021 \leavevmode

```

```

9022 \pdfstartlink
9023   attr{%
9024     \Hy@setpdfborder
9025     \Hy@setpdfhighlight
9026     \ifx\@runbordercolor\relax
9027     \else
9028       /C[\@runbordercolor]%
9029     \fi
9030   }%
9031   user {%
9032     /Subtype/Link%
9033     \ifHy@pdfa /F 4\fi
9034     /A<<%
9035     /F(\Hy@pstringF)%
9036     /S/Launch%
9037     \Hy@SetNewWindow
9038     \ifx\#3\%
9039     \else
9040       /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
9041     \fi
9042     \Hy@href@nextactionraw
9043     >>%
9044   }%
9045   \relax
9046   \Hy@colorlink\@runcolor#2\Hy@xspace@end
9047   \close@pdfink
9048 \endgroup
9049 }

```

\PDF@SetupDox

```

9050 \def\PDF@SetupDoc{%
9051   \ifx\@pdfpagescrop\@empty
9052   \else
9053     \edef\process@me{%
9054       \pdfpagesattr={%
9055         /CropBox[\@pdfpagescrop]%
9056         \expandafter\ifx\expandafter\the\pdfpagesattr\%
9057       \else
9058         ^^J\the\pdfpagesattr
9059       \fi
9060     }%
9061   }%
9062   \process@me
9063 \fi
9064 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
9065 \pdfcatalog{%
9066   /PageMode/\@pdfpagemode
9067   \ifx\@baseurl\@empty
9068   \else
9069     /URI<</Base(\Hy@pstringB)>>%
9070   \fi
9071 }%
9072 \ifx\@pdfstartpage\@empty
9073 \else

```

```

9074 \ifx\@pdfstartview\@empty
9075 \else
9076   openaction goto page\@pdfstartpage{\@pdfstartview}%
9077 \fi
9078 \fi
9079 \edef\Hy@temp{%
9080 \ifHy@pdftoolbar\else /HideToolbar true\fi
9081 \ifHy@pdfmenubar\else /HideMenubar true\fi
9082 \ifHy@pdfwindowui\else /HideWindowUI true\fi
9083 \ifHy@pdffitwindow /FitWindow true\fi
9084 \ifHy@pdfcenterwindow /CenterWindow true\fi
9085 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
9086 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
9087 \Hy@UseNameKey{Direction}\@pdfdirection
9088 \Hy@UseNameKey{ViewArea}\@pdfviewarea
9089 \Hy@UseNameKey{ViewClip}\@pdfviewclip
9090 \Hy@UseNameKey{PrintArea}\@pdfprintarea
9091 \Hy@UseNameKey{PrintClip}\@pdfprintclip
9092 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
9093 \Hy@UseNameKey{Duplex}\@pdfduplex
9094 \ifx\@pdfpicktraybypdfsize\@empty
9095 \else
9096   /PickTrayByPDFSize \@pdfpicktraybypdfsize
9097 \fi
9098 \ifx\@pdfprintpagerange\@empty
9099 \else
9100   /PrintPageRange[\@pdfprintpagerange]%
9101 \fi
9102 \ifx\@pdfnumcopies\@empty
9103 \else
9104   /NumCopies \@pdfnumcopies
9105 \fi
9106 }%
9107 \pdfcatalog{%
9108 \ifx\Hy@temp\@empty
9109 \else
9110   /ViewerPreferences<<\Hy@temp>>%
9111 \fi
9112 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
9113 \ifx\@pdflang\relax
9114 \else
9115   /Lang(\@pdflang)%
9116 \fi
9117 }%
9118 }

```

\PDF@FinishDoc

```

9119 \def\PDF@FinishDoc{%
9120 \pdf@ifdraftmode{}{%
9121 \Hy@UseMaketitleInfos
9122 \HyInfo@GenerateAddons
9123 \pdfinfo{%
9124 /Author(\@pdfauthor)%
9125 /Title(\@pdftitle)%

```

```

9126 /Subject(\@pdfsubject)%
9127 /Creator(\@pdfcreator)%
9128 \ifx\@pdfcreationdate\@empty
9129 \else
9130 /CreationDate(\@pdfcreationdate)%
9131 \fi
9132 \ifx\@pdfmoddate\@empty
9133 \else
9134 /ModDate(\@pdfmoddate)%
9135 \fi
9136 \ifx\@pdfproducer\relax
9137 \else
9138 /Producer(\@pdfproducer)%
9139 \fi
9140 /Keywords(\@pdfkeywords)%
9141 \ifx\@pdftrapped\@empty
9142 \else
9143 /Trapped/\@pdftrapped
9144 \fi
9145 \HyInfo@Addons
9146 }%
9147 }%
9148 \Hy@DisableOption{pdfauthor}%
9149 \Hy@DisableOption{pdftitle}%
9150 \Hy@DisableOption{pdfsubject}%
9151 \Hy@DisableOption{pdfcreator}%
9152 \Hy@DisableOption{addtopdfcreator}%
9153 \Hy@DisableOption{pdfcreationdate}%
9154 \Hy@DisableOption{pdfmoddate}%
9155 \Hy@DisableOption{pdfproducer}%
9156 \Hy@DisableOption{pdfkeywords}%
9157 \Hy@DisableOption{pdftrapped}%
9158 \Hy@DisableOption{pdfinfo}%
9159 }

```

`\hyper@pagetransition` `\@pdfpagetransition` is initialized with `\relax`. So it indicates, if option `pdfpage-transition` is used. First previous `/Trans` entries are removed. If a new `/Trans` key exists, it is appended to `\pdfpageattr`.

```

9160 \def\hyper@pagetransition{%
9161 \ifx\@pdfpagetransition\relax
9162 \else
9163 \expandafter\Hy@RemoveTransPageAttr
9164 \the\pdfpageattr^^J/Trans{}>>\END
9165 \ifx\@pdfpagetransition\@empty
9166 \else
9167 \edef\@processme{%
9168 \global\pdfpageattr{%
9169 \the\pdfpageattr
9170 ^^J/Trans << /S /\@pdfpagetransition\space >>%
9171 }%
9172 }%
9173 \@processme
9174 \fi
9175 \fi

```

9176 }

`\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.

```
9177 \gdef\Hy@RemoveTransPageAttr#1^^J/Trans#2#3>>#4\END{%
9178   \ifx\#2\%
9179     \global\pdfpageattr{#1}%
9180   \else
9181     \Hy@RemoveTransPageAttr#1#4\END
9182   \fi
9183 }
```

`\hyper@pageduration` `\@pdfpageduration` is initialized with `\relax`. So it indicates, if option `pdfpage-duration` is used. First previous `/Dur` entries are removed. If a new `/Dur` key exists, it is appended to `\pdfpageattr`.

```
9184 \def\hyper@pageduration{%
9185   \ifx\@pdfpageduration\relax
9186   \else
9187     \expandafter
9188     \Hy@RemoveDurPageAttr\the\pdfpageattr^^J/Dur{} \END
9189     \ifx\@pdfpageduration\@empty
9190     \else
9191       \edef\@processme{%
9192         \global\pdfpageattr{%
9193           \the\pdfpageattr
9194           ^^J/Dur \@pdfpageduration\space
9195         }%
9196       }%
9197       \@processme
9198     \fi
9199   \fi
9200 }
```

`\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.

```
9201 \gdef\Hy@RemoveDurPageAttr#1^^J/Dur#2#3 #4\END{%
9202   \ifx\#2\%
9203     \global\pdfpageattr{#1}%
9204   \else
9205     \Hy@RemoveDurPageAttr#1#4\END
9206   \fi
9207 }

9208 \pdf@ifdraftmode{}{%
9209   \g@addto@macro\Hy@EveryPageHook{%
9210     \hyper@pagetransition
9211     \hyper@pageduration
9212   }%
9213 }
```

Also XeTeX support `\pdfpagewidth` and `\pdfpageheight`, but it does not provide `\pdfhorigin` and `\pdfvorigin`.

```

9214 </pdftex>
9215 <{*pdftex | xetex}>
9216 \Hy@AtBeginDocument{%
9217   \ifHy@setpagesize
9218     \expandafter\@firstofone
9219   \else
9220     \expandafter\@gobble
9221   \fi
9222 }%
9223 \@ifclassloaded{seminar}{%
9224 <{*pdftex}>
9225   \setlength{\pdfhorigin}{1truein}%
9226   \setlength{\pdfvorigin}{1truein}%
9227 </pdftex>
9228   \ifportrait
9229     \ifdim\paperwidth=\z@
9230     \else
9231       \setlength{\pdfpagewidth}{\strip@pt\paperwidth truept}%
9232     \fi
9233     \ifdim\paperheight=\z@
9234     \else
9235       \setlength{\pdfpageheight}{\strip@pt\paperheight truept}%
9236     \fi
9237   \else
9238     \ifdim\paperheight=\z@
9239     \else
9240       \setlength{\pdfpagewidth}{\strip@pt\paperheight truept}%
9241     \fi
9242     \ifdim\paperwidth=\z@
9243     \else
9244       \setlength{\pdfpageheight}{\strip@pt\paperwidth truept}%
9245     \fi
9246   \fi
9247 }{%
9248   \ifnum\mag=\@m
9249     \ifdim\stockwidth>\z@
9250     \ifdim\stockheight>\z@
9251       \setlength{\pdfpagewidth}{\stockwidth}%
9252       \setlength{\pdfpageheight}{\stockheight}%
9253     \else
9254       \ifdim\paperwidth>\z@
9255       \ifdim\paperheight>\z@
9256         \setlength{\pdfpagewidth}{\paperwidth}%
9257         \setlength{\pdfpageheight}{\paperheight}%
9258       \fi
9259     \fi
9260   \fi
9261 \else
9262   \ifdim\stockwidth=\z@
9263   \ifdim\paperwidth>\z@
9264   \ifdim\paperheight>\z@
9265     \setlength{\pdfpagewidth}{\paperwidth}%

```

```

9266         \setlength{\pdfpageheight}{\paperheight}%
9267         \fi
9268     \fi
9269 \fi
9270 \fi
9271 \fi
9272 }%
9273 }%
9274 \Hy@DisableOption{setpagesize}%
9275 }
9276 </pdfTeX | xetex>
9277 <*pdfTeX>
9278 \def\Acrobatmenu#1#2{%
9279 \Hy@Acrobatmenu{#1}{#2}{%
9280 \leavevmode
9281 \EdefEscapeName\Hy@temp@menu{#1}%
9282 \pdfstartlink
9283 attr{%
9284 \Hy@setpdfborder
9285 \Hy@setpdfhighlight
9286 \ifx\@menubordercolor\relax
9287 \else
9288 /C[\@menubordercolor]%
9289 \fi
9290 }%
9291 user{%
9292 /Subtype/Link%
9293 \ifHy@pdfa /F 4\fi
9294 /A<<%
9295 /S/Named%
9296 /N/\Hy@temp@menu
9297 \Hy@href@nextactionraw
9298 >>%
9299 }%
9300 \relax
9301 \Hy@colorlink\@menucolor#2%
9302 \close@pdflink
9303 }%
9304 }

```

44.2.1 Fix for problem with different nesting levels

`\AtBeginShipoutFirst` adds an additional box layer around the first output page. This disturbs pdfTeX's low level link commands `\pdfstartlink` and `\pdfendlink`, if a link is broken across the first and second output page.

The problem could be fixed by replacing `\AtBeginShipoutFirst`, because the box layer is not necessary for pdfTeX—no `\specials` need to be inserted. However it's easier to add an additional box level for the pages after the first one. Also `\AtBeginShipoutFirst` could be invoked independently from `hyperref`.

Since version 2011/10/05 v1.16 of package 'atbegshi' `\AtBeginShipoutFirst` does not add a additional box layer.

change 2020-10-01: the code has been removed as outdated.

```

9305 </pdfTeX>

```

44.3 hypertex

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.

```
9306 (*hypertex)
9307 \providecommand*\XR@ext}{dvi}
9308 \let\PDF@FinishDoc\@empty
9309 \def\PDF@SetupDoc{%
9310   \ifx\@baseurl\@empty
9311     \else
9312       \special{html:<base href="\@baseurl">}%
9313     \fi
9314 }
9315 \Hy@WrapperDef\hyper@anchor#1{%
9316   \Hy@SaveLastskip
9317   \Hy@VerboseAnchor{#1}%
9318   \begingroup
9319     \let\protect=\string
9320     \hyper@chars
9321     \special{html:<a name=%
9322       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
9323   \endgroup
9324   \Hy@activeanchortrue
9325   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
```



```

9326 \special{html:</a>}%
9327 \Hy@activeanchorfalse
9328 \Hy@RestoreLastskip
9329 }
9330 \Hy@WrapperDef\hyper@anchorstart#1{%
9331 \Hy@SaveLastskip
9332 \Hy@VerboseAnchor{#1}%
9333 \begingroup
9334 \hyper@chars
9335 \special{html:<a name=%
9336 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
9337 \endgroup
9338 \Hy@activeanchortrue
9339 }
9340 \def\hyper@anchorend{%
9341 \special{html:</a>}%
9342 \Hy@activeanchorfalse
9343 \Hy@RestoreLastskip
9344 }
9345 \def\@urltype{url}
9346 \def\hyper@linkstart#1#2{%
9347 \Hy@VerboseLinkStart{#1}{#2}%
9348 \expandafter\Hy@colorlink\csname @#1color\endcsname
9349 \def\Hy@tempa{#1}%
9350 \ifx\Hy@tempa\@urltype
9351 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
9352 \else
9353 \begingroup
9354 \hyper@chars
9355 \special{html:<a href=%
9356 \hyper@quote\#\HyperDestNameFilter{#2}\hyper@quote>}%
9357 \endgroup
9358 \fi
9359 }
9360 \def\hyper@linkend{%
9361 \special{html:</a>}%
9362 \Hy@endcolorlink
9363 }
9364 \def\hyper@linkfile#1#2#3{%
9365 \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\#3\\\else\#3\fi}%
9366 }
9367 \def\hyper@linkurl#1#2{%

```

If we want to raise up the final link `\special`, we need to get its height; ask me why L^AT_EX constructs make this totally foul up, and make us revert to basic T_EX. I do not know.

```

9368 \leavevmode
9369 \ifHy@raiselinks
9370 \Hy@SaveSpaceFactor
9371 \Hy@SaveSavedSpaceFactor
9372 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
9373 \Hy@RestoreSavedSpaceFactor
9374 \@linkdim\dp\@tempboxa
9375 \lower\@linkdim\hbox{%

```

```

9376 \hyper@chars
9377 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
9378 }%
9379 \Hy@colorlink\@urlcolor
9380 \Hy@RestoreSpaceFactor
9381 #1%
9382 \Hy@SaveSpaceFactor
9383 \@linkdim\ht\@tempboxa

```

Because of the interaction with the dvilhs 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).

```

9384 \advance\@linkdim by -6.5\p@
9385 \raise\@linkdim\hbox{\special{html:</a>}}%
9386 \Hy@endcolorlink
9387 \Hy@RestoreSpaceFactor
9388 \else
9389 \begingroup
9390 \hyper@chars
9391 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
9392 \Hy@colorlink\@urlcolor#1\Hy@xspace@end
9393 \special{html:</a>}%
9394 \Hy@endcolorlink
9395 \endgroup
9396 \fi
9397 }

```

Very poor implementation of `\hyper@link` without considering `#1`.

```

9398 \def\hyper@link#1#2#3{%
9399 \Hy@VerboseLinkStart{#1}{#2}%
9400 \hyper@linkurl{#3}{\#\HyperDestNameFilter{#2}}%
9401 }

9402 \def\hyper@image#1#2{%
9403 \begingroup
9404 \hyper@chars
9405 \special{html:<img src=\hyper@quote#1\hyper@quote>}%
9406 \endgroup
9407 }
9408 </hypertex>
9409 <*\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 define this command before or after loading the `hyperref` package if the default `c:/netscape/netscape` is not suitable) `Dviwindo` could in fact handle external links to dvi files on the same machine without calling a web browser, but that would mean parsing the URL to recognise such, and this is currently not done.

This was more or less blindly copied from the `hypertex` cfg. For `dviwindo`, \LaTeX 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.

```

9410 \providecommand*\XR@ext}{dvi}
9411 \providecommand*\wwwbrowser{c:\string\netscape\string\netscape}
9412 \Hy@WrapperDef\hyper@anchor#1{%
9413   \Hy@SaveLastskip
9414   \Hy@VerboseAnchor{#1}%
9415   \begingroup
9416     \let\protect=\string
9417     \special{mark: #1}%
9418   \endgroup
9419   \Hy@activeanchortrue
9420   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
9421   \Hy@activeanchorfalse
9422   \Hy@RestoreLastskip
9423 }
9424 \Hy@WrapperDef\hyper@anchorstart#1{%
9425   \Hy@SaveLastskip
9426   \Hy@VerboseAnchor{#1}%
9427   \special{mark: #1}%
9428   \Hy@activeanchortrue
9429 }
9430 \def\hyper@anchorend{%
9431   \Hy@activeanchorfalse
9432   \Hy@RestoreLastskip
9433 }
9434 \def\hyper@linkstart#1#2{%
9435   \Hy@VerboseLinkStart{#1}{#2}%
9436   \expandafter\Hy@colorlink\csname @#1color\endcsname
9437   \special{button: %
9438     10000000 %
9439     \number\baselineskip\space
9440     #2%
9441   }%
9442 }
9443 \def\hyper@linkend{%
9444   \Hy@endcolorlink
9445 }
9446 \def\hyper@link#1#2#3{%
9447   \Hy@VerboseLinkStart{#1}{#2}%
9448   \leavevmode
9449   \ifHy@raiselinks
9450     \Hy@SaveSpaceFactor
9451     \Hy@SaveSavedSpaceFactor
9452     \sbox\@tempboxa{\Hy@RestoreSpaceFactor#3}%
9453     \Hy@RestoreSavedSpaceFactor
9454     \@linkdim\dp\@tempboxa
9455     \lower\@linkdim\hbox{%
9456       \special{button: %
9457         \number\wd\@tempboxa\space
9458         \number\ht\@tempboxa\space
9459         #2%
9460       }%
9461     \expandafter\Hy@colorlink\csname @#1color\endcsname

```

```

9462 \Hy@RestoreSpaceFactor
9463 #3\Hy@xspace@end
9464 \Hy@SaveSpaceFactor
9465 \Hy@endcolorlink
9466 }%
9467 \@linkdim\ht\@tempboxa
9468 \advance\@linkdim by -6.5\p@
9469 \raise\@linkdim\hbox{}%
9470 \Hy@RestoreSpaceFactor
9471 \else
9472 \special{button: %
9473 \number\wd\@tempboxa\space
9474 \number\ht\@tempboxa\space
9475 #2%
9476 }%
9477 \expandafter\Hy@colorlink\csname @#1color\endcsname
9478 #3\Hy@xspace@end
9479 \Hy@endcolorlink
9480 \fi
9481 }
9482 \def\hyper@linkurl#1#2{%
9483 \begingroup
9484 \hyper@chars
9485 \leavevmode
9486 \ifHy@raiselinks
9487 \Hy@SaveSpaceFactor
9488 \Hy@SaveSavedSpaceFactor
9489 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
9490 \Hy@RestoreSavedSpaceFactor
9491 \@linkdim\dp\@tempboxa
9492 \lower\@linkdim\hbox{%
9493 \special{button: %
9494 \number\wd\@tempboxa\space
9495 \number\ht\@tempboxa\space
9496 launch: \wwwbrowser\space
9497 #2%
9498 }%
9499 \Hy@colorlink\@urlcolor
9500 \Hy@RestoreSpaceFactor
9501 #1\Hy@xspace@end
9502 \Hy@SaveSpaceFactor
9503 \Hy@endcolorlink
9504 }%
9505 \@linkdim\ht\@tempboxa
9506 \advance\@linkdim by -6.5\p@
9507 \raise\@linkdim\hbox{}%
9508 \Hy@RestoreSpaceFactor
9509 \else
9510 \special{button: %
9511 \number\wd\@tempboxa\space
9512 \number\ht\@tempboxa\space
9513 launch: \wwwbrowser\space
9514 #2%
9515 }%

```

```

9516 \Hy@colorlink \@urlcolor
9517 #1\Hy@xspace@end
9518 \Hy@endcolorlink
9519 \fi
9520 \endgroup
9521 }
9522 \def\hyper@linkfile#1#2#3{%
9523 \begingroup
9524 \hyper@chars
9525 \leavevmode
9526 \ifHy@raiselinks
9527 \Hy@SaveSpaceFactor
9528 \Hy@SaveSavedSpaceFactor
9529 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
9530 \Hy@RestoreSavedSpaceFactor
9531 \@linkdim\dp\@tempboxa
9532 \lower\@linkdim\hbox{%
9533 \special{button: %
9534 \number\wd\@tempboxa\space
9535 \number\ht\@tempboxa\space
9536 #3,%
9537 file: #2%
9538 }%
9539 \Hy@colorlink \@filecolor
9540 \Hy@RestoreSpaceFactor
9541 #1\Hy@xspace@end
9542 \Hy@SaveSpaceFactor
9543 \Hy@endcolorlink
9544 }%
9545 \@linkdim\ht\@tempboxa
9546 \advance\@linkdim by -6.5\p@
9547 \raise\@linkdim\hbox{}%
9548 \Hy@RestoreSpaceFactor
9549 \else
9550 \special{button: %
9551 \number\wd\@tempboxa\space
9552 \number\ht\@tempboxa\space
9553 #3,%
9554 file: #2%
9555 }%
9556 \Hy@colorlink \@filecolor
9557 #1\Hy@xspace@end
9558 \Hy@endcolorlink
9559 \fi
9560 \endgroup
9561 }
9562 \HyInfo@AddonUnsupportedtrue
9563 \def\PDF@FinishDoc{%
9564 \Hy@UseMaketitleInfos
9565 \HyInfo@TrappedUnsupported
9566 \special{PDF: Keywords \@pdfkeywords}%
9567 \special{PDF: Title \@pdftitle}%
9568 \special{PDF: Creator \@pdfcreator}%
9569 \ifx\@pdfcreationdate\@empty

```

```

9570 \else
9571 \special{PDF: CreationDate \@pdfcreationdate}%
9572 \fi
9573 \ifx\@pdfmoddate\@empty
9574 \else
9575 \special{PDF: ModDate \@pdfmoddate}%
9576 \fi
9577 \special{PDF: Author \@pdfauthor}%
9578 \ifx\@pdfproducer\relax
9579 \else
9580 \special{PDF: Producer \@pdfproducer}%
9581 \fi
9582 \special{PDF: Subject \@pdfsubject}%
9583 \Hy@DisableOption{pdfauthor}%
9584 \Hy@DisableOption{pdftitle}%
9585 \Hy@DisableOption{pdfsubject}%
9586 \Hy@DisableOption{pdfcreator}%
9587 \Hy@DisableOption{addtopdfcreator}%
9588 \Hy@DisableOption{pdfcreationdate}%
9589 \Hy@DisableOption{pdfcreationdate}%
9590 \Hy@DisableOption{pdfmoddate}%
9591 \Hy@DisableOption{pdfproducer}%
9592 \Hy@DisableOption{pdfkeywords}%
9593 \Hy@DisableOption{pdftrapped}%
9594 \Hy@DisableOption{pdfinfo}%
9595 }
9596 \def\PDF@SetupDoc{%
9597 \ifx\@baseurl\@empty
9598 \else
9599 \special{PDF: Base \@baseurl}%
9600 \fi
9601 \ifx\@pdfpagescrop\@empty\else
9602 \special{PDF: BBox \@pdfpagescrop}%
9603 \fi
9604 \def\Hy@temp{}%
9605 \ifx\@pdfstartpage\@empty
9606 \else
9607 \ifx\@pdfstartview\@empty
9608 \else
9609 \edef\Hy@temp{%
9610 ,Page=\@pdfstartpage
9611 ,View=\@pdfstartview
9612 }%
9613 \fi
9614 \fi
9615 \edef\Hy@temp{%
9616 \noexpand\pdfmark{%
9617 pdfmark=/DOCVIEW,%
9618 PageMode=/\@pdfpagemode
9619 \Hy@temp
9620 }%
9621 }%
9622 \Hy@temp
9623 \ifx\@pdfpagescrop\@empty

```

```

9624 \else
9625 \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
9626 \fi
9627 \edef\Hy@temp{%
9628 \ifHy@pdftoolbar\else /HideToolbar true\fi
9629 \ifHy@pdfmenubar\else /HideMenubar true\fi
9630 \ifHy@pdfwindowui\else /HideWindowUI true\fi
9631 \ifHy@pdffitwindow /FitWindow true\fi
9632 \ifHy@pdfcenterwindow /CenterWindow true\fi
9633 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
9634 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
9635 \Hy@UseNameKey{Direction}\@pdfdirection
9636 \Hy@UseNameKey{ViewArea}\@pdfviewarea
9637 \Hy@UseNameKey{ViewClip}\@pdfviewclip
9638 \Hy@UseNameKey{PrintArea}\@pdfprintarea
9639 \Hy@UseNameKey{PrintClip}\@pdfprintclip
9640 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
9641 \Hy@UseNameKey{Duplex}\@pdfduplex
9642 \ifx\@pdfpicktraybypdfsize\@empty
9643 \else
9644 /PickTrayByPDFSize \@pdfpicktraybypdfsize
9645 \fi
9646 \ifx\@pdfprintpagerange\@empty
9647 \else
9648 /PrintPageRange[\@pdfprintpagerange]%
9649 \fi
9650 \ifx\@pdfnumcopies\@empty
9651 \else
9652 /NumCopies \@pdfnumcopies
9653 \fi
9654 }%
9655 \pdfmark{pdfmark=/PUT,%
9656 Raw={%
9657 \string{Catalog}\string}<<%
9658 \ifx\Hy@temp\@empty
9659 \else
9660 /ViewerPreferences<<\Hy@temp>>%
9661 \fi
9662 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
9663 \ifx\@pdflang\relax
9664 \else
9665 /Lang(\@pdflang)%
9666 \fi
9667 >>%
9668 }%
9669 }%
9670 }
9671 </dviwindo>
9672 <*\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.

```

9673 \special{dvipdfmx:config C 0x0010}
9674 \providecommand*\XR@ext}{pdf}
9675 \Hy@setbreaklinks{true}
9676 \def\HyPat@ObjRef{%
9677   @[^ ]+%
9678 }
9679 \newsavebox{\pdfm@box}
9680 \def\@pdfm@mark#1{\special{pdf:#1}}
9681 \Hy@WrapperDef\@pdfm@dest#1{%
9682   \Hy@SaveLastskip
9683   \Hy@VerboseAnchor{#1}%
9684   \begingroup
9685     \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
9686     \def\x{XYZ}%
9687     \ifx\x\@pdfview
9688       \def\x{XYZ @xpos @ypos null}%
9689     \else
9690       \def\x{FitH}%
9691       \ifx\x\@pdfview
9692         \def\x{FitH @ypos}%
9693       \else
9694         \def\x{FitBH}%
9695         \ifx\x\@pdfview
9696           \def\x{FitBH @ypos}%
9697         \else
9698           \def\x{FitV}%
9699           \ifx\x\@pdfview
9700             \def\x{FitV @xpos}%
9701           \else
9702             \def\x{FitBV}%
9703             \ifx\x\@pdfview
9704               \def\x{FitBV @xpos}%
9705             \else
9706               \def\x{Fit}%
9707               \ifx\x\@pdfview
9708                 \let\x\@pdfview
9709               \else
9710                 \def\x{FitB}%
9711                 \ifx\x\@pdfview
9712                   \let\x\@pdfview
9713                 \else
9714                   \def\x{FitR}%
9715                   \ifx\x\@pdfview
9716                     \Hy@Warning{'pdfview=FitR' is not supported}%
9717                     \def\x{XYZ @xpos @ypos null}%
9718                   \else
9719                     \@onelevel@sanitize\@pdfview
9720                     \Hy@Warning{%
9721                       Unknown value '\@pdfview' for pdfview%
9722                     }%
9723                     \def\x{XYZ @xpos @ypos null}%
9724                   \fi

```



```

9725         \fi
9726         \fi
9727         \fi
9728         \fi
9729         \fi
9730         \fi
9731         \fi
9732         \@pdfm@mark{dest (\Hy@pstringDest) [@thispage /\x]}%
9733     \endgroup
9734     \Hy@RestoreLastskip
9735 }
9736 \providecommand*\@pdfview{XYZ}
9737 \providecommand*\@pdfborder{0 0 1}
9738 \providecommand*\@pdfborderstyle{}
9739 \def\hyper@anchor#1{%
9740     \@pdfm@dest{#1}%
9741 }
9742 \def\hyper@anchorstart#1{%
9743     \Hy@activeanchortrue
9744     \@pdfm@dest{#1}%
9745 }
9746 \def\hyper@anchorend{%
9747     \Hy@activeanchorfalse
9748 }
9749 \newcounter{Hy@AnnotLevel}
9750 \ifHy@ocgcolorlinks
9751     \def\OBJ@OCG@view{@OCG@view}%
9752     \@pdfm@mark{%
9753         obj \OBJ@OCG@view <<%
9754             /Type/OCG%
9755             /Name(View)%
9756             /Usage<<%
9757             /Print<<%
9758             /PrintState/OFF%
9759             >>%
9760             /View<<%
9761             /ViewState/ON%
9762             >>%
9763             >>%
9764             >>%
9765         }%
9766     \@pdfm@mark{close \OBJ@OCG@view}%
9767     \def\OBJ@OCG@print{@OCG@print}%
9768     \@pdfm@mark{%
9769         obj \OBJ@OCG@print <<%
9770             /Type/OCG%
9771             /Name(Print)%
9772             /Usage<<%
9773             /Print<<%
9774             /PrintState/ON%
9775             >>%
9776             /View<<%
9777             /ViewState/OFF%

```

```

9778     >>%
9779     >>%
9780     >>%
9781 }%
9782 \@pdfm@mark{close \OBJ@OCG@print}%
9783 \def\OBJ@OCGs{@OCGs}%
9784 \@pdfm@mark{%
9785   obj \OBJ@OCGs [%
9786     \OBJ@OCG@view\space\OBJ@OCG@print
9787   ]%
9788 }%
9789 \@pdfm@mark{close \OBJ@OCGs}%
9790 \@pdfm@mark{%
9791   put @catalog <<%
9792     /OCProperties<<%
9793     /OCGs \OBJ@OCGs
9794     /D<<%
9795     /OFF[\OBJ@OCG@print]%
9796     /AS[%
9797       <<%
9798         /Event/View%
9799         /OCGs \OBJ@OCGs
9800         /Category[/View]%
9801       >>%
9802       <<%
9803         /Event/Print%
9804         /OCGs \OBJ@OCGs
9805         /Category[/Print]%
9806       >>%
9807       <<%
9808         /Event/Export%
9809         /OCGs \OBJ@OCGs
9810         /Category[/Print]%
9811       >>%
9812     ]%
9813   >>%
9814 >>%
9815 >>%
9816 }%
9817 \AtBeginShipout{%
9818   \setbox\AtBeginShipoutBox=\hbox{%
9819     \copy\AtBeginShipoutBox
9820     \@pdfm@mark{%
9821       put @resources <<%
9822         /Properties<<%
9823         /OCView \OBJ@OCG@view
9824         /OCPrint \OBJ@OCG@print
9825       >>%
9826     >>%
9827   }%
9828 }%
9829 }%
9830 \Hy@AtBeginDocument{%
9831   \def\Hy@colorlink#1{%

```

```

9832 \begingroup
9833 \ifHy@ocgcolorlinks
9834 \def\Hy@ocgcolor{#1}%
9835 \setbox0=\hbox\bgroup\color@begingroup
9836 \else
9837 \HyColor@UseColor#1%
9838 \fi
9839 }%
9840 \def\Hy@endcolorlink{%
9841 \ifHy@ocgcolorlinks
9842 \color@endgroup\egroup
9843 \mbox{%
9844 \@pdfm@mark{content /OC/OCPrint BDC}%
9845 \rlap{\copy0}%
9846 \@pdfm@mark{content EMC/OC/OCView BDC}%
9847 \begingroup
9848 \expandafter\HyColor@UseColor\Hy@ocgcolor
9849 \box0 %
9850 \endgroup
9851 \@pdfm@mark{content EMC}%
9852 }%
9853 \fi
9854 \endgroup
9855 }%
9856 }%
9857 \else
9858 \Hy@DisableOption{ocgcolorlinks}%
9859 \fi

```

Use primitive counter arithmetic here to avoid amsmath redefining `\stepcounter` (github issue/13)

```

9860 \def\Hy@BeginAnnot#1{%
9861 \global\advance\c@Hy@AnnotLevel\@ne
9862 \ifnum\c@Hy@AnnotLevel=\@ne
9863 #1%
9864 \fi
9865 }
9866 \def\Hy@endAnnot{%
9867 \ifnum\value{Hy@AnnotLevel}=\@ne
9868 \Hy@endcolorlink
9869 \@pdfm@mark{eann}%
9870 \fi
9871 \global\advance\c@Hy@AnnotLevel\m@ne
9872 }
9873 \def\Hy@undefinedname{UNDEFINED}
9874 \def\hyper@linkstart#1#2{%
9875 \Hy@VerboseLinkStart{#1}{#2}%
9876 \leavevmode
9877 \Hy@BeginAnnot{%
9878 \protected@edef\Hy@testname{#2}%
9879 \ifx\Hy@testname\@empty
9880 \Hy@Warning{%
9881 Empty destination name,\MessageBreak
9882 using '\Hy@undefinedname'%

```

```

9883 }%
9884 \let\Hy@testname\Hy@undefinedname
9885 \else
9886 \Hy@pstringdef\Hy@testname{%
9887 \expandafter\HyperDestNameFilter\expandafter{%
9888 \Hy@testname
9889 }%
9890 }%
9891 \fi
9892 \@pdfm@mark{%
9893 bann<<%
9894 /Type/Annot%
9895 /Subtype/Link%
9896 \ifHy@pdfa /F 4\fi
9897 \Hy@setpdfborder
9898 \Hy@setpdfhighlight
9899 \expandafter\ifx\csname @#1bordercolor\endcsname\relax
9900 \else
9901 /C[\csname @#1bordercolor\endcsname]%
9902 \fi
9903 /A<<%
9904 /S/GoTo%
9905 /D(\Hy@testname)%
9906 \Hy@href@nextactionraw
9907 >>%
9908 >>%
9909 }%
9910 \expandafter\Hy@colorlink\csname @#1color\endcsname
9911 }%
9912 }
9913 \def\hyper@linkend{\Hy@EndAnnot}%
9914 \def\hyper@link#1#2#3{%
9915 \hyper@linkstart{#1}{#2}#3\Hy@xspace@end\hyper@linkend
9916 }
9917 \def\hyper@linkfile#1#2#3{%
9918 \leavevmode
9919 \Hy@BeginAnnot{%
9920 \def\Hy@pstringF{#2}%
9921 \Hy@CleanupFile\Hy@pstringF
9922 \Hy@pstringdef\Hy@pstringF\Hy@pstringF
9923 \Hy@pstringdef\Hy@pstringD{#3}%
9924 \Hy@MakeRemoteAction
9925 \@pdfm@mark{%
9926 bann<<%
9927 /Type/Annot%
9928 /Subtype/Link%
9929 \ifHy@pdfa /F 4\fi
9930 \Hy@setpdfborder
9931 \Hy@setpdfhighlight
9932 \ifx\@filebordercolor\relax
9933 \else
9934 /C[\@filebordercolor]%
9935 \fi
9936 /A<<%

```

```

9937      /S/GoToR%
9938      /F(\Hy@pstringF)%
9939      /D%
9940      \ifx\#3\%
9941      [\Hy@href@page\@pdfremotestartview]%
9942      \else
9943      (\Hy@pstringD)%
9944      \fi
9945      \Hy@SetNewWindow
9946      \Hy@href@nextactionraw
9947      >>%
9948      >>%
9949      }%
9950      \Hy@colorlink\@filecolor
9951      }%
9952      #1\Hy@xspace@end
9953      \Hy@EndAnnot
9954      }
9955      \def\@hyper@launch run:#1\#2#3{% filename, anchor text linkname
9956      \leavevmode
9957      \Hy@BeginAnnot{%
9958      \Hy@pstringdef\Hy@pstringF{#1}%
9959      \Hy@pstringdef\Hy@pstringP{#3}%
9960      \@pdfm@mark{%
9961      bann<<%
9962      /Type/Annot%
9963      /Subtype/Link%
9964      \ifHy@pdfa /F 4\fi
9965      \Hy@setpdfborder
9966      \Hy@setpdfhighlight
9967      \ifx\@runbordercolor\relax
9968      \else
9969      /C[\@runbordercolor]%
9970      \fi
9971      /A<<%
9972      /F(\Hy@pstringF)%
9973      /S/Launch%
9974      \Hy@SetNewWindow
9975      \ifx\#3\%
9976      \else
9977      /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
9978      \fi
9979      \Hy@href@nextactionraw
9980      >>%
9981      >>%
9982      }%
9983      \Hy@colorlink\@runcolor
9984      }%
9985      #2\Hy@xspace@end
9986      \Hy@EndAnnot
9987      }
9988      \def\hyper@linkurl#1#2{%
9989      \leavevmode
9990      \Hy@BeginAnnot{%

```

```

9991 \Hy@pstringdef\Hy@pstringURI{#2}%
9992 \@pdfm@mark{%
9993   bann<<%
9994     /Type/Annot%
9995     /Subtype/Link%
9996     \ifHy@pdfa /F 4\fi
9997     \Hy@setpdfborder
9998     \Hy@setpdfhighlight
9999     \ifx \@urlbordercolor\relax
10000     \else
10001       /C[\@urlbordercolor]%
10002     \fi
10003     /A<<%
10004     /S/URI%
10005     /URI(\Hy@pstringURI)%
10006     \ifHy@href@ismap
10007       /IsMap true%
10008     \fi
10009     \Hy@href@nextactionraw
10010     >>%
10011   >>%
10012 }%
10013 \Hy@colorlink \@urlcolor
10014 }%
10015 #1\Hy@xspace@end
10016 \Hy@EndAnnot
10017 }
10018 \def\Acrobatmenu#1#2{%
10019 \Hy@Acrobatmenu{#1}{#2}{%
10020 \Hy@BeginAnnot{%
10021 \EdefEscapeName\Hy@temp@menu{#1}%
10022 \@pdfm@mark{%
10023   bann<<%
10024     /Type/Annot%
10025     /Subtype/Link%
10026     \ifHy@pdfa /F 4\fi
10027     \Hy@setpdfborder
10028     \Hy@setpdfhighlight
10029     \ifx \@menubordercolor\relax
10030     \else
10031       /C[\@menubordercolor]%
10032     \fi
10033     /A<<%
10034     /S/Named%
10035     /N/\Hy@temp@menu
10036     \Hy@href@nextactionraw
10037     >>%
10038   >>%
10039 }%
10040 \Hy@colorlink \@menucolor
10041 }%
10042 #2\Hy@xspace@end
10043 \Hy@EndAnnot
10044 }%

```

```

10045 }
10046
10047 \def\PDF@FinishDoc{%
10048 \Hy@UseMaketitleInfos
10049 \HyInfo@GenerateAddons
10050 \@pdfm@mark{%
10051 docinfo<<%
10052 /Title(\@pdftitle)%
10053 /Subject(\@pdfsubject)%
10054 /Creator(\@pdfcreator)%
10055 \ifx\@pdfcreationdate\@empty
10056 \else
10057 /CreationDate(\@pdfcreationdate)%
10058 \fi
10059 \ifx\@pdfmoddate\@empty
10060 \else
10061 /ModDate(\@pdfmoddate)%
10062 \fi
10063 /Author(\@pdfauthor)%
10064 \ifx\@pdfproducer\relax
10065 \else
10066 /Producer(\@pdfproducer)%
10067 \fi
10068 /Keywords(\@pdfkeywords)%
10069 \ifx\@pdftrapped\@empty
10070 \else
10071 /Trapped/\@pdftrapped
10072 \fi
10073 \HyInfo@Addons
10074 >>%
10075 }%
10076 \Hy@DisableOption{pdfauthor}%
10077 \Hy@DisableOption{pdftitle}%
10078 \Hy@DisableOption{pdfsubject}%
10079 \Hy@DisableOption{pdfcreator}%
10080 \Hy@DisableOption{addtopdfcreator}%
10081 \Hy@DisableOption{pdfcreationdate}%
10082 \Hy@DisableOption{pdfcreationdate}%
10083 \Hy@DisableOption{pdfmoddate}%
10084 \Hy@DisableOption{pdfproducer}%
10085 \Hy@DisableOption{pdfkeywords}%
10086 \Hy@DisableOption{pdftrapped}%
10087 \Hy@DisableOption{pdfinfo}%
10088 }

10089 \def\PDF@SetupDoc{%
10090 \edef\Hy@temp{%
10091 \ifHy@pdftoolbar\else /HideToolbar true\fi
10092 \ifHy@pdfmenubar\else /HideMenubar true\fi
10093 \ifHy@pdfwindowui\else /HideWindowUI true\fi
10094 \ifHy@pdffitwindow /FitWindow true\fi
10095 \ifHy@pdfcenterwindow /CenterWindow true\fi
10096 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
10097 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
10098 \Hy@UseNameKey{Direction}\@pdfdirection

```

```

10099 \Hy@UseNameKey{ViewArea}\@pdfviewarea
10100 \Hy@UseNameKey{ViewClip}\@pdfviewclip
10101 \Hy@UseNameKey{PrintArea}\@pdfprintarea
10102 \Hy@UseNameKey{PrintClip}\@pdfprintclip
10103 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
10104 \Hy@UseNameKey{Duplex}\@pdfduplex
10105 \ifx\@pdfpicktraybypdfsize\@empty
10106 \else
10107 /PickTrayByPDFSize \@pdfpicktraybypdfsize
10108 \fi
10109 \ifx\@pdfprintpagerange\@empty
10110 \else
10111 /PrintPageRange[\@pdfprintpagerange]%
10112 \fi
10113 \ifx\@pdfnumcopies\@empty
10114 \else
10115 /NumCopies \@pdfnumcopies
10116 \fi
10117 }%
10118 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
10119 \@pdfm@mark{%
10120 docview<<%
10121 \ifx\@pdfstartpage\@empty
10122 \else
10123 \ifx\@pdfstartview\@empty
10124 \else
10125 /OpenAction[@page\@pdfstartpage\@pdfstartview]%
10126 \fi
10127 \fi
10128 \ifx\@baseurl\@empty
10129 \else
10130 /URI<</Base(\Hy@pstringB)>>%
10131 \fi
10132 /PageMode/\@pdfpagemode
10133 \ifx\Hy@temp\@empty
10134 \else
10135 /ViewerPreferences<<\Hy@temp>>%
10136 \fi
10137 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
10138 \ifx\@pdflang\relax
10139 \else
10140 /Lang(\@pdflang)%
10141 \fi
10142 >>%
10143 }%
10144 \ifx\@pdfpagescrop\@empty
10145 \else
10146 \@pdfm@mark{put @pages <</CropBox[\@pdfpagescrop]>>}%
10147 \fi
10148 }
10149 </dvi/pdfm | xetex>
10150 <*/dvi/pdfm | xetex>

```

\hyper@pagetransition


```

10151 \def\hyper@pagetransition{%
10152   \ifx\@pdfpagetransition\relax
10153   \else
10154     \ifx\@pdfpagetransition\@empty
10155     \else
10156       \special{pdf:put @thispage %
10157         <</Trans<</S/\@pdfpagetransition>>>>%
10158       }%
10159     \fi
10160   \fi
10161 }

```

\hyper@pageduration

```

10162 \def\hyper@pageduration{%
10163   \ifx\@pdfpageduration\relax
10164   \else
10165     \ifx\@pdfpageduration\@empty
10166     \else
10167       \special{pdf:put @thispage %
10168         <</Dur \@pdfpageduration>>%
10169       }%
10170     \fi
10171   \fi
10172 }

10173 \g@addto@macro\Hy@EveryPageBoxHook{%
10174   \hyper@pagetransition
10175   \hyper@pageduration
10176 }

10177 </dviPDFM | xetex>

```

XeTeX uses pdfTeX's method `\pdfpagewidth` and `\pdfpageheight` for setting the paper size.

```

10178 (*dviPDFM)
10179 \AtBeginShipoutFirst{%
10180   \ifHy@setpagesize
10181   \begingroup
10182     \ifnum\mag=\@m
10183     \ifdim\stockwidth>\z@
10184       \ifdim\stockheight>\z@
10185         \special{papersize=\the\stockwidth,\the\stockheight}%
10186       \else
10187         \ifdim\paperwidth>\z@
10188           \ifdim\paperheight>\z@
10189             \special{papersize=\the\paperwidth,\the\paperheight}%
10190           \fi
10191         \fi
10192       \fi
10193     \else
10194       \ifdim\stockwidth=\z@
10195       \ifdim\paperwidth>\z@
10196         \ifdim\paperheight>\z@
10197           \special{papersize=\the\paperwidth,\the\paperheight}%
10198         \fi

```

```

10199     \fi
10200     \fi
10201     \fi
10202     \fi
10203     \endgroup
10204     \fi
10205     \Hy@DisableOption{setpagesize}%
10206 }
10207 </dvipdfm>

```

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.

```

10208 <*vtexhtml>
10209 \providecommand*\XR@ext}{htm}
10210 \RequirePackage{vtexhtml}
10211 \newif\if@Localurl
10212 \let\PDF@FinishDoc\@empty
10213 \def\PDF@SetupDoc{%
10214   \ifx\@baseurl\@empty
10215     \else
10216     \special{!direct <base href="\@baseurl">}%
10217   \fi
10218 }
10219 \def\@urltype{url}
10220 \def\hyper@link#1#2#3{%
10221   \Hy@VerboseLinkStart{#1}{#2}%
10222   \leavevmode
10223   \special{!direct <a href=%
10224     \hyper@quote\hyper@hash\HyperDestNameFilter{#2}\hyper@quote>}%
10225   #3\Hy@xspace@end
10226   \special{!direct </a>}%
10227 }
10228 \def\hyper@linkurl#1#2{%
10229   \begingroup
10230     \hyper@chars
10231     \leavevmode
10232     \MathBSuppress=1\relax
10233     \special{!direct <a href=%
10234       \hyper@quote\HyperDestNameFilter{#2}\hyper@quote>}%
10235     #1\Hy@xspace@end
10236     \MathBSuppress=0\relax
10237     \special{!direct </a>}%
10238   \endgroup
10239 }
10240 \def\hyper@linkfile#1#2#3{%
10241   \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\\else\##3\fi}%
10242 }
10243 \def\hyper@linkstart#1#2{%
10244   \Hy@VerboseLinkStart{#1}{#2}%
10245   \def\Hy@tempa{#1}\ifx\Hy@tempa\@urltype
10246     \@Localurltrue
10247     \special{!direct <a href=\hyper@quote#2\hyper@quote>}%

```

```

10248 \else
10249 \@@Localurlfalse
10250 \begingroup
10251 \hyper@chars
10252 \special{!aref \HyperDestNameFilter{#2}}%
10253 \endgroup
10254 \fi
10255 }
10256 \def\hyper@linkend{%
10257 \if@Localurl
10258 \special{!endaref}%
10259 \else
10260 \special{!direct </a>}%
10261 \fi
10262 }
10263 \Hy@WrapperDef\hyper@anchorstart#1{%
10264 \Hy@SaveLastskip
10265 \Hy@VerboseAnchor{#1}%
10266 \begingroup
10267 \hyper@chars
10268 \special{!aname #1}%
10269 \special{!direct <a name=%
10270 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
10271 \endgroup
10272 \Hy@activeanchortrue
10273 }
10274 \def\hyper@anchorend{%
10275 \special{!direct </a>}%
10276 \Hy@activeanchorfalse
10277 \Hy@RestoreLastskip
10278 }
10279 \Hy@WrapperDef\hyper@anchor#1{%
10280 \Hy@SaveLastskip
10281 \Hy@VerboseAnchor{#1}%
10282 \begingroup
10283 \let\protect=\string
10284 \hyper@chars
10285 \leavevmode
10286 \special{!aname #1}%
10287 \special{!direct <a name=%
10288 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
10289 \endgroup
10290 \Hy@activeanchortrue
10291 \bgroup\anchor@spot\egroup
10292 \special{!direct </a>}%
10293 \Hy@activeanchorfalse
10294 \Hy@RestoreLastskip
10295 }
10296 \def\@Form[#1]{%
10297 \Hy@Message{Sorry, TeXpider does not yet support FORMs}%
10298 }
10299 \let\@endForm\@empty
10300 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
10301 \Hy@Message{Sorry, TeXpider does not yet support FORM gauges}%

```

```

10302 }
10303 \def\@TextField[#1]#2{% parameters, label
10304 \Hy@Message{Sorry, TeXpider does not yet support FORM text fields}%
10305 }
10306 \def\@CheckBox[#1]#2{% parameters, label
10307 \Hy@Message{Sorry, TeXpider does not yet support FORM checkboxes}%
10308 }
10309 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
10310 \Hy@Message{Sorry, TeXpider does not yet support FORM choice menus}%
10311 }
10312 \def\@PushButton[#1]#2{% parameters, label
10313 \Hy@Message{Sorry, TeXpider does not yet support FORM pushbuttons}%
10314 }
10315 \def\@Reset[#1]#2{%
10316 \Hy@Message{Sorry, TeXpider does not yet support FORMs}%
10317 }
10318 \def\@Submit[#1]#2{%
10319 \Hy@Message{Sorry, TeXpider does not yet support FORMs}%
10320 }
10321 </vtexhtml>
10322 <*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.

```

10323 \ifcsname mediaheight\endcsname
10324 \ifHy@setpagesize
10325 \providecommand*\VTeXInitMediaSize{%
10326 \ifnum\mag=\@m
10327 \ifdim\stockwidth>\z@
10328 \ifdim\stockheight>\z@
10329 \setlength\mediaheight\stockheight
10330 \setlength\mediawidth\stockwidth
10331 \else
10332 \ifdim\paperwidth>\z@
10333 \ifdim\paperheight>\z@
10334 \setlength\mediaheight\paperheight
10335 \setlength\mediawidth\paperwidth
10336 \fi
10337 \fi
10338 \fi
10339 \else
10340 \ifdim\stockwidth=\z@
10341 \ifdim\paperwidth>\z@
10342 \ifdim\paperheight>\z@
10343 \setlength\mediaheight\paperheight
10344 \setlength\mediawidth\paperwidth
10345 \fi
10346 \fi
10347 \fi
10348 \fi
10349 \fi
10350 }%
10351 \Hy@AtBeginDocument{\VTeXInitMediaSize}%

```

```

10352 \fi
10353 \Hy@DisableOption{setpagesize}%
10354 \fi
Older versions of VTeX require xyz in lower case.
10355 \providecommand*\@pdfview{xyz}
10356 \providecommand*\@pdfborder{0 0 1}
10357 \providecommand*\@pdfborderstyle{}
10358 \let\CurrentBorderColor\@linkbordercolor
10359 \Hy@WrapperDef\hyper@anchor#1{%
10360 \Hy@SaveLastskip
10361 \Hy@VerboseAnchor{#1}%
10362 \begingroup
10363 \let\protect=\string
10364 \hyper@chars
10365 \special{!aname \HyperDestNameFilter{#1};\@pdfview}%
10366 \endgroup
10367 \Hy@activeanchortrue
10368 \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
10369 \Hy@activeanchorfalse
10370 \Hy@RestoreLastskip
10371 }
10372 \Hy@WrapperDef\hyper@anchorstart#1{%
10373 \Hy@SaveLastskip
10374 \Hy@VerboseAnchor{#1}%
10375 \begingroup
10376 \hyper@chars
10377 \special{!aname \HyperDestNameFilter{#1};\@pdfview}%
10378 \endgroup
10379 \Hy@activeanchortrue
10380 }
10381 \def\hyper@anchorend{%
10382 \Hy@activeanchorfalse
10383 \Hy@RestoreLastskip
10384 }
10385 \def\@urltype{url}
10386 \def\Hy@undefinedname{UNDEFINED}
10387 \def\hyper@linkstart#1#2{%
10388 \Hy@VerboseLinkStart{#1}{#2}%
10389 \Hy@pstringdef\Hy@pstringURI{#2}%
10390 \expandafter\Hy@colorlink\csname @#1color\endcsname
10391 \@ifundefined{#1bordercolor}{%
10392 \let\CurrentBorderColor\relax
10393 }{%
10394 \edef\CurrentBorderColor{%
10395 \csname @#1bordercolor\endcsname
10396 }%
10397 }%
10398 \def\Hy@tempa{#1}%
10399 \ifx\Hy@tempa\@urltype
10400 \special{!%
10401 aref <u=/Type/Action/S/URI/URI(\Hy@pstringURI)%
10402 \ifHy@href@ismap
10403 /IsMap true%
10404 \fi

```

```

10405     \Hy@href@nextactionraw
10406     >,%
10407     a=<%
10408     \ifHy@pdfa /F 4\fi
10409     \Hy@setpdfborder
10410     \ifx\CurrentBorderColor\relax
10411     \else
10412     /C [\CurrentBorderColor]%
10413     \fi
10414     >%
10415     }%
10416 \else
10417 \protected@edef\Hy@testname{#2}%
10418 \ifx\Hy@testname\@empty
10419 \Hy@Warning{%
10420     Empty destination name,\MessageBreak
10421     using ` \Hy@undefinedname'%
10422     }%
10423 \let\Hy@testname\Hy@undefinedname
10424 \fi
10425 \special{!%
10426     aref \expandafter\HyperDestNameFilter
10427     \expandafter{\Hy@testname};%
10428     a=<%
10429     \ifHy@pdfa /F 4\fi
10430     \Hy@setpdfborder
10431     \ifx\CurrentBorderColor\relax
10432     \else
10433     /C [\CurrentBorderColor]%
10434     \fi
10435     >%
10436     }%
10437 \fi
10438 }
10439 \def\hyper@linkend{%
10440 \special{!endaref}%
10441 \Hy@endcolorlink
10442 }
10443 \def\hyper@linkfile#1#2#3{%
10444 \leavevmode
10445 \def\Hy@pstringF{#2}%
10446 \Hy@CleanupFile\Hy@pstringF
10447 \special{!%
10448     aref <%
10449     \ifnum\Hy@VTeXversion>753 \ifHy@pdfnewwindow n\fi\fi
10450     f=\Hy@pstringF>#3;%
10451     a=<%
10452     \ifHy@pdfa /F 4\fi
10453     \Hy@setpdfborder
10454     \ifx\@filebordercolor\relax
10455     \else
10456     /C [\@filebordercolor]%
10457     \fi
10458     >%

```

```

10459 }%
10460 \Hy@colorlink\@filecolor
10461 #1\Hy@xspace@end
10462 \Hy@endcolorlink
10463 \special{!endaref}%
10464 }
10465 \def\hyper@linkurl#1#2{%
10466 \begingroup
10467 \Hy@pstringdef\Hy@pstringURI{#2}%
10468 \hyper@chars
10469 \leavevmode
10470 \special{!%
10471   aref <u=/Type/Action/S/URI/URI(\Hy@pstringURI)%
10472   \ifHy@href@ismap
10473     /IsMap true%
10474   \fi
10475   \Hy@href@nextactionraw
10476   >,%
10477   a=<%
10478   \ifHy@pdfa /F 4\fi
10479   \Hy@setpdfborder
10480   \ifx \@urlbordercolor\relax
10481     \else
10482     /C [\@urlbordercolor]%
10483   \fi
10484   >%
10485 }%
10486 \Hy@colorlink\@urlcolor
10487 #1\Hy@xspace@end
10488 \Hy@endcolorlink
10489 \special{!endaref}%
10490 \endgroup
10491 }
10492 \def\hyper@link#1#2#3{%
10493 \Hy@VerboseLinkStart{#1}{#2}%
10494 \@ifundefined{@#1bordercolor}{%
10495 \let\CurrentBorderColor\relax
10496 }{%
10497 \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
10498 }%
10499 \leavevmode
10500 \protected@edef\Hy@testname{#2}%
10501 \ifx\Hy@testname\@empty
10502 \Hy@Warning{%
10503   Empty destination name,\MessageBreak
10504   using ` \Hy@undefinedname'%
10505 }%
10506 \let\Hy@testname\Hy@undefinedname
10507 \fi
10508 \special{!%
10509   aref \expandafter\HyperDestNameFilter
10510   \expandafter{\Hy@testname};%
10511   a=<%
10512   \ifHy@pdfa /F 4\fi

```

```

10513 \Hy@setpdfborder
10514 \ifx\CurrentBorderColor\relax
10515 \else
10516 /C [\CurrentBorderColor]%
10517 \fi
10518 >%
10519 }%
10520 \expandafter
10521 \Hy@colorlink\csname @#1color\endcsname
10522 #3\Hy@xspace@end
10523 \Hy@endcolorlink
10524 \special{!endaref}%
10525 }
10526 \def\hyper@image#1#2{%
10527 \hyper@linkurl{#2}{#1}%
10528 }
10529 \def\@hyper@launch run:#1\#2#3{%
10530 \Hy@pstringdef\Hy@pstringF{#1}%
10531 \Hy@pstringdef\Hy@pstringP{#3}%
10532 \leavevmode
10533 \special{!aref %
10534 <u=%
10535 /Type/Action%
10536 /S/Launch%
10537 /F(\Hy@pstringF)%
10538 \Hy@SetNewWindow
10539 \ifx\#3\%
10540 \else
10541 /Win<</F(\Hy@pstringF)/P(\Hy@pstringP)>>%
10542 \fi
10543 \Hy@href@nextactionraw
10544 >,%
10545 a=<%
10546 \ifHy@pdfa /F 4\fi
10547 \Hy@setpdfborder
10548 \ifx\@runbordercolor\relax
10549 \else
10550 /C[\@runbordercolor]%
10551 \fi
10552 >%
10553 }%
10554 \Hy@colorlink\@runcolor
10555 #2\Hy@xspace@end
10556 \Hy@endcolorlink
10557 \special{!endaref}%
10558 }
10559 \def\Acrobatmenu#1#2{%
10560 \EdefEscapeName\Hy@temp@menu{#1}%
10561 \Hy@Acrobatmenu{#1}{#2}{%
10562 \special{!%
10563 aref <u=/S /Named /N /\Hy@temp@menu>;%
10564 a=<%
10565 \ifHy@pdfa /F 4\fi
10566 \Hy@setpdfborder

```



```

10567     \ifx\@menubordercolor\relax
10568     \else
10569     /C[\@menubordercolor]%
10570     \fi
10571     >%
10572     }%
10573     \Hy@colorlink\@menucolor
10574     #2\Hy@xspace@end
10575     \Hy@endcolorlink
10576     \special{!endaref}%
10577     }%
10578 }

```

The following code (transition effects) is made by Alex Kostin.

The code below makes sense for $\text{V}\text{T}\text{E}\text{X}$ 7.02 or later.

Please never use $\backslash\@ifundefined\{\text{V}\text{T}\text{E}\text{X}version\}\{..\}\{..\}$ *globally*.

```

10579 \ifnum\Hy@VTeXversion<702 %
10580 \else
10581 \def\hyper@pagetransition{%
10582 \ifx\@pdfpagetransition\relax
10583 \else
10584 \ifx\@pdfpagetransition\@empty

```

Standard incantation.

1. Does an old entry have to be deleted? 2. If 1=yes, how to delete?

```

10585 \else
10586 \hvtex@parse@trans\@pdfpagetransition
10587 \fi
10588 \fi
10589 }%

```

I have to write an “honest” parser to convert raw PDF code into $\text{V}\text{T}\text{E}\text{X}$ $\backslash\text{special}$. (AVK)

Syntax of $\text{V}\text{T}\text{E}\text{X}$ $\backslash\text{special}\{!trans <transition_effect>\}$:

```

<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:

```

10590 \def\hvtex@trans@effect@Blinds{\def\hvtex@trans@code{B}}%
10591 \def\hvtex@trans@effect@Box{\def\hvtex@trans@code{X}}%
10592 \def\hvtex@trans@effect@Dissolve{\def\hvtex@trans@code{D}}%

```

```

10593 \def\hvtex@trans@effect@Glitter{\def\hvtex@trans@code{G}}%
10594 \def\hvtex@trans@effect@Split{\def\hvtex@trans@code{S}}%
10595 \def\hvtex@trans@effect@Wipe{\def\hvtex@trans@code{W}}%
10596 \def\hvtex@trans@effect@R{\def\hvtex@trans@code{R}}%

```

Optional parameters:

```

10597 \def\hvtex@par@dimension{/Dm}%
10598 \def\hvtex@par@direction{/Di}%
10599 \def\hvtex@par@duration{/D}%
10600 \def\hvtex@par@motion{/M}%

```

Tokenizer:

```

10601 \def\hvtex@gettoken{%
10602   \expandafter\hvtex@gettoken@\hvtex@buffer\@nil
10603 }%

```

Notice that tokens in the input buffer must be space delimited.

```

10604 \def\hvtex@gettoken@#1 #2\@nil{%
10605   \edef\hvtex@token{#1}%
10606   \edef\hvtex@buffer{#2}%
10607 }%
10608 \def\hvtex@parse@trans#1{%

```

Initializing code:

```

10609 \let\hvtex@trans@code\@empty
10610 \let\hvtex@param@dimension\@empty
10611 \let\hvtex@param@direction\@empty
10612 \let\hvtex@param@duration\@empty
10613 \let\hvtex@param@motion\@empty
10614 \edef\hvtex@buffer{#1\space}%

```

First token is the PDF transition name without escape.

```

10615 \hvtex@gettoken
10616 \ifx\hvtex@token\@empty

```

Leading space(s)?

```

10617   \ifx\hvtex@buffer\@empty

```

The buffer is empty, nothing to do.

```

10618   \else
10619     \hvtex@gettoken
10620   \fi
10621 \fi
10622 \csname hvtex@trans@effect@\hvtex@token\endcsname

```

Now is time to parse optional parameters.

```

10623 \hvtex@trans@params
10624 }%

```

Reentrant macro to parse optional parameters.

```

10625 \def\hvtex@trans@params{%
10626   \ifx\hvtex@buffer\@empty
10627   \else
10628     \hvtex@gettoken
10629     \let\hvtex@trans@par\hvtex@token
10630     \ifx\hvtex@buffer\@empty
10631     \else
10632       \hvtex@gettoken
10633       \ifx\hvtex@trans@par\hvtex@par@duration

```

/D is the effect duration in seconds. V_TE_X special takes it in milliseconds.

```

10634     \let\hvtex@param@duration\hvtex@token
10635     \else \ifx\hvtex@trans@par\hvtex@par@motion
/M can be either /I or /O
10636     \expandafter\edef\expandafter\hvtex@param@motion
10637     \expandafter{\expandafter\@gobble\hvtex@token}%
10638     \else \ifx\hvtex@trans@par\hvtex@par@dimension

```

/Dm can be either /H or /V

```

10639     \expandafter\edef\expandafter\hvtex@param@dimension
10640     \expandafter{\expandafter\@gobble\hvtex@token}%
10641     \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).

```

10642     \let\hvtex@param@direction\hvtex@token
10643     \fi\fi\fi
10644     \fi
10645     \fi
10646     \ifx\hvtex@buffer\@empty
10647     \let\next\hvtex@produce@trans
10648     \else
10649     \let\next\hvtex@trans@params
10650     \fi
10651     \next
10652 }%

```

Merge <transition_effect> and issue the special when possible. Too lazy to validate optional parameters.

```

10653 \def\hvtex@produce@trans{%
10654 \let\vtex@trans@special\@empty
10655 \if S\hvtex@trans@code
10656 \edef\vtex@trans@special{\hvtex@trans@code
10657 \hvtex@param@dimension\hvtex@param@motion}%
10658 \else\if B\hvtex@trans@code
10659 \edef\vtex@trans@special{%
10660 \hvtex@trans@code\hvtex@param@dimension
10661 }%
10662 \else\if X\hvtex@trans@code
10663 \edef\vtex@trans@special{%
10664 \hvtex@trans@code\hvtex@param@motion
10665 }%
10666 \else\if W\hvtex@trans@code
10667 \edef\vtex@trans@special{%
10668 \hvtex@trans@code\hvtex@param@direction
10669 }%
10670 \else\if D\hvtex@trans@code
10671 \let\vtex@trans@special\hvtex@trans@code
10672 \else\if R\hvtex@trans@code
10673 \let\vtex@trans@special\hvtex@trans@code
10674 \else\if G\hvtex@trans@code
10675 \edef\vtex@trans@special{%
10676 \hvtex@trans@code\hvtex@param@direction
10677 }%

```

```

10678 \fi\fi\fi\fi\fi\fi
10679 \ifx\vtex@trans@special@empty
10680 \else
10681 \ifx\hvtex@param@duration@empty
10682 \else
10683 \setlength{\dimen@}{\hvtex@param@duration\p@}%

```

I'm not guilty of possible overflow.

```

10684 \multiply\dimen@\@m
10685 \edef\vtex@trans@special{%
10686 \vtex@trans@special,\strip@pt\dimen@
10687 }%
10688 \fi

```

And all the mess is just for this.

```

10689 \special{!trans \vtex@trans@special}%
10690 \fi
10691 }%

10692 \def\hyper@pageduration{%
10693 \ifx\@pdfpageduration\relax
10694 \else
10695 \ifx\@pdfpageduration@empty
10696 \special{!duration-}%
10697 \else
10698 \special{!duration \@pdfpageduration}%
10699 \fi
10700 \fi
10701 }%
10702 \g@addto@macro\Hy@EveryPageBoxHook{%
10703 \hyper@pagetransition
10704 \hyper@pageduration
10705 }%
10706 \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

```

10707 \ifx\@pdfproducer\relax
10708 \def\@pdfproducer{VTeX}%
10709 \ifnum\Hy@VTeXversion>\z@
10710 \count@\VTeXversion
10711 \divide\count@ 100 %
10712 \edef\@pdfproducer{\@pdfproducer\space v\the\count@}%
10713 \multiply\count@ -100 %
10714 \advance\count@\VTeXversion
10715 \edef\@pdfproducer{%
10716 \@pdfproducer

```

```

10717 .\ifnum\count@<10 0\fi\the\count@
10718 \ifx\VTeXOS\@undefined\else
10719 \ifnum\VTeXOS>0 %
10720 \ifnum\VTeXOS<6 %
10721 \space(%
10722 \ifcase\VTeXOS
10723 \or Windows\or Linux\or OS/2\or MacOS\or MacOS/X%
10724 \fi
10725 )%
10726 \fi
10727 \fi
10728 \fi
10729 ,\space
10730 \ifnum\OpMode=\@one PDF\else PS\fi
10731 \space backend%
10732 \ifx\gexmode\@undefined\else
10733 \ifnum\gexmode>\z@\space with GeX\fi
10734 \fi
10735 }%
10736 \fi
10737 \fi

```

Current `!pdfinfo` key syntax:

Key	Field	Type
a	Author	String
b	CropBox	String
c	Creator	String
k	Keywords	String
l	PageLayout	PS
p	PageMode	PS
r	Producer	String
s	Subject	String
t	Title	String
u	URI	PS
v	ViewPreferences	PS

Note: PS objects that are dicts are in <<.>> (yuck; no choice).

```

10738 \def\PDF@SetupDoc{%
10739 \ifx\@pdfpagescrop\@empty
10740 \else
10741 \special{!pdfinfo b=<\@pdfpagescrop>}%
10742 \fi
10743 \ifx\@pdfstartpage\@empty
10744 \else
10745 \ifx\@pdfstartview\@empty
10746 \else
10747 \special{!onopen Page\@pdfstartpage}%
10748 \fi
10749 \fi
10750 \special{!pdfinfo p=</\@pdfpagemode>}%
10751 \ifx\@baseurl\@empty
10752 \else
10753 \special{!pdfinfo u=<<</Base (\@baseurl)>>>}%
10754 \fi

```

```

10755 \special{!pdfinfo v=<<<%
10756   \ifHy@pdftoolbar\else /HideToolbar true\fi
10757   \ifHy@pdfmenubar\else /HideMenubar true\fi
10758   \ifHy@pdfwindowui\else /HideWindowUI true\fi
10759   \ifHy@pdfwindow /FitWindow true\fi
10760   \ifHy@pdfcenterwindow /CenterWindow true\fi
10761   \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
10762   \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
10763   \Hy@UseNameKey{Direction}\@pdfdirection
10764   \Hy@UseNameKey{ViewArea}\@pdfviewarea
10765   \Hy@UseNameKey{ViewClip}\@pdfviewclip
10766   \Hy@UseNameKey{PrintArea}\@pdfprintarea
10767   \Hy@UseNameKey{PrintClip}\@pdfprintclip
10768   \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
10769   \Hy@UseNameKey{Duplex}\@pdfduplex
10770   \ifx\@pdfpicktraybypdfsize\@empty
10771     \else
10772       /PickTrayByPDFSize \@pdfpicktraybypdfsize
10773     \fi
10774   \ifx\@pdfprintpagerange\@empty
10775     \else
10776       /PrintPageRange[\@pdfprintpagerange]%
10777     \fi
10778   \ifx\@pdfnumcopies\@empty
10779     \else
10780       /NumCopies \@pdfnumcopies
10781     \fi
10782   >>>}%
10783 \ifx\@pdfpagelayout\@empty
10784 \else
10785   \special{!pdfinfo l=</\@pdfpagelayout\space>}%
10786 \fi
10787 }%
10788 \HyInfo@AddonUnsupportedtrue
10789 \define@key{Hyp}{pdfcreationdate}{%
10790   \Hy@Warning{%
10791     VTeX does not support pdfcreationdate.\MessageBreak
10792     Therefore its setting is ignored%
10793   }%
10794 }
10795 \define@key{Hyp}{pdfmoddate}{%
10796   \Hy@Warning{%
10797     VTeX does not support pdfmoddate.\MessageBreak
10798     Therefore its setting is ignored%
10799   }%
10800 }
10801 \def\PDF@FinishDoc{%
10802   \Hy@UseMaketitleInfos
10803   \HyInfo@TrappedUnsupported
10804   \special{!pdfinfo a=<\@pdfauthor>}%
10805   \special{!pdfinfo t=<\@pdftitle>}%
10806   \special{!pdfinfo s=<\@pdfsubject>}%
10807   \special{!pdfinfo c=<\@pdfcreator>}%
10808   \ifx\@pdfproducer\relax

```

```

10809 \else
10810   \special{!pdfinfo r=<\@pdfproducer>}%
10811 \fi
10812 \special{!pdfinfo k=<\@pdfkeywords>}%
10813 \Hy@DisableOption{pdfauthor}%
10814 \Hy@DisableOption{pdftitle}%
10815 \Hy@DisableOption{pdfsubject}%
10816 \Hy@DisableOption{pdfcreator}%
10817 \Hy@DisableOption{addtopdfcreator}%
10818 \Hy@DisableOption{pdfcreationdate}%
10819 \Hy@DisableOption{pdfcreationdate}%
10820 \Hy@DisableOption{pdfmoddate}%
10821 \Hy@DisableOption{pdfproducer}%
10822 \Hy@DisableOption{pdfkeywords}%
10823 \Hy@DisableOption{pdftrapped}%
10824 \Hy@DisableOption{pdfinfo}%
10825 }
10826 </vtx>

```

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.

```

10827 <dviwindo>\def\literalps@out#1{\special{ps:#1}}%
10828 <packageEnd>\providecommand*{\Hy@DistillerDestFix}{-}
10829 <*pdfmark | dviwindo>
10830 \def\Hy@DistillerDestFix{%
10831   \begingroup
10832   \let\x\literalps@out

```

The fix has to be passed unchanged through GeX, if VTeX in PostScript mode with GeX is used.

```

10833   \ifnum \@ifundefined{OpMode}{0}{-}%
10834     \@ifundefined{gexmode}{0}{-}%
10835     \ifnum\gexmode>0 \OpMode\else 0\fi
10836   }>1 %
10837   \def\x##1{%
10838     \immediate\special{! =##1}%
10839   }%
10840 \fi
10841 \x{%
10842   /product where{%
10843     pop %
10844     product(Distiller)search{%
10845       pop pop pop %
10846     version(.)search{%

```

```

10847     exch pop exch pop%
10848     (3011)eq{%
10849         gsave %
10850         newpath 0 0 moveto closepath clip%
10851         /Courier findfont 10 scalefont setfont %
10852         72 72 moveto(.)show %
10853         grestore%
10854     }if%
10855     }{pop}ifelse%
10856     }{pop}ifelse%
10857     }if%
10858     }%
10859 \endgroup
10860 }
10861 </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

```

```

10862 (*pdfmark)
10863 \Hy@breaklinks@unsupported
10864 \def\HyPat@ObjRef{%
10865   \[~{}]+\}%
10866 }
10867 \Hy@WrapperDef\hyper@anchor#1{%
10868   \Hy@SaveLastskip
10869   \Hy@VerboseAnchor{#1}%
10870   \begingroup
10871   \pdfmark[\anchor@spot]{%
10872     pdfmark=/DEST,%
10873     linktype=anchor,%
10874     View=/\@pdfview \@pdfviewparams,%
10875     DestAnchor={#1}%
10876   }%
10877   \endgroup
10878   \Hy@RestoreLastskip
10879 }
10880 \@ifundefined{hyper@anchorstart}{\endinput}
10881 \Hy@WrapperDef\hyper@anchorstart#1{%
10882   \Hy@SaveLastskip
10883   \Hy@VerboseAnchor{#1}%
10884   \literalps@out{H.S}%

```



```

10885 \Hy@AllowHyphens
10886 \xdef\hyper@currentanchor{#1}%
10887 \Hy@activeanchortrue
10888 }
10889 \def\hyper@anchorend{%
10890 \literalps@out{\strip@pt@and@otherjunk\baselineskip\space H.A}%
10891 \pdfmark{%
10892   pdfmark=/DEST,%
10893   linktype=anchor,%
10894   View=/\@pdfview \@pdfviewparams,%
10895   DestAnchor=\hyper@currentanchor,%
10896 }%
10897 \Hy@activeanchorfalse
10898 \Hy@RestoreLastskip
10899 }
10900 \def\hyper@linkstart#1#2{%
10901 \Hy@VerboseLinkStart{#1}{#2}%
10902 \ifHy@breaklinks
10903 \else
10904 \leavevmode
10905 \ifmmode
10906 \def\Hy@LinkMath{${}}%
10907 \else
10908 \let\Hy@LinkMath\@empty
10909 \fi
10910 \Hy@SaveSpaceFactor
10911 \hbox\bgroup
10912 \Hy@RestoreSpaceFactor
10913 \Hy@LinkMath
10914 \fi
10915 \expandafter\Hy@colorlink\csname @#1color\endcsname
10916 \literalps@out{H.S}%
10917 \Hy@AllowHyphens
10918 \xdef\hyper@currentanchor{#2}%
10919 \gdef\hyper@currentlinktype{#1}%
10920 }
10921 \def\hyper@linkend{%
10922 \literalps@out{\strip@pt@and@otherjunk\baselineskip\space H.L}%
10923 \@ifundefined{@\hyper@currentlinktype bordercolor}{%
10924 \let\Hy@tempcolor\relax
10925 }{%
10926 \edef\Hy@tempcolor{%
10927 \csname @\hyper@currentlinktype bordercolor\endcsname
10928 }%
10929 }%
10930 \pdfmark{%
10931   pdfmark=/ANN,%
10932   linktype=link,%
10933   Subtype=/Link,%
10934   PDFAMFlags=4,%
10935   Dest=\hyper@currentanchor,%
10936   AcroHighlight=\@pdfhighlight,%
10937   Border=\@pdfborder,%
10938   BorderStyle=\@pdfborderstyle,%

```

```

10939   Color=\Hy@tempcolor,%
10940   Raw=H.B%
10941 }%
10942 \Hy@endcolorlink
10943 \ifHy@breaklinks
10944 \else
10945   \Hy@LinkMath
10946   \Hy@SaveSpaceFactor
10947 \egroup
10948   \Hy@RestoreSpaceFactor
10949 \fi
10950 }

```

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.

```

10951 \begingroup
10952 \catcode`P=12 %
10953 \catcode`T=12 %
10954 \lowercase{\endgroup
10955 \gdef\rem@ptetc#1.#2PT#3!{#1\ifnum#2>\z@.#2\fi}%
10956 }
10957 \def\strip@pt@and@otherjunk#1{\expandafter\rem@ptetc\the#1!}

```

`\hyper@pagetransition`

```

10958 \def\hyper@pagetransition{%
10959 \ifx\@pdfpagetransition\relax
10960 \else
10961 \ifx\@pdfpagetransition\@empty
10962 % 1. Does an old entry have to be deleted?
10963 % 2. If 1=yes, how to delete?
10964 \else
10965 \pdfmark{%
10966 pdfmark=/PUT,%
10967 Raw={%
10968 \string{ThisPage\string}%
10969 <</Trans << /S /\@pdfpagetransition\space >> >>%
10970 }%
10971 }%
10972 \fi
10973 \fi
10974 }

```

`\hyper@pageduration`

```

10975 \def\hyper@pageduration{%
10976 \ifx\@pdfpageduration\relax
10977 \else
10978 \ifx\@pdfpageduration\@empty
10979 % 1. Does an old entry have to be deleted?
10980 % 2. If 1=yes, how to delete?
10981 \else
10982 \pdfmark{%
10983 pdfmark=/PUT,%
10984 Raw={%

```

```

10985     \string{ThisPage\string}%
10986     <</Dur \@pdfpageduration>>%
10987     }%
10988   }%
10989   \fi
10990 \fi
10991 }

10992 \g@addto@macro\Hy@EveryPageBoxHook{%
10993   \hyper@pagetransition
10994   \hyper@pageduration
10995 }

10996 \def\hyper@image#1#2{%
10997   \hyper@linkurl{#2}{#1}%
10998 }
10999 \def\Hy@undefinedname{UNDEFINED}
11000 \def\hyper@link#1#2#3{%
11001   \Hy@VerboseLinkStart{#1}{#2}%
11002   \@ifundefined{@#1bordercolor}{%
11003     \let\Hy@tempcolor\relax
11004   }{%
11005     \edef\Hy@tempcolor{\csname @#1bordercolor\endcsname}%
11006   }%
11007   \begingroup
11008     \protected@edef\Hy@testname{#2}%
11009     \ifx\Hy@testname\@empty
11010       \Hy@Warning{%
11011         Empty destination name,\MessageBreak
11012         using `\'Hy@undefinedname'%
11013       }%
11014       \let\Hy@testname\Hy@undefinedname
11015     \fi
11016     \pdfmark[#{#3}]{%
11017       Color=\Hy@tempcolor,%
11018       linktype={#1},%
11019       AcroHighlight=\@pdfhighlight,%
11020       Border=\@pdfborder,%
11021       BorderStyle=\@pdfborderstyle,%
11022       pdfmark=/ANN,%
11023       Subtype=/Link,%
11024       PDFAFlags=4,%
11025       Dest=\Hy@testname
11026     }%
11027   \endgroup
11028 }
11029 \newtoks\pdf@docset
11030 \def\PDF@FinishDoc{%
11031   \Hy@UseMaketitleInfos
11032   \Hy@Info@GenerateAddons
11033   \let\Hy@temp\@empty
11034   \ifx\@pdfcreationdate\@empty
11035     \else
11036     \def\Hy@temp{CreationDate=\@pdfcreationdate,}%
11037   \fi

```

```

11038 \ifx \@pdfmoddate \@empty
11039 \else
11040 \expandafter \def \expandafter \Hy@temp \expandafter {%
11041 \Hy@temp
11042 ModDate=\@pdfmoddate,%
11043 }%
11044 \fi
11045 \ifx \@pdfproducer \relax
11046 \else
11047 \expandafter \def \expandafter \Hy@temp \expandafter {%
11048 \Hy@temp
11049 Producer=\@pdfproducer,%
11050 }%
11051 \fi
11052 \expandafter
11053 \pdfmark \expandafter {%
11054 \Hy@temp
11055 pdfmark=/DOCINFO,%
11056 Title=\@pdftitle,%
11057 Subject=\@pdfsubject,%
11058 Creator=\@pdfcreator,%
11059 Author=\@pdfauthor,%
11060 Keywords=\@pdfkeywords,%
11061 Trapped=\@pdftrapped
11062 }%
11063 \ifx \HyInfo@Addons \@empty
11064 \else
11065 \pdfmark {%
11066 pdfmark=/DOCINFO,%
11067 Raw={\HyInfo@Addons}%
11068 }%
11069 \fi
11070 \Hy@DisableOption{pdfauthor}%
11071 \Hy@DisableOption{pdftitle}%
11072 \Hy@DisableOption{pdfsubject}%
11073 \Hy@DisableOption{pdfcreator}%
11074 \Hy@DisableOption{addtopdfcreator}%
11075 \Hy@DisableOption{pdfcreationdate}%
11076 \Hy@DisableOption{pdfcreationdate}%
11077 \Hy@DisableOption{pdfmoddate}%
11078 \Hy@DisableOption{pdfproducer}%
11079 \Hy@DisableOption{pdfkeywords}%
11080 \Hy@DisableOption{pdftrapped}%
11081 \Hy@DisableOption{pdfinfo}%
11082 }
11083 \def \PDF@SetupDoc {%
11084 \def \Hy@temp {}%
11085 \ifx \@pdfstartpage \@empty
11086 \else
11087 \ifx \@pdfstartview \@empty
11088 \else
11089 \edef \Hy@temp {%
11090 ,Page=\@pdfstartpage
11091 ,View=\@pdfstartview

```

```

11092 }%
11093 \fi
11094 \fi
11095 \edef\Hy@temp{%
11096 \noexpand\pdfmark{%
11097 pdfmark=/DOCVIEW,%
11098 PageMode=/\@pdfpagemode
11099 \Hy@temp
11100 }%
11101 }%
11102 \Hy@temp
11103 \ifx\@pdfpagescrop\@empty
11104 \else
11105 \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
11106 \fi
11107 \edef\Hy@temp{%
11108 \ifHy@pdftoolbar\else /HideToolbar true\fi
11109 \ifHy@pdfmenubar\else /HideMenubar true\fi
11110 \ifHy@pdfwindowui\else /HideWindowUI true\fi
11111 \ifHy@pdffitwindow /FitWindow true\fi
11112 \ifHy@pdfcenterwindow /CenterWindow true\fi
11113 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
11114 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
11115 \Hy@UseNameKey{Direction}\@pdfdirection
11116 \Hy@UseNameKey{ViewArea}\@pdfviewarea
11117 \Hy@UseNameKey{ViewClip}\@pdfviewclip
11118 \Hy@UseNameKey{PrintArea}\@pdfprintarea
11119 \Hy@UseNameKey{PrintClip}\@pdfprintclip
11120 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
11121 \Hy@UseNameKey{Duplex}\@pdfduplex
11122 \ifx\@pdfpicktraybypdfsize\@empty
11123 \else
11124 /PickTrayByPDFSize \@pdfpicktraybypdfsize
11125 \fi
11126 \ifx\@pdfprintpagerange\@empty
11127 \else
11128 /PrintPageRange[\@pdfprintpagerange]%
11129 \fi
11130 \ifx\@pdfnumcopies\@empty
11131 \else
11132 /NumCopies \@pdfnumcopies
11133 \fi
11134 }%
11135 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
11136 \pdfmark{%
11137 pdfmark=/PUT,%
11138 Raw={%
11139 \string{Catalog\string}<<%
11140 \ifx\Hy@temp\@empty
11141 \else
11142 /ViewerPreferences<<\Hy@temp>>%
11143 \fi
11144 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
11145 \ifx\@pdflang\relax

```

```

11146     \else
11147     /Lang(\@pdflang)%
11148     \fi
11149     \ifx\@baseurl\@empty
11150     \else
11151     /URI<</Base(\Hy@pstringB)>>%
11152     \fi
11153     >>%
11154 }%
11155 }%
11156 }
11157 </pdfmark>
11158 (*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.

```

11159 \newif\ifHy@pdfmarkerror
11160 \def\pdfmark{\@ifnextchar[{\pdfmark@}{\pdfmark@[]}}
11161 \def\pdfmark@[#1]#2{%
11162   \Hy@pdfmarkerrorfalse
11163   \edef\@processme{\noexpand\pdf@toks={\the\pdf@defaulttoks}}%
11164   \@processme
11165   \let\pdf@type\relax
11166   \let\pdf@objdef\@empty
11167   \kvsetkeys{PDF}{#2}%
11168   \ifHy@pdfmarkerror
11169   \else
11170     \ifx\pdf@type\relax
11171       \Hy@WarningNoLine{no pdfmark type specified in #2!}%
11172       \ifx\#1\%
11173         \else
11174         \pdf@rect{#1}%
11175         \fi
11176       \else
11177         \ifx\#1\%
11178         \literalps@out{%
11179           [%
11180           \ifx\pdf@objdef\@empty
11181           \else
11182             /_objdef\string{\pdf@objdef\string}%
11183           \fi
11184           \the\pdf@toks\space\pdf@type\space pdfmark%
11185         ]%
11186         \else
11187         \@ifundefined{@\pdf@linktype color}{%
11188           \Hy@colorlink\@linkcolor
11189         }{%
11190           \expandafter\Hy@colorlink
11191             \csname @\pdf@linktype color\endcsname
11192         }%

```

```

11193     \pdf@rect{#1}%
11194     \literalps@out{%
11195     [%
11196     \ifx\pdf@objdef\@empty
11197     \else
11198     /_objdef\string{\pdf@objdef\string}%
11199     \fi
11200     \the\pdf@toks\space\pdf@type\space pdfmark%
11201     }%
11202     \Hy@endcolorlink
11203     \fi
11204     \fi
11205     \fi
11206 }

```

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}

```

```

11207 \newsavebox{\pdf@box}
11208 \providecommand*{\Hy@setouterhbox}{\sbox}
11209 \providecommand*{\Hy@breaklinksunhbox}{\unhbox}
11210 \def\Hy@DEST{/DEST}
11211 \def\pdf@rect#1{%
11212   \begingroup
11213   \chardef\x=1 %
11214   \def\Hy@temp{#1}%
11215   \ifx\Hy@temp\@empty
11216   \chardef\x=0 %
11217   \else
11218   \def\y{\anchor@spot}%
11219   \ifx\Hy@temp\y
11220   \def\y{\relax}%
11221   \ifx\anchor@spot\y
11222   \chardef\x=0 %
11223   \fi
11224   \fi
11225   \fi
11226   \expandafter\endgroup
11227   \ifcase\x
11228   \literalps@out{H.S}%
11229   \literalps@out{H.R}%
11230   \else
11231   \leavevmode
11232   \Hy@SaveSpaceFactor

```

```

11233 \ifmmode
11234 \def\Hy@LinkMath{${}%
11235 \else
11236 \let\Hy@LinkMath\@empty
11237 \fi
11238 \ifHy@breaklinks
11239 \Hy@setouterhbox\pdf@box{%
11240 \Hy@RestoreSpaceFactor
11241 \Hy@LinkMath
11242 \Hy@AllowHyphens#1\Hy@xspace@end
11243 \Hy@LinkMath
11244 \Hy@SaveSpaceFactor
11245 }%
11246 \else
11247 \sbox\pdf@box{%
11248 \Hy@RestoreSpaceFactor
11249 \Hy@LinkMath
11250 #1\Hy@xspace@end
11251 \Hy@LinkMath
11252 \Hy@SaveSpaceFactor
11253 }%
11254 \fi
11255 \dimen@ht\pdf@box
11256 \ifdim\dp\pdf@box=\z@
11257 \literalps@out{H.S}%
11258 \else
11259 \lower\dp\pdf@box\hbox{\literalps@out{H.S}}%
11260 \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...).

```

11261 \ifHy@breaklinks
11262 \ifhmode
11263 \Hy@breaklinkssunhbox\pdf@box
11264 \else
11265 \box\pdf@box
11266 \fi
11267 \else
11268 \expandafter\box\pdf@box
11269 \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

11270 \ifdim\dimen@=\z@
11271 \literalps@out{H.R}%
11272 \else
11273 \raise\dimen@\hbox{\literalps@out{H.R}}%
11274 \fi
11275 \Hy@RestoreSpaceFactor
11276 \fi
11277 \ifx\pdf@type\Hy@DEST

```



```

11278 \else
11279 \pdf@addtoksx{H.B}%
11280 \fi
11281 }

```

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.

```

11282 \newtoks\pdf@toks
11283 \newtoks\pdf@defaulttoks
11284 \pdf@defaulttoks={}%
11285 \def\pdf@addtoks#1#2{%
11286 \edef\@processme{\pdf@toks{\the\pdf@toks/#2 #1}}%
11287 \@processme
11288 }
11289 \def\pdf@addtoksx#1{%
11290 \edef\@processme{\pdf@toks{\the\pdf@toks\space #1}}%
11291 \@processme
11292 }
11293 \def\PDFdefaults#1{%
11294 \pdf@defaulttoks={#1}%
11295 }

```

This is the list of allowed keys. See the Acrobat manual for an explanation.

```

11296 % what is the type of pdfmark?
11297 \define@key{PDF}{pdfmark}{\def\pdf@type{#1}}
11298 % what is the link type?
11299 \define@key{PDF}{linktype}{\def\pdf@linktype{#1}}
11300 \def\pdf@linktype{link}
11301 % named object?
11302 \define@key{PDF}{objdef}{\edef\pdf@objdef{#1}}
11303 \let\pdf@objdef\@empty
11304 % parameter is a stream of PDF
11305 \define@key{PDF}{Raw}{\pdf@addtoksx{#1}}
11306 % parameter is a name
11307 \define@key{PDF}{Action}{\pdf@addtoks{#1}{Action}}
11308 % parameter is a array
11309 \define@key{PDF}{Border}{%
11310 \edef\Hy@temp{#1}%
11311 \ifx\Hy@temp\@empty
11312 \else
11313 \pdf@addtoks{[#1]\Hy@BorderArrayPatch}{Border}% hash-ok
11314 \fi
11315 }
11316 \let\Hy@BorderArrayPatch\@empty
11317 % parameter is a dictionary
11318 \define@key{PDF}{BorderStyle}{%
11319 \edef\Hy@temp{#1}%
11320 \ifx\Hy@temp\@empty
11321 \else
11322 \pdf@addtoks{<<#1>>}{BS}%
11323 \fi
11324 }
11325 % parameter is a array
11326 \define@key{PDF}{Color}{%

```

```

11327 \ifx\relax#1\relax
11328 \else
11329 \pdf@addtoks{[#1]}{Color}% hash-ok
11330 \fi
11331 }
11332 % parameter is a string
11333 \define@key{PDF}{Contents}{\pdf@addtoks{(#1)}{Contents}}
11334 % parameter is a integer
11335 \define@key{PDF}{Count}{\pdf@addtoks{#1}{Count}}
11336 % parameter is a array
11337 \define@key{PDF}{CropBox}{\pdf@addtoks{[#1]}{CropBox}}% hash-ok
11338 % parameter is a string
11339 \define@key{PDF}{DOSFile}{\pdf@addtoks{(#1)}{DOSFile}}
11340 % parameter is a string or file
11341 \define@key{PDF}{DataSource}{\pdf@addtoks{(#1)}{DataSource}}
11342 % parameter is a destination
11343 \define@key{PDF}{Dest}{%
11344 \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
11345 \ifx\Hy@pstringDest\@empty
11346 \Hy@pdfmarkerrortrue
11347 \Hy@Warning{Destination with empty name ignored}%
11348 \else
11349 \pdf@addtoks{(\Hy@pstringDest) cvn}{Dest}%
11350 \fi
11351 }
11352 \define@key{PDF}{DestAnchor}{%
11353 \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
11354 \ifx\Hy@pstringDest\@empty
11355 \Hy@pdfmarkerrortrue
11356 \Hy@Warning{Destination with empty name ignored}%
11357 \else
11358 \pdf@addtoks{(\Hy@pstringDest) cvn}{Dest}%
11359 \fi
11360 }
11361 % parameter is a string
11362 \define@key{PDF}{Dir}{\pdf@addtoks{(#1)}{Dir}}
11363 % parameter is a string
11364 \define@key{PDF}{File}{\pdf@addtoks{(#1)}{File}}
11365 % parameter is a int
11366 \define@key{PDF}{Flags}{\pdf@addtoks{#1}{Flags}}
11367 \define@key{PDF}{PDFAFlags}{%
11368 \ifHy@pdfa
11369 \pdf@addtoks{#1}{F}%
11370 \fi
11371 }
11372 % parameter is a name
11373 \define@key{PDF}{AcroHighlight}{%
11374 \begingroup
11375 \edef\x{#1}%
11376 \expandafter\endgroup\ifx\x\@empty
11377 \else
11378 \pdf@addtoks{#1}{H}%
11379 \fi
11380 }

```

```

11381 % parameter is a string
11382 \define@key{PDF}{ID}{\pdf@addtoks{(#1)}{ID}}% hash-ok
11383 % parameter is a string
11384 \define@key{PDF}{MacFile}{\pdf@addtoks{(#1)}{MacFile}}
11385 % parameter is a string
11386 \define@key{PDF}{ModDate}{\pdf@addtoks{(#1)}{ModDate}}
11387 % parameter is a string
11388 \define@key{PDF}{Op}{\pdf@addtoks{(#1)}{Op}}
11389 % parameter is a Boolean
11390 \define@key{PDF}{Open}{\pdf@addtoks{#1}{Open}}
11391 % parameter is a integer or name
11392 \define@key{PDF}{Page}{\pdf@addtoks{#1}{Page}}
11393 % parameter is a name
11394 \define@key{PDF}{PageMode}{\pdf@addtoks{#1}{PageMode}}
11395 % parameter is a string
11396 \define@key{PDF}{Params}{\pdf@addtoks{(#1)}{Params}}
11397 % parameter is a array
11398 \define@key{PDF}{Rect}{\pdf@addtoks{[#1]}{Rect}}% hash-ok
11399 % parameter is a integer
11400 \define@key{PDF}{SrcPg}{\pdf@addtoks{#1}{SrcPg}}
11401 % parameter is a name
11402 \define@key{PDF}{Subtype}{\pdf@addtoks{#1}{Subtype}}
11403 % parameter is a string
11404 \define@key{PDF}{Title}{\pdf@addtoks{(#1)}{Title}}
11405 % parameter is a string
11406 \define@key{PDF}{Unix}{\pdf@addtoks{(#1)}{Unix}}
11407 % parameter is a string
11408 \define@key{PDF}{UnixFile}{\pdf@addtoks{(#1)}{UnixFile}}
11409 % parameter is an array
11410 \define@key{PDF}{View}{\pdf@addtoks{[#1]}{View}}% hash-ok
11411 % parameter is a string
11412 \define@key{PDF}{WinFile}{\pdf@addtoks{(#1)}{WinFile}}
These are the keys used in the DOCINFO section.
11413 \define@key{PDF}{Author}{\pdf@addtoks{(#1)}{Author}}
11414 \define@key{PDF}{Creator}{\pdf@addtoks{(#1)}{Creator}}
11415 \define@key{PDF}{CreationDate}{\pdf@addtoks{(#1)}{CreationDate}}
11416 \define@key{PDF}{ModDate}{\pdf@addtoks{(#1)}{ModDate}}
11417 \define@key{PDF}{Producer}{\pdf@addtoks{(#1)}{Producer}}
11418 \define@key{PDF}{Subject}{\pdf@addtoks{(#1)}{Subject}}
11419 \define@key{PDF}{Keywords}{\pdf@addtoks{(#1)}{Keywords}}
11420 \define@key{PDF}{ModDate}{\pdf@addtoks{(#1)}{ModDate}}
11421 \define@key{PDF}{Base}{\pdf@addtoks{(#1)}{Base}}
11422 \define@key{PDF}{URI}{\pdf@addtoks{#1}{URI}}
11423 \define@key{PDF}{Trapped}{%
11424 \edef\Hy@temp{#1}%
11425 \ifx\Hy@temp\@empty
11426 \else
11427 \pdf@addtoks{/#1}{Trapped}%
11428 \fi
11429 }
11430
11431 </pdfmarkbase>
11432 <*pdfmark>
11433 \def\Acrobatmenu#1#2{%

```

```

11434 \EdefEscapeName\Hy@temp@menu{#1}%
11435 \Hy@Acrobatmenu{#1}{#2}{%
11436 \pdfmark{#2}{%
11437 linktype=menu,%
11438 pdfmark=/ANN,%
11439 AcroHighlight=\@pdfhighlight,%
11440 Border=\@pdfborder,%
11441 BorderStyle=\@pdfborderstyle,%
11442 Color=\@menubordercolor,%
11443 Action={<</Subtype/Named/N/\Hy@temp@menu>>},%
11444 Subtype=/Link,%
11445 PDFAFlags=4%
11446 }%
11447 }%
11448 }

```

And now for some useful examples:

```

11449 \def\PDFNextPage{\@ifnextchar{\PDFNextPage@}{\PDFNextPage@[]}}
11450 \def\PDFNextPage@#1#2{%
11451 \pdfmark{#2}{%
11452 #1,%
11453 Border=\@pdfborder,%
11454 BorderStyle=\@pdfborderstyle,%
11455 Color=.2 .1 .5,%
11456 pdfmark=/ANN,%
11457 Subtype=/Link,%
11458 PDFAFlags=4,%
11459 Page=/Next%
11460 }%
11461 }
11462 \def\PDFPreviousPage{%
11463 \@ifnextchar{\PDFPreviousPage@}{\PDFPreviousPage@[]}%
11464 }
11465 \def\PDFPreviousPage@#1#2{%
11466 \pdfmark{#2}{%
11467 #1,%
11468 Border=\@pdfborder,%
11469 BorderStyle=\@pdfborderstyle,%
11470 Color=.4 .4 .1,%
11471 pdfmark=/ANN,%
11472 Subtype=/Link,%
11473 PDFAFlags=4,%
11474 Page=/Prev%
11475 }%
11476 }
11477 \def\PDFOpen#1{%
11478 \pdfmark{#1,pdfmark=/DOCVIEW}%
11479 }

```

This will only work if you use Distiller 2.1 or higher.

```

11480 \def\hyper@linkurl#1#2{%
11481 \begingroup
11482 \Hy@pstringdef\Hy@pstringURI{#2}%
11483 \hyper@chars
11484 \leavevmode

```

```

11485 \pdfmark[#{#1}]{%
11486 pdfmark=/ANN,%
11487 linktype=url,%
11488 AcroHighlight=\@pdfhighlight,%
11489 Border=\@pdfborder,%
11490 BorderStyle=\@pdfborderstyle,%
11491 Color=\@urlbordercolor,%
11492 Action={<<%
11493 /Subtype/URI%
11494 /URI(\Hy@pstringURI)%
11495 \ifHy@href@ismap
11496 /IsMap true%
11497 \fi
11498 >>},%
11499 Subtype=/Link,%
11500 PDFAFlags=4%
11501 }%
11502 \endgroup
11503 }
11504 \def\hyper@linkfile#1#2#3{%
11505 \begingroup
11506 \def\Hy@pstringF{#2}%
11507 \Hy@CleanupFile\Hy@pstringF
11508 \Hy@pstringdef\Hy@pstringF\Hy@pstringF
11509 \Hy@pstringdef\Hy@pstringD{#3}%
11510 \Hy@MakeRemoteAction
11511 \leavevmode
11512 \pdfmark[#{#1}]{%
11513 pdfmark=/ANN,%
11514 Subtype=/Link,%
11515 PDFAFlags=4,%
11516 AcroHighlight=\@pdfhighlight,%
11517 Border=\@pdfborder,%
11518 BorderStyle=\@pdfborderstyle,%
11519 linktype=file,%
11520 Color=\@filebordercolor,%
11521 Action={%
11522 <<%
11523 /S/GoToR%
11524 \Hy@SetNewWindow
11525 /F(\Hy@pstringF)%
11526 /D%
11527 \ifx\#3\%
11528 [\Hy@href@page\@pdfremotestartview]%
11529 \else
11530 (\Hy@pstringD)cvn%
11531 \fi
11532 \Hy@href@nextactionraw
11533 >>%
11534 }%
11535 }%
11536 \endgroup
11537 }
11538 \def\@hyper@launch run:#1\#2#3{%

```

```

11539 \begingroup
11540 \Hy@pstringdef\Hy@pstringF{#1}%
11541 \Hy@pstringdef\Hy@pstringP{#3}%
11542 \leavevmode
11543 \pdfmark[#{2}]{%
11544 pdfmark=/ANN,%
11545 Subtype=/Link,%
11546 PDFAFlags=4,%
11547 AcroHighlight=\@pdfhighlight,%
11548 Border=\@pdfborder,%
11549 BorderStyle=\@pdfborderstyle,%
11550 linktype=run,%
11551 Color=\@runbordercolor,%
11552 Action={%
11553 <<%
11554 /S/Launch%
11555 \Hy@SetNewWindow
11556 /F(\Hy@pstringF)%
11557 \ifx\#3\%
11558 \else
11559 /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
11560 \fi
11561 \Hy@href@nextactionraw
11562 >>%
11563 }%
11564 }%
11565 \endgroup
11566 }
11567 </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.

```

11568 (*dvips)
11569 \providecommand*\XR@ext}{pdf}
11570 \let\Hy@raisedlink\@empty
11571 \def\literalps@out#1{\special{ps:SDict begin #1 end}}%
11572 \def\headerps@out#1{\special{! #1}}%
11573 \input{pdfmark.def}%
11574 \ifx\@pdfproducer\relax
11575 \def\@pdfproducer{dvips + Distiller}%
11576 \fi
11577 \providecommand*\@pdfborder{0 0 1}
11578 \providecommand*\@pdfborderstyle{}
11579 \providecommand*\@pdfview{XYZ}
11580 \providecommand*\@pdfviewparams{ H.V}
11581 \def\Hy@BorderArrayPatch{BorderArrayPatch}

```

```

11582 \g@addto@macro\Hy@FirstPageHook{%
11583 \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.

```

11584 /DvipsToPDF{72.27 mul Resolution div} def%
11585 /PDFToDvips{72.27 div Resolution mul} def%
11586 /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.

```

11587 product (Ghostscript) search {pop pop pop revision 927 gt}%
11588 {pop false} ifelse%
11589 {%
11590 /BorderArrayPatch{} def%
11591 }%
11592 {%
11593 /BorderArrayPatch{%
11594 [exch{%
11595 dup dup type/integertype eq exch type/realttype eq or%
11596 {BPToDvips}if%
11597 }forall]%
11598 }def%
11599 } 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.

```

11600 /HyperBorder {1 PDFToDvips} def%
11601 /H.V {pdf@hoff pdf@voff null} def%
11602 /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

```

11603 /H.S {%
11604 currentpoint %
11605 HyperBorder add /pdf@lly exch def %
11606 dup DvipsToPDF 72 add /pdf@hoff exch def %
11607 HyperBorder sub /pdf@llx exch def%
11608 } 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`

```

11609 /H.L {%
11610 2 sub dup%
11611 /HyperBasePt exch def %
11612 PDFToDvips /HyperBaseDvips exch def %
11613 currentpoint %
11614 HyperBaseDvips sub /pdf@ury exch def%
11615 /pdf@urx exch def%
11616 } def%
11617 /H.A {%
11618 H.L %
11619 % |pdf@voff| = the distance from the top of the page to a point
11620 % |\baselineskip| above the current point in PDF coordinates
11621 currentpoint exch pop %
11622 vsize 72 sub exch DvipsToPDF %
11623 HyperBasePt sub % baseline skip
11624 sub /pdf@voff exch def%
11625 } def%
11626 /H.R {%
11627 currentpoint %
11628 HyperBorder sub /pdf@ury exch def %
11629 HyperBorder add /pdf@urx exch def %
11630 % |pdf@voff| = the distance from the top of the page to the current point, in
11631 % PDF coordinates
11632 currentpoint exch pop vsize 72 sub %
11633 exch DvipsToPDF sub /pdf@voff exch def%
11634 } def%
11635 }%
11636 }
11637 \AtBeginShipoutFirst{%
11638 \ifHy@setpagesize
11639 \begingroup
11640 \ifnum\mag=\@m
11641 \ifdim\stockwidth>\z@
11642 \ifdim\stockheight>\z@
11643 \special{papersize=\the\stockwidth,\the\stockheight}%
11644 \else
11645 \ifdim\paperwidth>\z@
11646 \ifdim\paperheight>\z@
11647 \special{papersize=\the\paperwidth,\the\paperheight}%
11648 \fi
11649 \fi
11650 \fi
11651 \else
11652 \ifdim\stockwidth=\z@
11653 \ifdim\paperwidth>\z@
11654 \ifdim\paperheight>\z@

```



```

11655     \special{papersize=\the\paperwidth,\the\paperheight}%
11656     \fi
11657     \fi
11658     \fi
11659     \fi
11660     \fi
11661     \endgroup
11662     \fi
11663     \Hy@DisableOption{setpagesize}%
11664 }

11665 \def\setpdfinkmargin#1{%
11666   \begingroup
11667   \setlength{\dimen@}{#1}%
11668   \literalps@out{%
11669     /HyperBorder{\strip@pt\dimen@\space PDFToDvips}def%
11670   }%
11671   \endgroup
11672 }

11673 </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.

```

11674 (*vtexpdfmark)
11675 \providecommand*\XR@ext}{pdf}
11676 \let\Hy@raisedlink\@empty
11677 \def\literalps@out#1{\special{pS:#1}}%
11678 \def\headerps@out#1{\immediate\special{pS:#1}}%
11679 \input{pdfmark.def}%
11680 \ifx\@pdfproducer\relax
11681   \ifnum\OpMode=\@one
11682     \def\@pdfproducer{VTeX}%
11683   \else
11684     \def\@pdfproducer{VTeX + Distiller}%
11685   \fi
11686 \fi
11687 \providecommand*\@pdfborder{0 0 1}
11688 \providecommand*\@pdfborderstyle{}
11689 \providecommand*\@pdfview{XYZ}
11690 \providecommand*\@pdfviewparams{ H.V}
11691 \g@addto@macro\Hy@FirstPageHook{%
11692   \headerps@out{%
11693     /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.

```

11694   /HyperBorder {1} def%
11695   /H.V {pdf@hoff pdf@voff null} def%
11696   /H.B {/Rect[pdf@llx pdf@lly pdf@urx pdf@ury]} def%

```

H.S (start of anchor, link, or rect) stores the x and y coordinates of the current point, in PDF coordinates: $\text{pdf@lly} = Y_c - \text{HyperBorder}$, $\text{pdf@hoff} = X_c + 72$, $\text{pdf@llx} = X_c - \text{HyperBorder}$

```

11697 /H.S {%
11698   currentpoint %
11699   HyperBorder sub%
11700   /pdf@lly exch def %
11701   dup 72 add /pdf@hoff exch def %
11702   HyperBorder sub%
11703   /pdf@llx exch def%
11704 } def%

```

The x and y coordinates of the current point, minus the `\baselineskip`: $\text{pdf@ury} = Y_c + \text{HyperBasePt} + \text{HyperBorder}$, $\text{pdf@urx} = X_c + \text{HyperBorder}$

```

11705 /H.L {%
11706   2 sub%
11707   /HyperBasePt exch def %
11708   currentpoint %
11709   HyperBasePt add HyperBorder add%
11710   /pdf@ury exch def %
11711   HyperBorder add%
11712   /pdf@urx exch def%
11713 } def%
11714 /H.A {%
11715   H.L %
11716   currentpoint exch pop %
11717   vsize 72 sub exch %
11718   HyperBasePt add add%
11719   /pdf@voff exch def%
11720 } def%

```

$\text{pdf@ury} = Y_c + \text{HyperBorder}$, $\text{pdf@urx} = X_c + \text{HyperBorder}$

```

11721 /H.R {%
11722   currentpoint %
11723   HyperBorder add%
11724   /pdf@ury exch def %
11725   HyperBorder add%
11726   /pdf@urx exch def %
11727   currentpoint exch pop vsize 72 sub add%
11728   /pdf@voff exch def%
11729 } def%
11730 }%
11731 }

```

```

11732 \def\setpdfinkmargin#1{%
11733   \begingroup
11734   \setlength{\dimen@}{#1}%
11735   \literalps@out{%
11736     /HyperBorder{\strip@pt\dimen@}def%
11737   }%
11738   \endgroup
11739 }
11740 </vtexpdfmark>

```

44.11 Textures

```
11741 (*textures)
11742 \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.

```
11743 \begingroup
11744 \obeylines %
11745 \gdef\Hy@ps@CR{\noexpand
11746 }%
11747 \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`.

```
11748 \def\literalps@out#1{%
11749 \special{postscript 0 0 transform}%
11750 \special{rawpostscript itransform moveto\Hy@ps@CR #1}%
11751 }%
11752 %
```

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.

```
11753 \def\headerps@out#1{%
11754 \special{%
11755 prepostscript TeXdict begin\Hy@ps@CR
11756 #1\Hy@ps@CR
11757 end%
11758 }%
11759 }%
11760 %
```

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.

```
11761 \g@addto@macro\Hy@FirstPageHook{%
11762 \headerps@out{%
11763 /betterpdfmark {%
```

```

11764    systemdict begin %
11765      dup /BP eq%
11766      {cleartomark gsave nulldevice []}%
11767      {dup /EP eq%
11768        {cleartomark cleartomark grestore}%}
11769      {cleartomark}%
11770      ifelse%
11771    }ifelse %
11772  end%
11773 }def\Hy@ps@CR
11774 ___pdfmark___ not{/pdfmark /betterpdfmark load def}if%
11775 }% end of \headerps@out
11776 }% end of \AtBeginShipoutFirst
11777 %
11778 \input{pdfmark.def}%
11779 %
11780 \ifx\@pdfproducer\relax
11781   \def\@pdfproducer{Textures + Distiller}%
11782 \fi
11783 \providecommand*\@pdfborder{0 0 1}
11784 \providecommand*\@pdfborderstyle{}
11785 \providecommand*\@pdfview{XYZ}
11786 \providecommand*\@pdfviewparams{ H.V}
11787 %

```

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 .

```

11788 \Hy@AtBeginDocument{%
11789   \headerps@out{%

```

Textures lives in normal points, I think. So conversion from one coordinate system to another involves doing nothing.

```

11790   /vsize {\Hy@pageheight} def%
11791   /DvipsToPDF {} def%
11792   /PDFToDvips {} def%
11793   /BPToDvips {} def%
11794   /HyperBorder { 1 PDFToDvips } def\Hy@ps@CR
11795   /H.V {pdf@hoff pdf@voff null} def\Hy@ps@CR
11796   /H.B {/Rect[pdf@llx pdf@lly pdf@urx pdf@ury]} def\Hy@ps@CR
11797   /H.S {%
11798     currentpoint %
11799     HyperBorder add /pdf@lly exch def %
11800     dup DvipsToPDF 72 add /pdf@hoff exch def %
11801     HyperBorder sub /pdf@llx exch def%
11802   } def\Hy@ps@CR
11803   /H.L {%
11804     2 sub %
11805     PDFToDvips /HyperBase exch def %
11806     currentpoint %
11807     HyperBase sub /pdf@ury exch def%
11808     /pdf@urx exch def%

```

```

11809 } def\Hy@ps@CR
11810 /H.A {%
11811   H.L %
11812   currentpoint exch pop %
11813   vsize 72 sub exch DvipsToPDF %
11814   HyperBase sub % baseline skip
11815   sub /pdf@voff exch def%
11816 } def\Hy@ps@CR
11817 /H.R {%
11818   currentpoint %
11819   HyperBorder sub /pdf@ury exch def %
11820   HyperBorder add /pdf@urx exch def %
11821   currentpoint exch pop vsize 72 sub %
11822   exch DvipsToPDF sub /pdf@voff exch def%
11823 } def\Hy@ps@CR
11824 }%
11825 }

11826 \def\setpdfinkmargin#1{%
11827   \begingroup
11828   \setlength{\dimen@}{#1}%
11829   \literalps@out{%
11830     /HyperBorder{\strip@pt\dimen@\space PDFToDvips}def%
11831   }%
11832   \endgroup
11833 }

11834 \Hy@AtBeginDocument{%
11835   \ifHy@colorlinks
11836     \headerps@out{/PDFBorder{/Border [0 0 0]}def}%
11837   \fi
11838 }

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.

11839 \expandafter\let\expandafter\keepPDF@SetupDoc
11840 \csname PDF@SetupDoc\endcsname
11841 \def\PDF@SetupDoc{%
11842   \ifx\@baseurl\@empty
11843     \else
11844     \special{html:<base href="\@baseurl">}%
11845   \fi
11846   \keepPDF@SetupDoc
11847 }
11848 \Hy@WrapperDef\hyper@anchor#1{%
11849   \Hy@SaveLastskip
11850   \Hy@VerboseAnchor{#1}%
11851   \begingroup
11852     \let\protect=\string
11853     \special{html:<a name=%
11854       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
11855   \endgroup
11856   \Hy@activeanchortrue
11857   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink

```

```

11858 \special{html:</a>}%
11859 \Hy@activeanchorfalse
11860 \Hy@RestoreLastskip
11861 }
11862 \Hy@WrapperDef\hyper@anchorstart#1{%
11863 \Hy@SaveLastskip
11864 \Hy@VerboseAnchor{#1}%
11865 \begingroup
11866 \hyper@chars
11867 \special{html:<a name=%
11868 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
11869 \endgroup
11870 \Hy@activeanchortrue
11871 }
11872 \def\hyper@anchorend{%
11873 \special{html:</a>}%
11874 \Hy@activeanchorfalse
11875 \Hy@RestoreLastskip
11876 }
11877 \def\@urlltype{url}
11878 \def\hyper@linkstart#1#2{%
11879 \Hy@VerboseLinkStart{#1}{#2}%
11880 \expandafter\Hy@colorlink\csname @#1color\endcsname
11881 \def\Hy@tempa{#1}%
11882 \ifx\Hy@tempa\@urlltype
11883 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
11884 \else
11885 \begingroup
11886 \hyper@chars
11887 \special{%
11888 html:<a href=%
11889 \hyper@quote#\HyperDestNameFilter{#2}\hyper@quote>%
11890 }%
11891 \endgroup
11892 \fi
11893 }
11894 \def\hyper@linkend{%
11895 \special{html:</a>}%
11896 \Hy@endcolorlink
11897 }
11898 \def\hyper@linkfile#1#2#3{%
11899 \hyper@linkurl{#1}{%
11900 \Hy@linkfileprefix#2\ifx\#3\\\else\##3\fi
11901 }%
11902 }
11903 \def\hyper@linkurl#1#2{%
11904 \leavevmode
11905 \ifHy@raiselinks
11906 \Hy@SaveSpaceFactor
11907 \Hy@SaveSavedSpaceFactor
11908 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
11909 \Hy@RestoreSavedSpaceFactor
11910 \@linkdim\dp\@tempboxa
11911 \lower\@linkdim\hbox{%

```

```

11912 \hyper@chars
11913 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
11914 }%
11915 \Hy@colorlink\@urlcolor
11916 \Hy@RestoreSpaceFactor
11917 #1\Hy@xspace@end
11918 \Hy@SaveSpaceFactor
11919 \@linkdim\ht\@tempboxa
11920 \advance\@linkdim by -6.5\p@
11921 \raise\@linkdim\hbox{\special{html:</a>}}%
11922 \Hy@endcolorlink
11923 \Hy@RestoreSpaceFactor
11924 \else
11925 \begingroup
11926 \hyper@chars
11927 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
11928 \Hy@colorlink\@urlcolor#1\Hy@xspace@end
11929 \special{html:</a>}%
11930 \Hy@endcolorlink
11931 \endgroup
11932 \fi
11933 }

```

Very poor implementation of \hyper@link without considering #1.

```

11934 \def\hyper@link#1#2#3{%
11935 \Hy@VerboseLinkStart{#1}{#2}%
11936 \hyper@linkurl{#3}{\# \HyperDestNameFilter{#2}}%
11937 }
11938 \def\hyper@image#1#2{%
11939 \begingroup
11940 \hyper@chars
11941 \special{html:<img src=\hyper@quote#1\hyper@quote>}%
11942 \endgroup
11943 }
11944 </textures>

```

44.12 dvipsone

```

11945 % \subsection{dvipsone driver}
11946 % Over-ride the default setup macro in pdfmark driver to use Y\&Y
11947 % |\special| commands.
11948 (*dvipsone)
11949 \providecommand*\XR@ext}{pdf}
11950 \let\Hy@raisedlink\@empty
11951 \providecommand*\@pdfborder{0 0 1}
11952 \providecommand*\@pdfborderstyle{}
11953 \def\literalps@out#1{\special{ps:#1}}%
11954 \def\headerps@out#1{\special{headertext=#1}}%
11955 \input{pdfmark.def}%
11956 \HyInfo@AddonUnsupportedtrue
11957 \def\PDF@FinishDoc{%
11958 \Hy@UseMaketitleInfos
11959 \HyInfo@TrappedUnsupported
11960 \special{PDF: Keywords \@pdfkeywords}%

```

```

11961 \special{PDF: Title \@pdftitle}%
11962 \special{PDF: Creator \@pdfcreator}%
11963 \ifx\@pdfcreationdate\@empty
11964 \else
11965   \special{PDF: CreationDate \@pdfcreationdate}%
11966 \fi
11967 \ifx\@pdfmoddate\@empty
11968 \else
11969   \special{PDF: ModDate \@pdfmoddate}%
11970 \fi
11971 \special{PDF: Author \@pdfauthor}%
11972 \ifx\@pdfproducer\relax
11973 \else
11974   \special{PDF: Producer \@pdfproducer}%
11975 \fi
11976 \special{PDF: Subject \@pdfsubject}%
11977 \Hy@DisableOption{pdfauthor}%
11978 \Hy@DisableOption{pdftitle}%
11979 \Hy@DisableOption{pdfsubject}%
11980 \Hy@DisableOption{pdfcreator}%
11981 \Hy@DisableOption{addtopdfcreator}%
11982 \Hy@DisableOption{pdfcreationdate}%
11983 \Hy@DisableOption{pdfcreationdate}%
11984 \Hy@DisableOption{pdfmoddate}%
11985 \Hy@DisableOption{pdfproducer}%
11986 \Hy@DisableOption{pdfkeywords}%
11987 \Hy@DisableOption{pdftrapped}%
11988 \Hy@DisableOption{pdfinfo}%
11989 }
11990 \def\PDF@SetupDoc{%
11991   \def\Hy@temp{}%
11992   \ifx\@pdfstartpage\@empty
11993   \else
11994     \ifx\@pdfstartview\@empty
11995     \else
11996       \edef\Hy@temp{%
11997         ,Page=\@pdfstartpage
11998         ,View=\@pdfstartview
11999       }%
12000     \fi
12001   \fi
12002   \edef\Hy@temp{%
12003     \noexpand\pdfmark{%
12004       pdfmark=/DOCVIEW,%
12005       PageMode=/\@pdfpagemode
12006     }\Hy@temp
12007   }%
12008 }%
12009 \Hy@temp
12010 \ifx\@pdfpagescrop\@empty
12011 \else
12012   \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
12013 \fi
12014 \edef\Hy@temp{%

```



```

12015 \ifHy@pdftoolbar\else /HideToolbar true\fi
12016 \ifHy@pdfmenubar\else /HideMenubar true\fi
12017 \ifHy@pdfwindowui\else /HideWindowUI true\fi
12018 \ifHy@pdfwindow /FitWindow true\fi
12019 \ifHy@pdfcenterwindow /CenterWindow true\fi
12020 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
12021 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
12022 \Hy@UseNameKey{Direction}\@pdfdirection
12023 \Hy@UseNameKey{ViewArea}\@pdfviewarea
12024 \Hy@UseNameKey{ViewClip}\@pdfviewclip
12025 \Hy@UseNameKey{PrintArea}\@pdfprintarea
12026 \Hy@UseNameKey{PrintClip}\@pdfprintclip
12027 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
12028 \Hy@UseNameKey{Duplex}\@pdfduplex
12029 \ifx\@pdfpicktraybypdfsize\@empty
12030 \else
12031 /PickTrayByPDFSize \@pdfpicktraybypdfsize
12032 \fi
12033 \ifx\@pdfprintpagerange\@empty
12034 \else
12035 /PrintPageRange[\@pdfprintpagerange]%
12036 \fi
12037 \ifx\@pdfnumcopies\@empty
12038 \else
12039 /NumCopies \@pdfnumcopies
12040 \fi
12041 }%
12042 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
12043 \pdfmark{%
12044 pdfmark=/PUT,%
12045 Raw={%
12046 \string{Catalog\string}<<%
12047 \ifx\Hy@temp\@empty
12048 \else
12049 /ViewerPreferences<<\Hy@temp>>%
12050 \fi
12051 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
12052 \ifx\@pdflang\relax
12053 \else
12054 /Lang(\@pdflang)%
12055 \fi
12056 \ifx\@baseurl\@empty
12057 \else
12058 /URI<</Base(\Hy@pstringB)>>%
12059 \fi
12060 >>%
12061 }%
12062 }%
12063 }
12064 \providecommand*\@pdfview{XYZ}
12065 \providecommand*\@pdfviewparams{ %
12066 gsave revscl currentpoint grestore %
12067 72 add exch pop null exch null%
12068 }

```

```
12069 \def\Hy@BorderArrayPatch{BorderArrayPatch}
```

These are called at the start and end of unboxed links; their job is to leave available PS variables called `pdf@llx pdf@lly pdf@urx pdf@ury`, which are the coordinates of the bounding rectangle of the link, and `pdf@hoff pdf@voff` which are the PDF page offsets. These latter are currently not used in the `dvipsone` setup. The `Rect` pair are called at the LL and UR corners of a box known to `TEX`.

```
12070 \g@addto@macro\Hy@FirstPageHook{%
```

```
12071 \headerps@out{%
```

`dvipsone` lives in scaled points; does this mean 65536 or 65781?

```
12072 /DvipsToPDF { 65781 div } def%
```

```
12073 /PDFToDvips { 65781 mul } def%
```

```
12074 /BPToDvips{65781 mul}def%
```

```
12075 /HyperBorder { 1 PDFToDvips } def%
```

```
12076 /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.

```
12077 /BorderArrayPatch{%
```

```
12078 [exch{%
```

```
12079 dup dup type/integertype eq exch type/realttype eq or%
```

```
12080 {BPToDvips}if%
```

```
12081 }forall]%
```

```
12082 }def%
```

```
12083 /H.S {%
```

```
12084 currentpoint %
```

```
12085 HyperBorder add /pdf@lly exch def %
```

```
12086 dup DvipsToPDF 72 add /pdf@hoff exch def %
```

```
12087 HyperBorder sub /pdf@llx exch def%
```

```
12088 } def%
```

```
12089 /H.L {%
```

```
12090 2 sub %
```

```
12091 PDFToDvips /HyperBase exch def %
```

```
12092 currentpoint %
```

```
12093 HyperBase sub /pdf@ury exch def%
```

```
12094 /pdf@urx exch def%
```

```
12095 } def%
```

```
12096 /H.A {%
```

```
12097 H.L %
```

```
12098 currentpoint exch pop %
```

```
12099 HyperBase sub % baseline skip
```

```
12100 DvipsToPDF /pdf@voff exch def%
```

```
12101 } def%
```

```
12102 /H.R {%
```

```
12103 currentpoint %
```

```
12104 HyperBorder sub /pdf@ury exch def %
```

```
12105 HyperBorder add /pdf@urx exch def %
```

```
12106 currentpoint exch pop DvipsToPDF /pdf@voff exch def%
```

```
12107 } def%
```

```
12108 }%
```

```
12109 }
```

```
12110 \def\setpdfinkmargin#1{%
```

```
12111 \begingroup
```

```

12112 \setlength{\dimen@}{#1}%
12113 \literalps@out{%
12114 /HyperBorder{\strip@pt\dimen@\space PDFToDvips}def%
12115 }%
12116 \endgroup
12117 }
12118 </dvipsone>

```

44.13 TeX4ht

```

12119 (*tex4ht)
12120 \providecommand*\XR@ext}{html}
12121 \let\Hy@raisedlink\@empty
12122 \@ifpackageloaded{tex4ht}{%
12123 \Hy@InfoNoLine{tex4ht is already loaded}%
12124 }{%
12125 \RequirePackage[hTeX4ht]{tex4ht}%
12126 }
12127 \hyperlinkfileprefix{}
12128 \let\PDF@FinishDoc\@empty
12129 \def\PDF@SetupDoc{%
12130 \ifx\@baseurl\@empty
12131 \else
12132 \special{t4ht=<base href="\@baseurl">}%
12133 \fi
12134 }
12135 \Hy@WrapperDef\hyper@anchor#1{%
12136 \Hy@SaveLastskip
12137 \Hy@VerboseAnchor{#1}%
12138 \begingroup
12139 \let\protect=\string
12140 \special{t4ht=<a name=%
12141 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
12142 \endgroup
12143 \Hy@activeanchortrue
12144 \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
12145 \special{t4ht=</a>}%
12146 \Hy@activeanchorfalse
12147 \Hy@RestoreLastskip
12148 }
12149 \Hy@WrapperDef\hyper@anchorstart#1{%
12150 \Hy@SaveLastskip
12151 \Hy@VerboseAnchor{#1}%
12152 \begingroup
12153 \hyper@chars\special{t4ht=<a name=%
12154 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
12155 \endgroup
12156 \Hy@activeanchortrue
12157 }
12158 \def\hyper@anchorend{%
12159 \special{t4ht=</a>}%
12160 \Hy@activeanchorfalse
12161 \Hy@RestoreLastskip
12162 }
12163 \def\@urlltype{url}

```

```

12164 \def\hyper@linkstart#1#2{%
12165   \Hy@VerboseLinkStart{#1}{#2}%
12166   \expandafter\Hy@colorlink\csname @#1color\endcsname
12167   \def\Hy@tempa{#1}%
12168   \ifx\Hy@tempa\@urlltype
12169     \special{t4ht=<a href=\hyper@quote#2\hyper@quote>}%
12170   \else
12171     \begingroup
12172     \hyper@chars
12173     \special{t4ht=<a href=%
12174       \hyper@quote\#\Hy@HyperDestNameFilter{#2}\hyper@quote>}%
12175     \endgroup
12176   \fi
12177 }
12178 \def\hyper@linkend{%
12179   \special{t4ht=</a>}%
12180   \Hy@endcolorlink
12181 }
12182 \def\hyper@linkfile#1#2#3{%
12183   \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\\else\##3\fi}%
12184 }
12185 \def\hyper@linkurl#1#2{%
12186   \leavevmode
12187   \ifHy@raiselinks
12188     \Hy@SaveSpaceFactor
12189     \Hy@SaveSavedSpaceFactor
12190     \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
12191     \Hy@RestoreSavedSpaceFactor
12192     \@linkdim\dp\@tempboxa
12193     \lower\@linkdim\hbox{%
12194       \begingroup
12195         \hyper@chars
12196         \special{%
12197           t4ht=<a href=\hyper@quote#2\hyper@quote>%
12198         }%
12199       \endgroup
12200     }%
12201     \Hy@colorlink\@urlcolor
12202     \Hy@RestoreSpaceFactor
12203     #1\Hy@xspace@end
12204     \Hy@SaveSpaceFactor
12205     \Hy@endcolorlink
12206     \@linkdim\ht\@tempboxa
12207     \advance\@linkdim by -6.5\p@
12208     \raise\@linkdim\hbox{\special{t4ht=</a>}}%
12209     \Hy@RestoreSpaceFactor
12210   \else
12211     \begingroup
12212     \hyper@chars
12213     \special{t4ht=<a href=\hyper@quote#2\hyper@quote>}%
12214     \Hy@colorlink\@urlcolor
12215     #1\Hy@xspace@end
12216     \Hy@endcolorlink
12217     \special{t4ht=</a>}%

```

```

12218 \endgroup
12219 \fi
12220 }

Poor implementation of \hyper@link without considering #1.
12221 \def\hyper@link#1#2#3{%
12222 \Hy@VerboseLinkStart{#1}{#2}%
12223 \hyper@linkurl{#3}{\#\HyperDestNameFilter{#2}}%
12224 }
12225 \def\hyper@image#1#2{%
12226 \begingroup
12227 \hyper@chars
12228 \special{t4ht=<img src=\hyper@quote#1\hyper@quote>}%
12229 \endgroup
12230 }
12231 \let\autoref\ref
12232 \ifx \rEfLiNK \UnDef
12233 \def\rEfLiNK #1#2{#2}%
12234 \fi
12235 \let\backref\@gobble

Fix for tex4ht.
12236 \AtBeginDocument{%
12237 \expandafter
12238 \let\expandafter\Hy@OrgMakeLabel\csname Make:Label\endcsname
12239 \expandafter\def\csname Make:Label\endcsname#1#2{%
12240 \ifhmode
12241 \Hy@SaveSpaceFactor
12242 \else
12243 \global\Hy@SavedSpaceFactor=1000 %
12244 \fi
12245 \Hy@OrgMakeLabel{#1}{%
12246 \Hy@RestoreSpaceFactor
12247 #2\Hy@xspace@end%
12248 \Hy@SaveSpaceFactor
12249 }%
12250 \Hy@RestoreSpaceFactor
12251 }%
12252 }
12253 </tex4ht>
12254 (*tex4htcfg)
12255 \IfFileExists{\jobname.cfg}{\endinput}{ }
12256 \Preamble{html}
12257 \begin{document}%
12258 \EndPreamble
12259 \def\TeX{TeX}
12260 \def\OMEGA{Omega}
12261 \def\LaTeX{LaTeX}
12262 \def\LaTeXe{\LaTeX2e}
12263 \def\eTeX{e-TeX}
12264 \def\MF{Metafont}
12265 \def\MP{MetaPost}
12266 </tex4htcfg>

```

45 Driver-specific form support

45.1 pdfmarks

change 2020-06-20: added /Euro to encoding

```
12267 (*pdfmark)
12268 \long\def\@Form[#1]{%
12269 \g@addto@macro\Hy@FirstPageHook{%
12270 \headerps@out{%
12271 [%
12272 /_objdef{pdfDocEncoding}%
12273 /type/dict%
12274 /OBJ pdfmark%
12275 [%
12276 {pdfDocEncoding}%
12277 <<%
12278 /Type/Encoding%
12279 /Differences[%
12280 24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek/ring%
12281 /tilde %
12282 39/quotesingle %
12283 96/grave %
12284 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
12285 /fraction/guilsingleft/guilsingright/minus/perthousand%
12286 /quotedblbase/quotedblleft/quotedblright/quoteleft%
12287 /quoteright/quotesinglbase/trademark/fi/fl/Lslash/OE/Scaron%
12288 /Ydieresis/Zcaron/dotlessi/lslash/oe/scaron/zcaron %
12289 160/Euro %
12290 164/currency %
12291 166/brokenbar %
12292 168/dieresis/copyright/ordfeminine %
12293 172/logicalnot/.notdef/registered/macron/degree/plusminus%
12294 /twosuperior/threesuperior/acute/mu %
12295 183/periodcentered/cedilla/onesuperior/ordmasculine %
12296 188/onequarter/onehalf/threequarters %
12297 192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
12298 /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave%
12299 /Iacute/Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute%
12300 /Ocircumflex/Otilde/Odieresis/multiply/Oslash/Ugrave%
12301 /Uacute/Ucircumflex/Udieresis/Yacute/Thorn/germandbls%
12302 /agrave/aacute/acircumflex/atilde/adieresis/aring/ae%
12303 /ccedilla/egrave/eacute/ecircumflex/edieresis/igrave%
12304 /iacute/icircumflex/idieresis/eth/ntilde/ograve/oacute%
12305 /ocircumflex/otilde/odieresis/divide/oslash/ugrave/uacute%
12306 /ucircumflex/udieresis/yacute/thorn/ydieresis%
12307 ]%
12308 >>%
12309 /PUT pdfmark%
12310 [%
12311 /_objdef{ZaDb}%
12312 /type/dict%
12313 /OBJ pdfmark%
12314 [%
12315 {ZaDb}%
```

```

12316 <<%
12317 /Type/Font%
12318 /Subtype/Type1%
12319 /Name/ZaDb%
12320 /BaseFont/ZapfDingbats%
12321 >>%
12322 /PUT pdfmark%
12323 [%
12324 /_objdef{Helv}%
12325 /type/dict%
12326 /OBJ pdfmark%
12327 [%
12328 {Helv}%
12329 <<%
12330 /Type/Font%
12331 /Subtype/Type1%
12332 /Name/Helv%
12333 /BaseFont/Helvetica%
12334 /Encoding{pdfDocEncoding}%
12335 >>%
12336 /PUT pdfmark%
12337 [%
12338 /_objdef{aform}%
12339 /type/dict%
12340 /OBJ pdfmark%
12341 [%
12342 /_objdef{afields}%
12343 /type/array%
12344 /OBJ pdfmark%
12345 [%
12346 /_objdef{corder}%
12347 /type/array%
12348 /OBJ pdfmark%
12349 {%
12350 [%
12351 /BBox[0 0 100 100]%
12352 /_objdef{Check}%
12353 /BP pdfmark %
12354 1 0 0 setrgbcolor%
12355 /ZapfDingbats 80 selectfont %
12356 20 20 moveto%
12357 (4)show%
12358 [/EP pdfmark%
12359 [%
12360 /BBox[0 0 100 100]%
12361 /_objdef{Cross}%
12362 /BP pdfmark %
12363 1 0 0 setrgbcolor%
12364 /ZapfDingbats 80 selectfont %
12365 20 20 moveto%
12366 (8)show%
12367 [/EP pdfmark%
12368 [%
12369 /BBox[0 0 250 100]%

```

12370 /_objdef{Submit}%
12371 /BP pdfmark %
12372 0.6 setgray %
12373 0 0 250 100 rectfill %
12374 1 setgray %
12375 2 2 moveto %
12376 2 98 lineto %
12377 248 98 lineto %
12378 246 96 lineto %
12379 4 96 lineto %
12380 4 4 lineto %
12381 fill %
12382 0.34 setgray %
12383 248 98 moveto %
12384 248 2 lineto %
12385 2 2 lineto %
12386 4 4 lineto %
12387 246 4 lineto %
12388 246 96 lineto %
12389 fill%
12390 /Helvetica 76 selectfont %
12391 0 setgray %
12392 8 22.5 moveto%
12393 (Submit)show%
12394 [/EP pdfmark%
12395 [%
12396 /BBox[0 0 250 100]%
12397 /_objdef{SubmitP}%
12398 /BP pdfmark %
12399 0.6 setgray %
12400 0 0 250 100 rectfill %
12401 0.34 setgray %
12402 2 2 moveto %
12403 2 98 lineto %
12404 248 98 lineto %
12405 246 96 lineto %
12406 4 96 lineto %
12407 4 4 lineto %
12408 fill %
12409 1 setgray %
12410 248 98 moveto %
12411 248 2 lineto %
12412 2 2 lineto %
12413 4 4 lineto %
12414 246 4 lineto %
12415 246 96 lineto %
12416 fill%
12417 /Helvetica 76 selectfont %
12418 0 setgray %
12419 10 20.5 moveto%
12420 (Submit)show%
12421 [/EP pdfmark%
12422 } ?pdfmark%
12423 [%


```

12424 {aform}%
12425 <<%
12426 /Fields{afields}%
12427 /DR.<<%
12428 /Font.<<%
12429 /ZaDb{ZaDb}%
12430 /Helv{Helv}%
12431 >>%
12432 >>%
12433 /DA(/Helv 10 Tf 0 g)%
12434 /CO{corder}%
12435 \ifHy@pdfa
12436 \else
12437 \ifHyField@NeedAppearances
12438 /NeedAppearances true%
12439 \fi
12440 \fi
12441 >>%
12442 /PUT pdfmark%
12443 [%
12444 {Catalog}%
12445 <<%
12446 /AcroForm{aform}%
12447 >>%
12448 /PUT pdfmark%
12449 ]}%
12450 \kvsetkeys{Form}{#1}%
12451 }
12452 \let\@endForm\@empty
12453 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
12454 \Hy@Message{Sorry, pdfmark drivers do not support FORM gauges}%
12455 }

12456 \newcount\HyField@AnnotCount
12457 \HyField@AnnotCount=\z@
12458 \def\HyField@AdvanceAnnotCount{%
12459 \global\advance\HyField@AnnotCount\@ne
12460 }
12461 \def\HyField@TheAnnotCount{%
12462 \the\HyField@AnnotCount
12463 }

12464 \edef\Fld@pageobjref{/P\string{ThisPage\string}}
12465 \def\HyField@AddToFields#1{%
12466 \pdfmark{%
12467 pdfmark=/APPEND,%
12468 Raw={%
12469 \string{afields\string}%
12470 \string{#1\HyField@TheAnnotCount\string}%
12471 }%
12472 }%
12473 \ifx\Fld@calculate@code\@empty
12474 \else
12475 \pdfmark{%
12476 pdfmark=/APPEND,%

```

```

12477 Raw={%
12478   \string{corder\string}%
12479   \string{#1\HyField@TheAnnotCount\string}%
12480 }%
12481 }%
12482 \fi
12483 }

12484 \def\@TextField[#1]#2{% parameters, label
12485   \def\Fld@name{#2}%
12486   \let\Fld@default\@empty
12487   \let\Fld@value\@empty
12488   \def\Fld@width{\DefaultWidthofText}%
12489   \def\Fld@height{%
12490     \ifFld@multiline
12491       \DefaultHeightofTextMultiline
12492     \else
12493       \DefaultHeightofText
12494     \fi
12495   }%
12496   \begingroup
12497     \expandafter\HyField@SetKeys\expandafter{%
12498       \DefaultOptionsofText,#1%
12499     }%
12500     \HyField@FlagsText
12501     \ifFld@hidden\def\Fld@width{1sp}\fi
12502     \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
12503     \HyField@AdvanceAnnotCount
12504     \LayoutTextField{#2}{%
12505       \leavevmode
12506       \Hy@escapeform\PDFForm@Text
12507       \pdfmark[\MakeTextField{\Fld@width}{\Fld@height}]{%
12508         pdfmark=/ANN,%
12509         objdef=text\HyField@TheAnnotCount,%
12510         Raw={\PDFForm@Text}%
12511       }%
12512     }%
12513     \HyField@AddToFields{text}%
12514   \endgroup
12515 }

12516 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
12517   \def\Fld@name{#2}%
12518   \let\Fld@default\relax
12519   \let\Fld@value\relax
12520   \def\Fld@width{\DefaultWidthofChoiceMenu}%
12521   \def\Fld@height{\DefaultHeightofChoiceMenu}%
12522   \begingroup
12523     \Fld@menulength=0 %
12524     \@tempdima\z@
12525     \@for\@curropt:=#3\do{%
12526       \expandafter\Fld@checkequals\@curropt==\%
12527       \Hy@StepCount\Fld@menulength
12528       \settowidth{\@tempdimb}{\@currDisplay}%
12529       \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
12530     }%

```

```

12531 \advance\@tempdima by 15\p@
12532 \begingroup
12533 \HyField@SetKeys{#1}%
12534 \edef\x{\endgroup
12535 \noexpand\expandafter
12536 \noexpand\HyField@SetKeys
12537 \noexpand\expandafter{%
12538 \expandafter\noexpand\csname DefaultOptionsof%
12539 \ifFld@radio
12540 Radio%
12541 \else
12542 \ifFld@combo
12543 \ifFld@popdown
12544 PopdownBox%
12545 \else
12546 ComboBox%
12547 \fi
12548 \else
12549 ListBox%
12550 \fi
12551 \fi
12552 \endcsname
12553 }%
12554 }\x
12555 \HyField@SetKeys{#1}%
12556 \ifFld@hidden\def\Fld@width{1sp}\fi
12557 \ifx\Fld@value\relax
12558 \let\Fld@value\Fld@default
12559 \fi
12560 \LayoutChoiceField{#2}{%
12561 \ifFld@radio
12562 \HyField@FlagsRadioButton
12563 \@@Radio{#3}%
12564 \else
12565 \begingroup
12566 \HyField@FlagsChoice
12567 \ifdim\Fld@width<\@tempdima
12568 \ifdim\@tempdima<1cm\@tempdima1cm\fi
12569 \edef\Fld@width{\the\@tempdima}%
12570 \fi
12571 \ifFld@combo
12572 \else
12573 \@tempdima=\the\Fld@menulength\Fld@charsize
12574 \advance\@tempdima by \Fld@borderwidth bp %
12575 \advance\@tempdima by \Fld@borderwidth bp %
12576 \edef\Fld@height{\the\@tempdima}%
12577 \fi
12578 \@@Listbox{#3}%
12579 \endgroup
12580 \fi
12581 }%
12582 \endgroup
12583 }
12584 \def\@@Radio#1{%

```

```

12585 \Fld@listcount=0 %
12586 \EdefEscapeName\Fld@default{\Fld@default}%
12587 \@for\@curropt:=#1\do{%
12588   \expandafter\Fld@checkequals\@curropt==\%
12589   \EdefEscapeName\@currValue{\@currValue}%
12590   \Hy@StepCount\Fld@listcount
12591   \@currDisplay\space
12592   \Hy@escapeform\PDFForm@Radio
12593   \ifnum\Fld@listcount=1 %
12594     \HyField@AdvanceAnnotCount
12595     \fi
12596     \pdfmark[\MakeRadioField{\Fld@width}{\Fld@height}]{%
12597       pdfmark=/ANN,%
12598       objdef=\ifnum\Fld@listcount=1 radio\HyField@TheAnnotCount\fi,%
12599       Raw={%
12600         \PDFForm@Radio /AP <</N <</\@currValue\space {Check}>> >>%
12601       }%
12602     } % deliberate space between radio buttons
12603     \ifnum\Fld@listcount=1 %
12604       \HyField@AddToFields{radio}%
12605     \fi
12606   }%
12607 }
12608 \newcount\Fld@listcount
12609 \def\@@Listbox#1{%
12610   \HyField@PDFChoices{#1}%
12611   \Hy@escapeform\PDFForm@List
12612   \HyField@AdvanceAnnotCount
12613   \pdfmark[\MakeChoiceField{\Fld@width}{\Fld@height}]{%
12614     pdfmark=/ANN,%
12615     objdef=list\HyField@TheAnnotCount,%
12616     Raw={\PDFForm@List}%
12617   }%
12618   \HyField@AddToFields{list}%
12619 }
12620 \def\@PushButton[#1]#2{% parameters, label
12621   \def\Fld@name{#2}%
12622   \begingroup
12623     \expandafter\HyField@SetKeys\expandafter{%
12624       \DefaultOptionsofPushButton,#1%
12625     }%
12626     \ifHy@pdfa
12627       \Hy@Error{%
12628         PDF/A: Push button with JavaScript is prohibited%
12629       }\@ehc
12630     \LayoutPushButtonField{%
12631       \leavevmode
12632       \MakeButtonField{#2}%
12633     }%
12634     \else
12635       \HyField@FlagsPushButton
12636       \ifFld@hidden\def\Fld@width{1sp}\fi
12637       \HyField@AdvanceAnnotCount
12638     \LayoutPushButtonField{%

```

```

12639     \leavevmode
12640     \Hy@escapeform\PDFForm@Push
12641     \pdfmark[\MakeButtonField{#2}]{%
12642     pdfmark=/ANN,%
12643     objdef=push\HyField@TheAnnotCount,%
12644     Raw={\PDFForm@Push}%
12645     }%
12646     }%
12647     \HyField@AddToFields{push}%
12648     \fi
12649 \endgroup
12650 }
12651 \def\@Submit[#1]#2{%
12652 \def\Fld@width{\DefaultWidthofSubmit}%
12653 \def\Fld@height{\DefaultHeightofSubmit}%
12654 \begingroup
12655 \expandafter\HyField@SetKeys\expandafter{%
12656 \DefaultOptionsofSubmit,#1%
12657 }%
12658 \HyField@FlagsPushButton
12659 \HyField@FlagsSubmit
12660 \ifFld@hidden\def\Fld@width{1sp}\fi
12661 \Hy@escapeform\PDFForm@Submit
12662 \HyField@AdvanceAnnotCount
12663 \pdfmark[\MakeButtonField{#2}]{%
12664 pdfmark=/ANN,%
12665 objdef=submit\HyField@TheAnnotCount,%
12666 Raw={\PDFForm@Submit /AP<</N{Submit}/D{SubmitP}>>}}%
12667 }%
12668 \HyField@AddToFields{submit}%
12669 \endgroup
12670 }
12671 \def\@Reset[#1]#2{%
12672 \def\Fld@width{\DefaultWidthofReset}%
12673 \def\Fld@height{\DefaultHeightofReset}%
12674 \begingroup
12675 \expandafter\HyField@SetKeys\expandafter{%
12676 \DefaultOptionsofReset,#1%
12677 }%
12678 \leavevmode
12679 \ifHy@pdfa
12680 \Hy@Error{%
12681 PDF/A: Reset action is prohibited%
12682 } \@ehc
12683 \MakeButtonField{#2}%
12684 \else
12685 \HyField@FlagsPushButton
12686 \ifFld@hidden\def\Fld@width{1sp}\fi
12687 \Hy@escapeform\PDFForm@Reset
12688 \HyField@AdvanceAnnotCount
12689 \pdfmark[\MakeButtonField{#2}]{%
12690 pdfmark=/ANN,%
12691 objdef=reset\HyField@TheAnnotCount,%
12692 Raw={\PDFForm@Reset}%

```

```

12693 }%
12694 \HyField@AddToFields{reset}%
12695 \fi
12696 \endgroup
12697 }%
12698 \def\@CheckBox[#1]#2{% parameters, label
12699 \def\Fld@name{#2}%
12700 \def\Fld@default{0}%
12701 \begingroup
12702 \def\Fld@width{\DefaultWidthofCheckBox}%
12703 \def\Fld@height{\DefaultHeightofCheckBox}%
12704 \expandafter\HyField@SetKeys\expandafter{%
12705 \DefaultOptionsofCheckBox,#1%
12706 }%
12707 \HyField@FlagsCheckBox
12708 \ifFld@hidden\def\Fld@width{1sp}\fi
12709 \HyField@AdvanceAnnotCount
12710 \LayoutCheckField{#2}{%
12711 \leavevmode
12712 \Hy@escapeform\PDFForm@Check
12713 \pdfmark{\MakeCheckField{\Fld@width}{\Fld@height}}{%
12714 pdfmark=/ANN,%
12715 objdef=check\HyField@TheAnnotCount,%
12716 Raw={\PDFForm@Check}%
12717 }%
12718 }%
12719 \HyField@AddToFields{check}%
12720 \endgroup
12721 }
12722 \pdfmark)

```

45.2 HyperTeX

```

12723 (*hypertex)
12724 \def\@Form[#1]{%
12725 \Hy@Message{Sorry, HyperTeX does not support FORMs}%
12726 }
12727 \let\@endForm\@empty
12728 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
12729 \Hy@Message{Sorry, HyperTeX does not support FORM gauges}%
12730 }
12731 \def\@TextField[#1]#2{% parameters, label
12732 \Hy@Message{Sorry, HyperTeX does not support FORM text fields}%
12733 }
12734 \def\@CheckBox[#1]#2{% parameters, label
12735 \Hy@Message{Sorry, HyperTeX does not support FORM checkboxes}%
12736 }
12737 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
12738 \Hy@Message{Sorry, HyperTeX does not support FORM choice menus}%
12739 }
12740 \def\@PushButton[#1]#2{% parameters, label
12741 \Hy@Message{Sorry, HyperTeX does not support FORM pushbuttons}%
12742 }
12743 \def\@Reset[#1]#2{%

```

```

12744 \Hy@Message{Sorry, HyperTeX does not support FORMs}%
12745 }
12746 \def\@Submit[#1]#2{%
12747 \Hy@Message{Sorry, HyperTeX does not support FORMs}%
12748 }
12749 </hypertex>

```

45.3 TeX4ht

```

12750 (*tex4ht)
12751 \def\@Form[#1]{%
12752 \kvsetkeys{Form}{#1}%
12753 \HCode{<form action="\Form@action" method="\Form@method">}%
12754 }
12755 \def\@endForm{\HCode{</form>}}
12756 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
12757 \Hy@Message{Sorry, TeX4ht does not support gauges}%
12758 }
12759 \def\@TextField[#1]#2{% parameters, label
12760 \let\Hy@reserved@a\@empty
12761 \def\Fld@name{#2}%
12762 \let\Fld@default\@empty
12763 \bgroup
12764 \Field@toks={ }%
12765 \kvsetkeys{Field}{#1}%
12766 \HCode{<label for="\Fld@name">#2</label>}%
12767 \ifFld@password
12768 \@@PasswordField
12769 \else
12770 \@@TextField
12771 \fi
12772 \egroup
12773 }
12774 \def\@@PasswordField{%
12775 \HCode{%
12776 <input type="password" %
12777 id="\Fld@name" %
12778 name="\Fld@name" %
12779 \ifFld@hidden type="hidden" \fi
12780 value="\Fld@default" %
12781 \the\Field@toks
12782 >%
12783 }%
12784 }
12785 \def\@@TextField{%
12786 \ifFld@multiline
12787 \HCode{<textarea %
12788 \ifFld@readonly readonly \fi
12789 id="\Fld@name" %
12790 name="\Fld@name" %
12791 \ifFld@hidden type="hidden" \fi
12792 \the\Field@toks>%
12793 }%
12794 \Fld@default
12795 \HCode{</textarea>}%

```

```

12796 \else
12797 \HCode{<input type="textbox" %
12798 \ifFld@readonly readonly \fi
12799 id="\Fld@name" %
12800 name="\Fld@name" %
12801 \ifFld@hidden type="hidden" \fi
12802 value="\Fld@default" %
12803 \the\Field@toks>%
12804 }%
12805 \fi
12806 }
12807 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
12808 \def\Fld@name{#2}%
12809 \let\Fld@default\@empty
12810 \let\Hy@reserved@a\relax
12811 \begingroup
12812 \expandafter\Fld@findlength#3\\%
12813 \Field@toks={ }%
12814 \kvsetkeys{Field}{#1}%
12815 #2%
12816 \ifFld@radio
12817 \expandafter\@@Radio#3\\%
12818 \else
12819 \expandafter\@@Menu#3\\%
12820 \fi
12821 \endgroup
12822 }
12823 \def\Fld@findlength#1\\{%
12824 \Fld@menulength=0 %
12825 \@for\@curropt:=#1\do{\Hy@StepCount\Fld@menulength}%
12826 }
12827 \def\@@Menu#1\\{%
12828 \HCode{<select size="\the\Fld@menulength" %
12829 name="\Fld@name" %
12830 \the\Field@toks>%
12831 }%
12832 \@for\@curropt:=#1\do{%
12833 \expandafter\Fld@checkequals\@curropt==\\%
12834 \HCode{<option %
12835 \ifx\@curropt\Fld@default selected \fi
12836 value="\@currValue">\@currDisplay</option>%
12837 }%
12838 }%
12839 \HCode{</select>}%
12840 }
12841 \def\@@Radio#1\\{%
12842 \@for\@curropt:=#1\do{%
12843 \expandafter\Fld@checkequals\@curropt==\\%
12844 \HCode{<input type="radio" %
12845 \ifx\@curropt\Fld@default checked \fi
12846 name="\Fld@name" %
12847 value="\@currValue" %
12848 \the\Field@toks>%
12849 }%

```



```

12850   \@currDisplay
12851 }%
12852 }
12853 \def\@PushButton[#1]#2{% parameters, label
12854   \def\Fld@name{#2}%
12855   \bgroup
12856     \Field@toks={ }%
12857     \kvsetkeys{Field}{#1}%
12858     \HCode{<input type="button" %
12859       name="\Fld@name" %
12860       value="#2" %
12861       \the\Fld@toks>%
12862     }%
12863     \HCode{</button>}%
12864   \egroup
12865 }
12866 \def\@Submit[#1]#2{%
12867   \HCode{<button type="submit">#2</button>}%
12868 }
12869 \def\@Reset[#1]#2{%
12870   \HCode{<button type="reset">#2</button>}%
12871 }
12872 \def\@CheckBox[#1]#2{% parameters, label
12873   \let\Hy@reserved@a\@empty
12874   \def\Fld@name{#2}%
12875   \def\Fld@default{0}%
12876   \bgroup
12877     \Field@toks={ }%
12878     \kvsetkeys{Field}{#1}%
12879     \HCode{<input type="checkbox" %
12880       \ifFld@checked checked \fi
12881       \ifFld@disabled disabled \fi
12882       \ifFld@readonly readonly \fi
12883       name="\Fld@name" %
12884       \ifFld@hidden type="hidden" \fi
12885       value="\Fld@default" %
12886       \the\Fld@toks>%
12887     #2%
12888   }%
12889   \egroup
12890 }
12891 </tex4ht>

```

45.4 pdfTeX

```

12892 (*pdftex)
12893 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
12894   \Hy@Message{Sorry, pdftex does not support FORM gauges}%
12895 }
12896 \def\MakeFieldObject#1#2{\sbox0{#1}%
12897   \immediate\pdfxform 0 %
12898   \expandafter\edef\csname #2Object\endcsname{%
12899     \the\pdfastxform\space 0 R%
12900   }%
12901 % \hbox to 0pt{\hskip-\maxdimen{\pdfrefxform \the\pdfastxform}}%

```

```

12902 }%
12903 \let\HyField@afields\@empty
12904 \let\HyField@cofields\@empty
12905 \@ifundefined{pdfastlink}
12906 {%
12907 \let\HyField@AddToFields\relax
12908 \PackageInfo{hyperref}{%
12909   You need pdfTeX 1.40.0 for setting the /Fields entry.%
12910 \MessageBreak
12911   Adobe Reader/Acrobat accepts an empty /Field array,%
12912 \MessageBreak
12913   but other PDF viewers might complain%
12914 }}%
12915 {%
12916 \let\HyField@AuxAddToFields\@gobble
12917 \let\HyField@AuxAddToCoFields\@gobbletwo
12918 \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.

```

12919 \def\HyField@ABD@AuxAddToCoFields#1#2{%
12920 \begingroup
12921 \Hy@safe@activetrue
12922 \let\@secondoftwo\relax
12923 \ifx\HyField@cofields\@empty
12924 \xdef\HyField@cofields{%
12925 \@secondoftwo{#1}{ #2 0 R}%
12926 }%
12927 \else
12928 \let\@secondoftwo\relax
12929 \def\HyField@AddCoField##1##2##3{%
12930 \ifx##1\@empty
12931 \@secondoftwo{#1}{ #2 0 R}%
12932 \expandafter\@gobble
12933 \else
12934 \ifnum\pdfstrcmp{##2}{#1}>\z@
12935 \@secondoftwo{#1}{ #2 0 R}%
12936 \@secondoftwo{##2}{##3}%
12937 \expandafter\expandafter\expandafter\@gobble
12938 \else
12939 \@secondoftwo{##2}{##3}%
12940 \fi
12941 \fi
12942 \HyField@AddCoField
12943 }%
12944 \xdef\HyField@cofields{%
12945 \expandafter\HyField@AddCoField
12946 \HyField@cofields\@empty\@empty\@empty
12947 }%
12948 \fi
12949 \endgroup
12950 }%
12951 \Hy@AtBeginDocument{%
12952 \if@filesw
12953 \immediate\write\@mainaux{%

```

```

12954     \string\providecommand\string\HyField@AuxAddToFields[1]{}%
12955 }%
12956 \immediate\write\@mainaux{%
12957     \string\providecommand\string\HyField@AuxAddToCoFields[2]{}%
12958 }%
12959 \fi
12960 \let\HyField@AfterAuxOpen\@firstofone
12961 \def\HyField@AuxAddToFields#1{%
12962     \xdef\HyField@afields{%
12963         \ifx\HyField@afields\@empty
12964         \else
12965             \HyField@afields
12966             \space
12967         \fi
12968         #1 0 R.%
12969     }%
12970 }%
12971 \let\HyField@AuxAddToCoFields\HyField@ABD@AuxAddToCoFields
12972 }%
12973 \def\HyField@AddToFields{%
12974     \expandafter\HyField@@AddToFields\expandafter{%
12975         \the\pdfastlink
12976     }%
12977     \ifx\Fld@calculate@code\@empty
12978     \else
12979         \begingroup
12980         \Hy@safe@activestruer
12981         \edef\Hy@temp{%
12982             \endgroup
12983             \if@filesw
12984                 \write\@mainaux{%
12985                     \string\HyField@AuxAddToCoFields{%
12986                         \Fld@calculate@sortkey
12987                     }{%
12988                         \the\pdfastlink
12989                     }%
12990                 }%
12991             \fi
12992         }%
12993         \Hy@temp
12994     \fi
12995 }%
12996 \def\HyField@@AddToFields#1{%
12997     \HyField@AfterAuxOpen{%
12998         \if@filesw
12999             \write\@mainaux{%
13000                 \string\HyField@AuxAddToFields{#1}%
13001             }%
13002         \fi
13003     }%
13004 }%
13005 }
13006 \def\@Form[#1]{%
13007     \@ifundefined{textcolor}{\let\textcolor\@gobble}{}%

```

```

13008 \kvsetkeys{Form}{#1}%
13009 \pdf@ifdraftmode{}{%
13010 \Hy@FormObjects
13011 \ifnum\pdftexversion>13 %
13012 \pdfrefobj\OBJ@pdfdocencoding
13013 \pdfrefobj\OBJ@ZaDb
13014 \pdfrefobj\OBJ@Helv
13015 \fi
13016 \AtVeryEndDocument{%
13017 \immediate\pdfobj{%
13018 <<%
13019 /Fields[\HyField@afields]%
13020 \ifx\HyField@cofields\@empty
13021 \else
13022 /CO[\romannumeral-\Q\HyField@cofields]%
13023 \fi
13024 /DR<<%
13025 /Font<<%
13026 /ZaDb \OBJ@ZaDb\space 0 R%
13027 /Helv \OBJ@Helv\space 0 R%
13028 >>%
13029 >>%
13030 /DA(/Helv 10 Tf 0 g)%
13031 \ifHy@pdfa
13032 \else
13033 \ifHyField@NeedAppearances
13034 /NeedAppearances true%
13035 \fi
13036 \fi
13037 >>%
13038 }%
13039 \edef\OBJ@acroform{\the\pdflastobj}%
13040 \pdfcatalog{/AcroForm \OBJ@acroform\space 0 R}%
13041 }%
13042 }%
13043 \MakeFieldObject{%
Same as \ding{123} of package pifont.
13044 \begingroup
13045 \fontfamily{pzd}%
13046 \fontencoding{U}%
13047 \fontseries{m}%
13048 \fontshape{n}%
13049 \selectfont
13050 \char123 %
13051 \endgroup
13052 }{Ding}%
13053 \MakeFieldObject{%
13054 \fbox{\textcolor{yellow}{\textsf{Submit}}}%
13055 }{Submit}%
13056 \MakeFieldObject{%
13057 \fbox{\textcolor{yellow}{\textsf{SubmitP}}}%
13058 }{SubmitP}%
13059 }
13060 \let\@endForm\@empty

```

```

13061 \let\HyAnn@AbsPageLabel\@empty
13062 \let\Fld@pageobjref\@empty
13063 \@ifundefined{pdfpageref}{%
13064 }{%
13065 \@ifpackageloaded{zref-abspage}{%
13066 \newcount\HyAnn@Count
13067 \HyAnn@Count=\z@
13068 \def\HyAnn@AbsPageLabel{%
13069 \global\advance\HyAnn@Count by\@ne
13070 \zref@labelbyprops{HyAnn@\the\HyAnn@Count}{abspage}%
13071 \zref@refused{HyAnn@\the\HyAnn@Count}%
13072 }%
13073 \def\Fld@pageobjref{%
13074 \zref@ifrefundefined{HyAnn@\the\HyAnn@Count}{%
13075 }{%
13076 \zref@ifrefcontainsprop{HyAnn@\the\HyAnn@Count}{abspage}{%
13077 /P \pdfpageref
13078 \zref@extractdefault{HyAnn@\the\HyAnn@Count}{abspage}{1} %
13079 \space 0 R%
13080 }{%
13081 }%
13082 }%
13083 }%
13084 }{%
13085 }%
13086 }

13087 \def\@TextField[#1]#2{% parameters, label
13088 \def\Fld@name{#2}%
13089 \let\Fld@default\@empty
13090 \let\Fld@value\@empty
13091 \def\Fld@width{\DefaultWidthofText}%
13092 \def\Fld@height{%
13093 \ifFld@multiline
13094 \DefaultHeightofTextMultiline
13095 \else
13096 \DefaultHeightofText
13097 \fi
13098 }%
13099 \begingroup
13100 \expandafter\HyField@SetKeys\expandafter{%
13101 \DefaultOptionsofText,#1%
13102 }%
13103 \PDFForm@Name
13104 \HyField@FlagsText
13105 \ifFld@hidden\def\Fld@width{1sp}\fi
13106 \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
13107 \LayoutTextField{#2}{%
13108 \leavevmode
13109 \HyAnn@AbsPageLabel
13110 \Hy@escapeform\PDFForm@Text
13111 \pdfstartlink user {\PDFForm@Text}\relax
13112 \MakeTextField{\Fld@width}{\Fld@height}\pdfendlink
13113 \HyField@AddToFields
13114 }%

```

```

13115 \endgroup
13116 }
13117 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
13118 \def\Fld@name{#2}%
13119 \let\Fld@default\relax
13120 \let\Fld@value\relax
13121 \def\Fld@width{\DefaultWidthofChoiceMenu}%
13122 \def\Fld@height{\DefaultHeightofChoiceMenu}%
13123 \begingroup
13124 \Fld@menulength=0 %
13125 \@tempdima\z@
13126 \@for\@curropt:=#3\do{%
13127 \expandafter\Fld@chekequals\@curropt==\%
13128 \Hy@StepCount\Fld@menulength
13129 \settowidth{\@tempdimb}{\@currDisplay}%
13130 \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
13131 }%
13132 \advance\@tempdima by 15\p@
13133 \begingroup
13134 \HyField@SetKeys{#1}%
13135 \edef\x{\endgroup
13136 \noexpand\expandafter
13137 \noexpand\HyField@SetKeys
13138 \noexpand\expandafter{
13139 \expandafter\noexpand\csname DefaultOptionsof%
13140 \ifFld@radio
13141 Radio%
13142 \else
13143 \ifFld@combo
13144 \ifFld@popdown
13145 PopdownBox%
13146 \else
13147 ComboBox%
13148 \fi
13149 \else
13150 ListBox%
13151 \fi
13152 \fi
13153 \endcsname
13154 }%
13155 }\x
13156 \HyField@SetKeys{#1}%
13157 \PDFForm@Name
13158 \ifFld@hidden\def\Fld@width{1sp}\fi
13159 \ifx\Fld@value\relax
13160 \let\Fld@value\Fld@default
13161 \fi
13162 \LayoutChoiceField{#2}{%
13163 \ifFld@radio
13164 \HyField@FlagsRadioButton
13165 \@@Radio{#3}%
13166 \else
13167 \begingroup
13168 \HyField@FlagsChoice

```

```

13169     \ifdim\Fld@width<\@tempdima
13170     \ifdim\@tempdima<1cm\@tempdima1cm\fi
13171     \edef\Fld@width{\the\@tempdima}%
13172     \fi
13173     \ifFld@combo
13174     \else
13175     \@tempdima=\the\Fld@menulength\Fld@charsize
13176     \advance\@tempdima by \Fld@borderwidth bp %
13177     \advance\@tempdima by \Fld@borderwidth bp %
13178     \edef\Fld@height{\the\@tempdima}%
13179     \fi
13180     \@@ListBox{#3}%
13181     \endgroup
13182     \fi
13183     }%
13184 \endgroup
13185 }
13186 \def\@@Radio#1{%
13187 \Fld@listcount=0 %
13188 \EdefEscapeName\Fld@default{\Fld@default}%
13189 \@for\@curropt:=#1\do{%
13190 \expandafter\Fld@checkequals\@curropt==\%
13191 \EdefEscapeName\@currValue{\@currValue}%
13192 \Hy@StepCount\Fld@listcount
13193 \@currDisplay\space
13194 \leavevmode
13195 \HyAnn@AbsPageLabel
13196 \Hy@escapeform\PDFForm@Radio
13197 \pdfstartlink user {%
13198 \PDFForm@Radio
13199 /AP<<%
13200 /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.

```

13201     /\@currValue\space \DingObject
13202     >>%
13203     >>%
13204     }%
13205     \relax
13206     \MakeRadioField{\Fld@width}{\Fld@height}\pdfendlink
13207     \ifnum\Fld@listcount=1 %
13208     \HyField@AddToFields
13209     \fi
13210     \space % deliberate space between radio buttons
13211     }%
13212 }
13213 \newcount\Fld@listcount
13214 \def\@@ListBox#1{%
13215 \HyField@PDFChoices{#1}%
13216 \leavevmode
13217 \HyAnn@AbsPageLabel
13218 \Hy@escapeform\PDFForm@List

```

```

13219 \pdfstartlink user {\PDFForm@List}\relax
13220 \MakeChoiceField{\Fld@width}{\Fld@height}%
13221 \pdfendlink
13222 \HyField@AddToFields
13223 }
13224 \def\@PushButton[#1]#2{% parameters, label
13225 \def\Fld@name{#2}%
13226 \begingroup
13227 \expandafter\HyField@SetKeys\expandafter{%
13228 \DefaultOptionsofPushButton,#1%
13229 }%
13230 \PDFForm@Name
13231 \ifHy@pdfa
13232 \Hy@Error{%
13233 PDF/A: Push button with JavaScript is prohibited%
13234 } \@ehc
13235 \LayoutPushButtonField{%
13236 \leavevmode
13237 \MakeButtonField{#2}%
13238 }%
13239 \else
13240 \HyField@FlagsPushButton
13241 \ifFld@hidden\def\Fld@width{1sp}\fi
13242 \LayoutPushButtonField{%
13243 \leavevmode
13244 \HyAnn@AbsPageLabel
13245 \Hy@escapeform\PDFForm@Push
13246 \pdfstartlink user {\PDFForm@Push}\relax
13247 \MakeButtonField{#2}%
13248 \pdfendlink
13249 \HyField@AddToFields
13250 }%
13251 \fi
13252 \endgroup
13253 }
13254 \def\@Submit[#1]#2{%
13255 \def\Fld@width{\DefaultWidthofSubmit}%
13256 \def\Fld@height{\DefaultHeightofSubmit}%
13257 \begingroup
13258 \expandafter\HyField@SetKeys\expandafter{%
13259 \DefaultOptionsofSubmit,#1%
13260 }%
13261 \HyField@FlagsPushButton
13262 \HyField@FlagsSubmit
13263 \ifFld@hidden\def\Fld@width{1sp}\fi
13264 \leavevmode
13265 \HyAnn@AbsPageLabel
13266 \Hy@escapeform\PDFForm@Submit
13267 \pdfstartlink user {%
13268 \PDFForm@Submit
13269 /AP<</N \SubmitObject/D \SubmitPObject>>%
13270 }%
13271 \relax
13272 \MakeButtonField{#2}%

```



```

13273 \pdfendlink
13274 \HyField@AddToFields
13275 \endgroup
13276 }
13277 \def\@Reset[#1]#2{%
13278 \def\Fld@width{\DefaultWidthofReset}%
13279 \def\Fld@height{\DefaultHeightofReset}%
13280 \begingroup
13281 \expandafter\HyField@SetKeys\expandafter{%
13282 \DefaultOptionsofReset,#1%
13283 }%
13284 \leavevmode
13285 \ifHy@pdfa
13286 \Hy@Error{%
13287 PDF/A: Reset action is prohibited%
13288 }\@ehc
13289 \MakeButtonField{#2}%
13290 \else
13291 \HyField@FlagsPushButton
13292 \ifFld@hidden\def\Fld@width{1sp}\fi
13293 \HyAnn@AbsPageLabel
13294 \Hy@escapeform\PDFForm@Reset
13295 \pdfstartlink user {\PDFForm@Reset}\relax
13296 \MakeButtonField{#2}%
13297 \pdfendlink
13298 \HyField@AddToFields
13299 \fi
13300 \endgroup
13301 }
13302 \def\@CheckBox[#1]#2{% parameters, label
13303 \def\Fld@name{#2}%
13304 \def\Fld@default{0}%
13305 \begingroup
13306 \def\Fld@width{\DefaultWidthofCheckBox}%
13307 \def\Fld@height{\DefaultHeightofCheckBox}%
13308 \expandafter\HyField@SetKeys\expandafter{%
13309 \DefaultOptionsofCheckBox,#1%
13310 }%
13311 \PDFForm@Name
13312 \HyField@FlagsCheckBox
13313 \ifFld@hidden\def\Fld@width{1sp}\fi
13314 \LayoutCheckField{#2}{%
13315 \leavevmode
13316 \HyAnn@AbsPageLabel
13317 \Hy@escapeform\PDFForm@Check
13318 \pdfstartlink user {\PDFForm@Check}\relax
13319 \MakeCheckField{\Fld@width}{\Fld@height}%
13320 \pdfendlink
13321 \HyField@AddToFields
13322 }%
13323 \endgroup
13324 }
13325 \def\Hy@FormObjects{%
13326 \pdfobj {%

```

13327 <<%
13328 /Type/Encoding%
13329 /Differences[%
13330 24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek%
13331 /ring/tilde %
13332 39/quotesingle %
13333 96/grave %
13334 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
13335 /fraction/guilsingleft/guilsingright/minus/perthousand%
13336 /quotedblbase/quotedblleft/quotedblright/quoteleft%
13337 /quoteright/quotesinglbase/trademark/fi/fl/Lslash/OE%
13338 /Scaron/Ydieresis/Zcaron/dotlessi/lslash/oe/scaron/zcaron %
13339 160/Euro %
13340 164/currency %
13341 166/brokenbar %
13342 168/dieresis/copyright/ordfeminine %
13343 172/logicalnot/.notdef/registered/macron/degree/plusminus%
13344 /twosuperior/threesuperior/acute/mu %
13345 183/periodcentered/cedilla/onesuperior/ordmasculine %
13346 188/onequarter/onehalf/threequarters %
13347 192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
13348 /Cedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave%
13349 /Iacute/Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute%
13350 /Ocircumflex/Otilde/Odieresis/multiply/Oslash/Ugrave%
13351 /Uacute/Ucircumflex/Udieresis/Yacute/Thorn/germandbls%
13352 /agrave/aacute/acircumflex/atilde/adieresis/aring/ae%
13353 /cedilla/egrave/eacute/ecircumflex/edieresis/igrave%
13354 /iacute/icircumflex/idieresis/eth/ntilde/ograde/oacute%
13355 /ocircumflex/otilde/odieresis/divide/oslash/ugrave%
13356 /uacute/ucircumflex/udieresis/yacute/thorn/ydieresis%
13357]%
13358 >>%
13359 }%
13360 \xdef\OBJ@pdfdocencoding{\the\pdfastobj}%
13361 \pdfobj{%
13362 <<%
13363 /Type/Font%
13364 /Subtype/Type1%
13365 /Name/ZaDb%
13366 /BaseFont/ZapfDingbats%
13367 >>%
13368 }%
13369 \xdef\OBJ@ZaDb{\the\pdfastobj}%
13370 \pdfobj{%
13371 <<%
13372 /Type/Font%
13373 /Subtype/Type1%
13374 /Name/Helv%
13375 /BaseFont/Helvetica%
13376 /Encoding \OBJ@pdfdocencoding\space 0 R.%
13377 >>%
13378 }%
13379 \xdef\OBJ@Helv{\the\pdfastobj}%
13380 \global\let\Hy@FormObjects\relax

```
13381 }
13382 </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.

```
13383 < *dvipdfm | xetex >
```

```
\@Gauge
```

```
13384 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
13385 \Hy@Message{Sorry, dvipdfm/XeTeX does not support FORM gauges}%
13386 }
```

```
\@Form
```

```
13387 \def\@Form[#1]{%
13388 \@ifundefined{textcolor}{\let\textcolor\@gobble}{}%
13389 \kvsetkeys{Form}{#1}%
13390 \Hy@FormObjects
13391 \@pdfm@mark{obj @afields []}%
13392 \@pdfm@mark{obj @corder []}%
13393 \@pdfm@mark{%
13394 obj @aform <<%
13395 /Fields @afields%
13396 /DR<<%
13397 /Font<<%
13398 /ZaDb @OBJZaDb%
13399 /Helv @OBJHelv%
13400 >>%
13401 >>%
13402 /DA(/Helv 10 Tf 0 g)%
13403 /CO @corder%
13404 \ifHy@pdfa
13405 \else
13406 \ifHyField@NeedAppearances
13407 /NeedAppearances true%
13408 \fi
13409 \fi
13410 >>%
13411 }%
13412 \@pdfm@mark{put @catalog <</AcroForm @aform>>}%
13413 }
```

```
\@endForm
```

```
13414 \let\@endForm\@empty
```

```
\dvipdfm@setdim \dvipdfm@setdim sets dimensions for ann using \pdfm@box.
```

```
13415 \def\dvipdfm@setdim{%
13416 height \the\ht\pdfm@box\space
13417 width \the\wd\pdfm@box\space
13418 depth \the\dp\pdfm@box\space
13419 }
```

\HyField@AnnotCount

```
13420 \newcount\HyField@AnnotCount
13421 \HyField@AnnotCount=\z@
```

\HyField@AdvanceAnnotCount

```
13422 \def\HyField@AdvanceAnnotCount{%
13423 \global\advance\HyField@AnnotCount\@ne
13424 }
```

\HyField@TheAnnotCount

```
13425 \def\HyField@TheAnnotCount{%
13426 \the\HyField@AnnotCount
13427 }
```

\Fld@pageobjref

```
13428 \def\Fld@pageobjref{/P @thispage}%
```

\HyField@AddToFields

```
13429 \def\HyField@AddToFields#1{%
13430 \@pdfm@mark{put @afields @#1\HyField@TheAnnotCount}%
13431 \ifx\Fld@calculate@code\@empty
13432 \else
13433 \@pdfm@mark{put @corder @#1\HyField@TheAnnotCount}%
13434 \fi
13435 }
```

\@TextField

```
13436 \def\@TextField[#1]#2{% parameters, label
13437 \def\Fld@name{#2}%
13438 \let\Fld@default\@empty
13439 \let\Fld@value\@empty
13440 \def\Fld@width{\DefaultWidthofText}%
13441 \def\Fld@height{%
13442 \ifFld@multiline
13443 \DefaultHeightofTextMultiline
13444 \else
13445 \DefaultHeightofText
13446 \fi
13447 }%
13448 \begingroup
13449 \expandafter\HyField@SetKeys\expandafter{%
13450 \DefaultOptionsofText,#1%
13451 }%
13452 \PDFForm@Name
13453 \HyField@FlagsText
13454 \ifFld@hidden\def\Fld@width{1sp}\fi
13455 \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
13456 \setbox\pdfm@box=\hbox{%
13457 \MakeTextField{\Fld@width}{\Fld@height}%
13458 }%
13459 \HyField@AdvanceAnnotCount
13460 \LayoutTextField{#2}{%
13461 \leavevmode
```

```

13462 \Hy@escapeform\PDFForm@Text
13463 \@pdfm@mark{%
13464 ann @text\HyField@TheAnnotCount\space
13465 \dviPDFm@setdim << \PDFForm@Text >>%
13466 }%
13467 }%
13468 \unhbox\pdfm@box
13469 \HyField@AddToFields{text}%
13470 % record in @afields array
13471 \endgroup
13472 }

```

\@ChoiceMenu

```

13473 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
13474 \def\Fld@name{#2}%
13475 \let\Fld@default\relax
13476 \let\Fld@value\relax
13477 \def\Fld@width{\DefaultWidthofChoiceMenu}%
13478 \def\Fld@height{\DefaultHeightofChoiceMenu}%
13479 \begingroup
13480 \Fld@menulength=0 %
13481 \@tempdima\z@
13482 \@for\@curropt:=#3\do{%
13483 \expandafter\Fld@checkequals\@curropt==\%
13484 \Hy@StepCount\Fld@menulength
13485 \settowidth{\@tempdimb}{\@currDisplay}%
13486 \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
13487 }%
13488 \advance\@tempdima by 15\p@
13489 \begingroup
13490 \HyField@SetKeys{#1}%
13491 \edef\x{\endgroup
13492 \noexpand\expandafter
13493 \noexpand\HyField@SetKeys
13494 \noexpand\expandafter{%
13495 \expandafter\noexpand\cname DefaultOptionsof%
13496 \ifFld@radio
13497 Radio%
13498 \else
13499 \ifFld@combo
13500 \ifFld@popdown
13501 PopdownBox%
13502 \else
13503 ComboBox%
13504 \fi
13505 \else
13506 ListBox%
13507 \fi
13508 \fi
13509 \endcname
13510 }%
13511 }\x
13512 \HyField@SetKeys{#1}%
13513 \PDFForm@Name

```

```

13514 \ifFld@hidden\def\Fld@width{1sp}\fi
13515 \ifx\Fld@value\relax
13516 \let\Fld@value\Fld@default
13517 \fi
13518 \LayoutChoiceField{#2}{%
13519 \ifFld@radio
13520 \HyField@FlagsRadioButton
13521 \@@Radio{#3}%
13522 \else
13523 \begingroup
13524 \HyField@FlagsChoice
13525 \ifdim\Fld@width<\@tempdima
13526 \ifdim\@tempdima<1cm\@tempdima1cm\fi
13527 \edef\Fld@width{\the\@tempdima}%
13528 \fi
13529 \ifFld@combo
13530 \else
13531 \@tempdima=\the\Fld@menulength\Fld@charsize
13532 \advance\@tempdima by \Fld@borderwidth bp %
13533 \advance\@tempdima by \Fld@borderwidth bp %
13534 \edef\Fld@height{\the\@tempdima}%
13535 \fi
13536 \@@ListBox{#3}%
13537 \endgroup
13538 \fi
13539 }%
13540 \endgroup
13541 }

```

\@@Radio

```

13542 \def\@@Radio#1{%
13543 \Fld@listcount=0 %
13544 \EdefEscapeName\Fld@default{\Fld@default}%
13545 \setbox\pdfm@box=\hbox{%
13546 \MakeRadioField{\Fld@width}{\Fld@height}%
13547 }%
13548 \@for\@curropt:=#1\do{%
13549 \expandafter\Fld@checkequals\@curropt==\%
13550 \EdefEscapeName\@currValue{\@currValue}%
13551 \Hy@StepCount\Fld@listcount
13552 \@currDisplay\space
13553 \leavevmode
13554 \Hy@escapeform\PDFForm@Radio
13555 \ifnum\Fld@listcount=1 %
13556 \HyField@AdvanceAnnotCount
13557 \fi
13558 \@pdfm@mark{%
13559 ann %
13560 \ifnum\Fld@listcount=1 %
13561 @radio\HyField@TheAnnotCount%
13562 \space
13563 \fi
13564 \dvi pdfm@setdim
13565 <<%

```

```

13566     \PDFForm@Radio
13567     /AP<</N<</\@currValue /null>>>>%
13568     >>%
13569     }%
13570     \unhcopy\pdfm@box\space% deliberate space between radio buttons
13571     \ifnum\Fld@listcount=1 %
13572     \HyField@AddToFields{radio}%
13573     \fi
13574     }%
13575     }

\Fld@listcount
13576 \newcount\Fld@listcount

\@@ListBox
13577 \def\@@ListBox#1{%
13578 \HyField@PDFChoices{#1}%
13579 \setbox\pdfm@box=\hbox{%
13580 \MakeChoiceField{\Fld@width}{\Fld@height}%
13581 }%
13582 \leavevmode
13583 \Hy@escapeform\PDFForm@List
13584 \HyField@AdvanceAnnotCount
13585 \@pdfm@mark{%
13586 ann @list\HyField@TheAnnotCount\space
13587 \dvi pdfm@setdim
13588 <<\PDFForm@List>>%
13589 }%
13590 \unhbox\pdfm@box
13591 \HyField@AddToFields{list}%
13592 }

\@PushButton
13593 \def\@PushButton[#1]#2{% parameters, label
13594 \def\Fld@name{#2}%
13595 \begingroup
13596 \expandafter\HyField@SetKeys\expandafter{%
13597 \DefaultOptionsofPushButton,#1%
13598 }%
13599 \PDFForm@Name
13600 \ifHy@pdfa
13601 \Hy@Error{%
13602 PDF/A: Push button with JavaScript is prohibited%
13603 } \@ehc
13604 \LayoutPushButtonField{%
13605 \leavevmode
13606 \MakeButtonField{#2}%
13607 }%
13608 \else
13609 \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
13610 \HyField@FlagsPushButton
13611 \ifFld@hidden\def\Fld@width{1sp}\fi
13612 \HyField@AdvanceAnnotCount
13613 \LayoutPushButtonField{%

```

```

13614 \leavevmode
13615 \Hy@escapeform\PDFForm@Push
13616 \@pdfm@mark{%
13617   ann @push\HyField@TheAnnotCount\space
13618   \dviPDFm@setdim
13619   <<\PDFForm@Push>>%
13620 }%
13621 }%
13622 \unhbox\pdfm@box
13623 \HyField@AddToFields{push}%
13624 \fi
13625 \endgroup
13626 }

\@Submit
13627 \def\@Submit[#1]#2{%
13628 \def\Fld@width{\DefaultWidthofSubmit}%
13629 \def\Fld@height{\DefaultHeightofSubmit}%
13630 \begingroup
13631 \expandafter\HyField@SetKeys\expandafter{%
13632 \DefaultOptionsofSubmit,#1%
13633 }%
13634 \HyField@FlagsPushButton
13635 \HyField@FlagsSubmit
13636 \ifFld@hidden\def\Fld@width{1sp}\fi
13637 \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
13638 \leavevmode
13639 \Hy@escapeform\PDFForm@Submit
13640 \HyField@AdvanceAnnotCount
13641 \@pdfm@mark{%
13642   ann @submit\HyField@TheAnnotCount\space
13643   \dviPDFm@setdim
13644   <<\PDFForm@Submit>>%
13645 }%
13646 \unhbox\pdfm@box%
13647 \HyField@AddToFields{submit}%
13648 \endgroup
13649 }

\@Reset
13650 \def\@Reset[#1]#2{%
13651 \def\Fld@width{\DefaultWidthofReset}%
13652 \def\Fld@height{\DefaultHeightofReset}%
13653 \begingroup
13654 \expandafter\HyField@SetKeys\expandafter{%
13655 \DefaultOptionsofReset,#1%
13656 }%
13657 \leavevmode
13658 \ifHy@pdfa
13659 \Hy@Error{%
13660   PDF/A: Reset action is prohibited%
13661 } \@ehc
13662 \MakeButtonField{#2}%
13663 \else

```



```

13664 \HyField@FlagsPushButton
13665 \ifFld@hidden\def\Fld@width{1sp}\fi
13666 \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
13667 \Hy@escapeform\PDFForm@Reset
13668 \HyField@AdvanceAnnotCount
13669 \@pdfm@mark{%
13670   ann @reset\HyField@TheAnnotCount\space
13671   \dviPDFm@setdim
13672   <<\PDFForm@Reset>>%
13673 }%
13674 \unhbox\pdfm@box
13675 \HyField@AddToFields{reset}%
13676 \fi
13677 \endgroup
13678 }

```

\@CheckBox

```

13679 \def\@CheckBox[#1]#2{% parameters, label
13680 \def\Fld@name{#2}%
13681 \def\Fld@default{0}%
13682 \begingroup
13683 \def\Fld@width{\DefaultWidthofCheckBox}%
13684 \def\Fld@height{\DefaultHeightofCheckBox}%
13685 \expandafter\HyField@SetKeys\expandafter{%
13686 \DefaultOptionsofCheckBox,#1}%
13687 }%
13688 \PDFForm@Name
13689 \HyField@FlagsCheckBox
13690 \ifFld@hidden\def\Fld@width{1sp}\fi
13691 \setbox\pdfm@box=\hbox{%
13692 \MakeCheckField{\Fld@width}{\Fld@height}%
13693 }%
13694 \HyField@AdvanceAnnotCount
13695 \LayoutCheckField{#2}{%
13696 \leavevmode
13697 \Hy@escapeform\PDFForm@Check
13698 \@pdfm@mark{%
13699   ann @check\HyField@TheAnnotCount\space
13700   \dviPDFm@setdim
13701   <<\PDFForm@Check>>%
13702 }%
13703 \unhbox\pdfm@box
13704 \HyField@AddToFields{check}%
13705 }%
13706 \endgroup
13707 }

13708 \def\Hy@FormObjects{%
13709 \@pdfm@mark{obj @OBJpdfdocencoding%
13710 <<%
13711 /Type/Encoding%
13712 /Differences[%
13713   24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek/ring/tilde %
13714   39/quotesingle %

```

13715 96/grave %
13716 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
13717 /fraction/guilsinglleft/guilsinglright/minus/perthousand%
13718 /quotedblbase/quotedblleft/quotedblright/quoteleft/quoteright%
13719 /quotesinglbase/trademark/fi/fl/Lslash/OE/Scaron/Ydieresis%
13720 /Zcaron/dotlessi/lslash/oe/scaron/zcaron %
13721 160/Euro %
13722 164/currency %
13723 166/brokenbar %
13724 168/dieresis/copyright/ordfeminine %
13725 172/logicalnot/.notdef/registered/macron/degree/plusminus%
13726 /twosuperior/threesuperior/acute/mu %
13727 183/periodcentered/cedilla/onesuperior/ordmasculine %
13728 188/onequarter/onehalf/threequarters %
13729 192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
13730 /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave/Iacute%
13731 /Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute/Ocircumflex%
13732 /Otilde/Odieresis/multiply/Oslash/Ugrave/Uacute/Ucircumflex%
13733 /Udieresis/Yacute/Thorn/germandbls/agrave/aacute/acircumflex%
13734 /atilde/adieresis/aring/ae/ccedilla/egrave/eacute%
13735 /ecircumflex/edieresis/igrave/iacute/icircumflex/idieresis%
13736 /eth/ntilde/ograde/oacute/ocircumflex/otilde/odieresis%
13737 /divide/oslash/ugrave/uacute/ucircumflex/udieresis/yacute%
13738 /thorn/ydieresis%
13739]%
13740 >>%
13741 }%
13742 \@pdfm@mark{obj @OBJZaDb%
13743 <<%
13744 /Type/Font%
13745 /Subtype/Type1%
13746 /Name/ZaDb%
13747 /BaseFont/ZapfDingbats%
13748 >>%
13749 }%
13750 \@pdfm@mark{obj @OBJHelv%
13751 <<%
13752 /Type/Font%
13753 /Subtype/Type1%
13754 /Name/Helv%
13755 /BaseFont/Helvetica%
13756 /Encoding @OBJpdfdocencoding%
13757 >>%
13758 }%
13759 \global\let\Hy@FormObjects\relax
13760 }
13761 </dvipdfm | xetex>

45.6 Common forms part

13762 (*pdfform)

\Fld@pageobjref

13763 \providecommand*{\Fld@pageobjref}{}

\Hy@escapestring

```
13764 \@ifundefined{pdf@escapestring}
13765 {%
13766 \let\Hy@escapestring\@firstofone
13767 \def\Hy@escapeform#1{%
13768 \ifHy@pdfescapeform
13769 \def\Hy@escapestring##1{%
13770 \noexpand\Hy@escapestring{\noexpand##1}%
13771 }%
13772 \edef\Hy@temp{#1}%
13773 \expandafter\Hy@@@escapeform\Hy@temp\Hy@escapestring}\@nil
13774 \def\Hy@escapestring##1{%
13775 \@ifundefined{Hy@esc@\string##1}{%
13776 ##1%
13777 \ThisShouldNotHappen
13778 }{%
13779 \csname Hy@esc@\string##1\endcsname
13780 }%
13781 }%
13782 \else
13783 \let\Hy@escapestring\@firstofone
13784 \fi
13785 }%
13786 \def\Hy@@@escapeform#1\Hy@escapestring#2#3\@nil{%
13787 \ifx\#3\%
13788 \else
13789 \expandafter
13790 \Hy@pstringdef\csname Hy@esc@\string#2\endcsname{#2}%
13791 \Hy@ReturnAfterFi{%
13792 \Hy@@@escapeform#3\@nil
13793 }%
13794 \fi
13795 }%
13796 }{%
13797 \def\Hy@escapeform#1{%
13798 \ifHy@pdfescapeform
13799 \let\Hy@escapestring\pdfescapestring
13800 \else
13801 \let\Hy@escapestring\@firstofone
13802 \fi
13803 }%
13804 \Hy@escapeform{}}%
13805 }
```

\PDFForm@Name

```
13806 \def\PDFForm@Name{%
13807 \PDFForm@@Name\Fld@name
13808 \ifx\Fld@altname\relax
13809 \else
13810 \PDFForm@@Name\Fld@altname
13811 \fi
13812 \ifx\Fld@mappingname\relax
13813 \else
13814 \PDFForm@@Name\Fld@mappingname
```

```
13815 \fi
13816 }
```

\PDFForm@@Name

```
13817 \def\PDFForm@@Name#1{%
13818 \begingroup
13819 \ifnum\Hy@pdf@major@minor@version<105 % implementation note 117, PDF spec 1.7
13820 \ifHy@unicode
13821 \Hy@unicodedefalse
13822 \fi
13823 \fi
13824 \pdfstringdef\Hy@gtemp#1%
13825 \endgroup
13826 \let#1\Hy@gtemp
13827 }
```

\Fld@additionalactions

```
13828 \def\Fld@@additionalactions{%
K input (keystroke) format
13829 \ifx\Fld@keystroke@code\@empty
13830 \else
13831 /K<</S/JavaScript/JS(\Hy@escapestring{\Fld@keystroke@code})>>%
13832 \fi
F display format
13833 \ifx\Fld@format@code\@empty
13834 \else
13835 /F<</S/JavaScript/JS(\Hy@escapestring{\Fld@format@code})>>%
13836 \fi
V validation
13837 \ifx\Fld@validate@code\@empty
13838 \else
13839 /V<</S/JavaScript/JS(\Hy@escapestring{\Fld@validate@code})>>%
13840 \fi
C calculation
13841 \ifx\Fld@calculate@code\@empty
13842 \else
13843 /C<</S/JavaScript/JS(\Hy@escapestring{\Fld@calculate@code})>>%
13844 \fi
Fo receiving the input focus
13845 \ifx\Fld@onfocus@code\@empty
13846 \else
13847 /Fo<</S/JavaScript/JS(\Hy@escapestring{\Fld@onfocus@code})>>%
13848 \fi
Bl losing the input focus (blurred)
13849 \ifx\Fld@onblur@code\@empty
13850 \else
13851 /Bl<</S/JavaScript/JS(\Hy@escapestring{\Fld@onblur@code})>>%
13852 \fi
```

D pressing the mouse button (down)

```
13853 \ifx\Fld@onmousedown@code\@empty
13854 \else
13855 /D<</S/JavaScript/JS(\Hy@escapestring{\Fld@onmousedown@code})>>%
13856 \fi
```

U releasing the mouse button (up)

```
13857 \ifx\Fld@onmouseup@code\@empty
13858 \else
13859 /U<</S/JavaScript/JS(\Hy@escapestring{\Fld@onmouseup@code})>>%
13860 \fi
```

E cursor enters the annotation's active area.

```
13861 \ifx\Fld@onenter@code\@empty
13862 \else
13863 /E<</S/JavaScript/JS(\Hy@escapestring{\Fld@onenter@code})>>%
13864 \fi
```

X cursor exits the annotation's active area.

```
13865 \ifx\Fld@onexit@code\@empty
13866 \else
13867 /X<</S/JavaScript/JS(\Hy@escapestring{\Fld@onexit@code})>>%
13868 \fi
13869 }
13870 \def\Fld@additionalactions{%
13871 \if\Fld@@@additionalactions-%
13872 \else
13873 \ifHy@pdfa
13874 \else
13875 /AA<<\Fld@@@additionalactions>>%
13876 \fi
13877 \fi
13878 }
```

\Fld@annotnames

```
13879 \def\Fld@annotnames{%
13880 /T(\Fld@name)%
13881 \ifx\Fld@altname\relax
13882 \else
13883 /TU(\Fld@altname)%
13884 \fi
13885 \ifx\Fld@mappingname\relax
13886 \else
13887 /TM(\Fld@mappingname)%
13888 \fi
13889 }
```

\PDFForm@Check

```
13890 \def\PDFForm@Check{%
13891 /Subtype/Widget%
13892 \Fld@annotflags
13893 \Fld@pageobjref
13894 \Fld@annotnames
13895 /FT/Btn%
13896 \Fld@flags
```

```

13897 /Q \Fld@align
13898 /BS<</W \Fld@borderwidth /S/\Fld@borderstyle>>%
13899 /AP<< /N <</Yes<<>>>> >> %new string /Yes is from below
13900 /MK<<%
13901 \ifnum\Fld@rotation=\z@
13902 \else
13903 /R \Fld@rotation
13904 \fi
13905 \ifx\Fld@bordercolor\relax
13906 \else
13907 /BC[\Fld@bordercolor]%
13908 \fi
13909 \ifx\Fld@bcolor\relax
13910 \else
13911 /BG[\Fld@bcolor]%
13912 \fi
13913 /CA(\Hy@escapestring{\Fld@cbsymbol})%
13914 >>%
13915 /DA(/ZaDb \strip@pt\Fld@charsize\space Tf%
13916 \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
13917 /H/P%
13918 \ifFld@checked /V/Yes/AS/Yes\else /V/Off/AS/Off\fi
13919 \Fld@additionalactions
13920 }

```

\PDFForm@Push

```

13921 \ifHy@pdfa
13922 \else
13923 \def\PDFForm@Push{%
13924 /Subtype/Widget%
13925 \Fld@annotflags
13926 \Fld@pageobjref
13927 \Fld@annotnames
13928 /FT/Btn%
13929 \Fld@flags
13930 /H/P%
13931 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
13932 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
13933 \ifx\Fld@bordercolor\relax\else 1\fi
13934 \space
13935 \else
13936 /MK<<%
13937 \ifnum\Fld@rotation=\z@
13938 \else
13939 /R \Fld@rotation
13940 \fi
13941 \ifx\Fld@bordercolor\relax
13942 \else
13943 /BC[\Fld@bordercolor]%
13944 \fi
13945 >>%
13946 \fi
13947 /A<</S/JavaScript/JS(\Hy@escapestring{\Fld@onclick@code})>>%
13948 \Fld@additionalactions

```

13949 }%
13950 \fi

\PDFForm@List

```
13951 \def\PDFForm@List{%  
13952 /Subtype/Widget%  
13953 \Fld@annotflags  
13954 \Fld@pageobjref  
13955 \Fld@annotnames  
13956 /FT/Ch%  
13957 \Fld@flags  
13958 /Q \Fld@align  
13959 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%  
13960 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi  
13961     \ifx\Fld@bordercolor\relax\else 1\fi  
13962     \ifx\Fld@bcolor\relax \else 1\fi  
13963     \space  
13964 \else  
13965 /MK<<%  
13966     \ifnum\Fld@rotation=\z@  
13967     \else  
13968     /R \Fld@rotation  
13969     \fi  
13970     \ifx\Fld@bordercolor\relax  
13971     \else  
13972     /BC[\Fld@bordercolor]%  
13973     \fi  
13974     \ifx\Fld@bcolor\relax  
13975     \else  
13976     /BG[\Fld@bcolor]%  
13977     \fi  
13978     >>%  
13979 \fi  
13980 /DA(/Helv \strip@pt\Fld@charsize\space Tf%  
13981     \ifx\Fld@color\@empty\else\space\Fld@color\fi)%  
13982 \Fld@choices  
13983 \Fld@additionalactions  
13984 }
```

\PDFForm@Radio

```
13985 \def\PDFForm@Radio{%  
13986 /Subtype/Widget%  
13987 \Fld@annotflags  
13988 \Fld@pageobjref  
13989 \Fld@annotnames  
13990 /FT/Btn%  
13991 \Fld@flags  
13992 /H/P%  
13993 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%  
13994 /MK<<%  
13995     \ifnum\Fld@rotation=\z@  
13996     \else  
13997     /R \Fld@rotation  
13998     \fi
```

```

13999 \ifx\Fld@bordercolor\relax
14000 \else
14001 /BC[\Fld@bordercolor]%
14002 \fi
14003 \ifx\Fld@bcolor\relax
14004 \else
14005 /BG[\Fld@bcolor]%
14006 \fi
14007 /CA(\Hy@escapestring{\Fld@radiosymbol})%
14008 >>%
14009 /DA(/ZaDb \strip@pt\Fld@charsize\space Tf%
14010 \ifx\Fld@color\@empty\else\space\Fld@color\fi)%

```

New code, the default value is used for all buttons

```

14011 \ifx\Fld@default\@empty
14012 /V/Off%
14013 /DV/Off%
14014 \else
14015 /V/\Fld@default
14016 /DV/\Fld@default
14017 \fi
14018 \Fld@additionalactions
14019 }

```

\PDFForm@Text

```

14020 \def\PDFForm@Text{%
14021 /Subtype/Widget%
14022 \Fld@annotflags
14023 \Fld@pageobjref
14024 \Fld@annotnames
14025 /FT/Tx%
14026 \Fld@flags
14027 /Q \Fld@align
14028 /BS<</W \Fld@borderwidth\space /S /\Fld@borderstyle>>%
14029 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
14030 \ifx\Fld@bordercolor\relax\else 1\fi
14031 \ifx\Fld@bcolor\relax \else 1\fi
14032 \space
14033 \else
14034 /MK<<%
14035 \ifnum\Fld@rotation=\z@
14036 \else
14037 /R \Fld@rotation
14038 \fi
14039 \ifx\Fld@bordercolor\relax
14040 \else
14041 /BC[\Fld@bordercolor]%
14042 \fi
14043 \ifx\Fld@bcolor\relax
14044 \else
14045 /BG[\Fld@bcolor]%
14046 \fi
14047 >>%
14048 \fi

```



```

14049 /DA(/Helv \strip@pt\Fld@charsize\space Tf%
14050 \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
14051 /DV(\Hy@escapestring{\Fld@default})%
14052 /V(\Hy@escapestring{\Fld@value})%
14053 \Fld@additionalactions
14054 \ifnum\Fld@maxlen>\z@/MaxLen \Fld@maxlen \fi
14055 }

```

\PDFForm@Submit

```

14056 \def\PDFForm@Submit{%
14057 /Subtype/Widget%
14058 \Fld@annotflags
14059 \Fld@pageobjref
14060 \Fld@annotnames
14061 /FT/Btn%
14062 \Fld@flags
14063 /H/P%
14064 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
14065 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
14066 \ifx\Fld@bordercolor\relax\else 1\fi
14067 \space
14068 \else
14069 /MK<<%
14070 \ifnum\Fld@rotation=\z@
14071 \else
14072 /R \Fld@rotation
14073 \fi
14074 \ifx\Fld@bordercolor\relax
14075 \else
14076 /BC[\Fld@bordercolor]%
14077 \fi
14078 >>%
14079 \fi
14080 /A<<%
14081 /S/SubmitForm%
14082 /F<<%
14083 /FS/URL%
14084 /F(\Hy@escapestring{\Form@action})%
14085 >>%
14086 \Fld@submitflags
14087 >>%
14088 \Fld@additionalactions
14089 }

```

\PDFForm@Reset

```

14090 \ifHy@pdfa
14091 \else
14092 \def\PDFForm@Reset{%
14093 /Subtype/Widget%
14094 \Fld@annotflags
14095 \Fld@pageobjref
14096 \Fld@annotnames
14097 /FT/Btn%
14098 \Fld@flags

```

```

14099 /H/P%
14100 /DA(/Helv \strip@pt\Fld@charsize\space Tf 0 0 1 rg)%
14101 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
14102 \ifx\Fld@bordercolor\relax\else 1\fi
14103 \space
14104 \else
14105 /MK<<%
14106 \ifnum\Fld@rotation=\z@
14107 \else
14108 /R \Fld@rotation
14109 \fi
14110 \ifx\Fld@bordercolor\relax
14111 \else
14112 /BC[\Fld@bordercolor]%
14113 \fi
14114 % /CA (Clear)
14115 % /AC (Done)
14116 >>%
14117 \fi
14118 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
14119 /A<</S/ResetForm>>%
14120 \Fld@additionalactions
14121 }%
14122 \fi

14123 </pdfform>
14124 <*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`

```

14125 \def\phantomsection{%
14126 \Hy@MakeCurrentHrefAuto{section*}%
14127 \Hy@raisedlink{\hyper@anchorstart{\@currentHref}\hyper@anchorend}%
14128 }
14129 </packageEnd>

```

46.1 Bookmarks

```
14130 <*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.

```

14131 \def\Hy@writebookmark#1#2#3#4#5{%
14132   % section number, text, label, level, file
14133   \ifx\WriteBookmarks\relax%
14134   \else
14135     \ifnum#4>\Hy@bookmarksdepth\relax
14136     \else
14137       \@writetorep{#1}{#2}{#3}{#4}{#5}%
14138     \fi
14139   \fi
14140 }
14141 \def\Hy@currentbookmarklevel{0}
14142 \def\Hy@numberline#1{#1 }
14143 \def\@@writetorep#1#2#3#4#5{%
14144   \begingroup
14145   \edef\Hy@tempa{#5}%
14146   \ifx\Hy@tempa\Hy@bookmarkstype
14147     \edef\Hy@level{#4}%
14148     \ifx\Hy@levelcheck Y%
14149       \@tempcnta\Hy@level\relax
14150       \advance\@tempcnta by -1 %
14151       \ifnum\Hy@currentbookmarklevel<\@tempcnta
14152         \advance\@tempcnta by -\Hy@currentbookmarklevel\relax
14153         \advance\@tempcnta by 1 %
14154         \Hy@Warning{%
14155           Difference (\the\@tempcnta) between bookmark levels is %
14156           greater \MessageBreak than one, level fixed%
14157         }%
14158         \@tempcnta\Hy@currentbookmarklevel
14159         \advance\@tempcnta by 1 %
14160         \edef\Hy@level{\the\@tempcnta}%
14161       \fi
14162     \else
14163       \global\let\Hy@levelcheck Y%
14164     \fi
14165     \global\let\Hy@currentbookmarklevel\Hy@level
14166     \@tempcnta\Hy@level\relax
14167     \expandafter\xdef\csname Parent\Hy@level\endcsname{#3}%
14168     \advance\@tempcnta by -1 %
14169     \edef\Hy@tempa{#3}%
14170     \edef\Hy@tempb{\csname Parent\the\@tempcnta\endcsname}%
14171     \ifx\Hy@tempa\Hy@tempb

```

```

14172     \Hy@Warning{%
14173         The anchor of a bookmark and its parent's must not%
14174         \MessageBreak be the same. Added a new anchor%
14175     }%
14176     \phantomsection
14177 \fi
14178 \ifHy@bookmarksnumbered
14179     \let\numberline\Hy@numberline
14180     \let\booknumberline\Hy@numberline
14181     \let\partnumberline\Hy@numberline
14182     \let\chapternumberline\Hy@numberline
14183 \else
14184     \let\numberline\@gobble
14185     \let\booknumberline\@gobble
14186     \let\partnumberline\@gobble
14187     \let\chapternumberline\@gobble
14188 \fi
14189 \pdfstringdef\Hy@tempa{#2}%
14190 \HyPsd@SanitizeForOutFile\Hy@tempa
14191 \if@filesw
14192     \stepcounter{bookmark@seq@number}%
14193     \@ifundefined{@outlinefile}{%
14194     }{%
14195         \protected@write\@outlinefile}{%
14196         \protect\BOOKMARK
14197         [\Hy@level][\@bookmarkopenstatus{\Hy@level}]{#3}%
14198         {\Hy@tempa}{\Hy@tempb}%
14199         \@percentchar\space\thebookmark@seq@number
14200     }%
14201     }%
14202 \fi
14203 \fi
14204 \endgroup
14205 }
14206 \newcounter{bookmark@seq@number}

14207 \begingroup
14208 \lccode` (= ` { %
14209 \lccode` ) = ` } %
14210 \lccode` 1 = \z @
14211 \lccode` 2 = \z @
14212 \lccode` 3 = \z @
14213 \lccode` 5 = \z @
14214 \lccode` 7 = \z @
14215 \lccode` \# = \z @
14216 \lccode` \ ` = \z @
14217 \lccode` \ { = \z @
14218 \lccode` \ } = \z @
14219 \lowercase{%
14220 \endgroup
14221 \def\HyPsd@SanitizeForOutFile#1{%
14222     \@onelevel@sanitize\Hy@tempa
14223     \escapechar` \ %
14224     \edef\Hy@tempa{%
14225         \expandafter\HyPsd@SanitizeOut@BraceLeft\Hy@tempa(\@nil

```

```

14226 }%
14227 \edef\Hy@tempa{%
14228   \expandafter\HyPsd@SanitizeOut@BraceRight\Hy@tempa)\@nil
14229 }%
14230 }%
14231 \def\HyPsd@SanitizeOut@BraceLeft#1(#2\@nil{%
14232   #1%
14233   \ifx\#2\%
14234     \expandafter\@gobble
14235   \else
14236     \expandafter\@firstofone
14237   \fi
14238   {%
14239     \string\173%
14240     \HyPsd@SanitizeOut@BraceLeft#2\@nil
14241   }%
14242 }%
14243 \def\HyPsd@SanitizeOut@BraceRight#1)#2\@nil{%
14244   #1%
14245   \ifx\#2\%
14246     \expandafter\@gobble
14247   \else
14248     \expandafter\@firstofone
14249   \fi
14250   {%
14251     \string\175%
14252     \HyPsd@SanitizeOut@BraceRight#2\@nil
14253   }%
14254 }%
14255 }

```

In the call of `\BOOKMARK` the braces around `#4` are omitted, because it is not likely, that the level number contains `]`.

```

14256 \newcommand{\currentpdfbookmark}{%
14257   \pdfbookmark[\Hy@currentbookmarklevel]%
14258 }
14259 \newcommand{\subpdfbookmark}{%
14260   \@tempcnta\Hy@currentbookmarklevel
14261   \Hy@StepCount\@tempcnta
14262   \expandafter\pdfbookmark\expandafter[\the\@tempcnta]%
14263 }
14264 \newcommand{\belowpdfbookmark}[2]{%
14265   \@tempcnta\Hy@currentbookmarklevel
14266   \Hy@StepCount\@tempcnta
14267   \expandafter\pdfbookmark\expandafter[\the\@tempcnta]{#1}{#2}%
14268   \advance\@tempcnta by -1 %
14269   \xdef\Hy@currentbookmarklevel{\the\@tempcnta}%
14270 }

```

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.

```

14271 \renewcommand\pdfbookmark[3][0]{%
14272   \Hy@writebookmark}{#2}{#3.#1}{#1}{toc}%

```

```

14273 \hyper@anchorstart{#3.#1}\hyper@anchorend
14274 }
14275 \def\BOOKMARK{%
14276 \@ifnextchar{\@BOOKMARK}{\@BOOKMARK[1][-]}%
14277 }
14278 \def\@BOOKMARK[#1]{%
14279 \@ifnextchar{\@@BOOKMARK[#1]}{\@BOOKMARK[#1][-]}%
14280 }

```

The macros for calculating structure of outlines are derived from those by Petr Olsak used in the texinfopdf macros.

46.1.1 Rerun warning

`\Hy@OutlineRerunCheck`

```

14281 \RequirePackage{rerunfilecheck}[2009/12/10]
14282 \def\Hy@OutlineRerunCheck{%
14283 \RerunFileCheck{\jobname.out}{%
14284 \immediate\closeout\@outlinefile
14285 }{%
14286 Rerun to get outlines right\MessageBreak
14287 or use package `bookmark'%
14288 }%
14289 }

```

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.

```

14290 (*vtex)
14291 \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.

```

14292 \begingroup
14293 \catcode`\'=12 %
14294 \ifnum\Hy@VTeXversion<650 %
14295 \catcode`\ "=12 %
14296 \gdef\hv@pdf@char#1#2#3{%
14297 \char
14298 \ifcase'#1#2#3 %
14299 "00\or"01\or"02\or"03\or"04\or"05\or"06\or"07%
14300 \or"08\or"09\or"0A\or"0B\or"0C\or"0D\or"0E\or"0F%
14301 \or"10\or"11\or"12\or"13\or"14\or"15\or"16\or"17%
14302 \or"18\or"19\or"1A\or"1B\or"1C\or"1D\or"1E\or"1F%
14303 \or"20\or"21\or"22\or"23\or"24\or"25\or"26\or"27%
14304 \or"28\or"29\or"2A\or"2B\or"2C\or"2D\or"2E\or"2F%
14305 \or"30\or"31\or"32\or"33\or"34\or"35\or"36\or"37%
14306 \or"38\or"39\or"3A\or"3B\or"3C\or"3D\or"3E\or"3F%
14307 \or"40\or"41\or"42\or"43\or"44\or"45\or"46\or"47%
14308 \or"48\or"49\or"4A\or"4B\or"4C\or"4D\or"4E\or"4F%

```

```

14309 \or"50\or"51\or"52\or"53\or"54\or"55\or"56\or"57%
14310 \or"58\or"59\or"5A\or"5B\or"5C\or"5D\or"5E\or"5F%
14311 \or"60\or"61\or"62\or"63\or"64\or"65\or"66\or"67%
14312 \or"68\or"69\or"6A\or"6B\or"6C\or"6D\or"6E\or"6F%
14313 \or"70\or"71\or"72\or"73\or"74\or"75\or"76\or"77%
14314 \or"78\or"79\or"7A\or"7B\or"7C\or"7D\or"7E\or"7F%
14315 \or"80\or"81\or"82\or"83\or"84\or"85\or"86\or"87%
14316 \or"88\or"89\or"8A\or"8B\or"8C\or"8D\or"8E\or"8F%
14317 \or"90\or"91\or"92\or"93\or"94\or"95\or"96\or"97%
14318 \or"98\or"99\or"9A\or"9B\or"9C\or"9D\or"9E\or"9F%
14319 \or"A0\or"A1\or"A2\or"A3\or"A4\or"A5\or"A6\or"A7%
14320 \or"A8\or"A9\or"AA\or"AB\or"AC\or"AD\or"AE\or"AF%
14321 \or"B0\or"B1\or"B2\or"B3\or"B4\or"B5\or"B6\or"B7%
14322 \or"B8\or"B9\or"BA\or"BB\or"BC\or"BD\or"BE\or"BF%
14323 \or"C0\or"C1\or"C2\or"C3\or"C4\or"C5\or"C6\or"C7%
14324 \or"C8\or"C9\or"CA\or"CB\or"CC\or"CD\or"CE\or"CF%
14325 \or"D0\or"D1\or"D2\or"D3\or"D4\or"D5\or"D6\or"D7%
14326 \or"D8\or"D9\or"DA\or"DB\or"DC\or"DD\or"DE\or"DF%
14327 \or"E0\or"E1\or"E2\or"E3\or"E4\or"E5\or"E6\or"E7%
14328 \or"E8\or"E9\or"EA\or"EB\or"EC\or"ED\or"EE\or"EF%
14329 \or"F0\or"F1\or"F2\or"F3\or"F4\or"F5\or"F6\or"F7%
14330 \or"F8\or"F9\or"FA\or"FB\or"FC\or"FD\or"FE\or"FF%
14331 \fi
14332 }%
14333 \else
14334 \gdef\hv@pdf@char{\char'}%
14335 \fi
14336 \endgroup

```

\@@BOOKMARK

```

14337 \def\@@BOOKMARK[#1][#2]#3#4#5{%
14338 \expandafter\edef\csname @count@#3\endcsname{%
14339 \the\@serial@counter
14340 }%
14341 \edef\@mycount{\the\@serial@counter}%
14342 \Hy@StepCount\@serial@counter
14343 \edef\@parcount{%
14344 \expandafter\ifx\csname @count@#5\endcsname\relax
14345 0%
14346 \else
14347 \csname @count@#5\endcsname
14348 \fi
14349 }%
14350 \immediate\special{%
14351 !outline \HyperDestNameFilter{#3};p=\@parcount,i=\@mycount,%
14352 s=\ifx#2-c\else o\fi,t=#4%
14353 }%
14354 }%

```

\ReadBookmarks

```

14355 \def\ReadBookmarks{%
14356 \begingroup
14357 \def\0{\hv@pdf@char 0}%
14358 \def\1{\hv@pdf@char 1}%

```

```

14359 \def\2{\hv@pdf@char 2}%
14360 \def\3{\hv@pdf@char 3}%
14361 \def\{(){}%
14362 \def\}{}%
14363 \def\do##1{%
14364 \ifnum\catcode`##1=\active
14365 \@makeother##1%
14366 \else
14367 \ifnum\catcode`##1=6 %
14368 \@makeother##1%
14369 \fi
14370 \fi
14371 }%
14372 \dospecials
14373 \Hy@safe@activetrue
14374 \InputIfFileExists{\jobname.out}{-}{-}%
14375 \endgroup
14376 \ifx\WriteBookmarks\relax
14377 \else
14378 \if@filesw
14379 \newwrite\@outlinefile
14380 \Hy@OutlineRerunCheck
14381 \immediate\openout\@outlinefile=\jobname.out\relax
14382 \fi
14383 \fi
14384 }

14385 (/vtex)

14386 (*!vtex)
14387 \def\ReadBookmarks{%
14388 \pdf@ifdraftmode{-}{-}%
14389 \begingroup
14390 \def\do##1{%
14391 \ifnum\catcode`##1=\active
14392 \@makeother##1%
14393 \else
14394 \ifnum\catcode`##1=6 %
14395 \@makeother##1%
14396 \fi
14397 \fi
14398 }%
14399 \dospecials
14400 \Hy@safe@activetrue
14401 \escapechar=`\%
14402 \def\@@BOOKMARK[##1][##2]##3##4##5{%
14403 \calc@bm@number{##5}%
14404 }%
14405 \InputIfFileExists{\jobname.out}{-}{-}%
14406 \ifx\WriteBookmarks\relax
14407 \global\let\WriteBookmarks\relax
14408 \fi
14409 \def\@@BOOKMARK[##1][##2]##3##4##5{%
14410 \def\Hy@temp{##4}%
14411 (*pdfTeX)

```



```

14412 \Hy@pstringdef\Hy@pstringName{\HyperDestNameFilter{###3}}%
14413 \Hy@OutlineName{}\Hy@pstringName{%
14414 ##2\check@bm@number{###3}%
14415 }{%
14416 \expandafter\strip@prefix\meaning\Hy@temp
14417 }%
14418 </pdftex>
14419 (*pdfmark)
14420 \pdfmark{%
14421 pdfmark=/OUT,%
14422 Count={##2\check@bm@number{###3}},%
14423 Dest={###3},%
14424 Title=\expandafter\strip@prefix\meaning\Hy@temp
14425 }%
14426 </pdfmark>
14427 (*dviptfm | xetex)
14428 \Hy@pstringdef\Hy@pstringName{\HyperDestNameFilter{###3}}%
14429 \@pdfm@mark{%
14430 outline \ifHy@DviptfmxOutlineOpen
14431 [%
14432 \ifnum##21>\z@
14433 \else
14434 -%
14435 \fi
14436 ] %
14437 \fi
14438 ##1<<%
14439 /Title(\expandafter\strip@prefix\meaning\Hy@temp)%
14440 /A<<%
14441 /S/GoTo%
14442 /D(\Hy@pstringName)%
14443 >>%
14444 >>%
14445 }%
14446 </dviptfm | xetex>
14447 }%
14448 \begingroup
14449 \def\WriteBookmarks{0}%
14450 \InputIfFileExists{\jobname.out}{-}{-}%
14451 \endgroup
14452 %{\escapechar\m@ne\InputIfFileExists{\jobname.out}{-}{-}}%
14453 \endgroup
14454 }%
14455 \ifx\WriteBookmarks\relax
14456 \else
14457 \if@filesw
14458 \newwrite\@outlinefile
14459 \Hy@OutlineRerunCheck
14460 \immediate\openout\@outlinefile=\jobname.out\relax
14461 \fi
14462 \fi
14463 }
14464 (*pdftex)
14465 \def\Hy@OutlineName#1##2##3##4{%

```

```

14466 \pdfoutline goto name{#2}count#3{#4}%
14467 }
14468 </pdfutex>
14469 \def\check@bm@number#1{%
14470 \expandafter\ifx\csname B_#1\endcsname\relax
14471 0%
14472 \else
14473 \csname B_#1\endcsname
14474 \fi
14475 }
14476 \def\calc@bm@number#1{%
14477 \@tempcnta=\check@bm@number{#1}\relax
14478 \advance\@tempcnta by 1 %
14479 \expandafter\xdef\csname B_#1\endcsname{\the\@tempcnta}%
14480 }
14481 </!vtex>

14482 \ifHy@implicit
14483 \else
14484 \expandafter\endinput
14485 \fi

14486 </outlines>
14487 (*outlines | hypertex)

14488 \newlength\Hy@SectionHShift
14489 \def\Hy@SectionAnchorHref#1{%
14490 \ifx\protect\@typeset@protect
14491 \Hy@@SectionAnchor{#1}%
14492 \fi
14493 }
14494 \DeclareRobustCommand*{\Hy@@SectionAnchor}[1]{%
14495 \leavevmode
14496 \hbox to 0pt{%
14497 \kern-\Hy@SectionHShift
14498 \Hy@raisedlink{%
14499 \hyper@anchorstart{#1}\hyper@anchorend
14500 }%
14501 \hss
14502 }%
14503 }
14504 \AddToNoCaseChangeList{\Hy@@SectionAnchor}
14505 \@ifundefined{hyper@nopatch@sectioning}
14506 {
14507 \let\H@old@ssect\@ssect
14508 \def\@ssect#1#2#3#4#5{%
14509 \Hy@MakeCurrentHrefAuto{section*}%
14510 \setlength{\Hy@SectionHShift}{#1}%
14511 \begingroup
14512 \toks@{\H@old@ssect{#1}{#2}{#3}{#4}}%
14513 \toks\tw@\expandafter{%
14514 \expandafter\Hy@SectionAnchorHref\expandafter{\@currentHref}%
14515 #5%
14516 }%
14517 \edef\x{\endgroup
14518 \the\toks@\the\toks\tw@}%

```

```

14519 } \x
14520 }
14521 \let \H@old@chapter \@chapter
14522 \def \@chapter#1{%
14523   \begingroup
14524     \let \@mkboth \@gobbletwo
14525     \Hy@MakeCurrentHrefAuto{\Hy@chapapp*}%
14526     \Hy@raisedlink{%
14527       \hyper@anchorstart{\@currentHref}\hyper@anchorend
14528     }%
14529   \endgroup
14530   \H@old@chapter{#1}%
14531 }

```

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:

```

14532 \@ifundefined{@chapter}{}{%
14533   \let \Hy@org@chapter \@chapter
14534   \def \@chapter{%
14535     \def \Hy@next{%
14536       \Hy@MakeCurrentHrefAuto{\Hy@chapapp*}%
14537       \Hy@raisedlink{%
14538         \hyper@anchorstart{\@currentHref}\hyper@anchorend
14539       }%
14540     }%
14541     \ifnum \c@secnumdepth > \m@ne
14542       \@ifundefined{if@mainmatter}{%
14543         \iftrue{\csname if@mainmatter\endcsname}%
14544         \let \Hy@next \relax
14545       }%
14546     \fi
14547     \Hy@next
14548     \Hy@org@chapter
14549   }%
14550 }

14551 \let \H@old@part \@part
14552 \@ifundefined{chapter}{
14553   {\let \Hy@secnum@part \z@}
14554   {\let \Hy@secnum@part \m@ne}
14555 \def \@part{%
14556   \ifnum \Hy@secnum@part > \c@secnumdepth
14557     \phantomsection
14558   \fi
14559   \H@old@part
14560 }

14561 \let \H@old@spart \@spart
14562 \def \@spart#1{%
14563   \Hy@MakeCurrentHrefAuto{part*}%
14564   \Hy@raisedlink{%
14565     \hyper@anchorstart{\@currentHref}\hyper@anchorend
14566   }%
14567   \H@old@spart{#1}%

```

```

14568 }
14569 \let\H@old@sect\@sect
14570 \def\@sect#1#2#3#4#5#6[#7]#8{%
14571   \ifnum #2>\c@secnumdepth
14572     \expandafter\@firstoftwo
14573   \else
14574     \expandafter\@secondoftwo
14575   \fi
14576   {%
14577     \Hy@MakeCurrentHrefAuto{section*}%
14578     \setlength{\Hy@SectionHShift}{#3}%
14579     \begingroup
14580     \toks@{\H@old@sect{#1}{#2}{#3}{#4}{#5}{#6}{#7}}%
14581     \toks\tw@\expandafter{%
14582       \expandafter\Hy@SectionAnchorHref\expandafter{\@currentHref}%
14583       #8%
14584     }%
14585     \edef\x{\endgroup
14586       \the\toks@\the\toks\tw@}%
14587     }\x
14588   }{%
14589     \H@old@sect{#1}{#2}{#3}{#4}{#5}{#6}{#7}{#8}%
14590   }%
14591 }
14592 }{}

14593 </outlines | hypertex>
14594 (*outlines)

14595 \expandafter\def\csname Parent-4\endcsname{}
14596 \expandafter\def\csname Parent-3\endcsname{}
14597 \expandafter\def\csname Parent-2\endcsname{}
14598 \expandafter\def\csname Parent-1\endcsname{}
14599 \expandafter\def\csname Parent0\endcsname{}
14600 \expandafter\def\csname Parent1\endcsname{}
14601 \expandafter\def\csname Parent2\endcsname{}
14602 \expandafter\def\csname Parent3\endcsname{}
14603 \expandafter\def\csname Parent4\endcsname{}
14604 </outlines>

```

47 Encoding definition files for encodings of PDF strings

This was contributed by Heiko Oberdiek.

47.1 PD1 encoding

```

14605 (*pd1enc)
14606 \DeclareFontEncoding{PD1}{}{}

Accents
14607 \DeclareTextAccent{\`}{PD1}{\textasciigrave}
14608 \DeclareTextAccent{\'}{PD1}{\textacute}
14609 \DeclareTextAccent{\^}{PD1}{\textasciicircum}

```

```

14610 \DeclareTextAccent{\~}{PD1}{\texttilde}
14611 \DeclareTextAccent{\"}{PD1}{\textasciidieresis}
14612 \DeclareTextAccent{\r}{PD1}{\textstring}
14613 \DeclareTextAccent{\v}{PD1}{\textasciicaron}
14614 \DeclareTextAccent{\.}{PD1}{\textdotaccent}
14615 \DeclareTextAccent{\c}{PD1}{\textcedilla}
14616 \DeclareTextAccent{\=} {PD1}{\textasciimacron}
14617 \DeclareTextAccent{\b}{PD1}{\textmacronbelow}
14618 \DeclareTextAccent{\d}{PD1}{\textdotbelow}
14619 \DeclareTextCompositeCommand{\`}{PD1}{\@empty}{\textasciigrave}
14620 \DeclareTextCompositeCommand{\' }{PD1}{\@empty}{\textacute}
14621 \DeclareTextCompositeCommand{\^}{PD1}{\@empty}{\textasciicircum}
14622 \DeclareTextCompositeCommand{\~}{PD1}{\@empty}{\texttilde}
14623 \DeclareTextCompositeCommand{\"}{PD1}{\@empty}{\textasciidieresis}
14624 \DeclareTextCompositeCommand{\r}{PD1}{\@empty}{\textstring}
14625 \DeclareTextCompositeCommand{\v}{PD1}{\@empty}{\textasciicaron}
14626 \DeclareTextCompositeCommand{\.}{PD1}{\@empty}{\textdotaccent}
14627 \DeclareTextCompositeCommand{\c}{PD1}{\@empty}{\textcedilla}
14628 \DeclareTextCompositeCommand{\=} {PD1}{\@empty}{\textasciimacron}
14629 \DeclareTextCompositeCommand{\b}{PD1}{\@empty}{\textmacronbelow}
14630 \DeclareTextCompositeCommand{\d}{PD1}{\@empty}{\textdotbelow}
14631 \DeclareTextCompositeCommand{\`}{PD1}{\ }{\textasciigrave}
14632 \DeclareTextCompositeCommand{\' }{PD1}{\ }{\textacute}
14633 \DeclareTextCompositeCommand{\^}{PD1}{\ }{\textasciicircum}
14634 \DeclareTextCompositeCommand{\~}{PD1}{\ }{\texttilde}
14635 \DeclareTextCompositeCommand{\"}{PD1}{\ }{\textasciidieresis}
14636 \DeclareTextCompositeCommand{\r}{PD1}{\ }{\textstring}
14637 \DeclareTextCompositeCommand{\v}{PD1}{\ }{\textasciicaron}
14638 \DeclareTextCompositeCommand{\.}{PD1}{\ }{\textdotaccent}
14639 \DeclareTextCompositeCommand{\c}{PD1}{\ }{\textcedilla}
14640 \DeclareTextCompositeCommand{\=} {PD1}{\ }{\textasciimacron}
14641 \DeclareTextCompositeCommand{\b}{PD1}{\ }{\textmacronbelow}
14642 \DeclareTextCompositeCommand{\d}{PD1}{\ }{\textdotbelow}
14643 \DeclareTextCommand{\k}{PD1}[1]{\TextSymbolUnavailable{\k{#1}}#1}
14644 \DeclareTextCommand{\t}{PD1}[1]{\TextSymbolUnavailable{\t{#1}}#1}
14645 \DeclareTextCommand{\newtie}{PD1}[1]{%
14646 \TextSymbolUnavailable{\newtie{#1}}#1%
14647 }

```

Special white space escape characters not for use in bookmarks but for other PDF strings.

```

14648 % U+0009 (CHARACTER TABULATION)
14649 \DeclareTextCommand{\textHT}{PD1}{\011}% U+0009
14650 % U+000A (LINE FEED)
14651 \DeclareTextCommand{\textLF}{PD1}{\012}% U+000A
14652 % U+000D (CARRIAGE RETURN)
14653 \DeclareTextCommand{\textCR}{PD1}{\015}% U+000D

```

Accent glyph names

```

14654 % U+02D8 BREVE; breve
14655 \DeclareTextCommand{\textasciibreve}{PD1}{\030}% U+02D8
14656 % U+02C7 CARON; caron
14657 \DeclareTextCommand{\textasciicaron}{PD1}{\031}% U+02C7
14658 % U+02C6 MODIFIER LETTER CIRCUMFLEX ACCENT; circumflex
14659 \DeclareTextCommand{\textcircumflex}{PD1}{\032}% U+02C6

```

14660 % U+02D9 DOT ABOVE; dotaccent
14661 \DeclareTextCommand{\textdotaccent}{PD1}{\033}% U+02D9
14662 % U+02DD DOUBLE ACUTE ACCENT; hungarumlaut
14663 \DeclareTextCommand{\texthungarumlaut}{PD1}{\034}% U+02DD
14664 % U+02DB OGONEK; ogonek
14665 \DeclareTextCommand{\textogonek}{PD1}{\035}% U+02DB
14666 % U+02DA RING ABOVE; ring
14667 \DeclareTextCommand{\textring}{PD1}{\036}% U+02DA
14668 % U+02DC SMALL TILDE; ilde, *tilde
14669 \DeclareTextCommand{\texttilde}{PD1}{\037}% U+02DC

\040: U+0020 SPACE; *space, spacehackarabic
\041: U+0021 EXCLAMATION MARK; exclam
14670 % U+0022 QUOTATION MARK; quotedbl
14671 \DeclareTextCommand{\textquotedbl}{PD1}{"}% \042 U+0022
14672 % U+0023 NUMBER SIGN; numbersign
14673 \DeclareTextCommand{\textnumbersign}{PD1}{\043}% U+0023
14674 % U+0024 DOLLAR SIGN; dollar
14675 \DeclareTextCommand{\textdollar}{PD1}{\044}% U+0024
14676 % U+0025 PERCENT SIGN; percent
14677 \DeclareTextCommand{\textpercent}{PD1}{\045}% U+0025
14678 % U+0026 AMPERSAND; ampersand
14679 \DeclareTextCommand{\textampersand}{PD1}{\046}% U+0026

\047: U+0027 APOSTROPHE; quotesingle

14680 % U+0028 LEFT PARENTHESIS; parenleft
14681 \DeclareTextCommand{\textparenleft}{PD1}{\string\(% \050 U+0028
14682 % U+0029 RIGHT PARENTHESIS; parenright
14683 \DeclareTextCommand{\textparenright}{PD1}{\string\)% \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
14684 % U+002E FULL STOP; period
14685 \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
14686 % U+003C LESS-THAN SIGN; less
14687 \DeclareTextCommand{\textless}{PD1}{<}% \074 U+003C

\075: U+003D EQUALS SIGN; equal
14688 % U+003E GREATER-THAN SIGN; greater
14689 \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
14690 % U+005C REVERSE SOLIDUS; backslash
14691 \DeclareTextCommand{\textbackslash}{PD1}{\134}% U+005C
14692 % "U+2216 SET MINUS" simulated by "U+005C REVERSE SOLIDUS"
14693 \DeclareTextCommand{\textsetminus}{PD1}{\textbackslash}
\135: U+005D RIGHT SQUARE BRACKET; bracketright
14694 % U+005E CIRCUMFLEX ACCENT; asciicircum
14695 \DeclareTextCommand{\textasciicircum}{PD1}{\136}% U+005E
14696 % U+005F LOW LINE; underscore
14697 \DeclareTextCommand{\textunderscore}{PD1}{\137}% U+005F
14698 \DeclareTextCommand{\textmacronbelow}{PD1}{\137}% U+005F
14699 % U+0060 GRAVE ACCENT; grave
14700 \DeclareTextCommand{\textasciigrave}{PD1}{\140}% U+0060
\141: U+0061 LATIN SMALL LETTER A; a
...
\150: U+0068 LATIN SMALL LETTER H; h
14701 % U+0069 LATIN SMALL LETTER I; i
14702 \DeclareTextCompositeCommand{\.}{PD1}{i}{i}% \151 U+0069
\152: U+006A LATIN SMALL LETTER J; j
...
\172: U+007A LATIN SMALL LETTER Z; z
14703 % U+007B LEFT CURLY BRACKET; braceleft
14704 \DeclareTextCommand{\textbraceleft}{PD1}{\173}% U+007B
14705 % U+007C VERTICAL LINE; *bar, verticalbar
14706 \DeclareTextCommand{\textbar}{PD1}{|}% U+007C
14707 % U+007D RIGHT CURLY BRACKET; braceright
14708 \DeclareTextCommand{\textbraceright}{PD1}{\175}% U+007D
14709 % U+007E TILDE; asciitilde
14710 \DeclareTextCommand{\textasciitilde}{PD1}{\176}% U+007E
Slot \177 (0x7F) is undefined in PDFDocEncoding.
14711 % U+2022 BULLET; bullet
14712 \DeclareTextCommand{\textbullet}{PD1}{\200}% U+2022
14713 % U+2020 DAGGER; dagger
14714 \DeclareTextCommand{\textdagger}{PD1}{\201}% U+2020
14715 % U+2021 DOUBLE DAGGER; daggerdbl; \ddagger (LaTeX)
14716 \DeclareTextCommand{\textdaggerdbl}{PD1}{\202}% U+2021
14717 \DeclareTextCommand{\textddagger}{PD1}{\textdaggerdbl}
14718 % U+2026 HORIZONTAL ELLIPSIS; ellipsis
14719 \DeclareTextCommand{\textellipsis}{PD1}{\203}% U+2026
14720 % U+2014 EM DASH; emdash
14721 \DeclareTextCommand{\textemdash}{PD1}{\204}% U+2014
14722 % U+2013 EN DASH; endash
14723 \DeclareTextCommand{\textendash}{PD1}{\205}% U+2013
14724 % U+0192 LATIN SMALL LETTER F WITH HOOK; florin
14725 \DeclareTextCommand{\textflorin}{PD1}{\206}% U+0192
14726 % U+2044 FRACTION SLASH; fraction
14727 \DeclareTextCommand{\textfractionsolidus}{PD1}{\207}% U+2044
14728 % U+2039 SINGLE LEFT-POINTING ANGLE QUOTATION MARK; guil-
ingleft
14729 \DeclareTextCommand{\guilsingleft}{PD1}{\210}% U+2039

14730 % U+203A SINGLE RIGHT-POINTING ANGLE QUOTATION MARK; guiltingright
\DeclareTextCommand{\guiltingright}{PD1}{\211}% U+203A

14732 % U+2212 MINUS SIGN; minus
\DeclareTextCommand{\textminus}{PD1}{\212}% U+2212

14734 % U+2030 PER MILLE SIGN; perthousand
\DeclareTextCommand{\textperthousand}{PD1}{\213}% U+2030

14736 % U+201E DOUBLE LOW-9 QUOTATION MARK; quotedblbase
\DeclareTextCommand{\quotedblbase}{PD1}{\214}% U+201E

14738 % U+201C LEFT DOUBLE QUOTATION MARK; quotedblleft
\DeclareTextCommand{\textquotedblleft}{PD1}{\215}% U+201C

14740 % U+201D RIGHT DOUBLE QUOTATION MARK; quotedblright
\DeclareTextCommand{\textquotedblright}{PD1}{\216}% U+201D

14742 % U+2018 LEFT SINGLE QUOTATION MARK; quoteleft
\DeclareTextCommand{\textquoteleft}{PD1}{\217}% U+2018

14744 % U+2019 RIGHT SINGLE QUOTATION MARK; quoteright
\DeclareTextCommand{\textquoteright}{PD1}{\220}% U+2019

14746 % U+201A SINGLE LOW-9 QUOTATION MARK; quotesinglbase
\DeclareTextCommand{\quotesinglbase}{PD1}{\221}% U+201A

14748 % U+2122 TRADE MARK SIGN; trademark
\DeclareTextCommand{\texttrademark}{PD1}{\222}% U+2122

14750 % U+FB01 LATIN SMALL LIGATURE FI; fi
\DeclareTextCommand{\textfi}{PD1}{\223}% U+FB01

14752 % U+FB02 LATIN SMALL LIGATURE FL; fl
\DeclareTextCommand{\textfl}{PD1}{\224}% U+FB02

14754 % U+0141 LATIN CAPITAL LETTER L WITH STROKE; Lslash
\DeclareTextCommand{\L}{PD1}{\225}% U+0141

14756 % U+0152 LATIN CAPITAL LIGATURE OE; OE
\DeclareTextCommand{\OE}{PD1}{\226}% U+0152

14758 % U+0160 LATIN CAPITAL LETTER S WITH CARON; Scaron
\DeclareTextCompositeCommand{\v}{PD1}{S}{\227}% U+0160

14760 % U+0178 LATIN CAPITAL LETTER Y WITH DIAERESIS; Ydieresis
\DeclareTextCompositeCommand{\"}{PD1}{Y}{\230}% U+0178

14762 \DeclareTextCommand{\IJ}{PD1}{IJ}% ligature U+0049 U+004A

14763 % U+017D LATIN CAPITAL LETTER Z WITH CARON; Zcaron
\DeclareTextCompositeCommand{\v}{PD1}{Z}{\231}% U+017D

14765 % U+0131 LATIN SMALL LETTER DOTLESS I; dotlessi
\DeclareTextCommand{\i}{PD1}{\232}% U+0131

14767 % U+0142 LATIN SMALL LETTER L WITH STROKE; lslash
\DeclareTextCommand{\l}{PD1}{\233}% U+0142

14769 % U+0153 LATIN SMALL LIGATURE OE; oe
\DeclareTextCommand{\oe}{PD1}{\234}% U+0153

14771 % U+0161 LATIN SMALL LETTER S WITH CARON; scaron
\DeclareTextCompositeCommand{\v}{PD1}{s}{\235}% U+0161

14773 % U+017E LATIN SMALL LETTER Z WITH CARON; zcaron
\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.

14775 % U+20AC EURO SIGN; *Euro, euro
\DeclareTextCommand{\texteuro}{PD1}{\240}% U+20AC

14777 % U+00A1 INVERTED EXCLAMATION MARK; exclamdown
\DeclareTextCommand{\textexclamdown}{PD1}{\241}% U+00A1

14779 % U+00A2 CENT SIGN; cent
\DeclareTextCommand{\textcent}{PD1}{\242}% U+00A2

14781 % U+00A3 POUND SIGN; sterling
14782 \DeclareTextCommand{\textsterling}{PD1}{\243}% U+00A3
14783 % U+00A4 CURRENCY SIGN; currency
14784 \DeclareTextCommand{\textcurrency}{PD1}{\244}% U+00A4
14785 % U+00A5 YEN SIGN; yen
14786 \DeclareTextCommand{\textyen}{PD1}{\245}% U+00A5
14787 % U+00A6 BROKEN BAR; brokenbar
14788 \DeclareTextCommand{\textbrokenbar}{PD1}{\246}% U+00A6
14789 % U+00A7 SECTION SIGN; section
14790 \DeclareTextCommand{\textsection}{PD1}{\247}% U+00A7
14791 % U+00A8 DIAERESIS; dieresis
14792 \DeclareTextCommand{\textasciidieresis}{PD1}{\250}% U+00A8
14793 % U+00A9 COPYRIGHT SIGN; copyright
14794 \DeclareTextCommand{\textcopyright}{PD1}{\251}% U+00A9
14795 % U+00AA FEMININE ORDINAL INDICATOR; ordfeminine
14796 \DeclareTextCommand{\textordfeminine}{PD1}{\252}% U+00AA
14797 % U+00AB LEFT-POINTING DOUBLE ANGLE QUOTATION MARK; guillemetleft
14798 \DeclareTextCommand{\guillemotleft}{PD1}{\253}% U+00AB
14799 \DeclareTextCommand{\guillemetleft}{PD1}{\253}% U+00AB
14800 % U+00AC NOT SIGN; logicalnot
14801 \DeclareTextCommand{\textlogicalnot}{PD1}{\254}% U+00AC
14802 \DeclareTextCommand{\textlnot}{PD1}{\254}% logical not
No glyph \255 in PDFDocEncoding.
14803 % U+00AE REGISTERED SIGN; registered
14804 \DeclareTextCommand{\textregistered}{PD1}{\256}% U+00AE
14805 % U+00AF MACRON; *macron, overscore
14806 \DeclareTextCommand{\textasciimacron}{PD1}{\257}% U+00AF
14807 % U+00B0 DEGREE SIGN; degree
14808 \DeclareTextCommand{\textdegree}{PD1}{\260}% U+00B0
14809 % U+00B1 PLUS-MINUS SIGN; plusminus
14810 \DeclareTextCommand{\textplusminus}{PD1}{\261}% U+00B1
14811 % U+00B2 SUPERSCRIPT TWO; twosuperior
14812 \DeclareTextCommand{\texttwosuperior}{PD1}{\262}%* U+00B2
14813 % U+00B3 SUPERSCRIPT THREE; threesuperior
14814 \DeclareTextCommand{\textthreesuperior}{PD1}{\263}%* U+00B3
14815 % U+00B4 ACUTE ACCENT; acute
14816 \DeclareTextCommand{\textacute}{PD1}{\264}% U+00B4
14817 % U+00B5 MICRO SIGN; mu, mu1
14818 \DeclareTextCommand{\textmu}{PD1}{\265}% U+00B5
14819 % U+00B6 PILCROW SIGN; paragraph
14820 \DeclareTextCommand{\textparagraph}{PD1}{\266}% U+00B6
14821 % U+00B7 MIDDLE DOT; middot, *periodcentered
14822 \DeclareTextCommand{\textperiodcentered}{PD1}{\267}% U+00B7
14823 % U+00B8 CEDILLA; cedilla
14824 \DeclareTextCommand{\textcedilla}{PD1}{\270}% U+00B8
14825 % U+00B9 SUPERSCRIPT ONE; onesuperior
14826 \DeclareTextCommand{\textonesuperior}{PD1}{\271}%* U+00B9
14827 % U+00BA MASCULINE ORDINAL INDICATOR; ordmasculine
14828 \DeclareTextCommand{\textordmasculine}{PD1}{\272}% U+00BA
14829 % U+00BB RIGHT-POINTING DOUBLE ANGLE QUOTATION MARK; guillemetright
14830 \DeclareTextCommand{\guillemotright}{PD1}{\273}% U+00BB
14831 \DeclareTextCommand{\guillemetright}{PD1}{\273}% U+00BB
14832 % U+00BC VULGAR FRACTION ONE QUARTER; onequarter
14833 \DeclareTextCommand{\textonequarter}{PD1}{\274}% U+00BC

14834 % U+00BD VULGAR FRACTION ONE HALF; onehalf
14835 \DeclareTextCommand{\textonehalf}{PD1}{\275}% U+00BD
14836 % U+00BE VULGAR FRACTION THREE QUARTERS; threequarters
14837 \DeclareTextCommand{\textthreequarters}{PD1}{\276}% U+00BE
14838 % U+00BF INVERTED QUESTION MARK; questiondown
14839 \DeclareTextCommand{\textquestiondown}{PD1}{\277}% U+00BF
14840 % U+00C0 LATIN CAPITAL LETTER A WITH GRAVE; Agrave
14841 \DeclareTextCompositeCommand{\`}{PD1}{A}{\300}% U+00C0
14842 % U+00C1 LATIN CAPITAL LETTER A WITH ACUTE; Aacute
14843 \DeclareTextCompositeCommand{\'}{PD1}{A}{\301}% U+00C1
14844 % U+00C2 LATIN CAPITAL LETTER A WITH CIRCUMFLEX; Acircumflex
14845 \DeclareTextCompositeCommand{\^}{PD1}{A}{\302}% U+00C2
14846 % U+00C3 LATIN CAPITAL LETTER A WITH TILDE; Atilde
14847 \DeclareTextCompositeCommand{\~}{PD1}{A}{\303}% U+00C3
14848 % U+00C4 LATIN CAPITAL LETTER A WITH DIAERESIS; Adieresis
14849 \DeclareTextCompositeCommand{\"}{PD1}{A}{\304}% U+00C4
14850 % U+00C5 LATIN CAPITAL LETTER A WITH RING ABOVE; Aring
14851 \DeclareTextCompositeCommand{\r}{PD1}{A}{\305}% U+00C5
14852 % U+00C6 LATIN CAPITAL LETTER AE; AE
14853 \DeclareTextCommand{\AE}{PD1}{\306}% U+00C6
14854 % U+00C7 LATIN CAPITAL LETTER C WITH CEDILLA; Ccedilla
14855 \DeclareTextCompositeCommand{\c}{PD1}{C}{\307}% U+00C7
14856 % U+00C8 LATIN CAPITAL LETTER E WITH GRAVE; Egrave
14857 \DeclareTextCompositeCommand{\`}{PD1}{E}{\310}% U+00C8
14858 % U+00C9 LATIN CAPITAL LETTER E WITH ACUTE; Eacute
14859 \DeclareTextCompositeCommand{\'}{PD1}{E}{\311}% U+00C9
14860 % U+00CA LATIN CAPITAL LETTER E WITH CIRCUMFLEX; Ecircumflex
14861 \DeclareTextCompositeCommand{\^}{PD1}{E}{\312}% U+00CA
14862 % U+00CB LATIN CAPITAL LETTER E WITH DIAERESIS; Edieresis
14863 \DeclareTextCompositeCommand{\"}{PD1}{E}{\313}% U+00CB
14864 % U+00CC LATIN CAPITAL LETTER I WITH GRAVE; Igrave
14865 \DeclareTextCompositeCommand{\`}{PD1}{I}{\314}% U+00CC
14866 % U+00CD LATIN CAPITAL LETTER I WITH ACUTE; Iacute
14867 \DeclareTextCompositeCommand{\'}{PD1}{I}{\315}% U+00CD
14868 % U+00CE LATIN CAPITAL LETTER I WITH CIRCUMFLEX; Icircumflex
14869 \DeclareTextCompositeCommand{\^}{PD1}{I}{\316}% U+00CE
14870 % U+00CF LATIN CAPITAL LETTER I WITH DIAERESIS; Idieresis
14871 \DeclareTextCompositeCommand{\"}{PD1}{I}{\317}% U+00CF
14872 % U+00D0 LATIN CAPITAL LETTER ETH; Eth
14873 \DeclareTextCommand{\DH}{PD1}{\320}% U+00D0
14874 \DeclareTextCommand{\DJ}{PD1}{\320}% U+00D0
14875 % U+00D1 LATIN CAPITAL LETTER N WITH TILDE; Ntilde
14876 \DeclareTextCompositeCommand{\~}{PD1}{N}{\321}% U+00D1
14877 % U+00D2 LATIN CAPITAL LETTER O WITH GRAVE; Ograve
14878 \DeclareTextCompositeCommand{\`}{PD1}{O}{\322}% U+00D2
14879 % U+00D3 LATIN CAPITAL LETTER O WITH ACUTE; Oacute
14880 \DeclareTextCompositeCommand{\'}{PD1}{O}{\323}% U+00D3
14881 % U+00D4 LATIN CAPITAL LETTER O WITH CIRCUMFLEX; Ocircumflex
14882 \DeclareTextCompositeCommand{\^}{PD1}{O}{\324}% U+00D4
14883 % U+00D5 LATIN CAPITAL LETTER O WITH TILDE; Otilde
14884 \DeclareTextCompositeCommand{\~}{PD1}{O}{\325}% U+00D5
14885 % U+00D6 LATIN CAPITAL LETTER O WITH DIAERESIS; Odieresis
14886 \DeclareTextCompositeCommand{\"}{PD1}{O}{\326}% U+00D6
14887 % U+00D7 MULTIPLICATION SIGN; multiply

14888 \DeclareTextCommand{\textmultiply}{PD1}{\327}% U+00D7
14889 % U+00D8 LATIN CAPITAL LETTER O WITH STROKE; Oslash
14890 \DeclareTextCommand{\O}{PD1}{\330}% U+00D8
14891 % U+00D9 LATIN CAPITAL LETTER U WITH GRAVE; Ugrave
14892 \DeclareTextCompositeCommand{\`}{PD1}{U}{\331}% U+00D9
14893 % U+00DA LATIN CAPITAL LETTER U WITH ACUTE; Uacute
14894 \DeclareTextCompositeCommand{\'}{PD1}{U}{\332}% U+00DA
14895 % U+00DB LATIN CAPITAL LETTER U WITH CIRCUMFLEX; Ucircumflex
14896 \DeclareTextCompositeCommand{\^}{PD1}{U}{\333}% U+00DB
14897 % U+00DC LATIN CAPITAL LETTER U WITH DIAERESIS; Udieresis
14898 \DeclareTextCompositeCommand{\"}{PD1}{U}{\334}% U+00DC
14899 % U+00DD LATIN CAPITAL LETTER Y WITH ACUTE; Yacute
14900 \DeclareTextCompositeCommand{\'}{PD1}{Y}{\335}% U+00DD
14901 % U+00DE LATIN CAPITAL LETTER THORN; Thorn; \TH, \Thorn (wasysym)
14902 \DeclareTextCommand{\TH}{PD1}{\336}% U+00DE
14903 \DeclareTextCommand{\textThorn}{PD1}{\336}%* U+00DE
14904 % U+00DF LATIN SMALL LETTER SHARP S; germandbls
14905 \DeclareTextCommand{\ss}{PD1}{\337}% U+00DF
14906 % U+00E0 LATIN SMALL LETTER A WITH GRAVE; agrave
14907 \DeclareTextCompositeCommand{\`}{PD1}{a}{\340}% U+00E0
14908 % U+00E1 LATIN SMALL LETTER A WITH ACUTE; aacute
14909 \DeclareTextCompositeCommand{\'}{PD1}{a}{\341}% U+00E1
14910 % U+00E2 LATIN SMALL LETTER A WITH CIRCUMFLEX; acircumflex
14911 \DeclareTextCompositeCommand{\^}{PD1}{a}{\342}% U+00E2
14912 % U+00E3 LATIN SMALL LETTER A WITH TILDE; atilde
14913 \DeclareTextCompositeCommand{\~}{PD1}{a}{\343}% U+00E3
14914 % U+00E4 LATIN SMALL LETTER A WITH DIAERESIS; adieresis
14915 \DeclareTextCompositeCommand{\"}{PD1}{a}{\344}% U+00E4
14916 % U+00E5 LATIN SMALL LETTER A WITH RING ABOVE; aring
14917 \DeclareTextCompositeCommand{\r}{PD1}{a}{\345}% U+00E5
14918 % U+00E6 LATIN SMALL LETTER AE; ae
14919 \DeclareTextCommand{\ae}{PD1}{\346}% U+00E6
14920 % U+00E7 LATIN SMALL LETTER C WITH CEDILLA; ccedilla
14921 \DeclareTextCompositeCommand{\c}{PD1}{c}{\347}% U+00E7
14922 % U+00E8 LATIN SMALL LETTER E WITH GRAVE; egrave
14923 \DeclareTextCompositeCommand{\`}{PD1}{e}{\350}% U+00E8
14924 % U+00E9 LATIN SMALL LETTER E WITH ACUTE; eacute
14925 \DeclareTextCompositeCommand{\'}{PD1}{e}{\351}% U+00E9
14926 % U+00EA LATIN SMALL LETTER E WITH CIRCUMFLEX; ecircumflex
14927 \DeclareTextCompositeCommand{\^}{PD1}{e}{\352}% U+00EA
14928 % U+00EB LATIN SMALL LETTER E WITH DIAERESIS; edieresis
14929 \DeclareTextCompositeCommand{\"}{PD1}{e}{\353}% U+00EB
14930 % U+00EC LATIN SMALL LETTER I WITH GRAVE; igrave
14931 \DeclareTextCompositeCommand{\`}{PD1}{i}{\354}% U+00EC
14932 \DeclareTextCompositeCommand{\'}{PD1}{i}{\354}% U+00EC
14933 % U+00ED LATIN SMALL LETTER I WITH ACUTE; iacute
14934 \DeclareTextCompositeCommand{\'}{PD1}{i}{\355}% U+00ED
14935 \DeclareTextCompositeCommand{\'}{PD1}{i}{\355}% U+00ED
14936 % U+00EE LATIN SMALL LETTER I WITH CIRCUMFLEX; icircumflex
14937 \DeclareTextCompositeCommand{\^}{PD1}{i}{\356}% U+00EE
14938 \DeclareTextCompositeCommand{\^}{PD1}{i}{\356}% U+00EE
14939 % U+00EF LATIN SMALL LETTER I WITH DIAERESIS; idieresis
14940 \DeclareTextCompositeCommand{\"}{PD1}{i}{\357}% U+00EF
14941 \DeclareTextCompositeCommand{\"}{PD1}{i}{\357}% U+00EF

14942 % U+00F0 LATIN SMALL LETTER ETH; eth
14943 \DeclareTextCommand{\dh}{PD1}{\360}% U+00F0
14944 % U+00F1 LATIN SMALL LETTER N WITH TILDE; ntilde
14945 \DeclareTextCompositeCommand{\~}{PD1}{n}{\361}% U+00F1
14946 % U+00F2 LATIN SMALL LETTER O WITH GRAVE; ograve
14947 \DeclareTextCompositeCommand{\`}{PD1}{o}{\362}% U+00F2
14948 % U+00F3 LATIN SMALL LETTER O WITH ACUTE; oacute
14949 \DeclareTextCompositeCommand{\'}{PD1}{o}{\363}% U+00F3
14950 % U+00F4 LATIN SMALL LETTER O WITH CIRCUMFLEX; ocircumflex
14951 \DeclareTextCompositeCommand{\^}{PD1}{o}{\364}% U+00F4
14952 % U+00F5 LATIN SMALL LETTER O WITH TILDE; otilde
14953 \DeclareTextCompositeCommand{\~}{PD1}{o}{\365}% U+00F5
14954 % U+00F6 LATIN SMALL LETTER O WITH DIAERESIS; odieresis
14955 \DeclareTextCompositeCommand{\\"}{PD1}{o}{\366}% U+00F6
14956 % U+00F7 DIVISION SIGN; divide
14957 \DeclareTextCommand{\textdivide}{PD1}{\367}% U+00F7
14958 % U+00F8 LATIN SMALL LETTER O WITH STROKE; oslash
14959 \DeclareTextCommand{\o}{PD1}{\370}% U+00F8
14960 % U+00F9 LATIN SMALL LETTER U WITH GRAVE; ugrave
14961 \DeclareTextCompositeCommand{\`}{PD1}{u}{\371}% U+00F9
14962 % U+00FA LATIN SMALL LETTER U WITH ACUTE; uacute
14963 \DeclareTextCompositeCommand{\'}{PD1}{u}{\372}% U+00FA
14964 % U+00FB LATIN SMALL LETTER U WITH CIRCUMFLEX; ucircumflex
14965 \DeclareTextCompositeCommand{\^}{PD1}{u}{\373}% U+00FB
14966 % U+00FC LATIN SMALL LETTER U WITH DIAERESIS; udieresis
14967 \DeclareTextCompositeCommand{\\"}{PD1}{u}{\374}% U+00FC
14968 % U+00FD LATIN SMALL LETTER Y WITH ACUTE; yacute
14969 \DeclareTextCompositeCommand{\'}{PD1}{y}{\375}% U+00FD
14970 % U+00FE LATIN SMALL LETTER THORN; thorn; \th, \thorn (wasysym)
14971 \DeclareTextCommand{\th}{PD1}{\376}% U+00FE
14972 \DeclareTextCommand{\textthorn}{PD1}{\376}%* U+00FE
14973 % U+00FF LATIN SMALL LETTER Y WITH DIAERESIS; ydieresis
14974 \DeclareTextCompositeCommand{\\"}{PD1}{y}{\377}% U+00FF
14975 \DeclareTextCommand{\ij}{PD1}{ij}% ligature U+0069 U+006A

Glyphs that consist of several characters.
14976 \DeclareTextCommand{\SS}{PD1}{SS}%
14977 \DeclareTextCommand{\textcelsius}{PD1}{\textdegree C}%

Aliases (german.sty)
14978 \DeclareTextCommand{\textglqq}{PD1}{\quotedblbase}%
14979 \DeclareTextCommand{\textgrqq}{PD1}{\textquotedblleft}%
14980 \DeclareTextCommand{\textglq}{PD1}{\quotesinglbase}%
14981 \DeclareTextCommand{\textgrq}{PD1}{\textquoteleft}%
14982 \DeclareTextCommand{\textflqq}{PD1}{\guillemetleft}%
14983 \DeclareTextCommand{\textfrqq}{PD1}{\guillemetright}%
14984 \DeclareTextCommand{\textflq}{PD1}{\guilsinglleft}%
14985 \DeclareTextCommand{\textfrq}{PD1}{\guilsinglright}%

Aliases (math names)
14986 \DeclareTextCommand{\textneg}{PD1}{\textlogicalnot}%
14987 \DeclareTextCommand{\texttimes}{PD1}{\textmultiply}%
14988 \DeclareTextCommand{\textdiv}{PD1}{\textdivide}%
14989 \DeclareTextCommand{\textpm}{PD1}{\textplusminus}%
14990 \DeclareTextCommand{\textcdot}{PD1}{\textperiodcentered}%
14991 \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).

```

14992 \DeclareTextCompositeCommand{\k}{PD1}{a}{a}% aogonek
14993 \DeclareTextCompositeCommand{\'}{PD1}{c}{c}% cacute
14994 \DeclareTextCompositeCommand{\k}{PD1}{e}{e}% eogonek
14995 \DeclareTextCompositeCommand{\'}{PD1}{n}{n}% nacute
14996 \DeclareTextCompositeCommand{\'}{PD1}{s}{s}% sacute
14997 \DeclareTextCompositeCommand{\'}{PD1}{z}{z}% zacute
14998 \DeclareTextCompositeCommand{\.}{PD1}{z}{z}% zdot
14999 \DeclareTextCompositeCommand{\k}{PD1}{A}{A}% Aogonek
15000 \DeclareTextCompositeCommand{\'}{PD1}{C}{C}% Cacute
15001 \DeclareTextCompositeCommand{\k}{PD1}{E}{E}% Eogonek
15002 \DeclareTextCompositeCommand{\'}{PD1}{N}{N}% Nacute
15003 \DeclareTextCompositeCommand{\'}{PD1}{S}{S}% Sacute
15004 \DeclareTextCompositeCommand{\'}{PD1}{Z}{Z}% Zacute
15005 \DeclareTextCompositeCommand{\.}{PD1}{Z}{Z}% Zdot
15006 </pd1enc>

```

47.2 PU encoding

```

15007 (*puenc)
15008 \DeclareFontEncoding{PU}{}{}

```

47.2.1 NFSS2 accents

```

15009 % U+0300 COMBINING GRAVE ACCENT; gravecmb, *gravecomb
15010 \DeclareTextCommand{\`}{PU}[1]{#1\83\000}% U+0300
15011 % U+0301 COMBINING ACUTE ACCENT; acutecmb, *acutecomb
15012 \DeclareTextCommand{\'}{PU}[1]{#1\83\001}% U+0301
15013 % U+0302 COMBINING CIRCUMFLEX ACCENT; circumflexcmb
15014 \DeclareTextCommand{\^}{PU}[1]{#1\83\002}% U+0302
15015 % U+0303 COMBINING TILDE; tildecmb, *tildecmb
15016 \DeclareTextCommand{\~}{PU}[1]{#1\83\003}% U+0303
15017 % U+0304 COMBINING MACRON; macroncmb
15018 \DeclareTextCommand{\=}{PU}[1]{#1\83\004}% U+0304
15019 % U+0306 COMBINING BREVE; brevecmb
15020 \DeclareTextCommand{\u}{PU}[1]{#1\83\006}% U+0306
15021 \ifx\CYRDZE@undefined \else
15022 \DeclareTextCommand{\U}{PU}[1]{#1\83\006}% U+0306
15023 \fi
15024 % U+0307 COMBINING DOT ABOVE; dotaccentcmb
15025 \DeclareTextCommand{\.}{PU}[1]{#1\83\007}% U+0307
15026 % U+0308 COMBINING DIAERESIS; dieresiscmb
15027 \DeclareTextCommand{\"}{PU}[1]{#1\83\010}% U+0308
15028 % U+030A COMBINING RING ABOVE; ringcmb
15029 \DeclareTextCommand{\r}{PU}[1]{#1\83\012}% U+030A
15030 % U+030B COMBINING DOUBLE ACUTE ACCENT; hungarumlautcmb
15031 \DeclareTextCommand{\H}{PU}[1]{#1\83\013}% U+030B
15032 % U+030C COMBINING CARON; caroncmb
15033 \DeclareTextCommand{\v}{PU}[1]{#1\83\014}% U+030C
15034 </puenc>
15035 % U+030F COMBINING DOUBLE GRAVE ACCENT; dblgravecmb
15036 (puextra)\DeclareTextCommand{\G}{PU}[1]{#1\83\017}% U+030F
15037 (*puenc)

```

```

15038 \ifx\CYRDZE\@undefined \else
15039 \DeclareTextCommand{\C}{PU}[1]{#1\83\017}% U+030F
15040 \fi
15041 % U+0311 COMBINING INVERTED BREVE; breveinvertedcmb
15042 \DeclareTextCommand{\textinvbreve}{PU}[1]{#1\83\021}% U+0311
15043 \DeclareTextCommand{\newtie}{PU}[1]{#1\83\021}% U+0311
15044 % U+0323 COMBINING DOT BELOW; dotbelowcmb, *dotbelowcmb
15045 \DeclareTextCommand{\d}{PU}[1]{#1\83\043}% U+0323
15046 % U+0324 COMBINING DIAERESIS BELOW; dieresisbelowcmb; \textsubum-
    laut (tipa)
15047 \DeclareTextCommand{\textsubumlaut}{PU}[1]{#1\83\044}% U+0324
15048 % U+0325 COMBINING RING BELOW; ringbelowcmb; \textsubring (tipa)
15049 \DeclareTextCommand{\textsubring}{PU}[1]{#1\83\045}% U+0325
15050 % U+0327 COMBINING CEDILLA; cedillacmb
15051 \DeclareTextCommand{\c}{PU}[1]{#1\83\047}% U+0327
15052 % U+0328 COMBINING OGONEK; ogonekcmb
15053 \DeclareTextCommand{\k}{PU}[1]{#1\83\050}% U+0328
15054 % U+032D COMBINING CIRCUMFLEX ACCENT BELOW;
15055 % \textsubcircum (tipa)
15056 \DeclareTextCommand{\textsubcircum}{PU}[1]{#1\83\055}% U+032D
15057 % U+032E COMBINING BREVE BELOW; brevebelowcmb
15058 \DeclareTextCommand{\textsubbreve}{PU}[1]{#1\83\056}% U+032E
15059 % U+0330 COMBINING TILDE BELOW; tildebelowcmb; \textsubtilde (tipa)
15060 \DeclareTextCommand{\textsubtilde}{PU}[1]{#1\83\060}% U+0330
15061 % U+0331 COMBINING MACRON BELOW; macronbelowcmb
15062 \DeclareTextCommand{\b}{PU}[1]{#1\83\061}% U+0331
15063 % U+0361 COMBINING DOUBLE INVERTED BREVE; breveinverteddou-
    blecmb
15064 \DeclareTextCommand{\t}{PU}[1]{#1\83\141}% U+0361
15065 % U+20DD COMBINING ENCLOSING CIRCLE
15066 \DeclareTextCommand{\textcircled}{PU}[1]{#1\9040\335}% U+20DD

```

Double accents.

```

15067 \DeclareTextCommand{\textacutemacron}{PU}[1]{#1\83\001\83\004}% U+0301 U+0304
15068 \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.

```

15069 \DeclareTextCompositeCommand{\`}{PU}{\@empty}{\textasciigrave}%
15070 \DeclareTextCompositeCommand{\'}{PU}{\@empty}{\textacute}%
15071 \DeclareTextCompositeCommand{\^}{PU}{\@empty}{\textasciicircum}%
15072 \DeclareTextCompositeCommand{\~}{PU}{\@empty}{\texttilde}%
15073 \DeclareTextCompositeCommand{\"}{PU}{\@empty}{\textasciidieresis}%
15074 \DeclareTextCompositeCommand{\r}{PU}{\@empty}{\textring}%
15075 \DeclareTextCompositeCommand{\v}{PU}{\@empty}{\textasciicaron}%
15076 \DeclareTextCompositeCommand{\.}{PU}{\@empty}{\textdotaccent}%
15077 \DeclareTextCompositeCommand{\c}{PU}{\@empty}{\textcedilla}%
15078 \DeclareTextCompositeCommand{\u}{PU}{\@empty}{\textasciibreve}%
15079 </puenc>
15080 <puextra>\DeclareTextCompositeCommand{\G}{PU}{\@empty}{\textdoublegrave}%
15081 <*puenc>
15082 \DeclareTextCompositeCommand{\=}{PU}{\@empty}{\textasciimacron}%
15083 \DeclareTextCompositeCommand{\H}{PU}{\@empty}{\texthungarumlaut}%
15084 \DeclareTextCompositeCommand{\k}{PU}{\@empty}{\textogonek}%
15085 \DeclareTextCompositeCommand{\textinvbreve}{PU}{\@empty}{\83\021}% U+0311

```

15086 \DeclareTextCompositeCommand{\textsubumlaut}{PU}{\@empty}{\ \83\044}}% U+0324
15087 \DeclareTextCompositeCommand{\textsubring}{PU}{\@empty}{\textringlow}%
15088 \DeclareTextCompositeCommand{\textsubcircum}{PU}{\@empty}{\textcirc-
low}%
15089 \DeclareTextCompositeCommand{\textsubbreve}{PU}{\@empty}{\ \83\056}}% U+032E
15090 \DeclareTextCompositeCommand{\textsubtilde}{PU}{\@empty}{\texttildelow}%
15091 \DeclareTextCompositeCommand{\b}{PU}{\@empty}{\textmacronbelow}%
15092 \DeclareTextCompositeCommand{\d}{PU}{\@empty}{\textdotbelow}%
15093 \DeclareTextCompositeCommand{\t}{PU}{\@empty}{\texttie}%
15094 \DeclareTextCompositeCommand{\newtie}{PU}{\@empty}{\textnewtie}%
15095 \DeclareTextCompositeCommand{\textcircled}{PU}{\@empty}{\textbigcircle}%
15096 \DeclareTextCompositeCommand{\textacutemacron}{PU}{\@empty}{\ \83\001\83\004}}% U+0301 U
15097 \DeclareTextCompositeCommand{\textgravemacron}{PU}{\@empty}{\ \83\000\83\004}}% U+0300 U
15098 \DeclareTextCompositeCommand{\`}{PU}{\ }{\textasciigrave}%
15099 \DeclareTextCompositeCommand{\'}{PU}{\ }{\textacute}%
15100 \DeclareTextCompositeCommand{\^}{PU}{\ }{\textasciicircum}%
15101 \DeclareTextCompositeCommand{\~}{PU}{\ }{\texttilde}%
15102 \DeclareTextCompositeCommand{\"}{PU}{\ }{\textasciidieresis}%
15103 \DeclareTextCompositeCommand{\r}{PU}{\ }{\textring}%
15104 \DeclareTextCompositeCommand{\v}{PU}{\ }{\textasciicaron}%
15105 \DeclareTextCompositeCommand{\.}{PU}{\ }{\textdotaccent}%
15106 \DeclareTextCompositeCommand{\c}{PU}{\ }{\textcedilla}%
15107 \DeclareTextCompositeCommand{\u}{PU}{\ }{\textasciibreve}%
15108 (/puenc)
15109 (puextra)\DeclareTextCompositeCommand{\G}{PU}{\ }{\textdoublegrave}%
15110 (*puenc)
15111 \DeclareTextCompositeCommand{\=}{PU}{\ }{\textasciimacron}%
15112 \DeclareTextCompositeCommand{\H}{PU}{\ }{\texthungarumlaut}%
15113 \DeclareTextCompositeCommand{\k}{PU}{\ }{\textogonek}%
15114 \DeclareTextCompositeCommand{\textinvbreve}{PU}{\ }{\ \83\021}}% U+0311
15115 \DeclareTextCompositeCommand{\textsubumlaut}{PU}{\ }{\ \83\044}}% U+0324
15116 \DeclareTextCompositeCommand{\textsubring}{PU}{\ }{\textringlow}%
15117 \DeclareTextCompositeCommand{\textsubcircum}{PU}{\ }{\textcircumlow}%
15118 \DeclareTextCompositeCommand{\textsubbreve}{PU}{\ }{\ \83\056}}% U+032E
15119 \DeclareTextCompositeCommand{\textsubtilde}{PU}{\ }{\texttildelow}%
15120 \DeclareTextCompositeCommand{\b}{PU}{\ }{\textmacronbelow}%
15121 \DeclareTextCompositeCommand{\d}{PU}{\ }{\textdotbelow}%
15122 \DeclareTextCompositeCommand{\t}{PU}{\ }{\texttie}%
15123 \DeclareTextCompositeCommand{\newtie}{PU}{\ }{\textnewtie}%
15124 \DeclareTextCompositeCommand{\textcircled}{PU}{\ }{\textbigcircle}%
15125 \DeclareTextCompositeCommand{\textacutemacron}{PU}{\ }{\ \83\001\83\004}}% U+0301 U+0304
15126 \DeclareTextCompositeCommand{\textgravemacron}{PU}{\ }{\ \83\000\83\004}}% U+0300 U+0304

Accents for capitals (see encoding TS1)
15127 \DeclareTextCommand{\capitalcedilla}{PU}[1]{\c{#1}}%
15128 \DeclareTextCommand{\capitalogonek}{PU}[1]{\k{#1}}%
15129 \DeclareTextCommand{\capitalgrave}{PU}[1]{\`{#1}}%
15130 \DeclareTextCommand{\capitalacute}{PU}[1]{\'{#1}}%
15131 \DeclareTextCommand{\capitalcircumflex}{PU}[1]{\^{#1}}%
15132 \DeclareTextCommand{\capitaltilde}{PU}[1]{\~{#1}}%
15133 \DeclareTextCommand{\capitaldieresis}{PU}[1]{\"}{#1}}%
15134 \DeclareTextCommand{\capitalhungarumlaut}{PU}[1]{\H{#1}}%
15135 \DeclareTextCommand{\capitalring}{PU}[1]{\r{#1}}%
15136 \DeclareTextCommand{\capitalcaron}{PU}[1]{\v{#1}}%

15137 \DeclareTextCommand{\capitalbreve}{PU}[1]{\u{#1}}%
 15138 \DeclareTextCommand{\capitalmacron}{PU}[1]{\={#1}}%
 15139 \DeclareTextCommand{\capitaldotaccent}{PU}[1]{\.\{#1}}%
 15140 \DeclareTextCommand{\capitaltie}{PU}[1]{\t{#1}}%
 15141 \DeclareTextCommand{\capitalnewtie}{PU}[1]{\newtie{#1}}%

47.2.2 Basic Latin: U+0000 to U+007F

Special white space escape characters.

15142 % U+0009 (CHARACTER TABULATION)
 15143 \DeclareTextCommand{\textHT}{PU}{\80\011}% U+0009
 15144 % U+000A (LINE FEED)
 15145 \DeclareTextCommand{\textLF}{PU}{\80\012}% U+000A
 15146 % U+000D (CARRIAGE RETURN)
 15147 \DeclareTextCommand{\textCR}{PU}{\80\015}% U+000D
 \80\040: U+0020 SPACE; space, spacehackarabic
 \80\041: U+0021 EXCLAMATION MARK; exclam
 15148 % U+0022 QUOTATION MARK; quotedbl
 15149 \DeclareTextCommand{\textquotedbl}{PU}{"}% \80\042 U+0022
 15150 % U+0023 NUMBER SIGN; numbersign
 15151 \DeclareTextCommand{\textnumbersign}{PU}{\80\043}% U+0023
 15152 % U+0024 DOLLAR SIGN; dollar
 15153 \DeclareTextCommand{\textdollar}{PU}{\80\044}% U+0024
 15154 %* \textdollar -> \mathdollar
 15155 %* \textdollar -> \EyesDollar (marvosym)
 15156 % U+0025 PERCENT SIGN; percent
 15157 \DeclareTextCommand{\textpercent}{PU}{\80\045}% U+0025
 15158 % U+0026 AMPERSAND; ampersand
 15159 \DeclareTextCommand{\textampersand}{PU}{\80\046}% U+0026
 15160 %* \textampersand -> \binampersand (stmaryrd)
 15161 %* \textampersand -> \with (cml)
 15162 % U+0027 APOSTROPHE; quotesingle
 15163 \DeclareTextCommand{\textquotesingle}{PU}{\80\047}% U+0027
 15164 % U+0028 LEFT PARENTHESIS; parenleft
 15165 \DeclareTextCommand{\textparenleft}{PU}{\80\050}% U+0028
 15166 % U+0029 RIGHT PARENTHESIS; parenright
 15167 \DeclareTextCommand{\textparenright}{PU}{\80\051}% U+0029
 15168 % U+002A ASTERISK; asterisk; (?)
 15169 \DeclareTextCommand{\textasteriskcentered}{PU}{\80\052}% U+002A
 15170 % U+002B PLUS SIGN; plus; \MVPlus (marvosym)
 15171 \DeclareTextCommand{\textMVPlus}{PU}{\80\053}%* U+002B
 15172 % U+002C COMMA; comma; \MVComma (marvosym)
 15173 \DeclareTextCommand{\textMVComma}{PU}{\80\054}%* U+002C
 15174 % U+002D HYPHEN-MINUS; hyphen; \MVMinus (marvosym)
 15175 \DeclareTextCommand{\textMVMinus}{PU}{\80\055}%* U+002D
 15176 % U+002E FULL STOP; period; \MVPeriod (marvosym)
 15177 \DeclareTextCommand{\textMVPeriod}{PU}{\80\056}%* U+002E
 15178 % U+002F SOLIDUS; slash; \MVDivision (marvosym)
 15179 \DeclareTextCommand{\textMVDivision}{PU}{\80\057}%* U+002F
 15180 % U+0030 DIGIT ZERO; zero; \MVZero (marvosym)
 15181 \DeclareTextCommand{\textMVZero}{PU}{\80\060}%* U+0030
 15182 % U+0031 DIGIT ONE; one; \MVOne (marvosym)
 15183 \DeclareTextCommand{\textMVOne}{PU}{\80\061}%* U+0031
 15184 % U+0032 DIGIT TWO; two; \MVTwo (marvosym)

15185 \DeclareTextCommand{\textMVTwo}{PU}{\80\062}%* U+0032
15186 % U+0033 DIGIT THREE; three; \MVThree (marvosym)
15187 \DeclareTextCommand{\textMVThree}{PU}{\80\063}%* U+0033
15188 % U+0034 DIGIT FOUR; four; \MVFour (marvosym)
15189 \DeclareTextCommand{\textMVFour}{PU}{\80\064}%* U+0034
15190 % U+0035 DIGIT FIVE; five; \MVFive (marvosym)
15191 \DeclareTextCommand{\textMVFive}{PU}{\80\065}%* U+0035
15192 % U+0036 DIGIT SIX; six; \MVSix (marvosym)
15193 \DeclareTextCommand{\textMVSix}{PU}{\80\066}%* U+0036
15194 % U+0037 DIGIT SEVEN; seven; \MVSeven (marvosym)
15195 \DeclareTextCommand{\textMVSeven}{PU}{\80\067}%* U+0037
15196 % U+0038 DIGIT EIGHT; eight; \MVEight (marvosym)
15197 \DeclareTextCommand{\textMVEight}{PU}{\80\070}%* U+0038
15198 % U+0039 DIGIT NINE; nine; \MVNine (marvosym)
15199 \DeclareTextCommand{\textMVNine}{PU}{\80\071}%* U+0039
\80\072: U+003A COLON; colon
\80\073: U+003B SEMICOLON; semicolon
15200 % U+003C LESS-THAN SIGN; less
15201 \DeclareTextCommand{\textless}{PU}{<}% \80\074 U+003C
\80\075: U+003D EQUALS SIGN; equal
15202 % U+003E GREATER-THAN SIGN; greater
15203 \DeclareTextCommand{\textgreater}{PU}{>}% \80\076 U+003E
\80\077: U+003F QUESTION MARK; question
15204 % U+0040 COMMERCIAL AT; at; \MVAt (marvosym)
15205 \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
15206 % U+005C REVERSE SOLIDUS; backslash
15207 \DeclareTextCommand{\textbackslash}{PU}{\80\134}% U+005C
\80\135: U+005D RIGHT SQUARE BRACKET; bracketright
15208 % U+005E CIRCUMFLEX ACCENT; asciicircum
15209 \DeclareTextCommand{\textasciicircum}{PU}{\80\136}% U+005E
15210 % U+005F LOW LINE; underscore
15211 \DeclareTextCommand{\textunderscore}{PU}{\80\137}% U+005F
15212 %* \textunderscore -> \mathunderscore (LaTeX)
15213 % U+0060 GRAVE ACCENT; grave
15214 \DeclareTextCommand{\textasciigrave}{PU}{\80\140}% U+0060
\80\141: U+0061 LATIN SMALL LETTER A; a
...
\80\150: U+0068 LATIN SMALL LETTER H; h
15215 % U+0069 LATIN SMALL LETTER I; i
15216 \DeclareTextCompositeCommand{\.}{PU}{\i}{i}% \80\151 U+0069
15217 \DeclareTextCompositeCommand{\.}{PU}{\i}{i}% \80\151 U+0069
\80\152: U+006A LATIN SMALL LETTER J; j
...
\80\172: U+007A LATIN SMALL LETTER Z; z
15218 % U+007B LEFT CURLY BRACKET; braceleft

15219 \DeclareTextCommand{\textbraceleft}{PU}{\80\173}% U+007B
15220 % U+007C VERTICAL LINE; *bar, verticalbar
15221 \DeclareTextCommand{\textbar}{PU}{|}% \80\174 U+007C
15222 %* \textbar -> \textverline (tipa)
15223 % U+007D RIGHT CURLY BRACKET; braceright
15224 \DeclareTextCommand{\textbraceright}{PU}{\80\175}% U+007D
15225 % U+007E TILDE; asciitilde
15226 \DeclareTextCommand{\textasciitilde}{PU}{\80\176}% U+007E

47.2.3 Latin-1 Supplement: U+0080 to U+00FF

\80\240: U+00A0 NO-BREAK SPACE; nbspace, nonbreakingspace
15227 % U+00A1 INVERTED EXCLAMATION MARK; exclamdown
15228 \DeclareTextCommand{\textexclamdown}{PU}{\80\241}% U+00A1
15229 % U+00A2 CENT SIGN; cent
15230 \DeclareTextCommand{\textcent}{PU}{\80\242}% U+00A2
15231 % U+00A3 POUND SIGN; sterling
15232 \DeclareTextCommand{\textsterling}{PU}{\80\243}% U+00A3
15233 %* \textsterling -> \mathsterling (LaTeX)
15234 %* \textsterling -> \pounds (LaTeX)
15235 % U+00A4 CURRENCY SIGN; currency
15236 \DeclareTextCommand{\textcurrency}{PU}{\80\244}% U+00A4
15237 % U+00A5 YEN SIGN; yen
15238 \DeclareTextCommand{\textyen}{PU}{\80\245}% U+00A5
15239 % U+00A6 BROKEN BAR; brokenbar
15240 \DeclareTextCommand{\textbrokenbar}{PU}{\80\246}% U+00A6
15241 %* \textbrokenbar -> \brokenvert (wasysym)
15242 % U+00A7 SECTION SIGN; section
15243 \DeclareTextCommand{\textsection}{PU}{\80\247}% U+00A7
15244 %* \textsection -> \mathsection (LaTeX)
15245 %* \textsection -> \S (LaTeX)
15246 % U+00A8 DIAERESIS; diaeresis
15247 \DeclareTextCommand{\textasciidieresis}{PU}{\80\250}% U+00A8
15248 % U+00A9 COPYRIGHT SIGN; copyright
15249 \DeclareTextCommand{\textcopyright}{PU}{\80\251}%* U+00A9
15250 % U+00AA FEMININE ORDINAL INDICATOR; ordfeminine
15251 \DeclareTextCommand{\textordfeminine}{PU}{\80\252}% U+00AA
15252 % U+00AB LEFT-POINTING DOUBLE ANGLE QUOTATION MARK; guillemetleft
15253 \DeclareTextCommand{\guillemotleft}{PU}{\80\253}% U+00AB
15254 \DeclareTextCommand{\guillemetleft}{PU}{\80\253}% U+00AB
15255 % U+00AC NOT SIGN; logicalnot
15256 \DeclareTextCommand{\textlogicalnot}{PU}{\80\254}% U+00AC
15257 \DeclareTextCommand{\textlnot}{PU}{\80\254}% U+00AC
\80\255: U+00AD SOFT HYPHEN; sfthyphen, softthyphen
15258 % U+00AE REGISTERED SIGN; registered
15259 \DeclareTextCommand{\textregistered}{PU}{\80\256}% U+00AE
15260 % U+00AF MACRON; *macron, overscore
15261 \DeclareTextCommand{\textasciimacron}{PU}{\80\257}% U+00AF
15262 % U+00B0 DEGREE SIGN; degree
15263 \DeclareTextCommand{\textdegree}{PU}{\80\260}% U+00B0
15264 % U+00B1 PLUS-MINUS SIGN; plusminus
15265 \DeclareTextCommand{\textplusminus}{PU}{\80\261}% U+00B1
15266 % U+00B2 SUPERSCRIPT TWO; twosuperior

15267 \DeclareTextCommand{\texttwosuperior}{PU}{\80\262}%* U+00B2
15268 % U+00B3 SUPERSCRIPT THREE; threesuperior
15269 \DeclareTextCommand{\textthreesuperior}{PU}{\80\263}%* U+00B3
15270 % U+00B4 ACUTE ACCENT; acute
15271 \DeclareTextCommand{\textacute}{PU}{\80\264}% U+00B4
15272 \DeclareTextCommand{\textasciiacute}{PU}{\80\264}% U+00B4
15273 % U+00B5 MICRO SIGN; mu, mu1
15274 \DeclareTextCommand{\textmu}{PU}{\80\265}% U+00B5
15275 % U+00B6 PILCROW SIGN; paragraph
15276 \DeclareTextCommand{\textparagraph}{PU}{\80\266}% U+00B6
15277 %* \textparagraph -> \mathparagraph (LaTeX)
15278 % U+00B7 MIDDLE DOT; middot, *periodcentered
15279 \DeclareTextCommand{\textperiodcentered}{PU}{\80\267}% U+00B7
15280 %* \textperiodcentered -> \MultiplicationDot (marvosym)
15281 %* \textperiodcentered -> \Squaredot (marvosym)
15282 % U+00B8 CEDILLA; cedilla
15283 \DeclareTextCommand{\textcedilla}{PU}{\80\270}% U+00B8
15284 % U+00B9 SUPERSCRIPT ONE; onesuperior
15285 \DeclareTextCommand{\textonesuperior}{PU}{\80\271}%* U+00B9
15286 % U+00BA MASCULINE ORDINAL INDICATOR; ordmasculine
15287 \DeclareTextCommand{\textordmasculine}{PU}{\80\272}% U+00BA
15288 % U+00BB RIGHT-POINTING DOUBLE ANGLE QUOTATION MARK; guillemetright
15289 \DeclareTextCommand{\guillemotright}{PU}{\80\273}% U+00BB
15290 \DeclareTextCommand{\guillemetright}{PU}{\80\273}% U+00BB
15291 % U+00BC VULGAR FRACTION ONE QUARTER; onequarter
15292 \DeclareTextCommand{\textonequarter}{PU}{\80\274}% U+00BC
15293 % U+00BD VULGAR FRACTION ONE HALF; onehalf
15294 \DeclareTextCommand{\textonehalf}{PU}{\80\275}% U+00BD
15295 % U+00BE VULGAR FRACTION THREE QUARTERS; threequarters
15296 \DeclareTextCommand{\textthreequarters}{PU}{\80\276}% U+00BE
15297 % U+00BF INVERTED QUESTION MARK; questiondown
15298 \DeclareTextCommand{\textquestiondown}{PU}{\80\277}% U+00BF
15299 % U+00C0 LATIN CAPITAL LETTER A WITH GRAVE; Agrave
15300 \DeclareTextCompositeCommand{\`}{PU}{A}{\80\300}% U+00C0
15301 % U+00C1 LATIN CAPITAL LETTER A WITH ACUTE; Aacute
15302 \DeclareTextCompositeCommand{\'}{PU}{A}{\80\301}% U+00C1
15303 % U+00C2 LATIN CAPITAL LETTER A WITH CIRCUMFLEX; Acircumflex
15304 \DeclareTextCompositeCommand{\^}{PU}{A}{\80\302}% U+00C2
15305 % U+00C3 LATIN CAPITAL LETTER A WITH TILDE; Atilde
15306 \DeclareTextCompositeCommand{\~}{PU}{A}{\80\303}% U+00C3
15307 % U+00C4 LATIN CAPITAL LETTER A WITH DIAERESIS; Adieresis
15308 \DeclareTextCompositeCommand{\"}{PU}{A}{\80\304}% U+00C4
15309 % U+00C5 LATIN CAPITAL LETTER A WITH RING ABOVE; Aring
15310 \DeclareTextCompositeCommand{\r}{PU}{A}{\80\305}% U+00C5
15311 % U+00C6 LATIN CAPITAL LETTER AE; AE
15312 \DeclareTextCommand{\AE}{PU}{\80\306}% U+00C6
15313 % U+00C7 LATIN CAPITAL LETTER C WITH CEDILLA; Ccedilla
15314 \DeclareTextCompositeCommand{\c}{PU}{C}{\80\307}% U+00C7
15315 % U+00C8 LATIN CAPITAL LETTER E WITH GRAVE; Egrave
15316 \DeclareTextCompositeCommand{\`}{PU}{E}{\80\310}% U+00C8
15317 % U+00C9 LATIN CAPITAL LETTER E WITH ACUTE; Eacute
15318 \DeclareTextCompositeCommand{\'}{PU}{E}{\80\311}% U+00C9
15319 % U+00CA LATIN CAPITAL LETTER E WITH CIRCUMFLEX; Ecircumflex
15320 \DeclareTextCompositeCommand{\^}{PU}{E}{\80\312}% U+00CA

15321 % U+00CB LATIN CAPITAL LETTER E WITH DIAERESIS; Edieresis
15322 \DeclareTextCompositeCommand{"}{PU}{E}{\80\313}% U+00CB
15323 % U+00CC LATIN CAPITAL LETTER I WITH GRAVE; Igrave
15324 \DeclareTextCompositeCommand{"}{PU}{I}{\80\314}% U+00CC
15325 % U+00CD LATIN CAPITAL LETTER I WITH ACUTE; Iacute
15326 \DeclareTextCompositeCommand{"}{PU}{I}{\80\315}% U+00CD
15327 % U+00CE LATIN CAPITAL LETTER I WITH CIRCUMFLEX; Icircumflex
15328 \DeclareTextCompositeCommand{"}{PU}{I}{\80\316}% U+00CE
15329 % U+00CF LATIN CAPITAL LETTER I WITH DIAERESIS; Idieresis
15330 \DeclareTextCompositeCommand{"}{PU}{I}{\80\317}% U+00CF
15331 % U+00D0 LATIN CAPITAL LETTER ETH; Eth
15332 \DeclareTextCommand{\DH}{PU}{\80\320}% U+00D0
15333 % U+00D1 LATIN CAPITAL LETTER N WITH TILDE; Ntilde
15334 \DeclareTextCompositeCommand{"}{PU}{N}{\80\321}% U+00D1
15335 % U+00D2 LATIN CAPITAL LETTER O WITH GRAVE; Ograve
15336 \DeclareTextCompositeCommand{"}{PU}{O}{\80\322}% U+00D2
15337 % U+00D3 LATIN CAPITAL LETTER O WITH ACUTE; Oacute
15338 \DeclareTextCompositeCommand{"}{PU}{O}{\80\323}% U+00D3
15339 % U+00D4 LATIN CAPITAL LETTER O WITH CIRCUMFLEX; Ocircumflex
15340 \DeclareTextCompositeCommand{"}{PU}{O}{\80\324}% U+00D4
15341 % U+00D5 LATIN CAPITAL LETTER O WITH TILDE; Otilde
15342 \DeclareTextCompositeCommand{"}{PU}{O}{\80\325}% U+00D5
15343 % U+00D6 LATIN CAPITAL LETTER O WITH DIAERESIS; Odieresis
15344 \DeclareTextCompositeCommand{"}{PU}{O}{\80\326}% U+00D6
15345 % U+00D7 MULTIPLICATION SIGN; multiply
15346 \DeclareTextCommand{\textmultiply}{PU}{\80\327}% U+00D7
15347 %* \textmultiply -> \vartimes (stmaryrd)
15348 %* \textmultiply -> \MVMultiplication (marvosym)
15349 % U+00D8 LATIN CAPITAL LETTER O WITH STROKE; Oslash
15350 \DeclareTextCommand{\O}{PU}{\80\330}% U+00D8
15351 % U+00D9 LATIN CAPITAL LETTER U WITH GRAVE; Ugrave
15352 \DeclareTextCompositeCommand{"}{PU}{U}{\80\331}% U+00D9
15353 % U+00DA LATIN CAPITAL LETTER U WITH ACUTE; Uacute
15354 \DeclareTextCompositeCommand{"}{PU}{U}{\80\332}% U+00DA
15355 % U+00DB LATIN CAPITAL LETTER U WITH CIRCUMFLEX; Ucircumflex
15356 \DeclareTextCompositeCommand{"}{PU}{U}{\80\333}% U+00DB
15357 % U+00DC LATIN CAPITAL LETTER U WITH DIAERESIS; Udieresis
15358 \DeclareTextCompositeCommand{"}{PU}{U}{\80\334}% U+00DC
15359 % U+00DD LATIN CAPITAL LETTER Y WITH ACUTE; Yacute
15360 \DeclareTextCompositeCommand{"}{PU}{Y}{\80\335}% U+00DD
15361 % U+00DE LATIN CAPITAL LETTER THORN; Thorn; \TH, \Thorn (wasysym)
15362 \DeclareTextCommand{\TH}{PU}{\80\336}% U+00DE
15363 \DeclareTextCommand{\textThorn}{PU}{\80\336}%* U+00DE
15364 % U+00DF LATIN SMALL LETTER SHARP S; germandbls
15365 \DeclareTextCommand{\ss}{PU}{\80\337}% U+00DF
15366 % U+00E0 LATIN SMALL LETTER A WITH GRAVE; agrave
15367 \DeclareTextCompositeCommand{"}{PU}{a}{\80\340}% U+00E0
15368 % U+00E1 LATIN SMALL LETTER A WITH ACUTE; aacute
15369 \DeclareTextCompositeCommand{"}{PU}{a}{\80\341}% U+00E1
15370 % U+00E2 LATIN SMALL LETTER A WITH CIRCUMFLEX; acircumflex
15371 \DeclareTextCompositeCommand{"}{PU}{a}{\80\342}% U+00E2
15372 % U+00E3 LATIN SMALL LETTER A WITH TILDE; atilde
15373 \DeclareTextCompositeCommand{"}{PU}{a}{\80\343}% U+00E3
15374 % U+00E4 LATIN SMALL LETTER A WITH DIAERESIS; adieresis

15375 \DeclareTextCompositeCommand{\a}{PU}{a}{\80\344}% U+00E4
15376 % U+00E5 LATIN SMALL LETTER A WITH RING ABOVE; aring
15377 \DeclareTextCompositeCommand{\r}{PU}{a}{\80\345}% U+00E5
15378 % U+00E6 LATIN SMALL LETTER AE; ae
15379 \DeclareTextCommand{\ae}{PU}{\80\346}% U+00E6
15380 % U+00E7 LATIN SMALL LETTER C WITH CEDILLA; ccedilla
15381 \DeclareTextCompositeCommand{\c}{PU}{c}{\80\347}% U+00E7
15382 % U+00E8 LATIN SMALL LETTER E WITH GRAVE; egrave
15383 \DeclareTextCompositeCommand{\`}{PU}{e}{\80\350}% U+00E8
15384 % U+00E9 LATIN SMALL LETTER E WITH ACUTE; eacute
15385 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\351}% U+00E9
15386 % U+00EA LATIN SMALL LETTER E WITH CIRCUMFLEX; ecircumflex
15387 \DeclareTextCompositeCommand{\^}{PU}{e}{\80\352}% U+00EA
15388 % U+00EB LATIN SMALL LETTER E WITH DIAERESIS; edieresis
15389 \DeclareTextCompositeCommand{\"}{PU}{e}{\80\353}% U+00EB
15390 % U+00EC LATIN SMALL LETTER I WITH GRAVE; igrave
15391 \DeclareTextCompositeCommand{\`}{PU}{i}{\80\354}% U+00EC
15392 \DeclareTextCompositeCommand{\`}{PU}{i}{\80\354}% U+00EC
15393 % U+00ED LATIN SMALL LETTER I WITH ACUTE; iacute
15394 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}% U+00ED
15395 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}% U+00ED
15396 % U+00EE LATIN SMALL LETTER I WITH CIRCUMFLEX; icircumflex
15397 \DeclareTextCompositeCommand{\^}{PU}{i}{\80\356}% U+00EE
15398 \DeclareTextCompositeCommand{\^}{PU}{i}{\80\356}% U+00EE
15399 % U+00EF LATIN SMALL LETTER I WITH DIAERESIS; idieresis
15400 \DeclareTextCompositeCommand{\"}{PU}{i}{\80\357}% U+00EF
15401 \DeclareTextCompositeCommand{\"}{PU}{i}{\80\357}% U+00EF
15402 % U+00F0 LATIN SMALL LETTER ETH; eth
15403 \DeclareTextCommand{\dh}{PU}{\80\360}% U+00F0
15404 %* \dh -> \eth (wsuipa, phonetic)
15405 % U+00F1 LATIN SMALL LETTER N WITH TILDE; ntilde
15406 \DeclareTextCompositeCommand{\~}{PU}{n}{\80\361}% U+00F1
15407 % U+00F2 LATIN SMALL LETTER O WITH GRAVE; ograve
15408 \DeclareTextCompositeCommand{\`}{PU}{o}{\80\362}% U+00F2
15409 % U+00F3 LATIN SMALL LETTER O WITH ACUTE; oacute
15410 \DeclareTextCompositeCommand{\'}{PU}{o}{\80\363}% U+00F3
15411 % U+00F4 LATIN SMALL LETTER O WITH CIRCUMFLEX; ocircumflex
15412 \DeclareTextCompositeCommand{\^}{PU}{o}{\80\364}% U+00F4
15413 % U+00F5 LATIN SMALL LETTER O WITH TILDE; otilde
15414 \DeclareTextCompositeCommand{\~}{PU}{o}{\80\365}% U+00F5
15415 % U+00F6 LATIN SMALL LETTER O WITH DIAERESIS; odieresis
15416 \DeclareTextCompositeCommand{\"}{PU}{o}{\80\366}% U+00F6
15417 % U+00F7 DIVISION SIGN; divide
15418 \DeclareTextCommand{\textdivide}{PU}{\80\367}% U+00F7
15419 % U+00F8 LATIN SMALL LETTER O WITH STROKE; oslash
15420 \DeclareTextCommand{\o}{PU}{\80\370}% U+00F8
15421 % U+00F9 LATIN SMALL LETTER U WITH GRAVE; ugrave
15422 \DeclareTextCompositeCommand{\`}{PU}{u}{\80\371}% U+00F9
15423 % U+00FA LATIN SMALL LETTER U WITH ACUTE; uacute
15424 \DeclareTextCompositeCommand{\'}{PU}{u}{\80\372}% U+00FA
15425 % U+00FB LATIN SMALL LETTER U WITH CIRCUMFLEX; ucircumflex
15426 \DeclareTextCompositeCommand{\^}{PU}{u}{\80\373}% U+00FB
15427 % U+00FC LATIN SMALL LETTER U WITH DIAERESIS; udieresis
15428 \DeclareTextCompositeCommand{\"}{PU}{u}{\80\374}% U+00FC

15429 % U+00FD LATIN SMALL LETTER Y WITH ACUTE; yacute
15430 \DeclareTextCompositeCommand{\'}{PU}{y}{\80\375}% U+00FD
15431 % U+00FE LATIN SMALL LETTER THORN; thorn;
15432 % \th, \thorn (wasysym), \textthorn (tipa)
15433 \DeclareTextCommand{\th}{PU}{\80\376}% U+00FE
15434 \DeclareTextCommand{\textthorn}{PU}{\80\376}%* U+00FE
15435 % U+00FF LATIN SMALL LETTER Y WITH DIAERESIS; ydieresis
15436 \DeclareTextCompositeCommand{\"}{PU}{y}{\80\377}% U+00FF

47.2.4 Latin Extended-A: U+0080 to U+017F

15437 % U+0100 LATIN CAPITAL LETTER A WITH MACRON; Amacron
15438 \DeclareTextCompositeCommand{\=}{PU}{A}{\81\000}% U+0100
15439 % U+0101 LATIN SMALL LETTER A WITH MACRON; amacron
15440 \DeclareTextCompositeCommand{\=}{PU}{a}{\81\001}% U+0101
15441 % U+0102 LATIN CAPITAL LETTER A WITH BREVE; Abreve
15442 \DeclareTextCompositeCommand{\u}{PU}{A}{\81\002}% U+0102
15443 % U+0103 LATIN SMALL LETTER A WITH BREVE; abreve
15444 \DeclareTextCompositeCommand{\u}{PU}{a}{\81\003}% U+0103
15445 % U+0104 LATIN CAPITAL LETTER A WITH OGONEK; Aogonek
15446 \DeclareTextCompositeCommand{\k}{PU}{A}{\81\004}% U+0104
15447 % U+0105 LATIN SMALL LETTER A WITH OGONEK; aogonek
15448 \DeclareTextCompositeCommand{\k}{PU}{a}{\81\005}% U+0105
15449 % U+0106 LATIN CAPITAL LETTER C WITH ACUTE; Cacute
15450 \DeclareTextCompositeCommand{\'}{PU}{C}{\81\006}% U+0106
15451 % U+0107 LATIN SMALL LETTER C WITH ACUTE; cacute
15452 \DeclareTextCompositeCommand{\'}{PU}{c}{\81\007}% U+0107
15453 % U+0108 LATIN CAPITAL LETTER C WITH CIRCUMFLEX; Ccircumflex
15454 \DeclareTextCompositeCommand{\^}{PU}{C}{\81\010}% U+0108
15455 % U+0109 LATIN SMALL LETTER C WITH CIRCUMFLEX; ccircumflex
15456 \DeclareTextCompositeCommand{\^}{PU}{c}{\81\011}% U+0109
15457 % U+010A LATIN CAPITAL LETTER C WITH DOT ABOVE; Cdot, Cdotaccent
15458 \DeclareTextCompositeCommand{\.}{PU}{C}{\81\012}% U+010A
15459 % U+010B LATIN SMALL LETTER C WITH DOT ABOVE; cdot, cdotaccent
15460 \DeclareTextCompositeCommand{\.}{PU}{c}{\81\013}% U+010B
15461 % U+010C LATIN CAPITAL LETTER C WITH CARON; Ccaron
15462 \DeclareTextCompositeCommand{\v}{PU}{C}{\81\014}% U+010C
15463 % U+010D LATIN SMALL LETTER C WITH CARON; ccaron
15464 \DeclareTextCompositeCommand{\v}{PU}{c}{\81\015}% U+010D
15465 % U+010E LATIN CAPITAL LETTER D WITH CARON; Dcaron
15466 \DeclareTextCompositeCommand{\v}{PU}{D}{\81\016}% U+010E
15467 % U+010F LATIN SMALL LETTER D WITH CARON; dcaron
15468 \DeclareTextCompositeCommand{\v}{PU}{d}{\81\017}% U+010F
15469 % U+0110 LATIN CAPITAL LETTER D WITH STROKE; Dcroat, Dslash
15470 \DeclareTextCommand{\DJ}{PU}{\81\020}% U+0110
15471 % U+0111 LATIN SMALL LETTER D WITH STROKE; dcroat, dmacron;
15472 % \textcrd (tipa)
15473 \DeclareTextCommand{\dj}{PU}{\81\021}% U+0111
15474 \DeclareTextCommand{\textcrd}{PU}{\81\021}% U+0111
15475 %* \textcrd -> \crossd (wsuipa)
15476 % An alternate glyph with the stroke through the bowl:
15477 %* \textcrd -> \textbard (tipa)
15478 %* \textcrd -> \bard (wsuipa)

15479 % U+0112 LATIN CAPITAL LETTER E WITH MACRON; Emacron
15480 \DeclareTextCompositeCommand{\=}{PU}{E}{\81\022}% U+0112
15481 % U+0113 LATIN SMALL LETTER E WITH MACRON; emacron
15482 \DeclareTextCompositeCommand{\=}{PU}{e}{\81\023}% U+0113
15483 % U+0114 LATIN CAPITAL LETTER E WITH BREVE; Ebreve
15484 \DeclareTextCompositeCommand{\u}{PU}{E}{\81\024}% U+0114
15485 % U+0115 LATIN SMALL LETTER E WITH BREVE; ebreve
15486 \DeclareTextCompositeCommand{\u}{PU}{e}{\81\025}% U+0115
15487 % U+0116 LATIN CAPITAL LETTER E WITH DOT ABOVE; Edot, Edotaccent
15488 \DeclareTextCompositeCommand{\.}{PU}{E}{\81\026}% U+0116
15489 % U+0117 LATIN SMALL LETTER E WITH DOT ABOVE; edot, edotaccent
15490 \DeclareTextCompositeCommand{\.}{PU}{e}{\81\027}% U+0117
15491 % U+0118 LATIN CAPITAL LETTER E WITH OGONEK; Eogonek
15492 \DeclareTextCompositeCommand{\k}{PU}{E}{\81\030}% U+0118
15493 % U+0119 LATIN SMALL LETTER E WITH OGONEK; eogonek
15494 \DeclareTextCompositeCommand{\k}{PU}{e}{\81\031}% U+0119
15495 % U+011A LATIN CAPITAL LETTER E WITH CARON; Ecaron
15496 \DeclareTextCompositeCommand{\v}{PU}{E}{\81\032}% U+011A
15497 % U+011B LATIN SMALL LETTER E WITH CARON; ecaron
15498 \DeclareTextCompositeCommand{\v}{PU}{e}{\81\033}% U+011B
15499 % U+011C LATIN CAPITAL LETTER G WITH CIRCUMFLEX; Gcircumflex
15500 \DeclareTextCompositeCommand{\^}{PU}{G}{\81\034}% U+011C
15501 % U+011D LATIN SMALL LETTER G WITH CIRCUMFLEX; gcircumflex
15502 \DeclareTextCompositeCommand{\^}{PU}{g}{\81\035}% U+011D
15503 % U+011E LATIN CAPITAL LETTER G WITH BREVE; Gbreve
15504 \DeclareTextCompositeCommand{\u}{PU}{G}{\81\036}% U+011E
15505 % U+011F LATIN SMALL LETTER G WITH BREVE; gbreve
15506 \DeclareTextCompositeCommand{\u}{PU}{g}{\81\037}% U+011F
15507 % U+0120 LATIN CAPITAL LETTER G WITH DOT ABOVE; Gdot, Gdotac-
cent
15508 \DeclareTextCompositeCommand{\.}{PU}{G}{\81\040}% U+0120
15509 % U+0121 LATIN SMALL LETTER G WITH DOT ABOVE; gdot, gdotaccent
15510 \DeclareTextCompositeCommand{\.}{PU}{g}{\81\041}% U+0121
15511 % U+0122 LATIN CAPITAL LETTER G WITH CEDILLA; Gcedilla, Gcomma-
maaccent
15512 \DeclareTextCompositeCommand{\c}{PU}{G}{\81\042}% U+0122
15513 % U+0123 LATIN SMALL LETTER G WITH CEDILLA; gcedilla, gcommaaccent
15514 \DeclareTextCompositeCommand{\c}{PU}{g}{\81\043}% U+0123
15515 % U+0124 LATIN CAPITAL LETTER H WITH CIRCUMFLEX; Hcircumflex
15516 \DeclareTextCompositeCommand{\^}{PU}{H}{\81\044}% U+0124
15517 % U+0125 LATIN SMALL LETTER H WITH CIRCUMFLEX; hcircumflex
15518 \DeclareTextCompositeCommand{\^}{PU}{h}{\81\045}% U+0125
15519 % U+0126 LATIN CAPITAL LETTER H WITH STROKE; Hbar
15520 \DeclareTextCommand{\textHslash}{PU}{\81\046}% U+0126
15521 % U+0127 LATIN SMALL LETTER H WITH STROKE; hbar; \hbar (AmS)
15522 \DeclareTextCommand{\texthbar}{PU}{\81\047}%* U+0127
15523 %* \texthbar -> \textcrh (tipa)
15524 %* \texthbar -> \crossh (wsuipa)
15525 %* \texthbar -> \planck (phonetic)
15526 % U+0128 LATIN CAPITAL LETTER I WITH TILDE; Itilde
15527 \DeclareTextCompositeCommand{\~}{PU}{I}{\81\050}% U+0128
15528 % U+0129 LATIN SMALL LETTER I WITH TILDE; itilde
15529 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}% U+0129
15530 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}% U+0129

15531 % U+012A LATIN CAPITAL LETTER I WITH MACRON; Imacron
15532 \DeclareTextCompositeCommand{\=}{PU}{I}{\81\052}% U+012A
15533 % U+012B LATIN SMALL LETTER I WITH MACRON; imacron
15534 \DeclareTextCompositeCommand{\=}{PU}{i}{\81\053}% U+012B
15535 \DeclareTextCompositeCommand{\=}{PU}{i}{\81\053}% U+012B
15536 % U+012C LATIN CAPITAL LETTER I WITH BREVE; Ibreve
15537 \DeclareTextCompositeCommand{\u}{PU}{I}{\81\054}% U+012C
15538 % U+012D LATIN SMALL LETTER I WITH BREVE; ibreve
15539 \DeclareTextCompositeCommand{\u}{PU}{i}{\81\055}% U+012D
15540 \DeclareTextCompositeCommand{\u}{PU}{i}{\81\055}% U+012D
15541 % U+012E LATIN CAPITAL LETTER I WITH OGONEK; Iogonek
15542 \DeclareTextCompositeCommand{\k}{PU}{I}{\81\056}% U+012E
15543 % U+012F LATIN SMALL LETTER I WITH OGONEK; iogonek
15544 \DeclareTextCompositeCommand{\k}{PU}{i}{\81\057}% U+012F
15545 \DeclareTextCompositeCommand{\k}{PU}{i}{\81\057}% U+012F
15546 % U+0130 LATIN CAPITAL LETTER I WITH DOT ABOVE; Idot, Idotaccent
15547 \DeclareTextCompositeCommand{\.}{PU}{I}{\81\060}% U+0130
15548 % U+0131 LATIN SMALL LETTER DOTLESS I; dotlessi
15549 \DeclareTextCommand{\i}{PU}{\81\061}% U+0131
15550 % U+0132 LATIN CAPITAL LIGATURE IJ; IJ
15551 \DeclareTextCommand{\IJ}{PU}{\81\062}% U+0132
15552 % U+0133 LATIN SMALL LIGATURE IJ; ij
15553 \DeclareTextCommand{\ij}{PU}{\81\063}% U+0133
15554 % U+0134 LATIN CAPITAL LETTER J WITH CIRCUMFLEX; Jcircumflex
15555 \DeclareTextCompositeCommand{\^}{PU}{J}{\81\064}% U+0134
15556 % U+0135 LATIN SMALL LETTER J WITH CIRCUMFLEX; jcircumflex
15557 \DeclareTextCompositeCommand{\^}{PU}{j}{\81\065}% U+0135
15558 \DeclareTextCompositeCommand{\^}{PU}{j}{\81\065}% U+0135
15559 % U+0136 LATIN CAPITAL LETTER K WITH CEDILLA; Kcedilla, Kcommaac-
cent
15560 \DeclareTextCompositeCommand{\c}{PU}{K}{\81\066}% U+0136
15561 % U+0137 LATIN SMALL LETTER K WITH CEDILLA; kcedilla, kcommaaccent
15562 \DeclareTextCompositeCommand{\c}{PU}{k}{\81\067}% U+0137

The canonical name of U+0138, small letter kra, would be `\textkgreenlandic`, following the glyph naming convention. However `latex/base/inputenc.dtx` has choosen `\textkra`.

15563 % U+0138 LATIN SMALL LETTER KRA; kgreenlandic
15564 \DeclareTextCommand{\textkra}{PU}{\81\070}% U+0138
15565 % U+0139 LATIN CAPITAL LETTER L WITH ACUTE; Lacute
15566 \DeclareTextCompositeCommand{\'}{PU}{L}{\81\071}% U+0139
15567 % U+013A LATIN SMALL LETTER L WITH ACUTE; lacute
15568 \DeclareTextCompositeCommand{\'}{PU}{l}{\81\072}% U+013A
15569 % U+013B LATIN CAPITAL LETTER L WITH CEDILLA; Lcedilla, Lcommaac-
cent
15570 \DeclareTextCompositeCommand{\c}{PU}{L}{\81\073}% U+013B
15571 % U+013C LATIN SMALL LETTER L WITH CEDILLA; lcedilla, lcommaaccent
15572 \DeclareTextCompositeCommand{\c}{PU}{l}{\81\074}% U+013C
15573 % U+013D LATIN CAPITAL LETTER L WITH CARON; Lcaron
15574 \DeclareTextCompositeCommand{\v}{PU}{L}{\81\075}% U+013D
15575 % U+013E LATIN SMALL LETTER L WITH CARON; lcaron
15576 \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.`
15577 % U+013F LATIN CAPITAL LETTER L WITH MIDDLE DOT; Ldot, Ldotaccent
15578 \DeclareTextCompositeCommand{\.}{PU}{L}{\81\077}% U+013F
15579 % U+0140 LATIN SMALL LETTER L WITH MIDDLE DOT; ldot, ldotaccent
15580 \DeclareTextCompositeCommand{\.}{PU}{l}{\81\100}% U+0140
15581 % U+0141 LATIN CAPITAL LETTER L WITH STROKE; Lslash
15582 \DeclareTextCommand{\L}{PU}{\81\101}% U+0141
15583 % U+0142 LATIN SMALL LETTER L WITH STROKE; lslash
15584 \DeclareTextCommand{\l}{PU}{\81\102}% U+0142
15585 % U+0143 LATIN CAPITAL LETTER N WITH ACUTE; Nacute
15586 \DeclareTextCompositeCommand{\' }{PU}{N}{\81\103}% U+0143
15587 % U+0144 LATIN SMALL LETTER N WITH ACUTE; nacute
15588 \DeclareTextCompositeCommand{\' }{PU}{n}{\81\104}% U+0144
15589 % U+0145 LATIN CAPITAL LETTER N WITH CEDILLA; Ncedilla, Ncommaaccent
15590 \DeclareTextCompositeCommand{\c}{PU}{N}{\81\105}% U+0145
15591 % U+0146 LATIN SMALL LETTER N WITH CEDILLA; ncedilla, ncommaaccent
15592 \DeclareTextCompositeCommand{\c}{PU}{n}{\81\106}% U+0146
15593 % U+0147 LATIN CAPITAL LETTER N WITH CARON; Ncaron
15594 \DeclareTextCompositeCommand{\v}{PU}{N}{\81\107}% U+0147
15595 % U+0148 LATIN SMALL LETTER N WITH CARON; ncaron
15596 \DeclareTextCompositeCommand{\v}{PU}{n}{\81\110}% U+0148
15597 % U+0149 LATIN SMALL LETTER N PRECEDED BY APOSTROPHE; napostrophe, quoterightn
15598 \DeclareTextCommand{\textnapostrophe}{PU}{\81\111}% U+0149
15599 % U+014A LATIN CAPITAL LETTER ENG; Eng
15600 \DeclareTextCommand{\NG}{PU}{\81\112}% U+014A
15601 % U+014B LATIN SMALL LETTER ENG; eng
15602 \DeclareTextCommand{\ng}{PU}{\81\113}% U+014B
15603 %* \ng -> \eng (wsuipa)
15604 %* \ng -> \engma (phonetic)
15605 % U+014C LATIN CAPITAL LETTER O WITH MACRON; Omacron
15606 \DeclareTextCompositeCommand{\=} {PU}{O}{\81\114}% U+014C
15607 % U+014D LATIN SMALL LETTER O WITH MACRON; omacron
15608 \DeclareTextCompositeCommand{\=} {PU}{o}{\81\115}% U+014D
15609 % U+014E LATIN CAPITAL LETTER O WITH BREVE; Obreve
15610 \DeclareTextCompositeCommand{\u}{PU}{O}{\81\116}% U+014E
15611 % U+014F LATIN SMALL LETTER O WITH BREVE; obreve
15612 \DeclareTextCompositeCommand{\u}{PU}{o}{\81\117}% U+014F
15613 % U+0150 LATIN CAPITAL LETTER O WITH DOUBLE ACUTE; Odblacute, Ohungarumlaut
15614 \DeclareTextCompositeCommand{\H}{PU}{O}{\81\120}% U+0150
15615 % U+0151 LATIN SMALL LETTER O WITH DOUBLE ACUTE; odblacute, ohungarumlaut
15616 \DeclareTextCompositeCommand{\H}{PU}{o}{\81\121}% U+0151
15617 % U+0152 LATIN CAPITAL LIGATURE OE; OE
15618 \DeclareTextCommand{\OE}{PU}{\81\122}% U+0152
15619 % U+0153 LATIN SMALL LIGATURE OE; oe
15620 \DeclareTextCommand{\oe}{PU}{\81\123}% U+0153
15621 % U+0154 LATIN CAPITAL LETTER R WITH ACUTE; Racute
15622 \DeclareTextCompositeCommand{\' }{PU}{R}{\81\124}% U+0154
15623 % U+0155 LATIN SMALL LETTER R WITH ACUTE; racute
15624 \DeclareTextCompositeCommand{\' }{PU}{r}{\81\125}% U+0155

15625 % U+0156 LATIN CAPITAL LETTER R WITH CEDILLA; Rcedilla, Rcommaaccent
15626 \DeclareTextCompositeCommand{\c}{PU}{R}{\81\126}% U+0156
15627 % U+0157 LATIN SMALL LETTER R WITH CEDILLA; rcedilla, rcommaaccent
15628 \DeclareTextCompositeCommand{\c}{PU}{r}{\81\127}% U+0157
15629 % U+0158 LATIN CAPITAL LETTER R WITH CARON; Rcaron
15630 \DeclareTextCompositeCommand{\v}{PU}{R}{\81\130}% U+0158
15631 % U+0159 LATIN SMALL LETTER R WITH CARON; rcaron
15632 \DeclareTextCompositeCommand{\v}{PU}{r}{\81\131}% U+0159
15633 % U+015A LATIN CAPITAL LETTER S WITH ACUTE; Sacute
15634 \DeclareTextCompositeCommand{\'}{PU}{S}{\81\132}% U+015A
15635 % U+015B LATIN SMALL LETTER S WITH ACUTE; sacute
15636 \DeclareTextCompositeCommand{\'}{PU}{s}{\81\133}% U+015B
15637 % U+015C LATIN CAPITAL LETTER S WITH CIRCUMFLEX; Scircumflex
15638 \DeclareTextCompositeCommand{\^}{PU}{S}{\81\134}% U+015C
15639 % U+015D LATIN SMALL LETTER S WITH CIRCUMFLEX; scircumflex
15640 \DeclareTextCompositeCommand{\^}{PU}{s}{\81\135}% U+015D
15641 % U+015E LATIN CAPITAL LETTER S WITH CEDILLA; Scedilla
15642 \DeclareTextCompositeCommand{\c}{PU}{S}{\81\136}% U+015E
15643 % U+015F LATIN SMALL LETTER S WITH CEDILLA; scedilla
15644 \DeclareTextCompositeCommand{\c}{PU}{s}{\81\137}% U+015F
15645 % U+0160 LATIN CAPITAL LETTER S WITH CARON; Scaron
15646 \DeclareTextCompositeCommand{\v}{PU}{S}{\81\140}% U+0160
15647 % U+0161 LATIN SMALL LETTER S WITH CARON; scaron
15648 \DeclareTextCompositeCommand{\v}{PU}{s}{\81\141}% U+0161
15649 % U+0162 LATIN CAPITAL LETTER T WITH CEDILLA; Tcedilla, Tcommaaccent
15650 \DeclareTextCompositeCommand{\c}{PU}{T}{\81\142}% U+0162
15651 % U+0163 LATIN SMALL LETTER T WITH CEDILLA; tcedilla, tcommaaccent
15652 \DeclareTextCompositeCommand{\c}{PU}{t}{\81\143}% U+0163
15653 % U+0164 LATIN CAPITAL LETTER T WITH CARON; Tcaron
15654 \DeclareTextCompositeCommand{\v}{PU}{T}{\81\144}% U+0164
15655 % U+0165 LATIN SMALL LETTER T WITH CARON; tcaron
15656 \DeclareTextCompositeCommand{\v}{PU}{t}{\81\145}% U+0165
15657 % U+0166 LATIN CAPITAL LETTER T WITH STROKE; Tbar
15658 \DeclareTextCommand{\textTslash}{PU}{\81\146}% U+0166
15659 % U+0167 LATIN SMALL LETTER T WITH STROKE; tbar
15660 \DeclareTextCommand{\texttslash}{PU}{\81\147}% U+0167
15661 % U+0168 LATIN CAPITAL LETTER U WITH TILDE; Utilde
15662 \DeclareTextCompositeCommand{\~}{PU}{U}{\81\150}% U+0168
15663 % U+0169 LATIN SMALL LETTER U WITH TILDE; utilde
15664 \DeclareTextCompositeCommand{\~}{PU}{u}{\81\151}% U+0169
15665 % U+016A LATIN CAPITAL LETTER U WITH MACRON; Umacron
15666 \DeclareTextCompositeCommand{\=}{PU}{U}{\81\152}% U+016A
15667 % U+016B LATIN SMALL LETTER U WITH MACRON; umacron
15668 \DeclareTextCompositeCommand{\=}{PU}{u}{\81\153}% U+016B
15669 % U+016C LATIN CAPITAL LETTER U WITH BREVE; Ubreve
15670 \DeclareTextCompositeCommand{\u}{PU}{U}{\81\154}% U+016C
15671 % U+016D LATIN SMALL LETTER U WITH BREVE; ubreve
15672 \DeclareTextCompositeCommand{\u}{PU}{u}{\81\155}% U+016D
15673 % U+016E LATIN CAPITAL LETTER U WITH RING ABOVE; Uring
15674 \DeclareTextCompositeCommand{\r}{PU}{U}{\81\156}% U+016E
15675 % U+016F LATIN SMALL LETTER U WITH RING ABOVE; uring
15676 \DeclareTextCompositeCommand{\r}{PU}{u}{\81\157}% U+016F

15677 % U+0170 LATIN CAPITAL LETTER U WITH DOUBLE ACUTE; Udblacute, Uhungarumlaut
15678 \DeclareTextCompositeCommand{\H}{PU}{U}{\81\160}% U+0170
15679 % U+0171 LATIN SMALL LETTER U WITH DOUBLE ACUTE; udblacute, uhungarumlaut
15680 \DeclareTextCompositeCommand{\h}{PU}{u}{\81\161}% U+0171
15681 % U+0172 LATIN CAPITAL LETTER U WITH OGONEK; Uogonek
15682 \DeclareTextCompositeCommand{\k}{PU}{U}{\81\162}% U+0172
15683 % U+0173 LATIN SMALL LETTER U WITH OGONEK; uogonek
15684 \DeclareTextCompositeCommand{\k}{PU}{u}{\81\163}% U+0173
15685 % U+0174 LATIN CAPITAL LETTER W WITH CIRCUMFLEX; Wcircumflex
15686 \DeclareTextCompositeCommand{\^}{PU}{W}{\81\164}% U+0174
15687 % U+0175 LATIN SMALL LETTER W WITH CIRCUMFLEX; wcircumflex
15688 \DeclareTextCompositeCommand{\^}{PU}{w}{\81\165}% U+0175
15689 % U+0176 LATIN CAPITAL LETTER Y WITH CIRCUMFLEX; Ycircumflex
15690 \DeclareTextCompositeCommand{\^}{PU}{Y}{\81\166}% U+0176
15691 % U+0177 LATIN SMALL LETTER Y WITH CIRCUMFLEX; ycircumflex
15692 \DeclareTextCompositeCommand{\^}{PU}{y}{\81\167}% U+0177
15693 % U+0178 LATIN CAPITAL LETTER Y WITH DIAERESIS; Ydieresis
15694 \DeclareTextCompositeCommand{\"}{PU}{Y}{\81\170}% U+0178
15695 % U+0179 LATIN CAPITAL LETTER Z WITH ACUTE; Zacute
15696 \DeclareTextCompositeCommand{\'}{PU}{Z}{\81\171}% U+0179
15697 % U+017A LATIN SMALL LETTER Z WITH ACUTE; zacute
15698 \DeclareTextCompositeCommand{\'}{PU}{z}{\81\172}% U+017A
15699 % U+017B LATIN CAPITAL LETTER Z WITH DOT ABOVE; Zdot, Zdotaccent
15700 \DeclareTextCompositeCommand{\.}{PU}{Z}{\81\173}% U+017B
15701 % U+017C LATIN SMALL LETTER Z WITH DOT ABOVE; zdot, zdotaccent
15702 \DeclareTextCompositeCommand{\.}{PU}{z}{\81\174}% U+017C
15703 % U+017D LATIN CAPITAL LETTER Z WITH CARON; Zcaron
15704 \DeclareTextCompositeCommand{\v}{PU}{Z}{\81\175}% U+017D
15705 % U+017E LATIN SMALL LETTER Z WITH CARON; zcaron
15706 \DeclareTextCompositeCommand{\v}{PU}{z}{\81\176}% U+017E
15707 % U+017F LATIN SMALL LETTER LONG S; longs, slong
15708 \DeclareTextCommand{\textlongS}{PU}{\81\177}% U+017F

47.2.5 Latin Extended-B: U+0180 to U+024F

15709 % U+0180 LATIN SMALL LETTER B WITH STROKE; bstroke; \textcrb (tipa)
15710 \DeclareTextCommand{\textcrb}{PU}{\81\200}% U+0180
15711 %* \textcrb -> \crossb (wsuipa)
15712 % An alternate glyph with the stroke through the bowl:
15713 %* \textcrb -> \textbarb (tipa)
15714 %* \textcrb -> \barb (wsuipa)
15715 % U+0181 LATIN CAPITAL LETTER B WITH HOOK; Bhook; \hausA (phonetic)
15716 \DeclareTextCommand{\texthausA}{PU}{\81\201}%* U+0181
15717 % U+0188 LATIN SMALL LETTER C WITH HOOK; chook; \texthtc (tipa)
15718 \DeclareTextCommand{\texthtc}{PU}{\81\210}% U+0188
15719 % U+018A LATIN CAPITAL LETTER D WITH HOOK; Dhook; \hausD (phonetic)
15720 \DeclareTextCommand{\texthausD}{PU}{\81\212}%* U+018A
15721 % U+018E LATIN CAPITAL LETTER REVERSED E; Ereversed
15722 \DeclareTextCommand{\textEreversed}{PU}{\81\216}% U+018E
15723 \DeclareTextCommand{\textrevE}{PU}{\81\216}% U+018E
15724 % U+0192 LATIN SMALL LETTER F WITH HOOK; florin

15725 \DeclareTextCommand{\textflorin}{PU}{\81\222}% U+0192
15726 %* \textflorin -> \Florin (marvosym)
15727 % U+0195 LATIN SMALL LETTER HV; hv; \texthvlig (tipa)
15728 \DeclareTextCommand{\texthvlig}{PU}{\81\225}% U+0195
15729 %* \texthvlig -> \hv (wsuipa)
15730 % U+0198 LATIN CAPITAL LETTER K WITH HOOK; Khook; \hausaK (pho-
netic)
15731 \DeclareTextCommand{\texthausaK}{PU}{\81\230}%* U+0198
15732 % U+0199 LATIN SMALL LETTER K WITH HOOK; khook; \texthtk (tipa)
15733 \DeclareTextCommand{\texthtk}{PU}{\81\231}% U+0199
15734 %* \texthtk -> \hausak (phonetic)
15735 % U+019A LATIN SMALL LETTER L WITH BAR; lbar;
15736 % \textbarl (tipa), \barl (wsuipa)
15737 \DeclareTextCommand{\textbarl}{PU}{\81\232}%* U+019A
15738 % U+019B LATIN SMALL LETTER LAMBDA WITH STROKE/
15739 % LATIN SMALL LETTER BARRED LAMBDA; lambdastroke;
15740 % \textcrlambda (tipa)
15741 \DeclareTextCommand{\textcrlambda}{PU}{\81\233}% U+019B
15742 %* \textcrlambda -> \crossnilambda (wsuipa)
15743 %* \textcrlambda -> \barlambd (phonetic)
15744 %* \textcrlambda -> \lambdabar (txfonts/pxfonts)
15745 %* \textcrlambda -> \lambdash (txfonts/pxfonts)
15746 % U+019E LATIN SMALL LETTER N WITH LONG RIGHT LEG; nlegright-
long;
15747 % \textnrleg (tipx)
15748 \DeclareTextCommand{\textPUnrleg}{PU}{\81\236}% U+019E
15749 %* \textPUnrleg -> \textnrleg (tipx)
15750 % U+01A5 LATIN SMALL LETTER P WITH HOOK; phook; \texthtp (tipa)
15751 \DeclareTextCommand{\texthtp}{PU}{\81\245}% U+01A5
15752 % U+01AB LATIN SMALL LETTER T WITH PALATAL HOOK; tpalatalhook;
15753 % \textlhookt (tipa)
15754 \DeclareTextCommand{\textlhookt}{PU}{\81\253}% U+01AB
15755 % U+01AD LATIN SMALL LETTER T WITH HOOK; thook; \texthtt (tipa)
15756 \DeclareTextCommand{\texthtt}{PU}{\81\255}% U+01AD
15757 % U+01B9 LATIN SMALL LETTER EZH REVERSED/
15758 % LATIN SMALL LETTER REVERSED YOGH; \textrevyogh (tipa)
15759 \DeclareTextCommand{\textrevyogh}{PU}{\81\271}% U+01B9
15760 % U+01BB LATIN LETTER TWO WITH STROKE; twostroke; \textcrtwo (tipa)
15761 \DeclareTextCommand{\textcrtwo}{PU}{\81\273}% U+01BB
15762 % U+01BE LATIN LETTER INVERTED GLOTTAL STOP WITH STROKE;
15763 % glottalinvertedstroke; \textcrinvglotstop (tipa)
15764 \DeclareTextCommand{\textcrinvglotstop}{PU}{\81\276}% U+01BE
15765 % U+01BF LATIN LETTER WYNN; wynn; \textwynn (tipa)
15766 \DeclareTextCommand{\textwynn}{PU}{\81\277}% U+01BF
15767 % U+01C0 LATIN LETTER DENTAL CLICK/LATIN LETTER PIPE; clickden-
tal;
15768 % \textpipe (tipa)
15769 \DeclareTextCommand{\textpipe}{PU}{\81\300}% U+01C0
15770 %* \textpipe -> \textpipevar (tipx)
15771 % U+01C1 LATIN LETTER LATERAL CLICK/LATIN LETTER
15772 % DOUBLE PIPE; clicklateral; \textdoublepipe (tipa)
15773 \DeclareTextCommand{\textdoublepipe}{PU}{\81\301}% U+01C1
15774 %* \textdoublepipe -> \textdoublepipevar (tipx)
15775 % U+01C2 LATIN LETTER ALVEOLAR CLICK/LATIN LETTER PIPE DOU-

BLE BAR;

15776 % clickalveolar; \textdoublebarpipe (tipa)
15777 \DeclareTextCommand{\textdoublebarpipe}{PU}{\81\302}% U+01C2
15778 %* \textdoublebarpipe -> \textdoublebarpipevar (tipx)
15779 % U+01CD LATIN CAPITAL LETTER A WITH CARON; Acaron
15780 \DeclareTextCompositeCommand{\v}{PU}{A}{\81\315}% U+01CD
15781 % U+01CE LATIN SMALL LETTER A WITH CARON; acaron
15782 \DeclareTextCompositeCommand{\v}{PU}{a}{\81\316}% U+01CE
15783 % U+01CF LATIN CAPITAL LETTER I WITH CARON; Icaron
15784 \DeclareTextCompositeCommand{\v}{PU}{I}{\81\317}% U+01CF
15785 % U+01D0 LATIN SMALL LETTER I WITH CARON; icaron
15786 \DeclareTextCompositeCommand{\v}{PU}{i}{\81\320}% U+01D0
15787 \DeclareTextCompositeCommand{\v}{PU}{i}{\81\320}% U+01D0
15788 % U+01D1 LATIN CAPITAL LETTER O WITH CARON; Ocaron
15789 \DeclareTextCompositeCommand{\v}{PU}{O}{\81\321}% U+01D1
15790 % U+01D2 LATIN SMALL LETTER O WITH CARON; ocaron
15791 \DeclareTextCompositeCommand{\v}{PU}{o}{\81\322}% U+01D2
15792 % U+01D3 LATIN CAPITAL LETTER U WITH CARON; Ucaron
15793 \DeclareTextCompositeCommand{\v}{PU}{U}{\81\323}% U+01D3
15794 % U+01D4 LATIN SMALL LETTER U WITH CARON; ucaron
15795 \DeclareTextCompositeCommand{\v}{PU}{u}{\81\324}% U+01D4
15796 % U+01DD LATIN SMALL LETTER TURNED E; eturned; \inve (wasysym)
15797 \DeclareTextCommand{\textinve}{PU}{\81\335}%* U+01DD
15798 % U+01E4 LATIN CAPITAL LETTER G WITH STROKE; Gstroke
15799 \DeclareTextCommand{\textGslash}{PU}{\81\344}% U+01E4
15800 % U+01E5 LATIN SMALL LETTER G WITH STROKE; gstroke
15801 \DeclareTextCommand{\textgslash}{PU}{\81\345}% U+01E5
15802 %* \textgslash -> \textcrg (tipa)
15803 % U+01E6 LATIN CAPITAL LETTER G WITH CARON; Gcaron
15804 \DeclareTextCompositeCommand{\v}{PU}{G}{\81\346}% U+01E6
15805 % U+01E7 LATIN SMALL LETTER G WITH CARON; gcaron
15806 \DeclareTextCompositeCommand{\v}{PU}{g}{\81\347}% U+01E7
15807 % U+01E8 LATIN CAPITAL LETTER K WITH CARON; Kcaron
15808 \DeclareTextCompositeCommand{\v}{PU}{K}{\81\350}% U+01E8
15809 % U+01E9 LATIN SMALL LETTER K WITH CARON; kcaron
15810 \DeclareTextCompositeCommand{\v}{PU}{k}{\81\351}% U+01E9
15811 % U+01EA LATIN CAPITAL LETTER O WITH OGONEK; Oogonek
15812 \DeclareTextCompositeCommand{\k}{PU}{O}{\81\352}% U+01EA
15813 % U+01EB LATIN SMALL LETTER O WITH OGONEK; oogonek
15814 \DeclareTextCompositeCommand{\k}{PU}{o}{\81\353}% U+01EB
15815 % U+01F0 LATIN SMALL LETTER J WITH CARON; jcaron
15816 \DeclareTextCompositeCommand{\v}{PU}{j}{\81\360}% U+01F0
15817 \DeclareTextCompositeCommand{\v}{PU}{j}{\81\360}% U+01F0
15818 % U+01F4 LATIN CAPITAL LETTER G WITH ACUTE; Gacute
15819 \DeclareTextCompositeCommand{\'}{PU}{G}{\81\364}% U+01F4
15820 % U+01F5 LATIN SMALL LETTER G WITH ACUTE; gacute
15821 \DeclareTextCompositeCommand{\'}{PU}{g}{\81\365}% U+01F5
15822 % U+01F8 LATIN CAPITAL LETTER N WITH GRAVE
15823 \DeclareTextCompositeCommand{\`}{PU}{N}{\81\370}% U+01F8
15824 % U+01F9 LATIN SMALL LETTER N WITH GRAVE
15825 \DeclareTextCompositeCommand{\`}{PU}{n}{\81\371}% U+01F9
15826 % U+01FC LATIN CAPITAL LETTER AE WITH ACUTE; AEacute
15827 \DeclareTextCompositeCommand{\'}{PU}{\AE}{\81\374}% U+01FC
15828 % U+01FD LATIN SMALL LETTER AE WITH ACUTE; aeacute

15829 \DeclareTextCompositeCommand{\'}{PU}{\ae}{\81\375}% U+01FD
15830 % U+01FE LATIN CAPITAL LETTER O WITH STROKE AND ACUTE;
15831 % *Oslashacute, Ostrokeacut
15832 \DeclareTextCompositeCommand{\'}{PU}{\o}{\81\376}% U+01FE
15833 % U+01FF LATIN SMALL LETTER O WITH STROKE AND ACUTE;
15834 % *oslashacute, ostrokeacute
15835 \DeclareTextCompositeCommand{\'}{PU}{\o}{\81\377}% U+01FF
15836 (/puenc)
15837 (*puextra)
15838 % U+0200 LATIN CAPITAL LETTER A WITH DOUBLE GRAVE; Adblgrave
15839 \DeclareTextCompositeCommand{\G}{PU}{A}{\82\000}% U+0200
15840 % U+0201 LATIN SMALL LETTER A WITH DOUBLE GRAVE; adblgrave
15841 \DeclareTextCompositeCommand{\G}{PU}{a}{\82\001}% U+0201
15842 % U+0204 LATIN CAPITAL LETTER E WITH DOUBLE GRAVE; Edblgrave
15843 \DeclareTextCompositeCommand{\G}{PU}{E}{\82\004}% U+0204
15844 % U+0205 LATIN SMALL LETTER E WITH DOUBLE GRAVE; edblgrave
15845 \DeclareTextCompositeCommand{\G}{PU}{e}{\82\005}% U+0205
15846 (/puextra)
15847 (*puenc)
15848 % U+0206 LATIN CAPITAL LETTER E WITH INVERTED BREVE; Einvert-
edbreve
15849 \DeclareTextCompositeCommand{\textinvbreve}{PU}{E}{\82\006}% U+0206
15850 % U+0207 LATIN SMALL LETTER E WITH INVERTED BREVE; einvert-
breve
15851 \DeclareTextCompositeCommand{\textinvbreve}{PU}{e}{\82\007}% U+0207
15852 (/puenc)
15853 (*puextra)
15854 % U+0208 LATIN CAPITAL LETTER I WITH DOUBLE GRAVE; Idblgrave
15855 \DeclareTextCompositeCommand{\G}{PU}{I}{\82\010}% U+0208
15856 % U+0209 LATIN SMALL LETTER I WITH DOUBLE GRAVE; idblgrave
15857 \DeclareTextCompositeCommand{\G}{PU}{i}{\82\011}% U+0209
15858 \DeclareTextCompositeCommand{\G}{PU}{i}{\82\011}% U+0209
15859 (/puextra)
15860 (*puenc)
15861 % U+020A LATIN CAPITAL LETTER I WITH INVERTED BREVE; Iinverted-
breve
15862 \DeclareTextCompositeCommand{\textinvbreve}{PU}{I}{\82\012}% U+020A
15863 % U+020B LATIN SMALL LETTER I WITH INVERTED BREVE; iinverted-
breve
15864 \DeclareTextCompositeCommand{\textinvbreve}{PU}{i}{\82\013}% U+020B
15865 \DeclareTextCompositeCommand{\textinvbreve}{PU}{i}{\82\013}% U+020B
15866 (/puenc)
15867 (*puextra)
15868 % U+020C LATIN CAPITAL LETTER O WITH DOUBLE GRAVE; Odblgrave
15869 \DeclareTextCompositeCommand{\G}{PU}{O}{\82\014}% U+020C
15870 % U+020D LATIN SMALL LETTER O WITH DOUBLE GRAVE; odblgrave
15871 \DeclareTextCompositeCommand{\G}{PU}{o}{\82\015}% U+020D
15872 (/puextra)
15873 (*puenc)
15874 % U+020E LATIN CAPITAL LETTER O WITH INVERTED BREVE; Oinvert-
edbreve
15875 \DeclareTextCompositeCommand{\textinvbreve}{PU}{O}{\82\016}% U+020E
15876 % U+020F LATIN SMALL LETTER O WITH INVERTED BREVE; oinvert-
breve

15877 \DeclareTextCompositeCommand{\textinvbreve}{PU}{o}{\82\017}% U+020F
15878 (/puenc)
15879 (*puextra)
15880 % U+0210 LATIN CAPITAL LETTER R WITH DOUBLE GRAVE; Rdblgrave
15881 \DeclareTextCompositeCommand{\G}{PU}{R}{\82\020}% U+0210
15882 % U+0211 LATIN SMALL LETTER R WITH DOUBLE GRAVE; rdblgrave
15883 \DeclareTextCompositeCommand{\G}{PU}{r}{\82\021}% U+0211
15884 % U+0214 LATIN CAPITAL LETTER U WITH DOUBLE GRAVE; Udblgrave
15885 \DeclareTextCompositeCommand{\G}{PU}{U}{\82\024}% U+0214
15886 % U+0215 LATIN SMALL LETTER U WITH DOUBLE GRAVE; udblgrave
15887 \DeclareTextCompositeCommand{\G}{PU}{u}{\82\025}% U+0215
15888 (/puextra)
15889 (*puenc)
15890 % U+0216 LATIN CAPITAL LETTER U WITH INVERTED BREVE; Uinvert-
edbreve
15891 \DeclareTextCompositeCommand{\textinvbreve}{PU}{U}{\82\026}% U+0216
15892 % U+0217 LATIN SMALL LETTER U WITH INVERTED BREVE; uinverted-
breve
15893 \DeclareTextCompositeCommand{\textinvbreve}{PU}{u}{\82\027}% U+0217
15894 % U+021E LATIN CAPITAL LETTER H WITH CARON
15895 \DeclareTextCompositeCommand{\v}{PU}{H}{\82\036}% U+021E
15896 % U+021F LATIN SMALL LETTER H WITH CARON
15897 \DeclareTextCompositeCommand{\v}{PU}{h}{\82\037}% U+021F
15898 % U+0221 LATIN SMALL LETTER D WITH CURL; \textctd (tipa)
15899 \DeclareTextCommand{\textctd}{PU}{\82\041}% U+0221
15900 % U+0225 LATIN SMALL LETTER Z WITH HOOK; \textcommatailz (tipa)
15901 \DeclareTextCommand{\textcommatailz}{PU}{\82\045}% U+0225
15902 % U+0226 LATIN CAPITAL LETTER A WITH DOT ABOVE
15903 \DeclareTextCompositeCommand{\.}{PU}{A}{\82\046}% U+0226
15904 % U+0227 LATIN SMALL LETTER A WITH DOT ABOVE
15905 \DeclareTextCompositeCommand{\.}{PU}{a}{\82\047}% U+0227
15906 % U+0228 LATIN CAPITAL LETTER E WITH CEDILLA
15907 \DeclareTextCompositeCommand{\c}{PU}{E}{\82\050}% U+0228
15908 % U+0229 LATIN SMALL LETTER E WITH CEDILLA
15909 \DeclareTextCompositeCommand{\c}{PU}{e}{\82\051}% U+0229
15910 % U+022E LATIN CAPITAL LETTER O WITH DOT ABOVE
15911 \DeclareTextCompositeCommand{\.}{PU}{O}{\82\056}% U+022E
15912 % U+022F LATIN SMALL LETTER O WITH DOT ABOVE
15913 \DeclareTextCompositeCommand{\.}{PU}{o}{\82\057}% U+022F
15914 % U+0232 LATIN CAPITAL LETTER Y WITH MACRON
15915 \DeclareTextCompositeCommand{\=} {PU}{Y}{\82\062}% U+0232
15916 % U+0233 LATIN SMALL LETTER Y WITH MACRON
15917 \DeclareTextCompositeCommand{\=} {PU}{y}{\82\063}% U+0233
15918 % U+0235 LATIN SMALL LETTER N WITH CURL; \textctn (tipa)
15919 \DeclareTextCommand{\textctn}{PU}{\82\065}% U+0235
15920 % U+0236 LATIN SMALL LETTER T WITH CURL; \textctt (tipa)
15921 \DeclareTextCommand{\textctt}{PU}{\82\066}% U+0236
15922 % U+0237 LATIN SMALL LETTER DOTLESS J
15923 \DeclareTextCommand{\j}{PU}{\82\067}% U+0237
15924 % U+0238 LATIN SMALL LETTER DB DIGRAPH; \textdblig (tipx)
15925 \DeclareTextCommand{\textPUdblig}{PU}{\82\070}% U+0238
15926 %* \textPUdblig -> \textdblig (tipx)
15927 % U+0239 LATIN SMALL LETTER QP DIGRAPH; \textqplig (tipx)
15928 \DeclareTextCommand{\textPUqplig}{PU}{\82\071}% U+0239

15929 %* \textPUqplig -> \textqplig (tipx)
 15930 % U+023C LATIN SMALL LETTER C WITH STROKE; \slashc (wsuipa)
 15931 \DeclareTextCommand{\textslashc}{PU}{\82\074}%* U+023C
 15932 %* \textslashc -> \textcentoldstyle (textcomp)
 15933 % With bar instead of stroke:
 15934 %* \textslashc -> \textbarc (tipa)

47.2.6 IPA Extensions: U+0250 to U+02AF

15935 % U+0250 LATIN SMALL LETTER TURNED A; aturned; \textturna (tipa)
 15936 \DeclareTextCommand{\textturna}{PU}{\82\120}% U+0250
 15937 %* \textturna -> \inva (wasysym)
 15938 % U+0251 LATIN SMALL LETTER ALPHA/LATIN SMALL LETTER
 15939 % SCRIPT A; ascript; \textscripta (tipa), \scripta (wsuipa)
 15940 \DeclareTextCommand{\textscripta}{PU}{\82\121}%* U+0251
 15941 %* \textscripta -> \vara (phonetic)
 15942 % U+0252 LATIN SMALL LETTER TURNED ALPHA; ascriptturned;
 15943 % \textturnscripta (tipa)
 15944 \DeclareTextCommand{\textturnscripta}{PU}{\82\122}% U+0252
 15945 %* \textturnscripta -> \invscripta (wsuipa)
 15946 %* \textturnscripta -> \rotvara (phonetic)
 15947 % U+0253 LATIN CAPITAL LETTER B WITH HOOK; bhook; \texthtb (tipa)
 15948 \DeclareTextCommand{\texthtb}{PU}{\82\123}% U+0253
 15949 %* \texthtb -> \hookb (wsuipa)
 15950 %* \texthtb -> \hausab (phonetic)
 15951 % U+0254 LATIN SMALL LETTER OPEN O; oopen;
 15952 % \textopeno (tipa), \openo (wasysym)
 15953 \DeclareTextCommand{\textopeno}{PU}{\82\124}%* U+0254
 15954 %* \textopeno -> \varopeno (phonetic)
 15955 % U+0255 LATIN SMALL LETTER C WITH CURL; ccurl; \textctc (tipa)
 15956 \DeclareTextCommand{\textctc}{PU}{\82\125}% U+0255
 15957 %* \textctc -> \curlyc (wsuipa)
 15958 % U+0256 LATIN SMALL LETTER D WITH TAIL; dtail; \textrtaid (tipa)
 15959 \DeclareTextCommand{\textrtaid}{PU}{\82\126}%* U+0256
 15960 %* \textrtaid -> \taid (wsuipa)
 15961 % U+0257 LATIN SMALL LETTER D WITH HOOK; dhook; \texthtd (tipa)
 15962 \DeclareTextCommand{\texthtd}{PU}{\82\127}% U+0257
 15963 %* \texthtd -> \hookd (wsuipa)
 15964 %* \texthtd -> \hausad (phonetic)
 15965 % U+0258 LATIN SMALL LETTER REVERSED E; ereversed;
 15966 % \textreve (tipa), \reve (wsuipa)
 15967 \DeclareTextCommand{\textreve}{PU}{\82\130}%* U+0258
 15968 % U+0259 LATIN SMALL LETTER SCHWA; schwa;
 15969 % \textschwa (tipa), \schwa (wsuipa, phonetic)
 15970 \DeclareTextCommand{\textschwa}{PU}{\82\131}%* U+0259
 15971 % U+025A LATIN SMALL LETTER SCHWA WITH HOOK; schwahook;
 15972 % \textrhookschwa (tipa)
 15973 \DeclareTextCommand{\textrhookschwa}{PU}{\82\132}% U+025A
 15974 %* \textrhookschwa -> \er (wsuipa)
 15975 % U+025B LATIN SMALL LETTER OPEN E/LATIN SMALL LETTER EP-
 15976 % SILON; eopen;
 15976 % \niepsilon (wsuipa)
 15977 \DeclareTextCommand{\textniepsilon}{PU}{\82\133}%* U+025B
 15978 %* \textniepsilon -> \epsi (phonetic)
 15979 % U+025C LATIN SMALL LETTER REVERSED OPEN E; eopenreversed;

15980 % \textrepsilon (tipa), \repsilon (wsuipa)
15981 \DeclareTextCommand{\textrepsilon}{PU}{\82\134}%* U+025C
15982 % U+025D LATIN SMALL LETTER REVERSED OPEN E WITH HOOK; eopen-reversedhook;
15983 % \textrhoepsilon (tipa)
15984 \DeclareTextCommand{\textrhoepsilon}{PU}{\82\135}%* U+025D
15985 %* \textrhoepsilon -> \hookrepsilon (wsuipa)
15986 % U+025E LATIN SMALL LETTER CLOSED REVERSED OPEN E; eopenreversedclosed;
15987 % \textclosepsilon (tipa)
15988 \DeclareTextCommand{\textclosepsilon}{PU}{\82\136}% U+025E
15989 %* \textclosepsilon -> \closedrepsilon (wsuipa)
15990 % U+025F LATIN SMALL LETTER DOTLESS J WITH STROKE; jdotlessstroke;
15991 % \textbardotlessj (tipa)
15992 \DeclareTextCommand{\textbardotlessj}{PU}{\82\137}% U+025F
15993 %* \textbardotlessj -> \barj (phonetic)
15994 % U+0260 LATIN SMALL LETTER G WITH HOOK; ghook; \texthtg (tipa)
15995 \DeclareTextCommand{\texthtg}{PU}{\82\140}% U+0260
15996 %* \texthtg -> \hookg (wsuipa)
15997 % U+0261 LATIN SMALL LETTER SCRIPT G; gscript;
15998 % \textscriptg (tipa), \scriptg (wsuipa)
15999 \DeclareTextCommand{\textscriptg}{PU}{\82\141}%* U+0261
16000 %* \textscriptg -> \varg (phonetic)
16001 % U+0262 LATIN LETTER SMALL CAPITAL G; \textscg (tipa), \scg (wsuipa)
16002 \DeclareTextCommand{\textscg}{PU}{\82\142}%* U+0262
16003 % U+0263 LATIN SMALL LETTER GAMMA; gammalatinsmall;
16004 % \ipagamma (wsuipa), \vod (phonetic)
16005 \DeclareTextCommand{\textipagamma}{PU}{\82\143}%* U+0263
16006 %* \textipagamma -> \vod (phonetic)
16007 % U+0264 LATIN SMALL LETTER RAMS HORN; ramshorn;
16008 % \babygamma (wsuipa)
16009 \DeclareTextCommand{\textbabygamma}{PU}{\82\144}%* U+0264
16010 % U+0265 LATIN SMALL LETTER TURNED H; hturned; \textturnh (tipa)
16011 \DeclareTextCommand{\textturnh}{PU}{\82\145}% U+0265
16012 %* \textturnh -> \invh (wsuipa)
16013 %* \textturnh -> \udesc (phonetic)
16014 % U+0266 LATIN SMALL LETTER H WITH HOOK; hhook; \texthth (tipa)
16015 \DeclareTextCommand{\texthth}{PU}{\82\146}% U+0266
16016 %* \texthth -> \hookh (wsuipa)
16017 %* \texthth -> \voicedh (phonetic)
16018 % U+0267 LATIN SMALL LETTER HENG WITH HOOK; henghook; \texththeng (tipa)
16019 \DeclareTextCommand{\texththeng}{PU}{\82\147}% U+0267
16020 %* \texththeng -> \hookheng (wsuipa)
16021 % U+0268 LATIN SMALL LETTER I WITH STROKE;
16022 % \textbari (tipa), \bari (wsuipa)
16023 \DeclareTextCommand{\textbari}{PU}{\82\150}%* U+0268
16024 %* \textbari -> \ibar (phonetic)
16025 % U+0269 LATIN SMALL LETTER IOTA; iotalatin; \niiota (wsuipa)
16026 \DeclareTextCommand{\textniiota}{PU}{\82\151}%* U+0269
16027 %* \textniiota -> \vari (phonetic)
16028 % U+026A LATIN LETTER SMALL CAPITAL I; \textsci (tipa), \sci (wsuipa)
16029 \DeclareTextCommand{\textsci}{PU}{\82\152}%* U+026A

16030 % U+026B LATIN SMALL LETTER L WITH MIDDLE TILDE; lmiddletilde;
16031 % \textltilde (tipa)
16032 \DeclareTextCommand{\textltilde}{PU}{\82\153}% U+026B
16033 %* \textltilde -> \tildel (wsuipa)
16034 % U+026C LATIN SMALL LETTER L WITH BELT; lbelt; \textbeltl (tipa)
16035 \DeclareTextCommand{\textbeltl}{PU}{\82\154}% U+026C
16036 %* \textbeltl -> \latfric (wsuipa)
16037 % U+026D LATIN SMALL LETTER L WITH RETROFLEX HOOK;
16038 % lhookretroflex; \textrtaill (tipa)
16039 \DeclareTextCommand{\textrtaill}{PU}{\82\155}% U+026D
16040 %* \textrtaill -> \taill (wsuipa)
16041 % U+026E LATIN SMALL LETTER LEZH; lezh; \textlyoghlig (tipa)
16042 \DeclareTextCommand{\textlyoghlig}{PU}{\82\156}% U+026E
16043 %* \textlyoghlig -> \lz (wsuipa)
16044 % U+026F LATIN SMALL LETTER TURNED M; mturned; \textturnm (tipa)
16045 \DeclareTextCommand{\textturnm}{PU}{\82\157}% U+026F
16046 %* \textturnm -> \invm (wsuipa)
16047 %* \textturnm -> \rotm (phonetic)
16048 % U+0270 LATIN SMALL LETTER TURNED M WITH LONG LEG; mlongleg-
turned;
16049 % \textturnmrlleg (tipa)
16050 \DeclareTextCommand{\textturnmrlleg}{PU}{\82\160}% U+0270
16051 %* \textturnmrlleg -> \legm (wsuipa)
16052 % U+0271 LATIN SMALL LETTER M WITH HOOK; mhook; \textltailm (tipa)
16053 \DeclareTextCommand{\textltailm}{PU}{\82\161}% U+0271
16054 %* \textltailm -> \labdentainas (wsuipa)
16055 %* \textltailm -> \emgma (phonetic)
16056 % U+0272 LATIN SMALL LETTER N WITH LEFT HOOK; nhookleft; \textl-
tailn (tipa)
16057 \DeclareTextCommand{\textltailn}{PU}{\82\162}% U+0272
16058 %* \textltailn -> \nj (wsuipa)
16059 %* \textltailn -> \enya (phonetic)
16060 % U+0273 LATIN SMALL LETTER N WITH RETROFLEX HOOK;
16061 % nhookretroflex; \textrtailn (tipa)
16062 \DeclareTextCommand{\textrtailn}{PU}{\82\163}% U+0273
16063 %* \textrtailn -> \tailn (wsuipa)
16064 % U+0274 LATIN LETTER SMALL CAPITAL N; \textscn (tipa), \scn (wsuipa)
16065 \DeclareTextCommand{\textscn}{PU}{\82\164}%* U+0274
16066 % U+0275 LATIN CAPITAL LETTER O WITH MIDDLE TILDE/
16067 % LATIN CAPITAL LETTER BARRED O; obarred;
16068 % \textbaro (tipa), \baro (wsuipa)
16069 % But \baro from stmaryrd is different!
16070 \DeclareTextCommand{\textbaro}{PU}{\82\165}% U+0275
16071 % U+0276 LATIN LETTER SMALL CAPITAL OE; \textscnelig (tipa)
16072 \DeclareTextCommand{\textscnelig}{PU}{\82\166}% U+0276
16073 % U+0277 LATIN SMALL LETTER CLOSED OMEGA; omegalatincllosed;
16074 % \textcloseomega (tipa)
16075 \DeclareTextCommand{\textcloseomega}{PU}{\82\167}% U+0277
16076 %* \textcloseomega -> \closedniomega (wsuipa)
16077 %* \textcloseomega -> \varomega (phonetic)
16078 % U+0278 LATIN SMALL LETTER PHI; philatin; \niph (wsuipa)
16079 \DeclareTextCommand{\textniph}{PU}{\82\170}%* U+0278
16080 % U+0279 LATIN SMALL LETTER TURNED R; rturned; \textturnr (tipa)
16081 \DeclareTextCommand{\textturnr}{PU}{\82\171}% U+0279

16082 %* \textturnr -> \invr (wsuipa)
16083 %* \textturnr -> \rotr (phonetic)
16084 % U+027A LATIN SMALL LETTER TURNED R WITH LONG LEG;
16085 % rlonglegturned; \textturnlonglegr (tipa)
16086 \DeclareTextCommand{\textturnlonglegr}{PU}{\82\172}% U+027A
16087 %* \textturnlonglegr -> \invlegr (wsuipa)
16088 % U+027B LATIN SMALL LETTER TURNED R WITH HOOK; rhoorturned;
16089 % \textturnrrtail (tipa)
16090 \DeclareTextCommand{\textturnrrtail}{PU}{\82\173}% U+027B
16091 %* \textturnrrtail -> \tailinvr (wsuipa)
16092 % U+027C LATIN SMALL LETTER R WITH LONG LEG; rlongleg; \textlonglegr (tipa)
16093 \DeclareTextCommand{\textlonglegr}{PU}{\82\174}% U+027C
16094 %* \textlonglegr -> \legr (wsuipa)
16095 % U+027D LATIN SMALL LETTER R WITH TAIL; rhoort; \textrtailr (tipa)
16096 \DeclareTextCommand{\textrtailr}{PU}{\82\175}% U+027D
16097 %* \textrtailr -> \tailr (wsuipa)
16098 % U+027E LATIN SMALL LETTER R WITH FISHHOOK; rfishhook;
16099 % \textfishhookr (tipa)
16100 \DeclareTextCommand{\textfishhookr}{PU}{\82\176}% U+027E
16101 %* \textfishhookr -> \flapr (wsuipa)
16102 %* \textfishhookr -> \flapr (phonetic)
16103 % U+027F LATIN SMALL LETTER REVERSED R WITH FISHHOOK; rfishhookreversed;
16104 % \textlhtlongi (tipa)
16105 \DeclareTextCommand{\textlhtlongi}{PU}{\82\177}% U+027F
16106 % U+0280 LATIN LETTER SMALL CAPITAL R; \textscr (tipa), \scr (wsuipa)
16107 \DeclareTextCommand{\textscr}{PU}{\82\200}% U+0280
16108 % U+0281 LATIN LETTER SMALL CAPITAL INVERTED R; Rsmallinverted;
16109 % \textinvscr (tipa), \invscr (wsuipa)
16110 \DeclareTextCommand{\textinvscr}{PU}{\82\201}% U+0281
16111 % U+0282 LATIN SMALL LETTER S WITH HOOK; shook; \textrtails (tipa)
16112 \DeclareTextCommand{\textrtails}{PU}{\82\202}% U+0282
16113 %* \textrtails -> \tails (wsuipa)
16114 % U+0283 LATIN SMALL LETTER ESH; esh; \textesh (tipa), \esh (wsuipa)
16115 \DeclareTextCommand{\textesh}{PU}{\82\203}% U+0283
16116 % U+0284 LATIN SMALL LETTER DOTLESS J WITH STROKE AND HOOK;
16117 % dotlessjstrokehook; \texthtbardotlessj (tipa)
16118 \DeclareTextCommand{\texthtbardotlessj}{PU}{\82\204}% U+0284
16119 % U+0285 LATIN SMALL LETTER SQUAT REVERSED ESH; eshsquatreversed;
16120 % \textvibyi (tipa)
16121 \DeclareTextCommand{\textvibyi}{PU}{\82\205}% U+0285
16122 % U+0286 LATIN SMALL LETTER ESH WITH CURL; eshcurl; \textctesh (tipa)
16123 \DeclareTextCommand{\textctesh}{PU}{\82\206}% U+0286
16124 %* \textctesh -> \curlyesh (wsuipa)
16125 % U+0287 LATIN SMALL LETTER TURNED T; tturned; \textturnt (tipa)
16126 \DeclareTextCommand{\textturnt}{PU}{\82\207}% U+0287
16127 %* \textturnt -> \clickt (wsuipa)
16128 % U+0288 LATIN SMALL LETTER T WITH RETROFLEX HOOK; retroflexhook;
16129 % \textrtailt (tipa)
16130 \DeclareTextCommand{\textrtailt}{PU}{\82\210}% U+0288
16131 %* \textrtailt -> \tailt (wsuipa)

16132 % U+0289 LATIN SMALL LETTER U BAR; ubar;
16133 % \textbaru (tipa), \baru (wsuipa)
16134 \DeclareTextCommand{\textbaru}{PU}{\82\211}%* U+0289
16135 %* \textbaru -> \ubar (phonetic)
16136 % U+028A LATIN SMALL LETTER UPSILON; \niupsilon (wsuipa)
16137 \DeclareTextCommand{\textniupsilon}{PU}{\82\212}%* U+028A
16138 %* \textniupsilon -> \rotOmega (phonetic)
16139 % U+028B LATIN SMALL LETTER V WITH HOOK/LATIN SMALL LETTER SCRIPT V;
16140 % vhook; \textscriptv (tipa), \scriptv (wsuipa)
16141 \DeclareTextCommand{\textscriptv}{PU}{\82\213}%* U+028B
16142 % U+028C LATIN SMALL LETTER TURNED V; vturned; \textturnv (tipa)
16143 \DeclareTextCommand{\textturnv}{PU}{\82\214}%* U+028C
16144 %* \textturnv -> \invv (wsuipa)
16145 %* \textturnv -> \pwedge (phonetic)
16146 % U+028D LATIN SMALL LETTER TURNED W; wturned; \textturnw (tipa)
16147 \DeclareTextCommand{\textturnw}{PU}{\82\215}%* U+028D
16148 %* \textturnw -> \invw (wsuipa)
16149 %* \textturnw -> \rotw (phonetic)
16150 % U+028E LATIN SMALL LETTER TURNED Y; yturned; \textturny (tipa)
16151 \DeclareTextCommand{\textturny}{PU}{\82\216}%* U+028E
16152 %* \textturny -> \invy (wsuipa)
16153 %* \textturny -> \roty (phonetic)
16154 % U+028F LATIN LETTER SMALL CAPITAL Y; \textscy (tipa), \scy (wsuipa)
16155 \DeclareTextCommand{\textscy}{PU}{\82\217}%* U+028F
16156 % U+0290 LATIN SMALL LETTER Z WITH RETROFLEX HOOK; zretroflex-hook;
16157 % \textrtailz (tipa)
16158 \DeclareTextCommand{\textrtailz}{PU}{\82\220}% U+0290
16159 %* \textrtailz -> \tailz (wsuipa)
16160 % U+0291 LATIN SMALL LETTER Z WITH CURL; zcurl; \textctz (tipa)
16161 \DeclareTextCommand{\textctz}{PU}{\82\221}% U+0291
16162 %* \textctz -> \curlyz (wsuipa)
16163 % U+0292 LATIN SMALL LETTER EZH/LATIN SMALL LETTER YOGH; ezh;
16164 % \textyogh (tipa), \yogh (wsuipa)
16165 \DeclareTextCommand{\textyogh}{PU}{\82\222}%* U+0292
16166 % U+0293 LATIN SMALL LETTER EZH WITH CURL/LATIN SMALL LETTER YOGH CURL;
16167 % ezhcurl; \textctyogh (tipa)
16168 \DeclareTextCommand{\textctyogh}{PU}{\82\223}% U+0293
16169 %* \textctyogh -> \curlyyogh (wsuipa)
16170 % U+0294 LATIN LETTER GLOTTAL STOP; glottalstop;
16171 % \textglotstop (tipa), \glotstop (wsuipa)
16172 \DeclareTextCommand{\textglotstop}{PU}{\82\224}%* U+0294
16173 %* \textglotstop -> \ejective (wsuipa)
16174 %* \textglotstop -> \glottal (phonetic)
16175 % U+0295 LATIN LETTER PHARYNGEAL VOICED FRICATIVE/
16176 % LATIN LETTER REVERSED GLOTTAL STOP; glottalstopreversed;
16177 % \textrevglotstop (tipa), \revglotstop (wsuipa)
16178 \DeclareTextCommand{\textrevglotstop}{PU}{\82\225}%* U+0295
16179 %* \textrevglotstop -> \reveject (wsuipa)
16180 % U+0296 LATIN LETTER INVERTED GLOTTAL STOP; glottalstopinverted;
16181 % \textinvglotstop (tipa), \invglotstop (wsuipa)
16182 \DeclareTextCommand{\textinvglotstop}{PU}{\82\226}%* U+0296

16183 % U+0297 LATIN LETTER STRETCHED C; cstretched; \textstretchc (tipa)
16184 \DeclareTextCommand{\textstretchc}{PU}{\82\227}% U+0297
16185 %* \textstretchc -> \clickc (wsuipa)
16186 %* \textstretchc -> \textstretchcvar (tipx)
16187 % U+0298 LATIN LETTER BILABIAL CLICK; bilabialclick;
16188 % \textbullseye (tipa)
16189 \DeclareTextCommand{\textbullseye}{PU}{\82\230}% U+0298
16190 %* \textbullseye -> \clickb (wsuipa)
16191 %* \textbullseye -> \textObullseye (tipx)
16192 % U+0299 LATIN LETTER SMALL CAPITAL B; \textscb (tipa)
16193 \DeclareTextCommand{\textscb}{PU}{\82\231}% U+0299
16194 % U+029A LATIN SMALL LETTER CLOSED OPEN E; eopenclosed;
16195 % \textcloseepsilon (tipa)
16196 \DeclareTextCommand{\textcloseepsilon}{PU}{\82\232}% U+029A
16197 % U+029B LATIN LETTER SMALL CAPITAL G WITH HOOK; Gsmallhook;
16198 % \texthtscg (tipa)
16199 \DeclareTextCommand{\texthtscg}{PU}{\82\233}% U+029B
16200 % U+029C LATIN LETTER SMALL CAPITAL H; \textsch (tipa)
16201 \DeclareTextCommand{\textsch}{PU}{\82\234}% U+029C
16202 % U+029D LATIN SMALL LETTER J WITH CROSSED-TAIL; jcrossed-
tail; \textcdj (tipa)
16203 \DeclareTextCommand{\textctj}{PU}{\82\235}% U+029D
16204 %* \textctj -> \textctjvar (tipx)
16205 % U+029E LATIN SMALL LETTER TURNED K; kturned; \textturnk (tipa)
16206 \DeclareTextCommand{\textturnk}{PU}{\82\236}% U+029E
16207 %* \textturnk -> \textturnsck (tipx)
16208 % U+029F LATIN LETTER SMALL CAPITAL L; \textscL (tipa)
16209 \DeclareTextCommand{\textscL}{PU}{\82\237}% U+029F
16210 % U+02A0 LATIN SMALL LETTER Q WITH HOOK; qhook; \texthtq (tipa)
16211 \DeclareTextCommand{\texthtq}{PU}{\82\240}% U+02A0
16212 % U+02A1 LATIN LETTER GLOTTAL STOP WITH STROKE; glottalstop-
stroke;
16213 % \textbarglotstop (tipa)
16214 \DeclareTextCommand{\textbarglotstop}{PU}{\82\241}% U+02A1
16215 % U+02A2 LATIN LETTER REVERSED GLOTTAL STOP WITH STROKE/
16216 % LATIN LETTER REVERSED GLOTTAL STOP BAR; glottalstopstrokere-
versed;
16217 % \textbarrevglotstop (tipa)
16218 \DeclareTextCommand{\textbarrevglotstop}{PU}{\82\242}% U+02A2
16219 % U+02A3 LATIN SMALL LETTER DZ DIGRAPH; dzaltone; \textdzlig (tipa)
16220 \DeclareTextCommand{\textdzlig}{PU}{\82\243}% U+02A3
16221 %* \textdzlig -> \dz (wsuipa)
16222 % U+02A4 LATIN SMALL LETTER DEZH DIGRAPH; dezh; \textdyogh-
lig (tipa)
16223 \DeclareTextCommand{\textdyoghlig}{PU}{\82\244}% U+02A4
16224 % U+02A5 LATIN SMALL LETTER DZ DIGRAPH WITH CURL; dzcurl;
16225 % \textdctzlig (tipa)
16226 \DeclareTextCommand{\textdctzlig}{PU}{\82\245}% U+02A5
16227 % U+02A6 LATIN SMALL LETTER TS DIGRAPH; ts; \texttslig (tipa)
16228 \DeclareTextCommand{\texttslig}{PU}{\82\246}% U+02A6
16229 % U+02A7 LATIN SMALL LETTER TESH DIGRAPH; tesh; \textteshlig (tipa)
16230 \DeclareTextCommand{\textteshlig}{PU}{\82\247}% U+02A7
16231 %* \textteshlig -> \tesh (wsuipa)
16232 % U+02A8 LATIN SMALL LETTER TC DIGRAPH WITH CURL; tccurl;

16233 % \texttctclig (tipa)
16234 \DeclareTextCommand{\texttctclig}{PU}{\82\250}% U+02A8
16235 % U+02AE LATIN SMALL LETTER TURNED H WITH FISHHOOK;
16236 % \textlhtlongy (tipa)
16237 \DeclareTextCommand{\textlhtlongy}{PU}{\82\256}% U+02AE
16238 % U+02AF LATIN SMALL LETTER TURNED H WITH FISHHOOK AND TAIL;
16239 % \textvibyy (tipa)
16240 \DeclareTextCommand{\textvibyy}{PU}{\82\257}% U+02AF

47.2.7 Spacing Modifier Letters: U+02B0 to U+02FF

16241 % U+02BD MODIFIER LETTER REVERSED COMMA;
16242 % commareversedmod, afi64937; \textrevapostrophe (tipa)
16243 \DeclareTextCommand{\textrevapostrophe}{PU}{\82\275}% U+02BD
16244 % U+02C0 MODIFIER LETTER GLOTTAL STOP; glottalstopmod;
16245 % \textraiseplotstop (tipa)
16246 \DeclareTextCommand{\textraiseplotstop}{PU}{\82\300}% U+02C0
16247 % U+02C2 MODIFIER LETTER LEFT ARROWHEAD; arrowheadleftmod;
16248 % \textlptr (tipa)
16249 \DeclareTextCommand{\textlptr}{PU}{\82\302}% U+02C2
16250 % U+02C3 MODIFIER LETTER RIGHT ARROWHEAD; arrowheadrightmod;
16251 % \textrptr (tipa)
16252 \DeclareTextCommand{\textrptr}{PU}{\82\303}% U+02C3
16253 % U+02C7 CARON; caron
16254 \DeclareTextCommand{\textasciicaron}{PU}{\82\307}% U+02C7
16255 % U+02C8 MODIFIER LETTER VERTICAL LINE; verticallinemod;
16256 % \textprimstress (tipa)
16257 \DeclareTextCommand{\textprimstress}{PU}{\82\310}% U+02C8
16258 % U+02CC MODIFIER LETTER LOW VERTICAL LINE; verticallinelowmod;
16259 % \textsecstress (tipa)
16260 \DeclareTextCommand{\textsecstress}{PU}{\82\314}% U+02CC
16261 % U+02D0 MODIFIER LETTER TRIANGULAR COLON; colontriangularmod;
16262 % \textlengthmark (tipa)
16263 \DeclareTextCommand{\textlengthmark}{PU}{\82\320}% U+02D0
16264 % U+02D1 MODIFIER LETTER HALF TRIANGULAR COLON; colontriangularhalfmod;
16265 % \texthalflength (tipa)
16266 \DeclareTextCommand{\texthalflength}{PU}{\82\321}% U+02D1
16267 % U+02D8 BREVE; breve
16268 \DeclareTextCommand{\textasciibreve}{PU}{\82\330}% U+02D8
16269 % U+02D9 DOT ABOVE; dotaccent
16270 \DeclareTextCommand{\textdotaccent}{PU}{\82\331}% U+02D9
16271 % U+02DA RING ABOVE; ring
16272 \DeclareTextCommand{\textring}{PU}{\82\332}% U+02DA
16273 % U+02DB OGONEK; ogonek
16274 \DeclareTextCommand{\textogonek}{PU}{\82\333}% U+02DB
16275 % U+02DC SMALL TILDE; ilde, *tilde
16276 \DeclareTextCommand{\texttilde}{PU}{\82\334}% U+02DC
16277 % U+02DD DOUBLE ACUTE ACCENT; hungarumlaut
16278 \DeclareTextCommand{\texthungarumlaut}{PU}{\82\335}% U+02DD
16279 \DeclareTextCommand{\textacutedbl}{PU}{\82\335}% U+02DD
16280 % U+02F3 MODIFIER LETTER LOWER RING
16281 \DeclareTextCommand{\textringlow}{PU}{\82\363}% U+02F3
16282 % U+02F5 MODIFIER LETTER MIDDLE DOUBLE GRAVE ACCENT
16283 \DeclareTextCommand{\textgravedbl}{PU}{\82\365}% U+02F5

16284 % U+02F7 MODIFIER LETTER LOW TILDE
16285 \DeclareTextCommand{\texttildelow}{PU}{\82\367}% U+02F7
16286 % U+02F9 MODIFIER LETTER BEGIN HIGH TONE; \textopencorner (tipa)
16287 \DeclareTextCommand{\textopencorner}{PU}{\82\371}% U+02F9
16288 % U+02FA MODIFIER LETTER END HIGH TONE; \textcorner (tipa)
16289 \DeclareTextCommand{\textcorner}{PU}{\82\372}% U+02FA

47.2.8 Combining Diacritical Marks: U+0300 to U+036F

16290 % U+030F COMBINING DOUBLE GRAVE ACCENT; dblgravemcmb
16291 \DeclareTextCommand{\textdoublegrave}{PU}{ \83\017}% U+030F
16292 % U+0311 COMBINING INVERTED BREVE; breveinvertedcmb
16293 \DeclareTextCommand{\textnewtie}{PU}{ \83\021}% U+0311
16294 % U+0323 COMBINING DOT BELOW; dotbelowcmb, *dotbelowcmb
16295 \DeclareTextCommand{\textdotbelow}{PU}{ \83\043}% U+0323
16296 % U+0331 COMBINING MACRON BELOW; macronbelowcmb
16297 \DeclareTextCommand{\textmacronbelow}{PU}{ \83\061}% U+0331
16298 % U+0361 COMBINING DOUBLE INVERTED BREVE; breveinverteddou-
blecmb
16299 \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.

16300 \ifx\textBeta\@undefined \else
16301 \input{puenc-greek.def}
16302 \fi
16303 (/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.

16304 (*puenc)
16305 \ifx\CYRDZE\@undefined \else
16306 % U+0400 CYRILLIC CAPITAL LETTER IE WITH GRAVE
16307 \DeclareTextCompositeCommand{\`}{PU}{\CYRE}{\84\000}% U+0400
16308 % U+0401 CYRILLIC CAPITAL LETTER IO; Iocyrillic, *afii10023
16309 \DeclareTextCommand{\CYRYO}{PU}{\84\001}% U+0401
16310 \DeclareTextCompositeCommand{\"}{PU}{\CYRE}{\84\001}% U+0401
16311 % U+0402 CYRILLIC CAPITAL LETTER DJE; Djecyrillic, *afii10051
16312 \DeclareTextCommand{\CYRDJE}{PU}{\84\002}% U+0402
16313 % U+0403 CYRILLIC CAPITAL LETTER GJE; Gjecyrillic, *afii10052
16314 \DeclareTextCompositeCommand{\'}{PU}{\CYRG}{\84\003}% U+0403
16315 % U+0404 CYRILLIC CAPITAL LETTER UKRAINIAN IE; Ecyrillic, *afii10053
16316 \DeclareTextCommand{\CYRIE}{PU}{\84\004}% U+0404
16317 % U+0405 CYRILLIC CAPITAL LETTER DZE; Dzecyrillic, *afii10054
16318 \DeclareTextCommand{\CYRDZE}{PU}{\84\005}% U+0405
16319 % U+0406 CYRILLIC CAPITAL LETTER BYELORUSSIAN-UKRAINIAN I;
16320 % Icyrillic, *afii10055
16321 \DeclareTextCommand{\CYRII}{PU}{\84\006}% U+0406
16322 % U+0407 CYRILLIC CAPITAL LETTER YI; Yicyrillic, *afii10056
16323 \DeclareTextCommand{\CYRYI}{PU}{\84\007}% U+0407
16324 \DeclareTextCompositeCommand{\"}{PU}{\CYRII}{\84\007}% U+0407
16325 % U+0408 CYRILLIC CAPITAL LETTER JE; Jecyrillic, *afii10057

16326 \DeclareTextCommand{\CYRJE}{PU}{\84\010}% U+0408
16327 % U+0409 CYRILLIC CAPITAL LETTER LJE; Ljecyrillic, *afii10058
16328 \DeclareTextCommand{\CYRLJE}{PU}{\84\011}% U+0409
16329 % U+040A CYRILLIC CAPITAL LETTER NJE; Njecyrillic, *afii10059
16330 \DeclareTextCommand{\CYRNJE}{PU}{\84\012}% U+040A
16331 % U+040B CYRILLIC CAPITAL LETTER TSHE; Tshecyrillic, *afii10060
16332 \DeclareTextCommand{\CYRTSHE}{PU}{\84\013}% U+040B
16333 % U+040C CYRILLIC CAPITAL LETTER KJE; Kjecyrillic, *afii10061
16334 \DeclareTextCompositeCommand{\'}{PU}{\CYRK}{\84\014}% U+040C
16335 % U+040D CYRILLIC CAPITAL LETTER I WITH GRAVE
16336 \DeclareTextCompositeCommand{\`}{PU}{\CYRI}{\84\015}% U+040D
16337 % U+040E CYRILLIC CAPITAL LETTER SHORT U; Ushortcyrillic, *afii10062
16338 \DeclareTextCommand{\CYRUSHRT}{PU}{\84\016}% U+040E
16339 \DeclareTextCompositeCommand{\U}{PU}{\CYRU}{\84\016}% U+040E
16340 % U+040F CYRILLIC CAPITAL LETTER DZHE; Dzhecyrillic, *afii10145
16341 \DeclareTextCommand{\CYRDZHE}{PU}{\84\017}% U+040F
16342 % U+0410 CYRILLIC CAPITAL LETTER A; Acyrillic, *afii10017
16343 \DeclareTextCommand{\CYRA}{PU}{\84\020}% U+0410
16344 % U+0411 CYRILLIC CAPITAL LETTER BE; Becyrillic, *afii10018
16345 \DeclareTextCommand{\CYRB}{PU}{\84\021}% U+0411
16346 % U+0412 CYRILLIC CAPITAL LETTER VE; Vecyrillic, *afii10019
16347 \DeclareTextCommand{\CYRV}{PU}{\84\022}% U+0412
16348 % U+0413 CYRILLIC CAPITAL LETTER GHE; Gecyrillic, *afii10020
16349 \DeclareTextCommand{\CYRG}{PU}{\84\023}% U+0413
16350 % U+0414 CYRILLIC CAPITAL LETTER DE; Decyrillic, *afii10021
16351 \DeclareTextCommand{\CYRD}{PU}{\84\024}% U+0414
16352 % U+0415 CYRILLIC CAPITAL LETTER IE; Iecyrillic, *afii10022
16353 \DeclareTextCommand{\CYRE}{PU}{\84\025}% U+0415
16354 % U+0416 CYRILLIC CAPITAL LETTER ZHE; Zhecyrillic, *afii10024
16355 \DeclareTextCommand{\CYRZH}{PU}{\84\026}% U+0416
16356 % U+0417 CYRILLIC CAPITAL LETTER ZE; Zecyrillic, *afii10025
16357 \DeclareTextCommand{\CYRZ}{PU}{\84\027}% U+0417
16358 % U+0418 CYRILLIC CAPITAL LETTER I; Iicyrillic, *afii10026
16359 \DeclareTextCommand{\CYRI}{PU}{\84\030}% U+0418
16360 % U+0419 CYRILLIC CAPITAL LETTER SHORT I; Iishortcyrillic, *afii10027
16361 \DeclareTextCommand{\CYRISHRT}{PU}{\84\031}% U+0419
16362 \DeclareTextCompositeCommand{\U}{PU}{\CYRI}{\84\031}% U+0419
16363 % U+041A CYRILLIC CAPITAL LETTER KA; Kacyrillic, *afii10028
16364 \DeclareTextCommand{\CYRK}{PU}{\84\032}% U+041A
16365 % U+041B CYRILLIC CAPITAL LETTER EL; Elcyrillic, *afii10029
16366 \DeclareTextCommand{\CYRL}{PU}{\84\033}% U+041B
16367 % U+041C CYRILLIC CAPITAL LETTER EM; Emcyrillic, *afii10030
16368 \DeclareTextCommand{\CYRM}{PU}{\84\034}% U+041C
16369 % U+041D CYRILLIC CAPITAL LETTER EN; Encyrillic, *afii10031
16370 \DeclareTextCommand{\CYRN}{PU}{\84\035}% U+041D
16371 % U+041E CYRILLIC CAPITAL LETTER O; Ocyrillic, *afii10032
16372 \DeclareTextCommand{\CYRO}{PU}{\84\036}% U+041E
16373 % U+041F CYRILLIC CAPITAL LETTER PE; Pecyrillic, *afii10033
16374 \DeclareTextCommand{\CYRP}{PU}{\84\037}% U+041F
16375 % U+0420 CYRILLIC CAPITAL LETTER ER; Ercyrillic, *afii10034
16376 \DeclareTextCommand{\CYRR}{PU}{\84\040}% U+0420
16377 % U+0421 CYRILLIC CAPITAL LETTER ES; Escyrillic, *afii10035
16378 \DeclareTextCommand{\CYRS}{PU}{\84\041}% U+0421
16379 % U+0422 CYRILLIC CAPITAL LETTER TE; Tecyrillic, *afii10036

16380 \DeclareTextCommand{\CYRT}{PU}{\84\042}% U+0422
16381 % U+0423 CYRILLIC CAPITAL LETTER U; Ucyrillic, *afii10037
16382 \DeclareTextCommand{\CYRU}{PU}{\84\043}% U+0423
16383 % U+0424 CYRILLIC CAPITAL LETTER EF; Efcyrillic, *afii10038
16384 \DeclareTextCommand{\CYRF}{PU}{\84\044}% U+0424
16385 % U+0425 CYRILLIC CAPITAL LETTER HA; Khacyrillic, *afii10039
16386 \DeclareTextCommand{\CYRH}{PU}{\84\045}% U+0425
16387 % U+0426 CYRILLIC CAPITAL LETTER TSE; Tsecyrillic, *afii10040
16388 \DeclareTextCommand{\CYRC}{PU}{\84\046}% U+0426
16389 % U+0427 CYRILLIC CAPITAL LETTER CHE; Checyrillic, *afii10041
16390 \DeclareTextCommand{\CYRCH}{PU}{\84\047}% U+0427
16391 % U+0428 CYRILLIC CAPITAL LETTER SHA; Shacyrillic, *afii10042
16392 \DeclareTextCommand{\CYRSH}{PU}{\84\050}% U+0428
16393 % U+0429 CYRILLIC CAPITAL LETTER SHCHA; Shchacyrillic, *afii10043
16394 \DeclareTextCommand{\CYRSHCH}{PU}{\84\051}% U+0429
16395 % U+042A CYRILLIC CAPITAL LETTER HARD SIGN;
16396 % Hardsigncyrillic, *afii10044
16397 \DeclareTextCommand{\CYRHRDSN}{PU}{\84\052}% U+042A
16398 % U+042B CYRILLIC CAPITAL LETTER YERU; Yericyrillic, *afii10045
16399 \DeclareTextCommand{\CYRERY}{PU}{\84\053}% U+042B
16400 % U+042C CYRILLIC CAPITAL LETTER SOFT SIGN;
16401 % Softsigncyrillic, *afii10046
16402 \DeclareTextCommand{\CYRSFTSN}{PU}{\84\054}% U+042C
16403 % U+042D CYRILLIC CAPITAL LETTER E; Ereversedcyrillic, *afii10047
16404 \DeclareTextCommand{\CYREREV}{PU}{\84\055}% U+042D
16405 % U+042E CYRILLIC CAPITAL LETTER YU; IUcyrillic, *afii10048
16406 \DeclareTextCommand{\CYRYU}{PU}{\84\056}% U+042E
16407 % U+042F CYRILLIC CAPITAL LETTER YA; IAcyrillic, *afii10049
16408 \DeclareTextCommand{\CYRYA}{PU}{\84\057}% U+042F
16409 % U+0430 CYRILLIC SMALL LETTER A; acyrillic, *afii10065
16410 \DeclareTextCommand{\cyra}{PU}{\84\060}% U+0430
16411 % U+0431 CYRILLIC SMALL LETTER BE; *afii10066, becyrillic
16412 \DeclareTextCommand{\cyrb}{PU}{\84\061}% U+0431
16413 % U+0432 CYRILLIC SMALL LETTER VE; *afii10067, vecyrillic
16414 \DeclareTextCommand{\cyrv}{PU}{\84\062}% U+0432
16415 % U+0433 CYRILLIC SMALL LETTER GHE; *afii10068, gecyrillic
16416 \DeclareTextCommand{\cyrg}{PU}{\84\063}% U+0433
16417 % U+0434 CYRILLIC SMALL LETTER DE; *afii10069, decyrillic
16418 \DeclareTextCommand{\cyrd}{PU}{\84\064}% U+0434
16419 % U+0435 CYRILLIC SMALL LETTER IE; *afii10070, iecyrillic
16420 \DeclareTextCommand{\cyre}{PU}{\84\065}% U+0435
16421 % U+0436 CYRILLIC SMALL LETTER ZHE; *afii10072, zhecyrillic
16422 \DeclareTextCommand{\cyrzh}{PU}{\84\066}% U+0436
16423 % U+0437 CYRILLIC SMALL LETTER ZE; *afii10073, zecyrillic
16424 \DeclareTextCommand{\cyrz}{PU}{\84\067}% U+0437
16425 % U+0438 CYRILLIC SMALL LETTER I; *afii10074, iicyrillic
16426 \DeclareTextCommand{\cyri}{PU}{\84\070}% U+0438
16427 % U+0439 CYRILLIC SMALL LETTER SHORT I; *afii10075, iishortcyrillic
16428 \DeclareTextCommand{\cyrishrt}{PU}{\84\071}% U+0439
16429 \DeclareTextCompositeCommand{\U}{PU}{\cyri}{\84\071}% U+0439
16430 % U+043A CYRILLIC SMALL LETTER KA; *afii10076, kacyrillic
16431 \DeclareTextCommand{\cyrk}{PU}{\84\072}% U+043A
16432 % U+043B CYRILLIC SMALL LETTER EL; *afii10077, elcyrillic
16433 \DeclareTextCommand{\cyr}{PU}{\84\073}% U+043B

16434 % U+043C CYRILLIC SMALL LETTER EM; *afii10078, emcyrillic
16435 \DeclareTextCommand{\cyrm}{PU}{\84\074}% U+043C
16436 % U+043D CYRILLIC SMALL LETTER EN; *afii10079, encyirillic
16437 \DeclareTextCommand{\cyrn}{PU}{\84\075}% U+043D
16438 % U+043E CYRILLIC SMALL LETTER O; *afii10080, ocyrillic
16439 \DeclareTextCommand{\cyro}{PU}{\84\076}% U+043E
16440 % U+043F CYRILLIC SMALL LETTER PE; *afii10081, pecyirillic
16441 \DeclareTextCommand{\cyrp}{PU}{\84\077}% U+043F
16442 % U+0440 CYRILLIC SMALL LETTER ER; *afii10082, ercyirillic
16443 \DeclareTextCommand{\cyrr}{PU}{\84\100}% U+0440
16444 % U+0441 CYRILLIC SMALL LETTER ES; *afii10083, escyirillic
16445 \DeclareTextCommand{\cyrs}{PU}{\84\101}% U+0441
16446 % U+0442 CYRILLIC SMALL LETTER TE; *afii10084, tecyirillic
16447 \DeclareTextCommand{\cyrt}{PU}{\84\102}% U+0442
16448 % U+0443 CYRILLIC SMALL LETTER U; *afii10085, ucyirillic
16449 \DeclareTextCommand{\cyru}{PU}{\84\103}% U+0443
16450 % U+0444 CYRILLIC SMALL LETTER EF; *afii10086, efcyirillic
16451 \DeclareTextCommand{\cyrf}{PU}{\84\104}% U+0444
16452 % U+0445 CYRILLIC SMALL LETTER HA; *afii10087, khacyirillic
16453 \DeclareTextCommand{\cyrh}{PU}{\84\105}% U+0445
16454 % U+0446 CYRILLIC SMALL LETTER TSE; *afii10088, tsecyirillic
16455 \DeclareTextCommand{\cyrc}{PU}{\84\106}% U+0446
16456 % U+0447 CYRILLIC SMALL LETTER CHE; *afii10089, checyirillic
16457 \DeclareTextCommand{\cyrch}{PU}{\84\107}% U+0447
16458 % U+0448 CYRILLIC SMALL LETTER SHA; *afii10090, shacyirillic
16459 \DeclareTextCommand{\cyrsh}{PU}{\84\110}% U+0448
16460 % U+0449 CYRILLIC SMALL LETTER SHCHA; *afii10091, shchacyirillic
16461 \DeclareTextCommand{\cyrshch}{PU}{\84\111}% U+0449
16462 % U+044A CYRILLIC SMALL LETTER HARD SIGN; *afii10092, hardsigncyrillic
16463 \DeclareTextCommand{\cyrhrdsn}{PU}{\84\112}% U+044A
16464 %* \cyrhrdsn -> \hardsign (tipa)
16465 % U+044B CYRILLIC SMALL LETTER YERU; *afii10093, yericyirillic
16466 \DeclareTextCommand{\cyry}{PU}{\84\113}% U+044B
16467 % U+044C CYRILLIC SMALL LETTER SOFT SIGN; *afii10094, softsigncyirillic
16468 \DeclareTextCommand{\cyrsoftsn}{PU}{\84\114}% U+044C
16469 %* \cyrsoftsn -> \softsign (tipa)
16470 % U+044D CYRILLIC SMALL LETTER E; *afii10095, ereversedcyirillic
16471 \DeclareTextCommand{\cyrerev}{PU}{\84\115}% U+044D
16472 % U+044E CYRILLIC SMALL LETTER YU; *afii10096, iucyirillic
16473 \DeclareTextCommand{\cyryu}{PU}{\84\116}% U+044E
16474 % U+044F CYRILLIC SMALL LETTER YA; *afii10097, iacyirillic
16475 \DeclareTextCommand{\cyrya}{PU}{\84\117}% U+044F
16476 % U+0450 CYRILLIC SMALL LETTER IE WITH GRAVE
16477 \DeclareTextCompositeCommand{\cyrie}{PU}{\84\120}% U+0450
16478 % U+0451 CYRILLIC SMALL LETTER IO; *afii10071, iocyirillic
16479 \DeclareTextCommand{\cyryo}{PU}{\84\121}% U+0451
16480 \DeclareTextCompositeCommand{\cyrio}{PU}{\84\121}% U+0451
16481 % U+0452 CYRILLIC SMALL LETTER DJE; *afii10099, djecyirillic
16482 \DeclareTextCommand{\cyrdje}{PU}{\84\122}% U+0452
16483 % U+0453 CYRILLIC SMALL LETTER GJE; *afii10100, gjecyirillic
16484 \DeclareTextCompositeCommand{\cyrgje}{PU}{\84\123}% U+0453
16485 % U+0454 CYRILLIC SMALL LETTER UKRAINIAN IE; *afii10101, ecyirillic
16486 \DeclareTextCommand{\cyrieuk}{PU}{\84\124}% U+0454

16487 % U+0455 CYRILLIC SMALL LETTER DZE; *afii10102, dzecyrillic
16488 \DeclareTextCommand{\cyrdze}{PU}{\84\125}% U+0455
16489 % U+0456 CYRILLIC SMALL LETTER BYELORUSSIAN-UKRAINIAN I;
16490 % *afii10103, icyrillic
16491 \DeclareTextCommand{\cyrii}{PU}{\84\126}% U+0456
16492 % U+0457 CYRILLIC SMALL LETTER YI; *afii10104, yicyrillic
16493 \DeclareTextCommand{\cyryi}{PU}{\84\127}% U+0457
16494 \DeclareTextCompositeCommand{"}{PU}{\cyrii}{\84\127}% U+0457
16495 % U+0458 CYRILLIC SMALL LETTER JE; *afii10105, jecyrillic
16496 \DeclareTextCommand{\cyrje}{PU}{\84\130}% U+0458
16497 % U+0459 CYRILLIC SMALL LETTER LJE; *afii10106, ljecyrillic
16498 \DeclareTextCommand{\cyrlje}{PU}{\84\131}% U+0459
16499 % U+045A CYRILLIC SMALL LETTER NJE; *afii10107, njecyrillic
16500 \DeclareTextCommand{\cyrnje}{PU}{\84\132}% U+045A
16501 % U+045B CYRILLIC SMALL LETTER TSHE; *afii10108, tshecyrillic
16502 \DeclareTextCommand{\cyrtshe}{PU}{\84\133}% U+045B
16503 % U+045C CYRILLIC SMALL LETTER KJE; *afii10109, kjecyrillic
16504 \DeclareTextCompositeCommand{'}{PU}{\cyrk}{\84\134}% U+045C
16505 % U+045D CYRILLIC SMALL LETTER I WITH GRAVE
16506 \DeclareTextCompositeCommand{`}{PU}{\cyri}{\84\135}% U+045D
16507 % U+045E CYRILLIC SMALL LETTER SHORT U; *afii10110, ushortcyrillic
16508 \DeclareTextCommand{\cyrushrt}{PU}{\84\136}% U+045E
16509 \DeclareTextCompositeCommand{\U}{PU}{\curu}{\84\136}% U+045E
16510 % U+045F CYRILLIC SMALL LETTER DZHE; *afii10193, dzhecyrillic
16511 \DeclareTextCommand{\cyrdzhe}{PU}{\84\137}% U+045F
16512 % U+0460 CYRILLIC CAPITAL LETTER OMEGA; Omegacyrillic
16513 \DeclareTextCommand{\CYROMEGA}{PU}{\84\140}% U+0460
16514 % U+0461 CYRILLIC SMALL LETTER OMEGA; omegacyrillic
16515 \DeclareTextCommand{\cyromega}{PU}{\84\141}% U+0461
16516 % U+0462 CYRILLIC CAPITAL LETTER YAT; Yatcyrillic, *afii10146
16517 \DeclareTextCommand{\CYRYAT}{PU}{\84\142}% U+0462
16518 % U+0463 CYRILLIC SMALL LETTER YAT; *afii10194, yatcyrillic
16519 \DeclareTextCommand{\cyryat}{PU}{\84\143}% U+0463
16520 % U+0464 CYRILLIC CAPITAL LETTER IOTIFIED E; Eiotifiedcyrillic
16521 \DeclareTextCommand{\CYRIOTE}{PU}{\84\144}% U+0464
16522 % U+0465 CYRILLIC SMALL LETTER IOTIFIED E; eiotifiedcyrillic
16523 \DeclareTextCommand{\cyriote}{PU}{\84\145}% U+0465
16524 % U+0466 CYRILLIC CAPITAL LETTER LITTLE YUS; Yuslittlecyrillic
16525 \DeclareTextCommand{\CYRLYUS}{PU}{\84\146}% U+0466
16526 % U+0467 CYRILLIC SMALL LETTER LITTLE YUS; yuslittlecyrillic
16527 \DeclareTextCommand{\cyrlyus}{PU}{\84\147}% U+0467
16528 % U+0468 CYRILLIC CAPITAL LETTER IOTIFIED LITTLE YUS; Yuslitlei-
otifiedcyrillic
16529 \DeclareTextCommand{\CYRIOTLYUS}{PU}{\84\150}% U+0468
16530 % U+0469 CYRILLIC SMALL LETTER IOTIFIED LITTLE YUS; yuslitlei-
otifiedcyrillic
16531 \DeclareTextCommand{\cyriotlyus}{PU}{\84\151}% U+0469
16532 % U+046A CYRILLIC CAPITAL LETTER BIG YUS; Yusbigcyrillic
16533 \DeclareTextCommand{\CYRBYUS}{PU}{\84\152}% U+046A
16534 % U+046B CYRILLIC SMALL LETTER BIG YUS; yusbigcyrillic
16535 \DeclareTextCommand{\cyrbyus}{PU}{\84\153}% U+046B
16536 % U+046C CYRILLIC CAPITAL LETTER IOTIFIED BIG YUS; Yusbigiotified-
cyrillic
16537 \DeclareTextCommand{\CYRIOTBYUS}{PU}{\84\154}% U+046C

16538 % U+046D CYRILLIC SMALL LETTER IOTIFIED BIG YUS; yusbigiotified-cyrillic
16539 \DeclareTextCommand{\cyriotbyus}{PU}{\84\155}% U+046D
16540 % U+046E CYRILLIC CAPITAL LETTER KSI; Ksicyrillic
16541 \DeclareTextCommand{\CYRKSI}{PU}{\84\156}% U+046E
16542 % U+046F CYRILLIC SMALL LETTER KSI; ksicyrillic
16543 \DeclareTextCommand{\cyrksi}{PU}{\84\157}% U+046F
16544 % U+0470 CYRILLIC CAPITAL LETTER PSI; Psicyrillic
16545 \DeclareTextCommand{\CYRPSI}{PU}{\84\160}% U+0470
16546 % U+0471 CYRILLIC SMALL LETTER PSI; psicyrillic
16547 \DeclareTextCommand{\cyrpsi}{PU}{\84\161}% U+0471
16548 % U+0472 CYRILLIC CAPITAL LETTER FITA; Fitacyrillic, *afii10147
16549 \DeclareTextCommand{\CYRFITA}{PU}{\84\162}% U+0472
16550 % U+0473 CYRILLIC SMALL LETTER FITA; *afii10195, fitacyrillic
16551 \DeclareTextCommand{\cyrfita}{PU}{\84\163}% U+0473
16552 % U+0474 CYRILLIC CAPITAL LETTER IZHITSA; Izhitsacyrillic, *afii10148
16553 \DeclareTextCommand{\CYRIZH}{PU}{\84\164}% U+0474
16554 % U+0475 CYRILLIC SMALL LETTER IZHITSA; *afii10196, izhitsacyrillic
16555 \DeclareTextCommand{\cyrizh}{PU}{\84\165}% U+0475
16556 % U+0476 CYRILLIC CAPITAL LETTER IZHITSA WITH DOUBLE
16557 % GRAVE ACCENT; Izhitsadblgravecyrillic
16558 \DeclareTextCompositeCommand{\C}{PU}{\CYRIZH}{\84\166}% U+0476
16559 % U+0477 CYRILLIC SMALL LETTER IZHITSA WITH DOUBLE
16560 % GRAVE ACCENT; izhitsadblgravecyrillic
16561 \DeclareTextCompositeCommand{\C}{PU}{\cyrizh}{\84\167}% U+0477
16562 % U+0478 CYRILLIC CAPITAL LETTER UK; Ukcyrillic
16563 \DeclareTextCommand{\CYRUK}{PU}{\84\170}% U+0478
16564 % U+0479 CYRILLIC SMALL LETTER UK; ukcyrillic
16565 \DeclareTextCommand{\cyruk}{PU}{\84\171}% U+0479
16566 % U+047A CYRILLIC CAPITAL LETTER ROUND OMEGA; Omegaroundcyrillic
16567 \DeclareTextCommand{\CYROMEGARND}{PU}{\84\172}% U+047A
16568 % U+047B CYRILLIC SMALL LETTER ROUND OMEGA; omegaroundcyrillic
16569 \DeclareTextCommand{\cyromegarnd}{PU}{\84\173}% U+047B
16570 % U+047C CYRILLIC CAPITAL LETTER OMEGA WITH TITLO; Omegatitlocyrillic
16571 \DeclareTextCommand{\CYROMEGATITLO}{PU}{\84\174}% U+047C
16572 % U+047D CYRILLIC SMALL LETTER OMEGA WITH TITLO; omegatitlocyrillic
16573 \DeclareTextCommand{\cyromegatitlo}{PU}{\84\175}% U+047D
16574 % U+047E CYRILLIC CAPITAL LETTER OT; Otcyrillic
16575 \DeclareTextCommand{\CYROT}{PU}{\84\176}% U+047E
16576 % U+047F CYRILLIC SMALL LETTER OT; otcyrillic
16577 \DeclareTextCommand{\cyrot}{PU}{\84\177}% U+047F
16578 % U+0480 CYRILLIC CAPITAL LETTER KOPPA; Koppacyrillic
16579 \DeclareTextCommand{\CYRKOPPA}{PU}{\84\200}% U+0480
16580 % U+0481 CYRILLIC SMALL LETTER KOPPA; koppacyrillic
16581 \DeclareTextCommand{\cyrkoppa}{PU}{\84\201}% U+0481
16582 % U+0482 CYRILLIC THOUSANDS SIGN; thousandcyrillic
16583 \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
 16584 % U+048A CYRILLIC CAPITAL LETTER SHORT I WITH TAIL
 16585 \DeclareTextCommand{\CYRISHRTDSC}{PU}{\84\212}% U+048A
 16586 % U+048B CYRILLIC SMALL LETTER SHORT I WITH TAIL
 16587 \DeclareTextCommand{\cyrishrtdsc}{PU}{\84\213}% U+048B
 16588 % U+048C CYRILLIC CAPITAL LETTER SEMISOFT SIGN
 16589 \DeclareTextCommand{\CYRSEMISFTSN}{PU}{\84\214}% U+048C
 16590 % U+048D CYRILLIC SMALL LETTER SEMISOFT SIGN
 16591 \DeclareTextCommand{\cyrsemisftsn}{PU}{\84\215}% U+048D
 16592 % U+048E CYRILLIC CAPITAL LETTER ER WITH TICK
 16593 \DeclareTextCommand{\CYRRTICK}{PU}{\84\216}% U+048E
 16594 % U+048F CYRILLIC SMALL LETTER ER WITH TICK
 16595 \DeclareTextCommand{\cyrrtick}{PU}{\84\217}% U+048F
 16596 % U+0490 CYRILLIC CAPITAL LETTER GHE WITH UPTURN; Gheupturn-
 cyrillic, *afii10050
 16597 \DeclareTextCommand{\CYRGUP}{PU}{\84\220}% U+0490
 16598 % U+0491 CYRILLIC SMALL LETTER GHE WITH UPTURN; *afii10098, ghe-
 upturncyrillic
 16599 \DeclareTextCommand{\cyrgup}{PU}{\84\221}% U+0491
 16600 % U+0492 CYRILLIC CAPITAL LETTER GHE WITH STROKE; Ghestroke-
 cyrillic
 16601 \DeclareTextCommand{\CYRGHCRS}{PU}{\84\222}% U+0492
 16602 % U+0493 CYRILLIC SMALL LETTER GHE WITH STROKE; ghestrokecyrillic
 16603 \DeclareTextCommand{\cyrghcrs}{PU}{\84\223}% U+0493
 16604 % U+0494 CYRILLIC CAPITAL LETTER GHE WITH MIDDLE HOOK;
 16605 % Ghemiddlehookcyrillic
 16606 \DeclareTextCommand{\CYRGHK}{PU}{\84\224}% U+0494
 16607 % U+0495 CYRILLIC SMALL LETTER GHE WITH MIDDLE HOOK;
 16608 % ghemiddlehookcyrillic
 16609 \DeclareTextCommand{\cyrghk}{PU}{\84\225}% U+0495
 16610 % U+0496 CYRILLIC CAPITAL LETTER ZHE WITH DESCENDER;
 16611 % Zhedescendercyrillic
 16612 \DeclareTextCommand{\CYRZHDSC}{PU}{\84\226}% U+0496
 16613 % U+0497 CYRILLIC SMALL LETTER ZHE WITH DESCENDER;
 16614 % zhedescendercyrillic
 16615 \DeclareTextCommand{\cyrzhdsc}{PU}{\84\227}% U+0497
 16616 % U+0498 CYRILLIC CAPITAL LETTER ZE WITH DESCENDER; Zedescen-
 dercyrillic
 16617 \DeclareTextCommand{\CYRZDSC}{PU}{\84\230}% U+0498
 16618 \DeclareTextCompositeCommand{\c}{PU}{\CYRZ}{\84\230}% U+0498
 16619 % U+0499 CYRILLIC SMALL LETTER ZE WITH DESCENDER; zedescender-
 cyrillic
 16620 \DeclareTextCommand{\cyrzdsc}{PU}{\84\231}% U+0499
 16621 \DeclareTextCompositeCommand{\c}{PU}{\cyrz}{\84\231}% U+0499
 16622 % U+049A CYRILLIC CAPITAL LETTER KA WITH DESCENDER; Kadescen-
 dercyrillic
 16623 \DeclareTextCommand{\CYRKDSC}{PU}{\84\232}% U+049A

16624 % U+049B CYRILLIC SMALL LETTER KA WITH DESCENDER; kadescendercyrillic
16625 \DeclareTextCommand{\cyrkdsc}{PU}{\84\233}% U+049B
16626 % U+049C CYRILLIC CAPITAL LETTER KA WITH VERTICAL STROKE;
16627 % Kavertikalstrokecyrillic
16628 \DeclareTextCommand{\CYRKVCRS}{PU}{\84\234}% U+049C
16629 % U+049D CYRILLIC SMALL LETTER KA WITH VERTICAL STROKE;
16630 % kavertikalstrokecyrillic
16631 \DeclareTextCommand{\cyrkvcrs}{PU}{\84\235}% U+049D
16632 % U+049E CYRILLIC CAPITAL LETTER KA WITH STROKE; Kastrokecyrillic
16633 \DeclareTextCommand{\CYRKHCRS}{PU}{\84\236}% U+049E
16634 % U+049F CYRILLIC SMALL LETTER KA WITH STROKE; kastrokecyrillic
16635 \DeclareTextCommand{\cyrkhcrs}{PU}{\84\237}% U+049F
16636 % U+04A0 CYRILLIC CAPITAL LETTER BASHKIR KA; Kabashkircyrillic
16637 \DeclareTextCommand{\CYRKBEAK}{PU}{\84\240}% U+04A0
16638 % U+04A1 CYRILLIC SMALL LETTER BASHKIR KA; kabashkircyrillic
16639 \DeclareTextCommand{\cyrkbeak}{PU}{\84\241}% U+04A1
16640 % U+04A2 CYRILLIC CAPITAL LETTER EN WITH DESCENDER; Endescendercyrillic
16641 \DeclareTextCommand{\CYRNDSC}{PU}{\84\242}% U+04A2
16642 % U+04A3 CYRILLIC SMALL LETTER EN WITH DESCENDER; endescendercyrillic
16643 \DeclareTextCommand{\cyrndsc}{PU}{\84\243}% U+04A3
16644 % U+04A4 CYRILLIC CAPITAL LIGATURE EN GHE; Enghecyrillic
16645 \DeclareTextCommand{\CYRNG}{PU}{\84\244}% U+04A4
16646 % U+04A5 CYRILLIC SMALL LIGATURE EN GHE; enghecyrillic
16647 \DeclareTextCommand{\cyrng}{PU}{\84\245}% U+04A5
16648 % U+04A6 CYRILLIC CAPITAL LETTER PE WITH MIDDLE HOOK; Pemiddlehookcyrillic
16649 \DeclareTextCommand{\CYRPHK}{PU}{\84\246}% U+04A6
16650 % U+04A7 CYRILLIC SMALL LETTER PE WITH MIDDLE HOOK; pemiddlehookcyrillic
16651 \DeclareTextCommand{\cyrphk}{PU}{\84\247}% U+04A7
16652 % U+04A8 CYRILLIC CAPITAL LETTER ABKHASIAN HA; Haabkhasiancyrillic
16653 \DeclareTextCommand{\CYRABHHA}{PU}{\84\250}% U+04A8
16654 % U+04A9 CYRILLIC SMALL LETTER ABKHASIAN HA; haabkhasiancyrillic
16655 \DeclareTextCommand{\cyrabhha}{PU}{\84\251}% U+04A9
16656 % U+04AA CYRILLIC CAPITAL LETTER ES WITH DESCENDER; Esdescendercyrillic
16657 \DeclareTextCommand{\CYRSDSC}{PU}{\84\252}% U+04AA
16658 \DeclareTextCompositeCommand{\k}{PU}{\CYRS}{\84\252}% U+04AA
16659 % U+04AB CYRILLIC SMALL LETTER ES WITH DESCENDER; esdescendercyrillic
16660 \DeclareTextCommand{\cyrsdsc}{PU}{\84\253}% U+04AB
16661 \DeclareTextCompositeCommand{\k}{PU}{\cyr}{\84\253}% U+04AB
16662 % U+04AC CYRILLIC CAPITAL LETTER TE WITH DESCENDER; Tedescendercyrillic
16663 \DeclareTextCommand{\CYRTDSC}{PU}{\84\254}% U+04AC
16664 % U+04AD CYRILLIC SMALL LETTER TE WITH DESCENDER; tedescendercyrillic
16665 \DeclareTextCommand{\cyrtdsc}{PU}{\84\255}% U+04AD
16666 % U+04AE CYRILLIC CAPITAL LETTER STRAIGHT U; Ustraightcyrillic
16667 \DeclareTextCommand{\CYRY}{PU}{\84\256}% U+04AE

16668 % U+04AF CYRILLIC SMALL LETTER STRAIGHT U; ustraightcyrillic
16669 \DeclareTextCommand{\cyrj}{PU}{\84\257}% U+04AF
16670 % U+04B0 CYRILLIC CAPITAL LETTER STRAIGHT U WITH STROKE; Ustraightstrokecyrillic
16671 \DeclareTextCommand{\CYRYHCRS}{PU}{\84\260}% U+04B0
16672 % U+04B1 CYRILLIC SMALL LETTER STRAIGHT U WITH STROKE; ustraightstrokecyrillic
16673 \DeclareTextCommand{\cyrjhcrs}{PU}{\84\261}% U+04B1
16674 % U+04B2 CYRILLIC CAPITAL LETTER HA WITH DESCENDER; Hadesdescendercyrillic
16675 \DeclareTextCommand{\CYRHDSC}{PU}{\84\262}% U+04B2
16676 % U+04B3 CYRILLIC SMALL LETTER HA WITH DESCENDER; hadescendercyrillic
16677 \DeclareTextCommand{\cyrhdsc}{PU}{\84\263}% U+04B3
16678 % U+04B4 CYRILLIC CAPITAL LIGATURE TE TSE; Tetsecyrillic
16679 \DeclareTextCommand{\CYRTETSE}{PU}{\84\264}% U+04B4
16680 % U+04B5 CYRILLIC SMALL LIGATURE TE TSE; tetsecyrillic
16681 \DeclareTextCommand{\cyr tetse}{PU}{\84\265}% U+04B5
16682 % U+04B6 CYRILLIC CAPITAL LETTER CHE WITH DESCENDER;
16683 % Chedescendercyrillic
16684 \DeclareTextCommand{\CYRCHRDSC}{PU}{\84\266}% U+04B6
16685 % U+04B7 CYRILLIC SMALL LETTER CHE WITH DESCENDER; chedescendercyrillic
16686 \DeclareTextCommand{\cyrchr dsc}{PU}{\84\267}% U+04B7
16687 % U+04B8 CYRILLIC CAPITAL LETTER CHE WITH VERTICAL STROKE;
16688 % Cheverticalstrokecyrillic
16689 \DeclareTextCommand{\CYRCHVCRS}{PU}{\84\270}% U+04B8
16690 % U+04B9 CYRILLIC SMALL LETTER CHE WITH VERTICAL STROKE;
16691 % cheverticalstrokecyrillic
16692 \DeclareTextCommand{\cyrchvcrs}{PU}{\84\271}% U+04B9
16693 % U+04BA CYRILLIC CAPITAL LETTER SHHA; Shhacyrillic
16694 \DeclareTextCommand{\CYRSHHA}{PU}{\84\272}% U+04BA
16695 % U+04BB CYRILLIC SMALL LETTER SHHA; shhacyrillic
16696 \DeclareTextCommand{\cyrshha}{PU}{\84\273}% U+04BB
16697 % U+04BC CYRILLIC CAPITAL LETTER ABKHASIAN CHE; Cheabkhasiancyrillic
16698 \DeclareTextCommand{\CYRABHCH}{PU}{\84\274}% U+04BC
16699 % U+04BD CYRILLIC SMALL LETTER ABKHASIAN CHE; cheabkhasiancyrillic
16700 \DeclareTextCommand{\cyrabhch}{PU}{\84\275}% U+04BD
16701 % U+04BE CYRILLIC CAPITAL LETTER ABKHASIAN CHE WITH DESCENDER; Chedescenderabkhasiancyrillic
16702 \DeclareTextCommand{\CYRABHCHDSC}{PU}{\84\276}% U+04BE
16703 \DeclareTextCompositeCommand{\k}{PU}{\CYRABHCH}{\84\276}% U+04BE
16704 % U+04BF CYRILLIC SMALL LETTER ABKHASIAN CHE WITH DESCENDER; chedescenderabkhasiancyrillic
16705 \DeclareTextCommand{\cyrabhch dsc}{PU}{\84\277}% U+04BF
16706 \DeclareTextCompositeCommand{\k}{PU}{\cyrabhch}{\84\277}% U+04BF
16707 % U+04C0 CYRILLIC LETTER PALOCHKA; palochkacyrillic
16708 \DeclareTextCommand{\CYRpalochka}{PU}{\84\300}% U+04C0
16709 % U+04C1 CYRILLIC CAPITAL LETTER ZHE WITH BREVE; Zhebrevecyrillic
16710 \DeclareTextCompositeCommand{\U}{PU}{\CYRZH}{\84\301}% U+04C1
16711 % U+04C2 CYRILLIC SMALL LETTER ZHE WITH BREVE; zhebrevecyrillic
16712 \DeclareTextCompositeCommand{\U}{PU}{\cyrzh}{\84\302}% U+04C2

16713 % U+04C3 CYRILLIC CAPITAL LETTER KA WITH HOOK; Kahookcyrillic
16714 \DeclareTextCommand{\CYRKHK}{PU}{\84\303}% U+04C3
16715 % U+04C4 CYRILLIC SMALL LETTER KA WITH HOOK; kahookcyrillic
16716 \DeclareTextCommand{\cyrkhk}{PU}{\84\304}% U+04C4
16717 % U+04C5 CYRILLIC CAPITAL LETTER EL WITH TAIL
16718 \DeclareTextCommand{\CYRLDSC}{PU}{\84\305}% U+04C5
16719 % U+04C6 CYRILLIC SMALL LETTER EL WITH TAIL
16720 \DeclareTextCommand{\cyrldsc}{PU}{\84\306}% U+04C6
16721 % U+04C7 CYRILLIC CAPITAL LETTER EN WITH HOOK; Enhookcyrillic
16722 \DeclareTextCommand{\CYRNHK}{PU}{\84\307}% U+04C7
16723 % U+04C8 CYRILLIC SMALL LETTER EN WITH HOOK; enhookcyrillic
16724 \DeclareTextCommand{\cyrnhk}{PU}{\84\310}% U+04C8
16725 % U+04CB CYRILLIC CAPITAL LETTER KHAKASSIAN CHE; Chekhakas-
siancyrillic
16726 \DeclareTextCommand{\CYRCHLDSC}{PU}{\84\313}% U+04CB
16727 % U+04CC CYRILLIC SMALL LETTER KHAKASSIAN CHE; chekhakassian-
cyrillic
16728 \DeclareTextCommand{\cyrchldsc}{PU}{\84\314}% U+04CC
16729 % U+04CD CYRILLIC CAPITAL LETTER EM WITH TAIL
16730 \DeclareTextCommand{\CYRMDSC}{PU}{\84\315}% U+04CD
16731 % U+04CE CYRILLIC SMALL LETTER EM WITH TAIL
16732 \DeclareTextCommand{\cyrmdsc}{PU}{\84\316}% U+04CE
\84\317: U+04CF CYRILLIC SMALL LETTER PALOCHKA
16733 % U+04D0 CYRILLIC CAPITAL LETTER A WITH BREVE; Abrevecyrillic
16734 \DeclareTextCompositeCommand{\U}{PU}{\CYRA}{\84\320}% U+04D0
16735 % U+04D1 CYRILLIC SMALL LETTER A WITH BREVE; abrevecyrillic
16736 \DeclareTextCompositeCommand{\U}{PU}{\cyra}{\84\321}% U+04D1
16737 % U+04D2 CYRILLIC CAPITAL LETTER A WITH DIAERESIS; Adieresiscyril-
lic
16738 \DeclareTextCompositeCommand{\U}{PU}{\CYRA}{\84\322}% U+04D2
16739 % U+04D3 CYRILLIC SMALL LETTER A WITH DIAERESIS; adieresiscyrillic
16740 \DeclareTextCompositeCommand{\U}{PU}{\cyra}{\84\323}% U+04D3
16741 % U+04D4 CYRILLIC CAPITAL LIGATURE A IE; Aiecyrillic
16742 \DeclareTextCommand{\CYRAE}{PU}{\84\324}% U+04D4
16743 % U+04D5 CYRILLIC SMALL LIGATURE A IE; aiecyrillic
16744 \DeclareTextCommand{\cyrae}{PU}{\84\325}% U+04D5
16745 % U+04D6 CYRILLIC CAPITAL LETTER IE WITH BREVE; Iebrevecyrillic
16746 \DeclareTextCompositeCommand{\U}{PU}{\CYRE}{\84\326}% U+04D6
16747 % U+04D7 CYRILLIC SMALL LETTER IE WITH BREVE; iebrevecyrillic
16748 \DeclareTextCompositeCommand{\U}{PU}{\cyre}{\84\327}% U+04D7
16749 % U+04D8 CYRILLIC CAPITAL LETTER SCHWA; Schwacyrillic
16750 \DeclareTextCommand{\CYRSCHWA}{PU}{\84\330}% U+04D8
16751 % U+04D9 CYRILLIC SMALL LETTER SCHWA; *afii10846, schwacyrillic
16752 \DeclareTextCommand{\cyrschw}{PU}{\84\331}% U+04D9
16753 % U+04DA CYRILLIC CAPITAL LETTER SCHWA WITH DIAERESIS;
16754 % Schwadieresiscyrillic
16755 \DeclareTextCompositeCommand{\U}{PU}{\CYRSCHWA}{\84\332}% U+04DA
16756 % U+04DB CYRILLIC SMALL LETTER SCHWA WITH DIAERESIS;
16757 % schwadieresiscyrillic
16758 \DeclareTextCompositeCommand{\U}{PU}{\cyrschw}{\84\333}% U+04DB
16759 % U+04DC CYRILLIC CAPITAL LETTER ZHE WITH DIAERESIS; Zhediere-
siscyrillic
16760 \DeclareTextCompositeCommand{\U}{PU}{\CYRZH}{\84\334}% U+04DC
16761 % U+04DD CYRILLIC SMALL LETTER ZHE WITH DIAERESIS; zhedieresis-

cyrillic
 16762 \DeclareTextCompositeCommand{\}{PU}{\cyrzh}{\84\335}% U+04DD
 16763 % U+04DE CYRILLIC CAPITAL LETTER ZE WITH DIAERESIS; Zedieresis-cyrillic
 16764 \DeclareTextCompositeCommand{\}{PU}{\CYRZ}{\84\336}% U+04DE
 16765 % U+04DF CYRILLIC SMALL LETTER ZE WITH DIAERESIS; zedieresis-cyrillic
 16766 \DeclareTextCompositeCommand{\}{PU}{\cyrz}{\84\337}% U+04DF
 16767 % U+04E0 CYRILLIC CAPITAL LETTER ABKHASIAN DZE; Dzeabkhasian-cyrillic
 16768 \DeclareTextCommand{\CYRABHDZE}{PU}{\84\340}% U+04E0
 16769 % U+04E1 CYRILLIC SMALL LETTER ABKHASIAN DZE; dzeabkhasian-cyrillic
 16770 \DeclareTextCommand{\cyrabhdze}{PU}{\84\341}% U+04E1
 16771 % U+04E2 CYRILLIC CAPITAL LETTER I WITH MACRON; Imacroncyrillic
 16772 \DeclareTextCompositeCommand{\=}{PU}{\CYRI}{\84\342}% U+04E2
 16773 % U+04E3 CYRILLIC SMALL LETTER I WITH MACRON; imacroncyrillic
 16774 \DeclareTextCompositeCommand{\=}{PU}{\cyri}{\84\343}% U+04E3
 16775 % U+04E4 CYRILLIC CAPITAL LETTER I WITH DIAERESIS; Idieresis-cyrillic
 16776 \DeclareTextCompositeCommand{\}{PU}{\CYRI}{\84\344}% U+04E4
 16777 % U+04E5 CYRILLIC SMALL LETTER I WITH DIAERESIS; idieresis-cyrillic
 16778 \DeclareTextCompositeCommand{\}{PU}{\cyri}{\84\345}% U+04E5
 16779 % U+04E6 CYRILLIC CAPITAL LETTER O WITH DIAERESIS; Odieresis-cyrillic
 16780 \DeclareTextCompositeCommand{\}{PU}{\CYRO}{\84\346}% U+04E6
 16781 % U+04E7 CYRILLIC SMALL LETTER O WITH DIAERESIS; odieresis-cyrillic
 16782 \DeclareTextCompositeCommand{\}{PU}{\cyro}{\84\347}% U+04E7
 16783 % U+04E8 CYRILLIC CAPITAL LETTER BARRED O; Obarredcyrillic
 16784 \DeclareTextCommand{\CYROTLD}{PU}{\84\350}% U+04E8
 16785 % U+04E9 CYRILLIC SMALL LETTER BARRED O; obarredcyrillic
 16786 \DeclareTextCommand{\cyrotld}{PU}{\84\351}% U+04E9
 16787 % U+04EA CYRILLIC CAPITAL LETTER BARRED O WITH DIAERESIS;
 16788 % Obarreddieresis-cyrillic
 16789 \DeclareTextCompositeCommand{\}{PU}{\CYROTLD}{\84\352}% U+04EA
 16790 % U+04EB CYRILLIC SMALL LETTER BARRED O WITH DIAERESIS;
 16791 % obarreddieresis-cyrillic
 16792 \DeclareTextCompositeCommand{\}{PU}{\cyrotld}{\84\353}% U+04EB
 16793 % U+04EC CYRILLIC CAPITAL LETTER E WITH DIAERESIS
 16794 \DeclareTextCompositeCommand{\}{PU}{\CYREREV}{\84\354}% U+04EC
 16795 % U+04ED CYRILLIC SMALL LETTER E WITH DIAERESIS
 16796 \DeclareTextCompositeCommand{\}{PU}{\cyrerev}{\84\355}% U+04ED
 16797 % U+04EE CYRILLIC CAPITAL LETTER U WITH MACRON; Umacroncyrillic
 16798 \DeclareTextCompositeCommand{\=}{PU}{\CYRU}{\84\356}% U+04EE
 16799 % U+04EF CYRILLIC SMALL LETTER U WITH MACRON; umacroncyrillic
 16800 \DeclareTextCompositeCommand{\=}{PU}{\cyru}{\84\357}% U+04EF
 16801 % U+04F0 CYRILLIC CAPITAL LETTER U WITH DIAERESIS; Udieresis-cyrillic
 16802 \DeclareTextCompositeCommand{\}{PU}{\CYRU}{\84\360}% U+04F0
 16803 % U+04F1 CYRILLIC SMALL LETTER U WITH DIAERESIS; udieresis-cyrillic
 16804 \DeclareTextCompositeCommand{\}{PU}{\cyru}{\84\361}% U+04F1
 16805 % U+04F2 CYRILLIC CAPITAL LETTER U WITH DOUBLE ACUTE; Uhun-
 garumlautcyrillic
 16806 \DeclareTextCompositeCommand{\H}{PU}{\CYRU}{\84\362}% U+04F2
 16807 % U+04F3 CYRILLIC SMALL LETTER U WITH DOUBLE ACUTE; uhun-

garumlautcyrillic
16808 \DeclareTextCompositeCommand{\H}{PU}{\cyru}{\84\363}% U+04F3
16809 % U+04F4 CYRILLIC CAPITAL LETTER CHE WITH DIAERESIS; Chediere-
siscyrillic
16810 \DeclareTextCompositeCommand{\"}{PU}{\CYRCH}{\84\364}% U+04F4
16811 % U+04F5 CYRILLIC SMALL LETTER CHE WITH DIAERESIS; chedieresis-
cyrillic
16812 \DeclareTextCompositeCommand{\"}{PU}{\cyrch}{\84\365}% U+04F5
16813 % U+04F6 CYRILLIC CAPITAL LETTER GHE WITH DESCENDER
16814 \DeclareTextCommand{\CYRGDSC}{PU}{\84\366}% U+04F6
16815 % U+04F7 CYRILLIC SMALL LETTER GHE WITH DESCENDER
16816 \DeclareTextCommand{\cyrgdsc}{PU}{\84\367}% U+04F7
16817 % U+04F8 CYRILLIC CAPITAL LETTER YERU WITH DIAERESIS; Yerudiere-
siscyrillic
16818 \DeclareTextCompositeCommand{\"}{PU}{\CYRERY}{\84\370}% U+04F8
16819 % U+04F9 CYRILLIC SMALL LETTER YERU WITH DIAERESIS; yerudiere-
siscyrillic
16820 \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
16821 % U+04FC CYRILLIC CAPITAL LETTER HA WITH HOOK
16822 \DeclareTextCommand{\CYRHHK}{PU}{\84\374}% U+04FC
16823 % U+04FD CYRILLIC SMALL LETTER HA WITH HOOK
16824 \DeclareTextCommand{\cyrhkh}{PU}{\84\375}% U+04FD
16825 \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

16826 \ifx\hebdalet\@undefined\else
16827 % U+05C3 HEBREW PUNCTUATION SOF PASUQ
16828 \DeclareTextCommand{\sofpasuq}{PU}{\85\303}% U+05C3
16829 % U+05D0 HEBREW LETTER ALEF
16830 \DeclareTextCommand{\hebalef}{PU}{\85\320}% U+05D0
16831 % U+05D1 HEBREW LETTER BET
16832 \DeclareTextCommand{\hebbet}{PU}{\85\321}% U+05D1
16833 % U+05D2 HEBREW LETTER GIMEL
16834 \DeclareTextCommand{\hebgimel}{PU}{\85\322}% U+05D2
16835 % U+05D3 HEBREW LETTER DALET
16836 \DeclareTextCommand{\hebdalet}{PU}{\85\323}% U+05D3
16837 % U+05D4 HEBREW LETTER HE
16838 \DeclareTextCommand{\hebhe}{PU}{\85\324}% U+05D4
16839 % U+05D5 HEBREW LETTER VAV
16840 \DeclareTextCommand{\hebvav}{PU}{\85\325}% U+05D5
16841 % U+05D6 HEBREW LETTER ZAYIN
16842 \DeclareTextCommand{\hebzayin}{PU}{\85\326}% U+05D6
16843 % U+05D7 HEBREW LETTER HET

16844 \DeclareTextCommand{\hebhet}{PU}{\85\327}% U+05D7
16845 % U+05D8 HEBREW LETTER TET
16846 \DeclareTextCommand{\hebtet}{PU}{\85\330}% U+05D8
16847 % U+05D9 HEBREW LETTER YOD
16848 \DeclareTextCommand{\hebyod}{PU}{\85\331}% U+05D9
16849 % U+05DA HEBREW LETTER FINAL KAF
16850 \DeclareTextCommand{\hebfinalkaf}{PU}{\85\332}% U+05DA
16851 % U+05DB HEBREW LETTER KAF
16852 \DeclareTextCommand{\hebkaf}{PU}{\85\333}% U+05DB
16853 % U+05DC HEBREW LETTER LAMED
16854 \DeclareTextCommand{\heblamed}{PU}{\85\334}% U+05DC
16855 % U+05DD HEBREW LETTER FINAL MEM
16856 \DeclareTextCommand{\hebfinalmem}{PU}{\85\335}% U+05DD
16857 % U+05DE HEBREW LETTER MEM
16858 \DeclareTextCommand{\hebmeme}{PU}{\85\336}% U+05DE
16859 % U+05DF HEBREW LETTER FINAL NUN
16860 \DeclareTextCommand{\hebfinalnun}{PU}{\85\337}% U+05DF
16861 % U+05E0 HEBREW LETTER NUN
16862 \DeclareTextCommand{\hebnun}{PU}{\85\340}% U+05E0
16863 % U+05E1 HEBREW LETTER SAMEKH
16864 \DeclareTextCommand{\hebsamekh}{PU}{\85\341}% U+05E1
16865 % U+05E2 HEBREW LETTER AYIN
16866 \DeclareTextCommand{\hebayin}{PU}{\85\342}% U+05E2
16867 % U+05E3 HEBREW LETTER FINAL PE
16868 \DeclareTextCommand{\hebfinalpe}{PU}{\85\343}% U+05E3
16869 % U+05E4 HEBREW LETTER PE
16870 \DeclareTextCommand{\hebpe}{PU}{\85\344}% U+05E4
16871 % U+05E5 HEBREW LETTER FINAL TSADI
16872 \DeclareTextCommand{\hebfinaltsadi}{PU}{\85\345}% U+05E5
16873 % U+05E6 HEBREW LETTER TSADI
16874 \DeclareTextCommand{\hebtsadi}{PU}{\85\346}% U+05E6
16875 % U+05E7 HEBREW LETTER QOF
16876 \DeclareTextCommand{\hebqof}{PU}{\85\347}% U+05E7
16877 % U+05E8 HEBREW LETTER RESH
16878 \DeclareTextCommand{\hebresh}{PU}{\85\350}% U+05E8
16879 % U+05E9 HEBREW LETTER SHIN
16880 \DeclareTextCommand{\hebshin}{PU}{\85\351}% U+05E9
16881 %* \hebshin -> \hebsin (he8)
16882 % U+05EA HEBREW LETTER TAV
16883 \DeclareTextCommand{\hebtav}{PU}{\85\352}% U+05EA
16884 % U+05F0 HEBREW LIGATURE YIDDISH DOUBLE VAV
16885 \DeclareTextCommand{\doublevav}{PU}{\85\360}% U+05F0
16886 % U+05F1 HEBREW LIGATURE YIDDISH VAV YOD
16887 \DeclareTextCommand{\vavyod}{PU}{\85\361}% U+05F1
16888 % U+05F2 HEBREW LIGATURE YIDDISH DOUBLE YOD
16889 \DeclareTextCommand{\doubleyod}{PU}{\85\362}% U+05F2
16890 \fi

47.2.12 Thai: U+0E00 to U+0E7F

16891 % U+0E3F THAI CURRENCY SYMBOL BAHT; bahtthai
16892 \DeclareTextCommand{\textbaht}{PU}{\9016\077}% U+0E3F

47.2.13 Phonetic Extensions: U+1D00 to U+1D7F

16893 % U+1D00 LATIN LETTER SMALL CAPITAL A; \textscA (tipa)
16894 \DeclareTextCommand{\textscA}{PU}{\9035\000}% U+1D00
16895 % U+1D05 LATIN LETTER SMALL CAPITAL D; \textscD (wsuipa)
16896 \DeclareTextCommand{\textscD}{PU}{\9035\005}%* U+1D05
16897 % U+1D07 LATIN LETTER SMALL CAPITAL E; \textscE (tipa)
16898 \DeclareTextCommand{\textscE}{PU}{\9035\007}% U+1D07
16899 % U+1D0A LATIN LETTER SMALL CAPITAL J; \textscJ (tipa)
16900 \DeclareTextCommand{\textscJ}{PU}{\9035\012}% U+1D0A
16901 % U+1D0B LATIN LETTER SMALL CAPITAL K; \textscK (tipx)
16902 \DeclareTextCommand{\textscK}{PU}{\9035\013}% U+1D0B
16903 %* \textscK -> \textscK (tipx)
16904 % U+1D0D LATIN LETTER SMALL CAPITAL M; \textscM (tipx)
16905 \DeclareTextCommand{\textscM}{PU}{\9035\015}% U+1D0D
16906 %* \textscM -> \textscM (tipx)
16907 % U+1D18 LATIN LETTER SMALL CAPITAL P; \textscP (tipx)
16908 \DeclareTextCommand{\textscP}{PU}{\9035\030}% U+1D18
16909 %* \textscP -> \textscP (tipx)
16910 % U+1D19 LATIN LETTER SMALL CAPITAL REVERSED R; \textscR (tipx)
16911 \DeclareTextCommand{\textscR}{PU}{\9035\031}% U+1D19
16912 %* \textscR -> \textscR (tipx)
16913 % U+1D1C LATIN LETTER SMALL CAPITAL U; \textscU (tipa), \textscU (wsuipa)
16914 \DeclareTextCommand{\textscU}{PU}{\9035\034}%* U+1D1C
16915 % U+1D62 LATIN SUBSCRIPT SMALL LETTER I
16916 \DeclareTextCommand{\textsubscriptI}{PU}{\9035\142}%* U+1D62
16917 % U+1D63 LATIN SUBSCRIPT SMALL LETTER R
16918 \DeclareTextCommand{\textsubscriptR}{PU}{\9035\143}%* U+1D63
16919 % U+1D64 LATIN SUBSCRIPT SMALL LETTER U
16920 \DeclareTextCommand{\textsubscriptU}{PU}{\9035\144}%* U+1D64
16921 % U+1D65 LATIN SUBSCRIPT SMALL LETTER V
16922 \DeclareTextCommand{\textsubscriptV}{PU}{\9035\145}%* U+1D65
16923 % U+1D66 GREEK SUBSCRIPT SMALL LETTER BETA
16924 \DeclareTextCommand{\textsubscriptBeta}{PU}{\9035\146}%* U+1D66
16925 % U+1D67 GREEK SUBSCRIPT SMALL LETTER GAMMA
16926 \DeclareTextCommand{\textsubscriptGamma}{PU}{\9035\147}%* U+1D67
16927 % U+1D68 GREEK SUBSCRIPT SMALL LETTER RHO
16928 \DeclareTextCommand{\textsubscriptRho}{PU}{\9035\150}%* U+1D68
16929 % U+1D69 GREEK SUBSCRIPT SMALL LETTER PHI
16930 \DeclareTextCommand{\textsubscriptPhi}{PU}{\9035\151}%* U+1D69
16931 % U+1D6A GREEK SUBSCRIPT SMALL LETTER CHI
16932 \DeclareTextCommand{\textsubscriptChi}{PU}{\9035\152}%* U+1D6A
16933 % U+1D7B LATIN SMALL CAPITAL LETTER I WITH STROKE;
16934 % \textscI (wsuipa)
16935 \DeclareTextCommand{\textscI}{PU}{\9035\173}%* U+1D7B
16936 % U+1D7D LATIN SMALL LETTER P WITH STROKE; \textscP (wsuipa)
16937 \DeclareTextCommand{\textscP}{PU}{\9035\175}%* U+1D7D
16938 % U+1D7E LATIN SMALL CAPITAL LETTER U WITH STROKE;
16939 % \textscU (wsuipa)
16940 \DeclareTextCommand{\textscU}{PU}{\9035\176}%* U+1D7E

47.2.14 Phonetic Extensions Supplement: U+1D80 to U+1DBF

16941 % U+1D8F LATIN SMALL LETTER A WITH RETROFLEX HOOK; \textscA (tipx)
16942 \DeclareTextCommand{\textscA}{PU}{\9035\217}% U+1D8F
16943 %* \textscA -> \textscA (tipx)

16944 % U+1D91 LATIN SMALL LETTER D WITH HOOK AND TAIL; \texthtrtaild (tipa)
16945 \DeclareTextCommand{\texthtrtaild}{PU}{\9035\221}%* U+1D91
16946 % U+1D92 LATIN SMALL LETTER E WITH RETROFLEX HOOK; \textrhooko (tipx)
16947 \DeclareTextCommand{\textPurhooko}{PU}{\9035\222}% U+1D92
16948 %* \textPurhooko -> \textrhooko (tipx)
16949 % U+1D93 LATIN SMALL LETTER OPEN E WITH RETROFLEX HOOK;
16950 % \textrhookoepsilon (tipx)
16951 \DeclareTextCommand{\textPurhookoepsilon}{PU}{\9035\223}% U+1D93
16952 %* \textPurhookoepsilon -> \textrhookoepsilon (tipx)
16953 % U+1D97 LATIN SMALL LETTER OPEN O WITH RETROFLEX HOOK;
16954 % \textrhookopeno (tipx)
16955 \DeclareTextCommand{\textPurhookopeno}{PU}{\9035\227}% U+1D97
16956 %* \textPurhookopeno -> \textrhookopeno (tipx)

47.2.15 Latin Extended Additional: U+1E00 to U+1EFF

16957 % U+1E00 LATIN CAPITAL LETTER A WITH RING BELOW; Aringbelow
16958 \DeclareTextCompositeCommand{\textsubring}{PU}{A}{\9036\000}% U+1E00
16959 % U+1E01 LATIN SMALL LETTER A WITH RING BELOW; aringbelow
16960 \DeclareTextCompositeCommand{\textsubring}{PU}{a}{\9036\001}% U+1E01
16961 % U+1E02 LATIN CAPITAL LETTER B WITH DOT ABOVE; Bdotaccent
16962 \DeclareTextCompositeCommand{\.}{PU}{B}{\9036\002}% U+1E02
16963 % U+1E03 LATIN SMALL LETTER B WITH DOT ABOVE; bdotaccent
16964 \DeclareTextCompositeCommand{\.}{PU}{b}{\9036\003}% U+1E03
16965 % U+1E04 LATIN CAPITAL LETTER B WITH DOT BELOW; Bdotbelow
16966 \DeclareTextCompositeCommand{\d}{PU}{B}{\9036\004}% U+1E04
16967 % U+1E05 LATIN SMALL LETTER B WITH DOT BELOW; bdotbelow
16968 \DeclareTextCompositeCommand{\d}{PU}{b}{\9036\005}% U+1E05
16969 % U+1E06 LATIN CAPITAL LETTER B WITH LINE BELOW; Blinebelow
16970 \DeclareTextCompositeCommand{\b}{PU}{B}{\9036\006}% U+1E06
16971 % U+1E07 LATIN SMALL LETTER B WITH LINE BELOW; blinebelow
16972 \DeclareTextCompositeCommand{\b}{PU}{b}{\9036\007}% U+1E07
16973 % U+1E0A LATIN CAPITAL LETTER D WITH DOT ABOVE; Ddotaccent
16974 \DeclareTextCompositeCommand{\.}{PU}{D}{\9036\012}% U+1E0A
16975 % U+1E0B LATIN SMALL LETTER D WITH DOT ABOVE; ddotaccent
16976 \DeclareTextCompositeCommand{\.}{PU}{d}{\9036\013}% U+1E0B
16977 % U+1E0C LATIN CAPITAL LETTER D WITH DOT BELOW; Ddotbelow
16978 \DeclareTextCompositeCommand{\d}{PU}{D}{\9036\014}% U+1E0C
16979 % U+1E0D LATIN SMALL LETTER D WITH DOT BELOW; ddotbelow
16980 \DeclareTextCompositeCommand{\d}{PU}{d}{\9036\015}% U+1E0D
16981 % U+1E0E LATIN CAPITAL LETTER D WITH LINE BELOW; Dlinebelow
16982 \DeclareTextCompositeCommand{\b}{PU}{D}{\9036\016}% U+1E0E
16983 % U+1E0F LATIN SMALL LETTER D WITH LINE BELOW; dlinebelow
16984 \DeclareTextCompositeCommand{\b}{PU}{d}{\9036\017}% U+1E0F
16985 % U+1E10 LATIN CAPITAL LETTER D WITH CEDILLA; Dcedilla
16986 \DeclareTextCompositeCommand{\c}{PU}{D}{\9036\020}% U+1E10
16987 % U+1E11 LATIN SMALL LETTER D WITH CEDILLA; dcedilla
16988 \DeclareTextCompositeCommand{\c}{PU}{d}{\9036\021}% U+1E11
16989 % U+1E12 LATIN CAPITAL LETTER D WITH CIRCUMFLEX BELOW; Dcircumflexbelow
16990 \DeclareTextCompositeCommand{\textsubcircum}{PU}{D}{\9036\022}% U+1E12
16991 % U+1E13 LATIN SMALL LETTER D WITH CIRCUMFLEX BELOW; dcircumflexbelow

16992 \DeclareTextCompositeCommand{\textsubcircum}{PU}{d}{\9036\023}% U+1E13
16993 % U+1E14 LATIN CAPITAL LETTER E WITH MACRON AND GRAVE;
16994 % Emacrongrave
16995 \DeclareTextCompositeCommand{\textgravemacron}{PU}{E}{\9036\024}% U+1E14
16996 % U+1E15 LATIN SMALL LETTER E WITH MACRON AND GRAVE;
16997 % emacrongrave
16998 \DeclareTextCompositeCommand{\textgravemacron}{PU}{e}{\9036\025}% U+1E15
16999 % U+1E16 LATIN CAPITAL LETTER E WITH MACRON AND ACUTE;
17000 % Emacronacute
17001 \DeclareTextCompositeCommand{\textacutemacron}{PU}{E}{\9036\026}% U+1E16
17002 % U+1E17 LATIN SMALL LETTER E WITH MACRON AND ACUTE;
17003 % emacronacute
17004 \DeclareTextCompositeCommand{\textacutemacron}{PU}{e}{\9036\027}% U+1E17
17005 % U+1E18 LATIN CAPITAL LETTER E WITH CIRCUMFLEX BELOW; Ecir-
cumflexbelow
17006 \DeclareTextCompositeCommand{\textsubcircum}{PU}{E}{\9036\030}% U+1E18
17007 % U+1E19 LATIN SMALL LETTER E WITH CIRCUMFLEX BELOW; ecir-
cumflexbelow
17008 \DeclareTextCompositeCommand{\textsubcircum}{PU}{e}{\9036\031}% U+1E19
17009 % U+1E1A LATIN CAPITAL LETTER E WITH TILDE BELOW; Etildebelow
17010 \DeclareTextCompositeCommand{\textsubtilde}{PU}{E}{\9036\032}% U+1E1A
17011 % U+1E1B LATIN SMALL LETTER E WITH TILDE BELOW; etildebelow
17012 \DeclareTextCompositeCommand{\textsubtilde}{PU}{e}{\9036\033}% U+1E1B
17013 % U+1E1E LATIN CAPITAL LETTER F WITH DOT ABOVE; Fdotaccent
17014 \DeclareTextCompositeCommand{\.}{PU}{F}{\9036\036}% U+1E1E
17015 % U+1E1F LATIN SMALL LETTER F WITH DOT ABOVE; fdotaccent
17016 \DeclareTextCompositeCommand{\.}{PU}{f}{\9036\037}% U+1E1F
17017 % U+1E20 LATIN CAPITAL LETTER G WITH MACRON; Gmacron
17018 \DeclareTextCompositeCommand{=} {PU}{G}{\9036\040}% U+1E20
17019 % U+1E21 LATIN SMALL LETTER G WITH MACRON; gmacron
17020 \DeclareTextCompositeCommand{=} {PU}{g}{\9036\041}% U+1E21
17021 % U+1E22 LATIN CAPITAL LETTER H WITH DOT ABOVE; Hdotaccent
17022 \DeclareTextCompositeCommand{\.}{PU}{H}{\9036\042}% U+1E22
17023 % U+1E23 LATIN SMALL LETTER H WITH DOT ABOVE; hdotaccent
17024 \DeclareTextCompositeCommand{\.}{PU}{h}{\9036\043}% U+1E23
17025 % U+1E24 LATIN CAPITAL LETTER H WITH DOT BELOW; Hdotbelow
17026 \DeclareTextCompositeCommand{\d}{PU}{H}{\9036\044}% U+1E24
17027 % U+1E25 LATIN SMALL LETTER H WITH DOT BELOW; hdotbelow
17028 \DeclareTextCompositeCommand{\d}{PU}{h}{\9036\045}% U+1E25
17029 % U+1E26 LATIN CAPITAL LETTER H WITH DIAERESIS; Hdieresis
17030 \DeclareTextCompositeCommand{\"} {PU}{H}{\9036\046}% U+1E26
17031 % U+1E27 LATIN SMALL LETTER H WITH DIAERESIS; hdieresis
17032 \DeclareTextCompositeCommand{\"} {PU}{h}{\9036\047}% U+1E27
17033 % U+1E28 LATIN CAPITAL LETTER H WITH CEDILLA; Hcedilla
17034 \DeclareTextCompositeCommand{\c}{PU}{H}{\9036\050}% U+1E28
17035 % U+1E29 LATIN SMALL LETTER H WITH CEDILLA; hcedilla
17036 \DeclareTextCompositeCommand{\c}{PU}{h}{\9036\051}% U+1E29
17037 % U+1E2A LATIN CAPITAL LETTER H WITH BREVE BELOW; Hbrevebelow
17038 \DeclareTextCompositeCommand{\textsubbreve}{PU}{H}{\9036\052}% U+1E2A
17039 % U+1E2B LATIN SMALL LETTER H WITH BREVE BELOW; hbrevebelow
17040 \DeclareTextCompositeCommand{\textsubbreve}{PU}{h}{\9036\053}% U+1E2B
17041 % U+1E2C LATIN CAPITAL LETTER I WITH TILDE BELOW; Itildebelow
17042 \DeclareTextCompositeCommand{\textsubtilde}{PU}{I}{\9036\054}% U+1E2C
17043 % U+1E2D LATIN SMALL LETTER I WITH TILDE BELOW; itildebelow

17044 \DeclareTextCompositeCommand{\textsubtilde}{PU}{i}{\9036\055}% U+1E2D
17045 % U+1E30 LATIN CAPITAL LETTER K WITH ACUTE; Kacute
17046 \DeclareTextCompositeCommand{\'}{PU}{K}{\9036\060}% U+1E30
17047 % U+1E31 LATIN SMALL LETTER K WITH ACUTE; kacute
17048 \DeclareTextCompositeCommand{\'}{PU}{k}{\9036\061}% U+1E31
17049 % U+1E32 LATIN CAPITAL LETTER K WITH DOT BELOW; Kdotbelow
17050 \DeclareTextCompositeCommand{\d}{PU}{K}{\9036\062}% U+1E32
17051 % U+1E33 LATIN SMALL LETTER K WITH DOT BELOW; kdotbelow
17052 \DeclareTextCompositeCommand{\d}{PU}{k}{\9036\063}% U+1E33
17053 % U+1E34 LATIN CAPITAL LETTER K WITH LINE BELOW; Klinebelow
17054 \DeclareTextCompositeCommand{\b}{PU}{K}{\9036\064}% U+1E34
17055 % U+1E35 LATIN SMALL LETTER K WITH LINE BELOW; klinebelow
17056 \DeclareTextCompositeCommand{\b}{PU}{k}{\9036\065}% U+1E35
17057 % U+1E36 LATIN CAPITAL LETTER L WITH DOT BELOW; Ldotbelow
17058 \DeclareTextCompositeCommand{\d}{PU}{L}{\9036\066}% U+1E36
17059 % U+1E37 LATIN SMALL LETTER L WITH DOT BELOW; ldotbelow
17060 \DeclareTextCompositeCommand{\d}{PU}{l}{\9036\067}% U+1E37
17061 % U+1E3A LATIN CAPITAL LETTER L WITH LINE BELOW; Llinebelow
17062 \DeclareTextCompositeCommand{\b}{PU}{L}{\9036\072}% U+1E3A
17063 % U+1E3B LATIN SMALL LETTER L WITH LINE BELOW; llinebelow
17064 \DeclareTextCompositeCommand{\b}{PU}{l}{\9036\073}% U+1E3B
17065 % U+1E3C LATIN CAPITAL LETTER L WITH CIRCUMFLEX BELOW; Lcircumflexbelow
17066 \DeclareTextCompositeCommand{\textsubcircum}{PU}{L}{\9036\074}% U+1E3C
17067 % U+1E3D LATIN SMALL LETTER L WITH CIRCUMFLEX BELOW; lcircumflexbelow
17068 \DeclareTextCompositeCommand{\textsubcircum}{PU}{l}{\9036\075}% U+1E3D
17069 % U+1E3E LATIN CAPITAL LETTER M WITH ACUTE; Macute
17070 \DeclareTextCompositeCommand{\'}{PU}{M}{\9036\076}% U+1E3E
17071 % U+1E3F LATIN SMALL LETTER M WITH ACUTE; macute
17072 \DeclareTextCompositeCommand{\'}{PU}{m}{\9036\077}% U+1E3F
17073 % U+1E40 LATIN CAPITAL LETTER M WITH DOT ABOVE; Mdotaccent
17074 \DeclareTextCompositeCommand{\.}{PU}{M}{\9036\100}% U+1E40
17075 % U+1E41 LATIN SMALL LETTER M WITH DOT ABOVE; mdotaccent
17076 \DeclareTextCompositeCommand{\.}{PU}{m}{\9036\101}% U+1E41
17077 % U+1E42 LATIN CAPITAL LETTER M WITH DOT BELOW; Mdotbelow
17078 \DeclareTextCompositeCommand{\d}{PU}{M}{\9036\102}% U+1E42
17079 % U+1E43 LATIN SMALL LETTER M WITH DOT BELOW; mdotbelow
17080 \DeclareTextCompositeCommand{\d}{PU}{m}{\9036\103}% U+1E43
17081 % U+1E44 LATIN CAPITAL LETTER N WITH DOT ABOVE; Ndotaccent
17082 \DeclareTextCompositeCommand{\.}{PU}{N}{\9036\104}% U+1E44
17083 % U+1E45 LATIN SMALL LETTER N WITH DOT ABOVE; ndotaccent
17084 \DeclareTextCompositeCommand{\.}{PU}{n}{\9036\105}% U+1E45
17085 % U+1E46 LATIN CAPITAL LETTER N WITH DOT BELOW; Ndotbelow
17086 \DeclareTextCompositeCommand{\d}{PU}{N}{\9036\106}% U+1E46
17087 % U+1E47 LATIN SMALL LETTER N WITH DOT BELOW; ndotbelow
17088 \DeclareTextCompositeCommand{\d}{PU}{n}{\9036\107}% U+1E47
17089 % U+1E48 LATIN CAPITAL LETTER N WITH LINE BELOW; Nlinebelow
17090 \DeclareTextCompositeCommand{\b}{PU}{N}{\9036\110}% U+1E48
17091 % U+1E49 LATIN SMALL LETTER N WITH LINE BELOW; nlinebelow
17092 \DeclareTextCompositeCommand{\b}{PU}{n}{\9036\111}% U+1E49
17093 % U+1E4A LATIN CAPITAL LETTER N WITH CIRCUMFLEX BELOW; Ncircumflexbelow
17094 \DeclareTextCompositeCommand{\textsubcircum}{PU}{N}{\9036\112}% U+1E4A

17095 % U+1E4B LATIN SMALL LETTER N WITH CIRCUMFLEX BELOW; ncircumflexbelow
17096 \DeclareTextCompositeCommand{\textsubcircum}{PU}{n}{\9036\113}% U+1E4B
17097 % U+1E50 LATIN CAPITAL LETTER O WITH MACRON AND GRAVE;
17098 % Omacrongrave
17099 \DeclareTextCompositeCommand{\textgravemacron}{PU}{O}{\9036\120}% U+1E50
17100 % U+1E51 LATIN SMALL LETTER O WITH MACRON AND GRAVE;
17101 % omacrongrave
17102 \DeclareTextCompositeCommand{\textgravemacron}{PU}{o}{\9036\121}% U+1E51
17103 % U+1E52 LATIN CAPITAL LETTER O WITH MACRON AND ACUTE;
17104 % Omacronacute
17105 \DeclareTextCompositeCommand{\textacutemacron}{PU}{O}{\9036\122}% U+1E52
17106 % U+1E53 LATIN SMALL LETTER O WITH MACRON AND ACUTE;
17107 % omacronacute
17108 \DeclareTextCompositeCommand{\textacutemacron}{PU}{o}{\9036\123}% U+1E53
17109 % U+1E54 LATIN CAPITAL LETTER P WITH ACUTE; Pacute
17110 \DeclareTextCompositeCommand{\'}{PU}{P}{\9036\124}% U+1E54
17111 % U+1E55 LATIN SMALL LETTER P WITH ACUTE; pacute
17112 \DeclareTextCompositeCommand{\'}{PU}{p}{\9036\125}% U+1E55
17113 % U+1E56 LATIN CAPITAL LETTER P WITH DOT ABOVE; Pdotaccent
17114 \DeclareTextCompositeCommand{\.}{PU}{P}{\9036\126}% U+1E56
17115 % U+1E57 LATIN SMALL LETTER P WITH DOT ABOVE; pdotaccent
17116 \DeclareTextCompositeCommand{\.}{PU}{p}{\9036\127}% U+1E57
17117 % U+1E58 LATIN CAPITAL LETTER R WITH DOT ABOVE; Rdotaccent
17118 \DeclareTextCompositeCommand{\.}{PU}{R}{\9036\130}% U+1E58
17119 % U+1E59 LATIN SMALL LETTER R WITH DOT ABOVE; rdotaccent
17120 \DeclareTextCompositeCommand{\.}{PU}{r}{\9036\131}% U+1E59
17121 % U+1E5A LATIN CAPITAL LETTER R WITH DOT BELOW; Rdotbelow
17122 \DeclareTextCompositeCommand{\d}{PU}{R}{\9036\132}% U+1E5A
17123 % U+1E5B LATIN SMALL LETTER R WITH DOT BELOW; rdotbelow
17124 \DeclareTextCompositeCommand{\d}{PU}{r}{\9036\133}% U+1E5B
17125 % U+1E5E LATIN CAPITAL LETTER R WITH LINE BELOW; Rlinebelow
17126 \DeclareTextCompositeCommand{\b}{PU}{R}{\9036\136}% U+1E5E
17127 % U+1E5F LATIN SMALL LETTER R WITH LINE BELOW; rlinebelow
17128 \DeclareTextCompositeCommand{\b}{PU}{r}{\9036\137}% U+1E5F
17129 % U+1E60 LATIN CAPITAL LETTER S WITH DOT ABOVE; Sdotaccent
17130 \DeclareTextCompositeCommand{\.}{PU}{S}{\9036\140}% U+1E60
17131 % U+1E61 LATIN SMALL LETTER S WITH DOT ABOVE; sdotaccent
17132 \DeclareTextCompositeCommand{\.}{PU}{s}{\9036\141}% U+1E61
17133 % U+1E62 LATIN CAPITAL LETTER S WITH DOT BELOW; Sdotbelow
17134 \DeclareTextCompositeCommand{\d}{PU}{S}{\9036\142}% U+1E62
17135 % U+1E63 LATIN SMALL LETTER S WITH DOT BELOW; sdotbelow
17136 \DeclareTextCompositeCommand{\d}{PU}{s}{\9036\143}% U+1E63
17137 % U+1E6A LATIN CAPITAL LETTER T WITH DOT ABOVE; Tdotaccent
17138 \DeclareTextCompositeCommand{\.}{PU}{T}{\9036\152}% U+1E6A
17139 % U+1E6B LATIN SMALL LETTER T WITH DOT ABOVE; tdotaccent
17140 \DeclareTextCompositeCommand{\.}{PU}{t}{\9036\153}% U+1E6B
17141 % U+1E6C LATIN CAPITAL LETTER T WITH DOT BELOW; Tdotbelow
17142 \DeclareTextCompositeCommand{\d}{PU}{T}{\9036\154}% U+1E6C
17143 % U+1E6D LATIN SMALL LETTER T WITH DOT BELOW; tdotbelow
17144 \DeclareTextCompositeCommand{\d}{PU}{t}{\9036\155}% U+1E6D
17145 % U+1E6E LATIN CAPITAL LETTER T WITH LINE BELOW; Tlinebelow
17146 \DeclareTextCompositeCommand{\b}{PU}{T}{\9036\156}% U+1E6E
17147 % U+1E6F LATIN SMALL LETTER T WITH LINE BELOW; tlinebelow

17148 \DeclareTextCompositeCommand{\b}{PU}{t}{\9036\157}% U+1E6F
17149 % U+1E70 LATIN CAPITAL LETTER T WITH CIRCUMFLEX BELOW; Tcircumflexbelow
17150 \DeclareTextCompositeCommand{\textsubcircum}{PU}{T}{\9036\160}% U+1E70
17151 % U+1E71 LATIN SMALL LETTER T WITH CIRCUMFLEX BELOW; tcircumflexbelow
17152 \DeclareTextCompositeCommand{\textsubcircum}{PU}{t}{\9036\161}% U+1E71
17153 % U+1E72 LATIN CAPITAL LETTER U WITH DIAERESIS BELOW; Udiere-
sisbelow
17154 \DeclareTextCompositeCommand{\textsubumlaut}{PU}{U}{\9036\162}% U+1E72
17155 % U+1E73 LATIN SMALL LETTER U WITH DIAERESIS BELOW; udiere-
sisbelow
17156 \DeclareTextCompositeCommand{\textsubumlaut}{PU}{u}{\9036\163}% U+1E73
17157 % U+1E74 LATIN CAPITAL LETTER U WITH TILDE BELOW; Utildebelow
17158 \DeclareTextCompositeCommand{\textsubtilde}{PU}{U}{\9036\164}% U+1E74
17159 % U+1E75 LATIN SMALL LETTER U WITH TILDE BELOW; utildebelow
17160 \DeclareTextCompositeCommand{\textsubtilde}{PU}{u}{\9036\165}% U+1E75
17161 % U+1E76 LATIN CAPITAL LETTER U WITH CIRCUMFLEX BELOW; Ucircumflexbelow
17162 \DeclareTextCompositeCommand{\textsubcircum}{PU}{U}{\9036\166}% U+1E76
17163 % U+1E77 LATIN SMALL LETTER U WITH CIRCUMFLEX BELOW; ucircumflexbelow
17164 \DeclareTextCompositeCommand{\textsubcircum}{PU}{u}{\9036\167}% U+1E77
17165 % U+1E7C LATIN CAPITAL LETTER V WITH TILDE; Vtilde
17166 \DeclareTextCompositeCommand{\~}{PU}{V}{\9036\174}% U+1E7C
17167 % U+1E7D LATIN SMALL LETTER V WITH TILDE; vtilde
17168 \DeclareTextCompositeCommand{\~}{PU}{v}{\9036\175}% U+1E7D
17169 % U+1E7E LATIN CAPITAL LETTER V WITH DOT BELOW; Vdotbelow
17170 \DeclareTextCompositeCommand{\d}{PU}{V}{\9036\176}% U+1E7E
17171 % U+1E7F LATIN SMALL LETTER V WITH DOT BELOW; vdotbelow
17172 \DeclareTextCompositeCommand{\d}{PU}{v}{\9036\177}% U+1E7F
17173 % U+1E80 LATIN CAPITAL LETTER W WITH GRAVE; Wgrave
17174 \DeclareTextCompositeCommand{\`}{PU}{W}{\9036\200}% U+1E80
17175 % U+1E81 LATIN SMALL LETTER W WITH GRAVE; wgrave
17176 \DeclareTextCompositeCommand{\`}{PU}{w}{\9036\201}% U+1E81
17177 % U+1E82 LATIN CAPITAL LETTER W WITH ACUTE; Wacute
17178 \DeclareTextCompositeCommand{\'}{PU}{W}{\9036\202}% U+1E82
17179 % U+1E83 LATIN SMALL LETTER W WITH ACUTE; wacute
17180 \DeclareTextCompositeCommand{\'}{PU}{w}{\9036\203}% U+1E83
17181 % U+1E84 LATIN CAPITAL LETTER W WITH DIAERESIS; Wdieresis
17182 \DeclareTextCompositeCommand{\"}{PU}{W}{\9036\204}% U+1E84
17183 % U+1E85 LATIN SMALL LETTER W WITH DIAERESIS; wdieresis
17184 \DeclareTextCompositeCommand{\"}{PU}{w}{\9036\205}% U+1E85
17185 % U+1E86 LATIN CAPITAL LETTER W WITH DOT ABOVE; Wdotaccent
17186 \DeclareTextCompositeCommand{\.}{PU}{W}{\9036\206}% U+1E86
17187 % U+1E87 LATIN SMALL LETTER W WITH DOT ABOVE; wdotaccent
17188 \DeclareTextCompositeCommand{\.}{PU}{w}{\9036\207}% U+1E87
17189 % U+1E88 LATIN CAPITAL LETTER W WITH DOT BELOW; wdotbelow
17190 \DeclareTextCompositeCommand{\d}{PU}{W}{\9036\210}% U+1E88
17191 % U+1E89 LATIN SMALL LETTER W WITH DOT BELOW; wdotbelow
17192 \DeclareTextCompositeCommand{\d}{PU}{w}{\9036\211}% U+1E89
17193 % U+1E8A LATIN CAPITAL LETTER X WITH DOT ABOVE; Xdotaccent
17194 \DeclareTextCompositeCommand{\.}{PU}{X}{\9036\212}% U+1E8A
17195 % U+1E8B LATIN SMALL LETTER X WITH DOT ABOVE; xdotaccent

17196 \DeclareTextCompositeCommand{\.}{PU}{x}{\9036\213}% U+1E8B
17197 % U+1E8C LATIN CAPITAL LETTER X WITH DIAERESIS; Xdieresis
17198 \DeclareTextCompositeCommand{\"}{PU}{X}{\9036\214}% U+1E8C
17199 % U+1E8D LATIN SMALL LETTER X WITH DIAERESIS; xdieresis
17200 \DeclareTextCompositeCommand{\.}{PU}{x}{\9036\215}% U+1E8D
17201 % U+1E8E LATIN CAPITAL LETTER Y WITH DOT ABOVE; Ydotaccent
17202 \DeclareTextCompositeCommand{\.}{PU}{Y}{\9036\216}% U+1E8E
17203 % U+1E8F LATIN SMALL LETTER Y WITH DOT ABOVE; ydotaccent
17204 \DeclareTextCompositeCommand{\.}{PU}{y}{\9036\217}% U+1E8F
17205 % U+1E90 LATIN CAPITAL LETTER Z WITH CIRCUMFLEX; Zcircumflex
17206 \DeclareTextCompositeCommand{\^}{PU}{Z}{\9036\220}% U+1E90
17207 % U+1E91 LATIN SMALL LETTER Z WITH CIRCUMFLEX; zcircumflex
17208 \DeclareTextCompositeCommand{\^}{PU}{z}{\9036\221}% U+1E91
17209 % U+1E92 LATIN CAPITAL LETTER Z WITH DOT BELOW; Zdotbelow
17210 \DeclareTextCompositeCommand{\d}{PU}{Z}{\9036\222}% U+1E92
17211 % U+1E93 LATIN SMALL LETTER Z WITH DOT BELOW; zdotbelow
17212 \DeclareTextCompositeCommand{\d}{PU}{z}{\9036\223}% U+1E93
17213 % U+1E94 LATIN CAPITAL LETTER Z WITH LINE BELOW; Zlinebelow
17214 \DeclareTextCompositeCommand{\b}{PU}{Z}{\9036\224}% U+1E94
17215 % U+1E95 LATIN SMALL LETTER Z WITH LINE BELOW; zlinebelow
17216 \DeclareTextCompositeCommand{\b}{PU}{z}{\9036\225}% U+1E95
17217 % U+1E96 LATIN SMALL LETTER H WITH LINE BELOW; hlinebelow
17218 \DeclareTextCompositeCommand{\b}{PU}{h}{\9036\226}% U+1E96
17219 % U+1E97 LATIN SMALL LETTER T WITH DIAERESIS; tdieresis
17220 \DeclareTextCompositeCommand{\"}{PU}{t}{\9036\227}% U+1E97
17221 % U+1E98 LATIN SMALL LETTER W WITH RING ABOVE; wring
17222 \DeclareTextCompositeCommand{\r}{PU}{w}{\9036\230}% U+1E98
17223 % U+1E99 LATIN SMALL LETTER Y WITH RING ABOVE; yring
17224 \DeclareTextCompositeCommand{\r}{PU}{y}{\9036\231}% U+1E99
17225 % U+1E9B LATIN SMALL LETTER LONG S WITH DOT ABOVE; slongdo-
taccnt
17226 \DeclareTextCompositeCommand{\.}{PU}{\textlongs}{\9036\233}% U+1E9B
17227 % U+1EA0 LATIN CAPITAL LETTER A WITH DOT BELOW; Adotbelow
17228 \DeclareTextCompositeCommand{\d}{PU}{A}{\9036\240}% U+1EA0
17229 % U+1EA1 LATIN SMALL LETTER A WITH DOT BELOW; adotbelow
17230 \DeclareTextCompositeCommand{\d}{PU}{a}{\9036\241}% U+1EA1
17231 % U+1EB8 LATIN CAPITAL LETTER E WITH DOT BELOW; Edotbelow
17232 \DeclareTextCompositeCommand{\d}{PU}{E}{\9036\270}% U+1EB8
17233 % U+1EB9 LATIN SMALL LETTER E WITH DOT BELOW; edotbelow
17234 \DeclareTextCompositeCommand{\d}{PU}{e}{\9036\271}% U+1EB9
17235 % U+1EBC LATIN CAPITAL LETTER E WITH TILDE; Etilde
17236 \DeclareTextCompositeCommand{\~}{PU}{E}{\9036\274}% U+1EBC
17237 % U+1EBD LATIN SMALL LETTER E WITH TILDE; etilde
17238 \DeclareTextCompositeCommand{\~}{PU}{e}{\9036\275}% U+1EBD
17239 % U+1ECA LATIN CAPITAL LETTER I WITH DOT BELOW; Idotbelow
17240 \DeclareTextCompositeCommand{\d}{PU}{I}{\9036\312}% U+1ECA
17241 % U+1ECB LATIN SMALL LETTER I WITH DOT BELOW; idotbelow
17242 \DeclareTextCompositeCommand{\d}{PU}{i}{\9036\313}% U+1ECB
17243 % U+1ECC LATIN CAPITAL LETTER O WITH DOT BELOW; Odotbelow
17244 \DeclareTextCompositeCommand{\d}{PU}{O}{\9036\314}% U+1ECC
17245 % U+1ECD LATIN SMALL LETTER O WITH DOT BELOW; odotbelow
17246 \DeclareTextCompositeCommand{\d}{PU}{o}{\9036\315}% U+1ECD
17247 % U+1EE4 LATIN CAPITAL LETTER U WITH DOT BELOW; Udotbelow
17248 \DeclareTextCompositeCommand{\d}{PU}{U}{\9036\344}% U+1EE4

17249 % U+1EE5 LATIN SMALL LETTER U WITH DOT BELOW; udotbelow
 17250 \DeclareTextCompositeCommand{\d}{PU}{u}{\9036\345}% U+1EE5
 17251 % U+1EF2 LATIN CAPITAL LETTER Y WITH GRAVE; Ygrave
 17252 \DeclareTextCompositeCommand{\`}{PU}{Y}{\9036\362}% U+1EF2
 17253 % U+1EF3 LATIN SMALL LETTER Y WITH GRAVE; ygrave
 17254 \DeclareTextCompositeCommand{\`}{PU}{y}{\9036\363}% U+1EF3
 17255 % U+1EF4 LATIN CAPITAL LETTER Y WITH DOT BELOW; Ydotbelow
 17256 \DeclareTextCompositeCommand{\d}{PU}{Y}{\9036\364}% U+1EF4
 17257 % U+1EF5 LATIN SMALL LETTER Y WITH DOT BELOW; ydotbelow
 17258 \DeclareTextCompositeCommand{\d}{PU}{y}{\9036\365}% U+1EF5
 17259 % U+1EF8 LATIN CAPITAL LETTER Y WITH TILDE; Ytilde
 17260 \DeclareTextCompositeCommand{\~}{PU}{Y}{\9036\370}% U+1EF8
 17261 % U+1EF9 LATIN SMALL LETTER Y WITH TILDE; ytilde
 17262 \DeclareTextCompositeCommand{\~}{PU}{y}{\9036\371}% U+1EF9

47.2.16 General Punctuation: U+2000 to U+206F

17263 % U+200C ZERO WIDTH NON-JOINER; *afii61664, zerowidthnonjoiner
 17264 \DeclareTextCommand{\textcompwordmark}{PU}{\9040\014}% U+200C
 17265 % U+2013 EN DASH; endash
 17266 \DeclareTextCommand{\textendash}{PU}{\9040\023}% U+2013
 17267 % U+2014 EM DASH; emdash
 17268 \DeclareTextCommand{\textemdash}{PU}{\9040\024}% U+2014
 17269 % U+2016 DOUBLE VERTICAL LINE; dblverticalbar
 17270 \DeclareTextCommand{\textbardbl}{PU}{\9040\026}% U+2016
 17271 %* \textbardbl -> \textdoublevertline (tipa)
 17272 % U+2018 LEFT SINGLE QUOTATION MARK; quoteleft
 17273 \DeclareTextCommand{\textquoteleft}{PU}{\9040\030}% U+2018
 17274 % U+2019 RIGHT SINGLE QUOTATION MARK; quoteright
 17275 \DeclareTextCommand{\textquoteright}{PU}{\9040\031}% U+2019
 17276 % U+201A SINGLE LOW-9 QUOTATION MARK; quotesinglbase
 17277 \DeclareTextCommand{\quotesinglbase}{PU}{\9040\032}% U+201A
 17278 % U+201C LEFT DOUBLE QUOTATION MARK; quotedblleft
 17279 \DeclareTextCommand{\textquotedblleft}{PU}{\9040\034}% U+201C
 17280 % U+201D RIGHT DOUBLE QUOTATION MARK; quotedblright
 17281 \DeclareTextCommand{\textquotedblright}{PU}{\9040\035}% U+201D
 17282 % U+201E DOUBLE LOW-9 QUOTATION MARK; quotedblbase
 17283 \DeclareTextCommand{\quotedblbase}{PU}{\9040\036}% U+201E
 17284 % U+2020 DAGGER; dagger
 17285 \DeclareTextCommand{\textdagger}{PU}{\9040\040}%* U+2020
 17286 %* \textdagger -> \dag (LaTeX)
 17287 % U+2021 DOUBLE DAGGER; daggerdbl; \ddagger (LaTeX)
 17288 \DeclareTextCommand{\textdaggerdbl}{PU}{\9040\041}% U+2021
 17289 %* \textdaggerdbl -> \ddagger (LaTeX)
 17290 %* \textdaggerdbl -> \ddag (LaTeX)
 17291 % U+2022 BULLET; bullet
 17292 \DeclareTextCommand{\textbullet}{PU}{\9040\042}%* U+2022
 17293 % U+2025 TWO DOT LEADER; \hdotfor (MnSymbol)
 17294 \DeclareTextCommand{\texthdotfor}{PU}{\9040\045}%* U+2025
 17295 % U+2026 HORIZONTAL ELLIPSIS; ellipsis
 17296 \DeclareTextCommand{\textellipsis}{PU}{\9040\046}% U+2026
 17297 %* \textellipsis -> \mathellipsis
 17298 % U+2030 PER MILLE SIGN; perthousand
 17299 \DeclareTextCommand{\textperthousand}{PU}{\9040\060}% U+2030
 17300 % U+2031 PER TEN THOUSAND SIGN

17301 \DeclareTextCommand{\textpertenthousand}{PU}{\9040\061}% U+2031
17302 % U+2032 PRIME; minute; \prime (MnSymbol)
17303 \DeclareTextCommand{\textprime}{PU}{\9040\062}%* U+2032
17304 % U+2033 DOUBLE PRIME; \second (mathabx)
17305 \DeclareTextCommand{\textsecond}{PU}{\9040\063}%* U+2033
17306 % U+2034 TRIPLE PRIME; \third (mathabx)
17307 \DeclareTextCommand{\textthird}{PU}{\9040\064}%* U+2034
17308 % U+2035 REVERSED PRIME; \backprime (AmS)
17309 \DeclareTextCommand{\textbackprime}{PU}{\9040\065}%* U+2035
17310 % U+2039 SINGLE LEFT-POINTING ANGLE QUOTATION MARK; guil-
ingleft
17311 \DeclareTextCommand{\guilsingleft}{PU}{\9040\071}% U+2039
17312 % U+203A SINGLE RIGHT-POINTING ANGLE QUOTATION MARK; guil-
ingright
17313 \DeclareTextCommand{\guilsingright}{PU}{\9040\072}% U+203A
17314 % U+203B REFERENCE MARK; referencemark
17315 \DeclareTextCommand{\textreferencemark}{PU}{\9040\073}% U+203B
17316 % U+203D INTERROBANG
17317 \DeclareTextCommand{\textinterrobang}{PU}{\9040\075}% U+203D
17318 % U+2044 FRACTION SLASH; fraction
17319 \DeclareTextCommand{\textfractionsolidus}{PU}{\9040\104}% U+2044
17320 % U+2045 LEFT SQUARE BRACKET WITH QUILL
17321 \DeclareTextCommand{\textlquill}{PU}{\9040\105}% U+2045
17322 % U+2046 RIGHT SQUARE BRACKET WITH QUILL
17323 \DeclareTextCommand{\textrquill}{PU}{\9040\106}% U+2046
17324 % U+2052 COMMERCIAL MINUS SIGN
17325 \DeclareTextCommand{\textdiscount}{PU}{\9040\122}% U+2052
17326 % U+2056 THREE DOT PUNCTUATION; \lefttherefore (MnSymbol)
17327 \DeclareTextCommand{\textlefttherefore}{PU}{\9040\126}%* U+2056
17328 % U+2057 QUADRUPLE PRIME; \fourth (mathabx)
17329 \DeclareTextCommand{\textfourth}{PU}{\9040\127}%* U+2057
17330 % U+2058 FOUR DOT PUNCTUATION; \diamonddots (MnSymbol)
17331 \DeclareTextCommand{\textdiamonddots}{PU}{\9040\130}%* U+2058

47.2.17 Superscripts and Subscripts: U+2070 to U+209F

17332 % U+2070 SUPERSCRIPT ZERO; zerosuperior
17333 \DeclareTextCommand{\textzerosuperior}{PU}{\9040\160}%* U+2070
17334 % U+2071 SUPERSCRIPT LATIN SMALL LETTER I
17335 \DeclareTextCommand{\textisuperior}{PU}{\9040\161}%* U+2071
17336 % U+2074 SUPERSCRIPT FOUR; foursuperior
17337 \DeclareTextCommand{\textfoursuperior}{PU}{\9040\164}%* U+2074
17338 % U+2075 SUPERSCRIPT FIVE; fivesuperior
17339 \DeclareTextCommand{\textfivesuperior}{PU}{\9040\165}%* U+2075
17340 % U+2076 SUPERSCRIPT SIX; sixsuperior
17341 \DeclareTextCommand{\textsixsuperior}{PU}{\9040\166}%* U+2076
17342 % U+2077 SUPERSCRIPT SEVEN; sevensuperior
17343 \DeclareTextCommand{\textsevensuperior}{PU}{\9040\167}%* U+2077
17344 % U+2078 SUPERSCRIPT EIGHT; eightsuperior
17345 \DeclareTextCommand{\texteightsuperior}{PU}{\9040\170}%* U+2078
17346 % U+2079 SUPERSCRIPT NINE; ninesuperior
17347 \DeclareTextCommand{\textninesuperior}{PU}{\9040\171}%* U+2079
17348 % U+207A SUPERSCRIPT PLUS SIGN; plussuperior
17349 \DeclareTextCommand{\textplussuperior}{PU}{\9040\172}%* U+207A
17350 % U+207B SUPERSCRIPT MINUS

17351 \DeclareTextCommand{\textminussuperior}{PU}{\9040\173}%* U+207B
17352 % U+207C SUPERSCRIPT EQUALS SIGN; equalsuperior
17353 \DeclareTextCommand{\textequalsuperior}{PU}{\9040\174}%* U+207C
17354 % U+207D SUPERSCRIPT LEFT PARENTHESIS; parenleftsuperior
17355 \DeclareTextCommand{\textparenleftsuperior}{PU}{\9040\175}%* U+207D
17356 % U+207E SUPERSCRIPT RIGHT PARENTHESIS; parenrightsuperior
17357 \DeclareTextCommand{\textparenrightsuperior}{PU}{\9040\176}%* U+207E
17358 % U+207F SUPERSCRIPT LATIN SMALL LETTER N; nsuperior
17359 \DeclareTextCommand{\textnsuperior}{PU}{\9040\177}%* U+207F
17360 % U+2080 SUBSCRIPT ZERO; zeroinferior
17361 \DeclareTextCommand{\textzeroinferior}{PU}{\9040\200}%* U+2080
17362 % U+2081 SUBSCRIPT ONE; oneinferior
17363 \DeclareTextCommand{\textoneinferior}{PU}{\9040\201}%* U+2081
17364 % U+2082 SUBSCRIPT TWO; twoinferior
17365 \DeclareTextCommand{\texttwoinferior}{PU}{\9040\202}%* U+2082
17366 % U+2083 SUBSCRIPT THREE; threeminferior
17367 \DeclareTextCommand{\textthreeminferior}{PU}{\9040\203}%* U+2083
17368 % U+2084 SUBSCRIPT FOUR; fourinferior
17369 \DeclareTextCommand{\textfourinferior}{PU}{\9040\204}%* U+2084
17370 % U+2085 SUBSCRIPT FIVE; fiveinferior
17371 \DeclareTextCommand{\textfiveinferior}{PU}{\9040\205}%* U+2085
17372 % U+2086 SUBSCRIPT SIX; sixinferior
17373 \DeclareTextCommand{\textsixinferior}{PU}{\9040\206}%* U+2086
17374 % U+2087 SUBSCRIPT SEVEN; seveninferior
17375 \DeclareTextCommand{\textseveninferior}{PU}{\9040\207}%* U+2087
17376 % U+2088 SUBSCRIPT EIGHT; eightinferior
17377 \DeclareTextCommand{\texteightinferior}{PU}{\9040\210}%* U+2088
17378 % U+2089 SUBSCRIPT NINE; nineinferior
17379 \DeclareTextCommand{\textnineinferior}{PU}{\9040\211}%* U+2089
17380 % U+208A SUBSCRIPT PLUS SIGN
17381 \DeclareTextCommand{\textplusinferior}{PU}{\9040\212}%* U+208A
17382 % U+208B SUBSCRIPT MINUS
17383 \DeclareTextCommand{\textminusinferior}{PU}{\9040\213}%* U+208B
17384 % U+208C SUBSCRIPT EQUALS SIGN
17385 \DeclareTextCommand{\textequalsinferior}{PU}{\9040\214}%* U+208C
17386 % U+208D SUBSCRIPT LEFT PARENTHESIS; parenleftinferior
17387 \DeclareTextCommand{\textparenleftinferior}{PU}{\9040\215}%* U+208D
17388 % U+208E SUBSCRIPT RIGHT PARENTHESIS; parenrightinferior
17389 \DeclareTextCommand{\textparenrightinferior}{PU}{\9040\216}%* U+208E
17390 % U+2090 LATIN SUBSCRIPT SMALL LETTER A
17391 \DeclareTextCommand{\textainferior}{PU}{\9040\220}%* U+2090
17392 % U+2091 LATIN SUBSCRIPT SMALL LETTER E
17393 \DeclareTextCommand{\texteinferior}{PU}{\9040\221}%* U+2091
17394 % U+2092 LATIN SUBSCRIPT SMALL LETTER O
17395 \DeclareTextCommand{\textoinferior}{PU}{\9040\222}%* U+2092
17396 % U+2093 LATIN SUBSCRIPT SMALL LETTER X
17397 \DeclareTextCommand{\textxinferior}{PU}{\9040\223}%* U+2093
17398 % U+2094 LATIN SUBSCRIPT SMALL LETTER SCHWA
17399 \DeclareTextCommand{\textschwainferior}{PU}{\9040\224}%* U+2094
17400 % U+2095 LATIN SUBSCRIPT SMALL LETTER H
17401 \DeclareTextCommand{\texthinferior}{PU}{\9040\225}%* U+2095
17402 % U+2096 LATIN SUBSCRIPT SMALL LETTER K
17403 \DeclareTextCommand{\textkinferior}{PU}{\9040\226}%* U+2096
17404 % U+2097 LATIN SUBSCRIPT SMALL LETTER L

17405 \DeclareTextCommand{\textlinferior}{PU}{\9040\227}%* U+2097
17406 % U+2098 LATIN SUBSCRIPT SMALL LETTER M
17407 \DeclareTextCommand{\textminferior}{PU}{\9040\230}%* U+2098
17408 % U+2099 LATIN SUBSCRIPT SMALL LETTER N
17409 \DeclareTextCommand{\textninferior}{PU}{\9040\231}%* U+2099
17410 % U+209A LATIN SUBSCRIPT SMALL LETTER P
17411 \DeclareTextCommand{\textpinferior}{PU}{\9040\232}%* U+209A
17412 % U+209B LATIN SUBSCRIPT SMALL LETTER S
17413 \DeclareTextCommand{\textsinferior}{PU}{\9040\233}%* U+209B
17414 % U+209C LATIN SUBSCRIPT SMALL LETTER T
17415 \DeclareTextCommand{\texttinferior}{PU}{\9040\234}%* U+209C

47.2.18 Currency Symbols: U+20A0 to U+20CF

17416 % U+20A1 COLON SIGN; *colonmonetary, colonsign
17417 \DeclareTextCommand{\textcolonmonetary}{PU}{\9040\241}% U+20A1
17418 % U+20A4 LIRA SIGN; afi08941, *lira
17419 \DeclareTextCommand{\textlira}{PU}{\9040\244}% U+20A4
17420 % U+20A6 NAIRA SIGN
17421 \DeclareTextCommand{\textnaira}{PU}{\9040\246}% U+20A6
17422 % U+20A7 PESETA SIGN; peseta
17423 \DeclareTextCommand{\textpeseta}{PU}{\9040\247}% U+20A7
17424 % U+20A9 WON SIGN; won
17425 \DeclareTextCommand{\textwon}{PU}{\9040\251}% U+20A9
17426 % U+20AB DONG SIGN; dong
17427 \DeclareTextCommand{\textdong}{PU}{\9040\253}% U+20AB
17428 % U+20AC EURO SIGN; *Euro, euro
17429 \DeclareTextCommand{\texteuro}{PU}{\9040\254}% U+20AC
17430 %* \texteuro -> \EurDig (marvosym)
17431 %* \texteuro -> \EURdig (marvosym)
17432 %* \texteuro -> \EurHv (marvosym)
17433 %* \texteuro -> \EURhv (marvosym)
17434 %* \texteuro -> \EurCr (marvosym)
17435 %* \texteuro -> \EURcr (marvosym)
17436 %* \texteuro -> \EurTm (marvosym)
17437 %* \texteuro -> \EURtm (marvosym)
17438 %* \texteuro -> \Eur (marvosym)
17439 % U+20B0 GERMAN PENNY SIGN; \Deleatur (marvosym)
17440 \DeclareTextCommand{\textDeleatur}{PU}{\9040\260}%* U+20B0
17441 %* \textDeleatur -> \Denarius (marvosym)
17442 % U+20B1 PESO SIGN
17443 \DeclareTextCommand{\textpeso}{PU}{\9040\261}% U+20B1
17444 % U+20B2 GUARANI SIGN
17445 \DeclareTextCommand{\textguarani}{PU}{\9040\262}% U+20B2

47.2.19 Letterlike Symbols: U+2100 to U+214F

17446 % U+2103 DEGREE CELSIUS; centigrade
17447 \DeclareTextCommand{\textcelsius}{PU}{\9041\003}% U+2103
17448 % U+210F PLANCK CONSTANT OVER TWO PI; \hslash (AmS)
17449 \DeclareTextCommand{\texthslash}{PU}{\9041\017}%* U+210F
17450 % U+2111 BLACK-LETTER CAPITAL I (=imaginary part); Ifraktur; \Im (LaTeX)
17451 \DeclareTextCommand{\textIm}{PU}{\9041\021}%* U+2111
17452 % U+2113 SCRIPT SMALL L (=ell, liter); afi61289, lsquare; \ell (LaTeX)
17453 \DeclareTextCommand{\textell}{PU}{\9041\023}%* U+2113

17454 % U+2116 NUMERO SIGN; *afii61352, numero
17455 \DeclareTextCommand{\textnumero}{PU}{\9041\026}% U+2116
17456 % U+2117 SOUND RECORDING COPYRIGHT
17457 \DeclareTextCommand{\textcircledP}{PU}{\9041\027}% U+2117
17458 % U+2118 SCRIPT CAPITAL P (=Weierstrass elliptic function);
17459 % weierstrass; \wp (LaTeX)
17460 \DeclareTextCommand{\textwp}{PU}{\9041\030}%* U+2118
17461 % U+211C BLACK-LETTER CAPITAL R (=real part); Rfraktur; \Re (LaTeX)
17462 \DeclareTextCommand{\textRe}{PU}{\9041\034}%* U+211C
17463 % U+211E PRESCRIPTION TAKE; prescription
17464 \DeclareTextCommand{\textrecipe}{PU}{\9041\036}% U+211E
17465 % U+2120 SERVICE MARK
17466 \DeclareTextCommand{\textservicemark}{PU}{\9041\040}% U+2120
17467 % U+2122 TRADE MARK SIGN; trademark
17468 \DeclareTextCommand{\texttrademark}{PU}{\9041\042}% U+2122
17469 % U+2126 OHM SIGN; Ohm, Omega
17470 \DeclareTextCommand{\textohm}{PU}{\9041\046}% U+2126
17471 % U+2127 INVERTED OHM SIGN
17472 \DeclareTextCommand{\textmho}{PU}{\9041\047}%* U+2127
17473 %* \textmho -> \agemO (wasysym)
17474 % U+2129 TURNED GREEK SMALL LETTER IOTA; \riota (phonetic)
17475 \DeclareTextCommand{\textriota}{PU}{\9041\051}%* U+2129
17476 % U+212B ANGSTROM SIGN; angstrom
17477 \DeclareTextCommand{\textangstrom}{PU}{\9041\053}% U+212B
17478 % U+212E ESTIMATED SYMBOL; estimated
17479 \DeclareTextCommand{\textestimated}{PU}{\9041\056}% U+212E
17480 %* \textestimated -> \EstimatedSign (marvosym)
17481 %* \textestimated -> \Ecommerce (marvosym)
17482 % U+2132 TURNED CAPITAL F; \Finv (AmS)
17483 \DeclareTextCommand{\textFinv}{PU}{\9041\062}%* U+2132
17484 % U+2135 ALEF SYMBOL; aleph; \aleph (LaTeX)
17485 \DeclareTextCommand{\textaleph}{PU}{\9041\065}%* U+2135
17486 % U+2136 BET SYMBOL; \beth (AmS, MnSymbol)
17487 \DeclareTextCommand{\textbeth}{PU}{\9041\066}%* U+2136
17488 % U+2137 GIMEL SYMBOL; \gimel (AmS, MnSymbol)
17489 \DeclareTextCommand{\textgimel}{PU}{\9041\067}%* U+2137
17490 % U+2138 DALET SYMBOL; \daleth (AmS, MnSymbol)
17491 \DeclareTextCommand{\textdaleth}{PU}{\9041\070}%* U+2138
17492 % U+213B FACSIMILE SIGN; \fax (marvosym)
17493 \DeclareTextCommand{\textfax}{PU}{\9041\073}%* U+213B
17494 % U+2141 TURNED SANS-SERIF CAPITAL G (=game); \Game
17495 \DeclareTextCommand{\textGame}{PU}{\9041\101}%* U+2141
17496 % U+214B TURNED AMPERSAND; \invamp (txfonts/pxfonts)
17497 \DeclareTextCommand{\textinvamp}{PU}{\9041\113}% U+214B
17498 %* \textinvamp -> \bindnasrepma (stmaryrd)
17499 %* \textinvamp -> \parr (cml)

47.2.20 Number Forms: U+2150 to U+218F

17500 % U+2150 VULGAR FRACTION ONE SEVENTH
17501 \DeclareTextCommand{\textoneseventh}{PU}{\9041\120}% U+2150
17502 % U+2151 VULGAR FRACTION ONE NINTH
17503 \DeclareTextCommand{\textoneninth}{PU}{\9041\121}% U+2151
17504 % U+2152 VULGAR FRACTION ONE TENTH
17505 \DeclareTextCommand{\textonetenth}{PU}{\9041\122}% U+2152

17506 % U+2153 VULGAR FRACTION ONE THIRD; onethird
 17507 \DeclareTextCommand{\textonethird}{PU}{\9041\123}% U+2153
 17508 % U+2154 VULGAR FRACTION TWO THIRDS; twothirds
 17509 \DeclareTextCommand{\texttwothirds}{PU}{\9041\124}% U+2154
 17510 % U+2155 VULGAR FRACTION ONE FIFTH
 17511 \DeclareTextCommand{\textonefifth}{PU}{\9041\125}% U+2155
 17512 % U+2156 VULGAR FRACTION TWO FIFTHS
 17513 \DeclareTextCommand{\texttwofifths}{PU}{\9041\126}% U+2156
 17514 % U+2157 VULGAR FRACTION THREE FIFTHS
 17515 \DeclareTextCommand{\textthreefifths}{PU}{\9041\127}% U+2157
 17516 % U+2158 VULGAR FRACTION FOUR FIFTHS
 17517 \DeclareTextCommand{\textfourfifths}{PU}{\9041\130}% U+2158
 17518 % U+2159 VULGAR FRACTION ONE SIXTH
 17519 \DeclareTextCommand{\textonesixth}{PU}{\9041\131}% U+2159
 17520 % U+215A VULGAR FRACTION FIVE SIXTHS
 17521 \DeclareTextCommand{\textfivesixths}{PU}{\9041\132}% U+215A
 17522 % U+215B VULGAR FRACTION ONE EIGHTH; oneeighth
 17523 \DeclareTextCommand{\textoneeighth}{PU}{\9041\133}% U+215B
 17524 % U+215C VULGAR FRACTION THREE EIGHTHS; threeeighths
 17525 \DeclareTextCommand{\textthreeeighths}{PU}{\9041\134}% U+215C
 17526 % U+215D VULGAR FRACTION FIVE EIGHTHS; fiveeighths
 17527 \DeclareTextCommand{\textfiveeighths}{PU}{\9041\135}% U+215D
 17528 % U+215E VULGAR FRACTION SEVEN EIGHTHS; seveneighths
 17529 \DeclareTextCommand{\textseveneighths}{PU}{\9041\136}% U+215E
 17530 % U+2184 LATIN SMALL LETTER REVERSED C
 17531 \DeclareTextCommand{\textrevc}{PU}{\9041\204}% U+2184
 17532 % U+2189 VULGAR FRACTION ZERO THIRDS
 17533 \DeclareTextCommand{\textzerthirds}{PU}{\9041\211}% U+2189

47.2.21 Arrows: U+2190 to U+21FF

17534 % U+2190 LEFTWARDS ARROW; arrowleft
 17535 \DeclareTextCommand{\textleftarrow}{PU}{\9041\220}%* U+2190
 17536 % U+2191 UPWARDS ARROW; arrowup
 17537 \DeclareTextCommand{\textuparrow}{PU}{\9041\221}%* U+2191
 17538 % U+2192 RIGHTWARDS ARROW; arrowright
 17539 \DeclareTextCommand{\textrightarrow}{PU}{\9041\222}%* U+2192
 17540 %* \textrightarrow -> \MVRightArrow (marvosym)
 17541 %* \textrightarrow -> \MVRightarrow (marvosym)
 17542 % U+2193 DOWNWARDS ARROW; arrowdown
 17543 \DeclareTextCommand{\textdownarrow}{PU}{\9041\223}%* U+2193
 17544 %* \textdownarrow -> \MVArrowDown (marvosym)
 17545 %* \textdownarrow -> \Force (marvosym)
 17546 % U+2194 LEFT RIGHT ARROW; arrowboth; \leftrightarrow (LaTeX)
 17547 \DeclareTextCommand{\textleftrightarrow}{PU}{\9041\224}%* U+2194
 17548 % U+2195 UP DOWN ARROW; arrowupdn; \updownarrow (LaTeX)
 17549 \DeclareTextCommand{\textupdownarrow}{PU}{\9041\225}%* U+2195
 17550 % U+2196 NORTH WEST ARROW; arrowupleft; \nwarrow (LaTeX)
 17551 \DeclareTextCommand{\textnwarrow}{PU}{\9041\226}%* U+2196
 17552 % U+2197 NORTH EAST ARROW; arrowupright; \nearrow (LaTeX)
 17553 \DeclareTextCommand{\textnearrow}{PU}{\9041\227}%* U+2197
 17554 %* \textnearrow -> \textglobe (tipa)
 17555 % U+2198 SOUTH EAST ARROW; arrowdownright; \searrow (LaTeX)
 17556 \DeclareTextCommand{\textsearrow}{PU}{\9041\230}%* U+2198
 17557 %* \textsearrow -> \textglobfall (tipa)

17558 % U+2199 SOUTH WEST ARROW; arrowdownleft; \swarrow (LaTeX)
17559 \DeclareTextCommand{\textswarrow}{PU}{\9041\231}%* U+2199
17560 % U+219A LEFTWARDS ARROW WITH STROKE; \leftarrow (AmS)
17561 \DeclareTextCommand{\textleftarrow}{PU}{\9041\232}%* U+219A
17562 % U+219B RIGHTWARDS ARROW WITH STROKE; \rightarrow (AmS)
17563 \DeclareTextCommand{\textrightarrow}{PU}{\9041\233}%* U+219B
17564 % U+219E LEFTWARDS TWO HEADED ARROW; \twoheadleftarrow (AmS)
17565 \DeclareTextCommand{\texttwoheadleftarrow}{PU}{\9041\236}%* U+219E
17566 % \twoheadleftarrow (txfonts/pxfonts)
17567 \DeclareTextCommand{\textntwoheadleftarrow}{PU}{\9041\236\83\070}%* U+219E U+0338
17568 % U+219F UPWARDS TWO HEADED ARROW; \twoheaduparrow (MnSymbol)
17569 \DeclareTextCommand{\texttwoheaduparrow}{PU}{\9041\237}%* U+219F
17570 % U+21A0 RIGHTWARDS TWO HEADED ARROW;
17571 % \twoheadrightarrow (AmS)
17572 \DeclareTextCommand{\texttwoheadrightarrow}{PU}{\9041\240}%* U+21A0
17573 % \twoheadrightarrow (txfonts/pxfonts)
17574 \DeclareTextCommand{\textntwoheadrightarrow}{PU}{\9041\240\83\070}%* U+21A0 U+0338
17575 % U+21A1 DOWNWARDS TWO HEADED ARROW; \twoheaddownarrow (Mn-
Symbol)
17576 \DeclareTextCommand{\texttwoheaddownarrow}{PU}{\9041\241}%* U+21A1
17577 % U+21A2 LEFTWARDS ARROW WITH TAIL; \leftarrowtail (AmS)
17578 \DeclareTextCommand{\textleftarrowtail}{PU}{\9041\242}%* U+21A2
17579 % U+21A3 RIGHTWARDS ARROW WITH TAIL; \rightarrowtail (AmS)
17580 \DeclareTextCommand{\textrightarrowtail}{PU}{\9041\243}%* U+21A3
17581 % U+21A6 RIGHTWARDS ARROW FROM BAR; \mapsto (LaTeX)
17582 \DeclareTextCommand{\textmapsto}{PU}{\9041\246}%* U+21A6
17583 % U+21A9 LEFTWARDS ARROW WITH HOOK; \hookleftarrow (LaTeX)
17584 \DeclareTextCommand{\texthookleftarrow}{PU}{\9041\251}%* U+21A9
17585 % U+21AA RIGHTWARDS ARROW WITH HOOK; \hookrightarrow (LaTeX)
17586 \DeclareTextCommand{\texthookrightarrow}{PU}{\9041\252}%* U+21AA
17587 % U+21AB LEFTWARDS ARROW WITH LOOP; \looparrowleft (AmS)
17588 \DeclareTextCommand{\textlooparrowleft}{PU}{\9041\253}%* U+21AB
17589 % U+21AC RIGHTWARDS ARROW WITH LOOP; \looparrowright (AmS)
17590 \DeclareTextCommand{\textlooparrowright}{PU}{\9041\254}%* U+21AC
17591 % U+21AE LEFT RIGHT ARROW WITH STROKE; \leftrightarrow (AmS)
17592 \DeclareTextCommand{\textleftrightarrow}{PU}{\9041\256}%* U+21AE
17593 % U+21AF DOWNWARDS ZIGZAG ARROW; \lightning (stmaryrd)
17594 \DeclareTextCommand{\textlightning}{PU}{\9041\257}%* U+21AF
17595 %* \textlightning -> \Lightning (marvosym)
17596 % U+21B5 DOWNWARDS ARROW WITH CORNER LEFTWARDS;
17597 % \dls (mathabx)
17598 \DeclareTextCommand{\textdls}{PU}{\9041\265}%* U+21B5
17599 % U+21B6 ANTICLOCKWISE TOP SEMICIRCLE ARROW;
17600 % \curvearrowleft (AmS)
17601 \DeclareTextCommand{\textcurvearrowleft}{PU}{\9041\266}%* U+21B6
17602 % U+21B7 CLOCKWISE TOP SEMICIRCLE ARROW; \curvearrowright (AmS)
17603 \DeclareTextCommand{\textcurvearrowright}{PU}{\9041\267}%* U+21B7
17604 % U+21BC LEFTWARDS HARPOON WITH BARB UPWARDS; harpoonleft-
barbup;
17605 % \leftharpoonup (LaTeX)
17606 \DeclareTextCommand{\textleftharpoonup}{PU}{\9041\274}%* U+21BC
17607 % U+21BD LEFTWARDS HARPOON WITH BARB DOWNWARDS;
17608 % \leftharpoondown (LaTeX)
17609 \DeclareTextCommand{\textleftharpoondown}{PU}{\9041\275}%* U+21BD

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17610 % U+21BE UPWARDS HARPOON WITH BARB RIGHTWARDS;
17611 % \upharpoonright (AmS)
17612 \DeclareTextCommand{\textupharpoonright}{PU}{\9041\276}%* U+21BE
17613 % U+21BF UPWARDS HARPOON WITH BARB LEFTWARDS;
17614 % \upharpoonleft (AmS)
17615 \DeclareTextCommand{\textupharpoonleft}{PU}{\9041\277}%* U+21BF
17616 % U+21C0 RIGHTWARDS HARPOON WITH BARB UPWARDS; harpoonright-
barbup
17617 % \rightharpoonup (LaTeX)
17618 \DeclareTextCommand{\textrightharpoonup}{PU}{\9041\300}%* U+21C0
17619 % U+21C1 RIGHTWARDS HARPOON WITH BARB DOWNWARDS;
17620 % \rightharpoondown (LaTeX)
17621 \DeclareTextCommand{\textrightharpoondown}{PU}{\9041\301}%* U+21C1
17622 % U+21C2 DOWNWARDS HARPOON WITH BARB RIGHTWARDS;
17623 % \downharpoonright (AmS)
17624 \DeclareTextCommand{\textdownharpoonright}{PU}{\9041\302}%* U+21C2
17625 % U+21C3 DOWNWARDS HARPOON WITH BARB LEFTWARDS;
17626 % \downharpoonleft (AmS)
17627 \DeclareTextCommand{\textdownharpoonleft}{PU}{\9041\303}%* U+21C3
17628 % U+21C4 RIGHTWARDS ARROW OVER LEFTWARDS ARROW;
17629 % arrowrightoverleft; \rightleftarrows (MnSymbol)
17630 \DeclareTextCommand{\textrightleftarrows}{PU}{\9041\304}%* U+21C4
17631 % U+21C5 UPWARDS ARROW LEFTWARDS OF DOWNWARDS ARROW; ar-
rowupleftofdown;
17632 % \updownarrows (MnSymbol)
17633 \DeclareTextCommand{\textupdownarrows}{PU}{\9041\305}%* U+21C5
17634 % U+21C6 LEFTWARDS ARROW OVER RIGHTWARDS ARROW; arrowleft-
overright;
17635 % \leftrightarrows (AmS)
17636 \DeclareTextCommand{\textleftrightarrows}{PU}{\9041\306}%* U+21C6
17637 % U+21C7 LEFTWARDS PAIRED ARROWS; \leftleftarrows (AmS)
17638 \DeclareTextCommand{\textleftleftarrows}{PU}{\9041\307}%* U+21C7
17639 % U+21C8 UPWARDS PAIRED ARROWS; \upuparrows (AmS)
17640 \DeclareTextCommand{\textupuparrows}{PU}{\9041\310}%* U+21C8
17641 % U+21C9 RIGHTWARDS PAIRED ARROWS; \rightrightarrows (AmS)
17642 \DeclareTextCommand{\textrightarrows}{PU}{\9041\311}%* U+21C9
17643 % U+21CA DOWNWARDS PAIRED ARROWS; \downdownarrows (AmS)
17644 \DeclareTextCommand{\textdowndownarrows}{PU}{\9041\312}%* U+21CA
17645 % U+21CB LEFTWARDS HARPOON OVER RIGHTWARDS HARPOON;
17646 % \leftrightharpoons (AmS);
17647 \DeclareTextCommand{\textleftrightharpoons}{PU}{\9041\313}%* U+21CB
17648 % U+21CC RIGHTWARDS HARPOON OVER LEFTWARDS HARPOON;
17649 % \rightleftharpoons (LaTeX, AmS)
17650 \DeclareTextCommand{\textrightleftharpoons}{PU}{\9041\314}%* U+21CC
17651 % U+21CD LEFTWARDS DOUBLE ARROW WITH STROKE; arrowleftd-
blstroke;
17652 % \nLeftarrow (AmS)
17653 \DeclareTextCommand{\textnLeftarrow}{PU}{\9041\315}%* U+21CD
17654 % U+21CE LEFT RIGHT DOUBLE ARROW WITH STROKE; \nLeftrightarrow
(AmS)
17655 \DeclareTextCommand{\textnLeftrightarrow}{PU}{\9041\316}%* U+21CE
17656 % U+21CF RIGHTWARDS DOUBLE ARROW WITH STROKE; arrowrightd-
blstroke;
17657 % \nrightarrow (AmS)

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17658 \DeclareTextCommand{\textnRightarrow}{PU}{\9041\317}%* U+21CF
17659 % U+21D0 LEFTWARDS DOUBLE ARROW; arrowdblleft, arrowleftdbl;
17660 % \Leftarrow (LaTeX)
17661 \DeclareTextCommand{\textLeftarrow}{PU}{\9041\320}%* U+21D0
17662 % U+21D1 UPWARDS DOUBLE ARROW; arrowdblup; \Uparrow (LaTeX)
17663 \DeclareTextCommand{\textUparrow}{PU}{\9041\321}%* U+21D1
17664 % U+21D2 RIGHTWARDS DOUBLE ARROW; arrowdblright, dblarrowright;
17665 % \rightarrow (LaTeX)
17666 \DeclareTextCommand{\textRightarrow}{PU}{\9041\322}%* U+21D2
17667 %* \textRightarrow -> \Conclusion (marvosym)
17668 % U+21D3 DOWNWARDS DOUBLE ARROW; arrowdblDOWN; \Downarrow (La-
TeX)
17669 \DeclareTextCommand{\textDownarrow}{PU}{\9041\323}%* U+21D3
17670 % U+21D4 LEFT RIGHT DOUBLE ARROW; arrowdblboth;
17671 % \Leftrightarrow (LaTeX)
17672 \DeclareTextCommand{\textLeftrightarrow}{PU}{\9041\324}%* U+21D4
17673 %* \textLeftrightarrow -> \Equivalence (marvosym)
17674 % U+21D5 UP DOWN DOUBLE ARROW; \Updownarrow (LaTeX)
17675 \DeclareTextCommand{\textUpdownarrow}{PU}{\9041\325}%* U+21D5
17676 % U+21D6 NORTH WEST DOUBLE ARROW; \Nwarrow (MnSymbol)
17677 \DeclareTextCommand{\textNwarrow}{PU}{\9041\326}%* U+21D6
17678 % U+21D7 NORTH EAST DOUBLE ARROW; \Nearrow (MnSymbol)
17679 \DeclareTextCommand{\textNearrow}{PU}{\9041\327}%* U+21D7
17680 % U+21D8 SOUTH EAST DOUBLE ARROW; \Searrow (MnSymbol)
17681 \DeclareTextCommand{\textSearrow}{PU}{\9041\330}%* U+21D8
17682 % U+21D9 SOUTH WEST DOUBLE ARROW; \Swarrow (MnSymbol)
17683 \DeclareTextCommand{\textSwarrow}{PU}{\9041\331}%* U+21D9
17684 % U+21DA LEFTWARDS TRIPLE ARROW; \Lleftarrow (AmS)
17685 \DeclareTextCommand{\textLleftarrow}{PU}{\9041\332}%* U+21DA
17686 % U+21DB RIGHTWARDS TRIPLE ARROW; \Rrightarrow (MnSymbol)
17687 \DeclareTextCommand{\textRrightarrow}{PU}{\9041\333}%* U+21DB
17688 % U+21DC LEFTWARDS SQUIGGLE ARROW; \leftsquigarrow (mathabx)
17689 \DeclareTextCommand{\textleftsquigarrow}{PU}{\9041\334}%* U+21DC
17690 % U+21DD RIGHTWARDS SQUIGGLE ARROW; \rightsquigarrow (mathabx)
17691 \DeclareTextCommand{\textright squigarrow}{PU}{\9041\335}%* U+21DD
17692 % U+21E0 LEFTWARDS DASHED ARROW; arrowdashleft;
17693 % \dashleftarrow (AmS)
17694 \DeclareTextCommand{\textdashleftarrow}{PU}{\9041\340}%* U+21E0
17695 %* \textdashleftarrow -> \dashedleftarrow (MnSymbol)
17696 % U+21E1 UPWARDS DASHED ARROW; arrowdashup; \dasheduparrow (Mn-
Symbol)
17697 \DeclareTextCommand{\textdasheduparrow}{PU}{\9041\341}%* U+21E1
17698 % U+21E2 RIGHTWARDS DASHED ARROW; arrowdashright; \dashrightar-
row (AmS)
17699 \DeclareTextCommand{\textdashrightarrow}{PU}{\9041\342}%* U+21E2
17700 %* \textdashrightarrow -> \dashedrightarrow (MnSymbol)
17701 % U+21E3 DOWNWARDS DASHED ARROW; arrowdashdown; \dasheddownar-
row (MnSymbol)
17702 \DeclareTextCommand{\textdasheddownarrow}{PU}{\9041\343}%* U+21E3
17703 % U+21E8 RIGHTWARDS WHITE ARROW; \pointer (wasysym)
17704 \DeclareTextCommand{\textpointer}{PU}{\9041\350}%* U+21E8
17705 % U+21F5 DOWNWARDS ARROW LEFTWARDS OF UPWARDS ARROW;
17706 % \downuparrows (MnSymbol)
17707 \DeclareTextCommand{\textdownuparrows}{PU}{\9041\365}%* U+21F5

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17708 % U+21FD LEFTWARDS OPEN-HEADED ARROW; \leftarrowtriangle (stmaryrd)
17709 \DeclareTextCommand{\textleftarrowtriangle}{PU}{\9041\375}%* U+21FD
17710 % U+21FE RIGHTWARDS OPEN-HEADED ARROW; \rightarrowtriangle (stmaryrd)
17711 \DeclareTextCommand{\textrightarrowtriangle}{PU}{\9041\376}%* U+21FE
17712 % U+21FF LEFT RIGHT OPEN-HEADED ARROW; \leftrightarrowtriangle
(stmaryrd)
17713 \DeclareTextCommand{\textleftrightarrowtriangle}{PU}{\9041\377}%* U+21FF

47.2.22 Mathematical Operators: U+2200 to U+22FF

17714 % U+2200 FOR ALL; forall; \forall (LaTeX)
17715 \DeclareTextCommand{\textforall}{PU}{\9042\000}%* U+2200
17716 % U+2201 COMPLEMENT; \complement (AmS)
17717 \DeclareTextCommand{\textcomplement}{PU}{\9042\001}%* U+2201
17718 % U+2202 PARTIAL DIFFERENTIAL; partialdiff; \partial (LaTeX)
17719 \DeclareTextCommand{\textpartial}{PU}{\9042\002}%* U+2202
17720 % U+2203 THERE EXISTS; existential; \exists (LaTeX)
17721 \DeclareTextCommand{\textexists}{PU}{\9042\003}%* U+2203
17722 % U+2204 THERE DOES NOT EXIST; \nexists (AmS)
17723 \DeclareTextCommand{\textnexists}{PU}{\9042\004}%* U+2204
17724 % U+2205 EMPTY SET; emptyset; \emptyset (LaTeX), \varnothing (AmS)
17725 \DeclareTextCommand{\textemptyset}{PU}{\9042\005}%* U+2205
17726 %* \textemptyset -> \varnothing (AmS)
17727 % U+2206 INCREMENT; increment, Delta; \triangle (LaTeX)
17728 \DeclareTextCommand{\texttriangle}{PU}{\9042\006}%* U+2206
17729 % U+2207 NABLA; nabla, gradient; \nabla (LaTeX)
17730 \DeclareTextCommand{\textnabla}{PU}{\9042\007}%* U+2207
17731 % U+2208 ELEMENT OF; element; \in (LaTeX)
17732 \DeclareTextCommand{\textin}{PU}{\9042\010}%* U+2208
17733 % U+2209 NOT AN ELEMENT OF; notelement, notelementof; \notin (LaTeX)
17734 \DeclareTextCommand{\textnotin}{PU}{\9042\011}%* U+2209
17735 % U+220A SMALL ELEMENT OF; \smallin (mathdesign)
17736 \DeclareTextCommand{\textsmallin}{PU}{\9042\012}%* U+220A
17737 % U+220B CONTAINS AS MEMBER; suchthat; \ni (LaTeX)
17738 \DeclareTextCommand{\textni}{PU}{\9042\013}%* U+220B
17739 %* \textni -> \owns (mathabx)
17740 % U+220C DOES NOT CONTAIN AS MEMBER; \notowner (mathabx)
17741 \DeclareTextCommand{\textnotowner}{PU}{\9042\014}%* U+220C
17742 %* \textnotowner -> \notin (txfonts/pxfonts)
17743 % U+220D SMALL CONTAINS AS MEMBER; \smallowns (mathdesign)
17744 \DeclareTextCommand{\textsmallowns}{PU}{\9042\015}%* U+220D
17745 % U+220F N-ARY PRODUCT; \prod (LaTeX)
17746 \DeclareTextCommand{\textprod}{PU}{\9042\017}%* U+220F
17747 % U+2210 N-ARY COPRODUCT; \amalg (LaTeX)
17748 \DeclareTextCommand{\textamalg}{PU}{\9042\020}%* U+2210
17749 % U+2211 N-ARY SUMMATION; summation; \sum (LaTeX)
17750 \DeclareTextCommand{\textsum}{PU}{\9042\021}%* U+2211
17751 % U+2212 MINUS SIGN; minus
17752 \DeclareTextCommand{\textminus}{PU}{\9042\022}%* U+2212
17753 % U+2213 MINUS-OR-PLUS SIGN; minusplus; \mp (LaTeX)
17754 \DeclareTextCommand{\textmp}{PU}{\9042\023}%* U+2213
17755 % U+2214 DOT PLUS; \dotplus (AmS)
17756 \DeclareTextCommand{\textdotplus}{PU}{\9042\024}%* U+2214
17757 % U+2215 DIVISION SLASH; divisionslash; \Divides (marvosym)
17758 \DeclareTextCommand{\textDivides}{PU}{\9042\025}%* U+2215

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17759 % \DividesNot (marvosym)
17760 \DeclareTextCommand{\textDividesNot}{PU}{\9042\025\9040\322}%* U+2215 U+20D2
17761 % U+2216 SET MINUS; \setminus (LaTeX)
17762 \DeclareTextCommand{\textsetminus}{PU}{\9042\026}%* U+2216
17763 % U+2217 ASTERISK OPERATOR; asteriskmath; \ast (LaTeX)
17764 \DeclareTextCommand{\textast}{PU}{\9042\027}%* U+2217
17765 % U+2218 RING OPERATOR; \circ (LaTeX)
17766 \DeclareTextCommand{\textcirc}{PU}{\9042\030}%* U+2218
17767 % U+2219 BULLET OPERATOR; bulletoperator; \bullet (LaTeX)
17768 \DeclareTextCommand{\textbulletoperator}{PU}{\9042\031}% U+2219
17769 % U+221A SQUARE ROOT; radical
17770 \DeclareTextCommand{\textsqrt}{PU}{\9042\032}%* U+221A
17771 % U+221D PROPORTIONAL TO; proportional; \propto (LaTeX)
17772 \DeclareTextCommand{\textpropto}{PU}{\9042\035}%* U+221D
17773 %* \textpropto -> \varprop (wasysym)
17774 % U+221E INFINITY; infinity; \infty (LaTeX)
17775 \DeclareTextCommand{\textinfty}{PU}{\9042\036}%* U+221E
17776 % U+2220 ANGLE; angle; \angle (LaTeX)
17777 \DeclareTextCommand{\textangle}{PU}{\9042\040}%* U+2220
17778 % U+2221 MEASURED ANGLE; \measuredangle (mathabx, MnSymbol)
17779 \DeclareTextCommand{\textmeasuredangle}{PU}{\9042\041}%* U+2221
17780 % U+2222 SPHERICAL ANGLE; \sphericalangle (Ams)
17781 \DeclareTextCommand{\textsphericalangle}{PU}{\9042\042}%* U+2222
17782 %* \textsphericalangle -> \varangle (wasysym)
17783 %* \textsphericalangle -> \Anglesign (marvosym)
17784 %* \textsphericalangle -> \AngleSign (marvosym)
17785 % U+2223 DIVIDES; divides; \mid (LaTeX)
17786 \DeclareTextCommand{\textmid}{PU}{\9042\043}%* U+2223
17787 % U+2224 DOES NOT DIVIDE; \nmid (AmS)
17788 \DeclareTextCommand{\textnmid}{PU}{\9042\044}%* U+2224
17789 %* \textnmid -> \notdivides (mathabx)
17790 % U+2225 PARALLEL TO; parallel; \parallel (LaTeX)
17791 \DeclareTextCommand{\textparallel}{PU}{\9042\045}%* U+2225
17792 % U+2226 NOT PARALLEL TO; notparallel; \nparallel (AmS)
17793 \DeclareTextCommand{\textnparallel}{PU}{\9042\046}%* U+2226
17794 %* \textnparallel -> nUpdownline (MnSymbol)
17795 % U+2227 LOGICAL AND; logicaland; \wedge (LaTeX)
17796 \DeclareTextCommand{\textwedge}{PU}{\9042\047}%* U+2227
17797 % \owedge (stmaryrd)
17798 \DeclareTextCommand{\textowedge}{PU}{\9042\047\9040\335}%* U+2227 U+20DD
17799 %* \textowedge -> \varowedge (stmaryrd)
17800 % U+2228 LOGICAL OR; logicalor; \vee (LaTeX)
17801 \DeclareTextCommand{\textvee}{PU}{\9042\050}%* U+2228
17802 % \ovee (stmaryrd)
17803 \DeclareTextCommand{\textovee}{PU}{\9042\050\9040\335}%* U+2228 U+20DD
17804 %* \textovee -> \varovee (stmaryrd)
17805 % U+2229 INTERSECTION; intersection; \cap (LaTeX)
17806 \DeclareTextCommand{\textcap}{PU}{\9042\051}%* U+2229
17807 % U+222A UNION; union; \cup (LaTeX)
17808 \DeclareTextCommand{\textcup}{PU}{\9042\052}%* U+222A
17809 % U+222B INTEGRAL; integral; \int (LaTeX)
17810 \DeclareTextCommand{\textint}{PU}{\9042\053}%* U+222B
17811 %* \textint -> \varint (wasysym)
17812 % U+222C DOUBLE INTEGRAL; dblintegral; \iint (AmS)

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17813 \DeclareTextCommand{\textiint}{PU}{\9042\054}%* U+222C
17814 % U+222D TRIPLE INTEGRAL; \iiint (AmS)
17815 \DeclareTextCommand{\textiiiint}{PU}{\9042\055}%* U+222D
17816 % U+222E CONTOUR INTEGRAL; contourintegral; \oint (LaTeX)
17817 \DeclareTextCommand{\textoint}{PU}{\9042\056}%* U+222E
17818 %* \textoint -> \varoint (wasysym)
17819 % U+222F SURFACE INTEGRAL; \oiint (wasysym)
17820 \DeclareTextCommand{\textoint}{PU}{\9042\057}%* U+222F
17821 % U+2232 CLOCKWISE CONTOUR INTEGRAL;
17822 % \ointclockwise (txfonts/pxfonts)
17823 \DeclareTextCommand{\textointclockwise}{PU}{\9042\062}%* U+2232
17824 % U+2233 ANTICLOCKWISE CONTOUR INTEGRAL; \ointctrlockwise (tx-
fonts/pxfonts)
17825 \DeclareTextCommand{\textointctrlockwise}{PU}{\9042\063}%* U+2233
17826 % U+2234 THEREFORE; therefore; \therefore (AmS)
17827 \DeclareTextCommand{\texttherefore}{PU}{\9042\064}%* U+2234
17828 %* \texttherefore -> uptherefore (MnSymbol)
17829 % U+2235 BECAUSE; because; \because (AmS)
17830 \DeclareTextCommand{\textbecause}{PU}{\9042\065}%* U+2235
17831 %* \textbecause -> \downtherefore (MnSymbol)
17832 % U+2236 RATIO; \vdotdot (MnSymbol)
17833 \DeclareTextCommand{\textvdotdot}{PU}{\9042\066}%* U+2236
17834 % U+2237 PROPORTION; \squaredots (MnSymbol)
17835 \DeclareTextCommand{\textsquaredots}{PU}{\9042\067}%* U+2237
17836 % U+2238 DOT MINUS; \dotminus (MnSymbol)
17837 \DeclareTextCommand{\textdotminus}{PU}{\9042\070}%* U+2238
17838 %* \textdotminus -> \textdotdiv (mathabx)
17839 % U+2239 EXCESS; \eqcolon (txfonts/pxfonts)
17840 \DeclareTextCommand{\texteqcolon}{PU}{\9042\071}%* U+2239
17841 % U+223C TILDE OPERATOR; similar; \sim (LaTeX)
17842 \DeclareTextCommand{\textsim}{PU}{\9042\074}%* U+223C
17843 %* \textsim -> \AC (wasysym)
17844 % U+223D REVERSED TILDE; reversedtilde; \backsim (AmS)
17845 \DeclareTextCommand{\textbacksim}{PU}{\9042\075}%* U+223D
17846 % \nbacksim (txfonts/pxfonts)
17847 \DeclareTextCommand{\textnbacksim}{PU}{\9042\075\83\070}%* U+223D U+0338
17848 % U+2240 WREATH PRODUCT; \wr (LaTeX)
17849 \DeclareTextCommand{\textwr}{PU}{\9042\100}%* U+2240
17850 %* \textwr -> \wreath (MnSymbol)
17851 % U+2241 NOT TILDE; \nsim (AmS)
17852 \DeclareTextCommand{\textnsim}{PU}{\9042\101}%* U+2241
17853 % U+2242 MINUS TILDE; \eqsim (MnSymbol)
17854 \DeclareTextCommand{\texteqsim}{PU}{\9042\102}%* U+2242
17855 % \neqsim (MnSymbol)
17856 \DeclareTextCommand{\textneqsim}{PU}{\9042\102\83\070}%* U+2242 U+0338
17857 % U+2243 ASYMPTOTICALLY EQUAL TO; asymptoticallyequal; \simeq (La-
TeX)
17858 \DeclareTextCommand{\textsimeq}{PU}{\9042\103}%* U+2243
17859 % U+2244 NOT ASYMPTOTICALLY EQUAL TO; \nsimeq (txfonts/pxfonts)
17860 \DeclareTextCommand{\textnsimeq}{PU}{\9042\104}%* U+2244
17861 % U+2245 APPROXIMATELY EQUAL TO; approximatelyequal; \cong (LaTeX)
17862 \DeclareTextCommand{\textcong}{PU}{\9042\105}%* U+2245
17863 % U+2247 NEITHER APPROXIMATELY NOR ACTUALLY EQUAL TO;
17864 % \ncong (AmS)

17865 \DeclareTextCommand{\textncong}{PU}{\9042\107}%* U+2247
17866 % U+2248 ALMOST EQUAL TO; approxequal; \approx (LaTeX)
17867 \DeclareTextCommand{\textapprox}{PU}{\9042\110}%* U+2248
17868 % U+2249 NOT ALMOST EQUAL TO; \naprox (txfonts/pxfonts0
17869 \DeclareTextCommand{\textnapprox}{PU}{\9042\111}%* U+2249
17870 %* \textnapprox -> \nthickapprox (txfonts/pxfonts)
17871 % U+224A ALMOST EQUAL OR EQUAL TO; \approxeq (AmS)
17872 \DeclareTextCommand{\textapproxeq}{PU}{\9042\112}%* U+224A
17873 % \naprox (txfonts/pxfonts)
17874 \DeclareTextCommand{\textnapproxeq}{PU}{\9042\112\83\070}%* U+224A U+0338
17875 % U+224B TRIPLE TILDE; \triplesim (MnSymbol)
17876 \DeclareTextCommand{\texttriplesim}{PU}{\9042\113}%* U+224B
17877 %* \texttriplesim -> \VHF (wasysym)
17878 % \ntriplesim (MnSymbol)
17879 \DeclareTextCommand{\textntriplesim}{PU}{\9042\113\83\070}%* U+224B U+0338
17880 % U+224C ALL EQUAL TO; allequal; \backcong (MnSymbol)
17881 \DeclareTextCommand{\textbackcong}{PU}{\9042\114}%* U+224C
17882 % \nbackcong (MnSymbol)
17883 \DeclareTextCommand{\textnbackcong}{PU}{\9042\114\83\070}%* U+224C U+0338
17884 % U+224D EQUIVALENT TO; \asymp (LaTeX)
17885 \DeclareTextCommand{\textasymp}{PU}{\9042\115}%* U+224D
17886 % \nasymp (txfonts/pxfonts)
17887 \DeclareTextCommand{\textnasymp}{PU}{\9042\115\83\070}%* U+224D U+0338
17888 %* \textnasymp -> \notasymp (mathabx)
17889 % U+224E GEOMETRICALLY EQUIVALENT TO; \Bumpeq (AmS)
17890 \DeclareTextCommand{\textBumpeq}{PU}{\9042\116}%* U+224E
17891 % \nBumpeq (txfonts/pxfonts)
17892 \DeclareTextCommand{\textnBumpeq}{PU}{\9042\116\83\070}%* U+224E U+0338
17893 % U+224F DIFFERENCE BETWEEN; \bumpeq (AmS)
17894 \DeclareTextCommand{\textbumpeq}{PU}{\9042\117}%* U+224F
17895 % \nbumpeq (txfonts/pxfonts)
17896 \DeclareTextCommand{\textnbumpeq}{PU}{\9042\117\83\070}%* U+224F U+0338
17897 % U+2250 APPROACHES THE LIMIT; approaches; \doteq (LaTeX)
17898 \DeclareTextCommand{\textdoteq}{PU}{\9042\120}%* U+2250
17899 % \ndoteq (MnSymbol)
17900 \DeclareTextCommand{\textndoteq}{PU}{\9042\120\83\070}%* U+2250 U+0338
17901 % U+2251 GEOMETRICALLY EQUAL TO; geometricallyequal;
17902 % \doteqdot (AmS)
17903 \DeclareTextCommand{\textdoteqdot}{PU}{\9042\121}%* U+2251
17904 %* \textdoteqdot -> \Doteq (MnSymbol)
17905 % \nDoteq (MnSymbol)
17906 \DeclareTextCommand{\textnDoteq}{PU}{\9042\121\83\070}%* U+2251 U+0338
17907 % U+2252 APPROXIMATELY EQUAL TO OR THE IMAGE OF; approx-
equalorimage;
17908 % \fallingdotseq (AmS)
17909 \DeclareTextCommand{\textfallingdotseq}{PU}{\9042\122}%* U+2252
17910 % \nfallingdotseq (MnSymbol)
17911 \DeclareTextCommand{\textnfallingdotseq}{PU}{\9042\122\83\070}%* U+2252 U+0338
17912 % U+2253 IMAGE OF OR APPROXIMATELY EQUAL TO; imageorapprox-
imatelyequal;
17913 % \risingdotseq (AmS)
17914 \DeclareTextCommand{\textrisingdotseq}{PU}{\9042\123}%* U+2253
17915 % \nrisingdotseq (MnSymbol)
17916 \DeclareTextCommand{\textnrisingdotseq}{PU}{\9042\123\83\070}%* U+2253 U+0338

17917 % U+2254 COLON EQUALS; \colonequals (colonequals)
17918 \DeclareTextCommand{\textcolonequals}{PU}{\9042\124}%* U+2254
17919 % U+2255 EQUALS COLON; \equalscolon (colonequals)
17920 \DeclareTextCommand{\textequalscolon}{PU}{\9042\125}%* U+2255
17921 % U+2256 RING IN EQUAL TO; \eqcirc (AmS)
17922 \DeclareTextCommand{\texteqcirc}{PU}{\9042\126}%* U+2256
17923 % \neqcirc (MnSymbol)
17924 \DeclareTextCommand{\textneqcirc}{PU}{\9042\126\83\070}%* U+2256 U+0338
17925 % U+2257 RING EQUAL TO; \circeq (AmS)
17926 \DeclareTextCommand{\textcirceq}{PU}{\9042\127}%* U+2257
17927 % \ncirceq (MnSymbol)
17928 \DeclareTextCommand{\textncirceq}{PU}{\9042\127\83\070}%* U+2257 U+0338
17929 % U+2259 ESTIMATES; \hateq (MnSymbol)
17930 \DeclareTextCommand{\texthateq}{PU}{\9042\131}%* U+2259
17931 %* \texthateq -> \corresponds (mathabx)
17932 %* \texthateq -> \Corresponds (marvosym)
17933 % \nhateq (MnSymbol)
17934 \DeclareTextCommand{\textnhateq}{PU}{\9042\131\83\070}%* U+2259 U+0338
17935 % U+225C DELTA EQUAL TO; \triangleeq (AmS)
17936 \DeclareTextCommand{\texttriangleeq}{PU}{\9042\134}%* U+225C
17937 % U+2260 NOT EQUAL TO; notequal; \ne (LaTeX), \neq (LaTeX)
17938 \DeclareTextCommand{\textneq}{PU}{\9042\140}%* U+2260
17939 \DeclareTextCommand{\textne}{PU}{\9042\140}%* U+2260
17940 %* \textneq -> \nequal (MnSymbol)
17941 % U+2261 IDENTICAL TO; equivalence; \equiv (LaTeX)
17942 \DeclareTextCommand{\textequiv}{PU}{\9042\141}%* U+2261
17943 %* \textequiv -> \Congruent (marvosym)
17944 % U+2262 NOT IDENTICAL TO; notidentical; \notequiv (txfonts/pxfonts)
17945 \DeclareTextCommand{\textnotequiv}{PU}{\9042\142}%* U+2262
17946 %* \textnotequiv -> \NotCongruent (marvosym)
17947 %* \textnotequiv -> \notequiv (mathabx)
17948 % U+2264 LESS-THAN OR EQUAL TO; lessequal; \le (LaTeX), \leq (LaTeX)
17949 \DeclareTextCommand{\textleq}{PU}{\9042\144}%* U+2264
17950 \DeclareTextCommand{\textle}{PU}{\9042\144}%* U+2264
17951 %* \textleq -> \LessOrEqual (marvosym)
17952 % U+2265 GREATER-THAN OR EQUAL TO; greaterequal;
17953 % \ge (LaTeX), \geq (LaTeX)
17954 \DeclareTextCommand{\textgeq}{PU}{\9042\145}%* U+2265
17955 \DeclareTextCommand{\textge}{PU}{\9042\145}%* U+2265
17956 %* \textgeq -> \LargerOrEqual (marvosym)
17957 % U+2266 LESS-THAN OVER EQUAL TO; lessoverequal; \leqq (AmS)
17958 \DeclareTextCommand{\textleqq}{PU}{\9042\146}%* U+2266
17959 % \nleqq (txfonts/pxfonts)
17960 \DeclareTextCommand{\textnleqq}{PU}{\9042\146\83\070}%* U+2266 U+0338
17961 % U+2267 GREATER-THAN OVER EQUAL TO; greateroverequal; \geqq (AmS)
17962 \DeclareTextCommand{\textgeqq}{PU}{\9042\147}%* U+2267
17963 % \ngeqq (txfonts/pxfonts)
17964 \DeclareTextCommand{\textngeqq}{PU}{\9042\147\83\070}%* U+2267 U+0338
17965 % U+2268 LESS-THAN BUT NOT EQUAL TO; \lneqq (AmS)
17966 \DeclareTextCommand{\textlneqq}{PU}{\9042\150}%* U+2268
17967 % U+2269 GREATER-THAN BUT NOT EQUAL TO; \gneqq (AmS)
17968 \DeclareTextCommand{\textgneqq}{PU}{\9042\151}%* U+2269
17969 % U+226A MUCH LESS-THAN; muchless; \ll (LaTeX)
17970 \DeclareTextCommand{\textll}{PU}{\9042\152}%* U+226A

17971 % \nll (txfonts/pxfonts)
17972 \DeclareTextCommand{\textnll}{PU}{\9042\152\83\070}%* U+226A U+0338
17973 % U+226B MUCH GREATER-THAN; muchgreater; \gg (LaTeX)
17974 \DeclareTextCommand{\textgg}{PU}{\9042\153}%* U+226B
17975 % \ngg (txfonts/pxfonts)
17976 \DeclareTextCommand{\textngg}{PU}{\9042\153\83\070}%* U+226B U+0338
17977 % U+226C BETWEEN; \between (AmS)
17978 \DeclareTextCommand{\textbetween}{PU}{\9042\154}%* U+226C
17979 % U+226E NOT LESS-THAN; notless; \nless (AmS)
17980 \DeclareTextCommand{\textnless}{PU}{\9042\156}%* U+226E
17981 % U+226F NOT GREATER-THAN; notgreater; \ngtr (AmS)
17982 \DeclareTextCommand{\textngtr}{PU}{\9042\157}%* U+226F
17983 % U+2270 NEITHER LESS-THAN NOR EQUAL TO; notlessnorequal;
17984 % \nleq (AmS)
17985 \DeclareTextCommand{\textnleq}{PU}{\9042\160}%* U+2270
17986 % U+2271 NEITHER GREATER-THAN NOR EQUAL TO; notgreaternorequal;
17987 % \ngeq (AmS)
17987 \DeclareTextCommand{\textngeq}{PU}{\9042\161}%* U+2271
17988 % U+2272 LESS-THAN OR EQUIVALENT TO; lessorequivalent; \lessim (AmS)
17989 \DeclareTextCommand{\textlessim}{PU}{\9042\162}%* U+2272
17990 %* \textlessim -> \apprle (wasysym)
17991 % U+2273 GREATER-THAN OR EQUIVALENT TO; greaterorequivalent; \gtrsim (AmS)
17992 \DeclareTextCommand{\textgtrsim}{PU}{\9042\163}%* U+2273
17993 %* \textgtrsim -> \apprge (wasysym)
17994 % U+2274 NEITHER LESS-THAN NOR EQUIVALENT TO; \nlessim (txfonts/pxfonts)
17995 \DeclareTextCommand{\textnlessim}{PU}{\9042\164}%* U+2274
17996 % U+2275 NEITHER GREATER-THAN NOR EQUIVALENT TO; \ngtrsim (txfonts/pxfonts)
17997 \DeclareTextCommand{\textngtrsim}{PU}{\9042\165}%* U+2275
17998 % U+2276 LESS-THAN OR GREATER-THAN; lessorgreater; \lessgtr (AmS)
17999 \DeclareTextCommand{\textlessgtr}{PU}{\9042\166}%* U+2276
18000 % U+2277 GREATER-THAN OR LESS-THAN; greaterorless; \gtrless (AmS)
18001 \DeclareTextCommand{\textgtrless}{PU}{\9042\167}%* U+2277
18002 % U+2278 NEITHER LESS-THAN NOR GREATER-THAN; \ngtrless (txfonts/pxfonts)
18003 \DeclareTextCommand{\textngtrless}{PU}{\9042\170}%* U+2278
18004 % U+2279 NEITHER GREATER-THAN NOR LESS-THAN; \nlessgtr (txfonts/pxfonts)
18005 \DeclareTextCommand{\textnlessgtr}{PU}{\9042\171}%* U+2279
18006 % U+227A PRECEDES; precedes; \prec (LaTeX)
18007 \DeclareTextCommand{\textprec}{PU}{\9042\172}%* U+227A
18008 % U+227B SUCCEEDS; succeeds; \succ (LaTeX)
18009 \DeclareTextCommand{\textsucc}{PU}{\9042\173}%* U+227B
18010 % U+227C PRECEDES OR EQUAL TO; \preccurlyeq (AmS)
18011 \DeclareTextCommand{\textpreccurlyeq}{PU}{\9042\174}%* U+227C
18012 % U+227D SUCCEEDS OR EQUAL TO; \succcurlyeq (AmS)
18013 \DeclareTextCommand{\textsucccurlyeq}{PU}{\9042\175}%* U+227D
18014 % U+227E PRECEDES OR EQUIVALENT TO; \precsim (AmS)
18015 \DeclareTextCommand{\textprecsim}{PU}{\9042\176}%* U+227E
18016 % \nprecsim (txfonts/pxfonts)
18017 \DeclareTextCommand{\textnprecsim}{PU}{\9042\176\83\070}%* U+227E U+0338
18018 % U+227F SUCCEEDS OR EQUIVALENT TO; \succsim (AmS)

18019 \DeclareTextCommand{\textsuccsim}{PU}{\9042\177}%* U+227F
18020 % \nsuccsim (txfonts/pxfonts)
18021 \DeclareTextCommand{\textnsuccsim}{PU}{\9042\177\83\070}%* U+227F U+0338
18022 % U+2280 DOES NOT PRECEDE; notprecedes; \nprec (AmS)
18023 \DeclareTextCommand{\textnprec}{PU}{\9042\200}%* U+2280
18024 % U+2281 DOES NOT SUCCEED; notsucceds; \succ (AmS)
18025 \DeclareTextCommand{\textnsucc}{PU}{\9042\201}%* U+2281
18026 % U+2282 SUBSET OF; propersubset; \subset (LaTeX)
18027 \DeclareTextCommand{\textsubset}{PU}{\9042\202}%* U+2282
18028 % U+2283 SUPERSET OF; propersuperset; \supset (LaTeX)
18029 \DeclareTextCommand{\textsupset}{PU}{\9042\203}%* U+2283
18030 % U+2284 NOT A SUBSET OF; notsubset; \nsubset (mathabx)
18031 \DeclareTextCommand{\textnsubset}{PU}{\9042\204}%* U+2284
18032 % U+2285 NOT A SUPERSET OF; notsuperset; \nsupset (mathabx)
18033 \DeclareTextCommand{\textnsupset}{PU}{\9042\205}%* U+2285
18034 % U+2286 SUBSET OF OR EQUAL TO; reflexsubset; \subseteq (LaTeX)
18035 \DeclareTextCommand{\textsubseteq}{PU}{\9042\206}%* U+2286
18036 % U+2287 SUPERSET OF OR EQUAL TO; reflexsuperset; \supseteq (LaTeX)
18037 \DeclareTextCommand{\textsupseteq}{PU}{\9042\207}%* U+2287
18038 % U+2288 NEITHER A SUBSET OF NOR EQUAL TO; \nsubseteq (AmS)
18039 \DeclareTextCommand{\textnsubseteq}{PU}{\9042\210}%* U+2288
18040 % U+2289 NEITHER A SUPERSET OF NOR EQUAL TO; \nsupseteq (AmS)
18041 \DeclareTextCommand{\textnsupseteq}{PU}{\9042\211}%* U+2289
18042 % U+228A SUBSET OF WITH NOT EQUAL TO; subsetnotequal; \subsetneq (AmS)
18043 \DeclareTextCommand{\textsubsetneq}{PU}{\9042\212}%* U+228A
18044 % U+228B SUPERSET OF WITH NOT EQUAL TO; supersetnotequal; \supsetneq (AmS)
18045 \DeclareTextCommand{\textsupsetneq}{PU}{\9042\213}%* U+228B
18046 % U+228D MULTISSET MULTIPLICATION; \cupdot (MnSymbol)
18047 \DeclareTextCommand{\textcupdot}{PU}{\9042\215}%* U+228D
18048 % U+228E MULTISSET UNION; \cupplus (MnSymbol)
18049 \DeclareTextCommand{\textcupplus}{PU}{\9042\216}%* U+228E
18050 % U+228F SQUARE IMAGE OF; \sqsubset (latexsym, ...)
18051 \DeclareTextCommand{\textsqsubset}{PU}{\9042\217}%* U+228F
18052 % \nsqsubset (txfonts/pxfonts)
18053 \DeclareTextCommand{\textnsqsubset}{PU}{\9042\217\83\070}%* U+228F U+0338
18054 % U+2290 SQUARE ORIGINAL OF; \sqsupset (latexsym, ...)
18055 \DeclareTextCommand{\textsqsupset}{PU}{\9042\220}%* U+2290
18056 % \nsqsupset (txfonts/pxfonts)
18057 \DeclareTextCommand{\textnsqsupset}{PU}{\9042\220\83\070}%* U+2290 U+0338
18058 % U+2291 SQUARE IMAGE OF OR EQUAL TO; \sqsubseteq (LaTeX)
18059 \DeclareTextCommand{\textsqsubseteq}{PU}{\9042\221}%* U+2291
18060 % \nsqsubseteq (txfonts/pxfonts)
18061 \DeclareTextCommand{\textnsqsubseteq}{PU}{\9042\221\83\070}%* U+2291 U+0338
18062 % U+2292 SQUARE ORIGINAL OF OR EQUAL TO; \sqsupseteq (LaTeX)
18063 \DeclareTextCommand{\textsqsupseteq}{PU}{\9042\222}%* U+2292
18064 % \nsqsupseteq (txfonts/pxfonts)
18065 \DeclareTextCommand{\textnsqsupseteq}{PU}{\9042\222\83\070}%* U+2292 U+0338
18066 % U+2293 SQUARE CAP; \sqcap (LaTeX)
18067 \DeclareTextCommand{\textsqcap}{PU}{\9042\223}%* U+2293
18068 % U+2294 SQUARE CUP; \sqcup (LaTeX)
18069 \DeclareTextCommand{\textsqcup}{PU}{\9042\224}%* U+2294
18070 % U+2295 CIRCLED PLUS; circleplus; \oplus (LaTeX)

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18071 \DeclareTextCommand{\textoplus}{PU}{\9042\225}%* U+2295
18072 %* \textoplus -> \varoplus (stmaryrd)
18073 % U+2296 CIRCLED MINUS; minuscircle; \ominus (LaTeX)
18074 \DeclareTextCommand{\textominus}{PU}{\9042\226}%* U+2296
18075 %* \textominus -> \varominus (stmaryrd)
18076 % U+2297 CIRCLED TIMES; circlemultiply; \otimes (LaTeX)
18077 \DeclareTextCommand{\textotimes}{PU}{\9042\227}%* U+2297
18078 %* \textotimes -> \varotimes (stmaryrd)
18079 % U+2298 CIRCLED DIVISION SLASH; \oslash (LaTeX)
18080 \DeclareTextCommand{\textoslash}{PU}{\9042\230}%* U+2298
18081 %* \textoslash -> \varoslash (stmaryrd)
18082 % U+2299 CIRCLED DOT OPERATOR; circle(d?)ot; \odot (LaTeX)
18083 \DeclareTextCommand{\textodot}{PU}{\9042\231}%* U+2299
18084 %* \textodot -> \varodot (stmaryrd)
18085 % U+229A CIRCLED RING OPERATOR; \circledcirc (AmS)
18086 \DeclareTextCommand{\textcircledcirc}{PU}{\9042\232}%* U+229A
18087 %* \textcircledcirc -> \ocirc (mathabx)
18088 %* \textcircledcirc -> \varocircle (stmaryrd)
18089 % U+229B CIRCLED ASTERISK OPERATOR; \circledast (AmS)
18090 \DeclareTextCommand{\textcircledast}{PU}{\9042\233}%* U+229B
18091 %* \textcircledast -> \varoast (stmaryrd)
18092 %* \textcircledast -> \oasterisk (mathabx)
18093 % U+229D CIRCLED DASH; \circleddash (AmS)
18094 \DeclareTextCommand{\textcircleddash}{PU}{\9042\235}%* U+229D
18095 % U+229E SQUARED PLUS; \boxplus (AmS)
18096 \DeclareTextCommand{\textboxplus}{PU}{\9042\236}%* U+229E
18097 % U+229F SQUARED MINUS; \boxminus (AmS)
18098 \DeclareTextCommand{\textboxminus}{PU}{\9042\237}%* U+229F
18099 % U+22A0 SQUARED TIMES; \boxtimes (AmS)
18100 \DeclareTextCommand{\textboxtimes}{PU}{\9042\240}%* U+22A0
18101 % U+22A1 SQUARED DOT OPERATOR; \boxdot (AmS)
18102 \DeclareTextCommand{\textboxdot}{PU}{\9042\241}%* U+22A1
18103 % U+22A2 RIGHT TACK; \vdash (LaTeX)
18104 \DeclareTextCommand{\textvdash}{PU}{\9042\242}%* U+22A2
18105 %* \textvdash -> \rightvdash (MnSymbol)
18106 % U+22A3 LEFT TACK; \dashv; \dashv (LaTeX)
18107 \DeclareTextCommand{\textdashv}{PU}{\9042\243}%* U+22A3
18108 %* \textdashv -> \leftvdash (MnSymbol)
18109 % \ndashv (mathabx)
18110 \DeclareTextCommand{\textndashv}{PU}{\9042\243\83\070}%* U+22A3 U+0338
18111 %* \textndashv -> \leftvdash (MnSymbol)
18112 % U+22A4 DOWN TACK (=top); \tackdown; \top (LaTeX)
18113 \DeclareTextCommand{\texttop}{PU}{\9042\244}%* U+22A4
18114 %* \texttop -> \downvdash (MnSymbol)
18115 % \ndownvdash (MnSymbol)
18116 \DeclareTextCommand{\textndownvdash}{PU}{\9042\244\83\070}%* U+22A4 U+0338
18117 % U+22A5 UP TACK (=base, bottom); \bot (LaTeX)
18118 \DeclareTextCommand{\textbot}{PU}{\9042\245}%* U+22A5
18119 %* \textbot -> \upvdash (MnSymbol)
18120 % \nupvdash (MnSymbol)
18121 \DeclareTextCommand{\textnupvdash}{PU}{\9042\245\83\070}%* U+22A5 U+0338
18122 %* \textnupvdash -> \nperp (MnSymbol)
18123 % U+22A8 TRUE; \vDash (AmS)
18124 \DeclareTextCommand{\textvDash}{PU}{\9042\250}%* U+22A8

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18125 %* \textvDash -> \models (LaTeX)
18126 %* \textvDash -> \rightmodels (MnSymbol)
18127 % U+22A9 FORCES; \Vdash (AmS)
18128 \DeclareTextCommand{\textVdash}{PU}{\9042\251}%* U+22A9
18129 %* \textVdash -> \rightVdash (MnSymbol)
18130 % U+22AA TRIPLE VERTICAL BAR RIGHT TURNSTILE; \Vvdash (AmS)
18131 \DeclareTextCommand{\textVvdash}{PU}{\9042\252}%* U+22AA
18132 % \nVvash (mathabx)
18133 \DeclareTextCommand{\textnVvash}{PU}{\9042\252\83\070}%* U+22AA U+0338
18134 % U+22AB DOUBLE VERTICAL BAR DOUBLE RIGHT TURNSTILE;
18135 % \VDash (mathabx)
18136 \DeclareTextCommand{\textVDash}{PU}{\9042\253}%* U+22AB
18137 %* \textVDash -> \rightModels (MnSymbol)
18138 % U+22AC DOES NOT PROVE; \nvDash (AmS)
18139 \DeclareTextCommand{\textnvDash}{PU}{\9042\254}%* U+22AC
18140 %* \textnvDash -> \nrighnvDash (MnSymbol)
18141 % U+22AD NOT TRUE; \nvDash (AmS)
18142 \DeclareTextCommand{\textnVDash}{PU}{\9042\255}%* U+22AD
18143 %* \textnVDash -> \nrighModels (MnSymbol)
18144 %* \textnVDash -> \nmodels (MnSymbol)
18145 % U+22AE DOES NOT FORCE; \nVdash (txfonts/pxfonts)
18146 \DeclareTextCommand{\textnVdash}{PU}{\9042\256}%* U+22AE
18147 %* \textnVdash -> \nrighVdash (MnSymbol)
18148 % U+22AF NEGATED DOUBLE VERTICAL BAR DOUBLE RIGHT TURN-
STILE; \nVDash (AmS)
18149 \DeclareTextCommand{\textnVDash}{PU}{\9042\257}%* U+22AF
18150 %* \textnVDash -> \nrighModels (MnSymbol)
18151 % U+22B2 NORMAL SUBGROUP OF; \lhd (latexsym, ...)
18152 \DeclareTextCommand{\textlhd}{PU}{\9042\262}%* U+22B2
18153 %* \textlhd -> \lessclosed (MnSymbol)
18154 % U+22B3 CONTAINS AS NORMAL SUBGROUP; \rhd (latexsym, ...)
18155 \DeclareTextCommand{\textrhd}{PU}{\9042\263}%* U+22B3
18156 %* \textrhd -> \gtrclosed (MnSymbol)
18157 % U+22B4 NORMAL SUBGROUP OF OR EQUAL TO; \unlhd (latexsym, ...)
18158 \DeclareTextCommand{\textunlhd}{PU}{\9042\264}%* U+22B4
18159 %* \textunlhd -> \leqclosed (MnSymbol)
18160 %* \textunlhd -> \trianglelefteq (MnSymbol)
18161 % U+22B5 CONTAINS AS NORMAL SUBGROUP OR EQUAL TO; \unrhd (la-
texsym, ...)
18162 \DeclareTextCommand{\textunrhd}{PU}{\9042\265}%* U+22B5
18163 %* \textunrhd -> \geqclosed (MnSymbol)
18164 %* \textunrhd -> \trianglerighteq (MnSymbol)
18165 % U+22B6 ORIGINAL OF; \multimapdotbothA (txfonts/pxfonts)
18166 \DeclareTextCommand{\textmultimapdotbothA}{PU}{\9042\266}%* U+22B6
18167 % U+22B7 IMAGE OF; \multimapdotbothB (txfonts/pxfonts)
18168 \DeclareTextCommand{\textmultimapdotbothB}{PU}{\9042\267}%* U+22B7
18169 % U+22B8 MULTIMAP; \multimap (AmS, txfonts/pxfonts)
18170 \DeclareTextCommand{\textmultimap}{PU}{\9042\270}%* U+22B8
18171 % U+22BB XOR; \veebar (AmS)
18172 \DeclareTextCommand{\textveebar}{PU}{\9042\273}%* U+22BB
18173 % U+22BC NAND; \barwedge (mathabx)
18174 \DeclareTextCommand{\textbarwedge}{PU}{\9042\274}%* U+22BC
18175 % U+22C6 STAR OPERATOR; \star (LaTeX)
18176 \DeclareTextCommand{\textstar}{PU}{\9042\306}%* U+22C6

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18177 % U+22C7 DIVISION TIMES; \divideontimes (AmS)
18178 \DeclareTextCommand{\textdivideontimes}{PU}{\9042\307}%* U+22C7
18179 % U+22C8 BOWTIE; \bowtie (LaTeX)
18180 \DeclareTextCommand{\textbowtie}{PU}{\9042\310}%* U+22C8
18181 %* \textbowtie -> \Bowtie (wasysym)
18182 % U+22C9 LEFT NORMAL FACTOR SEMIDIRECT PRODUCT; \ltimes (AmS)
18183 \DeclareTextCommand{\textltimes}{PU}{\9042\311}%* U+22C9
18184 % U+22CA RIGHT NORMAL FACTOR SEMIDIRECT PRODUCT;
18185 % \rtimes (AmS)
18186 \DeclareTextCommand{\textrtimes}{PU}{\9042\312}%* U+22CA
18187 % U+22CB LEFT SEMIDIRECT PRODUCT; \leftthreetimes (AmS)
18188 \DeclareTextCommand{\textleftthreetimes}{PU}{\9042\313}%* U+22CB
18189 % U+22CC RIGHT SEMIDIRECT PRODUCT; \rightthreetimes (AmS)
18190 \DeclareTextCommand{\textrightthreetimes}{PU}{\9042\314}%* U+22CC
18191 % U+22CD REVERSED TILDE EQUALS; \backsimeq (AmS)
18192 \DeclareTextCommand{\textbacksimeq}{PU}{\9042\315}%* U+22CD
18193 % \nbacksimeq (txfonts/pxfonts)
18194 \DeclareTextCommand{\textnbacksimeq}{PU}{\9042\315\83\070}%* U+22CD U+0338
18195 % U+22CE CURLY LOGICAL OR; curlyor; \curlyvee (AmS)
18196 \DeclareTextCommand{\textcurlyvee}{PU}{\9042\316}%* U+22CE
18197 %* \textcurlyvee -> \varcurlyvee (stmaryrd)
18198 % U+22CF CURLY LOGICAL AND; curlyand; \curlywedge (AmS)
18199 \DeclareTextCommand{\textcurlywedge}{PU}{\9042\317}%* U+22CF
18200 %* \textcurlywedge -> \varcurlywedge (stmaryrd)
18201 % U+22D0 DOUBLE SUBSET; \Subset (AmS)
18202 \DeclareTextCommand{\textSubset}{PU}{\9042\320}%* U+22D0
18203 % \nSubset (txfonts/pxfonts)
18204 \DeclareTextCommand{\textnSubset}{PU}{\9042\320\83\070}%* U+22D0 U+0338
18205 % U+22D1 DOUBLE SUPERSET; \Supset (AmS)
18206 \DeclareTextCommand{\textSupset}{PU}{\9042\321}%* U+22D1
18207 % \nSupset (txfonts/pxfonts)
18208 \DeclareTextCommand{\textnSupset}{PU}{\9042\321\83\070}%* U+22D1 U+0338
18209 % U+22D2 DOUBLE INTERSECTION; \Cap (AmS)
18210 \DeclareTextCommand{\textCap}{PU}{\9042\322}%* U+22D2
18211 %* \textCap -> \doublecap (mathabx)
18212 % U+22D3 DOUBLE UNION; \Cup (AmS)
18213 \DeclareTextCommand{\textCup}{PU}{\9042\323}%* U+22D3
18214 %* \textCup -> \doublecup (mathabx)
18215 % U+22D4 PITCHFORK; \pitchfork (mathabx)
18216 \DeclareTextCommand{\textpitchfork}{PU}{\9042\324}%* U+22D4
18217 % U+22D6 LESS-THAN WITH DOT; \lessdot (AmS)
18218 \DeclareTextCommand{\textlessdot}{PU}{\9042\326}%* U+22D6
18219 % U+22D7 GREATER-THAN WITH DOT; \gtrdot (AmS)
18220 \DeclareTextCommand{\textgtrdot}{PU}{\9042\327}%* U+22D7
18221 % U+22D8 VERY MUCH LESS-THAN; \lll (AmS)
18222 \DeclareTextCommand{\textlll}{PU}{\9042\330}%* U+22D8
18223 % U+22D9 VERY MUCH GREATER-THAN; \ggg (AmS)
18224 \DeclareTextCommand{\textggg}{PU}{\9042\331}%* U+22D9
18225 % U+22DA LESS-THAN EQUAL TO OR GREATER-THAN; lesseqqualorgreater;
18226 % \lesseqgtr (AmS)
18227 \DeclareTextCommand{\textlesseqgtr}{PU}{\9042\332}%* U+22DA
18228 % U+22DB GREATER-THAN EQUAL TO OR LESS-THAN; greaterequalorless;
18229 % \gtreqless (AmS)
18230 \DeclareTextCommand{\textgtreqless}{PU}{\9042\333}%* U+22DB

18231 % U+22DE EQUAL TO OR PRECEDES; \curlyeqprec (MnSymbol)
18232 \DeclareTextCommand{\textcurlyeqprec}{PU}{\9042\336}%* U+22DE
18233 % \ncurlyeqprec (mathabx)
18234 \DeclareTextCommand{\textncurlyeqprec}{PU}{\9042\336\83\070}%* U+22DE U+0338
18235 % U+22DF EQUAL TO OR SUCCEEDS; \curlyeqsucc (MnSymbol)
18236 \DeclareTextCommand{\textcurlyeqsucc}{PU}{\9042\337}%* U+22DF
18237 % \ncurlyeqsucc (mathabx)
18238 \DeclareTextCommand{\textncurlyeqsucc}{PU}{\9042\337\83\070}%* U+22DF U+0338
18239 % U+22E0 DOES NOT PRECEDE OR EQUAL; \npreccurlyeq (txfonts/pxfonts)
18240 \DeclareTextCommand{\textnpreccurlyeq}{PU}{\9042\340}%* U+22E0
18241 % U+22E1 DOES NOT SUCCEED OR EQUAL; \nsucccurlyeq (txfonts/pxfonts)
18242 \DeclareTextCommand{\textnsucccurlyeq}{PU}{\9042\341}%* U+22E1
18243 % U+22E2 NOT SQUARE IMAGE OF OR EQUAL TO; \nqssubseteq (tx-
fonts/pxfonts)
18244 \DeclareTextCommand{\textnqssubseteq}{PU}{\9042\342}%* U+22E2
18245 % U+22E3 NOT SQUARE ORIGINAL OF OR EQUAL TO; \nqsupseteq (tx-
fonts/pxfonts)
18246 \DeclareTextCommand{\textnqsupseteq}{PU}{\9042\343}%* U+22E3
18247 % U+22E4 SQUARE IMAGE OF OR NOT EQUAL TO; \sqsubseteq (mathabx)
18248 \DeclareTextCommand{\textsqsubseteq}{PU}{\9042\344}%* U+22E4
18249 %* \textsqsubseteq -> \varsqsubseteq (mathabx)
18250 % U+22E5 SQUARE ORIGINAL OF OR NOT EQUAL TO; \sqsupseteq (math-
abx)
18251 \DeclareTextCommand{\textsqsupseteq}{PU}{\9042\345}%* U+22E5
18252 %* \textsqsupseteq -> \varsqsupseteq (mathabx)
18253 % U+22E6 LESS-THAN BUT NOT EQUIVALENT TO; \lnsim (AmS)
18254 \DeclareTextCommand{\textlnsim}{PU}{\9042\346}%* U+22E6
18255 % U+22E7 GREATER-THAN BUT NOT EQUIVALENT TO; \gnsim (AmS)
18256 \DeclareTextCommand{\textgnsim}{PU}{\9042\347}%* U+22E7
18257 % U+22E8 PRECEDES BUT NOT EQUIVALENT TO; \preccsim (AmS)
18258 \DeclareTextCommand{\textpreccsim}{PU}{\9042\350}%* U+22E8
18259 % U+22E9 SUCCEEDS BUT NOT EQUIVALENT TO; \succsim (AmS)
18260 \DeclareTextCommand{\textsuccsim}{PU}{\9042\351}%* U+22E9
18261 % U+22EA NOT NORMAL SUBGROUP OF; \ntriangleleft (AmS)
18262 \DeclareTextCommand{\textntriangleleft}{PU}{\9042\352}%* U+22EA
18263 %* \textntriangleleft -> \nlessclosed (MnSymbol)
18264 % U+22EB DOES NOT CONTAIN AS NORMAL SUBGROUP; \ntriangleright
(AmS)
18265 \DeclareTextCommand{\textntriangleright}{PU}{\9042\353}%* U+22EB
18266 %* \textntriangleright -> \ngtrclosed (MnSymbol)
18267 % U+22EC NOT NORMAL SUBGROUP OF OR EQUAL TO;
18268 % \ntrianglelefteq (AmS)
18269 \DeclareTextCommand{\textntrianglelefteq}{PU}{\9042\354}%* U+22EC
18270 % U+22ED DOES NOT CONTAIN AS NORMAL SUBGROUP OR EQUAL;
18271 % \ntrianglerighteq (AmS)
18272 \DeclareTextCommand{\textntrianglerighteq}{PU}{\9042\355}%* U+22ED
18273 %* \textntrianglerighteq -> \textngeqclosed
18274 % U+22EE VERTICAL ELLIPSIS; \vdots (LaTeX)
18275 \DeclareTextCommand{\textvdots}{PU}{\9042\356}%* U+22EE
18276 % U+22EF MIDLINE HORIZONTAL ELLIPSIS; \cdots (LaTeX)
18277 \DeclareTextCommand{\textcdots}{PU}{\9042\357}%* U+22EF
18278 % U+22F0 UP RIGHT DIAGONAL ELLIPSIS; \udots (MnSymbol)
18279 \DeclareTextCommand{\textudots}{PU}{\9042\360}%* U+22F0
18280 % U+22F1 DOWN RIGHT DIAGONAL ELLIPSIS; \ddots (LaTeX)

18281 \DeclareTextCommand{\textddots}{PU}{\9042\361}%* U+22F1
 18282 % U+22F6 ELEMENT OF WITH OVERBAR; \barin (mathabx)
 18283 \DeclareTextCommand{\textbarin}{PU}{\9042\366}%* U+22F6

47.2.23 Miscellaneous Technical: U+2300 to U+23FF

18284 % U+2300 DIAMETER SIGN; \diameter (mathabx,wasysym)
 18285 \DeclareTextCommand{\textdiameter}{PU}{\9043\000}%* U+2300
 18286 % U+2310 REVERSED NOT SIGN; \backneg (MnSymbol)
 18287 \DeclareTextCommand{\textbackneg}{PU}{\9043\020}%* U+2310
 18288 % U+2311 SQUARE LOZENGE; \wasylozenge (wasysym)
 18289 \DeclareTextCommand{\textwasylozenge}{PU}{\9043\021}%* U+2311
 18290 % U+2319 TURNED NOT SIGN; \invbackneg (MnSymbol)
 18291 \DeclareTextCommand{\textinvbackneg}{PU}{\9043\031}%* U+2319
 18292 % U+231A WATCH; \clock (wasysym)
 18293 \DeclareTextCommand{\textclock}{PU}{\9043\032}%* U+231A
 18294 %* \textclock -> \Clocklogo (marvosym)
 18295 %* \textclock -> \ClockLogo (marvosym)
 18296 % U+231C TOP LEFT CORNER; \ulcorner (AmS)
 18297 \DeclareTextCommand{\textulcorner}{PU}{\9043\034}%* U+231C
 18298 % U+231D TOP RIGHT CORNER; \urcorner (AmS)
 18299 \DeclareTextCommand{\texturcorner}{PU}{\9043\035}%* U+231D
 18300 % U+231E BOTTOM LEFT CORNER; \llcorner (AmS)
 18301 \DeclareTextCommand{\textllcorner}{PU}{\9043\036}%* U+231E
 18302 % U+231F BOTTOM RIGHT CORNER; \lrcorner (AmS)
 18303 \DeclareTextCommand{\textlrcorner}{PU}{\9043\037}%* U+231F
 18304 % U+2322 FROWN; \frown (LaTeX)
 18305 \DeclareTextCommand{\textfrown}{PU}{\9043\042}%* U+2322
 18306 % U+2323 SMILE; \smile (LaTeX)
 18307 \DeclareTextCommand{\textsmile}{PU}{\9043\043}%* U+2323
 18308 % U+2328 KEYBOARD; \Keyboard (marvosym)
 18309 \DeclareTextCommand{\textKeyboard}{PU}{\9043\050}%* U+2328
 18310 % U+2329 LEFT-POINTING ANGLE BRACKET; \angleleft; \langle (LaTeX)
 18311 \DeclareTextCommand{\textlangle}{PU}{\9043\051}%* U+2329
 18312 % U+232A RIGHT-POINTING ANGLE BRACKET; \angleright; \rangle (LaTeX)
 18313 \DeclareTextCommand{\textrightangle}{PU}{\9043\052}%* U+232A
 18314 % U+2339 APL FUNCTIONAL SYMBOL QUAD DIVIDE; \APLinv (wasysym)
 18315 \DeclareTextCommand{\textAPLinv}{PU}{\9043\071}%* U+2339
 18316 % U+233C APL FUNCTIONAL SYMBOL QUAD CIRCLE; \Tumbler (marvosym)
 18317 \DeclareTextCommand{\textTumbler}{PU}{\9043\074}%* U+233C
 18318 % U+233D APL FUNCTIONAL SYMBOL CIRCLE STILE; \baro (stmaryrd)
 18319 \DeclareTextCommand{\textstmaryrdbaro}{PU}{\9043\075}% U+233D
 18320 %* \textstmaryrdbaro -> \baro (stmaryrd)
 18321 % U+233F APL FUNCTIONAL SYMBOL SLASH BAR; \notslash (wasysym)
 18322 \DeclareTextCommand{\textnotslash}{PU}{\9043\077}%* U+233F
 18323 % U+2340 APL FUNCTIONAL SYMBOL BACKSLASH BAR;
 18324 % \notbackslash (wasysym)
 18325 \DeclareTextCommand{\textnotbackslash}{PU}{\9043\100}%* U+2340
 18326 % U+2342 APL FUNCTIONAL SYMBOL QUAD BACKSLASH; \boxbackslash (mathabx)
 18327 \DeclareTextCommand{\textboxbackslash}{PU}{\9043\102}%* U+2342
 18328 % U+2347 APL FUNCTIONAL SYMBOL QUAD LEFTWARDS ARROW;
 18329 % \APLleftarrowbox (wasysym)
 18330 \DeclareTextCommand{\textAPLleftarrowbox}{PU}{\9043\107}%* U+2347

18331 % U+2348 APL FUNCTIONAL SYMBOL QUAD RIGHTWARDS ARROW;
 18332 % \APLrightarrowbox (wasysym)
 18333 \DeclareTextCommand{\textAPLrightarrowbox}{PU}{\9043\110}%* U+2348
 18334 % U+2350 APL FUNCTIONAL SYMBOL QUAD UPWARDS ARROW; \APLup-
 arrowbox (wasysym)
 18335 \DeclareTextCommand{\textAPLuparrowbox}{PU}{\9043\120}%* U+2350
 18336 % U+2357 APL FUNCTIONAL SYMBOL QUAD DOWNWARDS ARROW;
 18337 % \APLdownarrowbox (wasysym)
 18338 \DeclareTextCommand{\textAPLdownarrowbox}{PU}{\9043\127}%* U+2357
 18339 % U+235E APL FUNCTIONAL SYMBOL QUOTE QUAD;
 18340 % \APLinput (wasysym)
 18341 \DeclareTextCommand{\textAPLinput}{PU}{\9043\136}%* U+235E
 18342 % U+2370 APL FUNCTIONAL SYMBOL QUAD QUESTION; \Request (china2e)
 18343 \DeclareTextCommand{\textRequest}{PU}{\9043\160}%* U+2370
 18344 % U+2393 DIRECT CURRENT SYMBOL FORM TWO; \Beam (marvosym)
 18345 \DeclareTextCommand{\textBeam}{PU}{\9043\223}%* U+2393
 18346 % U+2394 SOFTWARE-FUNCTION SYMBOL; \hexagon (wasysym)
 18347 \DeclareTextCommand{\texthexagon}{PU}{\9043\224}%* U+2394
 18348 % U+2395 APL FUNCTIONAL SYMBOL QUAD; \APLbox (wasysym)
 18349 \DeclareTextCommand{\textAPLbox}{PU}{\9043\225}%* U+2395
 18350 % U+23ED BLACK RIGHT-POINTING DOUBLE TRIANGLE WITH VERTI-
 CAL BAR;
 18351 % \ForwardToIndex (marvosym)
 18352 \DeclareTextCommand{\textForwardToIndex}{PU}{\9043\355}%* U+23ED
 18353 % U+23EE BLACK LEFT-POINTING DOUBLE TRIANGLE WITH VERTI-
 CAL BAR;
 18354 % \RewindToIndex (marvosym)
 18355 \DeclareTextCommand{\textRewindToIndex}{PU}{\9043\356}%* U+23EE

47.2.24 Control Pictures: U+2400 to U+243F

18356 % U+2422 BLANK SYMBOL
 18357 \DeclareTextCommand{\textblank}{PU}{\9044\042}% U+2422
 18358 % U+2423 OPEN BOX; blank
 18359 \DeclareTextCommand{\textvisiblespace}{PU}{\9044\043}% U+2423

47.2.25 Optical Character Recognition: U+2440 to U+245F

18360 % U+244A OCR DOUBLE BACKSLASH; \bbslash (stmaryrd)
 18361 \DeclareTextCommand{\textbbslash}{PU}{\9044\112}%* U+244A
 18362 %* \textbbslash -> \varparallelinv (txfonts/pxfonts)

47.2.26 Enclosed Alphanumerics: U+2460 to U+24FF

18363 % U+2460 CIRCLED DIGIT ONE; onecircle
 18364 \DeclareTextCompositeCommand{\textcircled}{PU}{1}{\9044\140}% U+2460
 18365 % U+2461 CIRCLED DIGIT TWO; twocircle
 18366 \DeclareTextCompositeCommand{\textcircled}{PU}{2}{\9044\141}% U+2461
 18367 % U+2462 CIRCLED DIGIT THREE; threecircle
 18368 \DeclareTextCompositeCommand{\textcircled}{PU}{3}{\9044\142}% U+2462
 18369 % U+2463 CIRCLED DIGIT FOUR; fourcircle
 18370 \DeclareTextCompositeCommand{\textcircled}{PU}{4}{\9044\143}% U+2463
 18371 % U+2464 CIRCLED DIGIT FIVE; fivecircle
 18372 \DeclareTextCompositeCommand{\textcircled}{PU}{5}{\9044\144}% U+2464
 18373 % U+2465 CIRCLED DIGIT SIX; sixcircle
 18374 \DeclareTextCompositeCommand{\textcircled}{PU}{6}{\9044\145}% U+2465
 18375 % U+2466 CIRCLED DIGIT SEVEN; sevenscircle

18376 \DeclareTextCompositeCommand{\textcircled}{PU}{7}{\9044\146}% U+2466
18377 % U+2467 CIRCLED DIGIT EIGHT; eightcircle
18378 \DeclareTextCompositeCommand{\textcircled}{PU}{8}{\9044\147}% U+2467
18379 % U+2468 CIRCLED DIGIT NINE; ninecircle
18380 \DeclareTextCompositeCommand{\textcircled}{PU}{9}{\9044\150}% U+2468
18381 % U+2469 CIRCLED NUMBER TEN; tencircle
18382 \DeclareTextCompositeCommand{\textcircled}{PU}{10}{\9044\151}% U+2469
18383 % U+246A CIRCLED NUMBER ELEVEN; elevencircle
18384 \DeclareTextCompositeCommand{\textcircled}{PU}{11}{\9044\152}% U+246A
18385 % U+246B CIRCLED NUMBER TWELVE; twelvecircle
18386 \DeclareTextCompositeCommand{\textcircled}{PU}{12}{\9044\153}% U+246B
18387 % U+246C CIRCLED NUMBER THIRTEEN; thirteencircle
18388 \DeclareTextCompositeCommand{\textcircled}{PU}{13}{\9044\154}% U+246C
18389 % U+246D CIRCLED NUMBER FOURTEEN; fourteencircle
18390 \DeclareTextCompositeCommand{\textcircled}{PU}{14}{\9044\155}% U+246D
18391 % U+246E CIRCLED NUMBER FIFTEEN; fifteencircle
18392 \DeclareTextCompositeCommand{\textcircled}{PU}{15}{\9044\156}% U+246E
18393 % U+246F CIRCLED NUMBER SIXTEEN; sixteencircle
18394 \DeclareTextCompositeCommand{\textcircled}{PU}{16}{\9044\157}% U+246F
18395 % U+2470 CIRCLED NUMBER SEVENTEEN; seventeencircle
18396 \DeclareTextCompositeCommand{\textcircled}{PU}{17}{\9044\160}% U+2470
18397 % U+2471 CIRCLED NUMBER EIGHTEEN; eighteencircle
18398 \DeclareTextCompositeCommand{\textcircled}{PU}{18}{\9044\161}% U+2471
18399 % U+2472 CIRCLED NUMBER NINETEEN; nineteencircle
18400 \DeclareTextCompositeCommand{\textcircled}{PU}{19}{\9044\162}% U+2472
18401 % U+2473 CIRCLED NUMBER TWENTY; twentycircle
18402 \DeclareTextCompositeCommand{\textcircled}{PU}{20}{\9044\163}% U+2473
18403 % U+24B6 CIRCLED LATIN CAPITAL LETTER A; Acircle
18404 \DeclareTextCompositeCommand{\textcircled}{PU}{A}{\9044\266}% U+24B6
18405 % \CircledA (marvosym)
18406 \DeclareTextCommand{\textCircledA}{PU}{\9044\266}%* U+24B6
18407 %* \textCircledA -> \CleaningA
18408 % U+24B7 CIRCLED LATIN CAPITAL LETTER B; Bcircle
18409 \DeclareTextCompositeCommand{\textcircled}{PU}{B}{\9044\267}% U+24B7
18410 % U+24B8 CIRCLED LATIN CAPITAL LETTER C; Ccircle
18411 \DeclareTextCompositeCommand{\textcircled}{PU}{C}{\9044\270}% U+24B8
18412 % U+24B9 CIRCLED LATIN CAPITAL LETTER D; Dcircle
18413 \DeclareTextCompositeCommand{\textcircled}{PU}{D}{\9044\271}% U+24B9
18414 % U+24BA CIRCLED LATIN CAPITAL LETTER E; Ecircle
18415 \DeclareTextCompositeCommand{\textcircled}{PU}{E}{\9044\272}% U+24BA
18416 % U+24BB CIRCLED LATIN CAPITAL LETTER F; Fcircle
18417 \DeclareTextCompositeCommand{\textcircled}{PU}{F}{\9044\273}% U+24BB
18418 % \CleaningF (marvosym)
18419 \DeclareTextCommand{\textCleaningF}{PU}{\9044\273}%* U+24BB
18420 % \CleaningFF (marvosym)
18421 \DeclareTextCommand{\textCleaningFF}{PU}{\9044\273\83\062}%* U+24BB U+0332
18422 % U+24BC CIRCLED LATIN CAPITAL LETTER G; Gcircle
18423 \DeclareTextCompositeCommand{\textcircled}{PU}{G}{\9044\274}% U+24BC
18424 % U+24BD CIRCLED LATIN CAPITAL LETTER H; Hcircle
18425 \DeclareTextCompositeCommand{\textcircled}{PU}{H}{\9044\275}% U+24BD
18426 % U+24BE CIRCLED LATIN CAPITAL LETTER I; Icircle
18427 \DeclareTextCompositeCommand{\textcircled}{PU}{I}{\9044\276}% U+24BE
18428 % U+24BF CIRCLED LATIN CAPITAL LETTER J; Jcircle
18429 \DeclareTextCompositeCommand{\textcircled}{PU}{J}{\9044\277}% U+24BF

18430 % U+24C0 CIRCLED LATIN CAPITAL LETTER K; Kcircle
18431 \DeclareTextCompositeCommand{\textcircled}{PU}{K}{\9044\300}% U+24C0
18432 % U+24C1 CIRCLED LATIN CAPITAL LETTER L; Lcircle
18433 \DeclareTextCompositeCommand{\textcircled}{PU}{L}{\9044\301}% U+24C1
18434 % U+24C2 CIRCLED LATIN CAPITAL LETTER M; Mcircle
18435 \DeclareTextCompositeCommand{\textcircled}{PU}{M}{\9044\302}% U+24C2
18436 % U+24C3 CIRCLED LATIN CAPITAL LETTER N; Ncircle
18437 \DeclareTextCompositeCommand{\textcircled}{PU}{N}{\9044\303}% U+24C3
18438 % U+24C4 CIRCLED LATIN CAPITAL LETTER O; Ocircle
18439 \DeclareTextCompositeCommand{\textcircled}{PU}{O}{\9044\304}% U+24C4
18440 % U+24C5 CIRCLED LATIN CAPITAL LETTER P; Pcircle
18441 \DeclareTextCompositeCommand{\textcircled}{PU}{P}{\9044\305}% U+24C5
18442 % \CleaningP (marvosym)
18443 \DeclareTextCompositeCommand{\textCleaningP}{PU}{\9044\305}%* U+24C5
18444 % \CleaningPP (marvosym)
18445 \DeclareTextCommand{\textCleaningPP}{PU}{\9044\305\83\062}%* U+24C5 U+0332
18446 % U+24C6 CIRCLED LATIN CAPITAL LETTER Q; Qcircle
18447 \DeclareTextCompositeCommand{\textcircled}{PU}{Q}{\9044\306}% U+24C6
18448 % U+24C7 CIRCLED LATIN CAPITAL LETTER R; Rcircle
18449 \DeclareTextCompositeCommand{\textcircled}{PU}{R}{\9044\307}% U+24C7
18450 % U+24C8 CIRCLED LATIN CAPITAL LETTER S; Scircle
18451 \DeclareTextCompositeCommand{\textcircled}{PU}{S}{\9044\310}% U+24C8
18452 % U+24C9 CIRCLED LATIN CAPITAL LETTER T; Tcircle
18453 \DeclareTextCompositeCommand{\textcircled}{PU}{T}{\9044\311}% U+24C9
18454 % U+24CA CIRCLED LATIN CAPITAL LETTER U; Ucircle
18455 \DeclareTextCompositeCommand{\textcircled}{PU}{U}{\9044\312}% U+24CA
18456 % U+24CB CIRCLED LATIN CAPITAL LETTER V; Vcircle
18457 \DeclareTextCompositeCommand{\textcircled}{PU}{V}{\9044\313}% U+24CB
18458 % U+24CC CIRCLED LATIN CAPITAL LETTER W; Wcircle
18459 \DeclareTextCompositeCommand{\textcircled}{PU}{W}{\9044\314}% U+24CC
18460 % U+24CD CIRCLED LATIN CAPITAL LETTER X; Xcircle
18461 \DeclareTextCompositeCommand{\textcircled}{PU}{X}{\9044\315}% U+24CD
18462 % U+24CE CIRCLED LATIN CAPITAL LETTER Y; Ycircle
18463 \DeclareTextCompositeCommand{\textcircled}{PU}{Y}{\9044\316}% U+24CE
18464 % U+24CF CIRCLED LATIN CAPITAL LETTER Z; Zcircle
18465 \DeclareTextCompositeCommand{\textcircled}{PU}{Z}{\9044\317}% U+24CF
18466 % U+24D0 CIRCLED LATIN SMALL LETTER A; acircle
18467 \DeclareTextCompositeCommand{\textcircled}{PU}{a}{\9044\320}% U+24D0
18468 % U+24D1 CIRCLED LATIN SMALL LETTER B; bcircle
18469 \DeclareTextCompositeCommand{\textcircled}{PU}{b}{\9044\321}% U+24D1
18470 % U+24D2 CIRCLED LATIN SMALL LETTER C; ccircle
18471 \DeclareTextCompositeCommand{\textcircled}{PU}{c}{\9044\322}% U+24D2
18472 % U+24D3 CIRCLED LATIN SMALL LETTER D; dcircle
18473 \DeclareTextCompositeCommand{\textcircled}{PU}{d}{\9044\323}% U+24D3
18474 % U+24D4 CIRCLED LATIN SMALL LETTER E; ecircle
18475 \DeclareTextCompositeCommand{\textcircled}{PU}{e}{\9044\324}% U+24D4
18476 % U+24D5 CIRCLED LATIN SMALL LETTER F; fcircle
18477 \DeclareTextCompositeCommand{\textcircled}{PU}{f}{\9044\325}% U+24D5
18478 % U+24D6 CIRCLED LATIN SMALL LETTER G; gcircle
18479 \DeclareTextCompositeCommand{\textcircled}{PU}{g}{\9044\326}% U+24D6
18480 % U+24D7 CIRCLED LATIN SMALL LETTER H; hcircle
18481 \DeclareTextCompositeCommand{\textcircled}{PU}{h}{\9044\327}% U+24D7
18482 % U+24D8 CIRCLED LATIN SMALL LETTER I; icircle
18483 \DeclareTextCompositeCommand{\textcircled}{PU}{i}{\9044\330}% U+24D8

18484 % U+24D9 CIRCLED LATIN SMALL LETTER J; jcircle
 18485 \DeclareTextCompositeCommand{\textcircled}{PU}{j}{\9044\331}% U+24D9
 18486 % U+24DA CIRCLED LATIN SMALL LETTER K; kcircle
 18487 \DeclareTextCompositeCommand{\textcircled}{PU}{k}{\9044\332}% U+24DA
 18488 % U+24DB CIRCLED LATIN SMALL LETTER L; lcircle
 18489 \DeclareTextCompositeCommand{\textcircled}{PU}{l}{\9044\333}% U+24DB
 18490 % U+24DC CIRCLED LATIN SMALL LETTER M; mcircle
 18491 \DeclareTextCompositeCommand{\textcircled}{PU}{m}{\9044\334}% U+24DC
 18492 % U+24DD CIRCLED LATIN SMALL LETTER N; ncircle
 18493 \DeclareTextCompositeCommand{\textcircled}{PU}{n}{\9044\335}% U+24DD
 18494 % U+24DE CIRCLED LATIN SMALL LETTER O; ocircle
 18495 \DeclareTextCompositeCommand{\textcircled}{PU}{o}{\9044\336}% U+24DE
 18496 % U+24DF CIRCLED LATIN SMALL LETTER P; pcircle
 18497 \DeclareTextCompositeCommand{\textcircled}{PU}{p}{\9044\337}% U+24DF
 18498 % U+24E0 CIRCLED LATIN SMALL LETTER Q; qcircle
 18499 \DeclareTextCompositeCommand{\textcircled}{PU}{q}{\9044\340}% U+24E0
 18500 % U+24E1 CIRCLED LATIN SMALL LETTER R; rcircle
 18501 \DeclareTextCompositeCommand{\textcircled}{PU}{r}{\9044\341}% U+24E1
 18502 % U+24E2 CIRCLED LATIN SMALL LETTER S; scircle
 18503 \DeclareTextCompositeCommand{\textcircled}{PU}{s}{\9044\342}% U+24E2
 18504 % U+24E3 CIRCLED LATIN SMALL LETTER T; tcircle
 18505 \DeclareTextCompositeCommand{\textcircled}{PU}{t}{\9044\343}% U+24E3
 18506 % U+24E4 CIRCLED LATIN SMALL LETTER U; ucircle
 18507 \DeclareTextCompositeCommand{\textcircled}{PU}{u}{\9044\344}% U+24E4
 18508 % U+24E5 CIRCLED LATIN SMALL LETTER V; vcircle
 18509 \DeclareTextCompositeCommand{\textcircled}{PU}{v}{\9044\345}% U+24E5
 18510 % U+24E6 CIRCLED LATIN SMALL LETTER W; wcircle
 18511 \DeclareTextCompositeCommand{\textcircled}{PU}{w}{\9044\346}% U+24E6
 18512 % U+24E7 CIRCLED LATIN SMALL LETTER X; xcircle
 18513 \DeclareTextCompositeCommand{\textcircled}{PU}{x}{\9044\347}% U+24E7
 18514 % U+24E8 CIRCLED LATIN SMALL LETTER Y; ycircle
 18515 \DeclareTextCompositeCommand{\textcircled}{PU}{y}{\9044\350}% U+24E8
 18516 % U+24E9 CIRCLED LATIN SMALL LETTER Z; zcircle
 18517 \DeclareTextCompositeCommand{\textcircled}{PU}{z}{\9044\351}% U+24E9
 18518 % U+24EA CIRCLED DIGIT ZERO
 18519 \DeclareTextCompositeCommand{\textcircled}{PU}{0}{\9044\352}% U+24EA

47.2.27 Box Drawing: U+2500 to 257F

18520 % U+2504 BOX DRAWINGS LIGHT TRIPLE DASH HORIZONTAL; \Cutting-
 Line (marvosym)
 18521 \DeclareTextCommand{\textCuttingLine}{PU}{\9045\004}%* U+2504
 18522 %* \textCuttingLine -> \Kutline (marvosym)
 18523 %* \textCuttingLine -> \CutLine (marvosym)
 18524 %* \textCuttingLine -> \Cutline (marvosym)

47.2.28 Geometric Shapes: U+25A0 to U+25FF

18525 % U+25B2 BLACK UP-POINTING TRIANGLE; \UParrow (wasysym)
 18526 \DeclareTextCommand{\textUParrow}{PU}{\9045\262}%* U+25B2
 18527 %* \textUParrow -> \MoveUp (marvosym)
 18528 % U+25B3 WHITE UP-POINTING TRIANGLE; whiteuppointingtriangle;
 18529 % \bigtriangleup (LaTeX)
 18530 \DeclareTextCommand{\textbigtriangleup}{PU}{\9045\263}%* U+25B3
 18531 %* \textbigtriangleup -> \APLup (wasysym)
 18532 %* \textbigtriangleup -> \Bleech (marvosym)

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18533 % U+25B6 BLACK RIGHT-POINTING TRIANGLE; \Forward (marvosym)
18534 \DeclareTextCommand{\textForward}{PU}{\9045\266}%* U+25B6
18535 % U+25B7 WHITE RIGHT-POINTING TRIANGLE (= z notation range restric-
tion);
18536 % whiterightpointingtriangle; \triangleright (LaTeX)
18537 \DeclareTextCommand{\texttriangleright}{PU}{\9045\267}%* U+25B7
18538 % U+25BA BLACK RIGHT-POINTING POINTER; \RHD (wasysym)
18539 \DeclareTextCommand{\textRHD}{PU}{\9045\272}%* U+25BA
18540 % U+25BC BLACK DOWN-POINTING TRIANGLE; \DOWNarrow (wasysym)
18541 \DeclareTextCommand{\textDOWNarrow}{PU}{\9045\274}%* U+25BC
18542 %* \textDOWNarrow -> \MoveDown (marvosym)
18543 % U+25BD WHITE DOWN-POINTING TRIANGLE; whitedownpointingtrian-
gle;
18544 % \bigtriangledown (LaTeX)
18545 \DeclareTextCommand{\textbigtriangledown}{PU}{\9045\275}%* U+25BD
18546 %* \textbigtriangledown -> \APLdown (wasysym)
18547 % U+25C0 BLACK LEFT-POINTING TRIANGLE; \Rewind (marvosym)
18548 \DeclareTextCommand{\textRewind}{PU}{\9045\300}%* U+25C0
18549 % U+25C1 WHITE RIGHT-POINTING TRIANGLE (= z notation domain re-
striction);
18550 % whiteleftpointingtriangle; \triangleleft (LaTeX)
18551 \DeclareTextCommand{\texttriangleleft}{PU}{\9045\301}%* U+25C1
18552 % U+25C4 BLACK LEFT-POINTING POINTER; \LHD (wasysym)
18553 \DeclareTextCommand{\textLHD}{PU}{\9045\304}%* U+25C4
18554 % U+25C7 WHITE DIAMOND; whitediamond; \diamond (LaTeX)
18555 \DeclareTextCommand{\textdiamond}{PU}{\9045\307}%* U+25C7
18556 %* \textdiamond -> \Diamond (wasysym)
18557 % U+25CA LOZENGE; lozenge; \lozenge (AmS)
18558 \DeclareTextCommand{\textlozenge}{PU}{\9045\312}%* U+25CA
18559 % U+25D6 LEFT HALF BLACK CIRCLE; \LEFTCIRCLE (wasysym)
18560 \DeclareTextCommand{\textLEFTCIRCLE}{PU}{\9045\326}%* U+25D6
18561 % U+25D7 RIGHT HALF BLACK CIRCLE; \RIGHTCIRCLE (wasysym)
18562 \DeclareTextCommand{\textRIGHTCIRCLE}{PU}{\9045\327}%* U+25D7
18563 % U+25E6 WHITE BULLET; *openbullet, whitebullet
18564 \DeclareTextCommand{\textopenbullet}{PU}{\9045\346}%* U+25E6
18565 % U+25EB WHITE SQUARE WITH VERTICAL BISECTING LINE;
18566 % \boxbar (stmaryrd)
18567 \DeclareTextCommand{\textboxbar}{PU}{\9045\353}%* U+25EB
18568 % U+25EF LARGE CIRCLE; largecircle
18569 \DeclareTextCommand{\textbigcircle}{PU}{\9045\357}%* U+25EF
18570 %* \textbigcircle -> \varbigcirc (stmaryrd)
18571 %

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47.2.29 Miscellaneous Symbols: U+2600 to U+26FF

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18572 % U+2601 CLOUD; \Cloud (ifsym)
18573 \DeclareTextCommand{\textCloud}{PU}{\9046\001}%* U+2601
18574 % U+2605 BLACK STAR; \FiveStar (bbding)
18575 \DeclareTextCommand{\textFiveStar}{PU}{\9046\005}%* U+2605
18576 % U+2606 WHITE STAR; \FiveStarOpen (bbding)
18577 \DeclareTextCommand{\textFiveStarOpen}{PU}{\9046\006}%* U+2606
18578 % U+260E BLACK TELEPHONE; telephoneblack; \Phone (bbding)
18579 \DeclareTextCommand{\textPhone}{PU}{\9046\016}%* U+260E
18580 %* \textPhone -> \Telefon (marvosym)
18581 % U+2610 BALLOT BOX; \boxempty (stmaryrd)

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18582 \DeclareTextCommand{\textboxempty}{PU}{\9046\020}%* U+2610
18583 %* \textboxempty -> \Box (wasysym)
18584 % U+2611 BALLOT BOX WITH CHECK; \Checkedbox (marvosym)
18585 \DeclareTextCommand{\textCheckedbox}{PU}{\9046\021}%* U+2611
18586 %* \textCheckedbox -> \CheckedBox (marvosym)
18587 % U+2612 BALLOT BOX WITH X; \Crossedbox (marvosym)
18588 \DeclareTextCommand{\textCrossedbox}{PU}{\9046\022}%* U+2612
18589 %* \textCrossedbox -> \XBox (wasysym)
18590 %* \textCrossedbox -> \CrossedBox (marvosym)
18591 % U+2615 HOT BEVERAGE; \Coffeecup (marvosym)
18592 \DeclareTextCommand{\textCoffeecup}{PU}{\9046\025}%* U+2615
18593 % U+261A BLACK LEFT POINTING INDEX; \HandCuffLeft (bding)
18594 \DeclareTextCommand{\textHandCuffLeft}{PU}{\9046\032}%* U+261A
18595 % U+261B BLACK RIGHT POINTING INDEX; \HandCuffRight (bding)
18596 \DeclareTextCommand{\textHandCuffRight}{PU}{\9046\033}%* U+261B
18597 % U+261C WHITE LEFT POINTING INDEX; \HandLeft (bding)
18598 \DeclareTextCommand{\textHandLeft}{PU}{\9046\034}%* U+261C
18599 %* \textHandLeft -> \rightpointleft (fourier)
18600 % U+261E WHITE RIGHT POINTING INDEX; \HandRight (bding)
18601 \DeclareTextCommand{\textHandRight}{PU}{\9046\036}%* U+261E
18602 %* \textHandRight -> \leftpointright (fourier)
18603 %* \textHandRight -> \PointingHand (marvosym)
18604 %* \textHandRight -> \Pointinghand (marvosym)
18605 % U+2622 RADIOACTIVE SIGN; \Radioactivity (marvosym)
18606 \DeclareTextCommand{\textRadioactivity}{PU}{\9046\042}%* U+2622
18607 %* \textRadioactivity -> \Radiation (ifsym)
18608 % U+2623 BIOHAZARD SIGN; \Biohazard (marvosym)
18609 \DeclareTextCommand{\textBiohazard}{PU}{\9046\043}%* U+2623
18610 % U+2625 ANKH; \Ankh (marvosym)
18611 \DeclareTextCommand{\textAnkh}{PU}{\9046\045}%* U+2625
18612 % U+262F YIN YANG; \YinYang (marvosym)
18613 \DeclareTextCommand{\textYinYang}{PU}{\9046\057}%* U+262F
18614 %* \textYinYang -> \Yinyang (marvosym)
18615 %* \textYinYang -> \YingYang (marvosym)
18616 %* \textYinYang -> \Yingyang (marvosym)
18617 % U+2639 WHITE FROWNING FACE; \frownie (wasysym)
18618 \DeclareTextCommand{\textfrownie}{PU}{\9046\071}%* U+2639
18619 %* \textfrownie -> \Frowny (marvosym)
18620 % U+263A WHITE SMILING FACE; \smiley (wasysym)
18621 \DeclareTextCommand{\textsmiley}{PU}{\9046\072}%* U+263A
18622 %* \textsmiley -> \Smiley (marvosym)
18623 % U+263B BLACK SMILING FACE; \blacksmiley (wasysym)
18624 \DeclareTextCommand{\textblacksmiley}{PU}{\9046\073}%* U+263B
18625 % U+263C WHITE SUN WITH RAYS; \sun (wasysym)
18626 \DeclareTextCommand{\textsun}{PU}{\9046\074}%* U+263C
18627 %* \textsun -> \Sun (marvosym)
18628 % U+263D FIRST QUARTER MOON; \leftmoon (wasysym, mathabx)
18629 \DeclareTextCommand{\textleftmoon}{PU}{\9046\075}%* U+263D
18630 % U+263E LAST QUARTER MOON; \rightmoon (wasysym, mathabx)
18631 \DeclareTextCommand{\textrightmoon}{PU}{\9046\076}%* U+263E
18632 % U+263F MERCURY; \mercury (wasysym)
18633 \DeclareTextCommand{\textmercury}{PU}{\9046\077}%* U+263F
18634 %* \textmercury -> \Mercury (marvosym)
18635 % U+2640 FEMALE SIGN; female; \female (wasysym)

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18636 \DeclareTextCommand{\textPUfemale}{PU}{\9046\100}% U+2640
18637 %* \textPUfemale -> \textfemale (tipx)
18638 %* \textPUfemale -> \female (wasysym)
18639 %* \textPUfemale -> \venus (wasysym)
18640 %* \textPUfemale -> \Venus (marvosym)
18641 %* \textPUfemale -> \Female (marvosym)
18642 % U+2641 EARTH; \earth (wasysym)
18643 \DeclareTextCommand{\textearth}{PU}{\9046\101}%* U+2641
18644 %* \textearth -> \Earth (marvosym)
18645 % U+2642 MALE SIGN; male, mars; \male (wasysym)
18646 \DeclareTextCommand{\textmale}{PU}{\9046\102}%* U+2642
18647 %* \textmale -> \mars (wasysym)
18648 %* \textmale -> \Mars (marvosym)
18649 %* \textmale -> \Male (marvosym)
18650 % U+2643 JUPITER; \jupiter (wasysym)
18651 \DeclareTextCommand{\textjupiter}{PU}{\9046\103}%* U+2643
18652 %* \textjupiter -> \Jupiter (marvosym)
18653 % U+2644 SATURN; \saturn (wasysym)
18654 \DeclareTextCommand{\textsaturn}{PU}{\9046\104}%* U+2644
18655 %* \textsaturn -> \Saturn (marvosym)
18656 % U+2645 URANUS; \uranus (wasysym)
18657 \DeclareTextCommand{\texturanus}{PU}{\9046\105}%* U+2645
18658 %* \texturanus -> \Uranus (marvosym)
18659 % U+2646 NEPTUNE; \neptune (wasysym)
18660 \DeclareTextCommand{\textneptune}{PU}{\9046\106}%* U+2646
18661 %* \textneptune -> \Neptune (marvosym)
18662 % U+2647 PLUTO; \pluto (wasysym)
18663 \DeclareTextCommand{\textpluto}{PU}{\9046\107}%* U+2647
18664 %* \textpluto -> \Pluto (marvosym)
18665 % U+2648 ARIES; \aries (wasysym)
18666 \DeclareTextCommand{\textaries}{PU}{\9046\110}%* U+2648
18667 %* \textaries -> \Aries (marvosym)
18668 % U+2649 TAURUS; \taurus (wasysym)
18669 \DeclareTextCommand{\texttaurus}{PU}{\9046\111}%* U+2649
18670 %* \texttaurus -> \Taurus (marvosym)
18671 % U+264A GEMINI; \gemini (wasysym)
18672 \DeclareTextCommand{\textgemini}{PU}{\9046\112}%* U+264A
18673 %* \textgemini -> \Gemini (marvosym)
18674 % U+264B CANCER; \cancer (wasysym)
18675 \DeclareTextCommand{\textcancer}{PU}{\9046\113}%* U+264B
18676 %* \textcancer -> \Cancer (marvosym)
18677 % U+264C LEO; \leo (wasysym)
18678 \DeclareTextCommand{\textleo}{PU}{\9046\114}%* U+264C
18679 %* \textleo -> \Leo (marvosym)
18680 % U+264D VIRGO; \virgo (wasysym)
18681 \DeclareTextCommand{\textvirgo}{PU}{\9046\115}%* U+264D
18682 %* \textvirgo -> \Virgo (marvosym)
18683 % U+264E LIBRA; \libra (wasysym)
18684 \DeclareTextCommand{\textlibra}{PU}{\9046\116}%* U+264E
18685 %* \textlibra -> \Libra (marvosym)
18686 % U+264F SCORPIO; \scorpio (wasysym)
18687 \DeclareTextCommand{\textscorpio}{PU}{\9046\117}%* U+264F
18688 %* \textscorpio -> \Scorpio (marvosym)
18689 % U+2650 SAGITTARIUS; \sagittarius (wasysym)

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18690 \DeclareTextCommand{\textsagittarius}{PU}{\9046\120}%* U+2650
18691 %* \textsagittarius -> \Sagittarius (marvosym)
18692 % U+2651 CAPRICORN; \capricornus (wasysym)
18693 \DeclareTextCommand{\textcapricornus}{PU}{\9046\121}%* U+2651
18694 %* \textcapricornus -> \Capricorn (marvosym)
18695 % U+2652 AQUARIUS; \aquarius (wasysym)
18696 \DeclareTextCommand{\textaquarius}{PU}{\9046\122}%* U+2652
18697 %* \textaquarius -> \Aquarius (marvosym)
18698 % U+2653 PISCES; \pisces (wasysym)
18699 \DeclareTextCommand{\textpisces}{PU}{\9046\123}%* U+2653
18700 %* \textpisces -> \Pisces (marvosym)
18701 % U+2660 BLACK SPADE SUIT; spade, spadesuitblack; \spadesuit (LaTeX)
18702 \DeclareTextCommand{\textspadesuitblack}{PU}{\9046\140}% U+2660
18703 %* \textspadesuitblack -> \spadesuit (MnSymbol)
18704 % U+2661 WHITE HEART SUIT; heartsuitwhite; \heartsuit (LaTeX)
18705 \DeclareTextCommand{\textheartsuitwhite}{PU}{\9046\141}% U+2661
18706 %* \textheartsuitwhite -> \Heart (marvosym)
18707 %* \textheartsuitwhite -> \heartsuit (MnSymbol)
18708 % U+2662 WHITE DIAMOND SUIT; diamondsuitwhite; \diamondsuit (LaTeX)
18709 \DeclareTextCommand{\textdiamondsuitwhite}{PU}{\9046\142}% U+2662
18710 %* \textdiamondsuitwhite -> \diamondsuit (MnSymbol)
18711 % U+2663 BLACK CLUB SUIT; club, clubsuitblack; \clubsuit (LaTeX)
18712 \DeclareTextCommand{\textclubsuitblack}{PU}{\9046\143}% U+2663
18713 %* \textclubsuitblack -> \clubsuit (MnSymbol)
18714 % U+2664 WHITE SPADE SUIT; spadesuitwhite
18715 \DeclareTextCommand{\textspadesuitwhite}{PU}{\9046\144}% U+2664
18716 % U+2665 BLACK HEART SUIT; heartsuitblack, heart
18717 \DeclareTextCommand{\textheartsuitblack}{PU}{\9046\145}% U+2665
18718 % U+2666 BLACK DIAMOND SUIT; diamond
18719 \DeclareTextCommand{\textdiamondsuitblack}{PU}{\9046\146}% U+2666
18720 % U+2667 WHITE CLUB SUIT; clubsuitwhite
18721 \DeclareTextCommand{\textclubsuitwhite}{PU}{\9046\147}% U+2667
18722 % U+2669 QUARTER NOTE; quarternote; \quarternote (wasysym, arev)
18723 \DeclareTextCommand{\textquarternote}{PU}{\9046\151}%* U+2669
18724 % U+266A EIGHTH NOTE; musicalnote; \textmusicalnote (textcomp)
18725 \DeclareTextCommand{\textmusicalnote}{PU}{\9046\152}%* U+266A
18726 %* \textmusicalnote -> \eighthnote (wasysym, arev)
18727 % U+266B BEAMED EIGHTH NOTES; eighthnotebeamed; \twonotes (wasysym)
18728 \DeclareTextCommand{\texttwonotes}{PU}{\9046\153}%* U+266B
18729 % U+266C BEAMED SIXTEENTH NOTES; beamedsixteenthnotes; \sixteenth-
note (arev)
18730 \DeclareTextCommand{\textsixteenthnote}{PU}{\9046\154}%* U+266C
18731 % U+266D MUSIC FLAT SIGN; musicflatsign; \flat (LaTeX)
18732 \DeclareTextCommand{\textflat}{PU}{\9046\155}%* U+266D
18733 % U+266E MUSIC NATURAL SIGN; \natural (LaTeX)
18734 \DeclareTextCommand{\textnatural}{PU}{\9046\156}%* U+266E
18735 % U+266F MUSIC SHARP SIGN; musicsharpsign; \sharp (LaTeX)
18736 \DeclareTextCommand{\textsharp}{PU}{\9046\157}%* U+266F
18737 % U+2672 UNIVERSAL RECYCLING SYMBOL; \recycle (recycle)
18738 \DeclareTextCommand{\textrecycle}{PU}{\9046\162}%* U+2672
18739 %* \textrecycle -> \Recycling (marvosym)
18740 % U+267F WHEELCHAIR SYMBOL; \Wheelchair (marvosym)
18741 \DeclareTextCommand{\textWheelchair}{PU}{\9046\177}%* U+267F
18742 % U+2691 BLACK FLAG; \Flag (ifsym)

18743 \DeclareTextCommand{\textFlag}{PU}{\9046\221}%* U+2691
18744 %* \textFlag -> \VarFlag (ifsym)
18745 % U+2692 HAMMER AND PICK; \MineSign (marvosym)
18746 \DeclareTextCommand{\textMineSign}{PU}{\9046\222}%* U+2692
18747 % U+2694 CROSSED SWORDS; \dsmilitary (dictsym)
18748 \DeclareTextCommand{\textdsmilitary}{PU}{\9046\224}%* U+2694
18749 %* \textdsmilitary -> \textxswup (fourier)
18750 % U+2695 STAFF OF AESCULAPIUS; \dsmedical (dictsym)
18751 \DeclareTextCommand{\textdsmedical}{PU}{\9046\225}%* U+2695
18752 % U+2696 SCALES; \dsjuridical (dictsym)
18753 \DeclareTextCommand{\textdsjuridical}{PU}{\9046\226}%* U+2696
18754 % U+2697 ALEMBIC; \dschemical (dictsym)
18755 \DeclareTextCommand{\textdschemical}{PU}{\9046\227}%* U+2697
18756 % U+2698 FLOWER; \dsbiological (dictsym)
18757 \DeclareTextCommand{\textdsbiological}{PU}{\9046\230}%* U+2698
18758 % U+269A STAFF OF HERMES; \dscommercial (dictsym)
18759 \DeclareTextCommand{\textdscommercial}{PU}{\9046\232}%* U+269A
18760 % U+269D OUTLINED WHITE STAR; \manstar (manfnt)
18761 \DeclareTextCommand{\textmanstar}{PU}{\9046\235}%* U+269D
18762 % U+26A0 WARNING SIGN; \danger (fourier)
18763 \DeclareTextCommand{\textdanger}{PU}{\9046\240}%* U+26A0
18764 % U+26A2 DOUBLED FEMALE SIGN; \FemaleFemale (marvosym)
18765 \DeclareTextCommand{\textFemaleFemale}{PU}{\9046\242}%* U+26A2
18766 % U+26A3 DOUBLED MALE SIGN; \MaleMale (marvosym)
18767 \DeclareTextCommand{\textMaleMale}{PU}{\9046\243}%* U+26A3
18768 % U+26A4 INTERLOCKED FEMALE AND MALE SIGN; \FemaleMale (mar-
vosym)
18769 \DeclareTextCommand{\textFemaleMale}{PU}{\9046\244}%* U+26A4
18770 % U+26A5 MALE AND FEMALE SIGN; \Hermaphrodite (marvosym)
18771 \DeclareTextCommand{\textHermaphrodite}{PU}{\9046\245}%* U+26A5
18772 % U+26AA MEDIUM WHITE CIRCLE; \Neural (marvosym)
18773 \DeclareTextCommand{\textNeutral}{PU}{\9046\252}%* U+26AA
18774 % U+26AD MARRIAGE SYMBOL
18775 \DeclareTextCommand{\textmarried}{PU}{\9046\255}% U+26AD
18776 % U+26AE DIVORCE SYMBOL
18777 \DeclareTextCommand{\textdivorced}{PU}{\9046\256}% U+26AE
18778 % U+26B2 NEUTER; \textunconfemale (tipx)
18779 \DeclareTextCommand{\textPUunconfemale}{PU}{\9046\262}% U+26B2
18780 %* \textPUunconfemale -> \textunconfemale (tipx)
18781 % U+26B9 SEXTILE; \hexstar (wasysym)
18782 \DeclareTextCommand{\texthexstar}{PU}{\9046\271}%* U+26B9
18783 % U+26BD SOCCER BALL; \Football (marvosym)
18784 \DeclareTextCommand{\textSoccerBall}{PU}{\9046\275}% U+26BD
18785 %* \textSoccerBall -> \Football (marvosym)
18786 % U+26C5 SUN BEHIND CLOUD; \SunCloud (ifsym)
18787 \DeclareTextCommand{\textSunCloud}{PU}{\9046\305}%* U+26C5
18788 % U+26C6 RAIN; \Rain (ifsym)
18789 \DeclareTextCommand{\textRain}{PU}{\9046\306}%* U+26C6
18790 % U+26D4 NO ENTRY; \noway (fourier)
18791 \DeclareTextCommand{\textnoway}{PU}{\9046\324}%* U+26D4
18792 % U+26F0 MOUNTAIN; \Mountain (ifsym)
18793 \DeclareTextCommand{\textMountain}{PU}{\9046\360}%* U+26F0
18794 % U+26FA TENT; \Tent (ifsym)
18795 \DeclareTextCommand{\textTent}{PU}{\9046\372}%* U+26FA

47.2.30 Dingbats: U+2700 to U+27BF

18796 % U+2701 UPPER BLADE SCISSORS; \ScissorRightBrokenBottom (bding)
18797 \DeclareTextCommand{\textScissorRightBrokenBottom}{PU}{\9047\001}% U+2701
18798 %* \textScissorRightBrokenBottom -> \CutLeft (marvosym)
18799 %* \textScissorRightBrokenBottom -> \Cutright (marvosym)
18800 % U+2702 BLACK SCISSORS; \ScissorRight (bding)
18801 \DeclareTextCommand{\textScissorRight}{PU}{\9047\002}%* U+2702
18802 %* \textScissorRight -> \RightScissors (marvosym)
18803 %* \textScissorRight -> \Leftscissors (marvosym)
18804 % U+2703 LOWER BLADE SCISSORS; \ScissorRightBrokenTop (bding)
18805 \DeclareTextCommand{\textScissorRightBrokenTop}{PU}{\9047\003}%* U+2703
18806 % U+2704 WHITE SCISSORS; \ScissorHollowRight (bding)
18807 \DeclareTextCommand{\textScissorHollowRight}{PU}{\9047\004}%* U+2704
18808 % U+2706 TELEPHONE LOCATION SIGN; \PhoneHandset (bding)
18809 \DeclareTextCommand{\textPhoneHandset}{PU}{\9047\006}%* U+2706
18810 % U+2707 TAPE DRIVE; \Tape (bding)
18811 \DeclareTextCommand{\textTape}{PU}{\9047\007}%* U+2707
18812 % U+2708 AIRPLANE; \Plane (bding)
18813 \DeclareTextCommand{\textPlane}{PU}{\9047\010}%* U+2708
18814 % U+2709 ENVELOPE; \Envelope (bding),
18815 \DeclareTextCommand{\textEnvelope}{PU}{\9047\011}%* U+2709
18816 %* \textEnvelope -> \Letter (marvosym)
18817 % U+270C VICTORY HAND; \Peace (bding)
18818 \DeclareTextCommand{\textPeace}{PU}{\9047\014}%* U+270C
18819 % U+270D WRITING HAND; \WritingHand (marvosym)
18820 \DeclareTextCommand{\textWritingHand}{PU}{\9047\015}%* U+270D
18821 %* \textWritingHand -> \Writinghand (marvosym)
18822 % U+270E LOWER RIGHT PENCIL; \PencilRightDown (bding)
18823 \DeclareTextCommand{\textPencilRightDown}{PU}{\9047\016}%* U+270E
18824 % U+270F PENCIL; \PencilRight (bding)
18825 \DeclareTextCommand{\textPencilRight}{PU}{\9047\017}%* U+270F
18826 % U+2710 UPPER RIGHT PENCIL; \PencilRightUp (bding)
18827 \DeclareTextCommand{\textPencilRightUp}{PU}{\9047\020}%* U+2710
18828 % U+2711 WHITE NIB; \NibRight (bding)
18829 \DeclareTextCommand{\textNibRight}{PU}{\9047\021}%* U+2711
18830 % U+2712 BLACK NIB; \NibSolidRight (bding)
18831 \DeclareTextCommand{\textNibSolidRight}{PU}{\9047\022}%* U+2712
18832 % U+2713 CHECK MARK; checkmark; \Checkmark (bding)
18833 \DeclareTextCommand{\textCheckmark}{PU}{\9047\023}%* U+2713
18834 %* \textCheckmark -> \checkmark (MnSymbol)
18835 % U+2714 HEAVY CHECK MARK; \CheckmarkBold (bding)
18836 \DeclareTextCommand{\textCheckmarkBold}{PU}{\9047\024}%* U+2714
18837 % U+2715 MULTIPLICATION X; \XSolid (bding)
18838 \DeclareTextCommand{\textXSolid}{PU}{\9047\025}%* U+2715
18839 % U+2716 HEAVY MULTIPLICATION X; \XSolidBold (bding)
18840 \DeclareTextCommand{\textXSolidBold}{PU}{\9047\026}%* U+2716
18841 % U+2717 BALLOT X; \XSolidBrush (bding)
18842 \DeclareTextCommand{\textXSolidBrush}{PU}{\9047\027}%* U+2717
18843 % U+2719 OUTLINED GREEK CROSS; \PlusOutline (bding)
18844 \DeclareTextCommand{\textPlusOutline}{PU}{\9047\031}%* U+2719
18845 % U+271A HEAVY GREEK CROSS; \Plus (bding)
18846 \DeclareTextCommand{\textPlus}{PU}{\9047\032}%* U+271A
18847 % U+271B OPEN CENTRE CROSS; \PlusThinCenterOpen (bding)

18848 \DeclareTextCommand{\textPlusThinCenterOpen}{PU}{\9047\033}%* U+271B
18849 % U+271C HEAVY OPEN CENTRE CROSS; \PlusCenterOpen (bding)
18850 \DeclareTextCommand{\textPlusCenterOpen}{PU}{\9047\034}%* U+271C
18851 % U+271D LATIN CROSS; \Cross (bding)
18852 \DeclareTextCommand{\textCross}{PU}{\9047\035}%* U+271D
18853 % U+271E SHADOWED WHITE LATIN CROSS; \CrossOpenShadow (bding)
18854 \DeclareTextCommand{\textCrossOpenShadow}{PU}{\9047\036}%* U+271E
18855 % U+271F OUTLINED LATIN CROSS; \CrossOutline (bding)
18856 \DeclareTextCommand{\textCrossOutline}{PU}{\9047\037}%* U+271F
18857 % U+2720 MALTESE CROSS; \CrossMaltese (bding)
18858 \DeclareTextCommand{\textCrossMaltese}{PU}{\9047\040}%* U+2720
18859 % U+2721 STAR OF DAVID; \DavidStar (bding)
18860 \DeclareTextCommand{\textDavidStar}{PU}{\9047\041}%* U+2721
18861 %* \textDavidStar -> \davidstar (wasysym)
18862 % U+2722 FOUR TEARDROP-SPOKED ASTERISK; \FourAsterisk (bding)
18863 \DeclareTextCommand{\textFourAsterisk}{PU}{\9047\042}%* U+2722
18864 % U+2723 FOUR BALLOON-SPOKED ASTERISK; \JackStar (bding)
18865 \DeclareTextCommand{\textJackStar}{PU}{\9047\043}%* U+2723
18866 % U+2724 HEAVY FOUR BALLOON-SPOKED ASTERISK; \JackStarBold (bding)
18867 \DeclareTextCommand{\textJackStarBold}{PU}{\9047\044}%* U+2724
18868 % U+2725 FOUR CLUB-SPOKED ASTERISK; \CrossClowerTips (bding)
18869 \DeclareTextCommand{\textClowerTips}{PU}{\9047\045}%* U+2725
18870 % U+2726 BLACK FOUR POINTED STAR; \FourStar (bding)
18871 \DeclareTextCommand{\textFourStar}{PU}{\9047\046}%* U+2726
18872 % U+2727 WHITE FOUR POINTED STAR; \FourStarOpen (bding)
18873 \DeclareTextCommand{\textFourStarOpen}{PU}{\9047\047}%* U+2727
18874 % U+2728 CIRCLED WHITE STAR; \FiveStarOpenCircled (bding)
18875 \DeclareTextCommand{\textFiveStarOpenCircled}{PU}{\9047\052}%* U+2728
18876 % U+2729 OPEN CENTRE BLACK STAR; \FiveStarCenterOpen (bding)
18877 \DeclareTextCommand{\textFiveStarCenterOpen}{PU}{\9047\053}%* U+2729
18878 % U+272A BLACK CENTRE WHITE STAR; \FiveStarOpenDotted (bding)
18879 \DeclareTextCommand{\textFiveStarOpenDotted}{PU}{\9047\054}%* U+272A
18880 % U+272B OUTLINED BLACK STAR; \FiveStarOutline (bding)
18881 \DeclareTextCommand{\textFiveStarOutline}{PU}{\9047\055}%* U+272B
18882 % U+272C HEAVY OUTLINED BLACK STAR; \FiveStarOutlineHeavy (bding)
18883 \DeclareTextCommand{\textFiveStarOutlineHeavy}{PU}{\9047\056}%* U+272C
18884 % U+272D PINWHEEL STAR; \FiveStarConvex (bding)
18885 \DeclareTextCommand{\textFiveStarConvex}{PU}{\9047\057}%* U+272D
18886 % U+272E SHADOWED WHITE STAR; \FiveStarShadow (bding)
18887 \DeclareTextCommand{\textFiveStarShadow}{PU}{\9047\060}%* U+272E
18888 % U+272F HEAVY ASTERISK; \AsteriskBold (bding)
18889 \DeclareTextCommand{\textAsteriskBold}{PU}{\9047\061}%* U+272F
18890 % U+2730 OPEN CENTRE ASTERISK; \AsteriskCenterOpen (bding)
18891 \DeclareTextCommand{\textAsteriskCenterOpen}{PU}{\9047\062}%* U+2730
18892 % U+2731 EIGHT POINTED BLACK STAR; \EightStarTaper (bding)
18893 \DeclareTextCommand{\textEightStarTaper}{PU}{\9047\064}%* U+2731
18894 % U+2732 EIGHT POINTED PINWHEEL STAR; \EightStarConvex (bding)
18895 \DeclareTextCommand{\textEightStarConvex}{PU}{\9047\065}%* U+2732
18896 % U+2733 SIX POINTED BLACK STAR; \SixStar (bding)
18897 \DeclareTextCommand{\textSixStar}{PU}{\9047\066}%* U+2733
18898 % U+2734 EIGHT POINTED RECTILINEAR BLACK STAR; \EightStar (bding)
18899 \DeclareTextCommand{\textEightStar}{PU}{\9047\067}%* U+2734

18900 % U+2738 HEAVY EIGHT POINTED RECTILINEAR BLACK STAR; \EightStarBold (bding)

18901 \DeclareTextCommand{\textEightStarBold}{PU}{\9047\070}%* U+2738

18902 % U+2739 TWELVE POINTED BLACK STAR; \TwelveStar (bding)

18903 \DeclareTextCommand{\textTwelveStar}{PU}{\9047\071}%* U+2739

18904 % U+273A SIXTEEN POINTED ASTERISK; \SixteenStarLight (bding)

18905 \DeclareTextCommand{\textSixteenStarLight}{PU}{\9047\072}%* U+273A

18906 % U+273B TEARDROP-SPOKED ASTERISK; \SixFlowerPetalRemoved (bding)

18907 \DeclareTextCommand{\textSixFlowerPetalRemoved}{PU}{\9047\073}%* U+273B

18908 % U+273C OPEN CENTRE TEARDROP-SPOKED ASTERISK;

18909 % \SixFlowerOpenCenter (bding)

18910 \DeclareTextCommand{\textSixFlowerOpenCenter}{PU}{\9047\074}%* U+273C

18911 % U+273D HEAVY TEARDROP-SPOKED ASTERISK; \Asterisk (bding)

18912 \DeclareTextCommand{\textAsterisk}{PU}{\9047\075}%* U+273D

18913 % U+273E SIX PETALLED BLACK AND WHITE FLORETTE; \SixFlowerAlternate (bding)

18914 \DeclareTextCommand{\textSixFlowerAlternate}{PU}{\9047\076}%* U+273E

18915 % U+273F BLACK FLORETTE; \FiveFlowerPetal (bding)

18916 \DeclareTextCommand{\textFiveFlowerPetal}{PU}{\9047\077}%* U+273F

18917 % U+2740 WHITE FLORETTE; \FiveFlowerOpen (bding)

18918 \DeclareTextCommand{\textFiveFlowerOpen}{PU}{\9047\100}%* U+2740

18919 % U+2741 EIGHT PETALLED OUTLINED BLACK FLORETTE; \EightFlowerPetal (bding)

18920 \DeclareTextCommand{\textEightFlowerPetal}{PU}{\9047\101}%* U+2741

18921 % U+2742 CIRCLED OPEN CENTRE EIGHT POINTED STAR; \SunshineOpenCircled (bding)

18922 \DeclareTextCommand{\textSunshineOpenCircled}{PU}{\9047\102}%* U+2742

18923 % U+2743 HEAVY TEARDROP-SPOKED PINWHEEL ASTERISK; \SixFlowerAltPetal (bding)

18924 \DeclareTextCommand{\textSixFlowerAltPetal}{PU}{\9047\103}%* U+2743

18925 % U+2744 SNOWFLAKE; \SnowflakeChevron (bding)

18926 \DeclareTextCommand{\textSnowflakeChevron}{PU}{\9047\104}%* U+2744

18927 % U+2745 TIGHT TRIFOLIATE SNOWFLAKE; \Snowflake (bding)

18928 \DeclareTextCommand{\textSnowflake}{PU}{\9047\105}%* U+2745

18929 % U+2746 HEAVY CHEVRON SNOWFLAKE; \SnowflakeChevronBold (bding)

18930 \DeclareTextCommand{\textSnowflakeChevronBold}{PU}{\9047\106}%* U+2746

18931 % U+2747 SPARKLE; \Sparkle (bding)

18932 \DeclareTextCommand{\textSparkle}{PU}{\9047\107}%* U+2747

18933 % U+2748 HEAVY SPARKLE; \SparkleBold (bding)

18934 \DeclareTextCommand{\textSparkleBold}{PU}{\9047\110}%* U+2748

18935 % U+2749 BALLOON-SPOKED ASTERISK; \AsteriskRoundedEnds (bding)

18936 \DeclareTextCommand{\textAsteriskRoundedEnds}{PU}{\9047\111}%* U+2749

18937 % U+274A EIGHT TEARDROP-SPOKED PROPELLER ASTERISK;

18938 % \EightFlowerPetalRemoved (bding)

18939 \DeclareTextCommand{\textEightFlowerPetalRemoved}{PU}{\9047\112}%* U+274A

18940 % U+274B HEAVY EIGHT TEARDROP-SPOKED PROPELLER ASTERISK;

18941 % \EightAsterisk (bding)

18942 \DeclareTextCommand{\textEightAsterisk}{PU}{\9047\113}%* U+274B

18943 % U+274D SHADOWED WHITE CIRCLE; \CircleShadow (bding)

18944 \DeclareTextCommand{\textCircleShadow}{PU}{\9047\115}%* U+274D

18945 % U+274F LOWER RIGHT DROP-SHADOWED WHITE SQUARE;

18946 % \SquareShadowBottomRight (bding)

18947 \DeclareTextCommand{\textSquareShadowBottomRight}{PU}{\9047\117}%* U+274F

18948 % U+2750 UPPER RIGHT DROP-SHADOWED WHITE SQUARE;
18949 % \SquareShadowTopRight (bbding)
18950 \DeclareTextCommand{\textSquareTopRight}{PU}{\9047\120}%* U+2750
18951 % U+2751 LOWER RIGHT SHADOWED WHITE SQUARE;
18952 % \SquareCastShadowBottomRight (bbding)
18953 \DeclareTextCommand{\textSquareCastShadowBottomRight}{PU}{\9047\121}%* U+2751
18954 % U+2752 UPPER RIGHT SHADOWED WHITE SQUARE;
18955 % \SquareCastShadowTopRight (bbding)
18956 \DeclareTextCommand{\textSquareCastShadowTopRight}{PU}{\9047\122}%* U+2752
18957 % U+2756 BLACK DIAMOND MINUS WHITE X; \OrnamentDiamondSolid (bb-
ding)
18958 \DeclareTextCommand{\textDiamondSolid}{PU}{\9047\126}%* U+2756
18959 % U+2758 LIGHT VERTICAL BAR; \RectangleThin (bbding)
18960 \DeclareTextCommand{\textRectangleThin}{PU}{\9047\130}%* U+2758
18961 % U+2759 MEDIUM VERTICAL BAR; \Rectangle (bbding)
18962 \DeclareTextCommand{\textRectangle}{PU}{\9047\131}%* U+2759
18963 % U+275A HEAVY VERTICAL BAR; \RectangleBold (bbding)
18964 \DeclareTextCommand{\textRectangleBold}{PU}{\9047\132}%* U+275A

47.2.31 Miscellaneous Mathematical Symbols-A: U+27C0 to U+27EF

18965 % U+27C2 PERPENDICULAR; perpendicular; \perp (LaTeX)
18966 \DeclareTextCommand{\textperp}{PU}{\9047\302}%* U+27C2
18967 % \notperp (mathabx)
18968 \DeclareTextCommand{\textnotperp}{PU}{\9047\302\83\070}%* U+27C2 U+0338
18969 % U+27C7 OR WITH DOT INSIDE; \veedot (MnSymbol)
18970 \DeclareTextCommand{\textveedot}{PU}{\9047\307}%* U+27C7
18971 % U+27D1 AND WITH DOT; \wedgedot (MnSymbol)
18972 \DeclareTextCommand{\textwedgedot}{PU}{\9047\321}%* U+27D1
18973 % U+27DC LEFT MULTIMAP; \leftspoon (MnSymbol)
18974 \DeclareTextCommand{\textleftspoon}{PU}{\9047\334}%* U+27DC
18975 % U+27E6 MATHEMATICAL LEFT WHITE SQUARE BRACKET
18976 \DeclareTextCommand{\textlbrackdbl}{PU}{\9047\346}%* U+27E6
18977 %* \textlbrackdbl -> \lbracket (stmaryrd)
18978 % U+27E7 MATHEMATICAL RIGHT WHITE SQUARE BRACKET
18979 \DeclareTextCommand{\textrbrackdbl}{PU}{\9047\347}%* U+27E7
18980 %* \textrbrackdbl -> \rrbracket (stmaryrd)

47.2.32 Supplemental Arrows-A: U+27F0 to U+27FF

18981 % U+27F2 ANTICLOCKWISE GAPPED CIRCLE ARROW;
18982 % \circlearrowleft (AmS)
18983 \DeclareTextCommand{\textcirclearrowleft}{PU}{\9047\362}%* U+27F2
18984 % U+27F3 CLOCKWISE GAPPED CIRCLE ARROW; \circlearrowright (AmS)
18985 \DeclareTextCommand{\textcirclearrowright}{PU}{\9047\363}%* U+27F3
18986 % U+27F5 LONG LEFTWARDS ARROW; \longleftarrow (AmS)
18987 \DeclareTextCommand{\textlongleftarrow}{PU}{\9047\365}%* U+27F5
18988 % U+27F6 LONG RIGHTWARDS ARROW; \longrightarrow (AmS)
18989 \DeclareTextCommand{\textlongrightarrow}{PU}{\9047\366}%* U+27F6
18990 % U+27F7 LONG LEFT RIGHT ARROW; \longlefttrightarrow (AmS)
18991 \DeclareTextCommand{\textlonglefttrightarrow}{PU}{\9047\367}%* U+27F7
18992 % U+27F8 LONG LEFTWARDS DOUBLE ARROW; \Longleftarrow (AmS)
18993 \DeclareTextCommand{\textLongleftarrow}{PU}{\9047\370}%* U+27F8
18994 % U+27F9 LONG RIGHTWARDS DOUBLE ARROW; \Longrightarrow (AmS)
18995 \DeclareTextCommand{\textLongrightarrow}{PU}{\9047\371}%* U+27F9
18996 % U+27FA LONG LEFT RIGHT DOUBLE ARROW; \Longlefttrightarrow (AmS)

18997 \DeclareTextCommand{\textLongleftarrow}{PU}{\9047\372}%* U+27FA
18998 % U+27FC LONG RIGHTWARDS ARROW FROM BAR; \longmapsto (AmS)
18999 \DeclareTextCommand{\textlongmapsto}{PU}{\9047\374}%* U+27FC
19000 % U+27FD LONG LEFTWARDS DOUBLE ARROW FROM BAR; \Longmaps-
from (stmaryrd)
19001 \DeclareTextCommand{\textLongmapsfrom}{PU}{\9047\375}%* U+27FD
19002 % U+27FE LONG RIGHTWARDS DOUBLE ARROW FROM BAR; \Longmap-
sto (stmaryrd)
19003 \DeclareTextCommand{\textLongmapsto}{PU}{\9047\376}%* U+27FE

47.2.33 Supplemental Arrows-B: U+2900 to U+297F

19004 % U+2921 NORTH WEST AND SOUTH EAST ARROW; \nwsearrow (MnSym-
bol)
19005 \DeclareTextCommand{\textnwsearrow}{PU}{\9051\041}%* U+2921
19006 % U+2922 NORTH EAST AND SOUTH WEST ARROW; \neswarrow (MnSym-
bol)
19007 \DeclareTextCommand{\textneswarrow}{PU}{\9051\042}%* U+2922
19008 % U+2923 NORTH WEST ARROW WITH HOOK; \hooknwarrow (MnSymbol)
19009 \DeclareTextCommand{\textlnhooknwarrow}{PU}{\9051\043}%* U+2923
19010 % U+2924 NORTH EAST ARROW WITH HOOK; \rhooknearrow (MnSymbol)
19011 \DeclareTextCommand{\textrhooknearrow}{PU}{\9051\044}%* U+2924
19012 % U+2925 SOUTH EAST ARROW WITH HOOK; \hooksearrow (MnSymbol)
19013 \DeclareTextCommand{\textlhooksearrow}{PU}{\9051\045}%* U+2925
19014 % U+2926 SOUTH WEST ARROW WITH HOOK; \rhookswarrow (MnSymbol)
19015 \DeclareTextCommand{\textrhookswarrow}{PU}{\9051\046}%* U+2926
19016 % U+2933 WAVE ARROW POINTING DIRECTLY RIGHT; \leadsto (wasysym)
19017 \DeclareTextCommand{\textleadsto}{PU}{\9051\063}%* U+2933
19018 % U+2934 ARROW POINTING RIGHTWARDS THEN CURVING UPWARDS;
19019 % \rcurvearrowne (MnSymbol)
19020 \DeclareTextCommand{\textrcurvearrowne}{PU}{\9051\064}%* U+2934
19021 % U+2935 ARROW POINTING RIGHTWARDS THEN CURVING DOWN-
WARDS;
19022 % \lcurvearrowse (MnSymbol)
19023 \DeclareTextCommand{\textlcurvearrowse}{PU}{\9051\065}%* U+2935
19024 % U+2936 ARROW POINTING DOWNWARDS THEN CURVING LEFT-
WARDS;
19025 % \lcurvearrowsw (MnSymbol)
19026 \DeclareTextCommand{\textlcurvearrowsw}{PU}{\9051\066}%* U+2936
19027 % U+2937 ARROW POINTING DOWNWARDS THEN CURVING RIGHT-
WARDS;
19028 % \rcurvearrowse (MnSymbol)
19029 \DeclareTextCommand{\textrcurvearrowse}{PU}{\9051\067}%* U+2937
19030 % U+2938 RIGHT-SIDE ARC CLOCKWISE ARROW; \lcurvearrowdown (Mn-
Symbol)
19031 \DeclareTextCommand{\textlcurvearrowdown}{PU}{\9051\070}%* U+2938
19032 %* \textlcurvearrowdown -> \RightTorque (marvosym)
19033 %* \textlcurvearrowdown -> \Righttorque (marvosym)
19034 % U+2939 LEFT-SIDE ARC ANTICLOCKWISE ARROW;
19035 % \rcurvearrowdown (MnSymbol)
19036 \DeclareTextCommand{\textrcurvearrowdown}{PU}{\9051\071}%* U+2939
19037 %* \textrcurvearrowdown -> \LeftTorque (marvosym)
19038 %* \textrcurvearrowdown -> \Lefttorque (marvosym)
19039 % U+293A TOP ARC ANTICLOCKWISE ARROW; \rcurvearrowleft (MnSym-
bol)

19040 \DeclareTextCommand{\textrcurvearrowleft}{PU}{\9051\072}%* U+293A
19041 % U+293B BOTTOM ARC ANTICLOCKWISE ARROW;
19042 % \rcurvearrowright (MnSymbol)
19043 \DeclareTextCommand{\textrcurvearrowright}{PU}{\9051\073}%* U+293B
19044 % U+294A LEFT BARB UP RIGHT BARB DOWN HARPOON; \leftrightharpoon (mathabx)
19045 \DeclareTextCommand{\textlefttrightharpoon}{PU}{\9051\112}%* U+294A
19046 % U+294B LEFT BARB DOWN RIGHT BARB UP HARPOON; \rightleftharpoon (mathabx)
19047 \DeclareTextCommand{\textrightleftharpoon}{PU}{\9051\113}%* U+294B
19048 % U+294C UP BARB RIGHT DOWN BARB LEFT HARPOON;
19049 % \updownharpoonrightleft (MnSymbol)
19050 \DeclareTextCommand{\textupdownharpoonrightleft}{PU}{\9051\114}%* U+294C
19051 % U+294D UP BARB LEFT DOWN BARB RIGHT HARPOON;
19052 % \updownharpoonleftright (MnSymbol)
19053 \DeclareTextCommand{\textupdownharpoonleftright}{PU}{\9051\115}%* U+294D
19054 % U+2962 LEFTWARDS HARPOON WITH BARB UP ABOVE LEFTWARDS
19055 % HARPOON WITH BARB DOWN; \leftleftharpoons (mathabx)
19056 \DeclareTextCommand{\textleftleftharpoons}{PU}{\9051\142}%* U+2962
19057 % U+2963 UPWARDS HARPOON WITH BARB LEFT BESIDE UPWARDS
19058 % HARPOON WITH BARB RIGHT; \upupharpoons (mathabx)
19059 \DeclareTextCommand{\textupupharpoons}{PU}{\9051\143}%* U+2963
19060 % U+2964 RIGHTWARDS HARPOON WITH BARB UP ABOVE RIGHTWARDS HARPOON
19061 % WITH BARB DOWN; \rightrightharpoons (mathabx)
19062 \DeclareTextCommand{\textrightrightharpoons}{PU}{\9051\144}%* U+2964
19063 % U+2965 DOWNWARDS HARPOON WITH BARB LEFT BESIDE DOWNWARDS HARPOON
19064 % WITH BARB RIGHT; \downdownharpoons (mathabx)
19065 \DeclareTextCommand{\textdowndownharpoons}{PU}{\9051\145}%* U+2965
19066 % U+296A LEFTWARDS HARPOON WITH BARB UP ABOVE LONG DASH;
19067 % \leftbarharpoon (mathabx)
19068 \DeclareTextCommand{\textleftbarharpoon}{PU}{\9051\152}%* U+296A
19069 % U+296B LEFTWARDS HARPOON WITH BARB DOWN BELOW
19070 % LONG DASH; \barleftharpoon (mathabx)
19071 \DeclareTextCommand{\textbarleftharpoon}{PU}{\9051\153}%* U+296B
19072 % U+296C RIGHTWARDS HARPOON WITH BARB UP ABOVE
19073 % LONG DASH; \rightbarharpoon (mathabx)
19074 \DeclareTextCommand{\textrightbarharpoon}{PU}{\9051\154}%* U+296C
19075 % U+296D RIGHTWARDS HARPOON WITH BARB DOWN BELOW
19076 % LONG DASH; \barrightharpoon (mathabx)
19077 \DeclareTextCommand{\textbarrightharpoon}{PU}{\9051\155}%* U+296D
19078 % U+296E UPWARDS HARPOON WITH BARB LEFT BESIDE DOWNWARDS HARPOON
19079 % WITH BARB RIGHT; \updownharpoons (mathabx)
19080 \DeclareTextCommand{\textupdownharpoons}{PU}{\9051\156}%* U+296E
19081 % U+296F DOWNWARDS HARPOON WITH BARB LEFT BESIDE UPWARDS HARPOON
19082 % WITH BARB RIGHT; \downupharpoons (mathabx)
19083 \DeclareTextCommand{\textdownupharpoons}{PU}{\9051\157}%* U+296F
19084 % U+297F DOWN FISH TAIL
19085 \DeclareTextCommand{\textmoo}{PU}{\9051\177\83\066}%* U+297F U+0336

47.2.34 Miscellaneous Mathematical Symbols-B: U+2980 to U+29FF

19086 % U+2987 Z NOTATION LEFT IMAGE BRACKET; \lparentesis (stmaryrd)
 19087 \DeclareTextCommand{\textlparentesis}{PU}{\9051\207}%* U+2987
 19088 % U+2988 Z NOTATION RIGHT IMAGE BRACKET; \rparentesis (stmaryrd)
 19089 \DeclareTextCommand{\textrparentesis}{PU}{\9051\210}%* U+2988
 19090 % U+29B0 REVERSED EMPTY SET; \invdiameter (wasysym)
 19091 \DeclareTextCommand{\textinvdiameter}{PU}{\9051\260}%* U+29B0
 19092 % U+29B6 CIRCLED VERTICAL BAR; \obar (stmaryrd)
 19093 \DeclareTextCommand{\textobar}{PU}{\9051\266}%* U+29B6
 19094 %* \textobar -> \textvarobar (stmaryrd)
 19095 % U+29B8 CIRCLED REVERSE SOLIDUS; \obslash (stmaryrd)
 19096 \DeclareTextCommand{\textobslash}{PU}{\9051\270}%* U+29B8
 19097 %* \textobslash -> \circledbslash (txfonts/pxfonts)
 19098 %* \textobslash -> \obackslash (mathabx)
 19099 %* \textobslash -> \varobslash (stmaryrd)
 19100 % U+29BA CIRCLE DIVIDED BY HORIZONTAL BAR AND TOP HALF
 19101 % DIVIDED BY VERTICAL BAR; \obot (mathabx)
 19102 \DeclareTextCommand{\textobot}{PU}{\9051\272}%* U+29BA
 19103 %* \textobot -> \odplus (ulsy)
 19104 % U+29BB CIRCLE WITH SUPERIMPOSED X; \NoChemicalCleaning (marvosym)
 19105 \DeclareTextCommand{\textNoChemicalCleaning}{PU}{\9051\273}%* U+29BB
 19106 % U+29C0 CIRCLED LESS-THAN; \olessthan (stmaryrd)
 19107 \DeclareTextCommand{\textolessthan}{PU}{\9051\300}%* U+29C0
 19108 %* \textolessthan -> \varolessthan (stmaryrd)
 19109 % U+29C1 CIRCLED GREATER-THAN; \ogreaterthan (stmaryrd)
 19110 \DeclareTextCommand{\textogreaterthan}{PU}{\9051\301}%* U+29C1
 19111 %* \textogreaterthan -> \varogreaterthan (stmaryrd)
 19112 % U+29C4 SQUARED RISING DIAGONAL SLASH; \boxslash (mathabx, stmaryrd)
 19113 \DeclareTextCommand{\textboxslash}{PU}{\9051\304}%* U+29C4
 19114 % U+29C5 SQUARED FALLING DIAGONAL SLASH; \boxbslash (stmaryrd)
 19115 \DeclareTextCommand{\textboxbslash}{PU}{\9051\305}%* U+29C5
 19116 % U+29C6 SQUARED ASTERISK; \boxast (stmaryrd)
 19117 \DeclareTextCommand{\textboxast}{PU}{\9051\306}%* U+29C6
 19118 % U+29C7 SQUARED SMALL CIRCLE; \boxcircle (stmaryrd)
 19119 \DeclareTextCommand{\textboxcircle}{PU}{\9051\307}%* U+29C7
 19120 % U+29C8 SQUARED SQUARE; \boxbox (stmaryrd)
 19121 \DeclareTextCommand{\textboxbox}{PU}{\9051\310}%* U+29C8
 19122 % U+29D3 BLACK BOWTIE; \Valve (marvosym)
 19123 \DeclareTextCommand{\textValve}{PU}{\9051\323}%* U+29D3
 19124 % U+29DF DOUBLE-ENDED MULTIMAP; \multimapboth (txfonts/pxfonts)
 19125 \DeclareTextCommand{\textmultimapboth}{PU}{\9051\337}%* U+29DF
 19126 % U+29E2 SHUFFLE PRODUCT; \shuffle (shuffle)
 19127 \DeclareTextCommand{\textshuffle}{PU}{\9051\342}%* U+29E2

47.2.35 Supplemental Mathematical Operators: U+2A00 to U+2AFF

19128 % U+2A04 N-ARY UNION OPERATOR WITH PLUS; \uplus (LaTeX)
 19129 \DeclareTextCommand{\textuplus}{PU}{\9052\004}%* U+2A04
 19130 % U+2A07 TWO LOGICAL AND OPERATOR; \bigdoublewedge (MnSymbol)
 19131 \DeclareTextCommand{\textbigdoublewedge}{PU}{\9052\007}%* U+2A07
 19132 % U+2A08 TWO LOGICAL OR OPERATOR; \bigdoublevee (MnSymbol)
 19133 \DeclareTextCommand{\textbigdoublevee}{PU}{\9052\010}%* U+2A08
 19134 % U+2A1D JOIN; \Join (latexsym, amsfonts, amssymb, mathabx, txfonts,
 19135 % pxfonts, wasysym)
 19136 \DeclareTextCommand{\textJoin}{PU}{\9052\035}%* U+2A1D

19137 % U+2A1F Z NOTATION SCHEMA COMPOSITION; \fatsemi (stmaryrd)
19138 \DeclareTextCommand{\textfatsemi}{PU}{\9052\037}%* U+2A1F
19139 % U+2A22 PLUS SIGN WITH SMALL CIRCLE ABOVE; \circplus (mathabx)
19140 \DeclareTextCommand{\textcircplus}{PU}{\9052\042}%* U+2A22
19141 % U+2A2A MINUS SIGN WITH DOT BELOW; \minusdot (MnSymbol)
19142 \DeclareTextCommand{\textminusdot}{PU}{\9052\052}%* U+2A2A
19143 %* \textminusdot -> \divdot (mathabx)
19144 % U+2A30 MULTIPLICATION SIGN WITH DOT ABOVE; \dottimes (mathabx)
19145 \DeclareTextCommand{\textdottimes}{PU}{\9052\060}%* U+2A30
19146 % U+2A32 SEMIDIRECT PRODUCT WITH BOTTOM CLOSED;
19147 % \dtimes (mathdesign)
19148 \DeclareTextCommand{\textdtimes}{PU}{\9052\062}%* U+2A32
19149 % U+2A38 CIRCLED DIVISION SIGN; \odiv (mathabx)
19150 \DeclareTextCommand{\textodiv}{PU}{\9052\070}%* U+2A38
19151 % U+2A3C INTERIOR PRODUCT; \invneg (MnSymbol)
19152 \DeclareTextCommand{\textinvneg}{PU}{\9052\074}%* U+2A3C
19153 % U+2A4E DOUBLE SQUARE INTERSECTION; \sqdoublecap (mathabx)
19154 \DeclareTextCommand{\textsqdoublecap}{PU}{\9052\116}%* U+2A4E
19155 %* \textsqdoublecap -> \doublesqcap (MnSymbol)
19156 % U+2A40 INTERSECTION WITH DOT; \capdot (MnSymbol)
19157 \DeclareTextCommand{\textcapdot}{PU}{\9052\100}%* U+2A40
19158 % U+2A4F DOUBLE SQUARE UNION; \sqdoublecup (mathabx)
19159 \DeclareTextCommand{\textsqdoublecup}{PU}{\9052\117}%* U+2A4F
19160 %* \textsqdoublecup -> \doublesqcup (MnSymbol)
19161 % U+2A55 TWO INTERSECTING LOGICAL AND; \doublewedge (MnSymbol)
19162 \DeclareTextCommand{\textdoublewedge}{PU}{\9052\125}%* U+2A55
19163 % U+2A56 TWO INTERSECTING LOGICAL OR; \doublevee (MnSymbol)
19164 \DeclareTextCommand{\textdoublevee}{PU}{\9052\126}%* U+2A56
19165 %* \textdoublevee -> \merge (stmaryrd)
19166 % U+2A5E LOGICAL AND WITH DOUBLE OVERBAR;
19167 % \doublebarwedge (AmS)
19168 \DeclareTextCommand{\textdoublebarwedge}{PU}{\9052\136}%* U+2A5E
19169 % U+2A63 LOGICAL OR WITH DOUBLE UNDERBAR;
19170 % \veedoublebar (mahtabx)
19171 \DeclareTextCommand{\textveedoublebar}{PU}{\9052\143}%* U+2A63
19172 % U+2A66 EQUALS SIGN WITH DOT BELOW; \eqdot (MnSymbol)
19173 \DeclareTextCommand{\texteqdot}{PU}{\9052\146}%* U+2A66
19174 % \neqdot (MnSymbol)
19175 \DeclareTextCommand{\textneqdot}{PU}{\9052\146\83\070}%* U+2A66 U+0338
19176 % U+2A74 DOUBLE COLON EQUAL; \coloncolonequals (colonequals)
19177 \DeclareTextCommand{\textcoloncolonequals}{PU}{\9052\164}%* U+2A74
19178 % U+2A7D LESS-THAN OR SLANTED EQUAL TO; \leqslant (AmS)
19179 \DeclareTextCommand{\textleqslant}{PU}{\9052\175}%* U+2A7D
19180 % \nleqslant (txfonts/pxfonts)
19181 \DeclareTextCommand{\textnleqslant}{PU}{\9052\175\83\070}%* U+2A7D U+0338
19182 % U+2A7E GREATER-THAN OR SLANTED EQUAL TO; \geqslant (AmS)
19183 \DeclareTextCommand{\textgeqslant}{PU}{\9052\176}%* U+2A7E
19184 % \ngeqslant (txfonts/pxfonts)
19185 \DeclareTextCommand{\textngeqslant}{PU}{\9052\176\83\070}%* U+2A7E U+0338
19186 % U+2A85 LESS-THAN OR APPROXIMATE; \lessapprox (AmS)
19187 \DeclareTextCommand{\textlessapprox}{PU}{\9052\205}%* U+2A85
19188 % \nlessapprox (txfonts/pxfonts)
19189 \DeclareTextCommand{\textnlessapprox}{PU}{\9052\205\83\070}%* U+2A85 U+0338
19190 % U+2A86 GREATER-THAN OR APPROXIMATE; \gtrapprox (AmS)

19191 \DeclareTextCommand{\textgtrapprox}{PU}{\9052\206}%* U+2A86
19192 % \ngtrapprox (txfonts/pxfonts)
19193 \DeclareTextCommand{\textngtrapprox}{PU}{\9052\206\83\070}%* U+2A86 U+0338
19194 % U+2A87 LESS-THAN AND SINGLE-LINE NOT EQUAL TO; \lneq (AmS)
19195 \DeclareTextCommand{\textlneq}{PU}{\9052\207}%* U+2A87
19196 % U+2A88 GREATER-THAN AND SINGLE-LINE NOT EQUAL TO;
19197 % \gneq (AmS)
19198 \DeclareTextCommand{\textgneq}{PU}{\9052\210}%* U+2A88
19199 % U+2A89 LESS-THAN AND NOT APPROXIMATE; \lnapprox (AmS)
19200 \DeclareTextCommand{\textlnapprox}{PU}{\9052\211}%* U+2A89
19201 % U+2A8A GREATER-THAN AND NOT APPROXIMATE; \gnapprox (AmS)
19202 \DeclareTextCommand{\textgnapprox}{PU}{\9052\212}%* U+2A8A
19203 % U+2A8B LESS-THAN ABOVE DOUBLE-LINE EQUAL ABOVE GREATER-
THAN;
19204 % \lesseqgtr (AmS)
19205 \DeclareTextCommand{\textlesseqgtr}{PU}{\9052\213}%* U+2A8B
19206 % U+2A8C GREATER-THAN ABOVE DOUBLE-LINE EQUAL ABOVE LESS-
THAN;
19207 % \gtreqless (AmS)
19208 \DeclareTextCommand{\textgtreqless}{PU}{\9052\214}%* U+2A8C
19209 % U+2A95 SLANTED EQUAL TO OR LESS-THAN; \eqslantless (AmS)
19210 \DeclareTextCommand{\texteqslantless}{PU}{\9052\225}%* U+2A95
19211 % U+2A96 SLANTED EQUAL TO OR GREATER-THAN; \eqslantgtr (AmS)
19212 \DeclareTextCommand{\texteqslantgtr}{PU}{\9052\226}%* U+2A96
19213 % U+2AA6 LESS-THAN CLOSED BY CURVE; \leftslice (stmaryrd)
19214 \DeclareTextCommand{\textleftslice}{PU}{\9052\246}%* U+2AA6
19215 % U+2AA7 GREATER-THAN CLOSED BY CURVE; \rightslice (stmaryrd)
19216 \DeclareTextCommand{\textrightslice}{PU}{\9052\247}%* U+2AA7
19217 % U+2AAF PRECEDES ABOVE SINGLE-LINE EQUALS SIGN; \preceq (Mn-
Symbol)
19218 \DeclareTextCommand{\textpreceq}{PU}{\9052\257}%* U+2AAF
19219 % \npreceq (txfonts/pxfonts)
19220 \DeclareTextCommand{\textnpreceq}{PU}{\9052\257\83\070}%* U+2AAF U+0338
19221 % U+2AB0 SUCCEEDS ABOVE SINGLE-LINE EQUALS SIGN; \succeq (Mn-
Symbol)
19222 \DeclareTextCommand{\textsucceq}{PU}{\9052\260}%* U+2AB0
19223 % \nsucceq (txfonts/pxfonts)
19224 \DeclareTextCommand{\textnsucceq}{PU}{\9052\260\83\070}%* U+2AB0 U+0338
19225 % U+2AB1 PRECEDES ABOVE SINGLE-LINE NOT EQUAL TO; \prec-
neq (mathabx)
19226 \DeclareTextCommand{\textprecneq}{PU}{\9052\261}%* U+2AB1
19227 % U+2AB2 SUCCEEDS ABOVE SINGLE-LINE NOT EQUAL TO; \succ-
neq (mathabx)
19228 \DeclareTextCommand{\textsucneq}{PU}{\9052\262}%* U+2AB2
19229 % U+2AB3 PRECEDES ABOVE EQUALS SIGN; \preceqq (txfonts/pxfonts)
19230 \DeclareTextCommand{\textpreceqq}{PU}{\9052\263}%* U+2AB3
19231 % \npreceqq (txfonts/pxfonts)
19232 \DeclareTextCommand{\textnpreceqq}{PU}{\9052\263\83\070}%* U+2AB3 U+0338
19233 % U+2AB4 SUCCEEDS ABOVE EQUALS SIGN; \succeqq (txfonts/pxfonts)
19234 \DeclareTextCommand{\textsucceqq}{PU}{\9052\264}%* U+2AB4
19235 % \nsucceqq (txfonts/pxfonts)
19236 \DeclareTextCommand{\textnsucceqq}{PU}{\9052\264\83\070}%* U+2AB4 U+0338
19237 % U+2AB5 PRECEDES ABOVE NOT EQUAL TO; \precneqq (txfonts/pxfonts)
19238 \DeclareTextCommand{\textprecneqq}{PU}{\9052\265}%* U+2AB5

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19239 % U+2AB6 SUCCEEDS ABOVE NOT EQUAL TO; \succneqq (txfonts/pxfonts)
19240 \DeclareTextCommand{\textsuccneqq}{PU}{\9052\266}%* U+2AB6
19241 % U+2AB7 PRECEDES ABOVE ALMOST EQUAL TO; \preccapprox (AmS)
19242 \DeclareTextCommand{\textpreccapprox}{PU}{\9052\267}%* U+2AB7
19243 % \npreccapprox (txfonts/pxfonts)
19244 \DeclareTextCommand{\textnpreccapprox}{PU}{\9052\267\83\070}%* U+2AB7 U+0338
19245 % U+2AB8 SUCCEEDS ABOVE ALMOST EQUAL TO; \succapprox (AmS)
19246 \DeclareTextCommand{\textsuccapprox}{PU}{\9052\270}%* U+2AB8
19247 % \nsuccapprox (txfonts/pxfonts)
19248 \DeclareTextCommand{\textnsuccapprox}{PU}{\9052\270\83\070}%* U+2AB8 U+0338
19249 % U+2AB9 PRECEDES ABOVE NOT ALMOST EQUAL TO; \precnap-
      prox (AmS)
19250 \DeclareTextCommand{\textprecnapprox}{PU}{\9052\271}%* U+2AB9
19251 % U+2ABA SUCCEEDS ABOVE NOT ALMOST EQUAL TO; \succnap-
      prox (AmS)
19252 \DeclareTextCommand{\textsuccnapprox}{PU}{\9052\272}%* U+2ABA
19253 % U+2AC5 SUBSET OF ABOVE EQUALS SIGN; \subseteqq (AmS)
19254 \DeclareTextCommand{\textsubseteqq}{PU}{\9052\305}%* U+2AC5
19255 % \nsubseteqq (txfonts/pxfonts, mathabx)
19256 \DeclareTextCommand{\textnsubseteqq}{PU}{\9052\305\83\070}%* U+2AC5 U+0338
19257 % U+2AC6 SUPERSET OF ABOVE EQUALS SIGN; \supseteqq (AmS)
19258 \DeclareTextCommand{\textsupseteqq}{PU}{\9052\306}%* U+2AC6
19259 % \nsupseteqq (mathabx)
19260 \DeclareTextCommand{\textnsupseteqq}{PU}{\9052\306\83\070}%* U+2AC6 U+0338
19261 % U+2AE3 DOUBLE VERTICAL BAR LEFT TURNSTILE
19262 \DeclareTextCommand{\textdashV}{PU}{\9052\343}%* U+2AE3
19263 %* \textdashV -> \leftVdash (MnSymbol)
19264 % \ndashV (mathabx)
19265 \DeclareTextCommand{\textndashV}{PU}{\9052\343\83\070}%* U+2AE3 U+0338
19266 %* \textndashV -> \nleftVdash (MnSymbol)
19267 % U+2AE4 VERTICAL BAR DOUBLE LEFT TURNSTILE; \Dashv (mathabx)
19268 \DeclareTextCommand{\textDashv}{PU}{\9052\344}%* U+2AE4
19269 %* \textDashv -> \leftmodels (MnSymbol)
19270 % \nDashv (mathabx)
19271 \DeclareTextCommand{\textnDashv}{PU}{\9052\344\83\070}%* U+2AE4 U+0338
19272 %* \textnDashv -> \nleftmodels (MnSymbol)
19273 % U+2AE5 DOUBLE VERTICAL BAR DOUBLE LEFT TURNSTILE;
19274 % \DashV (mathabx)
19275 \DeclareTextCommand{\textDashV}{PU}{\9052\345}%* U+2AE5
19276 %* \textDashV -> \leftModels (MnSymbol)
19277 % \nDashV (mathabx)
19278 \DeclareTextCommand{\textnDashV}{PU}{\9052\345\83\070}%* U+2AE5 U+0338
19279 %* \textnDashV -> \nleftModels (MnSymbol)
19280 % U+2AEA DOUBLE DOWN TACK; \downmodels (MnSymbol)
19281 \DeclareTextCommand{\textdownmodels}{PU}{\9052\352}%* U+2AEA
19282 % \ndownmodels (MnSymbol)
19283 \DeclareTextCommand{\textndownmodels}{PU}{\9052\352\83\070}%* U+2AEA U+0338
19284 % U+2AEB DOUBLE UP TACK; \upmodels (MnSymbol)
19285 \DeclareTextCommand{\textupmodels}{PU}{\9052\353}%* U+2AEB
19286 % \nupmodels (MnSymbol)
19287 \DeclareTextCommand{\textnupmodels}{PU}{\9052\353\83\070}%* U+2AEB U+0338
19288 % U+2AEF VERTICAL LINE WITH CIRCLE ABOVE; \upspoon (MnSymbol)
19289 \DeclareTextCommand{\textupspoon}{PU}{\9052\357}%* U+2AEF
19290 % U+2AF4 TRIPLE VERTICAL BAR BINARY RELATION;

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19291 % \interleave (stmaryrd)
 19292 \DeclareTextCommand{\textinterleave}{PU}{\9052\364}%* U+2AF4
 19293 % U+2AFD DOUBLE SOLIDUS OPERATOR; \sslash (stmaryrd)
 19294 \DeclareTextCommand{\textsslash}{PU}{\9052\375}%* U+2AFD
 19295 %* \textsslash -> \varparallel (txfonts\pxfonts)

47.2.36 Miscellaneous Symbols and Arrows: U+2B00 to U+2BFF

19296 % U+2B20 WHITE PENTAGON; \pentagon (wasysym)
 19297 \DeclareTextCommand{\textpentagon}{PU}{\9053\040}%* U+2B20
 19298 % U+2B21 WHITE HEXAGON; \varhexagon (wasysym)
 19299 \DeclareTextCommand{\textvarhexagon}{PU}{\9053\041}%* U+2B21

47.2.37 Latin Extended-C: U+2C60 to U+2C7F

19300 % U+2C7C LATIN SUBSCRIPT SMALL LETTER J
 19301 \DeclareTextCommand{\textjinferior}{PU}{\9054\174}%* U+2C7C

47.2.38 Supplemental Punctuation: U+2E00 to U+2E7F

19302 % U+2E13 DOTTED OBELOS; \slashdiv (MnSymbol)
 19303 \DeclareTextCommand{\textslashdiv}{PU}{\9056\023}%* U+2E13
 19304 % U+2E18 INVERTED INTERROBANG; \textinterrobangdown (textcomp)
 19305 \DeclareTextCommand{\textinterrobangdown}{PU}{\9056\030}% U+2E18
 19306 % U+2E2D FIVE DOT MARK; \fivedots (MnSymbol)
 19307 \DeclareTextCommand{\textfivedots}{PU}{\9056\055}%* U+2E2D

47.2.39 Modifier Tone Letters: U+A700 to U+A71F

19308 % U+A71B MODIFIER LETTER RAISED UP ARROW; \textupstep (tipa)
 19309 \DeclareTextCommand{\textupstep}{PU}{\9247\033}% U+A71B
 19310 % U+A71C MODIFIER LETTER RAISED DOWN ARROW;
 19311 % \textdownstep (tipa)
 19312 \DeclareTextCommand{\textdownstep}{PU}{\9247\034}% U+A71C

47.2.40 Latin Extended-D: U+A720 to U+A7FF

19313 % U+A727 LATIN SMALL LETTER HENG; \textheng (tipx)
 19314 \DeclareTextCommand{\textPUheng}{PU}{\9247\047}% U+A727
 19315 %* \textPUheng -> \textheng (tipx)
 19316 % U+A72C LATIN CAPITAL LETTER CUATRILLO; \textlhookfour (tipx)
 19317 \DeclareTextCommand{\textPULhookfour}{PU}{\9247\054}% U+A72C
 19318 %* \textPULhookfour -> \textlhookfour (tipx)
 19319 % U+A730 LATIN LETTER SMALL CAPITAL F; \textscf (tipx)
 19320 \DeclareTextCommand{\textPUScf}{PU}{\9247\060}% U+A730
 19321 %* \textPUScf -> \textscf (tipx)
 19322 % U+A735 LATIN SMALL LETTER AO; \textaoilig (tipx)
 19323 \DeclareTextCommand{\textPUaolig}{PU}{\9247\065}% U+A735
 19324 %* \textPUaolig -> \textaoilig (tipx)
 19325 % U+A74F LATIN SMALL LETTER OO; \oo (wsuipa)
 19326 \DeclareTextCommand{\textoo}{PU}{\9247\117}%* U+A74F
 19327 % U+A788 MODIFIER LETTER LOW CIRCUMFLEX ACCENT
 19328 \DeclareTextCommand{\textcircumlw}{PU}{\9247\210}% U+A788

47.2.41 Alphabetic Presentation Forms: U+FB00 to U+FB4F

19329 % U+FB01 LATIN SMALL LIGATURE FI; fi
 19330 \DeclareTextCommand{\textfi}{PU}{\9373\001}% U+FB01
 19331 % U+FB02 LATIN SMALL LIGATURE FL; fl
 19332 \DeclareTextCommand{\textfl}{PU}{\9373\002}% U+FB02

47.2.42 Musical Symbols: U+1D100 to U+1D1FF

19333 % U+1D13B MUSICAL SYMBOL WHOLE REST; \GaPa (harmony)
19334 \DeclareTextCommand{\textGaPa}{PU}{\9330\064\9335\073}%* U+1D13B
19335 % U+1D13C MUSICAL SYMBOL HALF REST; \HaPa (harmony)
19336 \DeclareTextCommand{\textHaPa}{PU}{\9330\064\9335\074}%* U+1D13C
19337 % U+1D13D MUSICAL SYMBOL QUARTER REST; \ViPa (harmony)
19338 \DeclareTextCommand{\textViPa}{PU}{\9330\064\9335\075}%* U+1D13D
19339 % U+1D13E MUSICAL SYMBOL EIGHTH REST; \AcPa (harmony)
19340 \DeclareTextCommand{\textAcPa}{PU}{\9330\064\9335\076}%* U+1D13E
19341 % U+1D13F MUSICAL SYMBOL SIXTEENTH REST; \SePa (harmony)
19342 \DeclareTextCommand{\textSePa}{PU}{\9330\064\9335\077}%* U+1D13F
19343 % U+1D140 MUSICAL SYMBOL THIRTY-SECOND REST; \ZwPa (harmony)
19344 \DeclareTextCommand{\textZwPa}{PU}{\9330\064\9335\100}%* U+1D140
19345 % U+1D15D MUSICAL SYMBOL WHOLE NOTE; \fullnote (wasysym)
19346 \DeclareTextCommand{\textfullnote}{PU}{\9330\064\9335\135}%* U+1D15D
19347 %* \textfullnote -> \Ganz (harmony)
19348 % U+1D15E MUSICAL SYMBOL HALF NOTE; \halfnote (wasysym)
19349 \DeclareTextCommand{\texthalfnote}{PU}{\9330\064\9335\136}%* U+1D15E
19350 %* \texthalfnote -> \Halb (harmony)
19351 % U+1D15F MUSICAL SYMBOL QUARTER NOTE; \Vier (harmony)
19352 \DeclareTextCommand{\textVier}{PU}{\9330\064\9335\137}%* U+1D15F
19353 % U+1D160 MUSICAL SYMBOL EIGHTH NOTE; \Acht (harmony)
19354 \DeclareTextCommand{\textAcht}{PU}{\9330\064\9335\140}%* U+1D160
19355 % U+1D161 MUSICAL SYMBOL SIXTEENTH NOTE; \Sech (harmony)
19356 \DeclareTextCommand{\textSech}{PU}{\9330\064\9335\141}%* U+1D161
19357 % U+1D162 MUSICAL SYMBOL THIRTY-SECOND NOTE; \Zwdr (harmony)
19358 \DeclareTextCommand{\textZwdr}{PU}{\9330\064\9335\142}%* U+1D162

47.2.43 Miscellaneous Symbols and Pictographs: U+1F300 to U+1F5FF

19359 % U+1F30D EARTH GLOBE EUROPE-AFRICA; \Mundus (marvosym)
19360 \DeclareTextCommand{\textMundus}{PU}{\9330\074\9337\015}%* U+1F30D
19361 % U+1F319 CRESCENT MOON; \Moon (marvosym)
19362 \DeclareTextCommand{\textMoon}{PU}{\9330\074\9337\031}%* U+1F319
19363 % U+1F468 MAN; \ManFace (marvosym)
19364 \DeclareTextCommand{\textManFace}{PU}{\9330\075\9334\150}%* U+1F468
19365 % U+1F469 WOMAN; \WomanFace (marvosym)
19366 \DeclareTextCommand{\textWomanFace}{PU}{\9330\075\9334\151}%* U+1F469
19367 %* \textWomanFace -> \Womanface (marvosym)
19368 % U+1F4E0 FAX MACHINE; \Fax (marvosym)
19369 \DeclareTextCommand{\textFax}{PU}{\9330\075\9334\340}%* U+1F4E0
19370 %* \textFax -> \Faxmachine (marvosym)
19371 % U+1F525 FIRE; \Fire (ifsym)
19372 \DeclareTextCommand{\textFire}{PU}{\9330\075\9335\045}%* U+1F525

47.2.44 Transport and Map Symbols: U+1F680 to U+1F6FF

19373 % U+1F6B2 BICYCLE; \Bicycle (marvosym)
19374 \DeclareTextCommand{\textBicycle}{PU}{\9330\075\9336\262}%* U+1F6B2
19375 % U+1F6B9 MENS SYMBOL; \Gentsroom (marvosym)
19376 \DeclareTextCommand{\textGentsroom}{PU}{\9330\075\9336\271}%* U+1F6B9
19377 % U+1F6BA WOMENS SYMBOL; \Ladiesroom (marvosym)
19378 \DeclareTextCommand{\textLadiesroom}{PU}{\9330\075\9336\272}%* U+1F6BA

47.2.45 Miscellaneous

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19379 \DeclareTextCommand{\SS}{PU}{SS}%
19380 % \textcopyleft (textcomp)
19381 \DeclareTextCommand{\textcopyleft}{PU}{\9041\204\9040\335}% U+2184 U+20DD
19382 % \ccnc (ccllicenses)
19383 \DeclareTextCommand{\textccnc}{PU}{\80\044\9040\340}%* U+0024 U+20E0
19384 % \ccnd (ccllicenses)
19385 \DeclareTextCommand{\textccnd}{PU}{=\9040\335}%* U+003D U+20DD
19386 % \ccsa (ccllicenses)
19387 \DeclareTextCommand{\textccsa}{PU}{\9047\362\9040\335}%* U+27F2 U+20DD
19388 % \Info (marvosym, china2e)
19389 \DeclareTextCommand{\textInfo}{PU}{\9330\065\9334\042\9040\336}%* U+1D422 U+20DE
19390 % \CESign (marvosym)
19391 \DeclareTextCommand{\textCESign}{PU}{\80\103\80\105}%* U+0043 U+0045
19392 %* \textCESign -> \CESign (marvosym)

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47.2.46 Aliases

Aliases (german.sty)

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19393 \DeclareTextCommand{\textglqq}{PU}{\quotedblbase}%
19394 \DeclareTextCommand{\textgrqq}{PU}{\textquotedblleft}%
19395 \DeclareTextCommand{\textglq}{PU}{\quotesinglbase}%
19396 \DeclareTextCommand{\textgrq}{PU}{\textquoteleft}%
19397 \DeclareTextCommand{\textflqq}{PU}{\guillemetleft}%
19398 \DeclareTextCommand{\textfrqq}{PU}{\guillemetright}%
19399 \DeclareTextCommand{\textflq}{PU}{\guilsinglleft}%
19400 \DeclareTextCommand{\textfrq}{PU}{\guilsinglright}%

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Aliases (math names)

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19401 \DeclareTextCommand{\textneg}{PU}{\textlogicalnot}%*
19402 \DeclareTextCommand{\texttimes}{PU}{\textmultiply}%*
19403 \DeclareTextCommand{\textdiv}{PU}{\textdivide}%*
19404 \DeclareTextCommand{\textpm}{PU}{\textplusminus}%*
19405 \DeclareTextCommand{\textcdot}{PU}{\textperiodcentered}%*
19406 </puenc>

```

47.3 PU encoding, additions for VnTeX

This file is provided by Han The Thanh.

```

19407 (*puvnenc)
19408 \DeclareTextCommand{\abreve}{PU}{\81\003}% U+0103
19409 \DeclareTextCommand{\acircumflex}{PU}{\80\342}% U+00E2
19410 \DeclareTextCommand{\ecircumflex}{PU}{\80\352}% U+00EA
19411 \DeclareTextCommand{\ocircumflex}{PU}{\80\364}% U+00F4
19412 \DeclareTextCommand{\ohorn}{PU}{\81\241}% U+01A1
19413 \DeclareTextCommand{\uhorn}{PU}{\81\260}% U+01B0
19414 \DeclareTextCommand{\ABREVE}{PU}{\81\002}% U+0102
19415 \DeclareTextCommand{\ACIRCUMFLEX}{PU}{\80\302}% U+00C2
19416 \DeclareTextCommand{\ECIRCUMFLEX}{PU}{\80\312}% U+00CA
19417 \DeclareTextCommand{\OCIRCUMFLEX}{PU}{\80\324}% U+00D4
19418 \DeclareTextCommand{\OHORN}{PU}{\81\240}% U+01A0
19419 \DeclareTextCommand{\UHORN}{PU}{\81\257}% U+01AF
19420 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\341}% U+00E1
19421 \DeclareTextCompositeCommand{\d}{PU}{a}{\9036\241}% U+1EA1

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19422 \DeclareTextCompositeCommand{\`}{PU}{a}{\80\340}% U+00E0
19423 \DeclareTextCompositeCommand{\h}{PU}{a}{\9036\243}% U+1EA3
19424 \DeclareTextCompositeCommand{\~}{PU}{a}{\80\343}% U+00E3
19425 \DeclareTextCompositeCommand{\'}{PU}{\abreve}{\9036\257}% U+1EAF
19426 \DeclareTextCompositeCommand{\d}{PU}{\abreve}{\9036\267}% U+1EB7
19427 \DeclareTextCompositeCommand{\`}{PU}{\abreve}{\9036\261}% U+1EB1
19428 \DeclareTextCompositeCommand{\h}{PU}{\abreve}{\9036\263}% U+1EB3
19429 \DeclareTextCompositeCommand{\~}{PU}{\abreve}{\9036\265}% U+1EB5
19430 \DeclareTextCompositeCommand{\'}{PU}{\acircumflex}{\9036\245}% U+1EA5
19431 \DeclareTextCompositeCommand{\d}{PU}{\acircumflex}{\9036\255}% U+1EAD
19432 \DeclareTextCompositeCommand{\`}{PU}{\acircumflex}{\9036\247}% U+1EA7
19433 \DeclareTextCompositeCommand{\h}{PU}{\acircumflex}{\9036\251}% U+1EA9
19434 \DeclareTextCompositeCommand{\~}{PU}{\acircumflex}{\9036\253}% U+1EAB
19435 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\351}% U+00E9
19436 \DeclareTextCompositeCommand{\d}{PU}{e}{\9036\271}% U+1EB9
19437 \DeclareTextCompositeCommand{\`}{PU}{e}{\80\350}% U+00E8
19438 \DeclareTextCompositeCommand{\h}{PU}{e}{\9036\273}% U+1EBB
19439 \DeclareTextCompositeCommand{\~}{PU}{e}{\9036\275}% U+1EBD
19440 \DeclareTextCompositeCommand{\'}{PU}{\ecircumflex}{\9036\277}% U+1EBF
19441 \DeclareTextCompositeCommand{\d}{PU}{\ecircumflex}{\9036\307}% U+1EC7
19442 \DeclareTextCompositeCommand{\`}{PU}{\ecircumflex}{\9036\301}% U+1EC1
19443 \DeclareTextCompositeCommand{\h}{PU}{\ecircumflex}{\9036\303}% U+1EC3
19444 \DeclareTextCompositeCommand{\~}{PU}{\ecircumflex}{\9036\305}% U+1EC5
19445 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}% U+00ED
19446 \DeclareTextCompositeCommand{\d}{PU}{i}{\9036\313}% U+1ECB
19447 \DeclareTextCompositeCommand{\`}{PU}{i}{\80\354}% U+00EC
19448 \DeclareTextCompositeCommand{\h}{PU}{i}{\9036\311}% U+1EC9
19449 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}% U+0129
19450 \DeclareTextCompositeCommand{\'}{PU}{o}{\80\363}% U+00F3
19451 \DeclareTextCompositeCommand{\d}{PU}{o}{\9036\315}% U+1ECD
19452 \DeclareTextCompositeCommand{\`}{PU}{o}{\80\362}% U+00F2
19453 \DeclareTextCompositeCommand{\h}{PU}{o}{\9036\317}% U+1ECF
19454 \DeclareTextCompositeCommand{\~}{PU}{o}{\80\365}% U+00F5
19455 \DeclareTextCompositeCommand{\'}{PU}{\ocircumflex}{\9036\321}% U+1ED1
19456 \DeclareTextCompositeCommand{\d}{PU}{\ocircumflex}{\9036\331}% U+1ED9
19457 \DeclareTextCompositeCommand{\`}{PU}{\ocircumflex}{\9036\323}% U+1ED3
19458 \DeclareTextCompositeCommand{\h}{PU}{\ocircumflex}{\9036\325}% U+1ED5
19459 \DeclareTextCompositeCommand{\~}{PU}{\ocircumflex}{\9036\327}% U+1ED7
19460 \DeclareTextCompositeCommand{\'}{PU}{\ohorn}{\9036\333}% U+1EDB
19461 \DeclareTextCompositeCommand{\d}{PU}{\ohorn}{\9036\343}% U+1EE3
19462 \DeclareTextCompositeCommand{\`}{PU}{\ohorn}{\9036\335}% U+1EDD
19463 \DeclareTextCompositeCommand{\h}{PU}{\ohorn}{\9036\337}% U+1EDF
19464 \DeclareTextCompositeCommand{\~}{PU}{\ohorn}{\9036\341}% U+1EE1
19465 \DeclareTextCompositeCommand{\'}{PU}{u}{\80\372}% U+00FA
19466 \DeclareTextCompositeCommand{\d}{PU}{u}{\9036\345}% U+1EE5
19467 \DeclareTextCompositeCommand{\`}{PU}{u}{\80\371}% U+00F9
19468 \DeclareTextCompositeCommand{\h}{PU}{u}{\9036\347}% U+1EE7
19469 \DeclareTextCompositeCommand{\~}{PU}{u}{\81\151}% U+0169
19470 \DeclareTextCompositeCommand{\'}{PU}{\uhorn}{\9036\351}% U+1EE9
19471 \DeclareTextCompositeCommand{\d}{PU}{\uhorn}{\9036\361}% U+1EF1
19472 \DeclareTextCompositeCommand{\`}{PU}{\uhorn}{\9036\353}% U+1EEB
19473 \DeclareTextCompositeCommand{\h}{PU}{\uhorn}{\9036\355}% U+1EED
19474 \DeclareTextCompositeCommand{\~}{PU}{\uhorn}{\9036\357}% U+1EEF
19475 \DeclareTextCompositeCommand{\'}{PU}{y}{\80\375}% U+00FD

19476 \DeclareTextCompositeCommand{\d}{PU}{y}{\9036\365}% U+1EF5
19477 \DeclareTextCompositeCommand{\`}{PU}{y}{\9036\363}% U+1EF3
19478 \DeclareTextCompositeCommand{\h}{PU}{y}{\9036\367}% U+1EF7
19479 \DeclareTextCompositeCommand{\~}{PU}{y}{\9036\371}% U+1EF9
19480 \DeclareTextCompositeCommand{\'}{PU}{A}{\80\301}% U+00C1
19481 \DeclareTextCompositeCommand{\d}{PU}{A}{\9036\240}% U+1EA0
19482 \DeclareTextCompositeCommand{\`}{PU}{A}{\80\300}% U+00C0
19483 \DeclareTextCompositeCommand{\h}{PU}{A}{\9036\242}% U+1EA2
19484 \DeclareTextCompositeCommand{\~}{PU}{A}{\80\303}% U+00C3
19485 \DeclareTextCompositeCommand{\'}{PU}{\ABREVE}{\9036\256}% U+1EAE
19486 \DeclareTextCompositeCommand{\d}{PU}{\ABREVE}{\9036\266}% U+1EB6
19487 \DeclareTextCompositeCommand{\`}{PU}{\ABREVE}{\9036\260}% U+1EB0
19488 \DeclareTextCompositeCommand{\h}{PU}{\ABREVE}{\9036\262}% U+1EB2
19489 \DeclareTextCompositeCommand{\~}{PU}{\ABREVE}{\9036\264}% U+1EB4
19490 \DeclareTextCompositeCommand{\'}{PU}{\ACIRCUMFLEX}{\9036\244}% U+1EA4
19491 \DeclareTextCompositeCommand{\d}{PU}{\ACIRCUMFLEX}{\9036\254}% U+1EAC
19492 \DeclareTextCompositeCommand{\`}{PU}{\ACIRCUMFLEX}{\9036\246}% U+1EA6
19493 \DeclareTextCompositeCommand{\h}{PU}{\ACIRCUMFLEX}{\9036\250}% U+1EA8
19494 \DeclareTextCompositeCommand{\~}{PU}{\ACIRCUMFLEX}{\9036\252}% U+1EA
19495 \DeclareTextCompositeCommand{\'}{PU}{E}{\80\311}% U+00C9
19496 \DeclareTextCompositeCommand{\d}{PU}{E}{\9036\270}% U+1EB8
19497 \DeclareTextCompositeCommand{\`}{PU}{E}{\80\310}% U+00C8
19498 \DeclareTextCompositeCommand{\h}{PU}{E}{\9036\272}% U+1EBA
19499 \DeclareTextCompositeCommand{\~}{PU}{E}{\9036\274}% U+1EBC
19500 \DeclareTextCompositeCommand{\'}{PU}{\ECIRCUMFLEX}{\9036\276}% U+1EBE
19501 \DeclareTextCompositeCommand{\d}{PU}{\ECIRCUMFLEX}{\9036\306}% U+1EC6
19502 \DeclareTextCompositeCommand{\`}{PU}{\ECIRCUMFLEX}{\9036\300}% U+1EC0
19503 \DeclareTextCompositeCommand{\h}{PU}{\ECIRCUMFLEX}{\9036\302}% U+1EC2
19504 \DeclareTextCompositeCommand{\~}{PU}{\ECIRCUMFLEX}{\9036\304}% U+1EC4
19505 \DeclareTextCompositeCommand{\'}{PU}{I}{\80\315}% U+00CD
19506 \DeclareTextCompositeCommand{\d}{PU}{I}{\9036\312}% U+1ECA
19507 \DeclareTextCompositeCommand{\`}{PU}{I}{\80\314}% U+00CC
19508 \DeclareTextCompositeCommand{\h}{PU}{I}{\9036\310}% U+1EC8
19509 \DeclareTextCompositeCommand{\~}{PU}{I}{\81\050}% U+0128
19510 \DeclareTextCompositeCommand{\'}{PU}{O}{\80\323}% U+00D3
19511 \DeclareTextCompositeCommand{\d}{PU}{O}{\9036\314}% U+1ECC
19512 \DeclareTextCompositeCommand{\`}{PU}{O}{\80\322}% U+00D2
19513 \DeclareTextCompositeCommand{\h}{PU}{O}{\9036\316}% U+1ECE
19514 \DeclareTextCompositeCommand{\~}{PU}{O}{\80\325}% U+00D5
19515 \DeclareTextCompositeCommand{\'}{PU}{\OCIRCUMFLEX}{\9036\320}% U+1ED0
19516 \DeclareTextCompositeCommand{\d}{PU}{\OCIRCUMFLEX}{\9036\330}% U+1ED8
19517 \DeclareTextCompositeCommand{\`}{PU}{\OCIRCUMFLEX}{\9036\322}% U+1ED2
19518 \DeclareTextCompositeCommand{\h}{PU}{\OCIRCUMFLEX}{\9036\324}% U+1ED4
19519 \DeclareTextCompositeCommand{\~}{PU}{\OCIRCUMFLEX}{\9036\326}% U+1ED6
19520 \DeclareTextCompositeCommand{\'}{PU}{\OHORN}{\9036\332}% U+1EDA
19521 \DeclareTextCompositeCommand{\d}{PU}{\OHORN}{\9036\342}% U+1EE2
19522 \DeclareTextCompositeCommand{\`}{PU}{\OHORN}{\9036\334}% U+1EDC
19523 \DeclareTextCompositeCommand{\h}{PU}{\OHORN}{\9036\336}% U+1EDE
19524 \DeclareTextCompositeCommand{\~}{PU}{\OHORN}{\9036\340}% U+1EE0
19525 \DeclareTextCompositeCommand{\'}{PU}{U}{\80\332}% U+00DA
19526 \DeclareTextCompositeCommand{\d}{PU}{U}{\9036\344}% U+1EE4
19527 \DeclareTextCompositeCommand{\`}{PU}{U}{\80\331}% U+00D9
19528 \DeclareTextCompositeCommand{\h}{PU}{U}{\9036\346}% U+1EE6
19529 \DeclareTextCompositeCommand{\~}{PU}{U}{\81\150}% U+0168

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19530 \DeclareTextCompositeCommand{\'}{PU}{\UHORN}{\9036\350}% U+1EE8
19531 \DeclareTextCompositeCommand{\d}{PU}{\UHORN}{\9036\360}% U+1EF0
19532 \DeclareTextCompositeCommand{\`}{PU}{\UHORN}{\9036\352}% U+1EEA
19533 \DeclareTextCompositeCommand{\h}{PU}{\UHORN}{\9036\354}% U+1EEC
19534 \DeclareTextCompositeCommand{\~}{PU}{\UHORN}{\9036\356}% U+1EEE
19535 \DeclareTextCompositeCommand{\'}{PU}{Y}{\80\335}% U+00DD
19536 \DeclareTextCompositeCommand{\d}{PU}{Y}{\9036\364}% U+1EF4
19537 \DeclareTextCompositeCommand{\`}{PU}{Y}{\9036\362}% U+1EF2
19538 \DeclareTextCompositeCommand{\h}{PU}{Y}{\9036\366}% U+1EF6
19539 \DeclareTextCompositeCommand{\~}{PU}{Y}{\9036\370}% U+1EF8
19540 (/puvnenc)

```

47.4 PU encoding, additions for Arabi

This file is provided and maintained by Youssef Jabri.

```

19541 (*puarenc)
19542 % U+0621;afii57409;ARABIC LETTER HAMZA
19543 \DeclareTextCommand{\hamza}{PU}{\86\041}% U+0621
19544 % U+0622;afii57410;ARABIC LETTER ALEF WITH MADDA ABOVE
19545 \DeclareTextCommand{\alefmadda}{PU}{\86\042}% U+0622
19546 % U+0623;afii57411;ARABIC LETTER ALEF WITH HAMZA ABOVE
19547 \DeclareTextCommand{\alefhamza}{PU}{\86\043}% U+0623
19548 % U+0624;afii57412;ARABIC LETTER WAW WITH HAMZA ABOVE
19549 \DeclareTextCommand{\wawhamza}{PU}{\86\044}% U+0624
19550 % U+0625;afii57413;ARABIC LETTER ALEF WITH HAMZA BELOW
19551 \DeclareTextCommand{\aleflowerhamza}{PU}{\86\045}% U+0625
19552 % U+0626;afii57414;ARABIC LETTER YEH WITH HAMZA ABOVE
19553 \DeclareTextCommand{\yahamza}{PU}{\86\046}% U+0626
19554 % U+0627;afii57415;ARABIC LETTER ALEF
19555 \DeclareTextCommand{\alef}{PU}{\86\047}% U+0627
19556 % U+0628;afii57416;ARABIC LETTER BEH
19557 \DeclareTextCommand{\baa}{PU}{\86\050}% U+0628
19558 % U+0629;afii57417;ARABIC LETTER TEH MARBUTA
19559 \DeclareTextCommand{\T}{PU}{\86\051}% U+0629
19560 % U+062A;afii57418;ARABIC LETTER TEH
19561 \DeclareTextCommand{\taa}{PU}{\86\052}% U+062A
19562 % U+062B;afii57419;ARABIC LETTER THEH
19563 \DeclareTextCommand{\thaa}{PU}{\86\053}% U+062B
19564 % U+062C;afii57420;ARABIC LETTER JEEM
19565 \DeclareTextCommand{\jeem}{PU}{\86\054}% U+062C
19566 % U+062D;afii57421;ARABIC LETTER HAH
19567 \DeclareTextCommand{\Haa}{PU}{\86\055}% U+062D
19568 % U+062E;afii57422;ARABIC LETTER KHAH
19569 \DeclareTextCommand{\kha}{PU}{\86\056}% U+062E
19570 % U+062F;afii57423;ARABIC LETTER DAL
19571 \DeclareTextCommand{\dal}{PU}{\86\057}% U+062F
19572 % U+0630;afii57424;ARABIC LETTER THAL
19573 \DeclareTextCommand{\dhal}{PU}{\86\060}% U+0630
19574 % U+0631;afii57425;ARABIC LETTER REH
19575 \DeclareTextCommand{\ra}{PU}{\86\061}% U+0631
19576 % U+0632;afii57426;ARABIC LETTER ZAIN
19577 \DeclareTextCommand{\zay}{PU}{\86\062}% U+0632
19578 % U+0633;afii57427;ARABIC LETTER SEEN

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19579 \DeclareTextCommand{\seen}{PU}{\86\063}% U+0633
19580 % U+0634;afii57428;ARABIC LETTER SHEEN
19581 \DeclareTextCommand{\sheen}{PU}{\86\064}% U+0634
19582 % U+0635;afii57429;ARABIC LETTER SAD
19583 \DeclareTextCommand{\sad}{PU}{\86\065}% U+0635
19584 % U+0636;afii57430;ARABIC LETTER DAD
19585 \DeclareTextCommand{\dad}{PU}{\86\066}% U+0636
19586 % U+0637;afii57431;ARABIC LETTER TAH
19587 \DeclareTextCommand{\Ta}{PU}{\86\067}% U+0637
19588 % U+0638;afii57432;ARABIC LETTER ZAH
19589 \DeclareTextCommand{\za}{PU}{\86\070}% U+0638
19590 % U+0639;afii57433;ARABIC LETTER AIN
19591 \DeclareTextCommand{\ayn}{PU}{\86\071}% U+0639
19592 % U+063A;afii57434;ARABIC LETTER GHAIN
19593 \DeclareTextCommand{\ghayn}{PU}{\86\072}% U+063A
19594 % U+0640;afii57440;ARABIC TATWEEL
19595 \DeclareTextCommand{\tatweel}{PU}{\86\100}% U+0640
19596 % U+0641;afii57441;ARABIC LETTER FEH
19597 \DeclareTextCommand{\fa}{PU}{\86\101}% U+0641
19598 % U+0642;afii57442;ARABIC LETTER QAF
19599 \DeclareTextCommand{\qaf}{PU}{\86\102}% U+0642
19600 % U+0643;afii57443;ARABIC LETTER KAF
19601 \DeclareTextCommand{\kaf}{PU}{\86\103}% U+0643
19602 % U+0644;afii57444;ARABIC LETTER LAM
19603 \DeclareTextCommand{\lam}{PU}{\86\104}% U+0644
19604 % U+0645;afii57445;ARABIC LETTER MEEM
19605 \DeclareTextCommand{\meem}{PU}{\86\105}% U+0645
19606 % U+0646;afii57446;ARABIC LETTER NOON
19607 \DeclareTextCommand{\nun}{PU}{\86\106}% U+0646
19608 % U+0647;afii57470;ARABIC LETTER HEH
19609 \DeclareTextCommand{\ha}{PU}{\86\107}% U+0647
19610 % U+0648;afii57448;ARABIC LETTER WAW
19611 \DeclareTextCommand{\waw}{PU}{\86\110}% U+0648
19612 % U+0649;afii57449;ARABIC LETTER ALEF MAKSURA
19613 \DeclareTextCommand{\alefmaqsura}{PU}{\86\111}% U+0649
19614 % U+064A;afii57450;ARABIC LETTER YEH
19615 \DeclareTextCommand{\ya}{PU}{\86\112}% U+064A
19616 % U+064B;afii57451;ARABIC FATHATAN
19617 \DeclareTextCommand{\nasb}{PU}{\86\113}% U+064B
19618 % U+064C;afii57452;ARABIC DAMMATAN
19619 \DeclareTextCommand{\raff}{PU}{\86\114}% U+064C
19620 % U+064D;afii57453;ARABIC KASRATAN
19621 \DeclareTextCommand{\jarr}{PU}{\86\115}% U+064D
19622 % U+064E;afii57454;ARABIC FATHA
19623 \DeclareTextCommand{\fatha}{PU}{\86\116}% U+064E
19624 % U+064F;afii57455;ARABIC DAMMA
19625 \DeclareTextCommand{\damma}{PU}{\86\117}% U+064F
19626 % U+0650;afii57456;ARABIC KASRA
19627 \DeclareTextCommand{\kasra}{PU}{\86\120}% U+0650
19628 % U+0651;afii57457;ARABIC SHADDA
19629 \DeclareTextCommand{\shadda}{PU}{\86\121}% U+0651
19630 % U+0652;afii57458;ARABIC SUKUN
19631 \DeclareTextCommand{\sukun}{PU}{\86\122}% U+0652

Farsi

19632 % U+067E ARABIC LETTER PEH; afii57506
19633 \DeclareTextCommand{\peh}{PU}{\86\176}% U+067E
19634 % U+0686 ARABIC LETTER TCHEH; afii57507
19635 \DeclareTextCommand{\tcheh}{PU}{\86\206}% U+0686
19636 % U+0698 ARABIC LETTER JEH; afii57508
19637 \DeclareTextCommand{\jeh}{PU}{\86\230}% U+0698
19638 % U+06A9 ARABIC LETTER KEHEH
19639 \DeclareTextCommand{\farsikaf}{PU}{\86\251}% U+06A9
19640 % U+06AF ARABIC LETTER GAF; afii57509
19641 \DeclareTextCommand{\gaf}{PU}{\86\257}% U+06AF
19642 % U+06CC ARABIC LETTER FAR.SI YEH
19643 \DeclareTextCommand{\farsiya}{PU}{\86\314}% U+06CC

19644 % U+200C ZERO WIDTH NON-JOINER; afii61664
19645 \DeclareTextCommand{\ZWNJ}{PU}{\9040\014}% U+200C
19646 % U+200D ZERO WIDTH JOINER; afii301
19647 \DeclareTextCommand{\textEncodingNoboundary}{PU}{\9040\015}% U+200D

19648 (/puarenc)
19649 (*psdextra)
19650 \Hy@VersionCheck{psdextra.def}
19651 \DeclareTextCommand{\textGamma}{PU}{\83\223}%* U+0393
19652 \DeclareTextCommand{\textDelta}{PU}{\83\224}%* U+0394
19653 \DeclareTextCommand{\textTheta}{PU}{\83\230}%* U+0398
19654 \DeclareTextCommand{\textLambda}{PU}{\83\233}%* U+039B
19655 \DeclareTextCommand{\textXi}{PU}{\83\236}%* U+039E
19656 \DeclareTextCommand{\textPi}{PU}{\83\240}%* U+03A0
19657 \DeclareTextCommand{\textSigma}{PU}{\83\243}%* U+03A3
19658 \DeclareTextCommand{\textUpsilon}{PU}{\83\245}%* U+03A5
19659 \DeclareTextCommand{\textPhi}{PU}{\83\246}%* U+03A6
19660 \DeclareTextCommand{\textChi}{PU}{\83\247}% U+03A7
19661 \DeclareTextCommand{\textPsi}{PU}{\83\250}%* U+03A8
19662 \DeclareTextCommand{\textOmega}{PU}{\83\251}%* U+03A9
19663 \DeclareTextCommand{\textalpha}{PU}{\83\261}%* U+03B1
19664 \DeclareTextCommand{\textbeta}{PU}{\83\262}%* U+03B2
19665 \DeclareTextCommand{\textgamma}{PU}{\83\263}%* U+03B3
19666 \DeclareTextCommand{\textdelta}{PU}{\83\264}%* U+03B4
19667 \DeclareTextCommand{\textepsilon}{PU}{\83\265}%* U+03B5
19668 \DeclareTextCommand{\textzeta}{PU}{\83\266}%* U+03B6
19669 \DeclareTextCommand{\texteta}{PU}{\83\267}%* U+03B7
19670 \DeclareTextCommand{\texttheta}{PU}{\83\270}%* U+03B8
19671 \DeclareTextCommand{\textiota}{PU}{\83\271}%* U+03B9
19672 \DeclareTextCommand{\textkappa}{PU}{\83\272}%* U+03BA
19673 \DeclareTextCommand{\textlambda}{PU}{\83\273}%* U+03BB
19674 \DeclareTextCommand{\textmugreek}{PU}{\83\274}%* U+03BC
19675 \DeclareTextCommand{\textnu}{PU}{\83\275}%* U+03BD
19676 \DeclareTextCommand{\textxi}{PU}{\83\276}%* U+03BE
19677 \DeclareTextCommand{\textpi}{PU}{\83\300}%* U+03C0
19678 \DeclareTextCommand{\textrho}{PU}{\83\301}%* U+03C1
19679 \DeclareTextCommand{\textvarsigma}{PU}{\83\302}%* U+03C2
19680 \DeclareTextCommand{\textsigma}{PU}{\83\303}%* U+03C3
19681 \DeclareTextCommand{\texttau}{PU}{\83\304}%* U+03C4
19682 \DeclareTextCommand{\textupsilon}{PU}{\83\305}%* U+03C5
19683 \DeclareTextCommand{\textphi}{PU}{\83\306}%* U+03C6

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19684 \DeclareTextCommand{\textchi}{PU}{\83\307}%* U+03C7
19685 \DeclareTextCommand{\textpsi}{PU}{\83\310}%* U+03C8
19686 \DeclareTextCommand{\textomega}{PU}{\83\311}%* U+03C9
19687 \newcommand*{\psdmapshortnames}{%
19688   \let\MVPlus\textMVPlus
19689   \let\MVComma\textMVComma
19690   \let\MVMinus\textMVMinus
19691   \let\MVPeriod\textMVPeriod
19692   \let\MVDivision\textMVDivision
19693   \let\MVZero\textMVZero
19694   \let\MVOne\textMVOne
19695   \let\MVTwo\textMVTwo
19696   \let\MVThree\textMVThree
19697   \let\MVFour\textMVFour
19698   \let\MVFive\textMVFive
19699   \let\MVSix\textMVSix
19700   \let\MVSeven\textMVSeven
19701   \let\MVEight\textMVEight
19702   \let\MVNine\textMVNine
19703   \let\MVAt\textMVAt
19704   \let\copyright\textcopyright
19705   \let\twosuperior\texttwosuperior
19706   \let\threesuperior\textthreesuperior
19707   \let\onesuperior\textonesuperior
19708   \let\Thorn\textThorn
19709   \let\thorn\textthorn
19710   \let\hbar\texthbar
19711   \let\hausA\texthausA
19712   \let\hausB\texthausB
19713   \let\hausC\texthausC
19714   \let\hausD\texthausD
19715   \let\hausE\texthausE
19716   \let\hausF\texthausF
19717   \let\hausG\texthausG
19718   \let\hausH\texthausH
19719   \let\hausI\texthausI
19720   \let\hausJ\texthausJ
19721   \let\hausK\texthausK
19722   \let\hausL\texthausL
19723   \let\hausM\texthausM
19724   \let\hausN\texthausN
19725   \let\hausO\texthausO
19726   \let\hausP\texthausP
19727   \let\hausQ\texthausQ
19728   \let\hausR\texthausR
19729   \let\hausS\texthausS
19730   \let\hausT\texthausT
19731   \let\hausU\texthausU
19732   \let\hausV\texthausV
19733   \let\hausW\texthausW
19734   \let\hausX\texthausX
19735   \let\hausY\texthausY
19736   \let\hausZ\texthausZ
19737   \let\esh\textesh

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19738 `\let\baru\textbaru`
19739 `\let\niupsilon\textniupsilon`
19740 `\let\scriptv\textscriptv`
19741 `\let\turnv\textturnv`
19742 `\let\turnw\textturnw`
19743 `\let\turny\textturny`
19744 `\let\scy\textscy`
19745 `\let\yogh\textyogh`
19746 `\let\glotstop\textglotstop`
19747 `\let\revglotstop\textrevglotstop`
19748 `\let\invglotstop\textinvglotstop`
19749 `\let\Gamma\textGamma`
19750 `\let\Delta\textDelta`
19751 `\let\Theta\textTheta`
19752 `\let\Lambda\textLambda`
19753 `\let\Xi\textXi`
19754 `\let\Pi\textPi`
19755 `\let\Sigma\textSigma`
19756 `\let\Upsilon\textUpsilon`
19757 `\let\Phi\textPhi`
19758 `\let\Psi\textPsi`
19759 `\let\Omega\textOmega`
19760 `\let\alpha\textalpha`
19761 `\let\beta\textbeta`
19762 `\let\gamma\textgamma`
19763 `\let\delta\textdelta`
19764 `\let\epsilon\textepsilon`
19765 `\let\zeta\textzeta`
19766 `\let\eta\texteta`
19767 `\let\theta\texttheta`
19768 `\let\iota\textiota`
19769 `\let\kappa\textkappa`
19770 `\let\lambda\textlambda`
19771 `\let\mu\textmu`
19772 `\let\mugreek\textmugreek`
19773 `\let\nu\textnu`
19774 `\let\xi\textxi`
19775 `\let\pi\textpi`
19776 `\let\rho\textrho`
19777 `\let\varsigma\textvarsigma`
19778 `\let\sigma\textsigma`
19779 `\let\tau\texttau`
19780 `\let\upsilon\textupsilon`
19781 `\let\phi\textphi`
19782 `\let\chi\textchi`
19783 `\let\psi\textpsi`
19784 `\let\omega\textomega`
19785 `\let\scd\textscd`
19786 `\let\scu\textscu`
19787 `\let\iinferior\textiinferior`
19788 `\let\rinferior\textrinferior`
19789 `\let\uinferior\textuinferior`
19790 `\let\vinferior\textvinferior`
19791 `\let\betainferior\textbetainferior`

19792 \let\gammainferior\textgammainferior
19793 \let\rhoinferior\textrhoinferior
19794 \let\phiinferior\textphiinferior
19795 \let\chiinferior\textchiinferior
19796 \let\barsci\textbarsci
19797 \let\barp\textbarp
19798 \let\barscu\textbarscu
19799 \let\htrtaild\texthtrtaild
19800 \let\dagger\textdagger
19801 \let\bullet\textbullet
19802 \let\hdotfor\texthdotfor
19803 \let\prime\textprime
19804 \let\second\textsecond
19805 \let\third\textthird
19806 \let\backprime\textbackprime
19807 \let\lefttherefore\textlefttherefore
19808 \let\fourth\textfourth
19809 \let\diamonddots\textdiamonddots
19810 \let\zerosuperior\textzerosuperior
19811 \let\isuperior\textisuperior
19812 \let\foursuperior\textfoursuperior
19813 \let\fivesuperior\textfivesuperior
19814 \let\sixsuperior\textsixsuperior
19815 \let\sevensuperior\textsevensuperior
19816 \let\eightsuperior\texteightsuperior
19817 \let\ninesuperior\textninesuperior
19818 \let\plussuperior\textplussuperior
19819 \let\minussuperior\textminussuperior
19820 \let\equalsuperior\textequalsuperior
19821 \let\parenleftsuperior\textparenleftsuperior
19822 \let\parenrightsuperior\textparenrightsuperior
19823 \let\nsuperior\textnsuperior
19824 \let\zeroinferior\textzeroinferior
19825 \let\oneinferior\textoneinferior
19826 \let\twoinferior\texttwoinferior
19827 \let\threeinferior\textthreeinferior
19828 \let\fourinferior\textfourinferior
19829 \let\fiveinferior\textfiveinferior
19830 \let\sixinferior\textsixinferior
19831 \let\seveninferior\textseveninferior
19832 \let\eightinferior\texteightinferior
19833 \let\nineinferior\textnineinferior
19834 \let\plusinferior\textplusinferior
19835 \let\minusinferior\textminusinferior
19836 \let\equalsinferior\textequalsinferior
19837 \let\parenleftinferior\textparenleftinferior
19838 \let\parenrightinferior\textparenrightinferior
19839 \let\ainferior\textainferior
19840 \let\einferior\texteinferior
19841 \let\oinferior\textoinferior
19842 \let\xinferior\textxinferior
19843 \let\schwainferior\textschwainferior
19844 \let\hinferior\texthinferior
19845 \let\kinferior\textkinferior

19846 \let\linferior\textlinferior
19847 \let\minferior\textminferior
19848 \let\ninferior\textninferior
19849 \let\pinferior\textpinferior
19850 \let\sinferior\textsinferior
19851 \let\tinferior\texttinferior
19852 \let\Deleatur\textDeleatur
19853 \let\hslash\texthslash
19854 \let\Im\textIm
19855 \let\ell\textell
19856 \let\wp\textwp
19857 \let\Re\textRe
19858 \let\mho\textmho
19859 \let\riota\textriota
19860 \let\Finv\textFinv
19861 \let\aleph\textaleph
19862 \let\beth\textbeth
19863 \let\gimel\textgimel
19864 \let\daleth\textdaleth
19865 \let\xfax\textfax
19866 \let\Game\textGame
19867 \let\leftarrow\textleftarrow
19868 \let\uparrow\textuparrow
19869 \let\rightarrow\textrightarrow
19870 \let\downarrow\textdownarrow
19871 \let\leftrightarrow\textleftrightarrow
19872 \let\updownarrow\textupdownarrow
19873 \let\nwarrow\textnwarrow
19874 \let\nearrow\textnearrow
19875 \let\searrow\textsearrow
19876 \let\swarrow\textswarrow
19877 \let\nleftarrow\textnleftarrow
19878 \let\nrightarrow\textnrightarrow
19879 \let\twoheadleftarrow\texttwoheadleftarrow
19880 \let\ntwoheadleftarrow\textntwoheadleftarrow
19881 \let\twoheaduparrow\texttwoheaduparrow
19882 \let\twoheadrightarrow\texttwoheadrightarrow
19883 \let\ntwoheadrightarrow\textntwoheadrightarrow
19884 \let\twoheaddownarrow\texttwoheaddownarrow
19885 \let\leftarrowtail\textleftarrowtail
19886 \let\rightarrowtail\textrightarrowtail
19887 \let\mapsto\textmapsto
19888 \let\hookleftarrow\texthookleftarrow
19889 \let\hookrightarrow\texthookrightarrow
19890 \let\looparrowleft\textlooparrowleft
19891 \let\looparrowright\textlooparrowright
19892 \let\leftrightharrow\textleftrightharrow
19893 \let\lightning\textlightning
19894 \let\dsh\textdsh
19895 \let\curvearrowleft\textcurvearrowleft
19896 \let\curvearrowright\textcurvearrowright
19897 \let\lefttharpoonup\textlefttharpoonup
19898 \let\lefttharpoondown\textlefttharpoondown
19899 \let\upharpoonright\textupharpoonright

19900 $\backslash\text{upharpoonleft}$
19901 $\backslash\text{rightharpoonup}$
19902 $\backslash\text{rightharpoondown}$
19903 $\backslash\text{downharpoonright}$
19904 $\backslash\text{downharpoonleft}$
19905 $\backslash\text{rightleftarrows}$
19906 $\backslash\text{updownarrows}$
19907 $\backslash\text{leftrightarrows}$
19908 $\backslash\text{leftleftarrows}$
19909 $\backslash\text{upuparrows}$
19910 $\backslash\text{rightrightarrows}$
19911 $\backslash\text{downdownarrows}$
19912 $\backslash\text{leftrightharpoons}$
19913 $\backslash\text{rightleftharpoons}$
19914 $\backslash\text{nLeftarrow}$
19915 $\backslash\text{nLeftrightarrow}$
19916 $\backslash\text{nRrightarrow}$
19917 $\backslash\text{Leftarrow}$
19918 $\backslash\text{Uparrow}$
19919 $\backslash\text{Rrightarrow}$
19920 $\backslash\text{Downarrow}$
19921 $\backslash\text{Leftrightarrow}$
19922 $\backslash\text{Updownarrow}$
19923 $\backslash\text{Nwarrow}$
19924 $\backslash\text{Nearrow}$
19925 $\backslash\text{Searrow}$
19926 $\backslash\text{Swarrow}$
19927 $\backslash\text{Lleftarrow}$
19928 $\backslash\text{Rrightarrow}$
19929 $\backslash\text{leftsquigarrow}$
19930 $\backslash\text{rightsquigarrow}$
19931 $\backslash\text{dashleftarrow}$
19932 $\backslash\text{dasheduparrow}$
19933 $\backslash\text{dashrightarrow}$
19934 $\backslash\text{dasheddownarrow}$
19935 $\backslash\text{pointer}$
19936 $\backslash\text{downuparrows}$
19937 $\backslash\text{leftarrowtriangle}$
19938 $\backslash\text{rightarrowtriangle}$
19939 $\backslash\text{leftrightarrowtriangle}$
19940 $\backslash\text{forall}$
19941 $\backslash\text{complement}$
19942 $\backslash\text{partial}$
19943 $\backslash\text{exists}$
19944 $\backslash\text{nexists}$
19945 $\backslash\text{emptyset}$
19946 $\backslash\text{triangle}$
19947 $\backslash\text{nabla}$
19948 $\backslash\text{in}$
19949 $\backslash\text{notin}$
19950 $\backslash\text{smallin}$
19951 $\backslash\text{ni}$
19952 $\backslash\text{notowner}$
19953 $\backslash\text{smallowns}$

19954 $\backslash\text{let}\backslash\text{prod}\backslash\text{textprod}$
19955 $\backslash\text{let}\backslash\text{amalg}\backslash\text{textamalg}$
19956 $\backslash\text{let}\backslash\text{sum}\backslash\text{textsum}$
19957 $\backslash\text{let}\backslash\text{mp}\backslash\text{textmp}$
19958 $\backslash\text{let}\backslash\text{dotplus}\backslash\text{textdotplus}$
19959 $\backslash\text{let}\backslash\text{Divides}\backslash\text{textDivides}$
19960 $\backslash\text{let}\backslash\text{DividesNot}\backslash\text{textDividesNot}$
19961 $\backslash\text{let}\backslash\text{setminus}\backslash\text{textsetminus}$
19962 $\backslash\text{let}\backslash\text{ast}\backslash\text{textast}$
19963 $\backslash\text{let}\backslash\text{circ}\backslash\text{textcirc}$
19964 $\backslash\text{let}\backslash\text{surd}\backslash\text{textsurd}$
19965 $\backslash\text{let}\backslash\text{propto}\backslash\text{textpropto}$
19966 $\backslash\text{let}\backslash\text{infty}\backslash\text{textinfty}$
19967 $\backslash\text{let}\backslash\text{angle}\backslash\text{textangle}$
19968 $\backslash\text{let}\backslash\text{measuredangle}\backslash\text{textmeasuredangle}$
19969 $\backslash\text{let}\backslash\text{sphericalangle}\backslash\text{textsphericalangle}$
19970 $\backslash\text{let}\backslash\text{mid}\backslash\text{textmid}$
19971 $\backslash\text{let}\backslash\text{nmid}\backslash\text{textnmid}$
19972 $\backslash\text{let}\backslash\text{parallel}\backslash\text{textparallel}$
19973 $\backslash\text{let}\backslash\text{nparallel}\backslash\text{textnparallel}$
19974 $\backslash\text{let}\backslash\text{wedge}\backslash\text{textwedge}$
19975 $\backslash\text{let}\backslash\text{owedge}\backslash\text{textowedge}$
19976 $\backslash\text{let}\backslash\text{vee}\backslash\text{textvee}$
19977 $\backslash\text{let}\backslash\text{ovee}\backslash\text{textovee}$
19978 $\backslash\text{let}\backslash\text{cap}\backslash\text{textcap}$
19979 $\backslash\text{let}\backslash\text{cup}\backslash\text{textcup}$
19980 $\backslash\text{let}\backslash\text{int}\backslash\text{textint}$
19981 $\backslash\text{let}\backslash\text{iint}\backslash\text{textiint}$
19982 $\backslash\text{let}\backslash\text{iiint}\backslash\text{textiiint}$
19983 $\backslash\text{let}\backslash\text{oint}\backslash\text{textoint}$
19984 $\backslash\text{let}\backslash\text{oiint}\backslash\text{textoiint}$
19985 $\backslash\text{let}\backslash\text{ointclockwise}\backslash\text{textointclockwise}$
19986 $\backslash\text{let}\backslash\text{ointctrlockwise}\backslash\text{textointctrlockwise}$
19987 $\backslash\text{let}\backslash\text{therefore}\backslash\text{texttherefore}$
19988 $\backslash\text{let}\backslash\text{because}\backslash\text{textbecause}$
19989 $\backslash\text{let}\backslash\text{vdotdot}\backslash\text{textvdotdot}$
19990 $\backslash\text{let}\backslash\text{squaredots}\backslash\text{textsquaredots}$
19991 $\backslash\text{let}\backslash\text{dotminus}\backslash\text{textdotminus}$
19992 $\backslash\text{let}\backslash\text{eqcolon}\backslash\text{texteqcolon}$
19993 $\backslash\text{let}\backslash\text{sim}\backslash\text{textsim}$
19994 $\backslash\text{let}\backslash\text{backsim}\backslash\text{textbacksim}$
19995 $\backslash\text{let}\backslash\text{nbacksim}\backslash\text{textnbacksim}$
19996 $\backslash\text{let}\backslash\text{wr}\backslash\text{textwr}$
19997 $\backslash\text{let}\backslash\text{nsim}\backslash\text{textnsim}$
19998 $\backslash\text{let}\backslash\text{eqsim}\backslash\text{texteqsim}$
19999 $\backslash\text{let}\backslash\text{neqsim}\backslash\text{textneqsim}$
20000 $\backslash\text{let}\backslash\text{simeq}\backslash\text{textsimeq}$
20001 $\backslash\text{let}\backslash\text{nsimeq}\backslash\text{textnsimeq}$
20002 $\backslash\text{let}\backslash\text{cong}\backslash\text{textcong}$
20003 $\backslash\text{let}\backslash\text{ncong}\backslash\text{textncong}$
20004 $\backslash\text{let}\backslash\text{approx}\backslash\text{textapprox}$
20005 $\backslash\text{let}\backslash\text{napprox}\backslash\text{textnapprox}$
20006 $\backslash\text{let}\backslash\text{approxeq}\backslash\text{textapproxeq}$
20007 $\backslash\text{let}\backslash\text{napproxeq}\backslash\text{textnapproxeq}$

20008 \let\triplesim\texttriplesim
20009 \let\ntriplesim\textntriplesim
20010 \let\backcong\textbackcong
20011 \let\backcong\textnbackcong
20012 \let\asymp\textasymp
20013 \let\nasymp\textnasymp
20014 \let\Bumpeq\textBumpeq
20015 \let\NBumpeq\textNBumpeq
20016 \let\bumpeq\textbumpeq
20017 \let\Nbumpeq\textNbumpeq
20018 \let\doteq\textdoteq
20019 \let\ndoteq\textndoteq
20020 \let\doteqdot\textdoteqdot
20021 \let\NDoteq\textNDoteq
20022 \let\fallingdoteq\textfallingdoteq
20023 \let\Nfallingdoteq\textNfallingdoteq
20024 \let\risingdoteq\extrisingdoteq
20025 \let\Nrisingdoteq\textNrisingdoteq
20026 \let\colonequals\textcolonequals
20027 \let\equalscolon\textequalscolon
20028 \let\eqcirc\texteqcirc
20029 \let\neqcirc\textneqcirc
20030 \let\circeq\textcirceq
20031 \let\ncirceq\textncirceq
20032 \let\hateq\texthateq
20033 \let\Nhateq\textNhateq
20034 \let\triangleeq\texttriangleeq
20035 \let\neq\textneq
20036 \let\ne\textne
20037 \let\equiv\textequiv
20038 \let\nequiv\textnequiv
20039 \let\leq\textleq
20040 \let\le\textle
20041 \let\geq\textgeq
20042 \let\ge\textge
20043 \let\leqq\textleqq
20044 \let\Nleqq\textNleqq
20045 \let\geqq\textgeqq
20046 \let\Ngeqq\textNgeqq
20047 \let\lneqq\textlneqq
20048 \let\gneqq\textgneqq
20049 \let\ll\textll
20050 \let\nll\textnll
20051 \let\gg\textgg
20052 \let\ngg\textngg
20053 \let\between\textbetween
20054 \let\nless\textnless
20055 \let\ngtr\textngtr
20056 \let\Nleq\textNleq
20057 \let\Ngeq\textNgeq
20058 \let\lesssim\textlesssim
20059 \let\gtrsim\textgtrsim
20060 \let\Nlesssim\textNlesssim
20061 \let\ngtrsim\textngtrsim

20062 \let\lessgtr\textlessgtr
20063 \let\gtrless\textgtrless
20064 \let\ngtrless\textngtrless
20065 \let\nlessgtr\textnlessgtr
20066 \let\prec\textprec
20067 \let\succ\textsucc
20068 \let\preccurlyeq\textpreccurlyeq
20069 \let\succcurlyeq\textsucccurlyeq
20070 \let\precsim\textprecsim
20071 \let\nprecsim\textnprecsim
20072 \let\succsim\textsuccsim
20073 \let\nsuccsim\textnsuccsim
20074 \let\nprec\textnprec
20075 \let\nsucc\textnsucc
20076 \let\subset\textsubset
20077 \let\supset\textsupset
20078 \let\nsubset\textnsubset
20079 \let\nsupset\textnsupset
20080 \let\subseteq\textsubseteq
20081 \let\supseteq\textsupseteq
20082 \let\nsubsubseteq\textnsubsubseteq
20083 \let\nsupseteq\textnsupseteq
20084 \let\subsetneq\textsubsetneq
20085 \let\supsetneq\textsupsetneq
20086 \let\cupdot\textcupdot
20087 \let\cupplus\textcupplus
20088 \let\sqssubset\textsqsubset
20089 \let\nsqsubset\textnsqsubset
20090 \let\sqsupset\textsqsupset
20091 \let\nsqsupset\textnsqsupset
20092 \let\sqssubseteq\textsqsubseteq
20093 \let\nsqsubseteq\textnsqsubseteq
20094 \let\sqsupseteq\textsqsupseteq
20095 \let\nsqsupseteq\textnsqsupseteq
20096 \let\sqcap\textsqcap
20097 \let\sqcup\textsqcup
20098 \let\oplus\textoplus
20099 \let\ominus\textominus
20100 \let\otimes\textotimes
20101 \let\oslash\textoslash
20102 \let\odot\textodot
20103 \let\circledcirc\textcircledcirc
20104 \let\circledast\textcircledast
20105 \let\circleddash\textcircleddash
20106 \let\boxplus\textboxplus
20107 \let\boxminus\textboxminus
20108 \let\boxtimes\textboxtimes
20109 \let\boxdot\textboxdot
20110 \let\vdash\textvdash
20111 \let\dashv\textdashv
20112 \let\ndashv\textndashv
20113 \let\top\texttop
20114 \let\ndownvdash\textndownvdash
20115 \let\bot\textbot

20116 `\let\nupvdash\textnupvdash`
 20117 `\let\vDash\textvDash`
 20118 `\let\Vdash\textVdash`
 20119 `\let\Vvdash\textVvdash`
 20120 `\let\nVdash\textnVdash`
 20121 `\let\VDash\textVDash`
 20122 `\let\nvdash\textnvdash`
 20123 `\let\nvDash\textnvDash`
 20124 `\let\nVdash\textnVdash`
 20125 `\let\nVDash\textnVDash`
 20126 `\let\lhd\textlhd`
 20127 `\let\rhd\textrhd`
 20128 `\let\unlhd\textunlhd`
 20129 `\let\unrhd\textunrhd`
 20130 `\let\multimapdotbothA\textmultimapdotbothA`
 20131 `\let\multimapdotbothB\textmultimapdotbothB`
 20132 `\let\multimap\textmultimap`
 20133 `\let\veebar\textveebar`
 20134 `\let\barwedge\textbarwedge`
 20135 `\let\star\textstar`
 20136 `\let\divideontimes\textdivideontimes`
 20137 `\let\bowtie\textbowtie`
 20138 `\let\ltimes\textltimes`
 20139 `\let\rtimes\textrtimes`
 20140 `\let\leftthreetimes\textleftthreetimes`
 20141 `\let\rightthreetimes\textrightthreetimes`
 20142 `\let\backsimeq\textbacksimeq`
 20143 `\let\nbacksimeq\textnbacksimeq`
 20144 `\let\curlyvee\textcurlyvee`
 20145 `\let\curlywedge\textcurlywedge`
 20146 `\let\Subset\textSubset`
 20147 `\let\nSubset\textnSubset`
 20148 `\let\Supset\textSupset`
 20149 `\let\nSupset\textnSupset`
 20150 `\let\Cap\textCap`
 20151 `\let\Cup\textCup`
 20152 `\let\pitchfork\textpitchfork`
 20153 `\let\lessdot\textlessdot`
 20154 `\let\gtrdot\textgtrdot`
 20155 `\let\lll\textlll`
 20156 `\let\ggg\textggg`
 20157 `\let\lesseqgtr\textlesseqgtr`
 20158 `\let\gtreqless\textgtreqless`
 20159 `\let\curlyeqprec\textcurlyeqprec`
 20160 `\let\ncurlyeqprec\textncurlyeqprec`
 20161 `\let\curlyeqsucc\textcurlyeqsucc`
 20162 `\let\ncurlyeqsucc\textncurlyeqsucc`
 20163 `\let\npreccurlyeq\textnpreccurlyeq`
 20164 `\let\nsuccurlyeq\textnsuccurlyeq`
 20165 `\let\nqsubseteq\textnqsubseteq`
 20166 `\let\nqsupseteq\textnqsupseteq`
 20167 `\let\sqsubsetneq\textsqsubsetneq`
 20168 `\let\sqsupsetneq\textsqsupsetneq`
 20169 `\let\lnsim\textlnsim`

20170 \let\gnsim\textgnsim
 20171 \let\precnsim\textprecnsim
 20172 \let\succnsim\textsuccnsim
 20173 \let\ntriangleleft\textntriangleleft
 20174 \let\ntriangleright\textntriangleright
 20175 \let\ntrianglelefteq\textntrianglelefteq
 20176 \let\ntrianglerighteq\textntrianglerighteq
 20177 \let\vdots\textvdots
 20178 \let\cdots\textcdots
 20179 \let\udots\textudots
 20180 \let\ddots\textddots
 20181 \let\barin\textbarin
 20182 \let\diameter\textdiameter
 20183 \let\backneg\textbackneg
 20184 \let\wasylozenge\textwasylozenge
 20185 \let\invbackneg\textinvbackneg
 20186 \let\clock\textclock
 20187 \let\ulcorner\textulcorner
 20188 \let\urcorner\texturcorner
 20189 \let\llcorner\textllcorner
 20190 \let\lrcorner\textlrcorner
 20191 \let\frown\textfrown
 20192 \let\smile\textsmile
 20193 \let\Keyboard\textKeyboard
 20194 \let\langle\textlangle
 20195 \let\rangle\textrangle
 20196 \let\APLin\textAPLin
 20197 \let\Tumbler\textTumbler
 20198 \let\notslash\textnotslash
 20199 \let\notbackslash\textnotbackslash
 20200 \let\boxbackslash\textboxbackslash
 20201 \let\APLleftarrowbox\textAPLleftarrowbox
 20202 \let\APLrightarrowbox\textAPLrightarrowbox
 20203 \let\APLuparrowbox\textAPLuparrowbox
 20204 \let\APLdownarrowbox\textAPLdownarrowbox
 20205 \let\APLin\textAPLin
 20206 \let\Request\textRequest
 20207 \let\Beam\textBeam
 20208 \let\hexagon\texthexagon
 20209 \let\APLbox\textAPLbox
 20210 \let\ForwardToIndex\textForwardToIndex
 20211 \let\RewindToIndex\textRewindToIndex
 20212 \let\bbslash\textbbslash
 20213 \let\CircledA\textCircledA
 20214 \let\CleaningF\textCleaningF
 20215 \let\CleaningFF\textCleaningFF
 20216 \let\CleaningP\textCleaningP
 20217 \let\CleaningPP\textCleaningPP
 20218 \let\CuttingLine\textCuttingLine
 20219 \let\UParrow\textUParrow
 20220 \let\bigtriangleup\textbigtriangleup
 20221 \let\Forward\textForward
 20222 \let\triangleright\texttriangleright
 20223 \let\RHD\textRHD

20224 \let\DOWNarrow\textDOWNarrow
20225 \let\bigtriangledown\textbigtriangledown
20226 \let\Rewind\textRewind
20227 \let\triangleleft\texttriangleleft
20228 \let\LHD\textLHD
20229 \let\diamond\textdiamond
20230 \let\lozenge\textlozenge
20231 \let\LEFTCIRCLE\textLEFTCIRCLE
20232 \let\RIGHTCIRCLE\textRIGHTCIRCLE
20233 \let\openbullet\textopenbullet
20234 \let\boxbar\textboxbar
20235 \let\bigcircle\textbigcircle
20236 \let\Cloud\textCloud
20237 \let\FiveStar\textFiveStar
20238 \let\FiveStarOpen\textFiveStarOpen
20239 \let\Phone\textPhone
20240 \let\boxempty\textboxempty
20241 \let\Checkedbox\textCheckedbox
20242 \let\Crossedbox\textCrossedbox
20243 \let\Coffeecup\textCoffeecup
20244 \let\HandCuffLeft\textHandCuffLeft
20245 \let\HandCuffRight\textHandCuffRight
20246 \let\HandLeft\textHandLeft
20247 \let\HandRight\textHandRight
20248 \let\Radioactivity\textRadioactivity
20249 \let\Biohazard\textBiohazard
20250 \let\Ankh\textAnkh
20251 \let\YinYang\textYinYang
20252 \let\frownie\textfrownie
20253 \let\smiley\textsmiley
20254 \let\blacksmiley\textblacksmiley
20255 \let\sun\textsun
20256 \let\leftmoon\textleftmoon
20257 \let\rightmoon\textrightmoon
20258 \let\mercury\textmercury
20259 \let\earth\textearth
20260 \let\male\textmale
20261 \let\jupiter\textjupiter
20262 \let\saturn\textsaturn
20263 \let\uranus\texturanus
20264 \let\neptune\textneptune
20265 \let\pluto\textpluto
20266 \let\aries\textaries
20267 \let\taurus\texttaurus
20268 \let\gemini\textgemini
20269 \let\cancer\textcancer
20270 \let\leo\textleo
20271 \let\virgo\textvirgo
20272 \let\libra\textlibra
20273 \let\scorpio\textscorpio
20274 \let\sagittarius\textsagittarius
20275 \let\capricornus\textcapricornus
20276 \let\aquarius\textaquarius
20277 \let\pisces\textpisces

20278 \let\quarternote\textquarternote
20279 \let\twonotes\texttwonotes
20280 \let\sixteenthnote\textsixteenthnote
20281 \let\flat\textflat
20282 \let\natural\textnatural
20283 \let\sharp\textsharp
20284 \let\recycle\textrecycle
20285 \let\Wheelchair\textWheelchair
20286 \let\Flag\textFlag
20287 \let\MineSign\textMineSign
20288 \let\dsilitary\textdsilitary
20289 \let\dsmedical\textdsmedical
20290 \let\dsjuridical\textdsjuridical
20291 \let\dschemical\textdschemical
20292 \let\dsbiological\textdsbiological
20293 \let\dscommercial\textdscommercial
20294 \let\manstar\textmanstar
20295 \let\danger\textdanger
20296 \let\FemaleFemale\textFemaleFemale
20297 \let\MaleMale\textMaleMale
20298 \let\FemaleMale\textFemaleMale
20299 \let\Hermaphrodite\textHermaphrodite
20300 \let\Neutral\textNeutral
20301 \let\hexstar\texthexstar
20302 \let\SunCloud\textSunCloud
20303 \let\Rain\textRain
20304 \let\noway\textnoway
20305 \let\Mountain\textMountain
20306 \let\Tent\textTent
20307 \let\ScissorRight\textScissorRight
20308 \let\ScissorRightBrokenTop\textScissorRightBrokenTop
20309 \let\ScissorHollowRight\textScissorHollowRight
20310 \let\PhoneHandset\textPhoneHandset
20311 \let\Tape\textTape
20312 \let\Plane\textPlane
20313 \let\Envelope\textEnvelope
20314 \let\Peace\textPeace
20315 \let\WritingHand\textWritingHand
20316 \let\PencilRightDown\textPencilRightDown
20317 \let\PencilRight\textPencilRight
20318 \let\PencilRightUp\textPencilRightUp
20319 \let\NibRight\textNibRight
20320 \let\NibSolidRight\textNibSolidRight
20321 \let\Checkmark\textCheckmark
20322 \let\CheckmarkBold\textCheckmarkBold
20323 \let\XSolid\textXSolid
20324 \let\XSolidBold\textXSolidBold
20325 \let\XSolidBrush\textXSolidBrush
20326 \let\PlusOutline\textPlusOutline
20327 \let\Plus\textPlus
20328 \let\PlusThinCenterOpen\textPlusThinCenterOpen
20329 \let\PlusCenterOpen\textPlusCenterOpen
20330 \let\Cross\textCross
20331 \let\CrossOpenShadow\textCrossOpenShadow

20332 \let\CrossOutline\textCrossOutline
20333 \let\CrossMaltese\textCrossMaltese
20334 \let\DavidStar\textDavidStar
20335 \let\FourAsterisk\textFourAsterisk
20336 \let\JackStar\textJackStar
20337 \let\JackStarBold\textJackStarBold
20338 \let\ClowerTips\textClowerTips
20339 \let\FourStar\textFourStar
20340 \let\FourStarOpen\textFourStarOpen
20341 \let\FiveStarOpenCircled\textFiveStarOpenCircled
20342 \let\FiveStarCenterOpen\textFiveStarCenterOpen
20343 \let\FiveStarOpenDotted\textFiveStarOpenDotted
20344 \let\FiveStarOutline\textFiveStarOutline
20345 \let\FiveStarOutlineHeavy\textFiveStarOutlineHeavy
20346 \let\FiveStarConvex\textFiveStarConvex
20347 \let\FiveStarShadow\textFiveStarShadow
20348 \let\AsteriskBold\textAsteriskBold
20349 \let\AsteriskCenterOpen\textAsteriskCenterOpen
20350 \let\EightStarTaper\textEightStarTaper
20351 \let\EightStarConvex\textEightStarConvex
20352 \let\SixStar\textSixStar
20353 \let\EightStar\textEightStar
20354 \let\EightStarBold\textEightStarBold
20355 \let\TwelveStar\textTwelveStar
20356 \let\SixteenStarLight\textSixteenStarLight
20357 \let\SixFlowerPetalRemoved\textSixFlowerPetalRemoved
20358 \let\SixFlowerOpenCenter\textSixFlowerOpenCenter
20359 \let\Asterisk\textAsterisk
20360 \let\SixFlowerAlternate\textSixFlowerAlternate
20361 \let\FiveFlowerPetal\textFiveFlowerPetal
20362 \let\FiveFlowerOpen\textFiveFlowerOpen
20363 \let\EightFlowerPetal\textEightFlowerPetal
20364 \let\SunshineOpenCircled\textSunshineOpenCircled
20365 \let\SixFlowerAltPetal\textSixFlowerAltPetal
20366 \let\SnowflakeChevron\textSnowflakeChevron
20367 \let\Snowflake\textSnowflake
20368 \let\SnowflakeChevronBold\textSnowflakeChevronBold
20369 \let\Sparkle\textSparkle
20370 \let\SparkleBold\textSparkleBold
20371 \let\AsteriskRoundedEnds\textAsteriskRoundedEnds
20372 \let\EightFlowerPetalRemoved\textEightFlowerPetalRemoved
20373 \let\EightAsterisk\textEightAsterisk
20374 \let\CircleShadow\textCircleShadow
20375 \let\SquareShadowBottomRight\textSquareShadowBottomRight
20376 \let\SquareTopRight\textSquareTopRight
20377 \let\SquareCastShadowBottomRight\textSquareCastShadowBottomRight
20378 \let\SquareCastShadowTopRight\textSquareCastShadowTopRight
20379 \let\DiamondSolid\textDiamondSolid
20380 \let\RectangleThin\textRectangleThin
20381 \let\Rectangle\textRectangle
20382 \let\RectangleBold\textRectangleBold
20383 \let\perp\textperp
20384 \let\notperp\textnotperp
20385 \let\veedot\textveedot

20386 \let\wedgedot\textwedgedot
20387 \let\leftspoon\textleftspoon
20388 \let\lbrackdbl\textlbrackdbl
20389 \let\rbrackdbl\textrbrackdbl
20390 \let\circlearrowleft\textcirclearrowleft
20391 \let\circlearrowright\textcirclearrowright
20392 \let\longleftarrow\textlongleftarrow
20393 \let\longrightarrow\textlongrightarrow
20394 \let\longleftarrow\textlongleftarrow
20395 \let\Longleftarrow\textLongleftarrow
20396 \let\Longrightarrow\textLongrightarrow
20397 \let\Longleftarrow\textLongleftarrow
20398 \let\longmapsto\textlongmapsto
20399 \let\Longmapsfrom\textLongmapsfrom
20400 \let\Longmapsto\textLongmapsto
20401 \let\nwsearrow\textnwsearrow
20402 \let\neswarrow\textneswarrow
20403 \let\lhooknarrow\textlhooknarrow
20404 \let\rhooknarrow\textrhooknarrow
20405 \let\lhooksearrow\textlhooksearrow
20406 \let\rhooksearrow\textrhooksearrow
20407 \let\leadsto\textleadsto
20408 \let\rcurvearrowne\textrcurvearrowne
20409 \let\lcurvearrowse\textlcurvearrowse
20410 \let\lcurvearrowsw\textlcurvearrowsw
20411 \let\rcurvearrowse\textrcurvearrowse
20412 \let\lcurvearrowdown\textlcurvearrowdown
20413 \let\rcurvearrowdown\textrcurvearrowdown
20414 \let\rcurvearrowleft\textrcurvearrowleft
20415 \let\rcurvearrowright\textrcurvearrowright
20416 \let\leftrightharpoon\textleftrightharpoon
20417 \let\rightrightarpoon\textrightleftarpoon
20418 \let\updownharpoonrightleft\textupdownharpoonrightleft
20419 \let\updownharpoonleftright\textupdownharpoonleftright
20420 \let\leftleftharpoons\textleftleftharpoons
20421 \let\upupharpoons\textupupharpoons
20422 \let\rightightharpoons\textrightightharpoons
20423 \let\downdownharpoons\textdowndownharpoons
20424 \let\leftbarharpoon\textleftbarharpoon
20425 \let\barleftarpoon\textbarleftarpoon
20426 \let\rightbarharpoon\textrightbarharpoon
20427 \let\barrightarpoon\textbarrightarpoon
20428 \let\updownharpoons\textupdownharpoons
20429 \let\downupharpoons\textdownupharpoons
20430 \let\moo\textmoo
20431 \let\llparenthesis\textllparenthesis
20432 \let\rrparenthesis\textrrparenthesis
20433 \let\invdiameter\textinvdiameter
20434 \let\obar\textobar
20435 \let\obslash\textobslash
20436 \let\obot\textobot
20437 \let\NoChemicalCleaning\textNoChemicalCleaning
20438 \let\olessthan\textolessthan
20439 \let\ogreaterthan\textogreaterthan

20440 $\backslash\text{boxslash}$
 20441 $\backslash\text{boxbslash}$
 20442 $\backslash\text{boxast}$
 20443 $\backslash\text{boxcircle}$
 20444 $\backslash\text{boxbox}$
 20445 $\backslash\text{Valve}$
 20446 $\backslash\text{multimapboth}$
 20447 $\backslash\text{shuffle}$
 20448 $\backslash\text{uplus}$
 20449 $\backslash\text{bigdoublewedge}$
 20450 $\backslash\text{bigdoublevee}$
 20451 $\backslash\text{Join}$
 20452 $\backslash\text{fatsemi}$
 20453 $\backslash\text{circplus}$
 20454 $\backslash\text{minusdot}$
 20455 $\backslash\text{dottimes}$
 20456 $\backslash\text{dtimes}$
 20457 $\backslash\text{odiv}$
 20458 $\backslash\text{invneg}$
 20459 $\backslash\text{sqdoublecap}$
 20460 $\backslash\text{capdot}$
 20461 $\backslash\text{sqdoublecup}$
 20462 $\backslash\text{doublewedge}$
 20463 $\backslash\text{doublevee}$
 20464 $\backslash\text{doublebarwedge}$
 20465 $\backslash\text{veedoublebar}$
 20466 $\backslash\text{eqdot}$
 20467 $\backslash\text{neqdot}$
 20468 $\backslash\text{coloncolonequals}$
 20469 $\backslash\text{leqslant}$
 20470 $\backslash\text{nleqslant}$
 20471 $\backslash\text{geqslant}$
 20472 $\backslash\text{ngeqslant}$
 20473 $\backslash\text{lessapprox}$
 20474 $\backslash\text{nlessapprox}$
 20475 $\backslash\text{gtrapprox}$
 20476 $\backslash\text{ngtrapprox}$
 20477 $\backslash\text{lneq}$
 20478 $\backslash\text{gneq}$
 20479 $\backslash\text{lnapprox}$
 20480 $\backslash\text{gnapprox}$
 20481 $\backslash\text{lesseqqtr}$
 20482 $\backslash\text{gtreqqlless}$
 20483 $\backslash\text{eqslantless}$
 20484 $\backslash\text{eqslantgtr}$
 20485 $\backslash\text{leftslice}$
 20486 $\backslash\text{rightslice}$
 20487 $\backslash\text{preceq}$
 20488 $\backslash\text{npreceq}$
 20489 $\backslash\text{succeq}$
 20490 $\backslash\text{nsucceq}$
 20491 $\backslash\text{precneq}$
 20492 $\backslash\text{succneq}$
 20493 $\backslash\text{preceqq}$

20494 `\let\npreceqq\textnpreceqq`
20495 `\let\succeqq\textsucceqq`
20496 `\let\nsucceqq\textnsucceqq`
20497 `\let\precneqq\textprecneqq`
20498 `\let\succneqq\textsuccneqq`
20499 `\let\precapprox\textprecapprox`
20500 `\let\nprecapprox\textnprecapprox`
20501 `\let\succapprox\textsuccapprox`
20502 `\let\nsuccapprox\textnsuccapprox`
20503 `\let\precnapprox\textprecnapprox`
20504 `\let\succnapprox\textsuccnapprox`
20505 `\let\subseteqq\textsubseteqq`
20506 `\let\nsubseteqq\textnsubseteqq`
20507 `\let\supseteqq\textsupseteqq`
20508 `\let\nsupseteqq\textnsupseteqq`
20509 `\let\dashV\textdashV`
20510 `\let\ndashV\textndashV`
20511 `\let\Dashv\textDashv`
20512 `\let\nDashv\textnDashv`
20513 `\let\DashV\textDashV`
20514 `\let\nDashV\textnDashV`
20515 `\let\downmodels\textdownmodels`
20516 `\let\ndownmodels\textndownmodels`
20517 `\let\upmodels\textupmodels`
20518 `\let\nupmodels\textnupmodels`
20519 `\let\upspoon\textupspoon`
20520 `\let\interleave\textinterleave`
20521 `\let\sslash\textsslash`
20522 `\let\pentagon\textpentagon`
20523 `\let\varhexagon\textvarhexagon`
20524 `\let\jinferior\textjinferior`
20525 `\let\slashdiv\textslashdiv`
20526 `\let\fivedots\textfivedots`
20527 `\let\oo\textoo`
20528 `\let\GaPa\textGaPa`
20529 `\let\HaPa\textHaPa`
20530 `\let\ViPa\textViPa`
20531 `\let\AcPa\textAcPa`
20532 `\let\SePa\textSePa`
20533 `\let\ZwPa\textZwPa`
20534 `\let\fullnote\textfullnote`
20535 `\let\halfnote\texthalfnote`
20536 `\let\Vier\textVier`
20537 `\let\Acht\textAcht`
20538 `\let\Sech\textSech`
20539 `\let\Zwdr\textZwdr`
20540 `\let\Mundus\textMundus`
20541 `\let\Moon\textMoon`
20542 `\let\ManFace\textManFace`
20543 `\let\WomanFace\textWomanFace`
20544 `\let\Fax\textFax`
20545 `\let\Fire\textFire`
20546 `\let\Bicycle\textBicycle`
20547 `\let\Gentsroom\textGentsroom`

20548 \let\Ladiesroom\textLadiesroom
20549 \let\ccnc\textccnc
20550 \let\ccsa\textccsa
20551 \let\Info\textInfo
20552 \let\CESign\textCESign
20553 \let\neg\textneg
20554 \let\times\texttimes
20555 \let\div\textdiv
20556 \let\pm\textpm
20557 \let\cdot\textcdot
20558 }% \psdmapshortnames
20559 \newcommand*{\psdaliasnames}{%
20560 \let\epsdice\HyPsd@DieFace
20561 \let\fcdice\HyPsd@DieFace
20562 \let\MoonPha\HyPsd@MoonPha
20563 \let\mathdollar\textdollar
20564 \let\EyesDollar\textdollar
20565 \let\binampersand\textampersand
20566 \let\with\textampersand
20567 \let\mathunderscore\textunderscore
20568 \let\textvertline\textbar
20569 \let\mathsterling\textsterling
20570 \let\pounds\textsterling
20571 \let\brokenvert\textbrokenbar
20572 \let\mathsection\textsection
20573 \let\S\textsection
20574 \let\mathparagraph\textparagraph
20575 \let\MultiplicationDot\textperiodcentered
20576 \let\Squaredot\textperiodcentered
20577 \let\vartimes\textmultiply
20578 \let\MVMultiplication\textmultiply
20579 \let\eth\dh
20580 \let\crossd\textcrd
20581 \let\textbard\textcrd
20582 \let\bard\textcrd
20583 \let\textcrh\texthbar
20584 \let\crossh\texthbar
20585 \let\planck\texthbar
20586 \let\eng\ng
20587 \let\engma\ng
20588 \let\crossb\textcrb
20589 \let\textbarb\textcrb
20590 \let\barb\textcrb
20591 \let\Florin\textflorin
20592 \let\hv\texthvlig
20593 \let\hausak\texthtk
20594 \let\crossnilambda\textcrlambda
20595 \let\barlambda\textcrlambda
20596 \let\lambdabar\textcrlambda
20597 \let\lambdaslash\textcrlambda
20598 \let\textnrleg\textPUnrleg
20599 \let\textpipevar\textpipe
20600 \let\textdoublepipevar\textdoublepipe
20601 \let\textdoublebarpipevar\textdoublebarpipe

20602 \let\textcrg\textgslash
20603 \let\textdblig\textPUdblig
20604 \let\textqplig\textPUqplig
20605 \let\textcentoldstyle\textslashc
20606 \let\textbarc\textslashc
20607 \let\inva\textturna
20608 \let\vara\textscripta
20609 \let\invscripta\textturnscripta
20610 \let\rotvara\textturnscripta
20611 \let\hookb\texthtb
20612 \let\hausab\texthtb
20613 \let\varopeno\textopeno
20614 \let\curlyc\textctc
20615 \let\taild\textrtaild
20616 \let\hookd\texthtd
20617 \let\hausad\texthtd
20618 \let\er\textrhookschwa
20619 \let\epsi\textniepsilon
20620 \let\hookrepsilon\texthookrepsilon
20621 \let\closedrepsilon\textcloserepsilon
20622 \let\barj\textbardotlessj
20623 \let\hookg\texthtg
20624 \let\varg\textscriptg
20625 \let\vod\textipagamma
20626 \let\invh\textturnh
20627 \let\udesc\textturnh
20628 \let\hookh\texthth
20629 \let\voicedh\texthth
20630 \let\hookheng\texththeng
20631 \let\ibar\textbari
20632 \let\vari\textniota
20633 \let\tildel\textltilde
20634 \let\latfric\textbeltl
20635 \let\tail\textrtail
20636 \let\lz\textlyoghlig
20637 \let\invm\textturnm
20638 \let\rotm\textturnm
20639 \let\legm\textturnmleg
20640 \let\labdentalnas\textltailm
20641 \let\emgma\textltailm
20642 \let\nj\textltailn
20643 \let\enya\textltailn
20644 \let\tailn\textrtailn
20645 \let\closedniomega\textcloseomega
20646 \let\varomega\textcloseomega
20647 \let\invr\textturnr
20648 \let\rotr\textturnr
20649 \let\invlegr\textturnlonglegr
20650 \let\tailinvr\textturnrrtail
20651 \let\legr\textlonglegr
20652 \let\tailr\textrtailr
20653 \let\flapr\textfishhookr
20654 \let\flap\textfishhookr
20655 \let\tails\textrtails

20656 \let\curlyesh\textctesh
20657 \let\clickt\textturnt
20658 \let\tailt\texttrtailt
20659 \let\ubar\textbaru
20660 \let\rotOmega\textniupsilon
20661 \let\invv\textturnv
20662 \let\pwedge\textturnv
20663 \let\invw\textturnw
20664 \let\rotw\textturnw
20665 \let\invy\textturny
20666 \let\roty\textturny
20667 \let\tailz\texttrtailz
20668 \let\curlyz\textctz
20669 \let\curlyyogh\textctyogh
20670 \let\ejective\textglotstop
20671 \let\glottal\textglotstop
20672 \let\reject\textrevglotstop
20673 \let\clickc\textstretchc
20674 \let\textstretchcvar\textstretchc
20675 \let\clickb\textbullseye
20676 \let\textObullseye\textbullseye
20677 \let\textctjvar\textctj
20678 \let\textturnsck\textturnk
20679 \let\dz\textdzlig
20680 \let\tesh\textteshlig
20681 \let\digamma\textdigammagreek
20682 \let\hardsign\cyrhrdsn
20683 \let\softsign\cyrftsns
20684 \let\hebsin\hebshin
20685 \let\textsck\textPUscck
20686 \let\textscm\textPUscm
20687 \let\textscp\textPUscp
20688 \let\textrevscr\textPUrevscr
20689 \let\textrhooca\textPURhooka
20690 \let\textrhooke\textPURhooko
20691 \let\textrhookepsilon\textPURhookoepsilon
20692 \let\textrhookopeno\textPURhookopeno
20693 \let\textdoublevertline\textbardbl
20694 \let\dag\textdagger
20695 \let\ddagger\textdaggerdbl
20696 \let\ddag\textdaggerdbl
20697 \let\mathellipsis\textellipsis
20698 \let\EurDig\texteuro
20699 \let\EURdig\texteuro
20700 \let\EurHv\texteuro
20701 \let\EURhv\texteuro
20702 \let\EurCr\texteuro
20703 \let\EURcr\texteuro
20704 \let\EurTm\texteuro
20705 \let\EURtm\texteuro
20706 \let\Eur\texteuro
20707 \let\Denarius\textDeleatur
20708 \let\agemO\textmho
20709 \let\EstimatedSign\textestimated

20710 `\let\Ecommerce\textestimated`
20711 `\let\bindnasrepma\textinvamp`
20712 `\let\parr\textinvamp`
20713 `\let\MVRightArrow\textrightarrow`
20714 `\let\MVRightarrow\textrightarrow`
20715 `\let\MVArrowDown\textdownarrow`
20716 `\let\Force\textdownarrow`
20717 `\let\textglobrise\textnearrow`
20718 `\let\textglobfall\textsearrow`
20719 `\let\Lightning\textlightning`
20720 `\let\Conclusion\textRightarrow`
20721 `\let\dashedleftarrow\textdashleftarrow`
20722 `\let\dashedrightarrow\textdashrightarrow`
20723 `\let\varnothing\textemptyset`
20724 `\let\owns\textni`
20725 `\let\notni\textnotowner`
20726 `\let\varprop\textpropto`
20727 `\let\varangle\textsphericalangle`
20728 `\let\Anglesign\textsphericalangle`
20729 `\let\AngleSign\textsphericalangle`
20730 `\let\notdivides\textnmid`
20731 `\let\varowedge\textowedge`
20732 `\let\varovee\textovee`
20733 `\let\varint\textint`
20734 `\let\varoint\textoint`
20735 `\let\downtherefore\textbecause`
20736 `\let\textdotdiv\textdotminus`
20737 `\let\AC\textsim`
20738 `\let\wreath\textwr`
20739 `\let\nthickapprox\textnapprox`
20740 `\let\VHF\texttriplesim`
20741 `\let\notasymp\textnasymp`
20742 `\let\Doteq\textdoteqdot`
20743 `\let\corresponds\texthateq`
20744 `\let\Corresponds\texthateq`
20745 `\let\nequal\textneq`
20746 `\let\Congruent\textequiv`
20747 `\let\NotCongruent\textnequiv`
20748 `\let\notequiv\textnequiv`
20749 `\let\LessOrEqual\textleq`
20750 `\let\LargerOrEqual\textgeq`
20751 `\let\apprle\textlesssim`
20752 `\let\apprge\textgtrsim`
20753 `\let\varoplus\textoplus`
20754 `\let\varominus\textominus`
20755 `\let\varotimes\textotimes`
20756 `\let\varoslash\textoslash`
20757 `\let\varodot\textodot`
20758 `\let\ocirc\textcircledcirc`
20759 `\let\varocircle\textcircledcirc`
20760 `\let\varoast\textcircledast`
20761 `\let\oasterisk\textcircledast`
20762 `\let\rightvdash\textvdash`
20763 `\let\leftvdash\textdashv`

20764 \let\leftvdash\textndashv
20765 \let\downvdash\texttop
20766 \let\upvdash\textbot
20767 \let\nperp\textnupvdash
20768 \let\models\textvDash
20769 \let\rightmodels\textvDash
20770 \let\rightVdash\textVdash
20771 \let\rightModels\textVDash
20772 \let\nrightvdash\textnvdash
20773 \let\nrightmodels\textnvDash
20774 \let\nmodels\textnvDash
20775 \let\nrightVdash\textnVdash
20776 \let\nrightModels\textnVDash
20777 \let\lessclosed\textlhd
20778 \let\gtrclosed\textrhd
20779 \let\leqclosed\textunlhd
20780 \let\trianglelefteq\textunlhd
20781 \let\geqclosed\textunrhd
20782 \let\trianglerighteq\textunrhd
20783 \let\Bowtie\textbowtie
20784 \let\varcurlyvee\textcurlyvee
20785 \let\varcurlywedge\textcurlywedge
20786 \let\doublecap\textCap
20787 \let\doublecup\textCup
20788 \let\varsqsubsetneq\textsqssubsetneq
20789 \let\varsqsupsetneq\textsqsupsetneq
20790 \let\nlessclosed\textntriangleleft
20791 \let\ngtrclosed\textntriangleright
20792 \let\Clocklogo\textclock
20793 \let\ClockLogo\textclock
20794 \let\baro\textstmaryrdbaro
20795 \let\varparallelinv\textbbslash
20796 \let\CleaningA\textCircledA
20797 \let\Kutline\textCuttingLine
20798 \let\CutLine\textCuttingLine
20799 \let\Cutline\textCuttingLine
20800 \let\MoveUp\textUParrow
20801 \let\APLup\textbigtriangleup
20802 \let\Bleech\textbigtriangleup
20803 \let\MoveDown\textDOWNarrow
20804 \let\APLdown\textbigtriangledown
20805 \let\Diamond\textdiamond
20806 \let\varbigcirc\textbigcircle
20807 \let\Telefon\textPhone
20808 \let\Box\textboxempty
20809 \let\CheckedBox\textCheckedbox
20810 \let\XBox\textCrossedbox
20811 \let\CrossedBox\textCrossedbox
20812 \let\rightpointleft\textHandLeft
20813 \let\leftpointright\textHandRight
20814 \let\PointingHand\textHandRight
20815 \let\Pointinghand\textHandRight
20816 \let\Radiation\textRadioactivity
20817 \let\Yinyang\textYinYang

20818 \let\YingYang\textYinYang
20819 \let\Yingyang\textYinYang
20820 \let\Frowny\textfrownie
20821 \let\Smiley\textsmiley
20822 \let\Sun\textsun
20823 \let\Mercury\textmercury
20824 \let\textfemale\textPUfemale
20825 \let\female\textPUfemale
20826 \let\venus\textPUfemale
20827 \let\Venus\textPUfemale
20828 \let\Female\textPUfemale
20829 \let\Earth\textearth
20830 \let\mars\textmale
20831 \let\Mars\textmale
20832 \let\Male\textmale
20833 \let\Jupiter\textjupiter
20834 \let\Saturn\textsaturn
20835 \let\Uranus\texturanus
20836 \let\Neptune\textneptune
20837 \let\Pluto\textpluto
20838 \let\Aries\textaries
20839 \let\Taurus\texttaurus
20840 \let\Gemini\textgemini
20841 \let\Cancer\textcancer
20842 \let\Leo\textleo
20843 \let\Virgo\textvirgo
20844 \let\Libra\textlibra
20845 \let\Scorpio\textscorpio
20846 \let\Sagittarius\textsagittarius
20847 \let\Capricorn\textcapricornus
20848 \let\Aquarius\textaquarius
20849 \let\Pisces\textpisces
20850 \let\spadesuit\textspadesuitblack
20851 \let\Heart\textheartsuitwhite
20852 \let\heartsuit\textheartsuitwhite
20853 \let\diamondsuit\textdiamondsuitwhite
20854 \let\clubsuit\textclubsuitblack
20855 \let\ eighthnote\textmusicalnote
20856 \let\Recycling\textrecycle
20857 \let\VarFlag\textFlag
20858 \let\textxswup\textdsmilitary
20859 \let\textuncrfemale\textPUuncrfemale
20860 \let\Football\textSoccerBall
20861 \let\CutLeft\textScissorRightBrokenBottom
20862 \let\Cutright\textScissorRightBrokenBottom
20863 \let\RightScissors\textScissorRight
20864 \let\Leftscissors\textScissorRight
20865 \let\Letter\textEnvelope
20866 \let\Writinghand\textWritingHand
20867 \let\checkmark\textCheckmark
20868 \let\ davidstar\textDavidStar
20869 \let\llbracket\textlbrackdbl
20870 \let\rrbracket\textrbrackdbl
20871 \let\RightTorque\textlcurvearrowdown


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20872 \let\Righttorque\textlcurvearrowdown
20873 \let\LeftTorque\textrcurvearrowdown
20874 \let\Lefttorque\textrcurvearrowdown
20875 \let\textvarobar\textobar
20876 \let\circledbslash\textobslash
20877 \let\obackslash\textobslash
20878 \let\varobslash\textobslash
20879 \let\odplus\textobot
20880 \let\varolessthan\textolessthan
20881 \let\varogreaterthan\textogreaterthan
20882 \let\divdot\textminusdot
20883 \let\doublesqcap\textsqdoublecap
20884 \let\doublesqcup\textsqdoublecup
20885 \let\merge\textdoublevee
20886 \let\leftVdash\textdashV
20887 \let\nleftVdash\textndashV
20888 \let\leftmodels\textDashv
20889 \let\nleftmodels\textnDashv
20890 \let\leftModels\textDashV
20891 \let\nleftModels\textnDashV
20892 \let\varparallel\textsslash
20893 \let\textheng\textPUheng
20894 \let\textlhookfour\textPUhookfour
20895 \let\textscf\textPUscf
20896 \let\textaolig\textPUaolig
20897 \let\Ganz\textfullnote
20898 \let\Halb\texthalfnote
20899 \let\Womanface\textWomanFace
20900 \let\Faxmachine\textFax
20901 \let\CEsign\textCESign
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