

Hypertext marks in L^AT_EX

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1 Documentation overview for hyperref

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

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

ChangeLog This file records the version history.

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

Bookmark talk, paper The paper version of the talk.

Source code documentation:

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

backref.dtx “Back referencing from bibliographical citations”

nameref.dtx “Section name references in L^AT_EX”

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3 File hycheck.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 `\cmd_` with an space at the end of the command name, defined by `\newcommand`. Therefore the further parsing is done by `\HyC@nc@opt` or `\HyC@nc@noopt` of the `\HyC@newcommand` chain.

```

114 \def\HyC@DeclareRobustCommand{%
115 \edef\HyC@robustcmd{%

```

```

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

\HyC@def The parameter text of \def or \edef is stored in the token register \HyC@Toks.
\HyC@edef
125 \def\HyC@def#1#{%
126 \HyC@Toks={#1}%
127 \HyC@nc@noopt
128 }
129 \let\HyC@edef\HyC@def

\HyC@doCheck This command performs the checks and prints the result.
130 \def\HyC@doCheck{%
131 \typeout{* Checking ` \HyC@string\HyC@cmd':}%
132 \HyC@checkItem{cmd}%
133 \HyC@checkItem{robustcmd}%
134 \HyC@checkItem{optcmd}%
135 \HyC@checkItem{robustoptcmd}%
136 \endgroup
137 }

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

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

\HyC@checkOk The result, if the check succeeds.
154 \def\HyC@checkOk#1{%
155 \typeout{\space\space` \HyC@string#1' ok.}%
156 }

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

```

```

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

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

```

4 Package options and setup

4.1 Save catcodes

There are many packages that change the standard catcodes.

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

```

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

```

\Hy@SetCatcodes

```

181 \def\Hy@SetCatcodes{%
182   \@makeother`\%
183   \@makeother\=%
184   \catcode`\$=3 %
185   \catcode`\&=4 %
186   \catcode`\^=7 %
187   \catcode`\_ =8 %
188   \@makeother\| %
189   \@makeother\: %
190   \@makeother\(%
191   \@makeother\)%
192   \@makeother\[ %
193   \@makeother\] %
194   \@makeother\/ %
195   \@makeother\! %
196   \@makeother\<%

```

```

197 \@makeother\>%
198 \@makeother\.%
199 \@makeother\;%
200 \@makeother\+%
201 \@makeother\-%
202 \@makeother\"%
203 \@makeother\'%
204 }

```

\Hy@RestoreCatcodes

```

205 \begingroup
206 \def\x#1{\catcode`\noexpand#1=\the\catcode`#1\relax}%
207 \xdef\Hy@RestoreCatcodes{%
208   \the\toks@
209   \x\$%
210   \x\&%
211   \x\~%
212   \x\_%
213   \x\|%
214   \x\:%
215   \x\(%
216   \x\) %
217   \x\[ %
218   \x\] %
219   \x\/%
220   \x\!%
221   \x\<%
222   \x\>%
223   \x\.%
224   \x\;%
225   \x\+%
226   \x\-%
227   \x\"%
228   \x\'%
229 }%
230 \endgroup

```

231 \Hy@SetCatcodes

change 2020-07-24: require newer pdftexcmds and remove fallback code for version older than 2010. change 2021-08-14: require expl3

```

232 \ifx\ExplSyntaxOn\undefined \RequirePackage{expl3}\fi
233 \RequirePackage{ltxcmds}[2010/11/12]
234 \RequirePackage{iftex}[2019/10/24]
235 \RequirePackage{pdftexcmds}[2018/09/10]
236 \RequirePackage{infwarerr}[2010/04/08]
237 \RequirePackage{keyval}[1997/11/10]
238 \RequirePackage{kvsetkeys}[2007/09/29]
239 \RequirePackage{kvdefinekeys}[2011/04/07]
240 \RequirePackage{pdfescape}[2007/11/11]
241 \RequirePackage{hycolor}
242 \RequirePackage{letltxmacro}[2008/06/13]
243 \RequirePackage{auxhook}[2009/12/14]
244 \RequirePackage{nameref}[2012/07/28]

```

```

245 \def\Hy@Error{\@PackageError{hyperref}}
246 \def\Hy@Warning{\@PackageWarning{hyperref}}
247 \def\Hy@WarningNoLine{\@PackageWarningNoLine{hyperref}}
248 \def\Hy@Info{\@PackageInfo{hyperref}}
249 \def\Hy@InfoNoLine{\@PackageInfoNoLine{hyperref}}
250 \def\Hy@Message#1{%
251   \GenericWarning{%
252     (hyperref)\@spaces\@spaces\@spaces\@spaces
253   }{%
254     Package hyperref Message: #1\ltx@gobble
255   }%
256 }

```

4.2 Version check

\Hy@VersionChecked

```

257 \chardef\Hy@VersionChecked=0 %

```

\Hy@VersionCheck

```

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

```

```

293      * \z: \a
294      }\@ehd
295      \fi
296      \fi
297      }%
298      }%
299      \endgroup
300      \chardef\Hy@VersionChecked=1 %
301      }

```

\Hy@@VersionCheck

```

302 \def\Hy@@VersionCheck #1#2 #3 #4\@nil{%
303   \def#1{#2 #3}%
304 }

```

4.3 Checks with regular expressions

```

305 \ltx@ifundefined{pdfmatch}{%
306   \def\Hy@Match#1#2#3#4#5{%
307     }{%
308     \def\Hy@Match#1#2#3{%
309       \begingroup
310       \edef\~{\ltx@backslashchar\string~}%
311       \edef\.{\ltx@backslashchar.}%
312       \edef\[{\ltx@backslashchar[]}%
313       \edef\${\ltx@backslashchar$}%
314       \edef\({\ltx@backslashchar(}%
315       \edef\){\ltx@backslashchar)}%
316       \edef\|{\ltx@backslashchar|}%
317       \edef\*{\ltx@backslashchar*}%
318       \edef\+{\ltx@backslashchar+}%
319       \edef\?{\ltx@backslashchar?}%
320       \edef\{{\ltx@backslashchar\ltx@leftbracechar}%
321       \edef\}{\ltx@rightbracechar}%
322       \edef\\\{\ltx@backslashchar\ltx@backslashchar}%
323       \let\ \ltx@space
324       \ifcase\pdfmatch#2{#3}{#1} %
325         \endgroup
326         \expandafter\ltx@secondoftwo
327       \or
328         \endgroup
329         \expandafter\ltx@firstoftwo
330       \else
331         \Hy@Warning{%
332           Internal error: Wrong pattern!\MessageBreak
333           --> #3 <--\MessageBreak
334           Pattern check ignored%
335         }%
336         \endgroup
337         \expandafter\ltx@firstoftwo
338       \fi
339     }%
340 }

```

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`.

```
341 \@ifundefined{AfterBeginDocument}{%
342   \def\AfterBeginDocument{\AtBeginDocument}%
343 }{}%
```

`\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.

```
344 \def\Hy@AtBeginDocument{%
345   \ltx@LocalAppendToMacro\Hy@AtBeginDocumentHook
346 }
```

`\Hy@AtEndOfPackage`

```
347 \def\Hy@AtEndOfPackage{%
348   \ltx@LocalAppendToMacro\Hy@AtEndOfPackageHook
349 }
```

`\Hy@AtBeginDocumentHook`

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

`\Hy@AtEndOfPackageHook`

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

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

```
352 \AtEndOfPackage{%
353   \Hy@AtEndOfPackageHook
354   \let\Hy@AtEndOfPackageHook\@undefined
355   \AfterBeginDocument{%
356     \Hy@AtBeginDocumentHook}%
357   \let\Hy@AtBeginDocumentHook\@undefined
358 }%
```

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

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

4.5 Switches

```
361 \newif\ifHy@stoppedearly
362 \newif\ifHy@typexml
363 \newif\ifHy@activeanchor
364 \newif\ifHy@backref
365 \newif\ifHy@bookmarks
```

```

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

```

Defaults for the switches are now set.

```

411 \Hy@backreffalse
412 \Hy@bookmarksnumberedfalse
413 \Hy@bookmarksopenfalse
414 \Hy@bookmarkstrue
415 \Hy@breaklinksfalse
416 \Hy@pdfcenterwindowfalse
417 \Hy@CJKbookmarksfalse
418 \Hy@destlabelfalse

```



```

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

```

5 Common help macros

\Hy@StepCount

```

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

```

\Hy@GlobalStepCount

```

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

```

```

456 \newdimen\@linkdim
457 \let\Hy@driver\ltx@empty
458 \let\MaybeStopEarly\relax
459 \newcount\Hy@linkcounter
460 \newcount\Hy@pagecounter
461 \Hy@linkcounter0
462 \Hy@pagecounter0

```

5.1 Macros for recursions

```

463 \let\Hy@ReturnEnd\@empty
464 \long\def\Hy@ReturnAfterFiFiEnd#1\fi#2\Hy@ReturnEnd{\fi\fi#1}
465 \long\def\Hy@ReturnAfterElseFiFiEnd#1\else#2\Hy@ReturnEnd{\fi\fi#1}

```

5.2 Babel's protection of shorthand characters

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

```

466 \def\Hy@safe@activetrue{\csname @safe@activetrue\endcsname}
467 \def\Hy@safe@activesfalse{\csname @safe@activesfalse\endcsname}

```

5.3 Coordinate transformations

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

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

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

- It cannot be used inside `\usepackage`, because LaTeX expands the options before package `hyperref` is loaded and `\hypercalcbp` is defined.
- With 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`

```

468 \def\hypercalcbp#1{%
469   \strip@pt\dimexpr 0.99626401\dimexpr(#1)\relax\relax
470 }%
471 \def\hypercalcbpdef{\def}%

```

6 Dealing with PDF strings

The PDF string stuff done by Heiko Oberdiek.

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

6.1 Description of PDF strings

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

- They are surrounded by parentheses. The hexadecimal form is not supported.

- Like PostScript language strings they use the same escaping mechanism:

<code>\\</code>	the backslash itself
<code>\), \((</code>	unbalanced parentheses
<code>\n, \r, \t, \b, \f</code>	special white space escape sequences
<code>\ddd</code>	octal character code <i>ddd</i>
- 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.

```

ppercaseUnsupportedInPdfStrings
lowercaseUnsupportedInPdfStrings
472 \ExplSyntaxOn
473 \@ifundefined{text__uppercase:n}{}
474 {
475   \def\MakeUppercaseUnsupportedInPdfStrings#1{\use:e {\text__uppercase:n {#1}}}
476   \def\MakeLowercaseUnsupportedInPdfStrings#1{\use:e {\text__lowercase:n {#1}}}
477 }
478 \ExplSyntaxOff

```

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

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

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

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

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

```
480 \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.

```
481 \escapechar`\\%
```

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

```
482 \edef\0{\string\0}%  
483 \edef\1{\string\1}%  
484 \edef\2{\string\2}%  
485 \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.

```
486 \ifHy@unicode  
487 \edef\8{\string\8}%  
488 \edef\9{\string\9}%  
489 \fontencoding{PU}%  
490 \HyPsd@UTFviii  
491 \def\ifpdfstringunicode##1##2{##1}%  
492 \else  
493 \fontencoding{PD1}%  
494 \def\ifpdfstringunicode##1##2{##2}%  
495 \fi  
496 \let\utf@viii@undeferr\HyPsd@utf@viii@undeferr  
497 \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).

```
498 \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).

```
499 \let\@inmathwarn\HyPsd@inmathwarn
```

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

```
500 \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.

```
501 \let\{\textbraceleft
502 \let\}\textbraceright
503 \let\\\textbackslash
504 \let\#\textnumbersign
505 \let\$\textdollar
506 \let\%\textpercent
507 \let\&\textampersand
508 % \let\~\textasciitilde
509 \let\_ \textunderscore
510 \let\P\textparagraph
511 \let\ldots\textellipsis
512 \let\dots\textellipsis
513 \ltx@ifundefined{textEncodingNoboundary}%
514 {}{\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.

```
515 \def\{\pdfstringdefWarn\}%
516 \def\newline{\pdfstringdefWarn\newline}%
```

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

```

517 \def\TeX{\TeX}%
518 \def\LaTeX{La\TeX}%
519 \def\LaTeXe{%
520   \LaTeX2%
521   \ifHy@unicode\83\265\else e\fi
522 }%
523 \def\eTeX{%
524   \ifHy@unicode\83\265\else e\fi
525   -\TeX%
526 }%
527 \def\SliTeX{Sli\TeX}%
528 \def\MF{Metafont}%
529 \def\MP{Metapost}%

```

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

```

530 \let\fontencoding\@gobble
531 \let\fontfamily\@gobble
532 \let\fontseries\@gobble
533 \let\fontshape\@gobble
534 \let\fontsize\@gobbletwo
535 \let\selectfont\@empty
536 \let\usefont\@gobblefour
537 \let\emph\@firstofone
538 \let\textnormal\@firstofone
539 \let\textrm\@firstofone
540 \let\textsf\@firstofone
541 \let\texttt\@firstofone
542 \let\textbf\@firstofone
543 \let\textmd\@firstofone
544 \let\textit\@firstofone
545 \let\textsc\@firstofone
546 \let\textsl\@firstofone
547 \let\textup\@firstofone
548 \let\normalfont\@empty
549 \let\rmfamily\@empty
550 \let\sffamily\@empty
551 \let\ttfamily\@empty
552 \let\bfseries\@empty
553 \let\mdseries\@empty
554 \let\itshape\@empty
555 \let\scshape\@empty
556 \let\slshape\@empty
557 \let\upshape\@empty
558 \let\em\@empty
559 \let\rm\@empty
560 \let\Huge\@empty
561 \let\LARGE\@empty
562 \let\Large\@empty
563 \let\footnotesize\@empty

```

```

564 \let\huge\@empty
565 \let\large\@empty
566 \let\normalsize\@empty
567 \let\scriptsize\@empty
568 \let\small\@empty
569 \let\tiny\@empty
570 \let\mathversion\@gobble
571 \let\phantom\@gobble
572 \let\vphantom\@gobble
573 \let\hphantom\@gobble

```

Package pifont.

```

574 \let\ding\HyPsd@ding
575 \let\Cube\HyPsd@DieFace
576 %* \HyPsd@DieFace -> \epsdice (epsdice)
577 %* \HyPsd@DieFace -> \fcdice (hhcount)

```

Environments.

```

578 \def\begin##1{\csname##1\endcsname}%
579 \def\end##1{\csname end##1\endcsname}%

```

Package color.

```

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

```

Upper- and lowercase.

```

581 \def\MakeUppercase{\MakeUppercaseUnsupportedInPdfStrings}%
582 \def\MakeLowercase{\MakeLowercaseUnsupportedInPdfStrings}%

```

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

```

583 \ifHy@psdextra
584 \ifHy@unicode
585 \csname psdmapshortnames\endcsname
586 \csname psdaliasnames\endcsname
587 \fi
588 \fi

```

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

```

589 \let\foreignlanguage\@secondoftwo
590 \let\textlatin\@firstofone
591 \ltx@ifundefined{language@group}{-}{-}%
592 \let\bbl@info\@gobble
593 \csname HyPsd@babel@\language@group\endcsname
594 }%
595 \let\@safe@activetrue\relax
596 \let\@safe@activesfalse\relax

```

Disable \cyr, used in russianb.ldf.

```

597 \let\cyr\relax

```

Package german.

```
598 \let\glqq\textglqq
599 \let\grqq\textgrqq
600 \let\glq\textglq
601 \let\grq\textgrq
602 \let\flqq\textflqq
603 \let\frqq\textfrqq
604 \let\flq\textflq
605 \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}

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

AMS classes.

```
607 \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.

```
608 \let\hspace\HyPsd@hspace
```

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

```
609 \let\label\@gobble
610 \let\index\@gobble
611 \let\glossary\@gobble
612 \let\href\HyPsd@href
613 \let\@mkboth\@gobbletwo
```

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

```
614 \let\ref\HyPsd@ref
615 \let\pageref\HyPsd@pageref
616 \let\nameref\HyPsd@nameref
617 \let\autoref\HyPsd@autoref
```

Miscellaneous commands.

```
618 \let\leavevmode\@empty
619 \let\mbox\@empty
```

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

```
620 \def\halign{\pdfstringdefWarn\halign\@gobble}%
621 \let\ignorespaces\HyPsd@ignorespaces
622 \let\Hy@SectionAnchorHref\@gobble
623 \let\ensuremath\@firstofone
```


Patch for cjk bookmarks.

```
624 \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 $\mathrm{T}_{\mathrm{E}}\mathrm{X}$'s stomach, but to be expanded by the mouth to give a PDF string. At this place before interpreting the string in `#2` additional redefinitions can be added by the hook `\pdfstringdefPreHook`.

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

```
625 \Hy@pdfstringtrue
626 \pdfstringdefPreHook
```

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

```
627 \HyPsd@LetUnexpandableSpace\space
628 \HyPsd@LetUnexpandableSpace\ %
629 \HyPsd@LetUnexpandableSpace~%
630 \HyPsd@LetUnexpandableSpace\nobreakspace
```

Package xspace.

```
631 \ltx@ifundefined{@xspace}{%
632 \let\xspace\HyPsd@ITALCORR
633 }{%
634 \let\xspace\HyPsd@XSPACE
635 }%
636 \let\/\HyPsd@ITALCORR
637 \let\bgroup\/%
638 \let\egroup\/%
```

Redefinitions of miscellaneous commands. Hyphenation does not make sense.

```
639 \let\discretionary\@gobbletwo
```

`\@ifstar` is defined in $\mathrm{L}^{\mathrm{A}}\mathrm{T}_{\mathrm{E}}\mathrm{X}$ 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 expandable 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:

```
640 \def\@ifnextchar{\HyPsd@ifnextchar\@ifnextchar}%
641 \def\kernel@ifnextchar{\HyPsd@ifnextchar\kernel@ifnextchar}%
642 \def\new@ifnextchar{\HyPsd@ifnextchar\new@ifnextchar}%
643 \let\@protected@testopt\HyPsd@protected@testopt
```

Support for package 'xargs':

```
644 \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 an descriptive warning for the user. As additional features xspace support is possible and grouping characters can be used without problems, because they are removed silently.

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

```
645 \begingroup
646 \let\GenericError\@gobblefour
647 \let\GenericWarning\@gobbletwo
648 \let\GenericInfo\@gobbletwo
```

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

```
649 \ifx\nofrenchguillemets\undefined
650 \else
651 \nofrenchguillemets
652 \fi
```

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

```

653 \let\Hy@temp\xdef
654 \let\def\HyPsd@DefCommand
655 \let\gdef\HyPsd@DefCommand
656 \let\edef\HyPsd@DefCommand
657 \let\xdef\HyPsd@DefCommand
658 \let\futurelet\HyPsd@LetCommand
659 \let\let\HyPsd@LetCommand
660 \Hy@temp#1{#2}%
661 \endgroup

```

6.2.3 Postprocessing

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

```

662 \ifx#1\@empty
663 \else

```

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

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

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

```

664 \HyPsd@ProtectSpaces#1%
665 \let\HyPsd@String\@empty
666 \expandafter\HyPsd@RemoveBraces\expandafter{#1|}%
667 \global\let#1\HyPsd@String

```

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

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

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

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

```

668 \let\HyPsd@SPACEOPTI\relax
669 {%
670 \let\HyPsd@String\@empty
671 \expandafter\HyPsd@CheckCatcodes#1\HyPsd@End
672 \global\let#1\HyPsd@String
673 }%
674 \expandafter\HyPsd@RemoveMask\expandafter
675 |\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.

```

676 \expandafter
677 \HyPsd@Subst\expandafter{\HyPsd@GLYPHERR}{\relax}#1%
678 \let\HyPsd@String\@empty
679 \expandafter\HyPsd@GlyphProcess#1\relax\@empty
680 \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.

```
681 \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.

```

682 \ifHy@unicode
683 \expandafter\HyPsd@StringSubst\csname 80\040\endcsname
684 \HyPsd@SPACEOPTI#1%
685 \edef\Hy@temp@A{\HyPsd@SPACEOPTI\HyPsd@SPACEOPTI\80\273}%
686 \expandafter\HyPsd@Subst\expandafter{\Hy@temp@A}%
687 {\HyPsd@SPACEOPTI\80\273}#1%
688 \else
689 \HyPsd@StringSubst{\040}\HyPsd@SPACEOPTI#1%
690 \expandafter\HyPsd@Subst\expandafter{%
691 \expandafter\HyPsd@SPACEOPTI\expandafter\HyPsd@SPACEOPTI
692 \string\273}\HyPsd@SPACEOPTI\273}#1%
693 \fi

```

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

```

694 \ifHy@unicode
695 \HyPsd@StringSubst{\}){\80\051}#1%
696 \HyPsd@Subst{\80\051}#1%
697 \let\HyPsd@empty\relax
698 \expandafter\HyPsd@StringSubst\csname 80\051\endcsname
699 {\HyPsd@empty\80\051}#1%
700 \else
701 \HyPsd@StringSubst{\}){\051}#1%
702 \HyPsd@Subst{\051}#1%
703 \let\HyPsd@empty\relax
704 \HyPsd@StringSubst{\051}\HyPsd@empty\string\})#1%
705 \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`.

```

706 \expandafter\HyPsd@Subst\expandafter{\//}\HyPsd@empty#1%
707 \ltx@ifundefined{@xspace}{%
708 }{%
709 \let\HyPsd@xspace\relax
710 \expandafter\HyPsd@Subst\expandafter
711 {\HyPsd@XSPACE}\HyPsd@xspace#1%
712 \let\HyPsd@xspace\HyPsd@doxspace
713 }%
714 \xdef#1{#1\HyPsd@empty}%

```

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

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

```

715 \HyPsd@Subst{---}\textemdash#1%
716 \HyPsd@Subst{--}\textendash#1%
717 % \HyPsd@Subst{fi}\textfi#1%
718 % \HyPsd@Subst{fl}\textfl#1%
719 \HyPsd@Subst{!}\textexclamdown#1%
720 \HyPsd@Subst{?}\textquestiondown#1%
```

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

```

721 \let\HyPsd@empty\@empty
```

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

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

```

722 \ifHy@unicode
723 \HyPsd@StringSubst\(\textparenleft#1%
724 \HyPsd@Subst(\textparenleft#1%
725 \else
726 \HyPsd@StringSubst\({\050}#1%
727 \HyPsd@Subst({\050}#1%
728 \HyPsd@StringSubst{\050}{\string\{ }#1%
729 \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.

```

730 \ifHy@unicode
731 \edef\HyPsd@SPACEOPTI{\80\040}%
732 \else
733 \let\HyPsd@SPACEOPTI\HyPsd@spaceopti
734 \fi
735 \xdef#1{#1\@empty}%
736 \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.

```

737 \endgroup
738 \begingroup
739 \ifHy@unicode
740 \HyPsd@ConvertToUnicode#1%

```

Try conversion back to PDFDocEncoding.

```

741 \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
742 \ltx@ifundefined{StringEncodingConvertTest}{%
743 }{%
744 \EdefUnescapeString\HyPsd@temp#1%
745 \iftutex
746 \let\HyPsd@UnescapedString\HyPsd@temp
747 \StringEncodingConvertTest\HyPsd@temp\HyPsd@temp
748 {utf16be}{ascii-print}{%
749 \EdefEscapeString\HyPsd@temp\HyPsd@temp
750 \global\let#1\HyPsd@temp
751 \HyPsd@EscapeTeX#1%
752 \Hy@unicodefalse
753 }{%
754 \HyPsd@EscapeTeX#1%
755 }%
756 \else
757 \StringEncodingConvertTest\HyPsd@temp\HyPsd@temp
758 {utf16be}{pdfdoc}{%
759 \EdefEscapeString\HyPsd@temp\HyPsd@temp
760 \global\let#1\HyPsd@temp
761 \HyPsd@EscapeTeX#1%
762 \Hy@unicodefalse
763 }{}%
764 \fi
765 }%
766 \fi
767 \fi

```

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

```

768 \pdfstringdefPostHook#1%
769 \endgroup
770 }

```

`\Hy@pdfstringdef`

```

771 \def\Hy@pdfstringdef#1#2{%
772 \pdfstringdef\Hy@gtemp{#2}%
773 \let#1\Hy@gtemp
774 }

```

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

```

775 \@ifpackageloaded{linguex}{%
776   \let\HyLinguex@OrgB\b
777   \let\HyLinguex@OrgC\c
778   \let\HyLinguex@OrgD\d
779   \def\HyLinguex@Restore{%
780     \let\b\HyLinguex@OrgB
781     \let\c\HyLinguex@OrgC
782     \let\d\HyLinguex@OrgD
783   }%
784   \Hy@AtEndOfPackage{%
785     \pdfstringdefDisableCommands{%
786       \ltx@ifundefined{oldb}{\let\b\oldb}%
787       \ltx@ifundefined{oldc}{\let\c\oldc}%
788       \ltx@ifundefined{oldd}{\let\d\oldd}%
789     }%
790   }%
791 }{%
792   \let\HyLinguex@Restore\relax
793 }%

```

6.3.3 Catcodes saving and restoring for .def files

\Hy@SaveCatcodeSettings

```

794 \def\Hy@SaveCatcodeSettings#1{%
795   \expandafter\edef\csname Hy@cat@#1\endcsname{%
796     \endlinechar=\the\endlinechar\relax
797     \catcode32 \the\catcode32\relax % (space)
798     \catcode34 \the\catcode34\relax % "
799     \catcode35 \the\catcode35\relax % #
800     \catcode37 \the\catcode37\relax % (percent)
801     \catcode40 \the\catcode40\relax % (
802     \catcode41 \the\catcode41\relax % )
803     \catcode42 \the\catcode42\relax % *
804     \catcode46 \the\catcode46\relax % .
805     \catcode58 \the\catcode58\relax % :
806     \catcode60 \the\catcode60\relax % <
807     \catcode61 \the\catcode61\relax % =
808     \catcode62 \the\catcode62\relax % >
809     \catcode64 \the\catcode64\relax % @
810     \catcode91 \the\catcode91\relax % [
811     \catcode92 \the\catcode92\relax % (backslash)
812     \catcode93 \the\catcode93\relax % ]
813     \catcode123 \the\catcode123\relax % {
814     \catcode124 \the\catcode124\relax % |
815     \catcode125 \the\catcode125\relax % }
816   }%
817   \endlinechar=-1 %
818   \catcode32 10 % (space)
819   \catcode34 12 % "
820   \catcode35 6 % #
821   \catcode37 14 % (percent)
822   \catcode40 12 % (
823   \catcode41 12 % )

```



```

824 \catcode42 12 % *
825 \catcode46 12 % .
826 \catcode58 12 % :
827 \catcode60 12 % <
828 \catcode61 12 % =
829 \catcode62 12 % >
830 \catcode91 12 % [
831 \catcode92 0 % (backslash)
832 \catcode93 12 % ]
833 \catcode123 1 % {
834 \catcode124 12 % |
835 \catcode125 2 % }
836 \makeatletter
837 }

```

`\Hy@RestoreCatcodeSettings`

```

838 \def\Hy@RestoreCatcodeSettings#1{%
839   \csname Hy@cat@#1\endcsname
840   \expandafter\let\csname Hy@cat@#1\endcsname\relax
841 }

```

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.

```

842 \@ifundefined{T@PD1}{%
843   \Hy@SaveCatcodeSettings{pd1}%
844   \input{pdlenc.def}%
845   \Hy@RestoreCatcodeSettings{pd1}%
846   \HyLinguex@Restore
847 }{}
848 \DeclareFontFamily{PD1}{pdf}{}
849 \DeclareFontShape{PD1}{pdf}{m}{n}{<-> cmr10 }{}
850 \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`.

```

851 \def\HyPsd@LoadUnicode{%
852   \@ifundefined{T@PU}{%
853     \Hy@SaveCatcodeSettings{pu}%

```

```

854 \input{puenc.def}%
855 \Hy@RestoreCatcodeSettings{pu}%
856 \HyLinguex@Restore
857 }{}%
858 \DeclareFontFamily{PU}{pdf}{}%
859 \DeclareFontShape{PU}{pdf}{m}{n}{ <-> cmr10 }{}%
860 \DeclareFontSubstitution{PU}{pdf}{m}{n}%
861 \HyPsd@LoadExtra
862 \let\HyPsd@LoadUnicode\relax
863 }

```

\HyPsd@LoadExtra

```

864 \def\HyPsd@LoadExtra{%
865 \ifHy@psdextra
866 \ltx@iffileloaded{puenc.def}{}%
867 \ltx@iffileloaded{puenc-greekbasic.def}{}{}%
868 \Hy@SaveCatcodeSettings{pu}%
869 \input{puenc-greekbasic.def}%
870 \Hy@RestoreCatcodeSettings{pu}}%
871 \Hy@SaveCatcodeSettings{psdextra}%
872 \input{psdextra.def}%
873 \Hy@RestoreCatcodeSettings{psdextra}%
874 \let\HyPsd@LoadExtra\relax
875 }{}%
876 \fi
877 }

```

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.

```

878 \def\texorpdfstring{%
879 \ifHy@pdfstring
880 \expandafter\@secondoftwo
881 \else
882 \expandafter\@firstoftwo
883 \fi
884 }

```

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.

```

885 \@ifundefined{pdfstringdefPreHook}{}%
886 \let\pdfstringdefPreHook\@empty
887 {}
888 \@ifundefined{pdfstringdefPostHook}{}%
889 \let\pdfstringdefPostHook\@gobble
890 {}

```

`\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`.

```
891 \def\pdfstringdefDisableCommands{%
892   \begingroup
893   \makeatletter
894   \HyPsd@DisableCommands
895 }
```

`\HyPsd@DisableCommands`

```
896 \long\def\HyPsd@DisableCommands#1{%
897   \ltx@GlobalAppendToMacro\pdfstringdefPreHook{#1}%
898   \endgroup
899 }
```

`\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`.

```
900 \def\pdfstringdefWarn#1{%
901   \expandafter\noexpand\csname<>-string#1\endcsname
902 }
```

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.

```
903 \begingroup
```

```

904 \catcode0=12 %
905 \def\x{\endgroup
906   \def\HyPsd@ignorespaces{%
907     \romannumeral\expandafter`\expandafter^^@%
908     \romannumeral^^@%
909   }%
910 }%
911 \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.

```

912 \newif\ifHy@next
913 \</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.

```

914 \*package>

```

6.5.3 CJK patch

```

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

\HyPsd@CJKhook

916 \def\HyPsd@CJKhook{%
917   \ltx@ifpackageloaded{CJK}{-%
918     \let\CJK@kern\relax
919     \let\CJKkern\relax
920     \let\CJK@CJK\relax
921     \ifHy@CJKbookmarks
922       \HyPsd@CJKhook@bookmarks
923     \fi
924     \HyPsd@CJKhook@unicode
925   }-%
926 }

```

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 ($\geq 0x40$).

```

927 \begingroup
928 \catcode"7F=\active
929 \toks@{%
930 \let\CJK@ignorespaces\empty
931 \def\CJK@char#1{\@gobbletwo}%
932 \let\CJK@charx\@gobblefour
933 \let\CJK@punctchar\@gobblefour
934 \def\CJK@punctcharx#1{\@gobblefour}%
935 \catcode"7F=\active
936 \def^^7f#1^^7f#2^^7f{%
937 \string #1\HyPsd@DecimalToOctal{#2}%
938 }%
939 % ... ?
940 \ifHy@unicode
941 \def\Hy@cjkpu{\80}%
942 \else
943 \let\Hy@cjkpu\@empty
944 \fi
945 \HyPsd@CJKActiveChars
946 }%
947 \count@=127 %
948 \@whilenum\count@<255 \do{%
949 \advance\count@ by 1 %
950 \lccode`\~=\count@
951 \lowercase{%
952 \toks@\expandafter{\the\toks@ ~}%
953 }%
954 }%
955 \toks@\expandafter{\the\toks@ !}%
956 \xdef\HyPsd@CJKhook@bookmarks{%
957 \the\toks@
958 }%
959 \endgroup

```

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

```

960 \def\HyPsd@CJKActiveChars#1{%
961 \ifx#1!%
962 \let\HyPsd@CJKActiveChars\relax
963 \else
964 \edef#1{\noexpand\Hy@cjkpu\string#1}%
965 \fi

```

```

966 \HyPsd@CJKActiveChars
967 }

```

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

```

968 \def\HyPsd@DecimalToOctal#1{%
969   \ifcase #1 %
970     \000\or \001\or \002\or \003\or \004\or \005\or \006\or \007%
971     \or \010\or \011\or \012\or \013\or \014\or \015\or \016\or \017%
972     \or \020\or \021\or \022\or \023\or \024\or \025\or \026\or \027%
973     \or \030\or \031\or \032\or \033\or \034\or \035\or \036\or \037%
974     \or \040\or \041\or \042\or \043\or \044\or \045\or \046\or \047%
975     \or \050\or \051\or \052\or \053\or \054\or \055\or \056\or \057%
976     \or 0\or 1\or 2\or 3\or 4\or 5\or 6\or 7%
977     \or 8\or 9\or \072\or \073\or \074\or \075\or \076\or \077%
978     \or @\or A\or B\or C\or D\or E\or F\or G%
979     \or H\or I\or J\or K\or L\or M\or N\or O%
980     \or P\or Q\or R\or S\or T\or U\or V\or W%
981     \or X\or Y\or Z\or \133\or \134\or \135\or \136\or \137%
982     \or \140\or a\or b\or c\or d\or e\or f\or g%
983     \or h\or i\or j\or k\or l\or m\or n\or o%
984     \or p\or q\or r\or s\or t\or u\or v\or w%
985     \or x\or y\or z\or \173\or \174\or \175\or \176\or \177%
986     \or \200\or \201\or \202\or \203\or \204\or \205\or \206\or \207%
987     \or \210\or \211\or \212\or \213\or \214\or \215\or \216\or \217%
988     \or \220\or \221\or \222\or \223\or \224\or \225\or \226\or \227%
989     \or \230\or \231\or \232\or \233\or \234\or \235\or \236\or \237%
990     \or \240\or \241\or \242\or \243\or \244\or \245\or \246\or \247%
991     \or \250\or \251\or \252\or \253\or \254\or \255\or \256\or \257%
992     \or \260\or \261\or \262\or \263\or \264\or \265\or \266\or \267%
993     \or \270\or \271\or \272\or \273\or \274\or \275\or \276\or \277%
994     \or \300\or \301\or \302\or \303\or \304\or \305\or \306\or \307%
995     \or \310\or \311\or \312\or \313\or \314\or \315\or \316\or \317%
996     \or \320\or \321\or \322\or \323\or \324\or \325\or \326\or \327%
997     \or \330\or \331\or \332\or \333\or \334\or \335\or \336\or \337%
998     \or \340\or \341\or \342\or \343\or \344\or \345\or \346\or \347%
999     \or \350\or \351\or \352\or \353\or \354\or \355\or \356\or \357%
1000    \or \360\or \361\or \362\or \363\or \364\or \365\or \366\or \367%
1001    \or \370\or \371\or \372\or \373\or \374\or \375\or \376\or \377%
1002  \fi
1003 }

```

6.5.5 CJK unicode

\HyPsd@CJKhook@unicode

```

1004 \def\HyPsd@CJKhook@unicode{%
1005   \let\Unicode\HyPsd@CJK@Unicode
1006   \let\CJKnumber\HyPsd@CJKnumber
1007   \let\CJKdigits\HyPsd@CJKdigits
1008 }

```

\HyPsd@CJK@Unicode

```

1009 \def\HyPsd@CJK@Unicode#1#2{%
1010   \ifnum#1<256 %
1011     \HyPsd@DecimalToOctalFirst{#1}%

```

```

1012 \HyPsd@DecimalToOctalSecond{#2}%
1013 \else
1014 \933%
1015 \expandafter\expandafter\expandafter\HyPsd@HighA
1016 \intcalcDiv{#1}{4}!%
1017 \933%
1018 \ifcase\intcalcMod{#1}{4} %
1019 4\or 5\or 6\or 7%
1020 \fi
1021 \HyPsd@DecimalToOctalSecond{#2}%
1022 \fi
1023 }

1024 \def\HyPsd@HighA#1!{%
1025 \expandafter\expandafter\expandafter\HyPsd@HighB
1026 \IntCalcDiv#1!64!!%
1027 \expandafter\expandafter\expandafter\HyPsd@HighD
1028 \IntCalcMod#1!64!!%
1029 }
1030 \def\HyPsd@HighB#1!{%
1031 \expandafter\expandafter\expandafter\HyPsd@HighC
1032 \IntCalcDec#1!!%
1033 }
1034 \def\HyPsd@HighC#1!{%
1035 \IntCalcDiv#1!4!%
1036 \@backslashchar
1037 \IntCalcMod#1!4!%
1038 }
1039 \def\HyPsd@HighD#1!{%
1040 \ifcase\IntCalcDiv#1!8! %
1041 0\or 1\or 2\or 3\or 4\or 5\or 6\or 7%
1042 \fi
1043 \ifcase\IntCalcMod#1!8! %
1044 0\or 1\or 2\or 3\or 4\or 5\or 6\or 7%
1045 \fi
1046 }
1047 \def\HyPsd@DecimalToOctalFirst#1{%
1048 \9%
1049 \ifcase#1 %
1050 000\or 001\or 002\or 003\or 004\or 005\or 006\or 007%
1051 \or 010\or 011\or 012\or 013\or 014\or 015\or 016\or 017%
1052 \or 020\or 021\or 022\or 023\or 024\or 025\or 026\or 027%
1053 \or 030\or 031\or 032\or 033\or 034\or 035\or 036\or 037%
1054 \or 040\or 041\or 042\or 043\or 044\or 045\or 046\or 047%
1055 \or 050\or 051\or 052\or 053\or 054\or 055\or 056\or 057%
1056 \or 060\or 061\or 062\or 063\or 064\or 065\or 066\or 067%
1057 \or 070\or 071\or 072\or 073\or 074\or 075\or 076\or 077%
1058 \or 100\or 101\or 102\or 103\or 104\or 105\or 106\or 107%
1059 \or 120\or 111\or 112\or 113\or 114\or 115\or 116\or 117%
1060 \or 120\or 121\or 122\or 123\or 124\or 125\or 126\or 127%
1061 \or 130\or 131\or 132\or 133\or 134\or 135\or 136\or 137%
1062 \or 140\or 141\or 142\or 143\or 144\or 145\or 146\or 147%
1063 \or 150\or 151\or 152\or 153\or 154\or 155\or 156\or 157%
1064 \or 160\or 161\or 162\or 163\or 164\or 165\or 166\or 167%

```

```

1065 \or 170\or 171\or 172\or 173\or 174\or 175\or 176\or 177%
1066 \or 200\or 201\or 202\or 203\or 204\or 205\or 206\or 207%
1067 \or 210\or 211\or 212\or 213\or 214\or 215\or 216\or 217%
1068 \or 220\or 221\or 222\or 223\or 224\or 225\or 226\or 227%
1069 \or 230\or 231\or 232\or 233\or 234\or 235\or 236\or 237%
1070 \or 240\or 241\or 242\or 243\or 244\or 245\or 246\or 247%
1071 \or 250\or 251\or 252\or 253\or 254\or 255\or 256\or 257%
1072 \or 260\or 261\or 262\or 263\or 264\or 265\or 266\or 267%
1073 \or 270\or 271\or 272\or 273\or 274\or 275\or 276\or 277%
1074 \or 300\or 301\or 302\or 303\or 304\or 305\or 306\or 307%
1075 \or 310\or 311\or 312\or 313\or 314\or 315\or 316\or 317%
1076 \or 320\or 321\or 322\or 323\or 324\or 325\or 326\or 327%
1077 \or 330\or 331\or 332\or 333\or 334\or 335\or 336\or 337%
1078 \or 340\or 341\or 342\or 343\or 344\or 345\or 346\or 347%
1079 \or 350\or 351\or 352\or 353\or 354\or 355\or 356\or 357%
1080 \or 360\or 361\or 362\or 363\or 364\or 365\or 366\or 367%
1081 \or 370\or 371\or 372\or 373\or 374\or 375\or 376\or 377%
1082 \fi
1083 }
1084 \def\HyPsd@DecimalToOctalSecond#1{%
1085 \ifcase #1 %
1086 \000\or \001\or \002\or \003\or \004\or \005\or \006\or \007%
1087 \or \010\or \011\or \012\or \013\or \014\or \015\or \016\or \017%
1088 \or \020\or \021\or \022\or \023\or \024\or \025\or \026\or \027%
1089 \or \030\or \031\or \032\or \033\or \034\or \035\or \036\or \037%
1090 \or \040\or \041\or \042\or \043\or \044\or \045\or \046\or \047%
1091 \or \050\or \051\or \052\or \053\or \054\or \055\or \056\or \057%
1092 \or \060\or \061\or \062\or \063\or \064\or \065\or \066\or \067%
1093 \or \070\or \071\or \072\or \073\or \074\or \075\or \076\or \077%
1094 \or \100\or \101\or \102\or \103\or \104\or \105\or \106\or \107%
1095 \or \110\or \111\or \112\or \113\or \114\or \115\or \116\or \117%
1096 \or \120\or \121\or \122\or \123\or \124\or \125\or \126\or \127%
1097 \or \130\or \131\or \132\or \133\or \134\or \135\or \136\or \137%
1098 \or \140\or \141\or \142\or \143\or \144\or \145\or \146\or \147%
1099 \or \150\or \151\or \152\or \153\or \154\or \155\or \156\or \157%
1100 \or \160\or \161\or \162\or \163\or \164\or \165\or \166\or \167%
1101 \or \170\or \171\or \172\or \173\or \174\or \175\or \176\or \177%
1102 \or \200\or \201\or \202\or \203\or \204\or \205\or \206\or \207%
1103 \or \210\or \211\or \212\or \213\or \214\or \215\or \216\or \217%
1104 \or \220\or \221\or \222\or \223\or \224\or \225\or \226\or \227%
1105 \or \230\or \231\or \232\or \233\or \234\or \235\or \236\or \237%
1106 \or \240\or \241\or \242\or \243\or \244\or \245\or \246\or \247%
1107 \or \250\or \251\or \252\or \253\or \254\or \255\or \256\or \257%
1108 \or \260\or \261\or \262\or \263\or \264\or \265\or \266\or \267%
1109 \or \270\or \271\or \272\or \273\or \274\or \275\or \276\or \277%
1110 \or \300\or \301\or \302\or \303\or \304\or \305\or \306\or \307%
1111 \or \310\or \311\or \312\or \313\or \314\or \315\or \316\or \317%
1112 \or \320\or \321\or \322\or \323\or \324\or \325\or \326\or \327%
1113 \or \330\or \331\or \332\or \333\or \334\or \335\or \336\or \337%
1114 \or \340\or \341\or \342\or \343\or \344\or \345\or \346\or \347%
1115 \or \350\or \351\or \352\or \353\or \354\or \355\or \356\or \357%
1116 \or \360\or \361\or \362\or \363\or \364\or \365\or \366\or \367%
1117 \or \370\or \371\or \372\or \373\or \374\or \375\or \376\or \377%
1118 \fi

```



```

1119 }
1120 \def\HyPsd@CJKnumber#1{%
1121   \ifnum#1<\z@
1122     \CJK@minus
1123     \expandafter\HyPsd@@CJKnumber\expandafter{\number-\number#1}%
1124   \else
1125     \expandafter\HyPsd@@CJKnumber\expandafter{\number#1}%
1126   \fi
1127 }
1128 \def\HyPsd@@CJKnumber#1{%
1129   \ifcase#1 %
1130     \CJK@zero\or\CJK@one\or\CJK@two\or\CJK@three\or\CJK@four\or
1131     \CJK@five\or\CJK@six\or\CJK@seven\or\CJK@eight\or\CJK@nine\or
1132     \CJK@ten\or\CJK@ten\CJK@one\or\CJK@ten\CJK@two\or
1133     \CJK@ten\CJK@three\or\CJK@ten\CJK@four\or\CJK@ten\CJK@five\or
1134     \CJK@ten\CJK@six\or\CJK@ten\CJK@seven\or\CJK@ten\CJK@eight\or
1135     \CJK@ten\CJK@nine
1136   \else
1137     \ifnum#1<10000 %
1138       \HyPsd@CJKnumberFour#1!\@empty{20}%
1139       \@empty
1140     \else
1141       \ifnum#1<100000000 %
1142         \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1143         \IntCalcDiv#1!10000!%
1144         !\{20}%
1145         \CJK@tenthousand
1146         \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1147         \IntCalcMod#1!10000!%
1148         !\CJK@zero{10}%
1149         \@empty
1150       \else
1151         \expandafter\HyPsd@CJKnumberLarge
1152         \number\IntCalcDiv#1!100000000!\expandafter!%
1153         \number\IntCalcMod#1!100000000!!%
1154       \fi
1155     \fi
1156   \fi
1157 }
1158 \def\HyPsd@CJKnumberLarge#1!#2!{%
1159   \HyPsd@CJKnumberFour#1!\{20}%
1160   \CJK@hundredmillion
1161   \ifnum#2=\z@
1162   \else
1163     \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1164     \IntCalcDiv#2!10000!%
1165     !\CJK@zero{10}%
1166     \CJK@tenthousand
1167     \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1168     \IntCalcMod#2!10000!%
1169     !\CJK@zero{10}%
1170     \@empty
1171   \fi
1172 }

```

```

1173 \def\HyPsd@CJKnumberFour#1!#2#3{%
1174   \ifnum#1=\z@
1175     \expandafter\@gobble
1176   \else
1177     \ifnum#1<1000 %
1178       #2%
1179       \HyPsd@CJKnumberThree#1!#{#3}%
1180     \else
1181       \HyPsd@@CJKnumber{\IntCalcDiv#1!1000!}%
1182       \CJK@thousand
1183       \expandafter\expandafter\expandafter\HyPsd@CJKnumberThree
1184       \IntCalcMod#1!1000!%
1185       !\CJK@zero{10}%
1186     \fi
1187   \fi
1188 }
1189 \def\HyPsd@CJKnumberThree#1!#2#3{%
1190   \ifnum#1=\z@
1191   \else
1192     \ifnum#1<100 %
1193       #2%
1194       \HyPsd@CJKnumberTwo#1!#{#3}%
1195     \else
1196       \HyPsd@@CJKnumber{\IntCalcDiv#1!100!}%
1197       \CJK@hundred
1198       \expandafter\expandafter\expandafter\HyPsd@CJKnumberTwo
1199       \IntCalcMod#1!100!%
1200       !\CJK@zero{10}%
1201     \fi
1202   \fi
1203 }
1204 \def\HyPsd@CJKnumberTwo#1!#2#3{%
1205   \ifnum#1=\z@
1206   \else
1207     \ifnum#1<#3 %
1208       #2%
1209       \HyPsd@@CJKnumber{#1}%
1210     \else
1211       \HyPsd@@CJKnumber{\IntCalcDiv#1!10!}%
1212       \CJK@ten
1213       \ifnum\IntCalcMod#1!10!=\z@
1214       \else
1215         \HyPsd@@CJKnumber{\IntCalcMod#1!10!}%
1216       \fi
1217     \fi
1218   \fi
1219 }
1220 \def\HyPsd@CJKdigits#1{%
1221   \ifx*#1\relax
1222     \expandafter\HyPsd@@CJKdigits\expandafter\CJK@zero
1223   \else
1224     \HyPsd@@CJKdigits\CJK@null{#1}%
1225   \fi
1226 }

```

```

1227 \def\HyPsd@@CJKdigits#1#2{%
1228   \ifx\|#2\|
1229     \else
1230       \HyPsd@@@CJKdigits#1#2\@nil
1231     \fi
1232 }%
1233 \def\HyPsd@@@CJKdigits#1#2#3\@nil{%
1234   \HyPsd@CJKdigit#1{#2}%
1235   \ifx\|#3\|
1236     \expandafter\@gobble
1237   \else
1238     \expandafter\@firstofone
1239   \fi
1240   {%
1241     \HyPsd@@@CJKdigits#1#3\@nil
1242   }%
1243 }
1244 \def\HyPsd@CJKdigit#1#2{%
1245   \ifcase#2 %
1246     #1\or
1247     \CJK@one\or\CJK@two\or\CJK@three\or\CJK@four\or
1248     \CJK@five\or\CJK@six\or\CJK@seven\or\CJK@eight\or\CJK@nine
1249   \fi
1250 }

```

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 `\@typesetprotect` (`=\relax`).

```

\def\@current@cmd#1{%
  \ifx\protect\@typesetprotect
    \@inmathwarn#1%
  \else
    \noexpand#1\expandafter\@gobble
  \fi}
\def\@changed@cmd#1#2{%
  \ifx\protect\@typesetprotect
    \@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}

1251 \def\HyPsd@inmathwarn#1#2{%
1252 \ifx#2\expandafter
1253 \expandafter\ifx\csname\cf@encoding\string#1\endcsname\relax
1254 \HyPsd@GLYPHERR
1255 \expandafter\@gobble\string#1%
1256 >%
1257 \expandafter\expandafter\expandafter\HyPsd@EndWithElse
1258 \else
1259 \expandafter\expandafter\expandafter\HyPsd@GobbleFiFi
1260 \fi
1261 \else
1262 \expandafter#2%
1263 \fi
1264 }
1265 \def\HyPsd@GobbleFiFi#1\fi#2\fi{}
1266 \def\HyPsd@EndWithElse#1\else\else{}

\HyPsd@add@accent

1267 \def\HyPsd@add@accent#1#2{%
1268 \HyPsd@GLYPHERR\expandafter\@gobble\string#1+\string#2>%
1269 #2%
1270 }%

```

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 caught by undelimited arguments.
- And they work in number, dimen, and skip assignments.

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

```

1271 \def\HyPsd@LetUnexpandableSpace#1{%
1272 \expandafter\futurelet\expandafter#1\expandafter\@gobble\space\relax
1273 }

```

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

```
1274 \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.

```
1275 \edef\HyPsd@XSPACE{\string#\string X}
1276 \edef\HyPsd@ITALCORR{\string#\string I}
1277 \edef\HyPsd@GLYPHERR{\string#\string G}
```

6.5.9 \hspace fix

\HyPsd@hspace

```
1278 \def\HyPsd@hspace#1{\HyPsd@@hspace#1*END}
```

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

```
1279 \def\HyPsd@@hspace#1*#2END{%
1280   \ifx\#2\%
1281     \HyPsd@hspacetest{#1}%
1282   \else
1283     \expandafter\HyPsd@hspacetest
1284   \fi
1285 }
```

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

```
1286 \def\HyPsd@hspacetest#1{\ifdim\dimexpr#1\relax>\z@\space\fi}
```

6.5.10 Fix for AMS classes

```
1287 \ltx@ifundefined{tocsection}{%
1288   \let\HyPsd@AMSclassfix\relax
1289 }{%
1290   \def\HyPsd@AMSclassfix{%
1291     \let\tocpart\HyPsd@tocsection
1292     \let\tocchapter\HyPsd@tocsection
1293     \let\tocappendix\HyPsd@tocsection
1294     \let\tocsection\HyPsd@tocsection
1295     \let\tocsubsection\HyPsd@tocsection
1296     \let\tocsubsubsection\HyPsd@tocsection
1297     \let\tocparagraph\HyPsd@tocsection
1298   }%
1299   \def\HyPsd@tocsection#1#2#3{%
1300     \if @#2@ \else \if @#1@ \else #1 \fi #2. \fi
1301     #3%
1302   }%
1303 }
```

6.5.11 Reference commands

\HyPsd@href

```
1304 \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.

```
1305 \def\HyPsd@ref#1{\HyPsd@@ref#1*\END}%
```

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

```
1306 \def\HyPsd@@ref#1*#2\END{%
1307   \ifx\#2\%
1308     \HyPsd@@@ref{#1}%
1309   \else
1310     \expandafter\HyPsd@@@ref
1311   \fi
1312 }%
```

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

```
1313 \def\HyPsd@@@ref#1{%
1314   \expandafter\ifx\csname r@#1\endcsname\relax
1315     ??%
1316   \else
1317     \expandafter\expandafter\expandafter
1318     \@car\csname r@#1\endcsname\@nil
1319   \fi
1320 }
```

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

```
1321 \def\HyPsd@pageref#1{\HyPsd@@pageref#1*\END}
```

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

```
1322 \def\HyPsd@@pageref#1*#2\END{%
1323   \ifx\#2\%
1324     \HyPsd@@@pageref{#1}%
1325   \else
1326     \expandafter\HyPsd@@@pageref
1327   \fi
1328 }
```

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

```
1329 \def\HyPsd@@@pageref#1{%
1330   \expandafter\ifx\csname r@#1\endcsname\relax
1331     ??%
1332   \else
1333     \expandafter\expandafter\expandafter\expandafter
1334     \expandafter\expandafter\expandafter\@car
1335     \expandafter\expandafter\expandafter\@gobble
1336     \csname r@#1\endcsname{}\@nil
1337   \fi
1338 }
```

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

```
1339 \def\HyPsd@nameref#1{\HyPsd@@nameref#1*\END}
```

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

```
1340 \def\HyPsd@@nameref#1*#2\END{%
1341   \ifx\|#2\|
1342     \HyPsd@@@nameref{#1}%
1343   \else
1344     \expandafter\HyPsd@@@nameref
1345   \fi
1346 }
```

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

```
1347 \def\HyPsd@@@nameref#1{%
1348   \expandafter\ifx\csname r@#1\endcsname\relax
1349     ??%
1350   \else
1351     \expandafter\expandafter\expandafter\expandafter
1352     \expandafter\expandafter\expandafter\@car
1353     \expandafter\expandafter\expandafter\@gobbletwo
1354     \csname r@#1\endcsname{}\}\@nil
1355   \fi
1356 }
```

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

```
1357 \def\HyPsd@autoref#1{\HyPsd@@autoref#1*\END}
```

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

```
1358 \def\HyPsd@@autoref#1*#2\END{%
1359   \ifx\|#2\|
1360     \HyPsd@@@autoref{#1}%
1361   \else
1362     \expandafter\HyPsd@@@autoref
1363   \fi
1364 }
```

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

```
1365 \def\HyPsd@@@autoref#1{%
1366   \expandafter\ifx\csname r@#1\endcsname\relax
1367     ??%
1368   \else
1369     \expandafter\expandafter\expandafter\HyPsd@autorefname
1370     \csname r@#1\endcsname{}\}\@nil
1371     \expandafter\expandafter\expandafter
1372     \@car\csname r@#1\endcsname\@nil
1373   \fi
1374 }
```

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

```
1375 \def\HyPsd@autorefname#1#2#3#4#5\@nil{%
1376   \ifx\|#4\|
1377     \else
1378       \HyPsd@@autorefname#4.\@nil
1379   \fi
1380 }
```

`\HyPsd@@autorefname`

```

1381 \def\HyPsd@@autorefname#1.#2\@nil{%
1382 \ltx@ifundefined{#1autorefname}{%
1383 \ltx@ifundefined{#1name}{%
1384 }{%
1385 \csname#1name\endcsname\space
1386 }%
1387 }{%
1388 \csname#1autorefname\endcsname\space
1389 }%
1390 }

```

6.5.12 Redefining the defining commands

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

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

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

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

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

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

`\HyPsd@DefCommand`

`\HyPsd@LetCommand`

```

1391 \begingroup
1392 \def\x#1#2{%
1393 \endgroup
1394 \let#1\def
1395 \def\HyPsd@DefCommand##1##2###{%
1396 #1%
1397 \expandafter\noexpand
1398 \csname\expandafter\@gobble\string##1\@empty\endcsname
1399 \@gobble

```



```

1400 }%
1401 \let#2\let
1402 \def\HyPsd@@LetCommand##1{%
1403   \expandafter\ifx\csname##1\expandafter\endcsname
1404     \csname iftrue\endcsname
1405     \pdfstringdefWarn\let
1406     \expandafter\@gobble
1407   \else
1408     \expandafter\ifx\csname##1\expandafter\endcsname
1409       \csname iffalse\endcsname
1410       \pdfstringdefWarn\let
1411       \expandafter\expandafter\expandafter\@gobble
1412     \else
1413       #2%
1414       \expandafter\noexpand
1415       \csname##1\expandafter\expandafter\expandafter\endcsname
1416     \fi
1417   \fi
1418 }%
1419 }%
1420 \expandafter\x\csname <def>-command\expandafter\endcsname
1421   \csname <let>-command\endcsname
1422 \def\HyPsd@LetCommand#1{%
1423   \expandafter\expandafter\expandafter\HyPsd@@LetCommand
1424   \expandafter\expandafter\expandafter{%
1425     \expandafter\@gobble\string#1\@empty
1426   }%
1427 }

```

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).

```

1428 \def\HyPsd@ifnextchar#1{%
1429   \pdfstringdefWarn#1%
1430   \expandafter\@gobbletwo\@gobble
1431 }

```

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`.

```
1432 \def\HyPsd@protected@testopt#1{%
1433   \pdfstringdefWarn#1%
1434   \@gobbletwo
1435 }
```

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:

```
1436 \def\HyPsd@Warning#1{%
1437   \begingroup
1438   \let\space\ltx@space
1439   \Hy@Warning{#1}%
1440   \endgroup
1441 }
```

6.6.2 Protecting spaces

```
1442 \RequirePackage{etexcmds}[2007/09/09]
1443 \ifetex@unexpanded
1444   \expandafter\@secondoftwo
1445 \else
1446   \expandafter\@firstoftwo
1447 \fi
1448 {%
```

`\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`.

```
1449 \def\HyPsd@ProtectSpaces#1{%
1450   \iftrue
1451     \expandafter\HyPsd@@ProtectSpacesFi
1452     \expandafter|\expandafter\@empty#1| \HyPsd@End#1%
1453   \fi
1454   }%
```

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

```
1455 \def\HyPsd@@ProtectSpacesFi#1 #2\HyPsd@End#3\fi{%
1456   \fi
1457   \ifx\scrollmode#2\scrollmode
1458     \HyPsd@RemoveMask#1\HyPsd@End#3%
1459   \else
1460     \gdef#3{#1\HyPsd@UnexpandableSpace#2}%
1461     \expandafter\HyPsd@@ProtectSpacesFi#3\HyPsd@End#3%
1462   \fi
1463   }%
```

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.

```
1464 \def\HyPsd@RemoveMask|#1|\HyPsd@End#2{%
1465   \toks@\expandafter{#1}%
1466   \xdef#2{\the\toks@}%
1467 }%

1468 }{%
1469   \let\HyPsd@fi\fi
1470   \def\HyPsd@ProtectSpaces#1{%
1471     \xdef#1{%
1472       \iftrue
1473         \expandafter\HyPsd@@ProtectSpacesFi
1474         \expandafter|\expandafter\@empty#1| %
1475       \HyPsd@fi
1476     }%
1477     \expandafter\HyPsd@RemoveMask#1\HyPsd@End#1%
1478   }%
1479   \def\HyPsd@@ProtectSpacesFi#1 #2\HyPsd@fi{%
1480     \fi
1481     \etex@unexpanded{#1}%
1482     \ifx\scrollmode#2\scrollmode
1483     \else
1484       \HyPsd@@ProtectSpacesFi\HyPsd@UnexpandableSpace#2%
1485     \HyPsd@fi
1486   }%
1487   \def\HyPsd@RemoveMask|#1|\HyPsd@End#2{%
1488     \xdef#2{\etex@unexpanded\expandafter{#1}}%
1489   }%
1490 }
```

6.6.3 Remove grouping braces

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

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

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

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

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

```

1497 \def\HyPsd@@RemoveBracesFi#1#2\HyPsd@End#3\fi{%
1498   \fi
1499   \def\Hy@temp@A{#1#2}%
1500   \def\Hy@temp@B{#3}%
1501   \ifx\Hy@temp@A\Hy@temp@B
1502     \expandafter\def\expandafter\HyPsd@String\expandafter{%
1503       \HyPsd@String#1%
1504     }%
1505     \ifx\scrollmode#2\scrollmode
1506       \else
1507         \Hy@ReturnAfterFiFiEnd{%
1508           \HyPsd@RemoveBraces{#2}%
1509         }%
1510       \fi
1511     \else
1512       \def\Hy@temp@A{#1}%
1513       \HyPsd@AppendItalcorr\HyPsd@String
1514       \ifx\Hy@temp@A\@empty
1515         \Hy@ReturnAfterElseFiFiEnd{%
1516           \HyPsd@RemoveBraces{#2}%
1517         }%
1518       \else
1519         \HyPsd@ProtectSpaces\Hy@temp@A
1520         \HyPsd@AppendItalcorr\Hy@temp@A
1521         \Hy@ReturnAfterFiFiEnd{%
1522           \expandafter\HyPsd@RemoveBraces\expandafter
1523             {\Hy@temp@A#2}%
1524         }%
1525       \fi
1526     \fi
1527   \Hy@ReturnEnd
1528 }
```

`\HyPsd@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`.

```

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

6.6.4 Catcode check

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

```

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

Check catcodes.

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

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

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

```

1539 \begingroup
1540   \catcode`\Q=\active
1541   \let Q\ltx@empty
1542   \gdef\HyPsd@CheckCatcodes#1#2\HyPsd@End{%
1543     \global\let\HyPsd@Rest\relax
1544     \ifcat\relax\noexpand#1\relax
1545       \ifx#1\protect
1546       \else
1547         \ifx#1\penalty
1548           \setbox\z@=\hbox{%
1549             \afterassignment\HyPsd@AfterCountRemove
1550             \count@=#2\HyPsd@End
1551           }%
1552         \else
1553           \ifx#1\kern
1554             \setbox\z@=\hbox{%
1555               \afterassignment\HyPsd@AfterDimenRemove
1556               \dimen@=#2\HyPsd@End
1557             }%
1558           \else
1559             \ifx#1\hskip
1560               \setbox\z@=\hbox{%
1561                 \afterassignment\HyPsd@AfterSkipRemove
1562                 \skip@=#2\HyPsd@End
1563               }%
1564             \else
1565               \HyPsd@CatcodeWarning{#1}%
1566             \fi
1567           \fi
1568         \fi
1569       \else
1570         \ifcat\noexpand#1\noexpandQ% active character
1571         \expandafter\expandafter\expandafter\def
1572         \expandafter\expandafter\expandafter\HyPsd@String
1573         \expandafter\expandafter\expandafter{%
1574           \expandafter\HyPsd@String\string#1%
1575         }%
1576       \else

```

```

1578 \ifcat#1A% letter
1579 \expandafter\def\expandafter\HyPsd@String\expandafter{%
1580 \HyPsd@String#1%
1581 }%
1582 \else
1583 \ifcat#1 % SPACE
1584 \expandafter\def\expandafter\HyPsd@String\expandafter{%
1585 \HyPsd@String\HyPsd@SPACEOPTI
1586 }%
1587 \else
1588 \ifcat$#1%
1589 \HyPsd@CatcodeWarning{math shift}%
1590 \else
1591 \ifcat&#1%
1592 \HyPsd@CatcodeWarning{alignment tab}%
1593 \else
1594 \ifcat^#1%
1595 \HyPsd@CatcodeWarning{superscript}%
1596 \else
1597 \ifcat_#1%
1598 \HyPsd@CatcodeWarning{subscript}%
1599 \else
1600 \expandafter\def\expandafter\HyPsd@String\expandafter{%
1601 \HyPsd@String#1%
1602 }%
1603 \fi
1604 \fi
1605 \fi
1606 \fi
1607 \fi
1608 \fi
1609 \fi
1610 \fi
1611 \ifx\HyPsd@Rest\relax
1612 \ifx\scrollmode#2\scrollmode
1613 \else
1614 \Hy@ReturnAfterFiFiEnd{%
1615 \HyPsd@CheckCatcodes#2\HyPsd@End
1616 }%
1617 \fi
1618 \else
1619 \ifx\HyPsd@Rest\@empty
1620 \else
1621 \Hy@ReturnAfterFiFiEnd{%
1622 \expandafter\HyPsd@CheckCatcodes\HyPsd@Rest\HyPsd@End
1623 }%
1624 \fi
1625 \fi
1626 \Hy@ReturnEnd
1627 }%
1628 \endgroup

```

Remove counts, dimens, skips.

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

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

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

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

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

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

Catcode warnings.

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

```
1656 \def\HyPsd@CatcodeWarning#1{%
1657   \HyPsd@Warning{%
1658     Token not allowed in a PDF string (%
1659     \ifHy@unicode
1660       Unicode%
1661     \else
1662       PDFDocEncoding%
1663     \fi
1664   ):}%
1665   \MessageBreak removing ``\HyPsd@RemoveCmdPrefix#1'%
1666 }%
1667 }
1668 \begingroup
```

```

1669 \catcode`\|=0 %
1670 \catcode`\|=12 %
1671 |gdef|HyPsd@RemoveCmdPrefix#1{%
1672   |expandafter|HyPsd@@RemoveCmdPrefix
1673   |string#1|@empty\<>-|@empty|@empty
1674 }%
1675 |gdef|HyPsd@@RemoveCmdPrefix#1\<>-#2|@empty#3|@empty{#1#2}%
1676 |endgroup

```

\HyPsd@RemoveSpaceWarning

```

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

```

\HyPsd@ReplaceSpaceWarning

```

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

```

6.6.5 Check for wrong glyphs

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

```

1703 \def\HyPsd@GlyphProcess#1\relax#2\@empty{%
1704   \expandafter\def\expandafter\HyPsd@String\expandafter{%
1705     \HyPsd@String#1%
1706   }%
1707   \ifx\\#2\\%
1708   \else
1709     \ltx@ReturnAfterFi{%
1710       \HyPsd@GlyphProcessWarning#2\@empty
1711     }%
1712   \fi
1713 }

```



```

1714 \def\HyPsd@GlyphProcessWarning#1>#2\@empty{%
1715   \HyPsd@@GlyphProcessWarning#1++>%
1716   \HyPsd@GlyphProcess#2\@empty
1717 }
1718 \def\HyPsd@@GlyphProcessWarning#1+#2+#3>{%
1719   \ifx\#2\%
1720     \HyPsd@Warning{%
1721       Glyph not defined in %
1722       P\ifHy@unicode U\else D1\fi\space encoding,\MessageBreak
1723       removing ` \@backslashchar#1'%
1724     }%
1725   \else
1726     \HyPsd@Warning{%
1727       Composite letter ` \@backslashchar#1+#2'\MessageBreak
1728       not defined in P\ifHy@unicode U\else D1\fi\space encoding,%
1729       \MessageBreak
1730       removing ` \@backslashchar#1'%
1731     }%
1732   \fi
1733 }

```

Spaces.

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

```

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

```

6.6.6 Replacing tokens

`\HyPsd@Subst` To save tokens `\HyPsd@StringSubst` is 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.
1741 \def\HyPsd@Subst#1#2#3{%
1742   \def\HyPsd@@ReplaceFi##1#1##2\END\fi{%
1743     \fi
1744     ##1%
1745     \ifx\scrollmode##2\scrollmode
1746     \else
1747       #2%
1748       \HyPsd@@ReplaceFi##2\END
1749     \fi
1750 }%

```

```

1751 \xdef#3{%
1752   \iftrue
1753     \expandafter\HyPsd@@ReplaceFi#3#1\END
1754   \fi
1755 }%
1756 }

```

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

```

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

```

`\HyPsd@EscapeTeX`

```

1760 \begingroup
1761 \lccode`!=`%%
1762 \lccode`|=`\\
1763 \lccode`\(=`{
1764 \lccode`\)=`}
1765 \lccode`0=\ltx@zero
1766 \lccode`1=\ltx@zero
1767 \lccode`3=\ltx@zero
1768 \lccode`4=\ltx@zero
1769 \lccode`5=\ltx@zero
1770 \lccode`7=\ltx@zero
1771 \lowercase{\endgroup
1772 \def\HyPsd@EscapeTeX#1{%
1773   \HyPsd@Subst!{|045}#1%
1774   \HyPsd@Subst({|173}#1%
1775   \HyPsd@Subst){|175}#1%
1776 }%
1777 }

```

6.6.7 Support for package `xspace`

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

```

1778 \def\HyPsd@doxspace#1{%
1779   \ifx#1\relax\else
1780     \ifx#1.\else
1781       \ifx#1:\else
1782         \ifx#1,\else
1783           \ifx#1;\else
1784             \ifx#1!\else
1785               \ifx#1?\else
1786                 \ifx#1/\else
1787                   \ifx#1-\else
1788                     \ifx#1'\else
1789                       \HyPsd@SPACEOPTI
1790                     \fi
1791                   \fi

```

```

1792     \fi
1793     \fi
1794     \fi
1795     \fi
1796     \fi
1797     \fi
1798     \fi
1799     \fi
1800     #1%
1801 }%

```

6.6.8 Converting to Unicode

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

```

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

```

\HyPsd@ConvertToUnicode

```

1805 |gdef|HyPsd@ConvertToUnicode#1{%
1806 |xdef#1{%
1807 |expandafter|HyPsd@DoConvert#1|@empty|@empty|@empty
1808 }%
1809 |ifx#1|@empty
1810 |else
1811 |xdef#1{%
1812 \376\377%
1813 #1%
1814 }%
1815 |fi
1816 }%

```

\HyPsd@DoConvert

```

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

```

\HyPsd@DoEscape

```

1831 |gdef|HyPsd@DoEscape#1{%
1832 |ifx#19%

```

```

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

```

\HyPsd@GetTwoBytes

```

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

```

\HyPsd@GetOneByte

```

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

```

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

```

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

```

\HyPsd@Char

```

1859 \begingroup
1860 \catcode0=9 %
1861 \catcode`\^=7 %
1862 \catcode`\^^=12 %
1863 \def\x{^^^0000}%
1864 \expandafter\endgroup
1865 \ifx\x\@empty
1866 \def\HyPsd@Char#1{%
1867 \ifnum`#1<128 %
1868 \@backslashchar 000#1%
1869 \else
1870 \ifnum`#1<65536 %
1871 \expandafter\HyPsd@CharTwoByte\number`#1!%
1872 \else
1873 \expandafter\expandafter\expandafter\HyPsd@CharSurrogate
1874 \intcalcSub{`#1}{65536}!%
1875 \fi
1876 \fi
1877 }%

```

```

1878 \def\HyPsd@CharTwoByte#1!{%
1879   \expandafter\expandafter\expandafter\HyPsd@CharOctByte
1880   \IntCalcDiv#1!256!!%
1881   \expandafter\expandafter\expandafter\HyPsd@CharOctByte
1882   \IntCalcMod#1!256!!%
1883 }%
1884 \def\HyPsd@CharOctByte#1!{%
1885   \@backslashchar
1886   \IntCalcDiv#1!64!%
1887   \intcalcDiv{\IntCalcMod#1!64!}{8}%
1888   \IntCalcMod#1!8!%
1889 }%
1890 \def\HyPsd@CharSurrogate#1!{%
1891   \@backslashchar 33%
1892   \IntCalcDiv#1!262144!%
1893   \expandafter\expandafter\expandafter\HyPsd@CharOctByte
1894   \intcalcDiv{\IntCalcMod#1!262144!}{1024}!%
1895   \@backslashchar 33%
1896   \expandafter\expandafter\expandafter\IntCalcAdd
1897   \intcalcDiv{\IntCalcMod#1!1024!}{256}!4!%
1898   \expandafter\expandafter\expandafter\HyPsd@CharOctByte
1899   \IntCalcMod#1!256!!%
1900 }%
1901 \else
1902   \def\HyPsd@Char#1{%
1903     \@backslashchar 000#1%
1904   }%
1905 \fi

```

change 2022-02-21 For the case that utf8 chars are protected we need to expand them. This works only if `\UTFviii@loop` is not defined in a group, which will be the case in the new latex code, so we test for it.

```

1906 \ifcsname UTFviii@loop\endcsname
1907 \def\HyPsd@expand@utfvii{%
1908   \count@"C2
1909   \@tempcnta"F5
1910   \def\UTFviii@tmp{\expandafter\def\expandafter~\expandafter{~}}%
1911   \UTFviii@loop
1912 }
1913 \else
1914 \def\HyPsd@expand@utfvii{}
1915 \fi

```

6.6.9 Support for UTF-8 input encoding

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

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

`\numexpr 123/4\relax` is replaced by

```

\number\dimexpr.25\dimexpr 123sp\relax\relax

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

```

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

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

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

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

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

$$(5)$$

```

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

```

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

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

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

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

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

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

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

$$(12)$$

```

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

```

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

```

UTF-8: 11110uuu  10uuzzzz  10yyyyyy  10xxxxxx
www = uuuu - 1
UTF-16: 110110ww  wwzzzzyy  110111yy  yyxxxxxx
octal: 011 011 0ww 0ww zzz zyy 011 011 1yy 0yy xxx xxx

```

```

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

```

```

1989 \number\numexpr4+\dimexpr.25\dimexpr#1sp\relax\relax\relax
1990 \csname\number\numexpr#1-4*\dimexpr.25\dimexpr#1sp\endcsname
1991 \number\dimexpr.125\dimexpr`#2sp-128sp\relax\relax
1992 \number\numexpr`#2-8*\dimexpr.125\dimexpr`#2sp\relax\relax\relax
1993 }%

```

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

```

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

```

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

```

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

```

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

```

2005 \expandafter\HyPsd@unichar\expandafter{%
2006 \number\numexpr#1-9216%
2007 -1024*\dimexpr.0009765625\dimexpr\number#1sp-\p@
2008 \relax\relax\relax
2009 }%
2010 \else
2011 \ifnum#1>"7FF %
2012 \9%
2013 \expandafter\HyPsd@unichar@first@byte\expandafter{%
2014 \number
2015 \dimexpr.00390625\dimexpr\number#1sp\relax\relax
2016 }%
2017 \else
2018 \8%
2019 \number\dimexpr.00390625\dimexpr\number#1sp\relax\relax
2020 \fi
2021 \expandafter\HyPsd@unichar@second@byte\expandafter{%
2022 \number
2023 \numexpr#1-256*\number
2024 \dimexpr.00390625\dimexpr\number#1sp\relax\relax\relax
2025 }%
2026 \fi
2027 \fi
2028 \else
2029 .% unsupported (Unicode -> PDF Doc Encoding)
2030 \fi
2031 }%
2032 \def\HyPsd@UnicodeReplacementCharacter{\9377\375}%
2033 \def\HyPsd@unichar@first@byte#1{%
2034 \number\dimexpr.015625\dimexpr#1sp\relax\relax
2035 \expandafter\HyPsd@unichar@octtwo\expandafter{%
2036 \number

```



```

2037 \numexpr#1-64*\number\dimexpr.015625\dimexpr#1sp%
2038 \relax\relax\relax
2039 }%
2040 }%
2041 \def\HyPsd@unichar@second@byte#1{%
2042 \csname\number\dimexpr.015625\dimexpr#1sp\relax\relax\endcsname
2043 \expandafter\HyPsd@unichar@octtwo\expandafter{%
2044 \number
2045 \numexpr#1-64*\number\dimexpr.015625\dimexpr#1sp%
2046 \relax\relax\relax
2047 }%
2048 }%
2049 \def\HyPsd@unichar@octtwo#1{%
2050 \number\dimexpr.125\dimexpr#1sp\relax\relax
2051 \number\dimexpr#1-8*\number\dimexpr.125\dimexpr#1sp%
2052 \relax\relax\relax
2053 }%

```

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

```

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

```

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

\HyPsd@DieFace Die faces are provided by

Package	Macro
ifsym	\Cube
epsdice	\epsdice
hhcount	\fcdice

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

```

2062 \def\HyPsd@DieFace#1{%
2063 \ifHy@unicode
2064 \ifnum#1<1 %
2065 \HyPsd@UnicodeReplacementCharacter
2066 \else
2067 \ifnum#1>6 %
2068 \9046\205%
2069 \expandafter\expandafter\expandafter
2070 \HyPsd@DieFaceLarge\intcalcSub{#1}{6}!%
2071 \else
2072 \9046\20\intcalcDec{#1}%
2073 \fi
2074 \fi
2075 \else

```

```

2076 .% Die faces are not part of PDFDocEncoding
2077 \fi
2078 }

```

\HyPsd@DieFaceLarge

```

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

```

6.6.11 Support for moon phases of package china2e

```

2093 \def\HyPsd@MoonPha#1{%
2094 \ifcase\intcalcNum{#1} %
2095 \HyPsd@UnicodeReplacementCharacter
2096 \or % 1
2097 % U+1F31A NEW MOON WITH FACE; \MoonPha{1} (china2e)
2098 \9330\074\9337\032%
2099 \or % 2
2100 \HyPsd@UnicodeReplacementCharacter
2101 \or % 3
2102 % U+1F31D FULL MOON WITH FACE; \MoonPha{3} (china2e)
2103 \9330\074\9337\035%
2104 \or % 4
2105 % U+1F31C LAST QUARTER MOON WITH FACE; \MoonPha{4} (china2e)
2106 \9330\074\9337\034%
2107 \else
2108 \HyPsd@UnicodeReplacementCharacter
2109 \fi
2110 }
2111 %* \HyPsd@MoonPha -> \MoonPha

```

6.6.12 Support for package pifont

\HyPsd@ding

```

2112 \def\HyPsd@ding#1{%
2113 \ifHy@unicode
2114 \ifnum#1<32 %
2115 \HyPsd@UnicodeReplacementCharacter
2116 \else
2117 \ifnum#1>254 %
2118 \HyPsd@UnicodeReplacementCharacter
2119 \else
2120 \ifnum#1<127 %
2121 \expandafter\expandafter\expandafter

```

```

2122     \HyPsd@@ding\intcalcNum{#1}!%
2123   \else
2124     \ifnum#1>160 %
2125       \expandafter\expandafter\expandafter
2126       \HyPsd@@ding\intcalcNum{#1}!%
2127     \else
2128       \HyPsd@UnicodeReplacementCharacter
2129     \fi
2130   \fi
2131 \fi
2132 \fi
2133 \else
2134   .% Dingbats are not part of PDFDocEncoding
2135 \fi
2136 }

```

\HyPsd@@ding

```

2137 \def\HyPsd@@ding#1!{%
2138   \ltx@ifundefined{HyPsd@ding@#1}{%
2139     \ifnum#1<127 %
2140       \9047%
2141       \HyPsd@DecimalToOctalSecond{\IntCalcSub#1!32!}%
2142     \else
2143       \ifnum#1<168 %
2144         \9047\14\IntCalcSub#1!160!%
2145       \else
2146         \ifnum#1>181 %
2147           \9047\HyPsd@DecimalToOctalSecond{\IntCalcSub#1!64!}%
2148         \else
2149           % 172..181 -> U+2460..U+2469
2150           \9044\HyPsd@DecimalToOctalSecond{\IntCalcSub#1!76!}%
2151         \fi
2152       \fi
2153     \fi
2154   }{%
2155     \csname HyPsd@ding@#1\endcsname
2156   }%
2157 }

2158 \@namedef{HyPsd@ding@32}{\space}
2159 % U+260E BLACK TELEPHONE
2160 \@namedef{HyPsd@ding@37}{\9046\016}% U+260E
2161 % U+261B BLACK RIGHT POINTING INDEX
2162 \@namedef{HyPsd@ding@42}{\9046\033}% U+261B
2163 % U+261E WHITE RIGHT POINTING INDEX
2164 \@namedef{HyPsd@ding@43}{\9046\036}% U+261E
2165 % U+2605 BLACK STAR
2166 \@namedef{HyPsd@ding@72}{\9046\005}% U+2605
2167 % U+25CF BLACK CIRCLE
2168 \@namedef{HyPsd@ding@108}{\9045\317}% U+25CF
2169 % U+25A0 BLACK SQUARE
2170 \@namedef{HyPsd@ding@110}{\9045\240}% U+25A0
2171 % U+25B2 BLACK UP-POINTING TRIANGLE
2172 \@namedef{HyPsd@ding@115}{\9045\262}% U+25B2

```

```

2173 % U+25BC BLACK DOWN-POINTING TRIANGLE
2174 \@namedef{HyPsd@ding@116}{\9045\274}% U+25BC
2175 % U+25C6 BLACK DIAMOND
2176 \@namedef{HyPsd@ding@117}{\9045\306}% U+25C6
2177 % U+25D7 RIGHT HALF BLACK CIRCLE
2178 \@namedef{HyPsd@ding@119}{\9045\327}% U+25D7
2179 \@namedef{HyPsd@ding@168}{\textclubsuitblack}%
2180 \@namedef{HyPsd@ding@169}{\textdiamondsuitblack}%
2181 \@namedef{HyPsd@ding@170}{\textheartsuitblack}%
2182 \@namedef{HyPsd@ding@171}{\textspadesuitblack}%
2183 \@namedef{HyPsd@ding@213}{\textrightarrow}%
2184 \@namedef{HyPsd@ding@214}{\textleftarrow}%
2185 \@namedef{HyPsd@ding@215}{\textupdownarrow}%
2186 \@namedef{HyPsd@ding@240}{\HyPsd@UnicodeReplacementCharacter}

```

7 Support of other packages

7.1 Package subfigure

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

```

2187 \@ifpackageloaded{subfigure}{%
2188   \ltx@ifundefined{sub@label}{%
2189     \Hy@hypertextnamesfalse
2190   }{%
2191     \renewcommand*{\sub@label}[1]{%
2192       \@bsphack
2193       \subfig@oldlabel{#1}%
2194       \if@filesw
2195         \begingroup
2196         \edef\@currentlabstr{%
2197           \expandafter\strip@prefix\meaning\@currentlabelname
2198         }%
2199         \protected@write\@auxout{}{%
2200           \string\newlabel{sub@#1}{%
2201             {\@nameuse{@@thesub\@capttype}}}%
2202             {\thepage}}%
2203             {%
2204               \expandafter\strip@period\@currentlabstr
2205               \relax.\relax\@@@%
2206             }%
2207             {\@currentHref}%
2208             {}%
2209           }%
2210         }%
2211       \endgroup
2212     \fi
2213     \@esphack
2214   }%
2215 }%
2216 }{}

```

7.2 Package xr and xr-hyper

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

```
2217 \ltx@ifundefined{XR@addURL}{%
2218 }{%
```

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.

```
2219 \def\xr@addURL#1{\xr@dURL#1{}{}{}\\}%
2220 \def\xr@dURL#1#2#3#4#5\\{%
2221   {#1}{#2}%
2222   \if!#4!%
2223   \else
2224     {#3}{#4}{\xr@URL}%
2225   \fi
2226 }%
2227 }

2228 \def\Hy@true{true}
2229 \def\Hy@false{false}
```

Providing dummy definitions.

```
2230 \let\literalps@out\@gobble
2231 \newcommand\pdfbookmark[3]{}{}
2232 \def\Acrobatmenu#1#2{\leavevmode#2}
2233 \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

```
2234 \let\HyperRaiseLinkHook\@empty
2235 \def\HyperRaiseLinkDefault{\baselineskip}
```

\HyperRaiseLinkHook allows the user to reassign \HyperRaiseLinkLength.

```
2236 \newcount\Hy@SavedSpaceFactor
2237 \def\Hy@SaveSpaceFactor{%
2238   \global\Hy@SavedSpaceFactor=\ifhmode\spacefactor\else\z@\fi
2239 }
2240 \def\Hy@RestoreSpaceFactor{%
2241   \relax
2242   \ifhmode
```

```

2243 \ifnum\Hy@SavedSpaceFactor>\z@
2244 \spacefactor=\Hy@SavedSpaceFactor
2245 \fi
2246 \fi
2247 }
2248 \def\Hy@SaveSavedSpaceFactor{%
2249 \edef\Hy@RestoreSavedSpaceFactor{%
2250 \global\Hy@SavedSpaceFactor=\the\Hy@SavedSpaceFactor\relax
2251 }%
2252 }
2253 \def\Hy@raisedlink#1{%
2254 \ifvmode
2255 #1%
2256 \else
2257 \Hy@SaveSpaceFactor
2258 \penalty\@M
2259 \smash{%
2260 \begingroup
2261 \let\HyperRaiseLinkLength\@tempdima
2262 \setlength\HyperRaiseLinkLength\HyperRaiseLinkDefault
2263 \HyperRaiseLinkHook
2264 \expandafter\endgroup
2265 \expandafter\raise\the\HyperRaiseLinkLength\hbox{%
2266 \Hy@RestoreSpaceFactor
2267 #1%
2268 \Hy@SaveSpaceFactor
2269 }%
2270 }%
2271 \Hy@RestoreSpaceFactor
2272 \fi
2273 }

```

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

```

2274 \def\Hy@SaveLastskip{%
2275 \let\Hy@RestoreLastskip\relax
2276 \ifvmode
2277 \ifdim\lastskip=\z@
2278 \ifnum\lastnodetype=1 %
2279 \let\Hy@RestoreLastskip\relax
2280 \else
2281 \let\Hy@RestoreLastskip\nobreak
2282 \fi
2283 \else
2284 \begingroup
2285 \skip@=-\lastskip
2286 \edef\x{%
2287 \endgroup
2288 \def\noexpand\Hy@RestoreLastskip{%
2289 \noexpand\ifvmode
2290 \noexpand\nobreak
2291 \vskip\the\skip@
2292 \vskip\the\lastskip\relax
2293 \noexpand\fi
2294 }%

```

```

2295     }%
2296     \x
2297     \fi
2298   \else
2299     \ifhmode
2300       \ifdim\lastskip=\z@
2301         \let\Hy@RestoreLastskip\nobreak
2302       \else
2303         \begingroup
2304           \skip@=-\lastskip
2305         \edef\x{%
2306           \endgroup
2307           \def\noexpand\Hy@RestoreLastskip{%
2308             \noexpand\ifhmode
2309               \noexpand\nobreak
2310               \hskip\the\skip@
2311               \hskip\the\lastskip\relax
2312             \noexpand\fi
2313           }%
2314         }%
2315       \x
2316     \fi
2317   \fi
2318 \fi
2319 }%

```

9 Options

```

2320 \SetupKeyvalOptions{%
2321   family=Hyp,%
2322   prefix=HyOpt%
2323 }

```

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/ltldocinit` if it doesn't exist.

```

\AddToDocumentProperties
\GetDocumentProperties 2324 \ExplSyntaxOn
2325 \@ifundefined{AddToDocumentProperties}
2326 {
2327   \prop_new:N \g__hyp_documentproperties_prop
2328   \NewDocumentCommand\AddToDocumentProperties{O{\@currname}mm}
2329   {
2330     \exp_args:NNx
2331     \prop_gput:Nnn \g__hyp_documentproperties_prop
2332     {
2333       \tl_if_blank:eTF {#1}{top-level/}{#1/} #2
2334     }
2335     { #3}
2336   }
2337   \NewExpandableDocumentCommand\GetDocumentProperties{m}

```

```

2338 {
2339   \prop_item:Nn \g__hyp_documentproperties_prop {#1}
2340 }
2341 }{}
2342 \ExplSyntaxOff

```

\IfHyperBooleanExists

```

2343 \def\IfHyperBooleanExists#1{%
2344   \lt@ifundefined{Hy@#1false}\lt@secondoftwo{%
2345     \lt@ifundefined{KV@Hyp@#1default}\lt@secondoftwo\lt@firstoftwo
2346   }%
2347 }

2348 \@namedef{KV@Hyp@stoppeearly@default}{}

```

\IfHyperBoolean

```

2349 \def\IfHyperBoolean#1{%
2350   \IfHyperBooleanExists{#1}{%
2351     \csname ifHy@#1\endcsname
2352     \expandafter\lt@firstoftwo
2353   \else
2354     \expandafter\lt@secondoftwo
2355   \fi
2356 } \lt@secondoftwo
2357 }

```

\Hy@boolkey

```

2358 \def\Hy@boolkey#1#2{%
2359   \edef\Hy@tempa{#2}%
2360   \lowercase\expandafter{%
2361     \expandafter\def\expandafter\Hy@tempa\expandafter{\Hy@tempa}%
2362   }%
2363   \ifx\Hy@tempa\@empty
2364     \let\Hy@tempa\Hy@true
2365   \fi
2366   \ifx\Hy@tempa\Hy@true
2367   \else
2368     \ifx\Hy@tempa\Hy@false
2369     \else
2370       \let\Hy@tempa\relax
2371     \fi
2372   \fi
2373   \ifx\Hy@tempa\relax
2374     \Hy@WarnOptionValue{#2}{#1}{`true' or `false'}%
2375   \else
2376     \Hy@Info{Option `#1' set ``\Hy@tempa'}%
2377     \csname Hy@#1\Hy@tempa\endcsname
2378   \fi
2379 }

```

\Hy@WarnOptionValue

```

2380 \def\Hy@WarnOptionValue#1#2#3{%
2381   \Hy@Warning{%
2382     Unexpected value `#1'\MessageBreak

```



```

2383   of option `#2' instead of\MessageBreak
2384   #3%
2385 }%
2386 }

```

`\Hy@DisableOption`

```

2387 \def\Hy@DisableOption#1{%
2388   \ltx@ifundefined{KV@Hyp@#1@default}{%
2389     \define@key{Hyp}{#1}%
2390   }{%
2391     \define@key{Hyp}{#1}[]%
2392   }%
2393   {\Hy@WarnOptionDisabled{#1}}%
2394 }
2395

```

`\Hy@WarnOptionDisabled`

```

2396 \def\Hy@WarnOptionDisabled#1{%
2397   \Hy@Warning{%
2398     Option `#1' has already been used,\MessageBreak
2399     setting the option has no effect%
2400   }%
2401 }

```

`\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`.

```

2402 \def\Hy@CheckOptionValue#1#2#3{%
2403   \begingroup
2404   \edef\x{#1}%
2405   \@onelevel@sanitize\x
2406   \let\y=y%
2407   \def\do##1##2{%
2408     \def\z{##1}%
2409     \@onelevel@sanitize\z
2410     \ifx\x\z
2411       \let\y=n%
2412     \let\do\@gobbletwo
2413   \fi
2414   }%
2415   #3%
2416   \ifx\y y%
2417     \def\do##1##2{%
2418       * `##1'%
2419       \ifx\\##2\\\else\space(##2)\fi
2420     \MessageBreak
2421   }%
2422   \Hy@Warning{%
2423     Values of option `#2':\MessageBreak
2424     #3%
2425     * An empty value disables the option.\MessageBreak
2426     Unknown value `x'%
2427   }%
2428   \fi

```

```

2429 \endgroup
2430 }

\Hy@DefNameKey #1: option name
#2: \do list with known values, first argument of \do is value, second argument
is a comment.
2431 \def\Hy@DefNameKey#1{%
2432 \expandafter\Hy@@DefNameKey\csname @#1\endcsname{#1}%
2433 }

\Hy@@DefNameKey #1: macro for value storage
#2: option name
#3: \do list with known values.
2434 \def\Hy@@DefNameKey#1#2#3{%
2435 \define@key{Hyp}{#2}{%
2436 \edef#1{##1}%
2437 \ifx#1\@empty
2438 \else
2439 \Hy@CheckOptionValue{##1}{#2}{#3}%
2440 \fi
2441 }%
2442 \let#1\@empty
2443 }

\Hy@UseNameKey
2444 \def\Hy@UseNameKey#1#2{%
2445 \ifx#2\@empty
2446 \else
2447 /#1/#2%
2448 \fi
2449 }

```

9.2 Defining the options

```

2450 \define@key{Hyp}{implicit}[true]{%
2451 \Hy@boolkey{implicit}{#1}%
2452 }
2453 \define@key{Hyp}{draft}[true]{%
2454 \Hy@boolkey{draft}{#1}%
2455 }
2456 \define@key{Hyp}{final}[true]{%
2457 \Hy@boolkey{final}{#1}%
2458 }
2459 \let\KV@Hyp@nolinks\KV@Hyp@draft
2460 \def\Hy@ObsoletePaperOption#1{%
2461 \Hy@WarningNoLine{%
2462 Option `#1' is no longer used%
2463 }%
2464 \define@key{Hyp}{#1}[true]{}%
2465 }
2466 \def\Hy@temp#1{%
2467 \define@key{Hyp}{#1}[true]{%
2468 \Hy@ObsoletePaperOption{#1}%

```

```

2469 }%
2470 }
2471 \Hy@temp{a4paper}
2472 \Hy@temp{a5paper}
2473 \Hy@temp{b5paper}
2474 \Hy@temp{letterpaper}
2475 \Hy@temp{legalpaper}
2476 \Hy@temp{executivepaper}

2477 \define@key{Hyp}{setpagesize}[true]{%
2478   \Hy@boolkey{setpagesize}{#1}%
2479 }
2480 \define@key{Hyp}{debug}[true]{%
2481   \Hy@boolkey{debug}{#1}%
2482 }
2483 \define@key{Hyp}{linktocpage}[true]{%
2484   \Hy@boolkey{linktocpage}{#1}%
2485   \ifHy@linktocpage
2486     \let\Hy@linktoc\Hy@linktoc@page
2487   \else
2488     \let\Hy@linktoc\Hy@linktoc@section
2489   \fi
2490 }
2491 \chardef\Hy@linktoc@none=0 %
2492 \chardef\Hy@linktoc@section=1 %
2493 \chardef\Hy@linktoc@page=2 %
2494 \chardef\Hy@linktoc@all=3 %
2495 \ifHy@linktocpage
2496   \let\Hy@linktoc\Hy@linktoc@page
2497 \else
2498   \let\Hy@linktoc\Hy@linktoc@section
2499 \fi
2500 \define@key{Hyp}{linktoc}{%
2501   \@ifundefined{Hy@linktoc@#1}{%
2502     \Hy@Warning{%
2503       Unexpected value `#1' of\MessageBreak
2504       option `linktoc' instead of `none',\MessageBreak
2505       `section', `page' or `all'%
2506     }%
2507   }{%
2508     \expandafter\let\expandafter\Hy@linktoc
2509     \csname Hy@linktoc@#1\endcsname
2510   }%
2511 }
2512 \define@key{Hyp}{extension}{\def\XR@ext{#1}}
2513 \let\XR@ext\relax
2514 \define@key{Hyp}{verbose}[true]{%
2515   \Hy@boolkey{verbose}{#1}%
2516 }

```

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.

```

2517 \define@key{Hyp}{raiselinks}[true]{%

```

```

2518 \Hy@boolkey{raiselinks}{#1}%
2519 }

```

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

```

2520 \def\Hy@setbreaklinks#1{%
2521   \csname breaklinks#1\endcsname
2522 }

2523 \def\Hy@breaklinks@unsupported{%
2524   \ifx\Hy@setbreaklinks\@gobble
2525     \ifHy@breaklinks
2526       \Hy@WarningNoLine{%
2527         You have enabled option `breaklinks'.\MessageBreak
2528         But driver `Hy@driver.def' does not support this.\MessageBreak
2529         Expect trouble with the link areas of broken links%
2530       }%
2531     \fi
2532   \fi
2533 }

```

```

2534 \define@key{Hyp}{breaklinks}[true]{%
2535   \Hy@boolkey{breaklinks}{#1}%
2536   \let\Hy@setbreaklinks\@gobble
2537 }

```

```

2538 \define@key{Hyp}{localanchorname}[true]{%
2539   \Hy@WarningNoLine{%
2540     Option `localanchorname' is deprecated%
2541   }%
2542   \Hy@boolkey{localanchorname}{#1}%
2543 }

```

Determines whether an automatic anchor is put on each page

```

2544 \define@key{Hyp}{pageanchor}[true]{%
2545   \Hy@boolkey{pageanchor}{#1}%
2546 }

```

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.

```

2547 \define@key{Hyp}{plainpages}[true]{%
2548   \Hy@boolkey{plainpages}{#1}%
2549 }

```

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

```

2550 \define@key{Hyp}{naturalnames}[true]{%
2551   \Hy@boolkey{naturalnames}{#1}%
2552 }

```

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

```

2553 \define@key{Hyp}{hypertexnames}[true]{%
2554   \Hy@boolkey{hypertexnames}{#1}%
2555 }

```

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

```

2556 \define@key{Hyp}{nesting}[true]{%
2557   \Hy@boolkey{nesting}{#1}%

```

```

2558 }
2559 \define@key{Hyp}{destlabel}[true]{%
2560   \Hy@boolkey{destlabel}{#1}%
2561 }

2562 \define@key{Hyp}{unicode}[true]{%
2563   \Hy@boolkey{unicode}{#1}%
2564   \ifHy@unicode
2565     \def\HyPsd@pdfencoding{unicode}%
2566     \HyPsd@LoadUnicode
2567   \else
2568     \def\HyPsd@pdfencoding{pdfdoc}%
2569   \fi
2570 }
2571 \Hy@AtBeginDocument{%
2572   \ifx\HyPsd@LoadUnicode\relax
2573   \else
2574     \def\HyPsd@LoadUnicode{%
2575       \Hy@Error{%
2576         Unicode support for bookmarks is not available.\MessageBreak
2577         Activate unicode support by using one of the options\MessageBreak
2578         `unicode', `pdfencoding=unicode', `pdfencoding=auto'\MessageBreak
2579         in the preamble%
2580       } \@ehc
2581       \global\let\HyPsd@LoadUnicode\relax
2582       \global\Hy@unicodetrue
2583       \global\let\Hy@unicodetrue\Hy@unicodetrue
2584     }%
2585   \fi
2586 }

2587 \define@key{Hyp}{pdfencoding}{%
2588   \edef\HyPsd@temp{#1}%
2589   \ifx\HyPsd@temp\HyPsd@pdfencoding@pdfdoc
2590     \let\HyPsd@pdfencoding\HyPsd@temp
2591     \Hy@unicodetrue
2592   \else
2593     \ifcase\ifx\HyPsd@temp\HyPsd@pdfencoding@unicode
2594       \z@
2595     \else
2596       \ifx\HyPsd@temp\HyPsd@pdfencoding@auto
2597         \z@
2598       \else
2599         \@ne
2600       \fi
2601     \fi
2602     \let\HyPsd@pdfencoding\HyPsd@temp
2603     \hypersetup{unicode}%
2604     \ifHy@unicode
2605       \def\HyPsd@pdfencoding{#1}%
2606       \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
2607         \HyPsd@LoadStringEncoding
2608       \fi
2609     \else
2610       \Hy@Warning{Cannot switch to unicode bookmarks}%

```

```

2611     \let\HyPsd@pdfencoding\HyPsd@pdfencoding@pdfdoc
2612     \fi
2613   \else
2614     \@onelevel@sanitize\HyPsd@temp
2615     \Hy@Warning{%
2616       Values of option `pdfencoding':\MessageBreak
2617       `pdfdoc', `unicode', `auto'.\MessageBreak
2618       Ignoring unknown value `\HyPsd@temp'%
2619     }%
2620   \fi
2621 \fi
2622 }
2623 \def\HyPsd@pdfencoding@auto{auto}
2624 \def\HyPsd@pdfencoding@pdfdoc{pdfdoc}
2625 \def\HyPsd@pdfencoding@unicode{unicode}

change 2020-08-14, use unicode by default:
2626 \let\HyPsd@pdfencoding\HyPsd@pdfencoding@unicode
2627 \HyPsd@LoadUnicode
2628 \def\HyPsd@LoadStringEnc{%
2629   \RequirePackage{stringenc}[2009/12/15]%
2630   \let\HyPsd@LoadStringEnc\relax
2631 }
2632 \Hy@AtBeginDocument{%
2633   \ifpackageloaded{stringenc}{%
2634     \let\HyPsd@LoadStringEnc\relax
2635   }{%
2636     \def\HyPsd@LoadStringEnc{%
2637       \Hy@WarningNoLine{%
2638         Missing package `stringenc'. Use `pdfencoding=auto'\MessageBreak
2639         in the preamble or load the package there%
2640       }%
2641     }%
2642   }%
2643 }
2644 \define@key{Hyp}{psdextra}[true]{%
2645   \Hy@boolkey{psdextra}{#1}%
2646   \HyPsd@LoadExtra
2647 }
2648 \def\hypersetup{\kvsetkeys{Hyp}}
2649 \newif\ifHy@setpdfversion
2650 \define@key{Hyp}{pdfversion}{%
2651   \ifundefined{Hy@pdfversion@#1}{%
2652     \PackageWarning{hyperref}{%
2653       Unsupported PDF version `#1'.\MessageBreak
2654       Valid values: 1.2-1.7, 2.0%
2655     }%
2656   }{%
2657     \Hy@setpdfversiontrue
2658     \@nameuse{Hy@pdfversion@#1}%
2659   }%
2660 }

```

\Hy@pdfminorversion already used elsewhere to denote \pdfminorversion or

`\pdfvariable majorversion` so introduce new names here.

```

2661 \@namedef{Hy@pdfversion@1.2}{\def\Hy@pdf@majorversion{1}\def\Hy@pdf@mi-
    norversion{2}}%
2662 \@namedef{Hy@pdfversion@1.3}{\def\Hy@pdf@majorversion{1}\def\Hy@pdf@mi-
    norversion{3}}%
2663 \@namedef{Hy@pdfversion@1.4}{\def\Hy@pdf@majorversion{1}\def\Hy@pdf@mi-
    norversion{4}}%
2664 \@namedef{Hy@pdfversion@1.5}{\def\Hy@pdf@majorversion{1}\def\Hy@pdf@mi-
    norversion{5}}%
2665 \@namedef{Hy@pdfversion@1.6}{\def\Hy@pdf@majorversion{1}\def\Hy@pdf@mi-
    norversion{6}}%
2666 \@namedef{Hy@pdfversion@1.7}{\def\Hy@pdf@majorversion{1}\def\Hy@pdf@mi-
    norversion{7}}%
2667 \@namedef{Hy@pdfversion@2.0}{\def\Hy@pdf@majorversion{2}\def\Hy@pdf@mi-
    norversion{0}}%
2668 \def\Hy@pdf@majorversion{1}\def\Hy@pdf@minorversion{5}

```

Legacy name, earlier releases assumed 1.x

```

2669 \let\Hy@pdfversion\Hy@pdf@minorversion
2670 \def\Hy@pdf@majorminor@version{\numexpr100*\Hy@pdf@majorversion+\Hy@pdf@mi-
    norversion\relax}
2671 \def\Hy@pdfmajorminor@version{\numexpr100*\Hy@pdfmajorversion+\Hy@pdfmi-
    norversion\relax}

```

if `pdfminorversion` is defined, make sure `pdfmajorversion` is too.

```

2672 \@ifundefined{pdfminorversion}{}{%
2673 \@ifundefined{pdfmajorversion}{}%
2674 \newcount\pdfmajorversion
2675 \pdfmajorversion=1
2676 }{}%
2677 }
2678 \ifx\pdfmajorversion\@undefined\else
2679 \def\Hy@pdfmajorversion{\pdfmajorversion}
2680 \fi

```

10 Options for different drivers

```

2681 \newif\ifHy@DviMode
2682 \let\Hy@DviErrMsg\ltx@empty
2683 \ifpdf
2684 \def\Hy@DviErrMsg{pdfTeX or LuaTeX is running in PDF mode}%
2685 \else
2686 \ifxetex
2687 \def\Hy@DviErrMsg{XeTeX is running}%
2688 \else
2689 \ifvtex
2690 \ifnum\OpMode=\z@
2691 \Hy@DviModetrue
2692 \else
2693 \def\Hy@DviErrMsg{VTeX is running, but not in DVI mode}%
2694 \fi
2695 \else
2696 \Hy@DviModetrue
2697 \fi
2698 \fi
2699 \fi

```

```

2700 \def\HyOpt@CheckDvi#1{%
2701   \ifHy@DviMode
2702     \expandafter\ltx@firstofone
2703   \else
2704     \Hy@Error{%
2705       Wrong DVI mode driver option `#1',\MessageBreak
2706       because \Hy@DviErrMsg
2707     }\@ehc
2708     \expandafter\ltx@gobble
2709   \fi
2710 }

2711 \DeclareVoidOption{tex4ht}{%
2712   \Hy@texhttrue
2713   \kvsetkeys{Hyp}{colorlinks=true}%
2714   \def\BeforeTeXIVht{\RequirePackage{color}}}%
2715   \def\Hy@driver{htex4ht}%
2716   \def\MaybeStopEarly{%
2717     \Hy@Message{Stopped early}%
2718     \Hy@AtBeginDocument{%
2719       \PDF@FinishDoc
2720       \gdef\PDF@FinishDoc{}}%
2721   }%
2722   \endinput
2723 }%
2724 }

2725 \DeclareVoidOption{pdftex}{%
2726   \ifpdf
2727     \def\Hy@driver{hpdftex}%
2728     \PassOptionsToPackage{pdftex}{color}%
2729   \else
2730     \Hy@Error{%
2731       Wrong driver option `pdftex',\MessageBreak
2732       because pdfTeX in PDF mode is not detected%
2733     }\@ehc
2734   \fi
2735 }

2736 \DeclareVoidOption{luatex}{%
2737   \ifpdf
2738     \ifx\pdfextension\@undefined
2739       \def\Hy@driver{hpdftex}%
2740       \PassOptionsToPackage{pdftex}{color}%
2741     \else
2742       \def\Hy@driver{hluatex}%
2743       \PassOptionsToPackage{luatex}{color}%
2744     \fi
2745   \else
2746     \Hy@Error{%
2747       Wrong driver option `luatex',\MessageBreak
2748       because luaTeX in PDF mode is not detected%
2749     }\@ehc
2750   \fi
2751 }

2752 \DeclareVoidOption{nativepdf}{%
2753   \HyOpt@CheckDvi{nativepdf}{%

```



```

2754 \def\Hy@driver{hdvips}%
2755 \PassOptionsToPackage{dvips}{color}%
2756 }%
2757 }
2758 \DeclareVoidOption{dvipdfm}{%
2759 \HyOpt@CheckDvi{dvipdfm}{%
2760 \def\Hy@driver{hdvipdfm}%
2761 }%
2762 }
2763 \DeclareVoidOption{dvipdfmx}{%
2764 \HyOpt@CheckDvi{dvipdfmx}{%
2765 \def\Hy@driver{hdvipdfm}%
2766 \PassOptionsToPackage{dvipdfmx}{color}%
2767 }%
2768 }
2769 \define@key{Hyp}{dvipdfmx-outline-open}[true]{%
2770 \expandafter\ifx\csname if#1\expandafter\endcsname
2771 \csname iftrue\endcsname
2772 \chardef\SpecialDvipdfmxOutlineOpen\@ne
2773 \else
2774 \chardef\SpecialDvipdfmxOutlineOpen\z@
2775 \fi
2776 }
2777 \DeclareVoidOption{xetex}{%
2778 \ifxetex
2779 \def\Hy@driver{hxdetex}%
2780 \else
2781 \Hy@Error{%
2782 Wrong driver option `xetex',\MessageBreak
2783 because XeTeX is not detected%
2784 }\@ehc
2785 \fi
2786 }
2787 \DeclareVoidOption{pdfmark}{%
2788 \HyOpt@CheckDvi{pdfmark}{%
2789 \def\Hy@driver{hdvips}%
2790 }%
2791 }
2792 \DeclareVoidOption{dvips}{%
2793 \HyOpt@CheckDvi{dvips}{%
2794 \def\Hy@driver{hdvips}%
2795 \PassOptionsToPackage{dvips}{color}%
2796 }%
2797 }
2798 \DeclareVoidOption{hypertex}{%
2799 \HyOpt@CheckDvi{hypertex}{%
2800 \def\Hy@driver{hypertex}%
2801 }%
2802 }
2803 \let\Hy@MaybeStopNow\relax
2804 \DeclareVoidOption{vtex}{%
2805 \ifvtex
2806 \ifnum 0\ifnum\OpMode<1 1\fi \ifnum\OpMode>3 1\fi =0 %
2807 \def\Hy@driver{hvtex}%

```

```

2808 \else
2809 \ifnum\OpMode=10\relax
2810 \def\Hy@driver{hvtexhtm}%
2811 \def\MaybeStopEarly{%
2812 \Hy@Message{Stopped early}%
2813 \Hy@AtBeginDocument{%
2814 \PDF@FinishDoc
2815 \gdef\PDF@FinishDoc{}%
2816 }%
2817 \endinput
2818 }%
2819 \else
2820 \Hy@Error{%
2821 Wrong driver option `vtex',\MessageBreak
2822 because of wrong OpMode (\the\OpMode)%
2823 }\@ehc
2824 \fi
2825 \fi
2826 \else
2827 \Hy@Error{%
2828 Wrong driver option `vtex',\MessageBreak
2829 because VTeX is not running%
2830 }\@ehc
2831 \fi
2832 }
2833 \DeclareVoidOption{vtxpdfmark}{%
2834 \ifvtex
2835 \ifnum 0\ifnum\OpMode<1 1\fi \ifnum\OpMode>3 1\fi =0 %
2836 \def\Hy@driver{hvtexmrk}%
2837 \else
2838 \Hy@Error{%
2839 Wrong driver option `vtxpdfmark',\MessageBreak
2840 because of wrong OpMode (\the\OpMode)%
2841 }\@ehc
2842 \fi
2843 \else
2844 \Hy@Error{%
2845 Wrong driver option `vtxpdfmark',\MessageBreak
2846 because VTeX is not running%
2847 }\@ehc
2848 \fi
2849 }
2850 \DeclareVoidOption{dviwindo}{%
2851 \HyOpt@CheckDvi{dviwindo}{%
2852 \def\Hy@driver{hdviwind}%
2853 \kvsetkeys{Hyp}{colorlinks}%
2854 \PassOptionsToPackage{dviwindo}{color}%
2855 }%
2856 }
2857 \DeclareVoidOption{dvipsone}{%
2858 \HyOpt@CheckDvi{dvipsone}{%
2859 \def\Hy@driver{hdvipson}%
2860 \PassOptionsToPackage{dvipsone}{color}%
2861 }%

```

```

2862 }
2863 \DeclareVoidOption{textures}{%
2864   \HyOpt@CheckDvi{textures}{%
2865     \def\Hy@driver{htexture}%
2866   }%
2867 }
2868 \DeclareVoidOption{latex2html}{%
2869   \Hy@Warning{Option `latex2html` is obsolete. \MessageBreak
2870     A current html.sty will do all necessary (re)definitions%
2871 }%
2872 }

No more special treatment for ps2pdf. Let it sink or swim.
2873 \DeclareVoidOption{ps2pdf}{%
2874   \HyOpt@CheckDvi{ps2pdf}{%
2875     \def\Hy@driver{hdvips}%
2876     \PassOptionsToPackage{dvips}{color}%
2877   }%
2878 }

2879 \let\HyOpt@DriverFallback\ltx@empty
2880 \define@key{Hyp}{driverfallback}{%
2881   \ifHy@DviMode
2882     \def\HyOpt@DriverFallback{#1}%
2883     \Hy@Match\HyOpt@DriverFallback{}{%
2884       ~(|dvipdfm|dvipdfmx|dvips|dvipsone|dviwindo|hypertex|ps2pdf|
2885       latex2html|tex4ht)$%
2886     }{}{%
2887       \Hy@Warning{%
2888         Invalid driver `#1' for option\MessageBreak
2889         `driverfallback'%
2890       }%
2891       \let\HyOpt@DriverFallback\ltx@empty
2892     }%
2893   \fi
2894 }

2895 \let\HyOpt@CustomDriver\ltx@empty
2896 \define@key{Hyp}{customdriver}{%
2897   \IfFileExists{#1.def}{%
2898     \def\HyOpt@CustomDriver{#1}%
2899   }{%
2900     \Hy@Warning{%
2901       Missing driver file `#1.def',\MessageBreak
2902       ignoring custom driver%
2903     }%
2904   }%
2905 }

```

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.

```

2906 \define@key{Hyp}{hyperfigures}[true]{%
2907   \Hy@boolkey{hyperfigures}{#1}%
2908 }

```

The automatic footnote linking can be disabled by option hyperfootnotes.

```
2909 \define@key{Hyp}{hyperfootnotes}[true]{%
2910   \Hy@boolkey{hyperfootnotes}{#1}%
2911 }
```

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

```
2912 \def\back@none{none}
2913 \def\back@section{section}
2914 \def\back@page{page}
2915 \def\back@slide{slide}
2916 \define@key{Hyp}{backref}[section]{%
2917   \lowercase{\def\Hy@tempa{#1}}%
2918   \ifx\Hy@tempa\@empty
2919     \let\Hy@tempa\back@section
2920   \fi
2921   \ifx\Hy@tempa\Hy@false
2922     \let\Hy@tempa\back@none
2923   \fi
2924   \ifx\Hy@tempa\back@slide
2925     \let\Hy@tempa\back@section
2926   \fi
2927   \ifx\Hy@tempa\back@page
2928     \PassOptionsToPackage{hyperpageref}{backref}%
2929     \Hy@backreftrue
2930   \else
2931     \ifx\Hy@tempa\back@section
2932       \PassOptionsToPackage{hyperref}{backref}%
2933       \Hy@backreftrue
2934     \else
2935       \ifx\Hy@tempa\back@none
2936         \Hy@backreffalse
2937       \else
2938         \Hy@WarnOptionValue{#1}{backref}{%
2939           `section', `slide', `page', `none',\MessageBreak
2940           or `false'}%
2941       \fi
2942     \fi
2943   \fi
2944 }
2945 \define@key{Hyp}{pagebackref}[true]{%
2946   \edef\Hy@tempa{#1}%
2947   \lowercase\expandafter{%
2948     \expandafter\def\expandafter\Hy@tempa\expandafter{\Hy@tempa}%
2949   }%
2950   \ifx\Hy@tempa\@empty
2951     \let\Hy@tempa\Hy@true
2952   \fi
2953   \ifx\Hy@tempa\Hy@true
2954     \PassOptionsToPackage{hyperpageref}{backref}%
2955     \Hy@backreftrue
2956   \else
2957     \ifx\Hy@tempa\Hy@false
2958       \Hy@backreffalse
2959     \else
```

```

2960 \Hy@WarnOptionValue{#1}{pagebackref}{`true' or `false'}%
2961 \fi
2962 \fi
2963 }

```

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

```

2964 \define@key{Hyp}{hyperindex}[true]{%
2965 \Hy@boolkey{hyperindex}{#1}%
2966 }

```

Configuration of encap char.

```

2967 \define@key{Hyp}{encap}[|]{%
2968 \def\HyInd@EncapChar{#1}%
2969 }

```

12 Language options

The \autoref feature depends on the language.

```

2970 \def\HyLang@afrikaans{%
2971 \def\equationautorefname{Vergelyking}%
2972 \def\footnoteautorefname{Voetnota}%
2973 \def\itemautorefname{Item}%
2974 \def\figureautorefname{Figuur}%
2975 \def\tableautorefname{Tabel}%
2976 \def\partautorefname{Deel}%
2977 \def\appendixautorefname{Bylae}%
2978 \def\chapterautorefname{Hoofstuk}%
2979 \def\sectionautorefname{Afdeling}%
2980 \def\subsectionautorefname{Subafdeling}%
2981 \def\subsubsectionautorefname{Subsubafdeling}%
2982 \def\paragraphautorefname{Paragraaf}%
2983 \def\subparagraphautorefname{Subparagraaf}%
2984 \def\FancyVerbLineautorefname{Lyn}%
2985 \def\theoremautorefname{Teorema}%
2986 \def\pageautorefname{Bladsy}%
2987 }
2988 \def\HyLang@english{%
2989 \def\equationautorefname{Equation}%
2990 \def\footnoteautorefname{footnote}%
2991 \def\itemautorefname{item}%
2992 \def\figureautorefname{Figure}%
2993 \def\tableautorefname{Table}%
2994 \def\partautorefname{Part}%
2995 \def\appendixautorefname{Appendix}%
2996 \def\chapterautorefname{chapter}%
2997 \def\sectionautorefname{section}%
2998 \def\subsectionautorefname{subsection}%
2999 \def\subsubsectionautorefname{subsubsection}%
3000 \def\paragraphautorefname{paragraph}%
3001 \def\subparagraphautorefname{subparagraph}%
3002 \def\FancyVerbLineautorefname{line}%
3003 \def\theoremautorefname{Theorem}%
3004 \def\pageautorefname{page}%

```

```

3005 }
3006 \def\HyLang@french{%
3007   \def\equationautorefname{'equation}%
3008   \def\footnoteautorefname{note}%
3009   \def\itemautorefname{item}%
3010   \def\figureautorefname{figure}%
3011   \def\tableautorefname{tableau}%
3012   \def\partautorefname{partie}%
3013   \def\appendixautorefname{annexe}%
3014   \def\chapterautorefname{chapitre}%
3015   \def\sectionautorefname{section}%
3016   \def\subsectionautorefname{sous-section}%
3017   \def\subsubsectionautorefname{sous-sous-section}%
3018   \def\paragraphautorefname{paragraphe}%
3019   \def\subparagraphautorefname{sous-paragraphe}%
3020   \def\FancyVerbLineautorefname{ligne}%
3021   \def\theoremautorefname{th\`eor\`eme}%
3022   \def\pageautorefname{page}%
3023 }
3024 \def\HyLang@german{%
3025   \def\equationautorefname{Gleichung}%
3026   \def\footnoteautorefname{Fu\ss note}%
3027   \def\itemautorefname{Punkt}%
3028   \def\figureautorefname{Abbildung}%
3029   \def\tableautorefname{Tabelle}%
3030   \def\partautorefname{Teil}%
3031   \def\appendixautorefname{Anhang}%
3032   \def\chapterautorefname{Kapitel}%
3033   \def\sectionautorefname{Abschnitt}%
3034   \def\subsectionautorefname{Unterabschnitt}%
3035   \def\subsubsectionautorefname{Unterunterabschnitt}%
3036   \def\paragraphautorefname{Absatz}%
3037   \def\subparagraphautorefname{Unterabsatz}%
3038   \def\FancyVerbLineautorefname{Zeile}%
3039   \def\theoremautorefname{Theorem}%
3040   \def\pageautorefname{Seite}%
3041 }
3042 \def\HyLang@italian{%
3043   \def\equationautorefname{Equazione}%
3044   \def\footnoteautorefname{nota}%
3045   \def\itemautorefname{punto}%
3046   \def\figureautorefname{Figura}%
3047   \def\tableautorefname{Tabella}%
3048   \def\partautorefname{Parte}%
3049   \def\appendixautorefname{Appendice}%
3050   \def\chapterautorefname{Capitolo}%
3051   \def\sectionautorefname{sezione}%
3052   \def\subsectionautorefname{sottosezione}%
3053   \def\subsubsectionautorefname{sottosottosezione}%
3054   \def\paragraphautorefname{paragrafo}%
3055   \def\subparagraphautorefname{sottoparagrafo}%
3056   \def\FancyVerbLineautorefname{linea}%
3057   \def\theoremautorefname{Teorema}%
3058   \def\pageautorefname{Pag.\@}%

```

```

3059 }
3060 \def\HyLang@magyar{%
3061   \def\equationautorefname{Egyenlet}%
3062   \def\footnoteautorefname{l\'abjegyzet}%
3063   \def\itemautorefname{Elem}%
3064   \def\figureautorefname{'Abra}%
3065   \def\tableautorefname{T\'abl\'azat}%
3066   \def\partautorefname{R\'esz}%
3067   \def\appendixautorefname{F\'uggel\'ek}%
3068   \def\chapterautorefname{fejezet}%
3069   \def\sectionautorefname{szakasz}%
3070   \def\subsectionautorefname{alszakasz}%
3071   \def\subsubsectionautorefname{alalszakasz}%
3072   \def\paragraphautorefname{bekezd\'es}%
3073   \def\subparagraphautorefname{albekezd\'es}%
3074   \def\FancyVerbLineautorefname{sor}%
3075   \def\theoremautorefname{T\'etel}%
3076   \def\pageautorefname{oldal}%
3077 }
3078 \def\HyLang@portuges{%
3079   \def\equationautorefname{Equa\c c\~ao}%
3080   \def\footnoteautorefname{Nota de rodap\'e}%
3081   \def\itemautorefname{Item}%
3082   \def\figureautorefname{Figura}%
3083   \def\tableautorefname{Tabela}%
3084   \def\partautorefname{Parte}%
3085   \def\appendixautorefname{Ap\~endice}%
3086   \def\chapterautorefname{Cap\'itulo}%
3087   \def\sectionautorefname{Se\c c\~ao}%
3088   \def\subsectionautorefname{Subse\c c\~ao}%
3089   \def\subsubsectionautorefname{Subsubse\c c\~ao}%
3090   \def\paragraphautorefname{par\'agrafo}%
3091   \def\subparagraphautorefname{subpar\'agrafo}%
3092   \def\FancyVerbLineautorefname{linha}%
3093   \def\theoremautorefname{Teorema}%
3094   \def\pageautorefname{P\'agina}%
3095 }

```

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`.

```

3096 \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`?

```

3097   \def\equationautorefname{\cyr\cyrv\cyrry\cyrr.}%

```

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

```

3098 % \def\equationautorefname{%
3099 %   \cyr\cyrv\cyrery\cyrr\cyra\cyrz\cyre\cyrn\cyri\cyre
3100 % }%

```

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

```

3101 \def\footnoteautorefname{%
3102   \cyr\cyrp\cyro\cyrd\cyrs\cyrt\cyrr.\ \cyrp\cyrr\cyri\cyrn.%
3103 }%

```

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

```

3104 % \def\footnoteautorefname{%
3105 %   \cyr\cyrp\cyro\cyrd\cyrs\cyrt\cyrr\cyro\cyrch\cyrn\cyro\cyre\ %
3106 %   \cyrp\cyrr\cyri\cyrn\cyre\cyrch\cyra\cyrn\cyri\cyre
3107 % }%

```

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

```

3108 % \def\Nomfootnoteautorefname{\cyr\cyrs\cyrn\cyro\cyrs\cyrk\cyra}%
3109 % \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 \autorefname{auto}” etc.

```

3110 \def\itemautorefname{\cyr\cyrp.}%
3111 % \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.

```

3112 \def\figureautorefname{\cyr\cyrr\cyri\cyrs.}%
3113 \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.

```

3114 \def\partautorefname{\cyr\cyrch.}%
3115 \def\chapterautorefname{\cyr\cyrg\cyrl.}%
3116 \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 \autorefname{auto}” etc.

```

3117 \def\appendixautorefname{\cyr\cyrp\cyrr\cyri\cyrl.}%
3118 % \def\appendixautorefname{%
3119 %   \cyr\cyrp\cyrr\cyri\cyrl\cyro\cyrz\cyre\cyrn\cyri\cyre
3120 % }%

```

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.

```

3121 \def\subsectionautorefname{\cyr\cyrr\cyra\cyrz\cyrd.}%
3122 \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.

```
3123 \def\paragraphautorefname{\cyr\cyrp.}%
3124 \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.

```
3125 % \def\paragraphautorefname{\cyr\cyrp\cyru\cyrn\cyrk\cyrt}%
3126 % \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.

```
3127 \def\FancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr.}%
```

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

```
3128 % \def\NomFancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr\cyro\cyrk\cyra}%
3129 % \def\AccFancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr\cyro\cyrk\cyru}%
```

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

```
3130 % \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 ...

```
3131 \def\theoremautorefname{\cyr\cyrt\cyre\cyro\cyrr.}%
```

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

```
3132 % \def\Nomtheoremautorefname{\cyr\cyrt\cyre\cyro\cyrr\cyre\cyrm\cyra}%
3133 % \def\Acctheoremautorefname{\cyr\cyrt\cyre\cyro\cyrr\cyre\cyrm\cyru}%
```

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

```
3134 \def\pageautorefname{\cyr\cyrs.}%
3135 }
```

```
3136 \def\HyLang@spanish{%
3137 \def\equationautorefname{Ecuaci'on}%
3138 \def\footnoteautorefname{Nota a pie de p'agina}%
3139 \def\itemautorefname{Elemento}%
3140 \def\figureautorefname{Figura}%
3141 \def\tableautorefname{Tabla}%
3142 \def\partautorefname{Parte}%
3143 \def\appendixautorefname{Ap'endice}%
3144 \def\chapterautorefname{Cap'itulo}%
3145 \def\sectionautorefname{Secci'on}%
3146 \def\subsectionautorefname{Subsecci'on}%
3147 \def\subsubsectionautorefname{Subsubsecci'on}%
3148 \def\paragraphautorefname{P'arrafo}%
3149 \def\subparagraphautorefname{Subp'arrafo}%
3150 \def\FancyVerbLineautorefname{L'inea}%
3151 \def\theoremautorefname{Teorema}%
```

```

3152 \def\pageautorefname{P\'agina}%
3153 }

3154 \def\HyLang@catalan{%
3155 \def\equationautorefname{Equaci\'o}%
3156 \def\footnoteautorefname{Nota al peu de p\'agina}%
3157 \def\itemautorefname{Element}%
3158 \def\figureautorefname{Figura}%
3159 \def\tableautorefname{Taula}%
3160 \def\partautorefname{Part}%
3161 \def\appendixautorefname{Ap\'endix}%
3162 \def\chapterautorefname{Cap\'itol}%
3163 \def\sectionautorefname{Secci\'o}%
3164 \def\subsectionautorefname{Subsecci\'o}%
3165 \def\subsubsectionautorefname{Subsubsecci\'o}%
3166 \def\paragraphautorefname{Par\'agraf}%
3167 \def\subparagraphautorefname{Subpar\'agraf}%
3168 \def\FancyVerbLineautorefname{L\'inia}%
3169 \def\theoremautorefname{Teorema}%
3170 \def\pageautorefname{P\'agina}%
3171 }

3172 \def\HyLang@vietnamese{%
3173 \def\equationautorefname{Ph\`uhorn{}\`ohorn{}ng tr\`inh}%
3174 \def\footnoteautorefname{Ch\`u th\`ich}%
3175 \def\itemautorefname{m\`d{u}c}%
3176 \def\figureautorefname{H\`inh}%
3177 \def\tableautorefname{B\`h{a}ng}%
3178 \def\partautorefname{Ph\`acircumflex{}n}%
3179 \def\appendixautorefname{Ph\`d{u} l\`d{u}c}%
3180 \def\chapterautorefname{ch\`uhorn{}\`ohorn{}ng}%
3181 \def\sectionautorefname{m\`d{u}c}%
3182 \def\subsectionautorefname{m\`d{u}c}%
3183 \def\subsubsectionautorefname{m\`d{u}c}%
3184 \def\paragraphautorefname{\`dj{}o\`d{a}n}%
3185 \def\subparagraphautorefname{\`dj{}o\`d{a}n}%
3186 \def\FancyVerbLineautorefname{d\`ong}%
3187 \def\theoremautorefname{D\`J{}\`d{i}nh l\`y}%
3188 \def\pageautorefname{Trang}%
3189 }

```

Greek, see github issue 52

```

3190 \def\HyLang@greek{%
3191 \def\equationautorefname{\textEpsilon\textxi\acconos\textiota\textsigma\textomega\textsigma\texteta}%
3192 \def\footnoteautorefname{\textupsilon\textpi\textomicron\textsigma\texteta\textmu\textepsilon\acconos\textiota\textomega\textsigma\texteta}%
3193 \def\itemautorefname{\textalpha\textnu\texttau\textiota\textkappa\textepsilon\acconos\textiota\textmu\textepsilon\textnu\textomicron}%
3194 \def\figureautorefname{\textSigma\textchi\acconos\texteta\textmu\textalpha}%
3195 \def\tableautorefname{\textPi\acconos\textiota\textnu\textalpha\textkappa\textalpha}%
3196 \def\partautorefname{\textMu\acconos\textepsilon\textrho\textomicron\textvarsigma}%

```

```

3197 \def\appendixautorefname{\textPi\textalpha\extrho\acctonos\textalpha\tex-
      trho\texttau\texteta\textmu\textalpha}%
3198 \def\chapterautorefname{\textkappa\textepsilon\textphi\acctonos\textal-
      pha\textlambda\textalpha\textiota\textomicron}%
3199 \def\sectionautorefname{\textepsilon\textnu\acctonos\textomicron\texttau\tex-
      eta\texttau\textalpha}%
3200 \def\subsectionautorefname{\textupsilon\textpi\textomicron\textepsilon\textnu\ac-
      ctonos\textomicron\texttau\texteta\texttau\textalpha}%
3201 \def\subsubsectionautorefname{\textupsilon\textpi\textomicron-\textupsilon\textpi\textomicron\tex-
3202 \def\paragraphautorefname{\textpi\textalpha\extrho\acctonos\textalpha\textgamma\tex-
      rho\textalpha\textphi\textomicron\textvarsigma}%
3203 \def\subparagraphautorefname{\textupsilon\textpi\textomicron\textpi\tex-
      talpha\extrho\acctonos\textalpha\textgamma\extrho\textalpha\textphi\textomi-
      cron\textvarsigma}%
3204 \def\FancyVerbLineautorefname{\textgamma\extrho\textalpha\textmu\textmu\ac-
      ctonos\texteta}%
3205 \def\theoremautorefname{\textTheta\textepsilon\acctonos\textomega\tex-
      rho\texteta\textmu\textalpha}%
3206 \def\pageautorefname{\textsigma\textepsilon\textlambda\acctonos\textiota\textdelta\tex-
      talpha}%
3207 }
3208 \def\HyLang@dutch{%
3209 \def\equationautorefname{Vergelijking}%
3210 \def\footnoteautorefname{voetnoot}%
3211 \def\itemautorefname{punt}%
3212 \def\figureautorefname{Figuur}%
3213 \def\tableautorefname{Tabel}%
3214 \def\partautorefname{Deel}%
3215 \def\appendixautorefname{Bijlage}%
3216 \def\chapterautorefname{hoofdstuk}%
3217 \def\sectionautorefname{paragraaf}%
3218 \def\subsectionautorefname{deelparagraaf}%
3219 \def\subsubsectionautorefname{deel-deelparagraaf}%
3220 \def\paragraphautorefname{alineaf}%
3221 \def\subparagraphautorefname{deelaalineaf}%
3222 \def\FancyVerbLineautorefname{regel}%
3223 \def\theoremautorefname{Stelling}%
3224 \def\pageautorefname{pagina}%
3225 }
3226 \def\HyLang@norsk{%
3227 \def\equationautorefname{Ligning}%
3228 \def\footnoteautorefname{fotnote}%
3229 \def\itemautorefname{element}%
3230 \def\figureautorefname{Figur}%
3231 \def\tableautorefname{Tabell}%
3232 \def\partautorefname{Del}%
3233 \def\appendixautorefname{Tillegg}%
3234 \def\chapterautorefname{kapittel}%
3235 \def\sectionautorefname{seksjon}%
3236 \def\subsectionautorefname{underseksjon}%
3237 \def\subsubsectionautorefname{under-underseksjon}%
3238 \def\paragraphautorefname{avsnitt}%
3239 \def\subparagraphautorefname{underavsnitt}%
3240 \def\FancyVerbLineautorefname{Linje}%

```

```

3241 \def\theoremautorefname{Teorem}%
3242 \def\pageautorefname{side}%
3243 }
3244 \def\HyLang@danish{%
3245 \def\equationautorefname{Ligning}%
3246 \def\footnoteautorefname{fodnote}%
3247 \def\itemautorefname{element}%
3248 \def\figureautorefname{Figur}%
3249 \def\tableautorefname{Tabel}%
3250 \def\partautorefname{Del}%
3251 \def\appendixautorefname{Bilag}%
3252 \def\chapterautorefname{kapitel}%
3253 \def\sectionautorefname{sektion}%
3254 \def\subsectionautorefname{under-sektion}%
3255 \def\subsubsectionautorefname{under-under-sektion}%
3256 \def\paragraphautorefname{afsnit}%
3257 \def\subparagraphautorefname{underafsnit}%
3258 \def\FancyVerbLineautorefname{linje}%
3259 \def\theoremautorefname{Teorem}%
3260 \def\pageautorefname{side}%
3261 }

```

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

```

3262 \def\HyLang@addto#1#2{%
3263   #2%
3264   \@temptokena{#2}%
3265   \ifx#1\relax
3266     \let#1\@empty
3267   \fi
3268   \ifx#1\@undefined
3269     \edef#1{\the\@temptokena}%
3270   \else
3271     \toks@\expandafter{#1}%
3272     \edef#1{\the\toks@\the\@temptokena}%
3273   \fi
3274   \@temptokena{}\toks@\@temptokena
3275 }
3276 \def\HyLang@DeclareLang#1#2#3{%
3277 \ifpackagewith{babel}{#1}{%
3278   \expandafter\HyLang@addto
3279     \csname extras#1\expandafter\endcsname
3280     \csname HyLang@#2\endcsname
3281   \begingroup
3282     \edef\x{\endgroup
3283       #3%
3284     }%
3285     \x
3286     \@namedef{HyLang@#1@done}{}%
3287   }{}%
3288   \begingroup
3289     \edef\x##1##2{%
3290       \noexpand\ifx##2\relax
3291         \errmessage{No definitions for language #2' found!}%

```

```

3292 \noexpand\fi
3293 \endgroup
3294 \noexpand\define@key{Hyp}{#1}[]{}%
3295 \noexpand\@ifundefined{HyLang@#1@done}{}%
3296 \noexpand\HyLang@addto{\noexpand##1}{\noexpand##2}%
3297 #3%
3298 \noexpand\@namedef{HyLang@#1@done}{}%
3299 }{}%
3300 }%
3301 }%
3302 \expandafter\x\csname extras#1\expandafter\endcsname
3303 \csname HyLang@#2\endcsname
3304 }
3305 \HyLang@DeclareLang{english}{english}{}
3306 \HyLang@DeclareLang{UKenglish}{english}{}
3307 \HyLang@DeclareLang{british}{english}{}
3308 \HyLang@DeclareLang{USenglish}{english}{}
3309 \HyLang@DeclareLang{american}{english}{}
3310 \HyLang@DeclareLang{german}{german}{}
3311 \HyLang@DeclareLang{austrian}{german}{}
3312 \HyLang@DeclareLang{ngerman}{german}{}
3313 \HyLang@DeclareLang{naustrian}{german}{}
3314 \HyLang@DeclareLang{russian}{russian}{\noexpand\hypersetup{unicode}}
3315 \HyLang@DeclareLang{brazil}{portuges}{}
3316 \HyLang@DeclareLang{brazilian}{portuges}{}
3317 \HyLang@DeclareLang{portuguese}{portuges}{}
3318 \HyLang@DeclareLang{spanish}{spanish}{}
3319 \HyLang@DeclareLang{catalan}{catalan}{}
3320 \HyLang@DeclareLang{afrikaans}{afrikaans}{}
3321 \HyLang@DeclareLang{french}{french}{}
3322 \HyLang@DeclareLang{frenchb}{french}{}
3323 \HyLang@DeclareLang{francais}{french}{}
3324 \HyLang@DeclareLang{acadian}{french}{}
3325 \HyLang@DeclareLang{canadien}{french}{}
3326 \HyLang@DeclareLang{italian}{italian}{}
3327 \HyLang@DeclareLang{magyar}{magyar}{}
3328 \HyLang@DeclareLang{hungarian}{magyar}{}
3329 \HyLang@DeclareLang{greek}{greek}{}
3330 \HyLang@DeclareLang{dutch}{dutch}{}
3331 \HyLang@DeclareLang{norsk}{norsk}{}
3332 \HyLang@DeclareLang{norwegian}{norsk}{}
3333 \HyLang@DeclareLang{danish}{danish}{}

```

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

```

3334 \DeclareVoidOption{vietnamese}{}%
3335 \HyLang@addto\extrasvietnamese\HyLang@vietnamese
3336 \Hy@AtEndOfPackage{%
3337 \@ifundefined{T@PU}{}{}%
3338 \input{puvncnc.def}%
3339 }%
3340 }%
3341 }
3342 \DeclareVoidOption{vietnam}{}%
3343 \HyLang@addto\extrasvietnam\HyLang@vietnamese

```

```

3344 \Hy@AtEndOfPackage{%
3345   \@ifundefined{T@PU}{}{%
3346     \input{puvnenc.def}%
3347   }%
3348 }%
3349 }

```

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

```

3350 \DeclareVoidOption{arabic}{%
3351   \Hy@AtEndOfPackage{%
3352     \@ifundefined{T@PU}{}{%
3353       \input{puarenc.def}%
3354     }%
3355   }%
3356 }

```

13 Options to change appearance of links

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

```

3357 \define@key{Hyp}{colorlinks}[true]{%
3358   \Hy@boolkey{colorlinks}{#1}%
3359 }
3360 \DeclareVoidOption{hidelinks}{%
3361   \Hy@colorlinksfalse
3362   \Hy@ocgcolorlinksfalse
3363   \Hy@frenchlinksfalse
3364   \def\Hy@colorlink##1{\begingroup}%
3365   \def\Hy@endcolorlink{\endgroup}%
3366   \def\@pdfborder{0 0 0}%
3367   \let\@pdfborderstyle\ltx@empty
3368 }
3369 \define@key{Hyp}{ocgcolorlinks}[true]{%
3370   \Hy@boolkey{ocgcolorlinks}{#1}%
3371 }
3372 \Hy@AtBeginDocument{%
3373   \begingroup
3374   \@ifundefined{OBJ@OCG@view}{%
3375     \ifHy@ocgcolorlinks
3376       \Hy@Warning{%
3377         Driver does not support `ocgcolorlinks',\MessageBreak
3378         using `colorlinks' instead%
3379       }%
3380     \fi
3381   }{}%
3382   \endgroup
3383 }
3384 \define@key{Hyp}{frenchlinks}[true]{%
3385   \Hy@boolkey{frenchlinks}{#1}%
3386 }

```

14 Bookmarking

```

3387 \begingroup\expandafter\expandafter\expandafter\endgroup
3388 \expandafter\ifx\csname chapter\endcsname\relax
3389   \def\toclevel@part{0}%
3390 \else
3391   \def\toclevel@part{-1}%
3392 \fi
3393 \def\toclevel@chapter{0}
3394 \def\toclevel@section{1}
3395 \def\toclevel@subsection{2}
3396 \def\toclevel@subsubsection{3}
3397 \def\toclevel@paragraph{4}
3398 \def\toclevel@subparagraph{5}
3399 \def\toclevel@figure{0}
3400 \def\toclevel@table{0}

3401 \define@key{Hyp}{bookmarks}[true]{%
3402   \Hy@boolkey{bookmarks}{#1}%
3403 }

3404 \define@key{Hyp}{bookmarksopen}[true]{%
3405   \Hy@boolkey{bookmarksopen}{#1}%
3406 }

```

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.

```

3407 \let\Hy@bookmarksdepth\c@tocdepth
3408 \define@key{Hyp}{bookmarksdepth}[]{%
3409   \begingroup
3410     \edef\x{#1}%
3411     \ifx\x\empty
3412       \global\let\Hy@bookmarksdepth\c@tocdepth
3413     \else
3414       \@ifundefined{toclevel@\x}{%
3415         \@onelevel@sanitize\x
3416         \edef\y{\expandafter\@car\x\@nil}%
3417         \ifcase 0\expandafter\ifx\y-1\fi
3418           \expandafter\ifnum\expandafter`\y>47 %
3419             \expandafter\ifnum\expandafter`\y<58 1\fi\fi\relax
3420           \Hy@Warning{Unknown document division name (\x)}%
3421         \else
3422           \setbox\z@=\hbox{%
3423             \count@=\x
3424             \xdef\Hy@bookmarksdepth{\the\count@}%
3425           }%
3426         \fi
3427       }{%
3428         \setbox\z@=\hbox{%

```

```

3429      \count@=\csname toplevel@\x\endcsname
3430      \xdef\Hy@bookmarksdepth{\the\count@}%
3431      }%
3432    }%
3433  \fi
3434 \endgroup
3435 }

```

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

```

3436 \define@key{Hyp}{bookmarksopenlevel}{%
3437   \def\@bookmarksopenlevel{#1}%
3438 }
3439 \def\@bookmarksopenlevel{\maxdimen}
3440 % `bookmarkstype' to specify which `toc' file to mimic
3441 \define@key{Hyp}{bookmarkstype}{%
3442   \def\Hy@bookmarkstype{#1}%
3443 }
3444 \def\Hy@bookmarkstype{toc}

```

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

```

3445 \define@key{Hyp}{bookmarksnumbered}[true]{%
3446   \Hy@boolkey{bookmarksnumbered}{#1}%
3447 }

```

Option CJKbookmarks enables the patch for CJK bookmarks.

```

3448 \define@key{Hyp}{CJKbookmarks}[true]{%
3449   \Hy@boolkey{CJKbookmarks}{#1}%
3450 }
3451 \def\Hy@temp#1{%
3452   \expandafter\Hy@@temp\csname @#1color\endcsname{#1}%
3453 }
3454 \def\Hy@@temp#1#2#3{%
3455   \define@key{Hyp}{#2color}{%
3456     \HyColor@HyperrefColor{##1}{#1}%
3457   }%
3458   \def#1{#3}%
3459 }
3460 \Hy@temp{link}{red}
3461 \Hy@temp{anchor}{black}
3462 \Hy@temp{cite}{green}
3463 \Hy@temp{file}{cyan}
3464 \Hy@temp{url}{magenta}
3465 \Hy@temp{menu}{red}
3466 \Hy@temp{run}{\@filecolor}
3467 \define@key{Hyp}{pagecolor}{%
3468   \Hy@WarningPageColor
3469 }
3470 \def\Hy@WarningPageColor{%
3471   \Hy@WarningNoLine{Option `pagecolor' is not available anymore}%
3472   \global\let\Hy@WarningPageColor\relax
3473 }
3474 \define@key{Hyp}{allcolors}{%
3475   \HyColor@HyperrefColor{#1}\@linkcolor
3476   \HyColor@HyperrefColor{#1}\@anchorcolor

```



```

3477 \HyColor@HyperrefColor{#1}\@citecolor
3478 \HyColor@HyperrefColor{#1}\@filecolor
3479 \HyColor@HyperrefColor{#1}\@urlcolor
3480 \HyColor@HyperrefColor{#1}\@menucolor
3481 \HyColor@HyperrefColor{#1}\@runcolor
3482 }

3483 \def\hyperbaseurl#1{\def\@baseurl{#1}}
3484 \define@key{Hyp}{baseurl}{\hyperbaseurl{#1}}
3485 \let\@baseurl\@empty
3486 \def\hyperlinkfileprefix#1{\def\Hy@linkfileprefix{#1}}
3487 \define@key{Hyp}{linkfileprefix}{\hyperlinkfileprefix{#1}}
3488 \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.

```

3489 \let\@pdfpagetransition\relax
3490 \define@key{Hyp}{pdfpagetransition}{%
3491   \def\@pdfpagetransition{#1}%
3492 }

```

`\@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.

```

3493 \let\@pdfpageduration\relax
3494 \define@key{Hyp}{pdfpageduration}{%
3495   \def\@pdfpageduration{#1}%
3496   \Hy@Match\@pdfpageduration{}{%
3497     ^([0-9]+\.[0-9]*|[0-9]*\.[0-9]+)$%
3498   }{%
3499     \Hy@Warning{%
3500       Invalid value '\@pdfpageduration'\MessageBreak
3501       of option `pdfpageduration'\MessageBreak
3502       is replaced by an empty value%
3503     }%
3504     \let\@pdfpageduration\ltx@empty
3505   }%
3506 }

```

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).

```

3507 \def\Hy@ColorList{cite,file,link,menu,run,url}
3508 \@for\Hy@temp:=\Hy@ColorList\do{%

```

```

3509 \edef\Hy@temp{%
3510   \noexpand\define@key{Hyp}{\Hy@temp bordercolor}{%
3511     \noexpand\HyColor@HyperrefBorderColor
3512       {##1}%
3513     \expandafter\noexpand\csname @\Hy@temp bordercolor\endcsname
3514     {hyperref}%
3515     {\Hy@temp bordercolor}%
3516   }%
3517 }%
3518 \Hy@temp
3519 }
3520 \define@key{Hyp}{pagebordercolor}{%
3521   \Hy@WarningPageBorderColor
3522 }
3523 \def\Hy@WarningPageBorderColor{%
3524   \Hy@WarningNoLine{Option `pagebordercolor' is not available anymore}%
3525   \global\let\Hy@WarningPageBorderColor\relax
3526 }
3527 \define@key{Hyp}{allbordercolors}{%
3528   \def\Hy@temp##1##2{%
3529     \HyColor@HyperrefBorderColor{#1}##1{hyperref}{##2bordercolor}%
3530   }%
3531   \Hy@temp\@citebordercolor{cite}%
3532   \Hy@temp\@filebordercolor{file}%
3533   \Hy@temp\@linkbordercolor{link}%
3534   \Hy@temp\@menubordercolor{menu}%
3535   \Hy@temp\@runbordercolor{run}%
3536   \Hy@temp\@urlbordercolor{url}%
3537 }
3538 \define@key{Hyp}{pdfhighlight}{\def\@pdfhighlight{#1}}
3539 \Hy@DefNameKey{pdfhighlight}{%
3540   \do{/I}{Invert}%
3541   \do{/N}{None}%
3542   \do{/O}{Outline}%
3543   \do{/P}{Push}%
3544 }
3545 \def\Hy@setpdfhighlight{%
3546   \ifx\@pdfhighlight\@empty
3547   \else
3548     /H\@pdfhighlight
3549   \fi
3550 }
3551 \define@key{Hyp}{pdfborder}{%
3552   \let\Hy@temp\@pdfborder
3553   \def\@pdfborder{#1}%
3554   \Hy@Match\@pdfborder{}{%
3555     ~\HyPat@NonNegativeReal/ %
3556     \HyPat@NonNegativeReal/ %
3557     \HyPat@NonNegativeReal/%
3558     ( ?[\HyPat@NonNegativeReal/( \HyPat@NonNegativeReal/)*])?%%
3559   }{}{%
3560     \Hy@Warning{%
3561       Invalid value `\'@pdfborder'\MessageBreak
3562       for option `pdfborder'.\MessageBreak

```

```

3563     Option setting is ignored%
3564 }%
3565 \let\@pdfborder\Hy@temp
3566 }%
3567 }
3568 \define@key{Hyp}{pdfborderstyle}{%
3569 \let\Hy@temp\@pdfborderstyle
3570 \def\@pdfborderstyle{#1}%
3571 \Hy@Match\@pdfborderstyle}{%
3572 ~%
3573 ( */Type */Border%
3574 | */W +\HyPat@NonNegativeReal/%
3575 | */S */[SDBIU]%
3576 | */D *[ \(\HyPat@NonNegativeReal/( \HyPat@NonNegativeReal/)?)?]%
3577 )* *$%
3578 }{}{%
3579 \Hy@Warning{%
3580     Invalid value `'\@pdfborderstyle'\MessageBreak
3581     for option `pdfborderstyle'.\MessageBreak
3582     Option setting is ignored%
3583 }%
3584 \let\@pdfborderstyle\Hy@temp
3585 }%
3586 }
3587 \def\Hy@setpdfborder{%
3588 \ifx\@pdfborder\@empty
3589 \else
3590 /Border[\@pdfborder]%
3591 \fi
3592 \ifx\@pdfborderstyle\@empty
3593 \else
3594 /BS<<\@pdfborderstyle>>%
3595 \fi
3596 }
3597 \Hy@DefNameKey{pdfpagemode}{%
3598 \do{UseNone}{}%
3599 \do{UseOutlines}{}%
3600 \do{UseThumbs}{}%
3601 \do{FullScreen}{}%
3602 \do{UseOC}{PDF 1.5}%
3603 \do{UseAttachments}{PDF 1.6}%
3604 }
3605 \Hy@DefNameKey{pdfnonfullscreenpagemode}{%
3606 \do{UseNone}{}%
3607 \do{UseOutlines}{}%
3608 \do{UseThumbs}{}%
3609 \do{FullScreen}{}%
3610 \do{UseOC}{PDF 1.5}%
3611 \do{UseAttachments}{PDF 1.6}%
3612 }
3613 \Hy@DefNameKey{pdfdirection}{%
3614 \do{L2R}{Left to right}%
3615 \do{R2L}{Right to left}%
3616 }

```

```

3617 \Hy@DefNameKey{pdfviewarea}{%
3618   \do{MediaBox}{}%
3619   \do{CropBox}{}%
3620   \do{BleedBox}{}%
3621   \do{TrimBox}{}%
3622   \do{ArtBox}{}%
3623 }
3624 \Hy@DefNameKey{pdfviewclip}{%
3625   \do{MediaBox}{}%
3626   \do{CropBox}{}%
3627   \do{BleedBox}{}%
3628   \do{TrimBox}{}%
3629   \do{ArtBox}{}%
3630 }
3631 \Hy@DefNameKey{pdfprintarea}{%
3632   \do{MediaBox}{}%
3633   \do{CropBox}{}%
3634   \do{BleedBox}{}%
3635   \do{TrimBox}{}%
3636   \do{ArtBox}{}%
3637 }
3638 \Hy@DefNameKey{pdfprintclip}{%
3639   \do{MediaBox}{}%
3640   \do{CropBox}{}%
3641   \do{BleedBox}{}%
3642   \do{TrimBox}{}%
3643   \do{ArtBox}{}%
3644 }
3645 \Hy@DefNameKey{pdfprintscaling}{%
3646   \do{AppDefault}{}%
3647   \do{None}{}%
3648 }
3649 \Hy@DefNameKey{pdfduplex}{%
3650   \do{Simplex}{}%
3651   \do{DuplexFlipShortEdge}{}%
3652   \do{DuplexFlipLongEdge}{}%
3653 }
3654 \Hy@DefNameKey{pdfpicktraybypdfsize}{%
3655   \do{true}{}%
3656   \do{false}{}%
3657 }
3658 \define@key{Hyp}{pdfprintpagerange}{%
3659   \def\@pdfprintpagerange{#1}%
3660 }
3661 \Hy@DefNameKey{pdfnumcopies}{%
3662   \do{2}{two copies}%
3663   \do{3}{three copies}%
3664   \do{4}{four copies}%
3665   \do{5}{five copies}%
3666 }
3667 \define@key{Hyp}{pdfusetitle}[true]{%
3668   \Hy@boolkey{pdfusetitle}{#1}%
3669 }
3670 \def\HyXeTeX@CheckUnicode{%

```

```

3671 \ifxetex
3672   \ifHy@unicode
3673   \else
3674     \Hy@WarningNoLine{%
3675       XeTeX driver only supports unicode.\MessageBreak
3676       Enabling option `unicode'%
3677     }%
3678     \kvsetkeys{Hyp}{unicode}%
3679   \fi
3680 \else
3681   \let\HyXeTeX@CheckUnicode\relax
3682 \fi
3683 }
3684 \def\HyPsd@PrerenderUnicode#1{%
3685   \begingroup
3686     \expandafter\ifx\csname PrerenderUnicode\endcsname\relax
3687     \else
3688       \sbox0{%
3689         \let\GenericInfo\@gobbletwo
3690         \let\GenericWarning\@gobbletwo
3691         \let\GenericError\@gobblefour
3692         \PrerenderUnicode{#1}%
3693       }%
3694     \fi
3695   \endgroup
3696 }
3697 \define@key{Hyp}{pdftitle}{%
3698   \AddToDocumentProperties[hyperref]{pdftitle}{#1}%
3699   \HyXeTeX@CheckUnicode
3700   \HyPsd@PrerenderUnicode{#1}%
3701   \pdfstringdef\@pdftitle{#1}%
3702 }
3703 \define@key{Hyp}{pdfauthor}{%
3704   \AddToDocumentProperties[hyperref]{pdfauthor}{#1}%
3705   \HyXeTeX@CheckUnicode
3706   \HyPsd@PrerenderUnicode{#1}%
3707   \pdfstringdef\@pdfauthor{#1}%
3708 }
3709 \define@key{Hyp}{pdfproducer}{%
3710   \AddToDocumentProperties[hyperref]{pdfproducer}{#1}%
3711   \HyXeTeX@CheckUnicode
3712   \HyPsd@PrerenderUnicode{#1}%
3713   \pdfstringdef\@pdfproducer{#1}%
3714 }
3715 \define@key{Hyp}{pdfcreator}{%
3716   \AddToDocumentProperties[hyperref]{pdfcreator}{#1}%
3717   \HyXeTeX@CheckUnicode
3718   \HyPsd@PrerenderUnicode{#1}%
3719   \pdfstringdef\@pdfcreator{#1}%
3720 }
3721 \define@key{Hyp}{addtopdfcreator}{%
3722   \HyXeTeX@CheckUnicode
3723   \HyPsd@PrerenderUnicode{#1}%
3724   \pdfstringdef\@pdfcreator{\@pdfcreator, #1}%

```

```

3725 }
3726 \define@key{Hyp}{pdfcreationdate}{%
3727   \begingroup
3728     \Hy@unicodedefalse
3729     \pdfstringdef\@pdfcreationdate{#1}%
3730   \endgroup
3731 }
3732 \define@key{Hyp}{pdfmoddate}{%
3733   \begingroup
3734     \Hy@unicodedefalse
3735     \pdfstringdef\@pdfmoddate{#1}%
3736   \endgroup
3737 }
3738 \define@key{Hyp}{pdfsubject}{%
3739   \AddToDocumentProperties[hyperref]{pdfsubject}{#1}%
3740   \HyXeTeX@CheckUnicode
3741   \HyPsd@PrerenderUnicode{#1}%
3742   \pdfstringdef\@pdfsubject{#1}%
3743 }
3744 \define@key{Hyp}{pdfkeywords}{%
3745   \AddToDocumentProperties[hyperref]{pdfkeywords}{#1}%
3746   \HyXeTeX@CheckUnicode
3747   \HyPsd@PrerenderUnicode{#1}%
3748   \pdfstringdef\@pdfkeywords{#1}%
3749 }
3750 \define@key{Hyp}{pdftrapped}{%
3751   \lowercase{\edef\Hy@temp{#1}}%
3752   \ifx\Hy@temp\HyInfo@trapped@true
3753     \def\@pdftrapped{True}%
3754   \else
3755     \ifx\Hy@temp\HyInfo@trapped@false
3756       \def\@pdftrapped{False}%
3757     \else
3758       \ifx\Hy@temp\HyInfo@trapped@unknown
3759         \def\@pdftrapped{Unknown}%
3760       \else
3761         \ifx\Hy@temp\@empty
3762           \else
3763             \Hy@Warning{%
3764               Unsupported value `#1'\MessageBreak
3765               for option `pdftrapped'%
3766             }%
3767           \fi
3768         \def\@pdftrapped{}%
3769       \fi
3770     \fi
3771   \fi
3772 }
3773 \def\HyInfo@trapped@true{true}
3774 \def\HyInfo@trapped@false{false}
3775 \def\HyInfo@trapped@unknown{unknown}
3776 \def\HyInfo@TrappedUnsupported{%
3777   \ifx\@pdftrapped\@empty
3778     \else

```

```

3779 \Hy@WarningNoLine{\pdftrapped' is not supported by this driver}%
3780 \gdef\HyInfo@TrappedUnsupported{}%
3781 \fi
3782 }
3783 \define@key{Hyp}{pdfinfo}{%
3784 \kvsetkeys{pdfinfo}{#1}%
3785 }
3786 \def\Hy@temp#1{%
3787 \lowercase{\Hy@temp@A{#1}}{#1}%
3788 }
3789 \def\Hy@temp@A#1#2{%
3790 \define@key{pdfinfo}{#2}{%
3791 \hypersetup{pdf#1={##1}}}%
3792 }%
3793 }
3794 \Hy@temp{Title}
3795 \Hy@temp{Author}
3796 \Hy@temp{Keywords}
3797 \Hy@temp{Subject}
3798 \Hy@temp{Creator}
3799 \Hy@temp{Producer}
3800 \Hy@temp{CreationDate}
3801 \Hy@temp{ModDate}
3802 \Hy@temp{Trapped}
3803 \newif\ifHyInfo@AddonUnsupported
3804 \kv@set@family@handler{pdfinfo}{%
3805 \HyInfo@AddonHandler{#1}{#2}%
3806 }
3807 \let\HyInfo@do\relax
3808 \def\HyInfo@AddonHandler#1#2{%
3809 \ifx\kv@value\relax
3810 \Hy@Warning{%
3811 Option `pdfinfo': ignoring key `\'kv@key' without value%
3812 }%
3813 \else
3814 \EdefEscapeName\HyInfo@KeyEscaped{\kv@key}%
3815 \EdefUnescapeName\HyInfo@Key{\HyInfo@KeyEscaped}%
3816 \expandafter\ifx\csname KV@pdfinfo@\HyInfo@Key\endcsname\relax
3817 \ifHyInfo@AddonUnsupported
3818 \Hy@Warning{%
3819 This driver does not support additional\MessageBreak
3820 information entries, therefore\MessageBreak
3821 `\'kv@key' is ignored%
3822 }%
3823 \else
3824 \def\HyInfo@tmp##1{%
3825 \kv@define@key{pdfinfo}{##1}{%
3826 \HyXeTeX@CheckUnicode
3827 \HyPsd@PrerenderUnicode{####1}%
3828 \pdfstringdef\HyInfo@Value{####1}%
3829 \global\expandafter
3830 \let\csname HyInfo@Value@##1\endcsname
3831 \HyInfo@Value
3832 }%

```

```

3833 }%
3834 \expandafter\HyInfo@tmp\expandafter{\HyInfo@Key}%
3835 \global\expandafter
3836 \let\csname KV@pdfinfo@\HyInfo@Key\expandafter\endcsname
3837 \csname KV@pdfinfo@\HyInfo@Key\endcsname
3838 \xdef\HyInfo@AddonList{%
3839 \HyInfo@AddonList
3840 \HyInfo@do{\HyInfo@Key}%
3841 }%
3842 \kv@parse@normalized{%
3843 \HyInfo@Key={#2}%
3844 }{%
3845 \kv@processor@default{pdfinfo}%
3846 }%
3847 \fi
3848 \else
3849 \kv@parse@normalized{%
3850 \HyInfo@Key={#2}%
3851 }{%
3852 \kv@processor@default{pdfinfo}%
3853 }%
3854 \fi
3855 \fi
3856 }
3857 \def\HyInfo@GenerateAddons{%
3858 \ifHyInfo@AddonUnsupported
3859 \def\HyInfo@Addons{}%
3860 \else
3861 \begingroup
3862 \toks@{}%
3863 \def\HyInfo@do##1{%
3864 \EdefEscapeName\HyInfo@Key{##1}%
3865 \edef\x{%
3866 \toks@{%
3867 \the\toks@
3868 /\HyInfo@Key(\csname HyInfo@Value@##1\endcsname)%
3869 }%
3870 }%
3871 \x
3872 }%
3873 \HyInfo@AddonList
3874 \edef\x{\endgroup
3875 \def\noexpand\HyInfo@Addons{\the\toks@}%
3876 }%
3877 \x
3878 \fi
3879 }
3880 \global\let\HyInfo@AddonList\ltx@empty
3881 \define@key{Hyp}{pdfview}{\calculate@pdfview#1 \}
3882 \define@key{Hyp}{pdflinkmargin}{\setpdflinkmargin{#1}}
3883 \let\setpdflinkmargin\@gobble
3884 \def\calculate@pdfview#1 #2\{%
3885 \def\@pdfview{#1}%
3886 \ifx\#2\%

```



```

3887 \def\@pdfviewparams{ -32768}%
3888 \else
3889 \def\@pdfviewparams{ #2}%
3890 \fi
3891 }
3892 \def\Hy@number#1{%
3893 \the\numexpr#1\relax
3894 }%
3895 \define@key{Hyp}{pdfstartpage}{%
3896 \ifx\#1\%
3897 \let\@pdfstartpage\ltx@empty
3898 \else
3899 \edef\@pdfstartpage{\Hy@number{#1}}%
3900 \fi
3901 }%
3902 \define@key{Hyp}{pdfstartview}{%
3903 \ifx\#1\%
3904 \let\@pdfstartview\ltx@empty
3905 \else
3906 \def\@pdfstartview{/#1}%
3907 \fi
3908 }
3909 \def\HyPat@NonNegativeReal/{%
3910 \ *([0-9]+\.[0-9]*|[0-9]*\.[0-9]+) *%
3911 }
3912 \define@key{Hyp}{pdfremotestartview}{%
3913 \ifx\#1\%
3914 \def\@pdfremotestartview{/Fit}%
3915 \else
3916 \edef\@pdfremotestartview{#1}%
3917 \Hy@Match\@pdfremotestartview{}{%
3918 ^{XYZ}%
3919 ()| %
3920 (null|-?\HyPat@NonNegativeReal/) %
3921 (null|-?\HyPat@NonNegativeReal/) %
3922 (null|\HyPat@NonNegativeReal/)%
3923 )| % end of "XYZ"
3924 Fit(%
3925 ()| %
3926 B| %
3927 (H|V|BH|BV)(%
3928 ()| %
3929 (null|\HyPat@NonNegativeReal/)%
3930 )| %
3931 R %
3932 \HyPat@NonNegativeReal/ %
3933 \HyPat@NonNegativeReal/ %
3934 \HyPat@NonNegativeReal/ %
3935 \HyPat@NonNegativeReal/ %
3936 ) % end of "Fit"
3937 )$%
3938 }{}{%
3939 \Hy@Warning{%
3940 Invalid value ` \@pdfremotestartview'\MessageBreak

```

```

3941         of `pdfremotestartview'\MessageBreak
3942         is replaced by `Fit'%
3943     }%
3944     \let\@pdfremotestartview\@empty
3945 }%
3946 \ifx\@pdfremotestartview\@empty
3947     \def\@pdfremotestartview{/Fit}%
3948 \else
3949     \edef\@pdfremotestartview{/ \@pdfremotestartview}%
3950 \fi
3951 \fi
3952 }
3953 \define@key{Hyp}{pdfpagescrop}{\edef\@pdfpagescrop{#1}}
3954 \define@key{Hyp}{pdftoolbar}[true]{%
3955     \Hy@boolkey{pdftoolbar}{#1}%
3956 }
3957 \define@key{Hyp}{pdfmenubar}[true]{%
3958     \Hy@boolkey{pdfmenubar}{#1}%
3959 }
3960 \define@key{Hyp}{pdfwindowui}[true]{%
3961     \Hy@boolkey{pdfwindowui}{#1}%
3962 }
3963 \define@key{Hyp}{pdffitwindow}[true]{%
3964     \Hy@boolkey{pdffitwindow}{#1}%
3965 }
3966 \define@key{Hyp}{pdfcenterwindow}[true]{%
3967     \Hy@boolkey{pdfcenterwindow}{#1}%
3968 }
3969 \define@key{Hyp}{pdfdisplaydoctitle}[true]{%
3970     \Hy@boolkey{pdfdisplaydoctitle}{#1}%
3971 }
3972 \define@key{Hyp}{pdfa}[true]{%
3973     \Hy@boolkey{pdfa}{#1}%
3974 }
3975 \define@key{Hyp}{pdfnewwindow}[true]{%
3976     \def\Hy@temp{#1}%
3977     \ifx\Hy@temp\@empty
3978         \Hy@pdfnewwindowsetfalse
3979     \else
3980         \Hy@pdfnewwindowsettrue
3981         \Hy@boolkey{pdfnewwindow}{#1}%
3982     \fi
3983 }
3984 \def\Hy@SetNewWindow{%
3985     \ifHy@pdfnewwindowset
3986         /NewWindow %
3987     \ifHy@pdfnewwindow true\else false\fi
3988 \fi
3989 }
3990 \Hy@DefNameKey{pdfpagelayout}{%
3991     \do{SinglePage}{}%
3992     \do{OneColumn}{}%
3993     \do{TwoColumnLeft}{}%
3994     \do{TwoColumnRight}{}%

```

```

3995 \do{TwoPageLeft}{PDF 1.5}%
3996 \do{TwoPageRight}{PDF 1.5}%
3997 }
3998 \define@key{Hyp}{pdflang}{%
3999 \edef\@pdflang{#1}%
4000 \def\Hy@temp{\relax}%
4001 \ifx\@pdflang\Hy@temp
4002 \let\@pdflang\relax
4003 \fi
4004 \ifx\@pdflang\relax
4005 \else
4006 \ifx\@pdflang\ltx@empty
4007 \else

```

Test according to ABNF of RFC 3066.

```

4008 \Hy@Match\@pdflang{icase}{%
4009 ~%
4010 [a-z]{1,8}%
4011 (-[a-z0-9]{1,8})*%
4012 $%
4013 }{%

```

Test according to ABNF of RFC 5646.

```

4014 \Hy@Match\@pdflang{icase}{%
4015 ~%
4016 (%
4017 % langtag
4018 (% language
4019 [a-z]{2,3}%
4020 ([a-z]{3}(-[a-z]{3}){0,2})?% extlang
4021 |[a-z]{4}% reserved for future use
4022 |[a-z]{5,8}% registered language subtag
4023 )%
4024 (-[a-z]{4})?% script
4025 (-([a-z]{2}|[0-9]{3}))?% region
4026 (-([a-z]{5,8}|[0-9][a-z0-9]{3}))?% variant
4027 (-[0-9a-wyz](-[a-z0-9]{2,8})+)*% extension
4028 (-x(-[a-z0-9]{1,8})+)?% privateuse
4029 % privateuse
4030 |x-([a-z0-9]{1,8})+%
4031 % grandfathered/irregular
4032 |en-GB-oed%
4033 |i-(ami|bnn|default|enochian|hak|klinton|lux|%
4034 mingo|navajo|pwn|tao|tay|tsu)%
4035 |sgn-(BE-FR|BE-NL|CH-DE)%
4036 % grandfathered/regular
4037 |art-lojban%
4038 |cel-gaulish%
4039 |no-(bok|nyn)%
4040 |zh-(guoyu|hakka|min|min-nan|xiang)%
4041 )%
4042 $%
4043 }{%

```

Test for unique extensions.

```

4044 \Hy@Match{-\@pdflang}{icase}{-[a-wyz0-9]-}{%
4045 \Hy@Match\@pdflang{icase}{~x-}{%
4046 % remove privateuse
4047 \edef\Hy@temp{-\@pdflang}%
4048 \Hy@Match\Hy@temp{icase}{%
4049 ~%
4050 (%
4051 (-[a-wyz0-9]|-[a-z0-9]{2,8})*%
4052 )%
4053 -x-%
4054 }{%
4055 \edef\Hy@temp{%
4056 \expandafter\strip@prefix\pdfastmatch1%
4057 }%
4058 }{}%
4059 \Hy@Match\Hy@temp{icase}{%
4060 (-[a-wyz0-9]-).*\ltx@backslashchar1%
4061 }{%
4062 \Hy@Warning{%
4063 Invalid language identifier `#1'\MessageBreak
4064 for option `pdflang', because it violates\MessageBreak
4065 well-formedness defined in RFC 4646\MessageBreak
4066 by duplicate singleton subtags%
4067 }%
4068 \let\@pdflang\relax
4069 }{}%
4070 }%
4071 }{}%

```

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

```

4072 \ifx\@pdflang\relax
4073 \else
4074 \Hy@Match\@pdflang{icase}{%
4075 ~%
4076 [a-zA-Z]{2}-%
4077 (%
4078 aa|AA|%
4079 [qQ][m-zA-Z]|%
4080 [xX][a-zA-Z]|%
4081 zz|ZZ%
4082 )%
4083 (-|$)%
4084 }{%
4085 \Hy@Warning{%
4086 Invalid language identifier `#1'\MessageBreak
4087 for option `pdflang' because of invalid country code%
4088 \MessageBreak
4089 in second subtag (RFC 3066)%
4090 }%
4091 \let\@pdflang\relax
4092 }{}%
4093 \fi
4094 }{%
4095 \Hy@Warning{%
4096 Invalid language identifier `#1'\MessageBreak

```

```

4097         for option `pdflang', because it violates\MessageBreak
4098         well-formedness defined in RFC 5646%
4099     }%
4100     \let\@pdflang\relax
4101 }%
4102 }{%
4103     \Hy@Warning{%
4104         Invalid language identifier `#1'\MessageBreak
4105         for option `pdflang' (RFC 3066)%
4106     }%
4107     \let\@pdflang\relax
4108 }%
4109 \fi
4110 \fi
4111 }
4112 \define@key{Hyp}{pdfpagelabels}[true]{%
4113     \Hy@boolkey{pdfpagelabels}{#1}%
4114 }
4115 \define@key{Hyp}{pdfescapeform}[true]{%
4116     \Hy@boolkey{pdfescapeform}{#1}%
4117 }

```

Default values:

```

4118 \def\@linkbordercolor{1 0 0}
4119 \def\@urlbordercolor{0 1 1}
4120 \def\@menubordercolor{1 0 0}
4121 \def\@filebordercolor{0 .5 .5}
4122 \def\@runbordercolor{0 .7 .7}
4123 \def\@citebordercolor{0 1 0}
4124 \def\@pdfhighlight{/I}
4125 \let\@pdftitle\ltx@empty
4126 \let\@pdfauthor\ltx@empty
4127 \let\@pdfproducer\relax
4128 \def\@pdfcreator{LaTeX with hyperref}
4129 \let\@pdfcreationdate\ltx@empty
4130 \let\@pdfmoddate\ltx@empty
4131 \let\@pdfsubject\ltx@empty
4132 \let\@pdfkeywords\ltx@empty
4133 \let\@pdftrapped\ltx@empty
4134 \let\@pdfpagescrop\ltx@empty
4135 \def\@pdfstartview{/Fit}
4136 \def\@pdfremotestartview{/Fit}
4137 \def\@pdfstartpage{1}
4138 \let\@pdfprintpagerange\ltx@empty
4139 \let\@pdflang\relax
4140 \let\PDF@SetupDoc\@empty
4141 \let\PDF@FinishDoc\@empty
4142 \let\phantomsection\@empty
4143 \let\special@paper\@empty
4144 \def\HyperDestNameFilter#1{#1}
4145 \Hy@AtBeginDocument{%
4146     \begingroup
4147     \edef\x{\ifdim\stockheight>\z@ \stockheight\else\paperheight\fi}%
4148     \dimen@=\x\relax
4149     \ifdim\dimen@>\z@

```

```

4150 \else
4151 \dimen@=11in\relax
4152 \Hy@WarningNoLine{%
4153   Height of page (\expandafter\string\x) %
4154   is invalid (\the\x),\MessageBreak
4155   using 11in%
4156 }%
4157 \fi
4158 \dimen@=0.99626401\dimen@
4159 \xdef\Hy@pageheight{\strip@pt\dimen@}%
4160 \endgroup
4161 }
4162 \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.

```

4163 \let\hyper@normalise\ExecuteOptions
4164 \let\ExecuteOptions\hypersetup
4165 \Hy@RestoreCatcodes
4166 \InputIfFileExists{hyperref.cfg}{\}{}
4167 \Hy@SetCatcodes
4168 \let\ExecuteOptions\hyper@normalise
4169 \ifx\Hy@MaybeStopNow\relax
4170 \else
4171 \Hy@stoppedearlytrue
4172 \expandafter\Hy@MaybeStopNow
4173 \fi
4174 \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.

```

4175 \SetupKeyvalOptions{family=Hyp}
4176 \DeclareLocalOptions{%
4177   a4paper,a5paper,b5paper,letterpaper,legalpaper,executivepaper%
4178 }

```

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

```

4179 \@ifpackagewith{hyperref}{tex4ht}{%
4180 }{%
4181 \@ifpackageloaded{tex4ht}{%
4182 \PassOptionsToPackage{tex4ht}{hyperref}%
4183 }{%
4184 \ltx@IfUndefined{HCode}{%
4185 }{%
4186 \begingroup
4187 \def\Hy@pkg{tex4ht}%
4188 \def\Hy@temp@A#1\RequirePackage[#2]#3#4\Hy@NIL{%
4189 \def\Hy@param{#2#3}%
4190 \ifx\Hy@param\ltx@empty
4191 \expandafter\ltx@gobble
4192 \else
4193 \def\Hy@param{#3}%
4194 \ifx\Hy@param\Hy@pkg
4195 \PassOptionsToPackage{#2}{tex4ht}%

```

```

4196         \expandafter\expandafter\expandafter\@gobble
4197         \else
4198         \expandafter\expandafter\expandafter\ltx@firstofone
4199         \fi
4200     \fi
4201     {\Hy@temp@A#4\Hy@NIL}%
4202 }%
4203 \expandafter
4204 \Hy@temp@A\@documentclasshook\RequirePackage[]{}\Hy@NIL
4205 \endgroup
4206 \PassOptionsToPackage{tex4ht}{hyperref}%
4207 }%
4208 }%
4209 }

4210 \let\ReadBookmarks\relax
4211 \ProcessKeyvalOptions{Hyp}

```

After processing options.

15.1 Package xspace support

```

4212 \def\Hy@xspace@end{}
4213 \ltx@ifundefined{xspaceaddexceptions}{%
4214   \Hy@AtBeginDocument{%
4215     \ltx@ifundefined{xspaceaddexceptions}{%
4216       }{%
4217         \def\Hy@xspace@end{%
4218           \ltx@gobble{end for xspace}%
4219         }%
4220         \xspaceaddexceptions{%
4221           \Hy@xspace@end,\hyper@linkend,\hyper@anchorend
4222         }%
4223       }%
4224     }%
4225   }{%
4226     \def\Hy@xspace@end{%
4227       \ltx@gobble{end for xspace}%
4228     }%
4229     \xspaceaddexceptions{\Hy@xspace@end,\hyper@linkend,\hyper@anchorend}%
4230   }

```

15.2 Option draft

```

4231 \Hy@AtBeginDocument{%
4232   \ifHy@draft
4233     \let\hyper@@anchor\@gobble
4234     \gdef\hyper@link#1#2#3{#3\Hy@xspace@end}%
4235     \def\hyper@anchorstart#1#2{#2\Hy@xspace@end}%
4236     \def\hyper@anchorend{\Hy@xspace@end}%
4237     \let\hyper@linkstart\@gobbletwo
4238     \def\hyper@linkend{\Hy@xspace@end}%
4239     \def\hyper@linkurl#1#2{#1\Hy@xspace@end}%
4240     \def\hyper@linkfile#1#2#3{#1\Hy@xspace@end}%
4241     \def\hyper@link@{#1}#2#3#4{#4\Hy@xspace@end}%
4242     \def\Acrobatmenu#1#2{\leavevmode#2\Hy@xspace@end}%

```

```

4243 \let\PDF@SetupDoc\@empty
4244 \let\PDF@FinishDoc\@empty
4245 \let\ReadBookmarks\relax
4246 \let\WriteBookmarks\relax
4247 \Hy@WarningNoLine{Draft mode on}%
4248 \fi
4249 \Hy@DisableOption{draft}%
4250 \Hy@DisableOption{nolinks}%
4251 \Hy@DisableOption{final}%
4252 }

```

15.3 PDF/A

```

4253 \Hy@DisableOption{pdfa}
4254 \ifHy@pdfa
4255 \ifnum \Hy@pdf@majorminor@version < 104
4256 \kvsetkeys{Hyp}{pdfversion=1.4}%
4257 \fi
4258 \Hy@DisableOption{pdfversion}%
4259 \def\Hy@Acrobatmenu#1#2{%
4260 \leavevmode
4261 \begingroup
4262 \edef\x{#1}%
4263 \@onelevel@sanitize\x
4264 \ifx\x\Hy@NextPage
4265 \let\y=Y%
4266 \else
4267 \ifx\x\Hy@PrevPage
4268 \let\y=Y%
4269 \else
4270 \ifx\x\Hy@FirstPage
4271 \let\y=Y%
4272 \else
4273 \ifx\x\Hy@LastPage
4274 \let\y=Y%
4275 \else
4276 \let\y=N%
4277 \fi
4278 \fi
4279 \fi
4280 \fi
4281 \expandafter\endgroup
4282 \ifx\y Y%
4283 \else
4284 \Hy@Error{%
4285 PDF/A: Named action `#1' is not permitted%
4286 }\@ehc
4287 {#2}%
4288 \expandafter\@gobble
4289 \fi
4290 }%
4291 \def\Hy@temp#1{%
4292 \expandafter\def\csname Hy@#1\endcsname{#1}%
4293 \expandafter\@onelevel@sanitize\csname Hy@#1\endcsname
4294 }%

```



```

4295 \Hy@temp{NextPage}%
4296 \Hy@temp{PrevPage}%
4297 \Hy@temp{FirstPage}%
4298 \Hy@temp{LastPage}%
4299 \else
4300 \def\Hy@Acrobatmenu#1#2{\leavevmode}%
4301 \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.

```

4302 \def\Hy@wrapper@babel#1#2{%
4303   \begingroup
4304     \Hy@safe@activetrue
4305     \set@display@protect
4306     \edef\x{#2}%
4307     \@onelevel@sanitize\x
4308     \toks@{#1}%
4309     \edef\x{\endgroup\the\toks@{\x}}%
4310     \x
4311   }
4312 \def\Hy@WrapperDef#1{%
4313   \begingroup
4314     \escapechar=\m@ne
4315     \xdef\Hy@gtemp{%
4316       \expandafter\noexpand\csname HyWrap@\string#1\endcsname
4317     }%
4318   \endgroup
4319   \edef#1{%
4320     \noexpand\Hy@wrapper@babel
4321     \expandafter\noexpand\Hy@gtemp
4322   }%
4323   \expandafter\def\Hy@gtemp
4324 }
4325 \ifHy@hyperfigures
4326   \Hy@Info{Hyper figures ON}%
4327 \else
4328   \Hy@Info{Hyper figures OFF}%
4329 \fi
4330 \ifHy@nesting
4331   \Hy@Info{Link nesting ON}%
4332 \else
4333   \Hy@Info{Link nesting OFF}%
4334 \fi
4335 \ifHy@hyperindex
4336   \Hy@Info{Hyper index ON}%
4337 \else
4338   \Hy@Info{Hyper index OFF}%
4339 \fi
4340 \ifHy@plainpages

```

```

4341 \Hy@Info{Plain pages ON}%
4342 \else
4343 \Hy@Info{Plain pages OFF}%
4344 \fi
4345 \ifHy@backref
4346 \Hy@Info{Backreferencing ON}%
4347 \else
4348 \Hy@Info{Backreferencing OFF}%
4349 \fi
4350 \ifHy@implicit
4351 \Hy@InfoNoLine{Implicit mode ON; LaTeX internals redefined}%
4352 \else
4353 \Hy@InfoNoLine{Implicit mode OFF; no redefinition of LaTeX internals}%
4354 \def\MaybeStopEarly{%
4355   \Hy@Message{Stopped early}%
4356   \Hy@AtBeginDocument{%
4357     \PDF@FinishDoc
4358     \gdef\PDF@FinishDoc{}}%
4359   }%
4360 \endinput
4361 }%
4362 \Hy@AtBeginDocument{%
4363   \let\autoref\ref
4364   \let\autopageref\pageref
4365   \ifx\@pdfpagemode\@empty
4366     \gdef\@pdfpagemode{UseNone}%
4367   \fi
4368   \global\Hy@backreffalse
4369 }%
4370 \Hy@AtEndOfPackage{%
4371   \global\let\ReadBookmarks\relax
4372   \global\let\WriteBookmarks\relax
4373 }%
4374 \fi
4375 \Hy@DisableOption{implicit}

```

15.4.1 Driver loading

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

```

4376 \@ifundefined{stockwidth}{\newdimen\stockwidth}{}
4377 \@ifundefined{stockheight}{\newdimen\stockheight}{}

4378 \Hy@AtEndOfPackage{%
4379   \@ifpackageloaded{tex4ht}{%
4380     \def\Hy@driver{htex4ht}%
4381     \Hy@texhttrue
4382   }{}%

```

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.

```

4383 \ifx\Hy@driver\@empty
4384 \else
4385   \ifx\pdfextension\@undefined
4386     \def\Hy@temp{hpdfTeX}%
4387   \else

```

```

4388 \def\Hy@temp{hluatex}%
4389 \fi
4390 \ifpdf
4391 \ifx\Hy@driver\Hy@temp
4392 \else
4393 \Hy@WarningNoLine{%
4394 Wrong driver ``\Hy@driver.def';\MessageBreak
4395 pdfTeX is running in PDF mode.\MessageBreak
4396 Forcing driver ``\Hy@temp.def'%
4397 }%
4398 \let\Hy@driver\Hy@temp
4399 \fi
4400 \else
4401 \ifx\Hy@driver\Hy@temp
4402 \Hy@WarningNoLine{%
4403 Wrong driver ``\Hy@driver.def';\MessageBreak
4404 pdfTeX is not running in PDF mode.\MessageBreak
4405 Using default driver%
4406 }%
4407 \let\Hy@driver\@empty
4408 \fi
4409 \fi
4410 \fi
4411 \ifHy@texht
4412 \else
4413 \ifx\Hy@driver\@empty
4414 \else
4415 \def\Hy@temp{hxtex}%
4416 \ifxetex
4417 \ifx\Hy@driver\Hy@temp
4418 \else
4419 \Hy@WarningNoLine{%
4420 Wrong driver ``\Hy@driver.def';\MessageBreak
4421 XeTeX is running.\MessageBreak
4422 Forcing driver ``\Hy@temp.def' for XeTeX%
4423 }%
4424 \let\Hy@driver\Hy@temp
4425 \fi
4426 \fi
4427 \fi
4428 \fi
4429 \ifx\Hy@driver\@empty
4430 \else
4431 \def\Hy@temp{hvtexhtm}%
4432 \ifnum\ifvtex\OpMode\else\m@ne\fi=10 %
4433 \ifx\Hy@driver\Hy@temp
4434 \else
4435 \Hy@WarningNoLine{%
4436 Wrong driver ``\Hy@driver.def';\MessageBreak
4437 VTeX is running in HTML mode.\MessageBreak
4438 Forcing driver ``\Hy@temp.def'%
4439 }%
4440 \let\Hy@driver\Hy@temp
4441 \fi

```

```

4442 \else
4443 \ifx\Hy@driver\Hy@temp
4444 \Hy@WarningNoLine{%
4445   Wrong driver ``\Hy@driver.def';\MessageBreak
4446   VTeX is not running in HTML mode.\MessageBreak
4447   Using default driver%
4448 }%
4449 \let\Hy@driver\@empty
4450 \fi
4451 \fi
4452 \fi

```

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

```

4453 \let\HyOpt@DriverType\ltx@empty
4454 \ifx\HyOpt@CustomDriver\ltx@empty
4455 \ifx\Hy@driver\@empty
4456 \def\HyOpt@DriverType{ (autodetected)}%
4457 \providecommand*{\Hy@defaultdriver}{hdvips}%
4458 \ifpdf
4459 \ifx\pdfextension\@undefined
4460 \def\Hy@driver{hpdftex}%
4461 \else
4462 \def\Hy@driver{hluatex}%
4463 \fi
4464 \else
4465 \ifxetex
4466 \def\Hy@driver{hxetex}%
4467 \else
4468 \ifnum\ifvtex\OpMode\else\m@ne\fi=10 %
4469 \def\Hy@driver{hvtexhtm}%
4470 \def\MaybeStopEarly{%
4471 \Hy@Message{Stopped early}%
4472 \Hy@AtBeginDocument{%
4473 \PDF@FinishDoc
4474 \gdef\PDF@FinishDoc{}}%
4475 }%
4476 \endinput
4477 }%
4478 \else
4479 \ifnum\ifvtex\OpMode\else\m@ne\fi=\@ne
4480 \def\Hy@driver{hvtex}%
4481 \else
4482 \ifnum\ifvtex\OpMode\else\m@ne\fi=\tw@
4483 \def\Hy@driver{hvtex}%
4484 \else
4485 \ifx\HyOpt@DriverFallback\ltx@empty
4486 \let\Hy@driver\Hy@defaultdriver
4487 \def\HyOpt@DriverType{ (default)}%
4488 \else
4489 \begingroup
4490 \toks@{\expandafter{\HyOpt@DriverFallback}%
4491 \edef\x{\endgroup
4492 \noexpand\kvsetkeys{Hyp}{\the\toks@}%
4493 }%
4494 \x

```

```

4495         \ifx\Hy@driver\ltx@empty
4496         \let\Hy@driver\Hy@defaultdriver
4497         \def\HyOpt@DriverType{ (default)}%
4498     \else
4499         \def\HyOpt@DriverType{ (fallback)}%
4500     \fi
4501 \fi
4502 \fi
4503 \fi
4504 \fi
4505 \fi
4506 \fi
4507 \ifx\Hy@driver\Hy@defaultdriver
4508     \def\Hy@temp{hdvwind}%
4509     \ifx\Hy@temp\Hy@driver
4510         \kvsetkeys{Hyp}{colorlinks}%
4511         \PassOptionsToPackage{dviwindo}{color}%
4512     \fi
4513 \fi
4514 \fi
4515 \else
4516     \def\HyOpt@DriverType{ (custom)}%
4517     \let\Hy@driver\HyOpt@CustomDriver
4518 \fi
4519 \Hy@InfoNoLine{Driver\HyOpt@DriverType: \Hy@driver}%
4520 \chardef\Hy@VersionChecked=0 %
4521 \input{\Hy@driver.def}%
4522 \ifcase\Hy@VersionChecked
4523     \Hy@VersionCheck{\Hy@driver.def}%
4524 \fi
4525 \let\@unprocessedoptions\relax
4526 \Hy@RestoreCatcodes
4527 \Hy@DisableOption{tex4ht}%
4528 \Hy@DisableOption{pdftex}%
4529 \Hy@DisableOption{nativepdf}%
4530 \Hy@DisableOption{dvipdfm}%
4531 \Hy@DisableOption{dvipdfmx}%
4532 \Hy@DisableOption{dvipdfmx-outline-open}%
4533 \Hy@DisableOption{pdfmark}%
4534 \Hy@DisableOption{dvips}%
4535 \Hy@DisableOption{hypertex}%
4536 \Hy@DisableOption{vtex}%
4537 \Hy@DisableOption{vtexpdfmark}%
4538 \Hy@DisableOption{dviwindo}%
4539 \Hy@DisableOption{dvipsone}%
4540 \Hy@DisableOption{textures}%
4541 \Hy@DisableOption{latex2html}%
4542 \Hy@DisableOption{ps2pdf}%
4543 \Hy@DisableOption{xetex}%
4544 \Hy@DisableOption{driverfallback}%
4545 \Hy@DisableOption{customdriver}%
4546 \Hy@DisableOption{pdfversion}%
4547 }

```

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.

```

4548 \newif\ifHy@DvipdfmxOutlineOpen
4549 \ifxetex
4550 \ifdim\number\XeTeXversion\XeTeXrevision in<0.9995in %
4551 \else
4552 \chardef\SpecialDvipdfmxOutlineOpen\@ne
4553 \Hy@DvipdfmxOutlineOpentruetrue
4554 \fi
4555 \fi
4556 \begingroup\expandafter\expandafter\expandafter\endgroup
4557 \expandafter\ifx\csname SpecialDvipdfmxOutlineOpen\endcsname\relax
4558 \else
4559 \ifnum\SpecialDvipdfmxOutlineOpen>\z@
4560 \Hy@DvipdfmxOutlineOpentruetrue
4561 \fi
4562 \fi

```

15.4.2 Bookmarks

```

4563 \def\WriteBookmarks{0}
4564 \def\@bookmarkopenstatus#1{%
4565 \ifHy@bookmarksopen

```

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

```

4566 \ifnum#1<\expandafter\@firstofone\expandafter
4567 {\number\@bookmarksopenlevel} % explicit space
4568 \else
4569 -%
4570 \fi
4571 \else
4572 -%
4573 \fi
4574 }
4575 \ifHy@bookmarks
4576 \Hy@Info{Bookmarks ON}%
4577 \ifx\@pdfpagemode\@empty
4578 \def\@pdfpagemode{UseOutlines}%
4579 \fi
4580 \else
4581 \let\@bookmarkopenstatus\ltx@gobble
4582 \Hy@Info{Bookmarks OFF}%
4583 \Hy@AtEndOfPackage{%
4584 \global\let\ReadBookmarks\relax
4585 \global\let\WriteBookmarks\relax
4586 }%
4587 \ifx\@pdfpagemode\@empty
4588 \def\@pdfpagemode{UseNone}%
4589 \fi
4590 \fi
4591 \Hy@DisableOption{bookmarks}

```

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

```

4592 \def\Hy@CatcodeWrapper#1{%

```

```

4593 \let\Hy@EndWrap\ltx@empty
4594 \def\TMP@EnsureCode##1##2{%
4595   \edef\Hy@EndWrap{%
4596     \Hy@EndWrap
4597     \catcode##1 \the\catcode##1\relax
4598   }%
4599   \catcode##1 ##2\relax
4600 }%
4601 \TMP@EnsureCode{10}{12}% ^^J
4602 \TMP@EnsureCode{33}{12}% !
4603 \TMP@EnsureCode{34}{12}% "
4604 \TMP@EnsureCode{36}{3}% $ (math)
4605 \TMP@EnsureCode{38}{4}% & (alignment)
4606 \TMP@EnsureCode{39}{12}% '
4607 \TMP@EnsureCode{40}{12}% (
4608 \TMP@EnsureCode{41}{12}% )
4609 \TMP@EnsureCode{42}{12}% *
4610 \TMP@EnsureCode{43}{12}% +
4611 \TMP@EnsureCode{44}{12}% ,
4612 \TMP@EnsureCode{45}{12}% -
4613 \TMP@EnsureCode{46}{12}% .
4614 \TMP@EnsureCode{47}{12}% /
4615 \TMP@EnsureCode{58}{12}% :
4616 \TMP@EnsureCode{59}{12}% ;
4617 \TMP@EnsureCode{60}{12}% <
4618 \TMP@EnsureCode{61}{12}% =
4619 \TMP@EnsureCode{62}{12}% >
4620 \TMP@EnsureCode{63}{12}% ?
4621 \TMP@EnsureCode{91}{12}% [
4622 \TMP@EnsureCode{93}{12}% ]
4623 \TMP@EnsureCode{94}{7}% ^ (superscript)
4624 \TMP@EnsureCode{95}{8}% _ (subscript)
4625 \TMP@EnsureCode{96}{12}% `
4626 \TMP@EnsureCode{124}{12}% |
4627 \TMP@EnsureCode{126}{13}% ~ (active)
4628 #1\relax
4629 \Hy@EndWrap
4630 }

```

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

```

4631 \Hy@AtBeginDocument{%
4632   \ifHy@ocgcolorlinks
4633     \kvsetkeys{Hyp}{colorlinks}%
4634     \ifHy@pdfa
4635       \Hy@Warning{%
4636         PDF/A: Optional Content Groups are prohibited,\MessageBreak
4637         using `colorlinks' instead of `ocgcolorlinks'%
4638       }%
4639       \Hy@ocgcolorlinksfalse
4640     \fi
4641   \fi
4642   \ifHy@ocgcolorlinks
4643     \else
4644       \Hy@DisableOption{ocgcolorlinks}%

```

```

4645 \fi
4646 \ifHy@colorlinks
4647   \def\@pdfborder{0 0 0}%
4648   \let\@pdfborderstyle\@empty
4649   \Hy@CatcodeWrapper{%
4650     \RequirePackage{color}%
4651   }%
4652   \def\Hy@colorlink#1{%
4653     \begingroup
4654     \HyColor@UseColor#1%
4655   }%
4656   \def\Hy@endcolorlink{\endgroup}%
4657   \Hy@Info{Link coloring ON}%
4658 \else
4659   \ifHy@frenchlinks
4660     \def\Hy@colorlink#1{\begingroup\fontshape{\scdefault}\selectfont}%
4661     \def\Hy@endcolorlink{\endgroup}%
4662     \Hy@Info{French linking ON}%
4663   \else
for grouping consistency:
4664     \def\Hy@colorlink#1{\begingroup}%
4665     \def\Hy@endcolorlink{\endgroup}%
4666     \Hy@Info{Link coloring OFF}%
4667   \fi
4668 \fi
4669 \Hy@DisableOption{colorlinks}%
4670 \Hy@DisableOption{frenchlinks}%
4671 \ifHy@texht
4672 \else

```

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

```

4673 \ifHy@implicit
4674   \let \T@Ref\HyRef@Ref
4675   \def\@refstar#1{%
4676     \NR@Ref@showkeys{#1}%
4677     \HyRef@StarSetRef{#1}\@firstoffive
4678   }
4679   \def\@pagerefstar#1{%
4680     \NR@Ref@showkeys{#1}%
4681     \HyRef@StarSetRef{#1}\@secondoffive
4682   }
4683   \def\@namerefstar#1{%
4684     \NR@Ref@showkeys{#1}%
4685     \HyRef@StarSetRef{#1}\@thirdoffive
4686   }
4687   \def\@Refstar#1{%
4688     \NR@Ref@showkeys{#1}%
4689     \HyRef@StarSetRef{#1}\HyRef@MakeUppercaseFirstOfFive
4690   }%
4691 \else
4692 \fi
4693 \fi
4694 }

```



```

4695 \Hy@AtBeginDocument{%
4696   \ifx\ReadBookmarks\relax
4697   \else
4698     \Hy@CatcodeWrapper\ReadBookmarks
4699   \fi
4700 }

4701 \ifHy@backref
4702   \RequirePackage{backref}%
4703 \else
4704   \let\Hy@backout\@gobble
4705 \fi
4706 \Hy@DisableOption{backref}
4707 \Hy@DisableOption{pagebackref}
4708 \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`.

```

4709 \begingroup
4710   \endlinechar=-1 %
4711   \catcode`\^^A=14 %
4712   \catcode`\^^M\active
4713   \catcode`\%\active
4714   \catcode`\#\active
4715   \catcode`\_\active
4716   \catcode`\$\active
4717   \catcode`\&\active
4718   \gdef\hyper@normalise{^^A
4719     \begingroup
4720       \catcode`\^^M\active
4721       \def^^M{ }^^A
4722       \catcode`\%\active
4723       \let%\@percentchar
4724       \let\%\@percentchar
4725       \catcode`\#\active
4726       \def#{\hyper@hash}^^A
4727       \def\#{\hyper@hash}^^A
4728       \@makeother\&^^A
4729       \edef&{\string&}^^A
4730       \edef\&{\string&}^^A
4731       \edef\textunderscore{\string_}^^A
4732       \let_\textunderscore
4733       \catcode`\_\active
4734       \let_\textunderscore
4735       \let~\hyper@tilde
4736       \let~\hyper@tilde
4737       \let\textasciitilde\hyper@tilde

```

```

4738 \let\\\@backslashchar
4739 \edef$\string$^^A
4740 \Hy@safe@activetrue
4741 \hyper@n@rmalise
4742 }^^A
4743 \catcode`\#=6 ^^A
4744 \gdef\Hy@ActiveCarriageReturn{^^M}^^A
4745 \gdef\hyper@n@rmalise#1#2{^^A
4746 \def\Hy@tempa{#2}^^A
4747 \ifx\Hy@tempa\Hy@ActiveCarriageReturn
4748 \ltx@ReturnAfterElseFi{^^A
4749 \hyper@@normalise{#1}^^A
4750 }^^A
4751 \else
4752 \ltx@ReturnAfterFi{^^A
4753 \hyper@@normalise{#1}{#2}^^A
4754 }^^A
4755 \fi
4756 }^^A
4757 \gdef\hyper@@normalise#1#2{^^A
4758 \edef\Hy@tempa{^^A
4759 \endgroup
4760 \noexpand#1{\Hy@RemovePercentCr#2%^^M\@nil}^^A
4761 }^^A
4762 \Hy@tempa
4763 }^^A
4764 \gdef\Hy@RemovePercentCr#1%^^M#2\@nil{^^A
4765 #1^^A
4766 \ifx\limits#2\limits
4767 \else
4768 \ltx@ReturnAfterFi{^^A
4769 \Hy@RemovePercentCr #2\@nil
4770 }^^A
4771 \fi
4772 }^^A
4773 \endgroup
4774 \providecommand*\hyper@chars{%
4775 \let\#\hyper@hash
4776 \let\%\@percentchar
4777 \Hy@safe@activetrue
4778 }

4779 \def\hyperlink#1#2{%
4780 \hyper@@link{}{#1}{#2}%
4781 }

4782 \def\Hy@VerboseLinkStart#1#2{%
4783 \ifHy@verbose
4784 \begingroup
4785 \Hy@safe@activetrue
4786 \xdef\Hy@VerboseGlobalTemp{(#1) `#2'}%
4787 \Hy@Info{Reference \Hy@VerboseGlobalTemp}%
4788 \xdef\Hy@VerboseGlobalTemp{%
4789 \Hy@VerboseGlobalTemp, %
4790 line \the\inputlineno

```

```

4791 }%
4792 \endgroup
4793 \let\Hy@VerboseLinkInfo\Hy@VerboseGlobalTemp
4794 \@onelevel@sanitize\Hy@VerboseLinkInfo
4795 \fi
4796 }

4797 \def\Hy@VerboseLinkInfo{<VerboseLinkInfo>}
4798 \def\Hy@VerboseLinkStop{%
4799 \ifHy@verbose
4800 \begingroup
4801 \edef\x{\endgroup
4802 \write\m@ne{%
4803 Package `hyperref' Info: %
4804 End of reference \Hy@VerboseLinkInfo.%
4805 }%
4806 }%
4807 \x
4808 \fi
4809 }

4810 \def\Hy@VerboseAnchor#1{%
4811 \ifHy@verbose
4812 \begingroup
4813 \Hy@safe@activertrue
4814 \Hy@Info{Anchor ``\HyperDestNameFilter{#1}'}%
4815 \endgroup
4816 \fi
4817 }

4818 \def\Hy@AllowHyphens{%
4819 \relax
4820 \ifhmode
4821 \penalty\@M
4822 \hskip\z@skip
4823 \fi
4824 }

4825 \DeclareRobustCommand*\href[1][]{%
4826 \begingroup
4827 \setkeys{href}{#1}%
4828 \@ifnextchar\bgroup\Hy@href{\hyper@normalise\href@}%
4829 }
4830 \def\Hy@href#1{%
4831 \hyper@normalise\href@
4832 }
4833 \begingroup
4834 \catcode`\$=6 %
4835 \catcode`\#=12 %
4836 \gdef\href@\$1{\expandafter\href@split$1##\}%
4837 \gdef\href@split$1#$2#$3\\$4{%
4838 \hyper@link{$1}{$2}{$3}{$4}%
4839 \endgroup
4840 }%
4841 \endgroup

```

Option ‘page’.

```

4842 \define@key{href}{page}{%
4843   \def\Hy@href@page{#1}%
4844 }
4845 \let\Hy@href@page\@empty
4846 \newcount\c@Hy@tempcnt
4847 \def\theHy@tempcnt{\the\c@Hy@tempcnt}
4848 \def\Hy@MakeRemoteAction{%
4849   \ifx\Hy@href@page\@empty
4850     \def\Hy@href@page{0}%
4851   \else
4852     \setcounter{Hy@tempcnt}{\Hy@href@page}%
4853     \ifnum\c@Hy@tempcnt<\@ne
4854       \Hy@Warning{%
4855         Invalid page number (\theHy@tempcnt)\MessageBreak
4856         for remote PDF file.\MessageBreak
4857         Using page 1%
4858       }%
4859     \def\Hy@href@page{0}%
4860   \else
4861     \global\advance\c@Hy@tempcnt\m@ne
4862   \edef\Hy@href@page{\theHy@tempcnt}%
4863   \fi
4864 \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.

```

4865 \ifx\Hy@href@nextactionraw\@empty
4866 \else
4867   \Hy@pdfnewwindowsettrue
4868   \Hy@pdfnewwindowtrue
4869 \fi
4870 }

```

Option ‘pdfremotestartview’.

```

4871 \define@key{href}{pdfremotestartview}{%
4872   \setkeys{Hyp}{pdfremotestartview={#1}}}%
4873 }

```

Option ‘pdfnewwindow’.

```

4874 \let\KV@href@pdfnewwindow\KV@Hyp@pdfnewwindow
4875 \let\KV@href@pdfnewwindow@default\KV@Hyp@pdfnewwindow@default

```

Option ‘ismap’.

```

4876 \newif\ifHy@href@ismap
4877 \define@key{href}{ismap}[true]{%
4878   \ltx@ifundefined{Hy@href@ismap#1}{%
4879     \Hy@Error{%
4880       Invalid value (#1) for key `ismap'.\MessageBreak
4881       Permitted values are `true' or `false'.\MessageBreak
4882       Ignoring `ismap'%
4883     }\@ehc
4884   }{%
4885     \csname Hy@href@ismap#1\endcsname
4886   }%
4887 }

```

Option ‘nextactionraw’.

```

4888 \let\Hy@href@nextactionraw\@empty
4889 \define@key{href}{nextactionraw}{%
4890   \edef\Hy@href@nextactionraw{#1}%
4891   \ifx\Hy@href@nextactionraw\@empty
4892     \else
4893       \Hy@Match\Hy@href@nextactionraw{%
4894         ~(\HyPat@ObjRef/|<<.*[/S[ /.+>>|}%
4895         \[( ?\HyPat@ObjRef/|<<.*[/S[ /.+>>)+ ?)]$%
4896       }%
4897       \Hy@Warning{Invalid value for `nextactionraw':\MessageBreak
4898       \Hy@href@nextactionraw\MessageBreak
4899       The action is discarded%
4900     }%
4901   }%
4902   \ifx\Hy@href@nextactionraw\@empty
4903     \else
4904       \edef\Hy@href@nextactionraw{/Next \Hy@href@nextactionraw}%
4905     \fi
4906   \fi
4907 }
4908 \def\HyPat@ObjRef/{.+}

```

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

```

4909 \RequirePackage{url}
4910 \let\HyOrg@url\url
4911 \def\Hurl{\begingroup \Url}
4912 \DeclareRobustCommand*{\nolinkurl}{\hyper@normalise\nolinkurl@}
4913 \def\nolinkurl@#1{\Hurl{#1}}
4914 \DeclareRobustCommand*{\url}{\hyper@normalise\url@}
4915 \def\url@#1{\hyper@linkurl{\Hurl{#1}}{#1}}
4916 \DeclareRobustCommand*{\hyperimage}{\hyper@normalise\hyper@image}
4917 \providecommand\hyper@image[2]{#2}
4918 \def\hypertarget#1#2{%
4919   \ifHy@nesting
4920     \hyper@@anchor{#1}{#2}%
4921   \else
4922     \hyper@@anchor{#1}{\relax}#2%
4923   \fi
4924 }

```

`\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.

```

4925 \DeclareRobustCommand*{\hyperref}{%
4926   \@ifnextchar{\Hy@babelnormalise\label@hyperref}\@hyperref
4927 }
4928 \def\Hy@babelnormalise#1[#2]{%
4929   \begingroup

```

```

4930 \Hy@safe@activestru
4931 \let\protect\@unexpandable@protect
4932 \edef\Hy@tempa{%
4933 \endgroup
4934 \noexpand#1[{#2}]%
4935 }%
4936 \Hy@tempa
4937 }
4938 \def\@hyperref{\hyper@normalise\@hyperref}
4939 \def\@hyperref#1#2#3{%
4940 \edef\ref@one{\ifx\#2\else#2.\fi#3}%
4941 \expandafter\tryhyper@link\ref@one\{#1}%
4942 }
4943 \def\tryhyper@link#1\#2{%
4944 \hyper@@link{#2}{#1}%
4945 }

4946 \def\hyperdef{\@ifnextchar{\label@hyperdef}{\@hyperdef}}
4947 \def\@hyperdef#1#2#3{% category, name, text
4948 \ifx\#1\%
4949 \def\Hy@AnchorName{#2}%
4950 \else
4951 \def\Hy@AnchorName{#1.#2}%
4952 \fi
4953 \ifHy@nesting
4954 \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{#3}%
4955 \else
4956 \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{\relax}{#3}%
4957 \fi
4958 }

```

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.

```

4959 \let\hyperrefundefinedlink\@firstofone
4960 \def\label@hyperref[#1]{%
4961 \expandafter\label@@hyperref\csname r@#1\endcsname{#1}%
4962 }%
4963 \def\label@@hyperref#1#2#3{%
4964 \ifx#1\relax
4965 \protect\G@refundefinedtrue
4966 \@latex@warning{%
4967 Hyper reference `#2' on page \thepage \space undefined%
4968 }%
4969 \begingroup
4970 \hyperrefundefinedlink{#3}%
4971 \endgroup
4972 \else
4973 \hyper@@link{\expandafter\@fifthoffive#1}%
4974 {\expandafter\@fourthoffive#1\@empty\@empty}{#3}%
4975 \fi
4976 }
4977 \def\label@hyperdef[#1]#2#3#4{% label name, category, name,
4978 % anchor text
4979 \@bsphack

```

```

4980 \ifx\|#2\|
4981 \def\Hy@AnchorName{#3}%
4982 \else
4983 \def\Hy@AnchorName{#2.#3}%
4984 \fi
4985 \if@filesw
4986 \protected@write\@auxout{}\{%
4987 \string\newlabel{#1}{\Hy@AnchorName}\}%
4988 }%
4989 \fi
4990 \@esphack
4991 \ifHy@nesting
4992 \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{#4}%
4993 \else
4994 \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{\relax}#4%
4995 \fi
4996 }

```

`\hyperget` To create manually bookmarks one need the destination. 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`

```

4997 \ExplSyntaxOn
4998 \cs_new:Npn \hyperget #1 #2
4999 {
5000 \use:c { __hyp_get_#1:n } { #2}
5001 }
5002
5003 \cs_new:Npn \__hyp_get_anchor:n #1
5004 {
5005 \HyperDestNameFilter
5006 {
5007 \cs_if_exist:cTF {r@#1}
5008 {
5009 \tl_item:cn {r@#1}{4}
5010 }
5011 {
5012 Doc-Start
5013 }
5014 }
5015 }
5016 \cs_new:Npn \__hyp_get_pageanchor:n #1
5017 {
5018 \HyperDestNameFilter
5019 {
5020 \cs_if_exist:cTF {r@#1}
5021 {
5022 page. \tl_item:cn {r@#1}{2}
5023 }
5024 {
5025 Doc-Start

```

```

5026     }
5027   }
5028 }
5029 \cs_new:Npn \__hyp_get_currentanchor:n #1
5030 {
5031   \HyperDestNameFilter { \@currentHref }
5032 }
5033 \ExplSyntaxOff

```

16.1 Link box support for XeTeX

```

5034 \newdimen\XeTeXLinkMargin
5035 \setlength{\XeTeXLinkMargin}{2pt}
5036 \ifxetex
5037   \font\XeTeXLink@font=pzdr at 1sp\relax
5038   \newcommand*{\XeTeXLink@space}{%
5039     \begingroup
5040       \XeTeXLink@font
5041       \@xxxii
5042     \endgroup
5043   }%
5044   \newcommand{\XeTeXLinkBox}[1]{%
5045     \begingroup
5046       \leavevmode
5047       \sbox\z@{#1}%
5048       \begingroup
5049         \dimen@=\dp\z@
5050         \advance\dimen@\XeTeXLinkMargin
5051         \setbox\tw@=\llap{%
5052           \hb@xt@\XeTeXLinkMargin{%
5053             \lower\dimen@\hbox{\XeTeXLink@space}%
5054             \hss
5055           }%
5056         }%
5057         \dp\tw@=\dp\z@
5058         \ht\tw@=\ht\z@
5059         \copy\tw@
5060       \endgroup
5061       \copy\z@
5062       \dimen@=\ht\z@
5063       \advance\dimen@\XeTeXLinkMargin
5064       \setbox\tw@=\rlap{%
5065         \hb@xt@\XeTeXLinkMargin{%
5066           \hss
5067           \raise\dimen@\hbox{\XeTeXLink@space}%
5068         }%
5069       }%
5070       \dp\tw@=\dp\z@
5071       \ht\tw@=\ht\z@
5072       \copy\tw@
5073     \endgroup
5074   }%
5075 \else
5076   \newcommand*{\XeTeXLinkBox}[1]{%

```



```

5077 \begingroup
5078 \leavevmode
5079 \sbox\z@{\#1}%
5080 \copy\z@
5081 \endgroup
5082 }%
5083 \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.

```

5084 \def\hyper@@link{\let\Hy@reserved@a\relax
5085 \@ifnextchar{\hyper@link@}{\hyper@link@[link]}}%
5086 }
5087 % #1: type
5088 % #2: URL
5089 % #3: destination name
5090 % #4: text
5091 \def\hyper@link@[#1]#2#3#4{%
5092 \ltx@ifempty{#4}{% link text
5093 \Hy@Warning{Suppressing empty link}%
5094 }{%
5095 \begingroup
5096 \protected@edef\Hy@tempa{#2}%
5097 \edef\Hy@tempb{#3}%
5098 \ifx\Hy@tempa\ltx@empty
5099 \ltx\Hy@tempb\ltx@empty
5100 \Hy@Warning{Suppressing link with empty target}%
5101 \toks@{%
5102 \endgroup
5103 \ltx@secondoftwo
5104 }%
5105 \else
5106 \toks@{%
5107 \endgroup
5108 \hyper@link{#1}%
5109 }%
5110 \fi
5111 \else
5112 \toks@{%
5113 \endgroup
5114 \expandafter\hyper@readexternallink#2\{\{#1}%
5115 }%
5116 \fi
5117 \Hy@safe@activesfalse
5118 \toks@\expandafter{%
5119 \the\expandafter\toks@
5120 \expandafter{\Hy@tempb}{#4}%
5121 }%
5122 \the\toks@
5123 }%

```

```
5124 }
```

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.

```
5125 \def\hyper@readexternallink#1\\#2#3#4{%
5126   \begingroup
5127     \let\\relax
5128   \expandafter\endgroup
5129   \expandafter\@hyper@@readexternallink#1\\{#2}{#3}{#4}%
5130 }
5131 \def\@hyper@@readexternallink#1\\#2#3#4{%
```

Parameters are:

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

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

```
5132 \@hyper@readexternallink{#2}{#3}{#4}#1::\{#1}%
5133 }
```

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

```
5134 \def\@pdftempwordfile{file}%
5135 \def\@pdftempwordrun{run}%
5136 \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:`

```
5137   \ifx\\#6\\%
5138     \@hyper@linkfile file:#7\\{#3}{#2}{#7}%
5139   \else
5140     \ifx\\#4\\%
5141       \@hyper@linkfile file:#7\\{#3}{#2}{#7}%
5142     \else
```

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

```
5143     \def\@pdftempa{#4}%
5144     \ifx\@pdftempa\@pdftempwordfile
5145       \@hyper@linkfile#7\\{#3}{#2}{#7}%
5146     \else
```

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

```
5147 \ifx\@pdftempa\@pdftempwordrun
5148 \ifHy@pdfa
5149 \Hy@Error{%
5150 PDF/A: Launch action is prohibited%
5151 }\@ehc
5152 \begingroup
5153 \leavevmode
5154 #2%
5155 \endgroup
5156 \else
5157 \@hyper@launch#7\{\#3}\#2}%
5158 \fi
5159 \else
```

otherwise its a URL

```
5160 \hyper@linkurl{\#3}\#7\ifx\#2\else\hyper@hash#2\fi}%
5161 \fi
5162 \fi
5163 \fi
5164 \fi
5165 }
```

By default, turn run: into file:

```
5166 \def\@hyper@launch run:#1\#2#3{% filename, anchor text, linkname
5167 \hyper@linkurl{\#2}\#3}%
5168 \Hy@linkfileprefix
5169 #1%
5170 \ifx\#3\%
5171 \else
5172 \hyper@hash
5173 #3%
5174 \fi
5175 }%
5176 }
```

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

```
5177 \def\@hyper@linkfile file:#1\#2#3#4{%
5178 %file url,link string, name, original uri
5179 \filename@parse{\#1}%
5180 \ifx\filename@ext\relax
5181 \edef\filename@ext{\XR@ext}%
5182 \fi
5183 \def\use@file{\filename@area\filename@base.\filename@ext}%
5184 \Hy@ifStringEndsWith\filename@ext\XR@ext{%
5185 \hyper@linkfile{\#2}\use@file{\#3}%
5186 }{%
5187 \ifx\@baseurl\empty
5188 \hyper@linkurl{\#2}\#4\ifx\#3\else\hyper@hash#3\fi
5189 }%
5190 \else
5191 \hyper@linkurl{\#2}\use@file\ifx\#3\else\hyper@hash#3\fi}%
5192 \fi
5193 }
```

```

5194 }%
5195 }

5196 \def\Hy@ifStringEndsWith#1#2{%
5197 \begingroup
5198 \edef\x{#1}%
5199 \@onelevel@sanitize\x
5200 \edef\x{.\x$}%
5201 \edef\y{#2}%
5202 \@onelevel@sanitize\y
5203 \edef\y{.\y$}%
5204 \expandafter\def\expandafter\z\expandafter##\expandafter1\y##2\@nil{%
5205 \endgroup
5206 \ifx\relax##2\relax
5207 \expandafter\ltx@secondoftwo
5208 \else
5209 \expandafter\ltx@firstoftwo
5210 \fi
5211 }%
5212 \expandafter\expandafter\expandafter\z\expandafter\x\y\@nil
5213 }

5214 \def\Hy@StringLocalhost{localhost}
5215 \@onelevel@sanitize\Hy@StringLocalhost
5216 \def\Hy@CleanupFile#1{%
5217 \edef#1{#1}%
5218 \expandafter\Hy@@CleanupFile#1\hbox{///\hbox\@nil{#1}%
5219 }
5220 \def\Hy@@CleanupFile#1//#2/#3\hbox#4\@nil#5{%
5221 \begingroup
5222 \toks@{\endgroup}%
5223 \def\x{#1}%
5224 \ifx\x\@empty
5225 \def\x{#2}%
5226 \ifx\x\@empty
5227 \toks@{\endgroup\def#5{/#3}}%
5228 \else
5229 \@onelevel@sanitize\x
5230 \ifx\x\Hy@StringLocalhost
5231 \toks@{\endgroup\def#5{/#3}}%
5232 \fi
5233 \fi
5234 \fi
5235 \the\toks@
5236 }

```

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.

```

5237 \long\def\hyper@@anchor#1#2{\@hyper@@anchor#1\relax#2\relax}
5238 \long\def\@hyper@@anchor#1\relax#2#3\relax{%

```

```

5239 \ifx\|#1\|%
5240 #2\Hy@Warning{Ignoring empty anchor}%
5241 \else
5242 \def\anchor@spot{#2#3}%
5243 \let\put@me@back\@empty
5244 \ifx\relax#2\relax
5245 \else
5246 \ifHy@nesting
5247 \else
5248 \ifcat a\noexpand#2\relax
5249 \else
5250 \ifcat 0\noexpand#2 \relax
5251 \else
5252 % \typeout{Anchor start is not alphanumeric %
5253 % on input line\the\inputlineno%
5254 % }%
5255 \let\anchor@spot\@empty
5256 \def\put@me@back{#2#3}%
5257 \fi
5258 \fi
5259 \fi
5260 \fi
5261 \ifHy@activeanchor
5262 \anchor@spot
5263 \else
5264 \hyper@anchor{#1}%
5265 \fi
5266 \expandafter\put@me@back
5267 \fi
5268 \let\anchor@spot\@empty
5269 }
5270 \let\anchor@spot\ltx@empty

```

18 Option ‘destlabel’

```

5271 \ifHy@destlabel

\hyper@newdestlabel

5272 \def\hyper@newdestlabel#1#2{%
5273 \begingroup
5274 \Hy@safe@activetrue
5275 \edef\x{\endgroup
5276 \noexpand\@newl@bel{HyDL}{#1}{#2}%
5277 }%
5278 \x
5279 }%

\hyper@destlabel@hook

5280 \providecommand*\hyper@destlabel@hook{}%

\Hy@DestRename

5281 \newcommand*\Hy@DestRename[2]{%
5282 \ltx@ifundefined{HyDL!#1}{%

```

```

5283 \begingroup
5284 \Hy@safe@activetrue
5285 \edef\dest@name{#1}%
5286 \edef\label@name{#2}%
5287 \hyper@destlabel@hook
5288 \Hy@IsNotEmpty{dest@name}{%
5289 \Hy@IsNotEmpty{label@name}{%
5290 \global\expandafter
5291 \let\csname HyDL!#1\endcsname\ltx@empty
5292 \if@files
5293 \protected@write\@auxout{}{%
5294 \string\hyper@newdestlabel
5295 {#1}%
5296 {\label@name}%
5297 }%
5298 \fi
5299 }%
5300 }%
5301 \endgroup
5302 }{}%
5303 }%

```

\HyperDestRename

```

5304 \newcommand*{\HyperDestRename}[2]{%
5305 \AtBeginDocument{%
5306 \Hy@DestRename{#1}{#2}%
5307 }%
5308 }%
5309 \AtBeginDocument{%
5310 \let\HyperDestRename\Hy@DestRename
5311 }%

```

\Hy@IsNotEmpty

```

5312 \def\Hy@IsNotEmpty#1{%
5313 \ltx@ifundefined{#1}\ltx@gobble{%
5314 \expandafter\ifx\csname#1\endcsname\ltx@empty
5315 \expandafter\ltx@gobble
5316 \else
5317 \expandafter\ltx@firstofone
5318 \fi
5319 }%
5320 }%

5321 \ltx@GlobalAppendToMacro\label@hook{%
5322 \HyperDestRename\@currentHref\label@name
5323 }%

```

\HyperDestLabelReplace

```

5324 \def\HyperDestLabelReplace#1{%
5325 \ltx@ifundefined{HyDL@#1}{%
5326 #1%
5327 }{}%
5328 \csname HyDL@#1\endcsname
5329 }%
5330 }%

```

```

\HyperDestNameFilter
5331 \let\HyperDestNameFilter\HyperDestLabelReplace
5332 \else

\hyper@newdestlabel
5333 \let\hyper@newdestlabel\ltx@gobbletwo

\HyperDestLabelReplace
5334 \let\HyperDestLabelReplace\ltx@firstofone

\HyperDestRename
@gobbletwo
5335 \fi
5336 \Hy@DisableOption{destlabel}

Provide a dummy default definition of \hyper@newdestlabel inside the .aux
files.
5337 \AddToHook{include/before}
5338 {\immediate\write\@partaux{\string\providecommand\string\hyper@newdest-
label[2]{}}}
5339 \AddToHook{begindocument}
5340 {\immediate\write\@mainaux{\string\providecommand\string\hyper@newdest-
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.

```
5341 \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
5342 \def\HyField@NewFlag#1#2{%
5343 \lowercase{\HyField@NewOption{#2}}%
5344 \lowercase{\HyField@NewBitsetFlag{#2}}{#2}{#1}%
5345 }
```

\HyField@NewFlagOnly

```
5346 \def\HyField@NewFlagOnly#1#2{%
5347 \lowercase{\HyField@NewBitsetFlag{#2}}{#2}{#1}%
5348 }
```

\HyField@NewOption #1: option name

```
5349 \def\HyField@NewOption#1{%
5350 \expandafter\newif\csname ifFld@#1\endcsname
5351 \define@key{Field}{#1}[true]{%
5352 \lowercase{\Field@boolkey{##1}}{#1}%
5353 }%
5354 }
```

\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

```
5355 \def\HyField@NewBitsetFlag#1#2#3#4{%
5356 \begingroup
5357 \count@=#4\relax
5358 \advance\count@\m@ne
5359 \def\x##1{%
5360 \endgroup
5361 \expandafter\def\csname HyField@#3@#1\endcsname{##1}%
5362 \expandafter\ifx\csname HyField@#3@#1\endcsname\relax
5363 \expandafter\edef\csname HyField@#3@#1\endcsname{%
5364 (\number#4) #2%
5365 }%
5366 \else
5367 \expandafter\edef\csname HyField@#3@#1\endcsname{%
5368 \csname HyField@#3@#1\endcsname
5369 /#2%
5370 }%
5371 \fi
5372 }%
5373 \expandafter\x\expandafter{\the\count@}%
5374 }
```

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

```
5375 \def\HyField@UseFlag#1#2{%
5376 \lowercase{\HyField@@UseFlag{#2}}{#1}%
5377 }
```

\HyField@@UseFlag

```
5378 \def\HyField@@UseFlag#1#2{%
5379 \bitsetSetValue{HyField@#2}{#1}%
5380 \csname HyField@#2@#1\endcsname
5381 }{%
5382 \csname ifFld@#1\endcsname 1\else 0\fi
5383 }%
5384 }
```



```

\HyField@SetFlag The bit set is HyField@#1
5385 \def\HyField@SetFlag#1#2{%
5386 \lowercase{\HyField@@SetFlag{#2}}{#1}%
5387 }

```

```

\HyField@@SetFlag
5388 \def\HyField@@SetFlag#1#2{%
5389 \bitsetSetValue{HyField@#2}{%
5390 \csname HyField@#2@#1\endcsname
5391 }{1}%
5392 }

```

```

\HyField@PrintFlags
5393 \def\HyField@PrintFlags#1#2{%
5394 \ifHy@verbose
5395 \begingroup
5396 \let\Hy@temp\@empty
5397 \let\MessageBreak\relax
5398 \expandafter\@for\expandafter\x\expandafter:\expandafter=%
5399 \bitsetGetSetBitList{HyField@#1}\do{%
5400 \edef\Hy@temp{%
5401 \Hy@temp
5402 \csname HyField@#1@\x\endcsname\MessageBreak
5403 }%
5404 }%
5405 \edef\x{\endgroup
5406 \noexpand\Hy@Info{%
5407 Field flags: %
5408 \expandafter\ifx\@car#1\@nil S\else/\fi
5409 #1 %
5410 \bitsetGetDec{HyField@#1} %
5411 (0x\bitsetGetHex{HyField@#1}{32})\MessageBreak
5412 \Hy@temp
5413 for #2%
5414 }%
5415 }\x
5416 \fi
5417 }

```

19.1.1 Declarations of field flags

“Table 8.70 Field flags common to all field types”

```

5418 \HyField@NewFlag{Ff}{ReadOnly}{1}
5419 \HyField@NewFlag{Ff}{Required}{2}
5420 \HyField@NewFlag{Ff}{NoExport}{3}

```

“Table 8.75 Field flags specific to button fields”

```

5421 \HyField@NewFlag{Ff}{NoToggleToOff}{15}
5422 \HyField@NewFlag{Ff}{Radio}{16}
5423 \HyField@NewFlag{Ff}{Pushbutton}{17}
5424 \HyField@NewFlag{Ff}{RadiosInUnison}{26}

```

“Table 8.77 Field flags specific to text fields”

```

5425 \HyField@NewFlag{Ff}{Multiline}{13}

```

```

5426 \HyField@NewFlag{Ff}{Password}{14}
5427 \HyField@NewFlag{Ff}{FileSelect}{21}% PDF 1.4
5428 \HyField@NewFlag{Ff}{DoNotSpellCheck}{23}% PDF 1.4
5429 \HyField@NewFlag{Ff}{DoNotScroll}{24}% PDF 1.4
5430 \HyField@NewFlag{Ff}{Comb}{25}% PDF 1.4
5431 \HyField@NewFlag{Ff}{RichText}{26}% PDF 1.5

```

“Table 8.79 field flags specific to choice fields”

```

5432 \HyField@NewFlag{Ff}{Combo}{18}
5433 \HyField@NewFlag{Ff}{Edit}{19}
5434 \HyField@NewFlag{Ff}{Sort}{20}
5435 \HyField@NewFlag{Ff}{MultiSelect}{22}% PDF 1.4
5436 % \HyField@NewFlag{Ff}{DoNotSpellCheck}{23}% PDF 1.4
5437 \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.

```

5438 \newif\ifFld@popdown
5439 \define@key{Field}{popdown}[true]{%
5440   \lowercase{\Field@boolkey{#1}}{popdown}%
5441 }

```

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.

```

5442 \HyField@NewFlag{F}{Invisible}{1}
5443 \HyField@NewFlag{F}{Hidden}{2}% PDF 1.2
5444 \HyField@NewFlag{F}{Print}{3}% PDF 1.2
5445 \HyField@NewFlag{F}{NoZoom}{4}% PDF 1.2
5446 \HyField@NewFlag{F}{NoRotate}{5}% PDF 1.3
5447 \HyField@NewFlag{F}{NoView}{6}% PDF 1.3
5448 \HyField@NewFlag{F}{Locked}{8}% PDF 1.4
5449 \HyField@NewFlag{F}{ToggleNoView}{9}% PDF 1.5
5450 \HyField@NewFlag{F}{LockedContents}{10}% PDF 1.7
5451 \ifHy@pdfa
5452   \def\HyField@PDFAFFlagWarning#1#2{%
5453     \Hy@Warning{%
5454       PDF/A: Annotation flag `#1' must\MessageBreak
5455       be set to `#2'%
5456     }%
5457   }%
5458   \Fld@invisiblefalse
5459   \def\Fld@invisibletrue{%
5460     \HyField@PDFAFFlagWarning{invisible}{false}%
5461   }%
5462   \Fld@hiddenfalse
5463   \def\Fld@hiddentrue{%
5464     \HyField@PDFAFFlagWarning{hidden}{false}%
5465   }%
5466   \Fld@printtrue
5467   \def\Fld@printfalse{%

```

```

5468 \HyField@PDFAFIagWarning{print}{true}%
5469 }%
5470 \Fld@nozoomtrue
5471 \def\Fld@nozoomfalse{%
5472 \HyField@PDFAFIagWarning{nozoom}{true}%
5473 }%
5474 \Fld@norotatetrue
5475 \def\Fld@norotatefalse{%
5476 \HyField@PDFAFIagWarning{norotate}{true}%
5477 }%
5478 \Fld@noviewfalse
5479 \def\Fld@noviewtrue{%
5480 \HyField@PDFAFIagWarning{noview}{false}%
5481 }%
5482 \fi

```

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

```

5483 \HyField@NewFlag{Submit}{IncludeNoValueFields}{2}
5484 \HyField@NewFlagOnly{Submit}{ExportFormat}{3}
5485 \HyField@NewFlag{Submit}{GetMethod}{4}
5486 \HyField@NewFlag{Submit}{SubmitCoordinates}{5}
5487 \HyField@NewFlagOnly{Submit}{XFDF}{6}
5488 \HyField@NewFlag{Submit}{IncludeAppendSaves}{7}
5489 \HyField@NewFlag{Submit}{IncludeAnnotations}{8}
5490 \HyField@NewFlagOnly{Submit}{SubmitPDF}{9}
5491 \HyField@NewFlag{Submit}{CanonicalFormat}{10}
5492 \HyField@NewFlag{Submit}{ExclNonUserAnnots}{11}
5493 \HyField@NewFlag{Submit}{ExclFKey}{12}
5494 \HyField@NewFlag{Submit}{EmbedForm}{14}

5495 \define@key{Field}{export}{%
5496 \lowercase{\def\Hy@temp{#1}}%
5497 \@ifundefined{Fld@export@\Hy@temp}{%
5498 \Onelevel@sanitize\Hy@temp
5499 \Hy@Error{%
5500 Unknown export format ` \Hy@temp'.\MessageBreak
5501 Known formats are `FDF', `HTML', `XFDF', and `PDF'%
5502 }\@ehc
5503 }{%
5504 \let\Fld@export\Hy@temp
5505 }%
5506 }
5507 \def\Fld@export{fdf}
5508 \@namedef{Fld@export@fdf}{0}%
5509 \@namedef{Fld@export@html}{1}%
5510 \@namedef{Fld@export@xfdf}{2}%
5511 \@namedef{Fld@export@pdf}{3}%

```

19.1.2 Set submit flags

\HyField@FlagsSubmit

```

5512 \def\HyField@FlagsSubmit{%
5513 \bitsetReset{HyField@Submit}%
5514 \ifcase\@nameuse{Fld@export@\Fld@export} %

```

```

5515 % FDF
5516 \HyField@UseFlag{Submit}{IncludeNoValueFields}%
5517 \HyField@UseFlag{Submit}{SubmitCoordinates}%
5518 \HyField@UseFlag{Submit}{IncludeAppendSaves}%
5519 \HyField@UseFlag{Submit}{IncludeAnnotations}%
5520 \HyField@UseFlag{Submit}{CanonicalFormat}%
5521 \HyField@UseFlag{Submit}{ExclNonUserAnnots}%
5522 \HyField@UseFlag{Submit}{ExclFKey}%
5523 \HyField@UseFlag{Submit}{EmbedForm}%
5524 \or % HTML
5525 \HyField@SetFlag{Submit}{ExportFormat}%
5526 \HyField@UseFlag{Submit}{IncludeNoValueFields}%
5527 \HyField@UseFlag{Submit}{GetMethod}%
5528 \HyField@UseFlag{Submit}{SubmitCoordinates}%
5529 \HyField@UseFlag{Submit}{CanonicalFormat}%
5530 \or % XFDF
5531 \HyField@SetFlag{Submit}{XFDF}%
5532 \HyField@UseFlag{Submit}{IncludeNoValueFields}%
5533 \HyField@UseFlag{Submit}{SubmitCoordinates}%
5534 \HyField@UseFlag{Submit}{CanonicalFormat}%
5535 \or % PDF
5536 \HyField@SetFlag{Submit}{SubmitPDF}%
5537 \HyField@UseFlag{Submit}{GetMethod}%
5538 \fi
5539 \HyField@PrintFlags{Submit}{submit button field}%
5540 \bitsetIsEmpty{HyField@Submit}{%
5541 \let\Fld@submitflags\ltx@empty
5542 }{%
5543 \edef\Fld@submitflags{/Flags \bitsetGetDec{HyField@Submit}}%
5544 }%
5545 }

```

19.1.3 Set annot flags in fields

\HyField@FlagsAnnot

```

5546 \def\HyField@FlagsAnnot#1{%
5547 \bitsetReset{HyField@F}%
5548 \HyField@UseFlag{F}{Invisible}%
5549 \HyField@UseFlag{F}{Hidden}%
5550 \HyField@UseFlag{F}{Print}%
5551 \HyField@UseFlag{F}{NoZoom}%
5552 \HyField@UseFlag{F}{NoRotate}%
5553 \HyField@UseFlag{F}{NoView}%
5554 \HyField@UseFlag{F}{Locked}%
5555 \HyField@UseFlag{F}{ToggleNoView}%
5556 \HyField@UseFlag{F}{LockedContents}%
5557 \HyField@PrintFlags{F}{#1}%
5558 \bitsetIsEmpty{HyField@F}{%
5559 \let\Fld@annotflags\ltx@empty
5560 }{%
5561 \edef\Fld@annotflags{/F \bitsetGetDec{HyField@F}}%
5562 }%
5563 }

```

19.1.4 Pushbutton field

\HyField@FlagsPushButton

```
5564 \def\HyField@FlagsPushButton{%
5565   \HyField@FlagsAnnot{push button field}%
5566   \bitsetReset{HyField@Ff}%
5567   \HyField@UseFlag{Ff}{ReadOnly}%
5568   \HyField@UseFlag{Ff}{Required}%
5569   \HyField@UseFlag{Ff}{NoExport}%
5570   \HyField@SetFlag{Ff}{Pushbutton}%
5571   \HyField@PrintFlags{Ff}{push button field}%
5572   \bitsetIsEmpty{HyField@Ff}{%
5573     \let\Fld@flags\ltx@empty
5574   }{%
5575     \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
5576   }%
5577 }
```

19.1.5 Check box field

\HyField@FlagsCheckBox

```
5578 \def\HyField@FlagsCheckBox{%
5579   \HyField@FlagsAnnot{check box field}%
5580   \bitsetReset{HyField@Ff}%
5581   \HyField@UseFlag{Ff}{ReadOnly}%
5582   \HyField@UseFlag{Ff}{Required}%
5583   \HyField@UseFlag{Ff}{NoExport}%
5584   \HyField@PrintFlags{Ff}{check box field}%
5585   \bitsetIsEmpty{HyField@Ff}{%
5586     \let\Fld@flags\ltx@empty
5587   }{%
5588     \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
5589   }%
5590 }
```

19.1.6 Radio button field

\HyField@FlagsRadioButton

```
5591 \def\HyField@FlagsRadioButton{%
5592   \HyField@FlagsAnnot{radio button field}%
5593   \bitsetReset{HyField@Ff}%
5594   \HyField@UseFlag{Ff}{ReadOnly}%
5595   \HyField@UseFlag{Ff}{Required}%
5596   \HyField@UseFlag{Ff}{NoExport}%
5597   \HyField@UseFlag{Ff}{NoToggleToOff}%
5598   \HyField@SetFlag{Ff}{Radio}%
5599   \HyField@UseFlag{Ff}{RadiosInUnison}%
5600   \HyField@PrintFlags{Ff}{radio button field}%
5601   \bitsetIsEmpty{HyField@Ff}{%
5602     \let\Fld@flags\ltx@empty
5603   }{%
5604     \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
5605   }%
5606 }
```

19.1.7 Text fields

\HyField@FlagsText

```
5607 \def\HyField@FlagsText{%
5608   \HyField@FlagsAnnot{text field}%
5609   \bitsetReset{HyField@Ff}%
5610   \HyField@UseFlag{Ff}{ReadOnly}%
5611   \HyField@UseFlag{Ff}{Required}%
5612   \HyField@UseFlag{Ff}{NoExport}%
5613   \HyField@UseFlag{Ff}{Multiline}%
5614   \HyField@UseFlag{Ff}{Password}%
5615   \HyField@UseFlag{Ff}{FileSelect}%
5616   \HyField@UseFlag{Ff}{DoNotSpellCheck}%
5617   \HyField@UseFlag{Ff}{DoNotScroll}%
5618   \ifFld@comb
5619     \ifcase0\ifFld@multiline
5620       \else\ifFld@password
5621       \else\ifFld@fileselect
5622       \else 1\fi\fi\fi\relax
5623     \Hy@Error{%
5624       Field option `comb' cannot used together with\MessageBreak
5625       `multiline', `password', or `fileselect'%
5626     }\@ehc
5627   \else
5628     \HyField@UseFlag{Ff}{Comb}%
5629   \fi
5630 \fi
5631 \HyField@UseFlag{Ff}{RichText}%
5632 \HyField@PrintFlags{Ff}{text field}%
5633 \bitsetIsEmpty{HyField@Ff}{%
5634   \let\Fld@flags\ltx@empty
5635 }{%
5636   \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
5637 }%
5638 }
```

19.1.8 Choice fields

\HyField@FlagsChoice

```
5639 \def\HyField@FlagsChoice{%
5640   \HyField@FlagsAnnot{choice field}%
5641   \bitsetReset{HyField@Ff}%
5642   \HyField@UseFlag{Ff}{ReadOnly}%
5643   \HyField@UseFlag{Ff}{Required}%
5644   \HyField@UseFlag{Ff}{NoExport}%
5645   \HyField@UseFlag{Ff}{Combo}%
5646   \ifFld@combo
5647     \HyField@UseFlag{Ff}{Edit}%
5648   \fi
5649   \HyField@UseFlag{Ff}{Sort}%
5650   \HyField@UseFlag{Ff}{MultiSelect}%
5651   \ifFld@combo
5652     \ifFld@edit
5653       \HyField@UseFlag{Ff}{DoNotSpellCheck}%
5654     \fi
5655   \fi
5656 }
```

```

5654 \fi
5655 \fi
5656 \HyField@UseFlag{Ff}{CommitOnSelChange}%
5657 \HyField@PrintFlags{Ff}{choice field}%
5658 \bitsetIsEmpty{HyField@Ff}{%
5659 \let\Fld@flags\ltx@empty
5660 }{%
5661 \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
5662 }%
5663 }

```

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`.

```

5664 \def\HyField@PDFChoices#1{%
5665 \begingroup
5666 \global\let\Fld@choices\ltx@empty
5667 \let\HyTmp@optlist\ltx@empty
5668 \let\HyTmp@optitem\relax
5669 \count@=0 %
5670 \kv@parse{#1}{%
5671 \Hy@pdfstringdef\kv@key\kv@key
5672 \ifx\kv@value\relax
5673 \ifnum\Hy@pdf@majorminor@version<103 % implementation note 122, PDF spec 1.7
5674 \xdef\Fld@choices{\Fld@choices(\kv@key)(\kv@key)}}%
5675 \else
5676 \xdef\Fld@choices{\Fld@choices(\kv@key)}%
5677 \fi
5678 \else
5679 \Hy@pdfstringdef\kv@value\kv@value
5680 \xdef\Fld@choices{\Fld@choices(\kv@value)(\kv@key)}}%
5681 \fi
5682 \edef\HyTmp@optlist{%
5683 \HyTmp@optlist
5684 \HyTmp@optitem{the\count@}{\kv@key}0%
5685 }%
5686 \advance\count@ by 1 %
5687 \@gobbletwo
5688 }%
5689 \xdef\Fld@choices{/Opt[\Fld@choices]}%
5690 \ifFld@multiselect
5691 \HyField@@PDFChoices{DV}\Fld@default
5692 \HyField@@PDFChoices{V}\Fld@value
5693 \else
5694 \ifx\Fld@default\relax
5695 \else
5696 \pdfstringdef\Hy@gtemp\Fld@default
5697 \xdef\Fld@choices{\Fld@choices/DV(\Hy@gtemp)}%
5698 \fi
5699 \ifx\Fld@value\relax

```

```

5700 \else
5701 \pdfstringdef\Hy@gtemp\Fld@value
5702 \xdef\Fld@choices{\Fld@choices/V(\Hy@gtemp)}%
5703 \fi
5704 \fi
5705 \endgroup
5706 }

```

\HyField@@PDFChoices

```

5707 \def\HyField@@PDFChoices#1#2{%
5708 \ifx#2\relax
5709 \else
5710 \count@=0 %
5711 \def\HyTmp@optitem##1##2##3{%
5712 \def\HyTmp@key{##2}%
5713 \ifx\HyTmp@key\Hy@gtemp
5714 \expandafter\def\expandafter\HyTmp@optlist\expandafter{%
5715 \HyTmp@optlist
5716 \HyTmp@optitem{##1}{##2}1%
5717 }%
5718 \let\HyTmp@found=Y%
5719 \else
5720 \expandafter\def\expandafter\HyTmp@optlist\expandafter{%
5721 \HyTmp@optlist
5722 \HyTmp@optitem{##1}{##2}##3%
5723 }%
5724 \fi
5725 }%
5726 \expandafter\comma@parse\expandafter{#2}{%
5727 \pdfstringdef\Hy@gtemp\comma@entry
5728 \let\HyTmp@found=N %
5729 \expandafter\let\expandafter\HyTmp@optlist\expandafter\@empty
5730 \HyTmp@optlist
5731 \ifx\HyTmp@found Y%
5732 \advance\count@ by 1 %
5733 \else
5734 \@onelevel@sanitize\comma@entry
5735 \PackageWarning{hyperref}{%
5736 \string\ChoiceBox: Ignoring value ``\comma@entry',%
5737 \MessageBreak
5738 it cannot be found in the choices%
5739 }%
5740 \fi
5741 \@gobble
5742 }%
5743 \def\HyTmp@optitem##1##2##3{%
5744 \ifnum##3=1 %
5745 (##2)%
5746 \fi
5747 }%
5748 \ifcase\count@
5749 \or
5750 \xdef\Fld@choices{\Fld@choices/#1\HyTmp@optlist}%
5751 \else

```



```

5752 \xdef\Fld@choices{\Fld@choices/#1[\HyTmp@optlist]}%
5753 \ifx#1V%
5754 \def\HyTmp@optitem##1##2##3{%
5755 \ifnum##3=1 %
5756 \@firstofone{ ##1}%
5757 \fi
5758 }%
5759 \edef\HyTmp@optlist{\HyTmp@optlist}%
5760 \xdef\Fld@choices{%
5761 \Fld@choices
5762 /I\expandafter\@firstofone\HyTmp@optlist}%
5763 }%
5764 \fi
5765 \fi
5766 \fi
5767 }

```

19.3 Forms

\HyField@SetKeys

```

5768 \def\HyField@SetKeys{%
5769 \kvsetkeys{Field}%
5770 }

5771 \newif\ifFld@checked
5772 \newif\ifFld@disabled
5773 \Fld@checkedfalse
5774 \Fld@disabledfalse
5775 \newcount\Fld@menulength
5776 \newdimen\Fld@Width
5777 \newdimen\Fld@charsize
5778 \Fld@charsize=10\p@
5779 \def\Fld@maxlen{0}
5780 \def\Fld@align{0}
5781 \def\Fld@color{0 0 0 rg}
5782 \def\Fld@bcolor{1 1 1}
5783 \def\Fld@bordercolor{1 0 0}
5784 \def\Fld@bordersep{1\p@}
5785 \def\Fld@borderwidth{1}
5786 \def\Fld@borderstyle{S}
5787 \def\Fld@cbsymbol{4}
5788 \def\Fld@radiosymbol{H}
5789 \def\Fld@rotation{0}
5790 \def\Form{\@ifnextchar[{\@Form}{\@Form[]}}
5791 \def@endForm{\@endForm}
5792 \newif\ifForm@html
5793 \Form@htmlfalse
5794 \def\Fld@boolkey#1##2{%
5795 \csname Form@##2\ifx\relax#1\relax true\else#1\fi\endcsname
5796 }
5797 \define@key{Form}{action}{%
5798 \hyper@normalise\Hy@DefFormAction{#1}%
5799 }
5800 \def\Hy@DefFormAction{\def\Fld@action}

```

```

5801 \def\enc@html{html}
5802 \define@key{Form}{encoding}{%
5803   \def\Hy@tempa{#1}%
5804   \ifx\Hy@tempa\enc@html
5805     \Form@htmltrue
5806     \def\Fld@export{html}%
5807   \else
5808     \Hy@Warning{%
5809       Form `encoding' key with \MessageBreak
5810       unknown value `#1'%
5811     }%
5812     \Form@htmlfalse
5813   \fi
5814 }
5815 \define@key{Form}{method}{%
5816   \lowercase{\def\Hy@temp{#1}}%
5817   \@ifundefined{Form@method@\Hy@temp}{%
5818     \@onelevel@sanitize\Hy@temp
5819     \Hy@Error{%
5820       Unknown method ``\Hy@temp'.\MessageBreak
5821       Known values are `post' and `get'%
5822     } \@ehc
5823   }{%
5824     \let\Form@method\Hy@temp
5825     \ifcase\@nameuse{Form@method@\Hy@temp} %
5826       \Fld@getmethodfalse
5827     \else
5828       \Fld@getmethodtrue
5829     \fi
5830   }%
5831 }
5832 \def\Form@method{}
5833 \@namedef{Form@method@post}{0}
5834 \@namedef{Form@method@get}{1}
5835 \newif\ifHyField@NeedAppearances
5836 \def\HyField@NeedAppearancesfalse{%
5837   \global\let\ifHyField@NeedAppearances\iffalse
5838 }
5839 \def\HyField@NeedAppearancetrue{%
5840   \global\let\ifHyField@NeedAppearances\iftrue
5841 }
5842 \HyField@NeedAppearancetrue
5843 \define@key{Form}{NeedAppearances}[true]{%
5844   \edef\Hy@tempa{#1}%
5845   \ifx\Hy@tempa\Hy@true
5846     \HyField@NeedAppearancetrue
5847   \else
5848     \ifx\Hy@tempa\Hy@false
5849       \HyField@NeedAppearancesfalse
5850     \else
5851       \Hy@Error{%
5852         Unexpected value ``\Hy@tempa'\MessageBreak
5853         of option `NeedAppearances' instead of\MessageBreak
5854         `true' or `false'%

```

```

5855     }\@ehc
5856   \fi
5857 \fi
5858 }
5859 \def\Field@boolkey#1#2{%
5860   \csname Fld@#2\ifx\relax#1\relax true\else#1\fi\endcsname
5861 }
5862 \ifHy@texht
5863   \newtoks\Field@toks
5864   \Field@toks={ }%
5865   \def\Field@addtoks#1#2{%
5866     \edef\@processme{\Field@toks{\the\Field@toks\space #1="#2"}}%
5867     \@processme
5868   }%
5869 \else
5870   \def\Hy@WarnHTMLFieldOption#1{%
5871     \Hy@Warning{%
5872       HTML field option `#1'\MessageBreak
5873       is ignored%
5874     }%
5875   }%
5876 \fi
5877 \def\Fld@checkequals#1=#2=#3\\{%
5878   \def\@currDisplay{#1}%
5879   \ifx\\#2\\%
5880     \def\@currValue{#1}%
5881   \else
5882     \def\@currValue{#2}%
5883   \fi
5884   \expandafter\Hy@pdfstringdef\expandafter\@currValue\expandafter{\@currValue}%
5885 }
5886 \define@key{Field}{loc}{%
5887   \def\Fld@loc{#1}%
5888 }
5889 \define@key{Field}{checked}[true]{%
5890   \lowercase{\Field@boolkey{#1}}{checked}%
5891 }
5892 \define@key{Field}{disabled}[true]{%
5893   \lowercase{\Field@boolkey{#1}}{disabled}%
5894 }
5895 \ifHy@texht
5896   \define@key{Field}{accesskey}{%
5897     \Field@addtoks{accesskey}{#1}%
5898   }%
5899   \define@key{Field}{tabkey}{%
5900     \Field@addtoks{tabkey}{#1}%
5901   }%
5902 \else
5903   \define@key{Field}{accesskey}{%
5904     \Hy@WarnHTMLFieldOption{accesskey}%
5905   }%
5906   \define@key{Field}{tabkey}{%
5907     \Hy@WarnHTMLFieldOption{tabkey}%
5908   }%

```

```

5909 \fi
5910 \define@key{Field}{name}{%
5911   \def\Fld@name{#1}%
5912 }
5913 \let\Fld@altname\relax
5914 \define@key{Field}{altname}{%
5915   \def\Fld@altname{#1}%
5916 }
5917 \let\Fld@mappingname\relax
5918 \define@key{Field}{mappingname}{%
5919   \def\Fld@mappingname{#1}%
5920 }
5921 \define@key{Field}{width}{%
5922   \def\Fld@width{#1}%
5923   \Field@Width#1\setbox0=\hbox{m}%
5924 }
5925 \define@key{Field}{maxlen}{%
5926   \def\Fld@maxlen{#1}%
5927 }
5928 \define@key{Field}{menulength}{%
5929   \Field@menulength=#1\relax
5930 }
5931 \define@key{Field}{height}{%
5932   \def\Fld@height{#1}%
5933 }
5934 \define@key{Field}{charsize}{%
5935   \setlength{\Fld@charsize}{#1}%
5936 }
5937 \define@key{Field}{borderwidth}{%
5938   \Hy@defaultbp\Fld@borderwidth{#1}%
5939 }
5940 \def\Hy@defaultbp#1#2{%
5941   \begingroup
5942     \afterassignment\Hy@defaultbpAux
5943     \dimen@=#2bp\relax{#1}{#2}%
5944 }
5945 \def\Hy@defaultbpAux#1\relax#2#3{%
5946   \ifx!#1!%
5947     \endgroup
5948     \def#2{#3}%
5949   \else
5950     \edef\x{\endgroup
5951       \def\noexpand#2{%
5952         \strip@pt\dimexpr\dimen@*800/803\relax
5953       }%
5954     }\x
5955   \fi
5956 }%
5957 \define@key{Field}{borderstyle}{%
5958   \let\Hy@temp\Fld@borderstyle
5959   \def\Fld@borderstyle{#1}%
5960   \Hy@Match\Fld@borderstyle{}{%
5961     ^[SDBIU]$%
5962   }{}{%

```

```

5963 \Hy@Warning{%
5964   Invalid value ` \@pdfborderstyle'\MessageBreak
5965   for option `pdfborderstyle'. Valid values:\MessageBreak
5966   \space\space S (Solid), D (Dashed), B (Beveled),\MessageBreak
5967   \space\space I (Inset), U (Underline)\MessageBreak
5968   Option setting is ignored%
5969 }%
5970 \let\Fld@borderstyle\Hy@temp
5971 }%
5972 }
5973 \define@key{Field}{bordersep}{%
5974   \def\Fld@bordersep{#1}%
5975 }
5976 \define@key{Field}{default}{%
5977   \Hy@pdfstringdef\Fld@default{#1}%
5978 }
5979 \define@key{Field}{align}{%
5980   \def\Fld@align{#1}%
5981 }
5982 \define@key{Field}{value}{%
5983   \Hy@pdfstringdef\Fld@value{#1}%
5984 }
5985 \define@key{Field}{checkboxsymbol}{%
5986   \Fld@DingDef\Fld@cbsymbol{#1}%
5987 }
5988 \define@key{Field}{radiosymbol}{%
5989   \Fld@DingDef\Fld@radiosymbol{#1}%
5990 }
5991 \def\Fld@DingDef#1#2{%
5992   \let\Fld@temp\ltx@empty
5993   \Fld@@DingDef#2\ding{ }\@nil
5994   \let#1\Fld@temp
5995 }
5996 \def\Fld@@DingDef#1\ding#2#3\@nil{%
5997   \expandafter\def\expandafter\Fld@temp\expandafter{%
5998     \Fld@temp
5999     #1%
6000   }%
6001   \ifx\#3\%
6002     \expandafter\@gobble
6003   \else
6004     \begingroup
6005     \lccode`0=#2\relax
6006     \lowercase{\endgroup
6007       \expandafter\def\expandafter\Fld@temp\expandafter{%
6008         \Fld@temp
6009         0%
6010       }%
6011     }%
6012     \expandafter\@firstofone
6013   \fi
6014   {%
6015     \Fld@@DingDef#3\@nil
6016   }%

```

```

6017 }

6018 \define@key{Field}{rotation}{%
6019   \def\Fld@rotation{#1}%
6020 }

6021 \define@key{Field}{backgroundcolor}{%
6022   \HyColor@FieldBColor{#1}\Fld@bcolor{hyperref}{backgroundcolor}%
6023 }
6024 \define@key{Field}{bordercolor}{%
6025   \HyColor@FieldBColor{#1}\Fld@bordercolor{hyperref}{bordercolor}%
6026 }
6027 \define@key{Field}{color}{%
6028   \HyColor@FieldColor{#1}\Fld@color{hyperref}{color}%
6029 }

6030 \let\Fld@onclick@code\ltx@empty
6031 \let\Fld@format@code\ltx@empty
6032 \let\Fld@validate@code\ltx@empty
6033 \let\Fld@calculate@code\ltx@empty
6034 \let\Fld@keystroke@code\ltx@empty
6035 \let\Fld@onfocus@code\ltx@empty
6036 \let\Fld@onblur@code\ltx@empty
6037 \let\Fld@onmousedown@code\ltx@empty
6038 \let\Fld@onmouseup@code\ltx@empty
6039 \let\Fld@onenter@code\ltx@empty
6040 \let\Fld@onexit@code\ltx@empty
6041 \def\Hy@temp#1{%
6042   \expandafter\Hy@@temp\csname Fld@#1@code\endcsname{#1}%
6043 }
6044 \def\Hy@@temp#1#2{%
6045   \ifHy@pdfa
6046     \define@key{Field}{#2}{%
6047       \Hy@Error{%
6048         PDF/A: Additional action `#2' is prohibited%
6049       }\@ehc
6050     }%
6051   \else
6052     \define@key{Field}{#2}{%
6053       \def#1{##1}%
6054     }%
6055   \fi
6056 }
6057 \Hy@temp{keystroke}
6058 \Hy@temp{format}
6059 \Hy@temp{validate}
6060 \Hy@temp{calculate}
6061 \Hy@temp{onfocus}
6062 \Hy@temp{onblur}
6063 \Hy@temp{onenter}
6064 \Hy@temp{onexit}

6065 \let\Fld@calculate@sortkey\ltx@empty
6066 \define@key{Field}{calculatesortkey}[1]{%
6067   \def\Fld@calculate@sortkey{#1}%
6068 }

```

```

6069 \ifHy@texht
6070 \def\Hy@temp#1{%
6071   \define@key{Field}{#1}{%
6072     \Field@addtoks{#1}{##1}%
6073   }%
6074 }%
6075 \else
6076 \def\Hy@temp#1{%
6077   \define@key{Field}{#1}{%
6078     \Hy@WarnHTMLFieldOption{#1}%
6079   }%
6080 }%
6081 \fi
6082 \Hy@temp{ondblclick}
6083 \Hy@temp{onmousedown}
6084 \Hy@temp{onmouseup}
6085 \Hy@temp{onmouseover}
6086 \Hy@temp{onmousemove}
6087 \Hy@temp{onmouseout}
6088 \Hy@temp{onkeydown}
6089 \Hy@temp{onkeyup}
6090 \Hy@temp{onselect}
6091 \Hy@temp{onchange}
6092 \Hy@temp{onkeypress}
6093 \ifHy@texht
6094 \define@key{Field}{onclick}{%
6095   \Field@addtoks{onclick}{#1}%
6096 }%
6097 \else
6098 \ifHy@pdfa
6099 \define@key{Field}{onclick}{%
6100   \Hy@Error{%
6101     PDF/A: Action `onclick' is prohibited%
6102   } \@ehc
6103 }%
6104 \else
6105 \define@key{Field}{onclick}{%
6106   \def\Fld@onclick@code{#1}%
6107 }%
6108 \fi
6109 \fi
6110 \DeclareRobustCommand\TextField{%
6111   \@ifnextchar[{\@TextField}{\@TextField[]}%
6112 }
6113 \DeclareRobustCommand\ChoiceMenu{%
6114   \@ifnextchar[{\@ChoiceMenu}{\@ChoiceMenu[]}%
6115 }
6116 \DeclareRobustCommand\CheckBox{%
6117   \@ifnextchar[{\@CheckBox}{\@CheckBox[]}%
6118 }
6119 \DeclareRobustCommand\PushButton{%
6120   \@ifnextchar[{\@PushButton}{\@PushButton[]}%
6121 }
6122 \DeclareRobustCommand\Gauge{%

```

```

6123 \@ifnextchar[{\@Gauge}{\@Gauge[]}%
6124 }
6125 \DeclareRobustCommand\Submit{%
6126 \@ifnextchar[{\@Submit}{\@Submit[]}%
6127 }
6128 \DeclareRobustCommand\Reset{%
6129 \@ifnextchar[{\@Reset}{\@Reset[]}%
6130 }
6131 \def\LayoutTextField#1#2{% label, field
6132 \def\Hy@temp{#1}%
6133 \ifx\Hy@temp\@empty
6134 #2%
6135 \else
6136 #1 #2%
6137 \fi
6138 }
6139 \def\LayoutChoiceField#1#2{% label, field
6140 \def\Hy@temp{#1}%
6141 \ifx\Hy@temp\@empty
6142 #2%
6143 \else
6144 #1 #2%
6145 \fi
6146 }
6147 \def\LayoutCheckField#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\LayoutPushButtonField#1{% button
6156 #1%
6157 }
6158 \def\MakeRadioField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
6159 \def\MakeCheckField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
6160 \def\MakeTextField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
6161 \def\MakeChoiceField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
6162 \def\MakeButtonField#1{%
6163 \sbox0{%
6164 \hskip\Fld@borderwidth bp#1\hskip\Fld@borderwidth bp%
6165 }%
6166 \@tempdima\ht0 %
6167 \advance\@tempdima by \Fld@borderwidth bp %
6168 \advance\@tempdima by \Fld@borderwidth bp %
6169 \ht0\@tempdima
6170 \@tempdima\dp0 %
6171 \advance\@tempdima by \Fld@borderwidth bp %
6172 \advance\@tempdima by \Fld@borderwidth bp %
6173 \dp0\@tempdima
6174 \box0\relax
6175 }
6176 \def\DefaultHeightofSubmit{14pt}

```



```

6177 \def\DefaultWidthofSubmit{2cm}
6178 \def\DefaultHeightofReset{14pt}
6179 \def\DefaultWidthofReset{2cm}
6180 \def\DefaultHeightofCheckBox{\normalbaselineskip}
6181 \def\DefaultWidthofCheckBox{\normalbaselineskip}
6182 \def\DefaultHeightofChoiceMenu{\normalbaselineskip}
6183 \def\DefaultWidthofChoiceMenu{\normalbaselineskip}
6184 \def\DefaultHeightofText{\normalbaselineskip}
6185 \def\DefaultHeightofTextMultiline{4\normalbaselineskip}
6186 \def\DefaultWidthofText{3cm}
6187 \def\DefaultOptionsofSubmit{print,name=Submit,noexport}
6188 \def\DefaultOptionsofReset{print,name=Reset,noexport}
6189 \def\DefaultOptionsofPushButton{print}
6190 \def\DefaultOptionsofCheckBox{print}
6191 \def\DefaultOptionsofText{print}

```

Default options for the types of \ChoiceMenu.

```

6192 \def\DefaultOptionsofListBox{print}
6193 \def\DefaultOptionsofComboBox{print,edit,sort}
6194 \def\DefaultOptionsofPopdownBox{print}
6195 \def\DefaultOptionsofRadio{print,notoggletooff}

```

20 Setup

```

6196 \ifHy@hyperfigures
6197 \Hy@Info{Hyper figures ON}%
6198 \else
6199 \Hy@Info{Hyper figures OFF}%
6200 \fi
6201 \ifHy@nesting
6202 \Hy@Info{Link nesting ON}%
6203 \else
6204 \Hy@Info{Link nesting OFF}%
6205 \fi
6206 \ifHy@hyperindex
6207 \Hy@Info{Hyper index ON}%
6208 \else
6209 \Hy@Info{Hyper index OFF}%
6210 \fi
6211 \ifHy@backref
6212 \Hy@Info{backreferencing ON}%
6213 \else
6214 \Hy@Info{backreferencing OFF}%
6215 \fi
6216 \ifHy@colorlinks
6217 \Hy@Info{Link coloring ON}%
6218 \else
6219 \Hy@Info{Link coloring OFF}%
6220 \fi
6221 \ifHy@ocgcolorlinks
6222 \Hy@Info{Link coloring with OCG ON}%
6223 \else
6224 \Hy@Info{Link coloring with OCG OFF}%

```

```

6225 \fi
6226 \ifHy@pdfa
6227   \Hy@Info{PDF/A mode ON}%
6228 \else
6229   \Hy@Info{PDF/A mode OFF}%
6230 \fi

```

21 Low-level utility macros

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

```

6231 \edef\hyper@hash{\string#}
6232 \edef\hyper@tilde{\string~}
6233 \edef\hyper@quote{\string"}

```

Support \label before \begin{document}.

```

6234 \def\@currentHref{Doc-Start}
6235 \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.

```

6236 \Hy@AtBeginDocument{%
6237   \Hy@pdfstringtrue
6238   \PDF@SetupDoc
6239   \let\PDF@SetupDoc\@empty
6240   \Hy@DisableOption{pdfpagescrop}%
6241   \Hy@DisableOption{pdfpagemode}%
6242   \Hy@DisableOption{pdfnonfullscreenpagemode}%
6243   \Hy@DisableOption{pdfdirection}%
6244   \Hy@DisableOption{pdfviewarea}%
6245   \Hy@DisableOption{pdfviewclip}%
6246   \Hy@DisableOption{pdfprintarea}%
6247   \Hy@DisableOption{pdfprintclip}%
6248   \Hy@DisableOption{pdfprintscaling}%
6249   \Hy@DisableOption{pdfduplex}%
6250   \Hy@DisableOption{pdfpicktraybypdfsize}%
6251   \Hy@DisableOption{pdfprintpagerange}%
6252   \Hy@DisableOption{pdfnumcopies}%
6253   \Hy@DisableOption{pdfstartview}%
6254   \Hy@DisableOption{pdfstartpage}%
6255   \Hy@DisableOption{pdftoolbar}%
6256   \Hy@DisableOption{pdfmenubar}%
6257   \Hy@DisableOption{pdfwindowui}%
6258   \Hy@DisableOption{pdfwindow}%
6259   \Hy@DisableOption{pdfcenterwindow}%
6260   \Hy@DisableOption{pdfdisplaydoctitle}%
6261   \Hy@DisableOption{pdfpagelayout}%
6262   \Hy@DisableOption{pdflang}%
6263   \Hy@DisableOption{baseurl}%
6264   \ifHy@texht\else\hyper@anchorstart{Doc-Start}\hyper@anchorend\fi
6265   \Hy@pdfstringfalse
6266 }

```

Ignore star from referencing macros: This is only needed if LaTeX doesn't define the starred variants itself.

```

6267 \@ifundefined{@kernel@ref}
6268 {\LetLtxMacro\NoHy@OrgRef\ref
6269 \DeclareRobustCommand*{\ref}{\%
6270 \ifstar\NoHy@OrgRef\NoHy@OrgRef
6271 }
6272 \LetLtxMacro\NoHy@OrgPageRef\pageref
6273 \DeclareRobustCommand*{\pageref}{\%
6274 \ifstar\NoHy@OrgPageRef\NoHy@OrgPageRef
6275 }{}

```

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.

```

6276 \def\NoHyper{%
6277 \def\hyper@link@[##1]##2##3##4{##4\Hy@xspace@end}%
6278 \def\hyper@@anchor##1##2{##2\Hy@xspace@end}%
6279 \global\let\hyper@livelink\hyper@link
6280 \gdef\hyper@link##1##2##3{##3\Hy@xspace@end}%
6281 \let\hyper@anchor\ltx@gobble
6282 \let\hyper@anchorstart\ltx@gobble
6283 \def\hyper@anchorend{\Hy@xspace@end}%
6284 \let\hyper@linkstart\ltx@gobbletwo
6285 \def\hyper@linkend{\Hy@xspace@end}%
6286 \def\hyper@linkurl##1##2{##1\Hy@xspace@end}%
6287 \def\hyper@linkfile##1##2##3{##1\Hy@xspace@end}%
6288 \let\Hy@backout\@gobble
6289 }
6290 \def\stop@hyper{%
6291 \def\hyper@link@[##1]##2##3##4{##4\Hy@xspace@end}%
6292 \let\Hy@backout\@gobble
6293 \let\hyper@@anchor\ltx@gobble
6294 \def\hyper@link##1##2##3{##3\Hy@xspace@end}%
6295 \let\hyper@anchor\ltx@gobble
6296 \let\hyper@anchorstart\ltx@gobble
6297 \def\hyper@anchorend{\Hy@xspace@end}%
6298 \let\hyper@linkstart\ltx@gobbletwo
6299 \def\hyper@linkend{\Hy@xspace@end}%
6300 \def\hyper@linkurl##1##2{##1\Hy@xspace@end}%
6301 \def\hyper@linkfile##1##2##3{##1\Hy@xspace@end}%
6302 }
6303 \def\endNoHyper{%
6304 \global\let\hyper@link\hyper@livelink
6305 }
6306 \end{package}

```

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:

```

6307 (*nohyperref)
6308 \RequirePackage{letltxmacro}[2008/06/13]
6309 \let\hyper@@anchor\@gobble
6310 \def\hyper@link#1#2#3{#3}%
6311 \let\hyper@anchorstart\@gobble
6312 \let\hyper@anchorend\@empty
6313 \let\hyper@linkstart\@gobbletwo
6314 \let\hyper@linkend\@empty
6315 \def\hyper@linkurl#1#2{#1}%
6316 \def\hyper@linkfile#1#2#3{#1}%
6317 \def\hyper@link@{#1#2#3}%
6318 \let\PDF@SetupDoc\@empty
6319 \let\PDF@FinishDoc\@empty
6320 \def\nohyperpage#1{#1}

```

Some top-level commands:

```

6321 \def\Acrobatmenu#1#2{\leavevmode#2}
6322 \let\pdfstringdefDisableCommands\@gobbletwo
6323 \let\texorpdfstring\@firstoftwo
6324 \let\pdfbookmark\@undefined
6325 \newcommand\pdfbookmark[3]{}{}
6326 \let\phantomsection\@empty
6327 \let\hypersetup\@gobble
6328 \let\hyperbaseurl\@gobble
6329 \newcommand*{\href}[3]{}{#3}
6330 \let\hyperdef\@gobbletwo
6331 \let\hyperlink\@gobble
6332 \let\hypertarget\@gobble
6333 \def\hyperref{%
6334   \ifnextchar\@gobbleopt{\expandafter\@gobbletwo\@gobble}%
6335 }
6336 \long\def\@gobbleopt[#1]{}
6337 \let\hyperpage\@empty

```

Ignore star from referencing macros. This is only needed in older formats.

```

6338 \@if@t@r\fmtversion{2022-06-01}
6339 {}%
6340 {%
6341   \LetLtxMacro\NoHy@OrgRef\ref
6342   \DeclareRobustCommand*{\ref}{%
6343     \ifstar\NoHy@OrgRef\NoHy@OrgRef
6344   }
6345   \LetLtxMacro\NoHy@OrgPageRef\pageref
6346   \DeclareRobustCommand*{\pageref}{%
6347     \ifstar\NoHy@OrgPageRef\NoHy@OrgPageRef
6348   }%
6349 }
6350 \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}`

```
6351 (*package)
6352 \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.

```
6353 \if@filesw
6354 \immediate\write\@auxout{%
6355 \string\providecommand\string\HyperFirstAtBeginDocument{%
6356 \string\AtBeginDocument}^^J%
6357 \string\HyperFirstAtBeginDocument{%
6358 \string\ifx\string\hyper@anchor\string\@undefined^^J%
6359 \string\global\string\let\string\oldnewlabel\string\newlabel^^J%
6360 \string\gdef\string\newlabel\string#1\string#2{%
6361 \string\newlabelxx{\string#1}\string#2}^^J%
6362 \string\gdef\string\newlabelxx%
6363 \string#1\string#2\string#3\string#4\string#5\string#6{%
6364 \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.

```
6365 \string\AtEndDocument{%
6366 \string\ifx\string\hyper@anchor\string\@undefined^^J%
6367 \string\let\string\newlabel\string\oldnewlabel^^J%
6368 \string\fi%
6369 }^^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.

```
6370 \string\fi%
6371 }^^J%
6372 \string\global\string\let\string\hyper@last\relax^^J%
6373 \string\gdef\string\HyperFirstAtBeginDocument\string#1{\string#1}%
6374 }%
6375 \fi
6376 \let\HyperFirstAtBeginDocument\ltx@firstofone
```

Now the code to deal with adding the hyperref package to a document with aux and toc written the standard way.

If hyperref was used last time, do nothing. change 2022-03-28: removed the test for an old toc. `\contentsline` has now always four arguments.

```
6377 \ifx\hyper@last\@undefined
6378 \def\newlabel#1#2{\@newl@bel r{#1}{#2}{\string#1}{\string#2}}%
6379 \fi
6380 }
```

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`.

```

6381 \ifHy@pdfusetitle
6382   \let\HyOrg@title\title
6383   \let\HyOrg@author\author
6384   \def\title{\@ifnextchar{\Hy@scanopttitle}{\Hy@scantitle}}%
6385   \def\Hy@scanopttitle[#1]{%
6386     \gdef\Hy@title{#1}%
6387     \HyOrg@title{#1}%
6388   }%
6389   \def\Hy@scantitle#1{%
6390     \gdef\Hy@title{#1}%
6391     \HyOrg@title{#1}%
6392   }%
6393   \def\author{\@ifnextchar{\Hy@scanoptauthor}{\Hy@scanauthor}}%
6394   \def\Hy@scanoptauthor[#1]{%
6395     \gdef\Hy@author{#1}%
6396     \HyOrg@author{#1}%
6397   }%
6398   \def\Hy@scanauthor#1{%
6399     \gdef\Hy@author{#1}%
6400     \HyOrg@author{#1}%
6401   }%

```

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.

```

6402 \begingroup
6403   \def\process@me#1\@nil#2{%
6404     \expandafter\let\expandafter\x\csname @#2\endcsname
6405     \edef\y{\expandafter\strip@prefix\meaning\x}%
6406     \def\c##1##2\@nil{%
6407       \ifx\\##1\\%
6408         \else
6409           \expandafter\gdef\csname Hy@#2\expandafter\endcsname
6410             \expandafter{\x}%
6411         \fi
6412       }%
6413     \expandafter\c\y\relax#1\@nil
6414   }%
6415   \expandafter\process@me\string\@latex@\@nil{title}%
6416   \expandafter\process@me\string\@latex@\@nil{author}%
6417 \endgroup
6418 \fi
6419 \Hy@DisableOption{pdfusetitle}

```

Macro `\Hy@UseMaketitleInfos` is used in the driver files, before the information entries are used.

The newline macro `\newline` or `\\` is much more complicate. In the title a good replacement can be a space, but can be already a space after `\\` in the title string. So this space is removed by scanning for the next non-empty argument.

In the macro `\author` the newline can perhaps separate the different authors,

so the newline expands here to a comma with space.

The possible arguments such as space or the optional argument after the newline macros are not detected.

A possible ¹ removes its argument.

```

6420 \def\Hy@UseMaketitleString#1{%
6421   \ltx@ifundefined{Hy@#1}{}%
6422   \begingroup
6423     \let\Hy@saved@hook\pdfstringdefPreHook
6424     \pdfstringdefDisableCommands{%
6425       \expandafter\let\expandafter\\\csname Hy@newline@#1\endcsname
6426       \let\newline\\%
6427       \def\and{;}%
6428       \let\thanks\@gobble%
6429     }%
6430     \expandafter\ifx\csname @pdf#1\endcsname\@empty
6431     \expandafter\pdfstringdef\csname @pdf#1\endcsname{%
6432       \csname Hy@#1\endcsname\@empty
6433     }%
6434     \fi
6435     \global\let\pdfstringdefPreHook\Hy@saved@hook
6436   \endgroup
6437 }%
6438 }
6439 \def\Hy@newline@title#1{ #1}
6440 \def\Hy@newline@author#1{, #1}
6441 \def\Hy@UseMaketitleInfos{%
6442   \Hy@UseMaketitleString{title}%
6443   \Hy@UseMaketitleString{author}%
6444 }

```

26 Page numbers

This stuff is done by Heiko Oberdiek.

27 Every page

```

6445 \RequirePackage{atbegshi}[2007/09/09]
6446 \let\Hy@EveryPageHook\ltx@empty
6447 \let\Hy@EveryPageBoxHook\ltx@empty
6448 \let\Hy@FirstPageHook\ltx@empty
6449 \AtBeginShipout{%
6450   \Hy@EveryPageHook
6451   \ifx\Hy@EveryPageBoxHook\ltx@empty
6452   \else
6453     \setbox\AtBeginShipoutBox=\vbox{%
6454       \offinterlineskip
6455       \Hy@EveryPageBoxHook
6456       \box\AtBeginShipoutBox
6457     }%
6458   \fi
6459 }

```

```

6460 \ltx@iffileloaded{hpdftex.def}{%
6461   \AtBeginShipout{%
6462     \Hy@FirstPageHook
6463     \global\let\Hy@FirstPageHook\ltx@empty
6464   }%
6465 }{%
6466   \AtBeginShipoutFirst{%
6467     \Hy@FirstPageHook
6468   }%
6469 }
6470 \g@addto@macro\Hy@FirstPageHook{%
6471   \PDF@FinishDoc
6472   \global\let\PDF@FinishDoc\ltx@empty
6473 }

```

27.1 PDF /PageLabels

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

```

6474 \ifHy@pdfpagelabels
6475   \begingroup\expandafter\expandafter\expandafter\endgroup
6476   \expandafter\ifx\csname thepage\endcsname\relax
6477     \Hy@pdfpagelabelsfalse
6478     \Hy@WarningNoLine{%
6479       Option `pdfpagelabels' is turned off\MessageBreak
6480       because \string\thepage\space is undefined%
6481     }%
6482     \csname fi\endcsname
6483     \csname iffalse\expandafter\endcsname
6484   \fi

```

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

```

6485   \def\thispdfpagelabel#1{%
6486     \gdef\HyPL@thisLabel{#1}%
6487   }%
6488   \global\let\HyPL@thisLabel\relax

```

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

```

6489   \let\HyPL@Labels\ltx@empty

```

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

```

6490   \newcount\Hy@abspage
6491   \Hy@abspage=0 %

```

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

```

6492   \def\HyPL@LastType{init}%
6493   \def\HyPL@LastNumber{0}%
6494   \let\HyPL@LastPrefix\ltx@empty

```

Definitions for the PDF names of the \LaTeX pendants.

```

6495   \def\HyPL@arabic{D}%
6496   \def\HyPL@Roman{R}%
6497   \def\HyPL@roman{r}%

```



```

6498 \def\HyPL@Alph{A}%
6499 \def\HyPL@alph{a}%

6500 \let\HyPL@SlidesSetPage\ltx@empty
6501 \ltx@ifclassloaded{slides}{%
6502   \def\HyPL@SlidesSetPage{%
6503     \advance\c@page\ltx@one
6504     \ifnum\value{page}>\ltx@one
6505       \protected@edef\HyPL@SlidesOptionalPage{%
6506         \Hy@SlidesFormatOptionalPage{\thepage}%
6507       }%
6508     \else
6509       \let\HyPL@SlidesOptionalPage\ltx@empty
6510     \fi
6511     \advance\c@page-\ltx@one
6512     \def\HyPL@page{%
6513       \csname the\Hy@SlidesPage\endcsname
6514       \HyPL@SlidesOptionalPage
6515     }%
6516   }%
6517 }{}%

```

`\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.

```

6518 \def\HyPL@EveryPage{%
6519   \begingroup
6520   \ifx\HyPL@thisLabel\relax
6521     \let\HyPL@page\thepage
6522     \HyPL@SlidesSetPage
6523   \else
6524     \let\HyPL@page\HyPL@thisLabel
6525     \global\let\HyPL@thisLabel\relax
6526   \fi
6527   \let\HyPL@Type\relax
6528   \ifnum\c@page>0 %
6529     \ifx\HyPL@SlidesSetPage\ltx@empty
6530       \expandafter\HyPL@CheckThePage\HyPL@page\@nil
6531     \fi
6532   \fi
6533   \let\Hy@temp Y%
6534   \ifx\HyPL@Type\HyPL@LastType
6535   \else
6536     \let\Hy@temp N%
6537   \fi
6538   \ifx\HyPL@Type\relax
6539     \pdfstringdef\HyPL@Prefix{\HyPL@page}%
6540   \else
6541     \pdfstringdef\HyPL@Prefix\HyPL@Prefix
6542   \fi
6543   \ifx\HyPL@Prefix\HyPL@LastPrefix
6544   \else
6545     \let\Hy@temp N%
6546   \fi
6547   \if Y\Hy@temp
6548     \advance\c@page by -1 %

```

```

6549 \ifnum\HyPL@LastNumber=\the\c@page\relax
6550 \else
6551 \let\Hy@temp N%
6552 \fi
6553 \Hy@StepCount\c@page
6554 \fi
6555 \if N\Hy@temp
6556 \ifx\HyPL@Type\relax
6557 \HyPL@StorePageLabel{/P(\HyPL@Prefix)}%
6558 \else
6559 \HyPL@StorePageLabel{%
6560 \ifx\HyPL@Prefix\@empty
6561 \else
6562 /P(\HyPL@Prefix)%
6563 \fi
6564 /S/\csname HyPL\HyPL@Type\endcsname
6565 \ifnum\the\c@page=1 %
6566 \else
6567 \space/St \the\c@page
6568 \fi
6569 }%
6570 \fi
6571 \fi
6572 \xdef\HyPL@LastNumber{\the\c@page}%
6573 \global\let\HyPL@LastType\HyPL@Type
6574 \global\let\HyPL@LastPrefix\HyPL@Prefix
6575 \endgroup
6576 \Hy@GlobalStepCount\Hy@abspage
6577 }%

```

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

```

6578 \def\HyPL@CheckThePage#1\@nil{%
6579 \HyPL@@CheckThePage{#1}#1\csname\endcsname\c@page\@nil
6580 }%

```

`\HyPL@@CheckThePage` The first check is, is `\thepage` is defined such as in L^AT_EX, e. g.: `\csname @arabic\endcsname\c@page`. In the current implementation the check fails, if there is another `\csname` before.

The second check tries to detect `\arabic{page}` at the end of the definition text of `\thepage`.

```

6581 \def\HyPL@@CheckThePage#1#2\csname#3\endcsname\c@page#4\@nil{%
6582 \def\Hy@tempa{#4}%
6583 \def\Hy@tempb{\csname\endcsname\c@page}%
6584 \ifx\Hy@tempa\Hy@tempb
6585 \expandafter\ifx\csname HyPL#3\endcsname\relax
6586 \else
6587 \def\HyPL@Type{#3}%
6588 \def\HyPL@Prefix{#2}%
6589 \fi
6590 \else
6591 \begingroup
6592 \let\Hy@next\endgroup
6593 \let\HyPL@found\@undefined
6594 \def\arabic{\HyPL@Format{arabic}}%

```

```

6595 \def\Roman{\HyPL@Format{Roman}}}%
6596 \def\roman{\HyPL@Format{roman}}}%
6597 \def\Alph{\HyPL@Format{Alph}}}%
6598 \def\alph{\HyPL@Format{alph}}}%
6599 \protected@edef\Hy@temp{#1}%
6600 \ifx\HyPL@found\relax
6601 \toks@{\expandafter{\Hy@temp}}%
6602 \edef\Hy@next{\endgroup
6603 \noexpand\HyPL@@@CheckThePage\the\toks@
6604 \noexpand\HyPL@found\relax\noexpand\@nil
6605 }%
6606 \fi
6607 \Hy@next
6608 \fi
6609 }%

```

`\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`.

```

6610 \def\HyPL@Format#1#2{%
6611 \ifx\HyPL@found\@undefined
6612 \expandafter\ifx\csname c@#2\endcsname\c@page
6613 \expandafter\noexpand\csname HyPL@found\endcsname{#1}%
6614 \else
6615 \expandafter\noexpand\csname#1\endcsname{#2}%
6616 \fi
6617 \else
6618 \expandafter\noexpand\csname#1\endcsname{#2}%
6619 \fi
6620 }%

```

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

```

6621 \def\HyPL@@@CheckThePage#1\HyPL@found#2#3\@nil{%
6622 \def\Hy@tempa{#3}%
6623 \def\Hy@tempb{\HyPL@found\relax}%
6624 \ifx\Hy@tempa\Hy@tempb
6625 \def\HyPL@Type{#2}%
6626 \def\HyPL@Prefix{#1}%
6627 \fi
6628 }%

```

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

```

6629 \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`.

```

6630 \def\HyPL@Useless{0<</S/D>>}%
6631 \@onelevel@sanitize\HyPL@Useless

```

`\HyPL@SetPageLabels` The page labels are written to the PDF catalog. The command `\Hy@PutCatalog` is defined in the driver files.

```

6632 \def\HyPL@SetPageLabels{%
6633   \@onelevel@sanitize\HyPL@Labels
6634   \ifx\HyPL@Labels\@empty
6635     \else
6636       \ifx\HyPL@Labels\HyPL@Useless
6637         \else
6638           \Hy@PutCatalog{/PageLabels<</Nums\HyPL@Labels>>>}%
6639         \fi
6640       \fi
6641     }%

6642 \g@addto@macro\Hy@EveryPageHook{\HyPL@EveryPage}%
6643 \fi

Option ‘pdfpagelabels’ has been used and is now disabled.
6644 \Hy@DisableOption{pdfpagelabels}
6645 \</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
6646 \<{*pdfTeX}>
6647 \pdf@ifdraftmode{%
6648   \let\Hy@PutCatalog\ltx@gobble
6649 }{%
6650   \let\Hy@PutCatalog\pdfcatalog
6651 }
6652 \</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.

```

6653 \<{*vTeX}>
6654 \providecommand*\XR@ext}{pdf}
6655 \edef\Hy@VTeXversion{%
6656   \ifx\VTeXversion\@undefined
6657     \z@
6658   \else
6659     \ifx\VTeXversion\relax
6660       \z@
6661     \else
6662       \VTeXversion
6663     \fi
6664   \fi
6665 }
6666 \begingroup
6667   \ifnum\Hy@VTeXversion<660 %
6668     \gdef\Hy@PutCatalog#1{%
6669       \Hy@WarningNoLine{%

```

```

6670      VTeX 6.59g or above required for pdfpagelabels%
6671    }%
6672  }%
6673 \else
6674   \gdef\Hy@PutCatalog#1{%
6675     \Hy@vt@PutCatalog#1/PageLabels<<>>\@nil
6676   }%
6677   \gdef\Hy@vt@PutCatalog#1/PageLabels<<#2>>#3\@nil{%
6678     \ifx\#2\%
6679     \else
6680       \immediate\special{!pdfpagelabels #2}%
6681     \fi
6682   }%
6683 \fi
6684 \endgroup
6685 </vtex>

6686 <*pdftex | vtex>

```

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

```

6687 \ifHy@pdfpagelabels
6688   \def\HyPL@StorePageLabel#1{%
6689     \toks@{\expandafter{\HyPL@Labels}}%
6690     \xdef\HyPL@Labels{%
6691       \the\toks@
6692       \the\Hy@abspage<<#1>>%
6693     }%
6694   }%

```

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.

```

6695 \RequirePackage{atveryend}[2009/12/07]%
6696 \AtVeryEndDocument{%
6697   \HyPL@SetPageLabels
6698 }%

6699 \fi
6700 </pdftex | vtex>

```

27.1.2 xetex

```

6701 <*xetex>
6702 \HyPsd@LoadUnicode
6703 \Hy@unicodetrue
6704 \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@unicode
6705 \else
6706   \let\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
6707 \fi
6708 \HyPsd@LoadStringEncoding
6709 \define@key{Hyp}{unicode}[true]{%
6710   \Hy@boolkey{unicode}{#1}%
6711   \ifHy@unicode
6712   \else
6713     \Hy@Warning{%

```

```

6714 XeTeX driver only supports `unicode=true'. Ignoring\MessageBreak
6715 option setting `unicode=false'%
6716 }%
6717 \Hy@unicodetrue
6718 \fi
6719 }
6720 \define@key{Hyp}{pdfencoding}{%
6721 \edef\HyPsd@temp{#1}%
6722 \ifx\HyPsd@temp\HyPsd@pdfencoding@unicode
6723 \let\HyPsd@pdfencoding\HyPsd@temp
6724 \else
6725 \ifx\HyPsd@temp\HyPsd@pdfencoding@auto
6726 \let\HyPsd@pdfencoding\HyPsd@temp
6727 \else
6728 \Hy@Warning{%
6729 XeTeX driver only supports\MessageBreak
6730 `pdfencoding=unicode|auto'. Ignoring option\MessageBreak
6731 setting `pdfencoding=\HyPsd@temp'%
6732 }%
6733 \fi
6734 \fi
6735 }
6736 \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:

```

6737 \def\setpdfinkmargin#1{%
6738 \begingroup
6739 \setlength{\dimen@}{#1}%
6740 \special{dvipdfmx:config g \strip@pt\dimen@}%
6741 \endgroup}
6742 \xetex

```

set the pdf version

```

6743 \*dvipdfm|xetex
6744 \special{pdf:majorversion \Hy@pdf@majorversion}
6745 \special{pdf:minorversion \Hy@pdf@minorversion}
6746 \dvipdfm|xetex

```

27.1.3 pdfmarkbase, dvipdfm, xetex

```

6747 \*pdfmarkbase
6748 \begingroup
6749 \ifundefined{headerps@out}{-}{-}%
6750 \toks@\expandafter{\Hy@FirstPageHook}%
6751 \xdef\Hy@FirstPageHook{%
6752 \noexpand\headerps@out{%
6753 systemdict /pdfmark known%
6754 {%
6755 userdict /?pdfmark systemdict /exec get put%
6756 }{%
6757 userdict /?pdfmark systemdict /pop get put %
6758 userdict /pdfmark systemdict /cleartomark get put%
6759 }%
6760 ifelse%
6761 }%

```

```

6762     \the\toks@
6763   }%
6764 }%
6765 \endgroup
6766 \</pdfmarkbase>

```

\Hy@PutCatalog

```

6767 \<dvipdfm | xetex>\def\Hy@PutCatalog#1{\<pdfmark{docview <<#1>>>}}
6768 \<*pdfmarkbase>
6769 \def\Hy@PutCatalog#1{%
6770   \pdfmark{pdfmark=/PUT,Raw={\string{Catalog\string} <<#1>>>}}%
6771 }
6772 \</pdfmarkbase>

6773 \<*pdfmarkbase | dvipdfm | xetex>
6774 \ifHy@pdfpagelabels

```

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

```

6775 \def\HyPL@StorePageLabel#1{%
6776   \if@filesw
6777     \begingroup
6778     \edef\Hy@tempa{\the\Hy@abspage<<#1>>>}%
6779     \immediate\write\@mainaux{%
6780       \string\HyPL@Entry{\Hy@tempa}%
6781     }%
6782   \endgroup
6783   \fi
6784 }%

```

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.

```

6785 \Hy@AtBeginDocument{%
6786   \if@filesw
6787     \immediate\write\@mainaux{%
6788       \string\providecommand\string*\string\HyPL@Entry[1]{}%
6789     }%
6790   \fi
6791   \ifx\HyPL@Labels\@empty
6792     \Hy@WarningNoLine{Rerun to get /PageLabels entry}%
6793   \else
6794     \HyPL@SetPageLabels
6795   \fi
6796   \let\HyPL@Entry\@gobble
6797 }%

```

\HyPL@Entry

```

6798 \def\HyPL@Entry#1{%
6799   \expandafter\gdef\expandafter\HyPL@Labels\expandafter{%
6800     \HyPL@Labels
6801     #1%
6802   }%
6803 }%

```

```

6804 \fi
6805 </pdfmarkbase | dvipdfm | xetex>
6806 <*packageEnd>
6807 \ifx\MaybeStopEarly\relax
6808 \else
6809 \Hy@stoppedearlytrue
6810 \expandafter\MaybeStopEarly
6811 \fi
6812 \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

```

6813 \def\Hy@CounterExists#1{%
6814 \begingroup\expandafter\expandafter\expandafter\endgroup
6815 \expandafter\ifx\csname c@#1\endcsname\relax
6816 \expandafter\@gobble
6817 \else
6818 \begingroup\expandafter\expandafter\expandafter\endgroup
6819 \expandafter\ifx\csname the#1\endcsname\relax
6820 \expandafter\expandafter\expandafter\@gobble
6821 \else
6822 \expandafter\expandafter\expandafter\@firstofone
6823 \fi
6824 \fi
6825 }
6826 \Hy@CounterExists{section}{%
6827 \providecommand\theHequation{\theHsection.\arabic{equation}}}%
6828 }
6829 \providecommand\theHequation{\arabic{equation}}}%
6830 \Hy@CounterExists{part}{%
6831 \providecommand\theHpart{\arabic{part}}}%
6832 }

```



```

6833 \ltx@ifundefined{thechapter}{%
6834   \providecommand\theHsection    {\arabic{section}}%
6835   \providecommand\theHfigure     {\arabic{figure}}%
6836   \providecommand\theHtable      {\arabic{table}}%
6837 }{%
6838   \providecommand\theHchapter     {\arabic{chapter}}%
6839   \providecommand\theHfigure      {\theHchapter.\arabic{figure}}%
6840   \providecommand\theHtable       {\theHchapter.\arabic{table}}%
6841   \providecommand\theHsection     {\theHchapter.\arabic{section}}%
6842 }
6843 \providecommand\theHsubsection    {\theHsection.\arabic{subsection}}
6844 \providecommand\theHsubsubsection{\theHsubsection.\arabic{subsubsection}}
6845 \providecommand\theHparagraph     {\theHsubsubsection.\arabic{paragraph}}
6846 \providecommand\theHsubparagraph {\theHparagraph.\arabic{subparagraph}}
6847 \providecommand\theHtheorem       {\theHsection.\arabic{theorem}}
6848 \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.

```

6849 \let\H@item\item
6850 \newcounter{Item}
6851 \def\theHItem{\arabic{Item}}
6852 \def\item{%
6853   \@hyper@itemfalse
6854   \if@nmbrlist\@hyper@itemtrue\fi
6855   \H@item
6856 }
6857 \providecommand\theHenumi    {\theHItem}
6858 \providecommand\theHenumii   {\theHItem}
6859 \providecommand\theHenumiii  {\theHItem}
6860 \providecommand\theHenumiv   {\theHItem}
6861 \providecommand\theHHfootnote {\arabic{Hfootnote}}
6862 \providecommand\theHmpfootnote{\arabic{mpfootnote}}
6863 \@ifundefined{theHHmpfootnote}{%
6864   \let\theHHmpfootnote\theHHfootnote
6865 }{}

```

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.

```

6866 \let\H@refstepcounter\refstepcounter
6867 \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`

```

6868 \newif\if@hyper@item
6869 \newif\if@skiphyperref
6870 \@hyper@itemfalse
6871 \@skiphyperreffalse
6872 \ExplSyntaxOn

```

```

6873 \def\refstepcounter#1{%
6874   \legacy_if:nF {Hy@pdfstring}
6875   {
6876     \H@refstepcounter{#1}%
6877     \bool_lazy_and:nnT
6878     { \l__hyp_target_create_bool }
6879     { ! \legacy_if_p:n{@skiphyperref} }
6880     {
6881       \legacy_if:nTF {@hyper@item}
6882       {
6883         \stepcounter{Item}%
6884         \hyper@refstepcounter{Item}%
6885         \@hyper@itemfalse
6886       }
6887       {
6888         \hyper@refstepcounter{#1}%
6889       }
6890     }
6891   }
6892 }
6893 \ExplSyntaxOff
6894 \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.

```

6895 \@ifpackageloaded{amsmath}{-}{\newif\ifmeasuring@\measuring@false}

```

`\hyper@refstepcounter`

```

6896 \def\hyper@refstepcounter#1{%
6897   \edef\This@name{#1}%
6898   \ifx\This@name\name@of@eq
6899     \@ifundefined{theHequation}{%
6900       \make@stripped@name{\theequation}%
6901       \let\theHequation\newname
6902     }{}%
6903   \fi
6904   \HyCnt@ProvideTheHCounter{#1}%
6905   \hyper@makecurrent{#1}%
6906   \ifmeasuring@
6907   \else
6908     \Hy@raisedlink{%
6909       \hyper@anchorstart{\@currentHref}\hyper@anchorend
6910     }%
6911   \fi
6912 }

```

`\Hy@ProvideTheHCounter` `\theH<counter>` is not set for counters that are defined before ‘hyperref’ is loaded. In `\cl@<ckpt>`, the clear counter list of the artificial counter `<ckpt>`, \LaTeX remembers the defined counters (needed for `\include`). We check the clear counter lists, whether our counter is present. If we found it, then we add the parent counter value to `\theH<counter>`. The `\@elt` list is used in sanitized form for the comparison, because the list might contain other stuff than `\@elts`. Also it simplifies the implementation, because \LaTeX , substring search `\in@` can be used.

```

6913 \def\HyCnt@ProvideTheHCounter#1{%
6914   \@ifundefined{theH#1}{%
6915     \expandafter\def\csname theH#1\endcsname{%
6916       \def\Hy@temp{\@elt{#1}}%
6917       \ltx@onelevel@sanitize\Hy@temp
6918       \let\HyOrg@elt\@elt
6919       \edef\@elt{%
6920         \noexpand\HyCnt@LookForParentCounter
6921         \expandafter\noexpand\csname theH#1\endcsname
6922       }%
6923       \cl@@ckpt
6924       \let\@elt\HyOrg@elt
6925       \expandafter
6926       \ltx@LocalAppendToMacro\csname theH#1\expandafter\endcsname
6927       \expandafter{%
6928         \expandafter\@arabic\csname c@#1\endcsname
6929       }%
6930     }{}%
6931 }

```

\Hy@LookForParentCounter

```

6932 \def\HyCnt@LookForParentCounter#1#2{%
6933   \expandafter\let\expandafter\Hy@temp@A\csname cl@#2\endcsname
6934   \ltx@ifundefined{cl@#2}{%
6935     }{%
6936       \ltx@onelevel@sanitize\Hy@temp@A
6937       \edef\Hy@temp@A{%
6938         \noexpand\in@{\Hy@temp}{\Hy@temp@A}%
6939       }\Hy@temp@A
6940       \ifin@
6941         \ltx@ifundefined{theH#2}{%
6942           \expandafter\ltx@LocalAppendToMacro\expandafter#1%
6943           \expandafter{%
6944             \expandafter\@arabic\csname c@#2\endcsname.%
6945           }%
6946         }{%
6947           \expandafter\ltx@LocalAppendToMacro\expandafter#1%
6948           \expandafter{%
6949             \csname theH#2\endcsname.%
6950           }%
6951         }%
6952       \fi
6953     }%
6954 }

```

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.

```

6955 \begingroup\expandafter\expandafter\expandafter\endgroup
6956 \expandafter\ifx\csname chapter\endcsname\relax
6957   \def\Hy@chapterstring{section}%

```

```

6958 \else
6959 \def\Hy@chapterstring{chapter}%
6960 \fi
6961 \def\Hy@appendixstring{appendix}
6962 \def\Hy@chapapp{\Hy@chapterstring}
6963 \ltx@ifundefined{appendix}{%
6964 }{%
6965 \let\HyOrg@appendix\appendix
6966 \def\Hy@AlphNoErr#1{%
6967 \ifnum\value{#1}>26 %
6968 Alph\number\value{#1}%
6969 \else
6970 \ifnum\value{#1}<1 %
6971 Alph\number\value{#1}%
6972 \else
6973 \Alph{#1}%
6974 \fi
6975 \fi
6976 }%
6977 \def\appendix{%
6978 \ltx@ifundefined{chapter}{%
6979 \gdef\theHsection{\Hy@AlphNoErr{section}}}%
6980 }{%
6981 \gdef\theHchapter{\Hy@AlphNoErr{chapter}}}%
6982 }%
6983 \xdef\Hy@chapapp{\Hy@appendixstring}%
6984 \HyOrg@appendix
6985 }%
6986 }

```

\Hy@Test@Alph

```

6987 \def\Hy@Test@Alph#1{%
6988 \ifcase#1\or
6989 a\or b\or c\or d\or e\or f\or g\or h\or i\or j\or
6990 k\or l\or m\or n\or o\or p\or q\or r\or s\or t\or
6991 u\or v\or w\or x\or y\or z%
6992 \else
6993 \@ctrerr
6994 \fi
6995 }

```

\Hy@Test@Alph

```

6996 \def\Hy@Test@Alph#1{%
6997 \ifcase#1\or
6998 A\or B\or C\or D\or E\or F\or G\or H\or I\or J\or
6999 K\or L\or M\or N\or O\or P\or Q\or R\or S\or T\or
7000 U\or V\or W\or X\or Y\or Z%
7001 \else
7002 \@ctrerr
7003 \fi
7004 }

```

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

```

7005 \NewHook{__hyp/target/setname }

```

```

7006 \define@key{Hyp}{next-anchor}{%
7007   \AddToHookNext{__hyp/target/setname}%
7008   {\Hy@MakeCurrentHref{#1}}%
7009 }

```

`\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.

```

7010 \def\hyper@makecurrent#1{%
7011   \begingroup
7012   \Hy@safe@activetrue
7013   \edef\Hy@param{#1}%
7014   \ifx\Hy@param\Hy@chapterstring
7015     \let\Hy@param\Hy@chapapp
7016   \fi
7017   \ifHy@hypertextnames
7018     \let\@number\@firstofone
7019     \def\@fnsymbol##1{fnsymbol\number##1}%
7020     \def\@arabic##1{\number##1}%
7021     \ifx\@alph\Hy@Test@alph
7022     \else
7023       \def\@alph{alph\number}%
7024     \fi
7025     \ifx\@Alph\Hy@Test@Alph
7026     \else
7027       \def\@Alph{Alph\number}%
7028     \fi
7029     \ifHy@naturalnames
7030       \let\textlatin\@firstofone
7031       \xdef\HyperGlobalCurrentHref{\csname the#1\endcsname}%
7032     \else
7033       \xdef\HyperGlobalCurrentHref{%
7034         \csname
7035           the%
7036           \expandafter\ifx\csname theH#1\endcsname\relax\else H\fi
7037           #1%
7038         \endcsname
7039       }%
7040     \fi
7041     \xdef\HyperGlobalCurrentHref{%
7042       \Hy@param.\expandafter\strip@prefix\meaning\HyperGlobalCurrentHref
7043     }%
7044   \else
7045     \Hy@GlobalStepCount\Hy@linkcounter
7046     \xdef\HyperGlobalCurrentHref{\Hy@param.the\Hy@linkcounter}%
7047   \fi
7048   \endgroup
7049   \let\HyperLocalCurrentHref\HyperGlobalCurrentHref
7050   \ifHy@localanchorname
7051     \let\@currentHref\HyperLocalCurrentHref
7052   \else
7053     \global\let\@currentHref\HyperGlobalCurrentHref
7054   \fi
7055   \UseHook{__hyp/target/setname}%

```

```
7056 }
```

`\Hy@MakeCurrentHref`

```
7057 \def\Hy@MakeCurrentHref#1{%
7058   \edef\HyperLocalCurrentHref{#1}%
7059   \@onelevel@sanitize\HyperLocalCurrentHref
7060   \global\let\HyperGlobalCurrentHref\HyperLocalCurrentHref
7061   \let\HyperLocalCurrentHref\HyperGlobalCurrentHref
7062   \ifHy@localanchorname
7063     \let\@currentHref\HyperLocalCurrentHref
7064   \else
7065     \global\let\@currentHref\HyperGlobalCurrentHref
7066   \fi
7067 }
```

`\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.

```
7068 \def\Hy@MakeCurrentHrefAuto#1{%
7069   \Hy@GlobalStepCount\Hy@linkcounter
7070   \Hy@MakeCurrentHref{#1.\the\Hy@linkcounter}%
7071   \UseHook{__hyp/target/setname}}
```

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

```
7072 \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.

```
7073 \def\hypergetref#1{\getrefbykeydefault{#1}{-}{??}}
7074 \def\hypergetpageref#1{\getrefbykeydefault{#1}{page}{0}}
```

30 Package titlesec and titletoc support

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

Package `titlesec` support:

```
7075 \@ifpackageloaded{titlesec}{%
7076   \def\ttl@Hy@steplink#1{%
7077     \Hy@MakeCurrentHrefAuto{#1*}%
7078     \edef\ttl@Hy@saveanchor{%
7079       \noexpand\Hy@raisedlink{%
7080         \noexpand\hyper@anchorstart{\@currentHref}%
7081         \noexpand\hyper@anchorend
7082       \def\noexpand\ttl@Hy@SavedCurrentHref{\@currentHref}%
7083       \noexpand\ttl@Hy@PatchSaveWrite
7084     }%
7085   }%
7086 }%
7087 \def\ttl@Hy@PatchSaveWrite{%
```

```

7088 \begingroup
7089 \toks@\expandafter{\ttl@savewrite}%
7090 \edef\x{\endgroup
7091 \def\noexpand\ttl@savewrite{%
7092 \let\noexpand\@currentHref
7093 \noexpand\ttl@Hy@SavedCurrentHref
7094 \the\toks@
7095 }%
7096 }%
7097 \x
7098 }%
7099 \def\ttl@Hy@refstepcounter#1{%
7100 \let\ttl@b\Hy@raisedlink
7101 \def\Hy@raisedlink##1{%
7102 \def\ttl@Hy@saveanchor{\Hy@raisedlink{##1}}%
7103 }%
7104 \refstepcounter{#1}%
7105 \let\Hy@raisedlink\ttl@b
7106 }%
7107 }{}

```

31 Package varioref support

Package nameref uses five arguments for the ref system. Fix provided by Felix Neubauer (felix.neubauer@gmx.net). This fix will no longer be needed with latex 2021-11-15.

```

7108 \@ifl@t@r\fmtversion{2021-11-15}
7109 {}%
7110 {
7111 \AtBeginDocument{%
7112 \def\Hy@varioref@undefined{???}{??}{-}{-}}
7113 \@ifpackageloaded{varioref}{%
7114 \def\vref@pagenum#1#2{%
7115 \@ifundefined{r@#2}{%
7116 \expandafter\let\csname r@#2\endcsname\Hy@varioref@undefined
7117 }{}%
7118 \edef#1{\getpagerefnumber{#2}}%
7119 }%
7120 }{}
7121 }
7122 }

```

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

```

7123 \@ifpackageloaded{longtable}{%
7124 \begingroup

```

```

7125 \def\y{\LT@array}%
7126 \@ifundefined{scr@LT@array}{%
7127   \@ifundefined{adl@LT@array}{\def\y{\adl@LT@array}}%
7128 }{\def\y{\scr@LT@array}}%
7129 \long\def\x\refstepcounter#1#2\@sharp#3#4\@nil{%
7130   \expandafter\endgroup
7131   \expandafter\def\y[##1]##2{%
7132     \H@refstepcounter{#1}%
7133     \hyper@makecurrent{table}%
7134     \let\Hy@LT@currentHref\@currentHref
7135     #2\@sharp###4%
7136   }%
7137 }%
7138 \expandafter\expandafter\expandafter\x\y[{#1}]{#2}\@nil

```

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

```

7139 \begingroup
7140 \def\x#1\ifvoid\LT@foot#2\fi#3\@nil{%
7141   \endgroup
7142   \def\LT@start{%
7143     #1%
7144     \ifvoid\LT@foot#2\fi
7145     \let\@currentHref\Hy@LT@currentHref
7146     \Hy@raisedlink{%
7147       \hyper@anchorstart{\@currentHref}\hyper@anchorend
7148     }%
7149     #3%
7150   }%
7151 }%
7152 \expandafter\x\LT@start\@nil
7153 }{}

```

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 40). The exception is that we move the equation incrementation inside the math environment to avoid specials outside and a wrong vertical spacing of equation environments.

```

7154 \let\new@refstepcounter\refstepcounter
7155 \let\H@equation\equation
7156 \let\H@endequation\endequation
7157 \@ifpackageloaded{amsmath}{%
7158   \long\def\Hy@temp{%
7159     \incr@eqnum
7160     \mathdisplay@push
7161     \st@rredfalse \global\@eqnswtrue
7162     \mathdisplay{equation}%
7163   }%
7164   \ifx\Hy@temp\equation
7165     \expandafter\ifx\csname if@fleqn\expandafter\endcsname
7166       \csname iftrue\endcsname

```



```

7167 \else
7168 \long\def\equation{%
7169 \mathdisplay@push
7170 \st@rredfalse \global\@eqnswtrue
7171 \mathdisplay{equation}%
7172 \incr@eqnum
7173 }%
7174 \fi
7175 \fi
7176 }{%
7177 \def\equation{%
7178 \let\refstepcounter\H@refstepcounter
7179 \H@equation
7180 \@ifundefined{theHequation}{%
7181 \make@stripped@name{\theequation}%
7182 \let\theHequation\newname
7183 }{}%
7184 \hyper@makecurrent{equation}%

```

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

```

7185 \mathopen{%
7186 \Hy@raisedlink{\hyper@anchorstart{\@currentHref}}%
7187 }%
7188 \let\refstepcounter\new@refstepcounter
7189 }%
7190 \def\endequation{%
7191 \ifx\Hy@raisedlink\ltx@empty
7192 \hyper@anchorend
7193 \else
7194 \mathclose{\Hy@raisedlink{\hyper@anchorend}}%
7195 \fi
7196 \H@endequation
7197 }%
7198 }

```

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.

```

7199 \newif\if@eqnstar
7200 \@eqnstarfalse
7201 \let\H@eqnarray\eqnarray
7202 \let\H@endeqnarray\endeqnarray
7203 \def\eqnarray{%
7204 \let\Hy@reserved@a\relax
7205 \def\@currentHref{}%
7206 \H@eqnarray
7207 \if@eqnstar
7208 \else
7209 \ifx\\\@currentHref\\%
7210 \else
7211 \@ifundefined{theHequation}{%
7212 \make@stripped@name{\theequation}%

```

```

7213     \let\theHequation\newname
7214   }{}%
7215   \hyper@makecurrent{equation}%
7216   \mathopen{%
7217     \Hy@raisedlink{%
7218       \hyper@anchorstart{\@currentHref}\hyper@anchorend
7219     }%
7220   }%
7221   \fi
7222 \fi
7223 }
7224 \def\endeqnarray{%
7225   \H@endeqnarray
7226 }

```

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.

```

7227 \@namedef{eqnarray*}{%
7228   \def\@eqnocr{\nonumber\@seqnocr}\@eqnstartrue\eqnarray
7229 }
7230 \@namedef{endeqnarray*}{%
7231   \nonumber\endeqnarray\@eqnstarfalse
7232 }

```

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

```

7233 \ltx@ifundefined{subeqnarray}{}{}%
7234 \let\H@subeqnarray\subeqnarray
7235 \let\H@endsubeqnarray\endsubeqnarray
7236 \def\subeqnarray{%
7237   \let\Hy@reserved@a\relax
7238   \H@subeqnarray
7239   \@ifundefined{theHequation}{}%
7240   \make@stripped@name{\theequation}%
7241   \let\theHequation\newname
7242 }{}%
7243   \hyper@makecurrent{equation}%
7244   \hyper@anchorstart{\@currentHref}\hyper@anchorend
7245 }%
7246 \def\endsubeqnarray{%
7247   \H@endsubeqnarray
7248 }%
7249 \providecommand\theHsubequation{\theHequation\alph{subequation}}%
7250 }

```

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

```

7251 \def\make@stripped@name#1{%
7252   \begingroup
7253   \escapechar\m@ne
7254   \global\let\newname\@empty
7255   \protected@edef\Hy@tempa{#1}%
7256   \edef\@tempb{%
7257     \noexpand\@tfor\noexpand\Hy@tempa:=%

```

```

7258     \expandafter\strip@prefix\meaning\Hy@tempa
7259   }%
7260   \@tempb\do{%
7261     \if{\Hy@tempa\else
7262     \if}\Hy@tempa\else
7263     \xdef\newname{\newname\Hy@tempa}%
7264     \fi
7265     \fi
7266   }%
7267 \endgroup
7268 }

```

Support for amsmath's subequations:

```

7269 \begingroup\expandafter\expandafter\expandafter\endgroup
7270 \expandafter\ifx\csname subequations\endcsname\relax
7271 \else
7272   \let\HyOrg@subequations\subequations
7273   \def\subequations{%
7274     \stepcounter{equation}%
7275     \protected@edef\theHparentequation{%
7276       \ifundefined{theHequation}\theequation\theHequation
7277     }%
7278     \addtocounter{equation}{-1}%
7279     \HyOrg@subequations
7280     \def\theHequation{\theHparentequation\alph{equation}}%
7281     \ignorespaces
7282   }%
7283 \fi

```

Support for package amsthm (Daniel Müllner): also cleveref.

```

7284 \Hy@AtBeginDocument{%
7285   \@ifpackageloaded{cleveref}{%
7286     \let\Hy@savethm\@thm
7287     \def\@thm{\ifhmode\unskip\fi\Hy@savethm}%
7288   }{%
7289     \@ifpackageloaded{amsthm}{%

```

Class amsbook uses a different definition of `\@thm`, where two lines are added (thanks to Dan Luecking for his analysis):

```

\let\thm@indent\indent % indent
\thm@headfont{\scshape}% heading font small caps

7290 \def\Hy@temp#1#2#3{%
7291   \ifhmode\unskip\unskip\par\fi
7292   \normalfont
7293   \trivlist
7294   \let\thmheadnl\relax
7295   \let\thm@swap\@gobble
7296   \let\thm@indent\indent % indent
7297   \thm@headfont{\scshape}% heading font small caps
7298   \thm@notefont{\fontseries\mddefault\upshape}%
7299   \thm@headpunct{.}% add period after heading
7300   \thm@headsep 5\p@ plus\p@ minus\p@\relax
7301   \thm@space@setup
7302   #1% style overrides

```

```

7303 \topsep \thm@preskip % used by thm head
7304 \topsepadd \thm@postskip % used by \endparenv
7305 \def\@tempa{#2}\ifx\@empty\@tempa
7306 \def\@tempa{\@oparg{\@begintheorem{#3}{}}}%
7307 \else
7308 \refstepcounter{#2}%
7309 \def\@tempa{%
7310 \@oparg{\@begintheorem{#3}{\csname the#2\endcsname}}}%
7311 }%
7312 \fi
7313 \@tempa
7314 }%
7315 \ifx\Hy@temp\@thm
7316 \def\@thm#1#2#3{%
7317 \ifhmode
7318 \unskip\unskip\par
7319 \fi
7320 \normalfont
7321 \trivlist
7322 \let\thmheadnl\relax
7323 \let\thm@swap\@gobble
7324 \let\thm@indent\indent % indent
7325 \thm@headfont{\scshape}% heading font small caps
7326 \thm@notefont{\fontseries\mddefault\upshape}%
7327 \thm@headpunct{.}% add period after heading
7328 \thm@headsep 5\p@ plus\p@ minus\p@\relax
7329 \thm@space@setup
7330 #1% style overrides
7331 \topsep \thm@preskip % used by thm head
7332 \topsepadd \thm@postskip % used by \endparenv
7333 \def\dth@counter{#2}%
7334 \ifx\@empty\dth@counter
7335 \def\@tempa{%
7336 \@oparg{\@begintheorem{#3}{}}}%
7337 }%
7338 \else
7339 \H@refstepcounter{#2}%
7340 \hyper@makecurrent{#2}%
7341 \let\Hy@dth@currentHref\@currentHref
7342 \def\@tempa{%
7343 \@oparg{\@begintheorem{#3}{\csname the#2\endcsname}}}%
7344 }%
7345 \fi
7346 \@tempa
7347 }%
7348 \else
7349 \def\@thm#1#2#3{%
7350 \ifhmode
7351 \unskip\unskip\par
7352 \fi
7353 \normalfont
7354 \trivlist
7355 \let\thmheadnl\relax
7356 \let\thm@swap\@gobble

```

```

7357 \thm@notefont{\fontseries\mddefault\upshape}%
7358 \thm@headpunct{.}% add period after heading
7359 \thm@headsep 5\p@ plus\p@ minus\p@\relax
7360 \thm@space@setup
7361 #1% style overrides
7362 \@topsep \thm@preskip % used by thm head
7363 \@topsepadd \thm@postskip % used by \@endparenv
7364 \def\dth@counter{#2}%
7365 \ifx\@empty\dth@counter
7366 \def\@tempa{%
7367 \@oparg{\@begintheorem{#3}{}}{}%
7368 }%
7369 \else
7370 \H@refstepcounter{#2}%
7371 \hyper@makecurrent{#2}%
7372 \let\Hy@dth@currentHref\@currentHref
7373 \def\@tempa{%
7374 \@oparg{\@begintheorem{#3}{\csname the#2\endcsname}}{}%
7375 }%
7376 \fi
7377 \@tempa
7378 }%
7379 \fi
7380 \dth@everypar={%
7381 \@minipagefalse
7382 \global\@newlistfalse
7383 \@noparitemfalse
7384 \if@inlabel
7385 \global\@inlabelfalse
7386 \begingroup
7387 \setbox\z@\lastbox
7388 \ifvoid\z@
7389 \kern-\itemindent
7390 \fi
7391 \endgroup
7392 \ifx\@empty\dth@counter
7393 \else
7394 \Hy@raisedlink{%
7395 \hyper@anchorstart{%
7396 \ltx@ifundefined{Hy@dth@currentHref}%
7397 \@currentHref\Hy@dth@currentHref
7398 }\hyper@anchorend
7399 }%
7400 \fi
7401 \unhbox\@labels
7402 \fi
7403 \if@nobreak
7404 \@nobreakfalse \clubpenalty\@M
7405 \else
7406 \clubpenalty\@clubpenalty \everypar{}%
7407 \fi
7408 }%
7409 }%

```

non `amsthm` case, remove final space on line before a theorem for githib issue 11.

```

7410 {%
7411 \let\Hy@savethm\@thm
7412 \def\@thm{\ifhmode\unskip\fi\Hy@savethm}%
7413 }%
7414 }%
7415 }

```

34 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@nopath@footnote` is defined we don't patch but assume that addings links to footnotes is handled elsewhere.

```

7416 \@ifundefined{hyper@nopath@footnote}{%
7417 \ifHy@hyperfootnotes
7418 \newcounter{Hfootnote}%
7419 \let\H@@footnotetext\@footnotetext
7420 \let\H@@footnotemark\@footnotemark
7421 \def\@xfootnotenext[#1]{%
7422 \begingroup
7423 \csname c@\@mpfn\endcsname #1\relax
7424 \unrestored@protected@xdef\@thefnmark{\thempfn}%
7425 \endgroup
7426 \ifx\@footnotetext\@mpfootnotetext
7427 \expandafter\H@@mpfootnotetext
7428 \else
7429 \expandafter\H@@@footnotetext
7430 \fi
7431 }%
7432 \def\@xfootnotemark[#1]{%
7433 \begingroup
7434 \c@footnote #1\relax
7435 \unrestored@protected@xdef\@thefnmark{\thefootnote}%
7436 \endgroup
7437 \H@@@footnotemark
7438 }%
7439 \let\H@@mpfootnotetext\@mpfootnotetext
7440 \long\def\@mpfootnotetext#1{%
7441 \H@@mpfootnotetext{%
7442 \ifHy@nesting
7443 \expandafter\ltx@firstoftwo
7444 \else
7445 \expandafter\ltx@secondoftwo
7446 \fi
7447 {%
7448 \expandafter\hyper@@anchor\expandafter{%
7449 \Hy@footnote@currentHref
7450 }\ignorespaces #1}%
7451 }%

```

```

7452 \Hy@raisedlink{%
7453 \expandafter\hyper@@anchor\expandafter{%
7454 \Hy@footnote@currentHref
7455 }{\relax}%
7456 }\ignorespaces #1%
7457 }%
7458 }%
7459 }%
7460 \long\def\@footnotetext#1{%
7461 \H@@@footnotetext{%
7462 \ifHy@nesting
7463 \expandafter\ltx@firstoftwo
7464 \else
7465 \expandafter\ltx@secondoftwo
7466 \fi
7467 {%
7468 \expandafter\hyper@@anchor\expandafter{%
7469 \Hy@footnote@currentHref
7470 }{\ignorespaces #1}%
7471 }{%
7472 \Hy@raisedlink{%
7473 \expandafter\hyper@@anchor\expandafter{%
7474 \Hy@footnote@currentHref
7475 }{\relax}%
7476 }%
7477 \let\@currentHref\Hy@footnote@currentHref
7478 \let\@currentlabelname\@empty
7479 \ignorespaces #1%
7480 }%
7481 }%
7482 }%

```

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.

```

7483 \def\@footnotemark{%
7484 \leavevmode
7485 \ifhmode\edef\@x@sf{\the\spacefactor}\nobreak\fi
7486 \stepcounter{Hfootnote}%
7487 \global\let\Hy@saved@currentHref\@currentHref
7488 \hyper@makecurrent{Hfootnote}%
7489 \global\let\Hy@footnote@currentHref\@currentHref
7490 \global\let\@currentHref\Hy@saved@currentHref
7491 \hyper@linkstart{link}{\Hy@footnote@currentHref}%
7492 \@makefnmark
7493 \hyper@linkend
7494 \ifhmode\spacefactor\@x@sf\fi
7495 \relax
7496 }%

```

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

```

7497 \@ifpackageloaded{tabularx}{%
7498   \let\HyOrg@TX@endtabularx\TX@endtabularx
7499   \def\Hy@tabularx@hook{%
7500     \let\@footnotetext\H@@footnotetext
7501     \let\@footnotemark\H@@footnotemark
7502     \let\@mpfootnotetext\H@@mpfootnotetext
7503   }%
7504   \begingroup
7505     \toks@\expandafter{\TX@endtabularx}%
7506     \xdef\Hy@gtemp{%
7507       \noexpand\Hy@tabularx@hook
7508       \the\toks@
7509     }%
7510   \endgroup
7511   \let\TX@endtabularx\Hy@gtemp
7512 }{}%

```

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

```

7513 \@ifpackageloaded{longtable}{%
7514   \CheckCommand{\LT@p@ftntext}[1]{%
7515     \edef\@tempa{%
7516       \the\LT@p@ftn
7517       \noexpand\footnotetext[\the\c@footnote]%
7518     }%
7519     \global\LT@p@ftn\expandafter{\@tempa{#1}}%
7520   }%
7521   \long\def\LT@p@ftntext#1{%
7522     \edef\@tempa{%
7523       \the\LT@p@ftn
7524     }%
7525     \begingroup
7526       \noexpand\c@footnote=\the\c@footnote\relax
7527       \noexpand\protected\xdef\noexpand\@thefnmark{%
7528         \noexpand\thempfn
7529       }%
7530       \noexpand\Hy@LT@footnotetext{%
7531         \Hy@footnote@currentHref
7532       }%
7533       \global\LT@p@ftn\expandafter{%
7534         \@tempa{#1}%
7535       }%
7536     \endgroup
7537   }%
7538   \long\def\Hy@LT@footnotetext#1#2{%
7539     \H@@@footnotetext{%
7540       \ifHy@nesting
7541         \hyper@@@anchor{#1}{#2}%
7542       \else
7543         \Hy@raisedlink{%
7544           \hyper@@@anchor{#1}{\relax}%
7545         }%

```



```

7546     \def\@currentHref{#1}%
7547     \let\@currentlabelname\@empty
7548     #2%
7549     \fi
7550 }%
7551 }%
7552 }{}%

```

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

```

7553 \@ifpackageloaded{fancyvrb}{%
7554   \def\V@@footnotetext{%
7555     \insert\footins\bgroup
7556     \csname reset@font\endcsname
7557     \footnotesize
7558     \interlinepenalty\interfootnotelinepenalty
7559     \splittopskip\footnotesep
7560     \splitmaxdepth\dp\strutbox
7561     \floatingpenalty \@MM
7562     \hsize\columnwidth
7563     \@parboxrestore
7564     \def\@currentcounter{footnote}%
7565     \protected@edef\@currentlabel{\csname p@footnote\endcsname\@thefn-
mark}%
7566     \@makefnmark{}%
7567     \rule{\z@}{\footnotesep}%
7568     \bgroup
7569     \aftergroup\V@@@footnotetext
7570     \Hy@raisedlink{%
7571       \expandafter\hyper@@anchor\expandafter{%
7572         \Hy@footnote@currentHref
7573       }\relax}%
7574     }%
7575     \let\@currentHref\Hy@footnote@currentHref
7576     \let\@currentlabelname\@empty
7577     \ignorespaces
7578   }%
7579 }{}%

```

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

```

7580 \def\Hy@temp#1{%
7581   \begingroup
7582   \unrestored@protected@xdef\@thefnmark{\ref{#1}}%
7583   \endgroup
7584   \@footnotemark
7585 }%
7586 \ifx\Hy@temp\footref
7587   \def\footref#1{%
7588     \begingroup
7589     \unrestored@protected@xdef\@thefnmark{\ref{#1}}%
7590     \endgroup
7591     \H@@@footnotemark
7592   }%
7593 \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.

```

7594 \let\HyOrg@maketitle\maketitle
7595 \def\maketitle{%
7596   \let\Hy@saved@footnotemark\@footnotemark
7597   \let\Hy@saved@footnotetext\@footnotetext
7598   \let\@footnotemark\H@@footnotemark
7599   \let\@footnotetext\H@@footnotetext
7600   \@ifnextchar[\Hy@maketitle@optarg{% ]
7601     \HyOrg@maketitle
7602     \Hy@maketitle@end
7603   }%
7604 }%
7605 \def\Hy@maketitle@optarg[#1]{%
7606   \HyOrg@maketitle[#1]}%
7607   \Hy@maketitle@end
7608 }%
7609 \def\Hy@maketitle@end{%
7610   \ifx\@footnotemark\H@@footnotemark
7611     \let\@footnotemark\Hy@saved@footnotemark
7612   \fi
7613   \ifx\@footnotetext\H@@footnotetext
7614     \let\@footnotetext\Hy@saved@footnotetext
7615   \fi
7616 }%

```

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

```

7617 \def\realfootnote{%
7618   \@ifnextchar[\@xfootnote%]
7619   {\stepcounter{\@mpfn}%
7620    \protected@xdef\@thefnmark{\thempfn}%
7621    \H@@footnotemark\H@@footnotetext
7622   }%
7623 }%

7624 \fi
7625 }-{}
7626 \Hy@DisableOption{hyperfootnotes}

7627 \</packageEnd>
7628 \< *check>
7629 \checklatex
7630 \checkcommand\def\@xfootnotenext[#1]{%
7631   \begingroup
7632     \csname c@\@mpfn\endcsname #1\relax
7633     \unrestored@protected@xdef\@thefnmark{\thempfn}%
7634   \endgroup
7635   \@footnotetext
7636 }
7637 \checkcommand\def\@xfootnotemark[#1]{%
7638   \begingroup
7639     \c@footnote #1\relax
7640     \unrestored@protected@xdef\@thefnmark{\thefootnote}%

```

```

7641 \endgroup
7642 \@footnotemark
7643 }
7644 \checkcommand\def\@footnotemark{%
7645 \leavevmode
7646 \ifhmode\edef\@xsf{\the\spacefactor}\nobreak\fi
7647 \@makefnmark
7648 \ifhmode\spacefactor\@xsf\fi
7649 \relax
7650 }
7651 </check>
7652 <*packageEnd>

```

35 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.

```

7653 \def\caption{%
7654 \ifx\@captive\@undefined
7655 \latexerror{\noexpand\caption outside float}\@ehd
7656 \expandafter\@gobble
7657 \else
7658 \H@refstepcounter\@captive
7659 \let\Hy@tempa\@caption
7660 \@ifundefined{float@caption}{%
7661 }{%
7662 \expandafter\ifx\csname @float@c@\@captive\endcsname
7663 \float@caption
7664 \let\Hy@tempa\Hy@float@caption
7665 \fi
7666 }%
7667 \expandafter\@firstofone
7668 \fi
7669 {\@dblarg{\Hy@tempa\@captive}}%
7670 }
7671 \long\def\@caption#1[#2]#3{%
7672 \expandafter\ifx\csname if@capstart\endcsname
7673 \csname iftrue\endcsname
7674 \global\let\@currentHref\hc@currentHref
7675 \else
7676 \hyper@makecurrent{\@captive}%
7677 \fi
7678 \@ifundefined{NR@gettitle}{%
7679 \def\@currentlabelname{#2}%
7680 }{%
7681 \NR@gettitle{#2}%
7682 }%
7683 \par\addcontentsline{\csname ext@#1\endcsname}{#1}{%
7684 \protect\numberline{\csname the#1\endcsname}{\ignorespaces #2}%
7685 }%
7686 \begingroup
7687 \@parboxrestore
7688 \if@minipage

```

```

7689 \setminipage
7690 \fi
7691 \normalsize
7692 \expandafter\ifx\csname if@capstart\expandafter\endcsname
7693 \csname iftrue\endcsname
7694 \global\@capstartfalse
7695 \@makecaption{\csname fnum@#1\endcsname}{\ignorespaces#3}%
7696 \else
7697 \@makecaption{\csname fnum@#1\endcsname}{%
7698 \ignorespaces

```

If we cannot have nesting, the anchor is empty.

```

7699 \ifHy@nesting
7700 \expandafter\hyper@@anchor\expandafter{\@currentHref}{#3}%
7701 \else
7702 \Hy@raisedlink{%
7703 \expandafter\hyper@@anchor\expandafter{%
7704 \@currentHref
7705 }{\relax}%
7706 }%
7707 #3%
7708 \fi
7709 }%
7710 \fi
7711 \par
7712 \endgroup
7713 }

```

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’.

```

7714 \let\Hy@float@caption\@caption
7715 \newcommand{\HyNew@float@makebox}[1]{%
7716 \HyOrg@float@makebox{%
7717 #1\relax
7718 \ifx\Hy@float@currentHref\@undefined
7719 \else
7720 \expandafter\hyper@@anchor\expandafter{%
7721 \Hy@float@currentHref
7722 }{\relax}%
7723 \global\let\Hy@float@currentHref\@undefined
7724 \fi
7725 }%
7726 }%
7727 \@ifpackageloaded{float}{%
7728 \def\Hy@float@caption{%
7729 \ifx\Hy@float@currentHref\@undefined
7730 \hyper@makecurrent{\@captype}%
7731 \global\let\Hy@float@currentHref\@currentHref
7732 \else
7733 \let\@currentHref\Hy@float@currentHref
7734 \fi
7735 \float@caption

```

```

7736 }%
7737 \let\HyOrg@float@makebox\float@makebox
7738 \let\float@makebox\HyNew@float@makebox
7739 }{}

7740 </packageEnd>
7741 <*check>
7742 \checklatex[1999/06/01 - 2000/06/01]
7743 \checkcommand\def\caption{%
7744   \ifx\@captive\@undefined
7745     \@latex@error{\noexpand\caption outside float}\@ehd
7746     \expandafter\@gobble
7747   \else
7748     \refstepcounter\@captive
7749     \expandafter\@firstofone
7750   \fi
7751   {\@dblarg{\@caption\@captive}}}%
7752 }
7753 \checkcommand\long\def\@caption#1[#2]#3{%
7754   \par
7755   \addcontentsline{\csname ext@#1\endcsname}{#1}{%
7756     \protect\numberline{\csname the#1\endcsname}{\ignorespaces #2}%
7757   }%
7758   \begingroup
7759     \@parboxrestore
7760     \if@minipage
7761       \setminipage
7762     \fi
7763     \normalsize
7764     \@makecaption{\csname fnum@#1\endcsname}{\ignorespaces #3}\par
7765   \endgroup
7766 }
7767 </check>
7768 <*packageEnd>

```

36 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, let's 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.

```

7769 \def\hyper@natlinkstart#1{%
7770   \Hy@backout{#1}%
7771   \hyper@linkstart{cite}{cite.#1}%
7772   \def\hyper@nat@current{#1}%
7773 }
7774 \def\hyper@natlinkend{%
7775   \hyper@linkend
7776 }

```

```

7777 \def\hyper@natlinkbreak#1#2{%
7778 \hyper@linkend#1\hyper@linkstart{cite}{cite.#2}%
7779 }
7780 \def\hyper@natanchorstart#1{%
7781 \Hy@raisedlink{\hyper@anchorstart{cite.#1}}%
7782 }
7783 \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.

```

7784 \let\IfUndefined{NAT@parse}{%
7785 \providecommand*\@extra@binfo{}%
7786 \providecommand*\@extra@b@citeb{}%
7787 \def\bibcite#1#2{%
7788 \@newl@bel{b}{#1\@extra@binfo}{%
7789 \hyper@link{cite}{cite.#1\@extra@b@citeb}{#2}%
7790 }%
7791 }%
7792 \gdef\@extra@binfo{}%

```

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

```

7793 \let\Hy@bibcite\bibcite
7794 \begingroup
7795 \@ifundefined{bbl@cite@choice}{}{%
7796 \g@addto@macro\bbl@cite@choice{%
7797 \let\bibcite\Hy@bibcite
7798 }%
7799 }%
7800 \endgroup

```

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

```

7801 \providecommand*\@BIBLABEL{\@biblabel}%
7802 \def\@bibitem[#1]#2{%
7803 \@skiphyperrtrue
7804 \H@item{%
7805 \ifx\Hy@raisedlink\@empty
7806 \hyper@anchorstart{cite.#2\@extra@b@citeb}%
7807 \@BIBLABEL{#1}%
7808 \hyper@anchorend
7809 \else
7810 \Hy@raisedlink{%
7811 \hyper@anchorstart{cite.#2\@extra@b@citeb}\hyper@anchorend
7812 }%
7813 \@BIBLABEL{#1}%
7814 \fi
7815 \hfill
7816 ]%
7817 \@skiphyperrfalse
7818 \if@filesw
7819 \begingroup
7820 \let\protect\noexpand
7821 \immediate\write\@auxout{%

```

```

7822     \string\bibcite{#2}{#1}%
7823 }%
7824 \endgroup
7825 \fi
7826 \ignorespaces
7827 }%

```

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

```

7828 \def\@bibitem#1{%
7829   \@skiphyperreftrue\H@item\@skiphyperreffalse
7830   \Hy@raisedlink{%
7831     \hyper@anchorstart{cite.#1\@extra@b@citeb}\relax\hyper@anchorend
7832   }%
7833   \if@filesw
7834     \begingroup
7835     \let\protect\noexpand
7836     \immediate\write\@auxout{%
7837       \string\bibcite{#1}{\the\value{\@listctr}}}%
7838     }%
7839   \endgroup
7840   \fi
7841   \ignorespaces
7842 }%
7843 }{}

7844 </packageEnd>
7845 <*check>
7846 \checklatex
7847 \checkcommand\def\@lbibitem[#1]#2{%
7848   \item[\@biblabel{#1}\hfill]%
7849   \if@filesw
7850     {%
7851       \let\protect\noexpand
7852       \immediate\write\@auxout{%
7853         \string\bibcite{#2}{#1}%
7854       }%
7855     }%
7856   \fi
7857   \ignorespaces
7858 }
7859 \checkcommand\def\@bibitem#1{%
7860   \item
7861   \if@filesw
7862     \immediate\write\@auxout{%
7863       \string\bibcite{#1}{\the\value{\@listctr}}}%
7864     }%
7865   \fi
7866   \ignorespaces
7867 }
7868 </check>
7869 <*packageEnd>

```

36.1 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.

```

7870 \ifpackageloaded{harvard}{%
7871   \Hy@AtBeginDocument{%
7872     \Hy@Info{*** compatibility with harvard **** }%
7873     \Hy@raiselinksfalse
7874     \def\harvardcite#1#2#3#4{%
7875       \global\@namedef{HAR@fn@#1}{\hyper@link[cite]{}{cite.#1}{#2}}%
7876       \global\@namedef{HAR@an@#1}{\hyper@link[cite]{}{cite.#1}{#3}}%
7877       \global\@namedef{HAR@yr@#1}{\hyper@link[cite]{}{cite.#1}{#4}}%
7878       \global\@namedef{HAR@df@#1}{\cename HAR@fn@#1\endcename}%
7879     }%
7880     \def\HAR@citetoaux#1{%
7881       \if@filesw\immediate\write\@auxout{\string\citation{#1}}\fi%
7882       \ifHy@backref
7883         \ifx\@empty\@currentlabel
7884           \else
7885             \@bsphack
7886             \if@filesw
7887               \protected@write\@auxout{}{%
7888                 \string\@writefile{brf}{%
7889                   \string\backcite{#1}{%
7890                     {thepage}{\@currentlabel}{\@currentHref}%
7891                   }%
7892                 }%
7893               }%
7894             \fi
7895             \@esphack
7896           \fi
7897         \fi
7898       }%
7899       \def\harvarditem{%
7900         \@ifnextchar[{\@harvarditem}{\@harvarditem[\null]}%
7901       }%
7902       \def\@harvarditem[#1]#2#3#4#5\par{%
7903         \item[]%
7904         \hyper@anchorstart{cite.#4}\relax\hyper@anchorend
7905         \if@filesw
7906           \begingroup
7907             \def\protect##1{\string ##1\space}%
7908             \ifthenelse{\equal{#1}{\null}}{%
7909               {\def\next{{#4}{#2}{#2}{#3}}}%
7910               {\def\next{{#4}{#2}{#1}{#3}}}%
7911             \immediate\write\@auxout{\string\harvardcite\codeof\next}%
7912           \endgroup
7913         \fi
7914         \protect\hspace*{-\labelwidth}%

```



```

7915 \protect\hspace*{-\labelsep}%
7916 \ignorespaces
7917 #5%
7918 \ifHy@backref
7919 \newblock
7920 \backref{\csname br@#4\endcsname}%
7921 \fi
7922 \par
7923 }%

```

`\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`:

```

7924 \long\def\HAR@checkcitations#1#2#3#4{%
7925 \def\HAR@tempa{\hyper@@link[cite]{\cite.#1}{#2}}%
7926 \expandafter\ifx\csname HAR@fn@#1\endcsname\HAR@tempa
7927 \def\HAR@tempa{\hyper@@link[cite]{\cite.#1}{#3}}%
7928 \expandafter\ifx\csname HAR@an@#1\endcsname\HAR@tempa
7929 \def\HAR@tempa{\hyper@@link[cite]{\cite.#1}{#4}}%
7930 \expandafter\ifx\csname HAR@yr@#1\endcsname\HAR@tempa
7931 \else
7932 \@tempswattrue
7933 \fi
7934 \else
7935 \@tempswattrue
7936 \fi
7937 \else
7938 \@tempswattrue
7939 \fi
7940 }%
7941 }%
7942 }{}

```

36.2 Package chicago

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

```

7943 \@ifpackageloaded{chicago}{%

```

`\citeN`

```

7944 \def\citeN{%
7945 \def\@citesep{-1000}%
7946 \def\@cite##1##2{##1}%
7947 \def\citeauthoryear##1##2##3{##1 (##3\@cite@opt)}%
7948 \@citedata@opt
7949 }%

```

`\shortciteN`

```

7950 \def\shortciteN{%
7951 \def\@citesep{-1000}%
7952 \def\@cite##1##2{##1}%
7953 \def\citeauthoryear##1##2##3{##2 (##3\@cite@opt)}%
7954 \@citedata@opt
7955 }%

```

\@citedata@opt

```
7956 \def\@citedata@opt{%
7957   \let\@cite@opt\@empty
7958   \@ifnextchar [{%
7959     \@tempswatrue
7960     \@citedatax@opt
7961   }{%
7962     \@tempswafalse
7963     \@citedatax[]%
7964   }%
7965 }%
```

\@citedatax@opt

```
7966 \def\@citedatax@opt[#1]{%
7967   \def\@cite@opt{, #1}%
7968   \@citedatax[{#1}]%
7969 }%

7970 }{}
```

37 Page numbers

The last page should not contain a /Dur key, because there is no page after the last page. Therefore at the last page there should be a command `\hypersetup{pdf-pageduration={}}`. This can be set with `\AtEndDocument`, but it can be too late, if the last page is already finished, or too early, if lots of float pages will follow. Therefore currently nothing is done by hyperref.

This where we supply a destination for each page.

```
7971 \ltx@ifclassloaded{slides}{%
7972   \def\Hy@SlidesFormatOptionalPage#1{(#1)}%
7973   \def\Hy@PageAnchorSlidesPlain{%
7974     \advance\c@page\ltx@one
7975     \edef\Hy@TempPageAnchor{%
7976       \noexpand\hyper@@anchor{%
7977         page.\the\c@slide.\the\c@overlay.\the\c@note%
7978         \ifnum\c@page=\ltx@one
7979           \else
7980             .\the\c@page
7981           \fi
7982         }%
7983       }%
7984       \advance\c@page-\ltx@one
7985     }%
7986     \def\Hy@PageAnchorSlide{%
7987       \advance\c@page\ltx@one
7988       \ifnum\c@page>\ltx@one
7989         \ltx@ifundefined{theHpage}{%
7990           \protected@edef\Hy@TheSlideOptionalPage{%
7991             \Hy@SlidesFormatOptionalPage{\theHpage}%
7992           }%
7993         }{%
7994           \protected@edef\Hy@TheSlideOptionalPage{%
```

```

7995     \Hy@SlidesFormatOptionalPage{\theHpage}%
7996     }%
7997     }%
7998     \else
7999     \def\Hy@TheSlideOptionalPage{%
8000     \fi
8001     \advance\c@page-\ltx@one
8002     \pdfstringdef\@the@H@page{%
8003     \csname
8004     the%
8005     \ltx@ifundefined{theH\Hy@SlidesPage}{H}%
8006     \Hy@SlidesPage
8007     \endcsname
8008     \Hy@TheSlideOptionalPage
8009     }%
8010     \ltx@gobblethree
8011     }%
8012     \def\Hy@SlidesPage{slide}%
8013     \g@addto@macro\slide{%
8014     \def\Hy@SlidesPage{slide}%
8015     }%
8016     \g@addto@macro\overlay{%
8017     \def\Hy@SlidesPage{overlay}%
8018     }%
8019     \g@addto@macro\note{%
8020     \def\Hy@SlidesPage{note}%
8021     }%
8022     }{%
8023     \def\Hy@PageAnchorSlidesPlain{%
8024     \def\Hy@PageAnchorSlide{%
8025     }
8026     \def\Hy@EveryPageAnchor{%
8027     \Hy@DistillerDestFix
8028     \ifHy@pageanchor
8029     \ifHy@hypertextnames
8030     \ifHy@plainpages
8031     \def\Hy@TempPageAnchor{\hyper@@anchor{page.\the\c@page}}%
8032     \Hy@PageAnchorSlidesPlain
8033     \else
8034     \begingroup
8035     \let\@number\@firstofone
8036     \Hy@unicodedefalse
8037     \Hy@PageAnchorSlide
8038     \pdfstringdef\@the@H@page{\theH@page}%
8039     \endgroup
8040     \EdefUnescapeString\@the@H@page{\@the@H@page}%
8041     \def\Hy@TempPageAnchor{\hyper@@anchor{page.\@the@H@page}}%
8042     \fi
8043     \else
8044     \Hy@GlobalStepCount\Hy@pagecounter
8045     \def\Hy@TempPageAnchor{%
8046     \hyper@@anchor{page.\the\Hy@pagecounter}%
8047     }%
8048     \fi

```

```

8049 \vbox to 0pt{%
8050 \kern\voffset
8051 \kern\topmargin
8052 \kern-1bp\relax
8053 \hbox to 0pt{%
8054 \kern\hoffset
8055 \kern\ifodd\value{page}%
8056 \oddsidemargin
8057 \else
8058 \evensidemargin
8059 \fi
8060 \kern-1bp\relax
8061 \Hy@TempPageAnchor\relax
8062 \hss
8063 }%
8064 \vss
8065 }%
8066 \fi
8067 }
8068 \g@addto@macro\Hy@EveryPageBoxHook{%
8069 \Hy@EveryPageAnchor
8070 }

```

38 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.

```

8071 \providecommand\protected@file@percent{}
8072 \def\addcontentsline#1#2#3{% toc extension, type, tag
8073 \begingroup
8074 \let\label\@gobble
8075 \ifx\@currentHref\@empty
8076 \Hy@Warning{%
8077 No destination for bookmark of \string\addcontentsline,%
8078 \MessageBreak destination is added%
8079 }%
8080 \phantomsection
8081 \fi
8082 \expandafter\ifx\csname toplevel@#2\endcsname\relax
8083 \begingroup
8084 \def\Hy@tempa{#1}%
8085 \ifx\Hy@tempa\Hy@bookmarkstype
8086 \Hy@WarningNoLine{%
8087 bookmark level for unknown #2 defaults to 0%
8088 }%
8089 \else
8090 \Hy@Info{bookmark level for unknown #2 defaults to 0}%
8091 \fi
8092 \endgroup

```

```

8093 \expandafter\gdef\csname toplevel@#2\endcsname{0}%
8094 \fi
8095 \edef\Hy@toplevel{\csname toplevel@#2\endcsname}%
8096 \Hy@writebookmark{\csname the#2\endcsname}%
8097   {#3}%
8098   {\@currentHref}%
8099   {\Hy@toplevel}%
8100   {#1}%
8101 \ifHy@verbose
8102 \begingroup
8103 \def\Hy@tempa{#3}%
8104 \@onelevel@sanitize\Hy@tempa
8105 \let\temp@online\on@line
8106 \let\on@line\@empty
8107 \Hy@Info{%
8108   bookmark\temp@online:\MessageBreak
8109   thecounter {\csname the#2\endcsname}\MessageBreak
8110   text {\Hy@tempa}\MessageBreak
8111   reference {\@currentHref}\MessageBreak
8112   toplevel {\Hy@toplevel}\MessageBreak
8113   type {#1}%
8114 }%
8115 \endgroup
8116 \fi
8117 \addtocontents{#1}{%
8118 \protect\contentsline{#2}{#3}{\thepage}{\@currentHref}\protected@file@per-
cent
8119 }%
8120 \endgroup
8121 }

```

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

```

8122 \def\contentsline#1#2#3#4{%
8123 \begingroup
8124 \Hy@safe@activetrue
8125 \edef\x{\endgroup
8126 \def\noexpand\Hy@tocdestname{#4}%
8127 }\x
8128 \ifx\Hy@tocdestname\ltx@empty
8129 \csname l@#1\endcsname{#2}{#3}%
8130 \else
8131 \ifcase\Hy@linktoc % none
8132 \csname l@#1\endcsname{#2}{#3}%
8133 \or % section
8134 \csname l@#1\endcsname{%
8135 \hyper@linkstart{link}{\Hy@tocdestname}{#2}\hyper@linkend
8136 }{#3}%
8137 \or % page
8138 \def\Hy@temp{#3}%
8139 \ifx\Hy@temp\ltx@empty
8140 \csname l@#1\endcsname{#2}{#3}%
8141 \else
8142 \csname l@#1\endcsname{{#2}}{%

```

```

8143     \hyper@linkstart{link}{\Hy@tocdestname}{#3}\hyper@linkend
8144   }%
8145   \fi
8146   \else % all
8147     \def\Hy@temp{#3}%
8148     \ifx\Hy@temp\ltx@empty
8149       \csname l@#1\endcsname{%
8150         \hyper@linkstart{link}{\Hy@tocdestname}{#2}\hyper@linkend
8151       }{}%
8152     \else
8153       \csname l@#1\endcsname{%
8154         \hyper@linkstart{link}{\Hy@tocdestname}{#2}\hyper@linkend
8155       }{}%
8156       \hyper@linkstart{link}{\Hy@tocdestname}{#3}\hyper@linkend
8157     }%
8158   \fi
8159 \fi
8160 \fi
8161 }

8162 \</packageEnd>
8163 \< *check>
8164 \checklatex
8165 \checkcommand\def\addcontentsline#1#2#3{%
8166   \addtocontents{#1}{\protect\contentsline{#2}{#3}{\thepage}}}%
8167 }
8168 \checkcommand\def\contentsline#1{\csname l@#1\endcsname}
8169 \</check>
8170 \< *packageEnd>

```

39 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.

```

8171 \let\H@definecounter\@definecounter
8172 \def\@definecounter#1{%
8173   \H@definecounter{#1}%
8174   \expandafter\gdef\csname theH#1\endcsname{\arabic{#1}}%
8175 }

```

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.

```

8176 \let\H@newctr\@newctr
8177 \def\@newctr#1[#2]{%
8178   \H@newctr#1[{#2}]%
8179   \expandafter\gdef\csname theH#1\endcsname{%
8180     \csname the\@ifundefined{theH#2}{H}{H}#2\endcsname.\arabic{#1}%
8181   }%
8182 }

```

40 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.

```

8183 \ifpackageloaded{amsmath}{%
8184   \def\Hy@make@anchor{%
8185     \Hy@MakeCurrentHrefAuto{AMS}%
8186     \Hy@raisedlink{\hyper@anchorstart{\@currentHref}\hyper@anchorend}%
8187   }%
8188   \def\Hy@make@df@tag@#1{%
8189     \gdef\df@tag{%
8190       \maketag@@@{\Hy@make@anchor#1}%
8191       \def\@currentlabel{#1}%
8192     }%
8193   }%
8194   \def\Hy@make@df@tag@@#1{%
8195     \gdef\df@tag{%
8196       \tagform@{\Hy@make@anchor#1}%
8197       \toks@{\exp{\p@equation{#1}}}%
8198       \edef\@currentlabel{\the\toks@}%
8199     }%
8200   }%
8201   \let\HyOrg@make@df@tag@@\make@df@tag@@
8202   \let\HyOrg@make@df@tag@@@\make@df@tag@@@
8203   \let\make@df@tag@@\Hy@make@df@tag@@
8204   \let\make@df@tag@@@\Hy@make@df@tag@@@
8205 }{}

```

Only play with `\seteqlebal` if we are using pdf \TeX . Other drivers cause problems; requested by Michael Downes (AMS).

```

8206 \ifpackagewith{hyperref}{pdf $\text{\TeX}$ }{%
8207   \let\H@seteqlabel\@seteqlabel
8208   \def\@seteqlabel#1{%
8209     \H@seteqlabel{#1}%
8210     \xdef\@currentHref{AMS.\the\Hy@linkcounter}%
8211     \Hy@raisedlink{%
8212       \hyper@anchorstart{\@currentHref}\hyper@anchorend
8213     }%
8214   }%
8215 }{}

```

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}}}

```

40.1 \@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.

```

8216 \let\HyOrg@addtoreset\@addtoreset
8217 \def\@addtoreset#1#2{%
8218   \HyOrg@addtoreset{#1}{#2}%
8219   \expandafter\xdef\csname theH#1\endcsname{%
8220     \expandafter\noexpand
8221       \csname the\@ifundefined{theH#2}{ }H#2\endcsname
8222     .\noexpand\the\noexpand\value{#1}%
8223   }%
8224 }
```

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

```

8225 \</packageEnd>
8226 \*check>
8227 \checkpackage{amsmath}[1999/12/14 - 2000/06/06]
8228 \checkcommand\newcommand{\numberwithin}[3][\arabic]{%
8229   \@ifundefined{c@#2}{\@nocounterr{#2}}{%
8230     \@ifundefined{c@#3}{\@nocnterr{#3}}{%
8231       \@addtoreset{#2}{#3}%
8232       \@xp\xdef\csname the#2\endcsname{%
8233         \@xp\@nx\csname the#3\endcsname .\@nx#1{#2}%
8234       }%
8235     }%
8236   }%
8237 }%
8238 \</check>
8239 \*packageEnd>
8240 \@ifpackageloaded{amsmath}{%
8241   \renewcommand*\numberwithin[3][\arabic]{%
8242     \@ifundefined{c@#2}{\@nocounterr{#2}}{%
8243       \@ifundefined{c@#3}{\@nocnterr{#3}}{%
8244         \HyOrg@addtoreset{#2}{#3}%
8245         \@xp\xdef\csname the#2\endcsname{%
8246           \@xp\@nx\csname the#3\endcsname .\@nx#1{#2}%
8247         }%
8248         \@xp\xdef\csname theH#2\endcsname{%
8249           \@xp\@nx
8250           \csname the\@ifundefined{theH#3}{ }H#3\endcsname
8251           .\@nx#1{#2}%
8252         }%
8253       }%
8254     }%
8255   }%
8256 }
```


41 Included figures

Simply intercept the low level graphics package macro.

```

8257 \ifHy@hyperfigures
8258   \let\Hy@Gin@setfile\Gin@setfile
8259   \def\Gin@setfile#1#2#3{%
8260     \hyperimage{#3}{\Hy@Gin@setfile{#1}{#2}{#3}}%
8261   }%
8262 \fi
8263 \Hy@DisableOption{hyperfigures}

```

42 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.

```

8264 \ifHy@hyperindex
8265   \def\HyInd@ParenLeft{({}%
8266   \def\HyInd@ParenRight{)}}%
8267   \def\hyperindexformat#1#2{%
8268     \let\HyOrg@hyperpage\hyperpage
8269     \let\hyperpage\@firstofone
8270     #1{\HyOrg@hyperpage{#2}}%
8271     \let\hyperpage\HyOrg@hyperpage
8272   }%
8273   \Hy@nextfalse
8274   \@ifpackageloaded{multind}{\Hy@nexttrue}{}%
8275   \@ifpackageloaded{index}{\Hy@nexttrue}{}%
8276   \@ifpackageloaded{amsmidx}{\Hy@nexttrue}{}%
8277   \begingroup
8278     \lccode`|=\expandafter`\HyInd@EncapChar\relax
8279     \lccode`\/=\`\\\relax
8280   \lowercase{\endgroup
8281     \ifHy@next
8282       \let\HyInd@org@wrindex\@wrindex
8283       \def\@wrindex#1#2{\HyInd@@wrindex{#1}{#2|}}}%
8284       \def\HyInd@@wrindex#1#2|#3|#4\\{%
8285         \ifx\\#3\\%
8286           \HyInd@org@wrindex{#1}{#2|hyperpage}%
8287         \else
8288           \HyInd@@@wrindex{#1}{#2}{#3}\\%
8289         \fi
8290       }%
8291       \def\HyInd@@@wrindex#1#2#3#4\\{%
8292         \def\Hy@temp@A{#3}%
8293         \ifcase0\ifx\Hy@temp@A\HyInd@ParenLeft 1\fi

```

```

8294         \ifx\Hy@temp@A\HyInd@ParenRight 1\fi
8295         \relax
8296         \HyInd@org@wrindex{#1}{%
8297             #2|hyperindexformat{/#3#4}%
8298         }%
8299     \else
8300         \ifx\#4\%
8301             \ifx\Hy@temp@A\HyInd@ParenRight
8302                 \HyInd@org@wrindex{#1}{#2|#3}%
8303             \else
8304                 \HyInd@org@wrindex{#1}{#2|#3hyperpage}%
8305             \fi
8306         \else
8307             \HyInd@org@wrindex{#1}{%
8308                 #2|#3hyperindexformat{/#4}%
8309             }%
8310         \fi
8311     \fi
8312 }%
8313 \else
8314     \def\@wrindex#1{\@wrindex#1||\}%
8315     \def\@wrindex#1|#2|#3\{\%
8316         \if@filesw
8317             \ifx\#2\%
8318                 \protected@write\@indexfile{\%
8319                     \string\indexentry{#1|hyperpage}{\thepage}%
8320                 }%
8321             \else
8322                 \HyInd@@@wrindex{#1}#2\%
8323             \fi
8324         \fi
8325     \endgroup
8326     \@esphack
8327 }%
8328 \def\HyInd@@@wrindex#1#2#3\{\%
8329     \def\Hy@temp@A{#2}%
8330     \ifcase0\ifx\Hy@temp@A\HyInd@ParenLeft 1\fi
8331         \ifx\Hy@temp@A\HyInd@ParenRight 1\fi
8332         \relax
8333     \protected@write\@indexfile{\%
8334         \string\indexentry{%
8335             #1|hyperindexformat{/#2#3}%
8336         }{\thepage}%
8337     }%
8338 \else
8339     \ifx\#3\%
8340         \ifx\Hy@temp@A\HyInd@ParenRight
8341             \HyInd@DefKey{#1}%
8342             \ltx@ifundefined{HyInd@(\HyInd@key)}{\%
8343                 \let\Hy@temp\ltx@empty
8344             }{\%
8345                 \expandafter\let\expandafter\Hy@temp
8346                 \csname HyInd@(\HyInd@key)\endcsname
8347             }%

```

```

8348     \protected@write\@indexfile{}\{%
8349         \string\indexentry{#1|#2\Hy@temp}\thepage}%
8350     }%
8351 \else
8352     \protected@write\@indexfile{}\{%
8353         \string\indexentry{#1|#2hyperpage}\thepage}%
8354     }%
8355     \HyInd@DefKey{#1}%
8356     \expandafter
8357     \gdef\csname HyInd@(\HyInd@key)\endcsname{%
8358         hyperpage%
8359     }%
8360 \fi
8361 \else
8362     \protected@write\@indexfile{}\{%
8363         \string\indexentry{%
8364             #1|#2hyperindexformat{/#3}%
8365         }\thepage}%
8366     }%
8367     \ifx\Hy@temp@A\HyInd@ParenLeft
8368         \HyInd@DefKey{#1}%
8369         \expandafter
8370         \gdef\csname HyInd@(\HyInd@key)\endcsname{%
8371             hyperindexformat{/#3}%
8372         }%
8373     \fi
8374 \fi
8375 \fi
8376 }%
8377 \def\HyInd@DefKey#1{%
8378     \begingroup
8379     \let\protect\@unexpandable@protect
8380     \edef\Hy@temp{#1}%
8381     \ltx@onelevel@sanitize\Hy@temp
8382     \global\let\HyInd@key\Hy@temp
8383     \endgroup
8384 }%
8385 \fi
8386 }%
8387 \fi
8388 \Hy@DisableOption{hyperindex}
8389 \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.

```
8390 \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.

```

8391 \def\hyperpage#1{%
8392     \HyInd@hyperpage#1\nohyperpage{}\@nil
8393 }
8394 \def\HyInd@hyperpage#1\nohyperpage#2#3\@nil{%
8395     \HyInd@@hyperpage{#1}%

```

```

8396 #2%
8397 \def\Hy@temp{#3}%
8398 \ifx\Hy@temp\@empty
8399 \else
8400 \ltx@ReturnAfterFi{%
8401 \HyInd@hyperpage#3\@nil
8402 }%
8403 \fi
8404 }
8405 \def\HyInd@@hyperpage#1{\@hyperpage#1---\}
8406 \def\@hyperpage#1--#2--#3\{\{%
8407 \ifx\#2\%
8408 \@commahyperpage{#1}%
8409 \else
8410 \HyInd@pagelink{#1}--\HyInd@pagelink{#2}%
8411 \fi
8412 }
8413 \def\@commahyperpage#1{\@commahyperpage#1, \}
8414 \def\@commahyperpage#1, #2, #3\{\{%
8415 \ifx\#2\%
8416 \HyInd@pagelink{#1}%
8417 \else
8418 \HyInd@pagelink{#1}, \HyInd@pagelink{#2}%
8419 \fi
8420 }

```

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

```

8421 \def\HyInd@pagelink#1{%
8422 \begingroup
8423 \toks@={}%
8424 \HyInd@removespaces#1 \@nil
8425 \endgroup
8426 }
8427 \def\HyInd@removespaces#1 #2\@nil{%
8428 \toks@=\expandafter{\the\toks@#1}%
8429 \ifx\#2\%
8430 \edef\x{\the\toks@}%
8431 \ifx\x\@empty
8432 \else
8433 \hyperlink{page.\the\toks@}{\the\toks@}%
8434 \fi
8435 \else
8436 \ltx@ReturnAfterFi{%
8437 \HyInd@removespaces#2\@nil
8438 }%
8439 \fi
8440 }

```

This breaks `TeX4ht`, so leave it to last. Emend `\@setref` to put out a hypertext link as well as its normal text (which is used as an anchor). (`\endinput` have to be on the same line like `\fi`, or you have to use `\expandafter` before.)

```

8441 \ifHy@texht
8442 \expandafter\endinput
8443 \fi

```

```

8444 \let\real@setref\@setref
8445 \def\@setref#1#2#3{% csname, extract group, refname
8446   \ifx#1\relax
8447     \protect\G@refundefinedtrue
8448     \nfss@text{\reset@font\bfseries ??}%
8449     \@latex@warning{%
8450       Reference `#3' on page \thepage \space undefined%
8451     }%
8452   \else
8453     \expandafter\Hy@setref@link#1\@empty\@empty\@nil{#2}%
8454   \fi
8455 }

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

8456 \def\Hy@setref@link#1#2#3#4#5#6\@nil#7{%
8457   \begingroup
8458   \toks0={\hyper@link{#5}{#4}}%
8459   \toks1=\expandafter{#7{#1}{#2}{#3}{#4}{#5}}%
8460   \edef\x{\endgroup
8461     \the\toks0 {\the\toks1 }%
8462   }%
8463   \x
8464 }

8465 \def\@pagesetref#1#2#3{% csname, extract macro, ref
8466   \ifx#1\relax
8467     \protect\G@refundefinedtrue
8468     \nfss@text{\reset@font\bfseries ??}%
8469     \@latex@warning{%
8470       Reference `#3' on page \thepage \space undefined%
8471     }%
8472   \else
8473     \protect\hyper@@link
8474     {\expandafter\@fifthoffive#1}%
8475     {page.\expandafter\@secondoffive#1}%
8476     {\expandafter\@secondoffive#1}%
8477   \fi
8478 }

8479 </packageEnd>
8480 <*check>
8481 \checklatex
8482 \checkcommand\def\@setref#1#2#3{%
8483   \ifx#1\relax
8484     \protect\G@refundefinedtrue
8485     \nfss@text{\reset@font\bfseries ??}%
8486     \@latex@warning{%
8487       Reference `#3' on page \thepage \space undefined%
8488     }%
8489   \else
8490     \expandafter#2#1\null
8491   \fi
8492 }
8493 </check>
8494 <*packageEnd>

```

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

```

8495 \def\HyRef@StarSetRef#1{%
8496   \begingroup
8497   \Hy@safe@activestrue
8498   \let\protect\@unexpandable@protect
8499   \edef\x{#1}%
8500   \@onelevel@sanitize\x
8501   \edef\x{\endgroup
8502     \noexpand\HyRef@@StarSetRef
8503     \expandafter\noexpand\csname r@\x\endcsname{\x}%
8504   }%
8505   \x
8506 }
8507 \def\HyRef@@StarSetRef#1#2#3{%
8508   \ifx#1\@undefined
8509     \let#1\relax
8510   \fi
8511   \real@setref#1#3{#2}%
8512 }
8513 \def\@refstar#1{%
8514   \HyRef@StarSetRef{#1}\@firstoffive
8515 }
8516 \def\@pagerefstar#1{%
8517   \HyRef@StarSetRef{#1}\@secondoffive
8518 }
8519 \def\@namerefstar#1{%
8520   \HyRef@StarSetRef{#1}\@thirdoffive
8521 }
8522 \def\@Refstar#1{%
8523   \HyRef@StarSetRef{#1}\HyRef@MakeUppercaseFirstOfFive
8524 }%
8525 \def\HyRef@MakeUppercaseFirstOfFive#1#2#3#4#5{%
8526   \MakeUppercase#1%
8527 }%
8528 \def\HyRef@Ref#1{%
8529   \hyperref[{#1}]{\Ref*{#1}}%
8530 }%
8531 \Hy@AtBeginDocument{%
8532   \@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.

```

8533   \@ifundefined{hyper@nopatch@varioref}
8534   {
8535     \renewcommand\Vref@star[2][]{%
8536       \begingroup
8537       \let\T@pageref\@pagerefstar
8538       \Ref*{#2}
8539       \vpageref{#1}{#2}%
8540     \endgroup
8541   }%
8542   \renewcommand\VR@f[2][]{%

```

```

8543 \begingroup
8544 \let\T@pageref\@pagerefstar
8545 \hyperref[#{#2}]{%
8546   \Ref*{#2}
8547   \vpageref[#1]{#2}%
8548 }%
8549 \endgroup
8550 }%
8551 \renewcommand\vr@f[2][]{%
8552 \begingroup
8553   \let\T@pageref\@pagerefstar
8554   \hyperref[#{#2}]{%
8555     \ref*{#2}
8556     \vpageref[#1]{#2}%
8557   }%
8558 \endgroup
8559 }%
8560 \renewcommand\vref@star[2][]{%
8561 \begingroup
8562   \let\T@pageref\@pagerefstar
8563   \ref*{#2}
8564   \vpageref[#1]{#2}%
8565 \endgroup
8566 }%
8567 }{}%
8568 }{}%
8569 }

8570 \DeclareRobustCommand*\autopageref}{%
8571   \@ifstar{%
8572     \HyRef@autopagerefname\pageref*%
8573   }\HyRef@autopageref
8574 }
8575 \def\HyRef@autopageref#1{%
8576   \hyperref[#{#1}]{\HyRef@autopagerefname\pageref*{#1}}%
8577 }
8578 \def\HyRef@autopagerefname{%
8579   \ltx@ifundefined{pageautorefname}{%
8580     \ltx@ifundefined{pagename}{%
8581       \Hy@Warning{No autoref name for `page'}%
8582     }{%
8583       \pagename\nobreakspace
8584     }%
8585   }{}%
8586   \pageautorefname\nobreakspace
8587 }%
8588 }

```

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

```

8589 \NewDocumentCommand\autoref{s}
8590 {
8591   \leavevmode
8592   \IfBooleanTF{#1}{\HyRef@autoref\@gobbletwo}{\HyRef@autoref\hyper@@link}}
8593 \def\HyRef@autoref#1#2{%
8594 \begingroup

```

```

8594 \Hy@safe@activetrue
8595 \expandafter\HyRef@autosetref\csname r@#2\endcsname{#2}{#1}%
8596 \endgroup
8597 }
8598 \def\HyRef@autosetref#1#2#3{% link command, csname, refname
8599 \HyRef@ShowKeysRef{#2}%
8600 \ifcase 0\ifx#1\relax 1\fi\ifx#1\Hy@varioref@undefined 1\fi\relax
8601 \edef\HyRef@thisref{%
8602 \expandafter\@fourthoffive#1\@empty\@empty\@empty
8603 }%
8604 \expandafter\HyRef@testreftype\HyRef@thisref.\.%
8605 \Hy@safe@activesfalse
8606 #3{%
8607 \expandafter\@fifthoffive#1\@empty\@empty\@empty
8608 }{%
8609 \expandafter\@fourthoffive#1\@empty\@empty\@empty
8610 }{%
8611 \HyRef@currentHtag
8612 \expandafter\@firstoffive#1\@empty\@empty\@empty
8613 \null
8614 }%
8615 \else
8616 \protect\G@refundefinedtrue
8617 \nfss@text{\reset@font\bfseries ??}%
8618 \@latex@warning{%
8619 Reference `#2' on page \thepage\space undefined%
8620 }%
8621 \fi
8622 }
8623 \def\HyRef@testreftype#1.#2\.{%
8624 \ltx@ifundefined{#1autorefname}{%
8625 \ltx@ifundefined{#1name}{%
8626 \HyRef@StripStar#1\*\@nil{#1}%
8627 \ltx@ifundefined{\HyRef@name autorefname}{%
8628 \ltx@ifundefined{\HyRef@name name}{%
8629 \def\HyRef@currentHtag{%
8630 \Hy@Warning{No autoref name for `#1'}%
8631 }{%
8632 \edef\HyRef@currentHtag{%
8633 \expandafter\noexpand\csname\HyRef@name name\endcsname
8634 \noexpand~%
8635 }%
8636 }%
8637 }{%
8638 \edef\HyRef@currentHtag{%
8639 \expandafter\noexpand
8640 \csname\HyRef@name autorefname\endcsname
8641 \noexpand~%
8642 }%
8643 }%
8644 }{%
8645 \edef\HyRef@currentHtag{%
8646 \expandafter\noexpand\csname#1name\endcsname
8647 \noexpand~%

```



```

8648 }%
8649 }%
8650 }{%
8651 \edef\HyRef@currentHtag{%
8652 \expandafter\noexpand\csname#1autorefname\endcsname
8653 \noexpand~%
8654 }%
8655 }%
8656 }
8657 \def\HyRef@StripStar#1*\#2\@nil#3{%
8658 \def\HyRef@name{#2}%
8659 \ifx\HyRef@name\HyRef@CaseStar
8660 \def\HyRef@name{#1}%
8661 \else
8662 \def\HyRef@name{#3}%
8663 \fi
8664 }
8665 \def\HyRef@CaseStar{*\\}
8666 \def\HyRef@currentHtag{}

```

Support for package showkeys.

\HyRef@ShowKeysRef

```

8667 \let\HyRef@ShowKeysRef@gobble
8668 \def\HyRef@ShowKeysInit{%
8669 \ifcsname SK@@label\endcsname
8670 \ifx\SK@ref\@empty
8671 \else
8672 \def\HyRef@ShowKeysRef{%
8673 \SK@\SK@\@ref
8674 }%
8675 \fi
8676 \fi
8677 }
8678 \AddToHook{package/showkeys/after}{\HyRef@ShowKeysInit}

```

Defaults for the names that \autoref uses.

```

8679 \providecommand*\AMSautorefname{\equationautorefname}
8680 \providecommand*\Hfootnoteautorefname{\footnoteautorefname}
8681 \providecommand*\Itemautorefname{\itemautorefname}
8682 \providecommand*\itemautorefname{item}
8683 \providecommand*\equationautorefname{Equation}
8684 \providecommand*\footnoteautorefname{footnote}
8685 \providecommand*\itemautorefname{item}
8686 \providecommand*\figureautorefname{Figure}
8687 \providecommand*\tableautorefname{Table}
8688 \providecommand*\partautorefname{Part}
8689 \providecommand*\appendixautorefname{Appendix}
8690 \providecommand*\chapterautorefname{chapter}
8691 \providecommand*\sectionautorefname{section}
8692 \providecommand*\subsectionautorefname{subsection}
8693 \providecommand*\subsubsectionautorefname{subsubsection}
8694 \providecommand*\paragraphautorefname{paragraph}
8695 \providecommand*\subparagraphautorefname{subparagraph}
8696 \providecommand*\FancyVerbLineautorefname{line}

```

```

8697 \providecommand*\theoremautorefname{Theorem}
8698 \providecommand*\pageautorefname{page}
8699 \endpackage

```

43 Configuration files

43.1 PS/PDF strings

Some drivers write PS or PDF strings. These strings are delimited by parentheses, therefore a lonely unmatched parenthesis must be avoided to avoid PS or PDF syntax errors. Also the backslash character itself has to be protected.

`\Hy@pstringdef` Therefore such strings should be passed through `\Hy@pstringdef`. The first argument holds a macro for the result, the second argument is the string that needs protecting. Since version 1.30.0 pdf_T_EX offers `\pdfescapestring`.

```

8700 (*pdfTEX | dvipdfm | xetex | vtex | pdfmarkbase | dviwindo)
8701 \begingroup\expandafter\expandafter\expandafter\endgroup
8702 \expandafter\ifx\csname pdf@escapestring\endcsname\relax
8703 \begingroup
8704 \catcode\| = 0 %
8705 \@makeother\| %
8706 |@firstofone{|endgroup
8707 |def|Hy@pstringdef#1#2{%
8708 |begingroup
8709 |edef~{|string~}%
8710 |xdef|Hy@gtemp{#2}%
8711 |endgroup
8712 |let#1|Hy@gtemp
8713 |@onelevel@sanitize#1%
8714 |edef#1{|expandafter|Hy@ExchangeBackslash#1|@nil}%
8715 |edef#1{|expandafter|Hy@ExchangeLeftParenthesis#1(|@nil}%
8716 |edef#1{|expandafter|Hy@ExchangeRightParenthesis#1)|@nil}%
8717 }%
8718 |def|Hy@ExchangeBackslash#1\#2|@nil{%
8719 #1%
8720 |ifx|\#2|\%
8721 |else
8722 \\\%
8723 |ltx@ReturnAfterFi{%
8724 |Hy@ExchangeBackslash#2|@nil
8725 }%
8726 |fi
8727 }%
8728 }%
8729 \def\Hy@ExchangeLeftParenthesis#1(#2\@nil{%
8730 #1%
8731 \ifx\#2\%
8732 \else
8733 \@backslashchar(%
8734 \ltx@ReturnAfterFi{%
8735 \Hy@ExchangeLeftParenthesis#2\@nil
8736 }%

```

```

8737 \fi
8738 }%
8739 \def\Hy@ExchangeRightParenthesis#1)#2\@nil{%
8740   #1%
8741   \ifx\#2\%
8742   \else
8743     \@backslashchar)%
8744     \ltx@ReturnAfterFi{%
8745       \Hy@ExchangeRightParenthesis#2\@nil
8746     }%
8747   \fi
8748 }%
8749 \else
8750 \def\Hy@pstringdef#1#2{%
8751   \begingroup
8752     \edef~{\string~}%
8753     \xdef\Hy@gtemp{\pdf@escapestring{#2}}%
8754   \endgroup
8755   \let#1\Hy@gtemp
8756 }%
8757 \fi
8758 </pdfTeX | dvipdfm | xetex | vtex | pdfmarkbase | dviwindo>

```

43.2 pdfTeX

```

8759 <*pdfTeX>
8760 \providecommand*\XR@ext}{pdf}
8761 \Hy@setbreaklinks{true}
8762 \def\HyPat@ObjRef{%
8763   [0-9]*[1-9][0-9]* 0 R%
8764 }

```

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`

```

8765 \def\Hy@pdfminorversion{\pdfoptionpdfminorversion}%
8766 \def\Hy@pdfminorversion{\pdfminorversion}%
8767 \ifHy@ocgcolorlinks
8768   \ifnum\Hy@pdfmajorminor@version<105 %
8769     \kvsetkeys{Hyp}{pdfversion=1.5}%
8770   \fi
8771 \fi
8772 \ifHy@setpdfversion
8773   \ifnum\Hy@pdf@majorminor@version<105 %
8774     \ltx@ifundefined{pdfobjcompresslevel}{%
8775     }{%
8776       \ifHy@verbose
8777         \Hy@InfoNoLine{%
8778           PDF object streams are disabled, because they are%
8779           \MessageBreak

```

```

8780         not supported in requested PDF version %
8781         \Hy@pdf@majorversion.\Hy@pdf@minorversion
8782     }%
8783 \fi
8784 \pdfobjcompresslevel=\ltx@zero
8785 }%
8786 \fi
8787 \ifnum\Hy@pdfmajorminor@version=\Hy@pdf@majorminor@version\relax
8788 \else
8789 \let\Hy@temp\ltx@empty
8790 \def\Hy@temp@A#1#2{%
8791 \ifnum#1>\ltx@zero
8792 \edef\Hy@temp{%
8793 \Hy@temp
8794 \space\space
8795 \the#1\space #2%
8796 \ifnum#1=\ltx@one\else s\fi
8797 \MessageBreak
8798 }%
8799 \fi
8800 }%
8801 \Hy@temp@A\pdflastobj{PDF object}%
8802 \Hy@temp@A\pdflastxform{form XObject}%
8803 \Hy@temp@A\pdflastximage{image XObject}%
8804 \Hy@temp@A\pdflastannot{annotation}%
8805 \ltx@ifundefined{pdflastlink}{%
8806 }{%
8807 \Hy@temp@A\pdflastlink{link}%
8808 }%
8809 \ifx\Hy@temp\ltx@empty
8810 \Hy@pdf@majorversion=\Hy@pdf@majorversion\relax
8811 \Hy@pdf@minorversion=\Hy@pdf@minorversion\relax
8812 \else
8813 \let\Hy@temp@A\ltx@empty
8814 \ifnum\Hy@pdf@majorminor@version=104 %
8815 \IfFileExists{pdf14.sty}{%
8816 \def\Hy@temp@A{%
8817 \MessageBreak
8818 Or \string\RequirePackage{pdf14} can be used%
8819 \MessageBreak
8820 before \string\documentclass\space as shortcut%
8821 }%
8822 }{}%
8823 \fi
8824 \Hy@WarningNoLine{%
8825 The PDF version number could not be set,\MessageBreak
8826 because some PDF objects are already written:%
8827 \MessageBreak
8828 \Hy@temp
8829 The version should be set as early as possible:%
8830 \MessageBreak
8831 \space\space
8832 \expandafter\string\Hy@pdf@majorversion=\Hy@pdf@majorversion, %
8833 \expandafter\string\Hy@pdf@minorversion=\Hy@pdf@minorversion

```

```

8834     \string\relax
8835     \ifnum\Hy@pdf@major@minor@version<105 %
8836     \ltx@ifundefined{pdfobjcompresslevel}{%
8837     }{%
8838     \MessageBreak
8839     \space\space
8840     \string\pdfobjcompresslevel=0\string\relax
8841     }%
8842     \fi
8843     \Hy@temp@A
8844     }%
8845     \fi
8846     \fi
8847     \PackageInfo{hyperref}{%
8848     \expandafter\string\Hy@pdf@major@version.%
8849     \expandafter\string\Hy@pdf@minor@version
8850     :=\number\Hy@pdf@major@version.\number\Hy@pdf@minor@version\space
8851     }%
8852     \fi
8853     \edef\Hy@pdf@major@version{\number\Hy@pdf@major@version}%
8854     \edef\Hy@pdf@minor@version{\number\Hy@pdf@minor@version}%
8855     \Hy@DisableOption{pdfversion}%

8856     \ifHy@ocgcolorlinks
8857     \pdf@ifdraftmode{}{%
8858     \immediate\pdfobj{%
8859     <<%
8860     /Type/OCG%
8861     /Name(View)%
8862     /Usage<<%
8863     /Print<<%
8864     /PrintState/OFF%
8865     >>%
8866     /View<<%
8867     /ViewState/ON%
8868     >>%
8869     >>%
8870     >>%
8871     }%
8872     \edef\OBJ@OCG@view{\the\pdf@tobj\space 0 R}%
8873     \immediate\pdfobj{%
8874     <<%
8875     /Type/OCG%
8876     /Name(Print)%
8877     /Usage<<%
8878     /Print<<%
8879     /PrintState/ON%
8880     >>%
8881     /View<<%
8882     /ViewState/OFF%
8883     >>%
8884     >>%
8885     >>%
8886     }%
8887     \edef\OBJ@OCG@print{\the\pdf@tobj\space 0 R}%

```

```

8888 \immediate\pdfobj{%
8889 [%
8890 \OBJ@OCG@view\space\OBJ@OCG@print
8891 ]%
8892 }%
8893 \edef\OBJ@OCGs{\the\pdfastobj\space 0 R}%
8894 \pdfcatalog{%
8895 /OCProperties<<%
8896 /OCGs \OBJ@OCGs
8897 /D<<%
8898 /OFF[\OBJ@OCG@print]%
8899 /AS[%
8900 <<%
8901 /Event/View%
8902 /OCGs \OBJ@OCGs
8903 /Category[/View]%
8904 >>%
8905 <<%
8906 /Event/Print%
8907 /OCGs \OBJ@OCGs
8908 /Category[/Print]%
8909 >>%
8910 <<%
8911 /Event/Export%
8912 /OCGs \OBJ@OCGs
8913 /Category[/Print]%
8914 >>%
8915 ]%
8916 >>%
8917 >>%
8918 }%
8919 \beginngroup
8920 \edef\x{\endgroup
8921 \pdfpageresources{%
8922 \the\pdfpageresources
8923 /Properties<<%
8924 /OCView \OBJ@OCG@view
8925 /OCPrint \OBJ@OCG@print
8926 >>%
8927 }%
8928 }%
8929 \x
8930 }%
8931 \Hy@AtBeginDocument{%
8932 \def\Hy@colorlink#1{%
8933 \beginngroup
8934 \ifHy@ocgcolorlinks
8935 \def\Hy@ocgcolor{#1}%
8936 \setbox0=\hbox\bgroup\color@beginngroup
8937 \else
8938 \HyColor@UseColor#1%
8939 \fi
8940 }%
8941 \def\Hy@endcolorlink{%

```

```

8942 \ifHy@ocgcolorlinks
8943 \color@endgroup\egroup
8944 \mbox{%
8945 \pdfliteral page{/OC/OCPrint BDC}%
8946 \rlap{\copy0}%
8947 \pdfliteral page{EMC/OC/OCView BDC}%
8948 \begingroup
8949 \expandafter\HyColor@UseColor\Hy@ocgcolor
8950 \box0 %
8951 \endgroup
8952 \pdfliteral page{EMC}%
8953 }%
8954 \fi
8955 \endgroup
8956 }%
8957 }%
8958 \else
8959 \Hy@DisableOption{ocgcolorlinks}%
8960 \fi

```

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

```

8961 \def\setpdfinkmargin#1{%
8962 \begingroup
8963 \setlength{\dimen@}{#1}%
8964 \expandafter\endgroup
8965 \expandafter\pdfinkmargin\the\dimen@\relax
8966 }
8967 \pdfinkmargin1pt %

```

First set up the default linking

```
8968 \providecommand*\@pdfview{XYZ}
```

First define the anchors:

```

8969 \Hy@WrapperDef\new@pdfink#1{%
8970 \ifhmode
8971 \@savsf\spacefactor
8972 \fi
8973 \Hy@SaveLastskip
8974 \Hy@VerboseAnchor{#1}%
8975 \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
8976 \Hy@DestName\Hy@pstringDest\@pdfview
8977 \Hy@RestoreLastskip
8978 \ifhmode
8979 \spacefactor\@savsf
8980 \fi
8981 }
8982 \let\pdf@endanchor\@empty

```

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

```

8983 \def\Hy@DestName#1#2{%
8984 \pdfdest name{#1}#2\relax
8985 }

```

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.

```

8986 \providecommand*\pdfborder{0 0 1}
8987 \providecommand*\pdfborderstyle{}
8988 \def\Hy@undefinedname{UNDEFINED}
8989 \def\find@pdfink#1#2{%
8990   \leavevmode
8991   \protected@edef\Hy@testname{#2}%
8992   \ifx\Hy@testname\@empty
8993     \Hy@Warning{%
8994       Empty destination name,\MessageBreak
8995       using '\Hy@undefinedname'%
8996     }%
8997     \let\Hy@testname\Hy@undefinedname
8998   \else
8999     \Hy@pstringdef\Hy@testname{%
9000       \expandafter\HyperDestNameFilter\expandafter{\Hy@testname}%
9001     }%
9002   \fi
9003   \Hy@StartlinkName{%
9004     \ifHy@pdfa /F 4\fi
9005     \Hy@setpdfborder
9006     \Hy@setpdfhighlight
9007     \ifx\CurrentBorderColor\relax
9008       \else
9009         /C[\CurrentBorderColor]%
9010       \fi
9011   }\Hy@testname
9012   \expandafter\Hy@colorlink\csname @#1color\endcsname
9013 }
9014 \def\Hy@StartlinkName#1#2{%
9015   \pdfstartlink attr{#1}goto name{#2}\relax
9016 }
9017 \def\close@pdfink{%
9018   \Hy@endcolorlink
9019   \Hy@VerboseLinkStop
9020   \pdfendlink
9021 }
9022 \def\hyper@anchor#1{%
9023   \new@pdfink{#1}\anchor@spot\pdf@endanchor
9024 }
9025 \def\hyper@anchorstart#1{%
9026   \new@pdfink{#1}%
9027   \Hy@activeanchortrue
9028 }
9029 \def\hyper@anchorend{%
9030   \pdf@endanchor
9031   \Hy@activeanchorfalse
9032 }
9033 \def\hyper@linkstart#1#2{%
9034   \Hy@VerboseLinkStart{#1}{#2}%
9035   \ltx@ifundefined{@#1bordercolor}{%
9036     \let\CurrentBorderColor\relax
9037   }{%

```



```

9038 \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
9039 }%
9040 \find@pdfink{#1}{#2}%
9041 }
9042 \def\hyper@linkend{\close@pdfink}
9043 \def\hyper@link#1#2#3{%
9044 \Hy@VerboseLinkStart{#1}{#2}%
9045 \ltx@ifundefined{@#1bordercolor}{%
9046 \let\CurrentBorderColor\relax
9047 }{%
9048 \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
9049 }%
9050 \find@pdfink{#1}{#2}#3\Hy@xspace@end
9051 \close@pdfink
9052 }
9053 \let\CurrentBorderColor\@linkbordercolor
9054 \def\hyper@linkurl#1#2{%
9055 \begingroup
9056 \Hy@pstringdef\Hy@pstringURI{#2}%
9057 \hyper@chars
9058 \leavevmode
9059 \pdfstartlink
9060 attr{%
9061 \Hy@setpdfborder
9062 \Hy@setpdfhighlight
9063 \ifx\@urlbordercolor\relax
9064 \else
9065 /C[\@urlbordercolor]%
9066 \fi
9067 }%
9068 user{%
9069 /Subtype/Link%
9070 \ifHy@pdfa /F 4\fi
9071 /A<<%
9072 /Type/Action%
9073 /S/URI%
9074 /URI(\Hy@pstringURI)%
9075 \ifHy@href@ismap
9076 /IsMap true%
9077 \fi
9078 \Hy@href@nextactionraw
9079 >>%
9080 }%
9081 \relax
9082 \Hy@colorlink\@urlcolor#1\Hy@xspace@end
9083 \close@pdfink
9084 \endgroup
9085 }
9086 \def\hyper@linkfile#1#2#3{% anchor text, filename, linkname
9087 \begingroup
9088 \def\Hy@pstringF{#2}%
9089 \Hy@CleanupFile\Hy@pstringF
9090 \Hy@pstringdef\Hy@pstringF\Hy@pstringF
9091 \Hy@pstringdef\Hy@pstringD{#3}%

```

```

9092 \Hy@MakeRemoteAction
9093 \leavevmode
9094 \pdfstartlink
9095 attr{%
9096   \Hy@setpdfborder
9097   \Hy@setpdfhighlight
9098   \ifx\@filebordercolor\relax
9099   \else
9100   /C[\@filebordercolor]%
9101   \fi
9102 }%
9103 user {%
9104   /Subtype/Link%
9105   \ifHy@pdfa /F 4\fi
9106   /A<<%
9107   /F(\Hy@pstringF)%
9108   /S/GoToR%
9109   \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}

```

```

9110   \ifx\#3\%
9111   /D[\Hy@href@page\@pdfremotestartview]%
9112   \else
9113   /D(\Hy@pstringD)%
9114   \fi
9115   \Hy@href@nextactionraw
9116   >>%
9117   }%
9118   \relax
9119   \Hy@colorlink\@filecolor#1\Hy@xspace@end
9120   \close@pdfink
9121 \endgroup
9122 }
9123 \def\@hyper@launch run:#1\#2#3{% filename, anchor text linkname
9124 \begingroup
9125   \Hy@pstringdef\Hy@pstringF{#1}%
9126   \Hy@pstringdef\Hy@pstringP{#3}%
9127   \leavevmode
9128   \pdfstartlink
9129   attr{%
9130     \Hy@setpdfborder
9131     \Hy@setpdfhighlight
9132     \ifx\@runbordercolor\relax
9133     \else

```

```

9134      /C[\@runbordercolor]%
9135      \fi
9136    }%
9137    user {%
9138      /Subtype/Link%
9139      \ifHy@pdfa /F 4\fi
9140      /A<<%
9141      /F(\Hy@pstringF)%
9142      /S/Launch%
9143      \Hy@SetNewWindow
9144      \ifx\#3\%
9145      \else
9146      /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
9147      \fi
9148      \Hy@href@nextactionraw
9149      >>%
9150    }%
9151    \relax
9152    \Hy@colorlink\@runcolor#2\Hy@xspace@end
9153    \close@pdflink
9154  \endgroup
9155 }

```

\PDF@SetupDox

```

9156 \def\PDF@SetupDoc{%
9157   \ifx\@pdfpagescrop\@empty
9158   \else
9159     \edef\process@me{%
9160       \pdfpagesattr={%
9161         /CropBox[\@pdfpagescrop]%
9162         \expandafter\ifx\expandafter\the\pdfpagesattr\%
9163         \else
9164         ^^J\the\pdfpagesattr
9165         \fi
9166       }%
9167     }%
9168     \process@me
9169   \fi
9170   \Hy@pstringdef\Hy@pstringB{\@baseurl}%
9171   \pdfcatalog{%
9172     /PageMode/\@pdfpagemode
9173     \ifx\@baseurl\@empty
9174     \else
9175     /URI<</Base(\Hy@pstringB)>>%
9176     \fi
9177   }%
9178   \ifx\@pdfstartpage\@empty
9179   \else
9180     \ifx\@pdfstartview\@empty
9181     \else
9182       openaction goto page\@pdfstartpage{\@pdfstartview}%
9183     \fi
9184   \fi
9185   \edef\Hy@temp{%

```

```

9186 \ifHy@pdftoolbar\else /HideToolbar true\fi
9187 \ifHy@pdfmenubar\else /HideMenubar true\fi
9188 \ifHy@pdfwindowui\else /HideWindowUI true\fi
9189 \ifHy@pdfwindow /FitWindow true\fi
9190 \ifHy@pdfcenterwindow /CenterWindow true\fi
9191 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
9192 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
9193 \Hy@UseNameKey{Direction}\@pdfdirection
9194 \Hy@UseNameKey{ViewArea}\@pdfviewarea
9195 \Hy@UseNameKey{ViewClip}\@pdfviewclip
9196 \Hy@UseNameKey{PrintArea}\@pdfprintarea
9197 \Hy@UseNameKey{PrintClip}\@pdfprintclip
9198 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
9199 \Hy@UseNameKey{Duplex}\@pdfduplex
9200 \ifx\@pdfpicktraybypdfsize\@empty
9201 \else
9202 /PickTrayByPDFSize \@pdfpicktraybypdfsize
9203 \fi
9204 \ifx\@pdfprintpagerange\@empty
9205 \else
9206 /PrintPageRange[\@pdfprintpagerange]%
9207 \fi
9208 \ifx\@pdfnumcopies\@empty
9209 \else
9210 /NumCopies \@pdfnumcopies
9211 \fi
9212 }%
9213 \pdfcatalog{%
9214 \ifx\Hy@temp\@empty
9215 \else
9216 /ViewerPreferences<<\Hy@temp>>%
9217 \fi
9218 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
9219 \ifx\@pdflang\relax
9220 \else
9221 /Lang(\@pdflang)%
9222 \fi
9223 }%
9224 }

```

\PDF@FinishDoc

```

9225 \def\PDF@FinishDoc{%
9226 \pdf@ifdraftmode{}\{%
9227 \Hy@UseMaketitleInfos
9228 \HyInfo@GenerateAddons
9229 \pdfinfo{%
9230 /Author(\@pdfauthor)%
9231 /Title(\@pdftitle)%
9232 /Subject(\@pdfsubject)%
9233 /Creator(\@pdfcreator)%
9234 \ifx\@pdfcreationdate\@empty
9235 \else
9236 /CreationDate(\@pdfcreationdate)%
9237 \fi

```

```

9238 \ifx\@pdfmoddate\@empty
9239 \else
9240 /ModDate(\@pdfmoddate)%
9241 \fi
9242 \ifx\@pdfproducer\relax
9243 \else
9244 /Producer(\@pdfproducer)%
9245 \fi
9246 /Keywords(\@pdfkeywords)%
9247 \ifx\@pdftrapped\@empty
9248 \else
9249 /Trapped/\@pdftrapped
9250 \fi
9251 \HyInfo@Addons
9252 }%
9253 }%
9254 \Hy@DisableOption{pdfauthor}%
9255 \Hy@DisableOption{pdftitle}%
9256 \Hy@DisableOption{pdfsubject}%
9257 \Hy@DisableOption{pdfcreator}%
9258 \Hy@DisableOption{addtopdfcreator}%
9259 \Hy@DisableOption{pdfcreationdate}%
9260 \Hy@DisableOption{pdfmoddate}%
9261 \Hy@DisableOption{pdfproducer}%
9262 \Hy@DisableOption{pdfkeywords}%
9263 \Hy@DisableOption{pdftrapped}%
9264 \Hy@DisableOption{pdfinfo}%
9265 }

```

`\hyper@pagetransition` `\@pdfpagetransition` is initialized with `\relax`. So it indicates, if option `pdfpagetransition` is used. First previous `/Trans` entries are removed. If a new `/Trans` key exists, it is appended to `\pdfpageattr`.

```

9266 \def\hyper@pagetransition{%
9267 \ifx\@pdfpagetransition\relax
9268 \else
9269 \expandafter\Hy@RemoveTransPageAttr
9270 \the\pdfpageattr^^J/Trans{}>>\END
9271 \ifx\@pdfpagetransition\@empty
9272 \else
9273 \edef\@processme{%
9274 \global\pdfpageattr{%
9275 \the\pdfpageattr
9276 ^^J/Trans << /S /\@pdfpagetransition\space >>%
9277 }%
9278 }%
9279 \@processme
9280 \fi
9281 \fi
9282 }

```

`\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.

```

9283 \gdef\Hy@RemoveTransPageAttr#1^^J/Trans#2#3>>#4\END{%
9284   \ifx\#2\%
9285     \global\pdfpageattr{#1}%
9286   \else
9287     \Hy@RemoveTransPageAttr#1#4\END
9288   \fi
9289 }

```

`\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`.

```

9290 \def\hyper@pageduration{%
9291   \ifx\@pdfpageduration\relax
9292   \else
9293     \expandafter
9294     \Hy@RemoveDurPageAttr\the\pdfpageattr^^J/Dur{} \END
9295   \ifx\@pdfpageduration\@empty
9296   \else
9297     \edef\@processme{%
9298       \global\pdfpageattr{%
9299         \the\pdfpageattr
9300         ^^J/Dur \@pdfpageduration\space
9301       }%
9302     }%
9303     \@processme
9304   \fi
9305 \fi
9306 }

```

`\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.

```

9307 \gdef\Hy@RemoveDurPageAttr#1^^J/Dur#2#3 #4\END{%
9308   \ifx\#2\%
9309     \global\pdfpageattr{#1}%
9310   \else
9311     \Hy@RemoveDurPageAttr#1#4\END
9312   \fi
9313 }

9314 \pdf@ifdraftmode{}{%
9315   \g@addto@macro\Hy@EveryPageHook{%
9316     \hyper@pagetransition
9317     \hyper@pageduration
9318   }%
9319 }

```

Also XeTeX support `\pdfpagewidth` and `\pdfpageheight`, but it does not
provide `\pdfhorigin` and `\pdfvorigin`.

```

9320 \</pdfTeX>

```

```

9321 (*pdftex | xetex)
9322 \Hy@AtBeginDocument{%
9323   \ifHy@setpagesize
9324     \expandafter\@firstofone
9325   \else
9326     \expandafter\@gobble
9327   \fi
9328   {%
9329     \@ifclassloaded{seminar}{%
9330 (*pdftex)
9331   \setlength{\pdfhorigin}{1truein}%
9332   \setlength{\pdfvorigin}{1truein}%
9333 }/pdftex)
9334   \ifportrait
9335     \ifdim\paperwidth=\z@
9336     \else
9337       \setlength{\pdfpagewidth}{\strip@pt\paperwidth truept}%
9338     \fi
9339     \ifdim\paperheight=\z@
9340     \else
9341       \setlength{\pdfpageheight}{\strip@pt\paperheight truept}%
9342     \fi
9343   \else
9344     \ifdim\paperheight=\z@
9345     \else
9346       \setlength{\pdfpagewidth}{\strip@pt\paperheight truept}%
9347     \fi
9348     \ifdim\paperwidth=\z@
9349     \else
9350       \setlength{\pdfpageheight}{\strip@pt\paperwidth truept}%
9351     \fi
9352   \fi
9353 }{%
9354   \ifdim\stockwidth>\z@
9355   \ifdim\stockheight>\z@
9356     \setlength{\pdfpagewidth}{\stockwidth}%
9357     \setlength{\pdfpageheight}{\stockheight}%
9358   \else
9359     \ifdim\paperwidth>\z@
9360     \ifdim\paperheight>\z@
9361       \setlength{\pdfpagewidth}{\paperwidth}%
9362       \setlength{\pdfpageheight}{\paperheight}%
9363     \fi
9364   \fi
9365   \fi
9366 \else
9367   \ifdim\stockwidth=\z@
9368   \ifdim\paperwidth>\z@
9369     \ifdim\paperheight>\z@
9370       \setlength{\pdfpagewidth}{\paperwidth}%
9371       \setlength{\pdfpageheight}{\paperheight}%
9372     \fi
9373   \fi
9374   \fi

```

```

9375     \fi
9376   }%
9377 }%
9378 \Hy@DisableOption{setpagesize}%
9379 }
9380 </pdfTeX | xetex>
9381 <*pdfTeX>
9382 \def\Acrobatmenu#1#2{%
9383   \Hy@Acrobatmenu{#1}{#2}{%
9384     \leavevmode
9385     \EdefEscapeName\Hy@temp@menu{#1}%
9386     \pdfstartlink
9387       attr{%
9388         \Hy@setpdfborder
9389         \Hy@setpdfhighlight
9390         \ifx\@menubordercolor\relax
9391           \else
9392             /C[\@menubordercolor]%
9393         \fi
9394       }%
9395       user{%
9396         /Subtype/Link%
9397         \ifHy@pdfa /F 4\fi
9398         /A<<%
9399         /S/Named%
9400         /N/\Hy@temp@menu
9401         \Hy@href@nextactionraw
9402       >>%
9403     }%
9404     \relax
9405     \Hy@colorlink\@menucolor#2%
9406     \close@pdflink
9407   }%
9408 }

```

43.2.1 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.

```

9409 </pdfTeX>

```

43.3 hypertext

The HyperTeX specification (this is borrowed from an article by Arthur Smith) says that conformant viewers/translators must recognize the following set of `\spe-`

cial commands:

href: html:

name: html:

end: html:

image: html:

base_name: html:<base href = "href_string">

The *href*, *name* and *end* commands are used to do the basic hypertext operations of establishing links between sections of documents. The *image* command is intended (as with current html viewers) to place an image of arbitrary graphical format on the page in the current location. The *base_name* command is be used to communicate to the *dvi* viewer the full (URL) location of the current document so that files specified by relative URL's may be retrieved correctly.

The *href* and *name* commands must be paired with an *end* command later in the \TeX file — the \TeX commands between the two ends of a pair form an *anchor* in the document. In the case of an *href* command, the *anchor* is to be highlighted in the *dvi* viewer, and when clicked on will cause the scene to shift to the destination specified by *href_string*. The *anchor* associated with a name command represents a possible location to which other hypertext links may refer, either as local references (of the form href="#name_string" with the *name_string* identical to the one in the name command) or as part of a URL (of the form URL#name_string). Here *href_string* is a valid URL or local identifier, while name_string could be any string at all: the only caveat is that ‘” characters should be escaped with a backslash (\), and if it looks like a URL name it may cause problems.

```
9410 (*hypertext)
9411 \providecommand*\XR@ext}{dvi}
9412 \let\PDF@FinishDoc\ltx@empty
9413 \def\PDF@SetupDoc{%
9414   \ifx\@baseurl\@empty
9415     \else
9416       \special{html:<base href="\@baseurl">}%
9417     \fi
9418 }
9419 \Hy@WrapperDef\hyper@anchor#1{%
9420   \Hy@SaveLastskip
9421   \Hy@VerboseAnchor{#1}%
9422   \begingroup
9423     \let\protect=\string
9424     \hyper@chars
9425     \special{html:<a name=%
9426       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
9427   \endgroup
9428   \Hy@activeanchortrue
9429   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
9430   \special{html:</a>}%
9431   \Hy@activeanchorfalse
9432   \Hy@RestoreLastskip
```

```

9433 }
9434 \Hy@WrapperDef\hyper@anchorstart#1{%
9435   \Hy@SaveLastskip
9436   \Hy@VerboseAnchor{#1}%
9437   \begingroup
9438     \hyper@chars
9439     \special{html:<a name=%
9440       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
9441   \endgroup
9442   \Hy@activeanchortrue
9443 }
9444 \def\hyper@anchorend{%
9445   \special{html:</a>}%
9446   \Hy@activeanchorfalse
9447   \Hy@RestoreLastskip
9448 }
9449 \def\@urltype{url}
9450 \def\hyper@linkstart#1#2{%
9451   \Hy@VerboseLinkStart{#1}{#2}%
9452   \expandafter\Hy@colorlink\csname @#1color\endcsname
9453   \def\Hy@tempa{#1}%
9454   \ifx\Hy@tempa\@urltype
9455     \special{html:<a href=\hyper@quote#2\hyper@quote>}%
9456   \else
9457     \begingroup
9458       \hyper@chars
9459       \special{html:<a href=%
9460         \hyper@quote\#\HyperDestNameFilter{#2}\hyper@quote>}%
9461     \endgroup
9462   \fi
9463 }
9464 \def\hyper@linkend{%
9465   \special{html:</a>}%
9466   \Hy@endcolorlink
9467 }
9468 \def\hyper@linkfile#1#2#3{%
9469   \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\else\##3\fi}%
9470 }
9471 \def\hyper@linkurl#1#2{%

```

If we want to raise up the final link `\special`, we need to get its height; ask me why \LaTeX constructs make this totally foul up, and make us revert to basic \TeX . I do not know.

```

9472 \leavevmode
9473 \ifHy@raiselinks
9474   \Hy@SaveSpaceFactor
9475   \Hy@SaveSavedSpaceFactor
9476   \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
9477   \Hy@RestoreSavedSpaceFactor
9478   \@linkdim\dp\@tempboxa
9479   \lower\@linkdim\hbox{%
9480     \hyper@chars
9481     \special{html:<a href=\hyper@quote#2\hyper@quote>}%
9482   }%

```

```

9483 \Hy@colorlink\@urlcolor
9484 \Hy@RestoreSpaceFactor
9485 #1%
9486 \Hy@SaveSpaceFactor
9487 \@linkdim\ht\@tempboxa

```

Because of the interaction with the dvihps processor, we have to subtract a little from the height. This is not clean, or checked. Check with Mark Doyle about what gives here. It may not be needed with the new dvips (Jan 1997).

```

9488 \advance\@linkdim by -6.5\p@
9489 \raise\@linkdim\hbox{\special{html:</a>}}%
9490 \Hy@endcolorlink
9491 \Hy@RestoreSpaceFactor
9492 \else
9493 \begingroup
9494 \hyper@chars
9495 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
9496 \Hy@colorlink\@urlcolor#1\Hy@xspace@end
9497 \special{html:</a>}}%
9498 \Hy@endcolorlink
9499 \endgroup
9500 \fi
9501 }

```

Very poor implementation of `\hyper@link` without considering #1.

```

9502 \def\hyper@link#1#2#3{%
9503 \Hy@VerboseLinkStart{#1}{#2}%
9504 \hyper@linkurl{#3}{\# \Hy@DestNameFilter{#2}}}%
9505 }

9506 \def\hyper@image#1#2{%
9507 \begingroup
9508 \hyper@chars
9509 \special{html:<img src=\hyper@quote#1\hyper@quote>}%
9510 \endgroup
9511 }
9512 </hypertex>
9513 < *dviwindo>

```

43.4 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.

```

9514 \providecommand*\XR@ext{dvi}
9515 \providecommand*\wwwbrowser{c:\string\netscape\string\netscape}

```

```

9516 \Hy@WrapperDef\hyper@anchor#1{%
9517 \Hy@SaveLastskip
9518 \Hy@VerboseAnchor{#1}%
9519 \begingroup
9520 \let\protect=\string
9521 \special{mark: #1}%
9522 \endgroup
9523 \Hy@activeanchortrue
9524 \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
9525 \Hy@activeanchorfalse
9526 \Hy@RestoreLastskip
9527 }
9528 \Hy@WrapperDef\hyper@anchorstart#1{%
9529 \Hy@SaveLastskip
9530 \Hy@VerboseAnchor{#1}%
9531 \special{mark: #1}%
9532 \Hy@activeanchortrue
9533 }
9534 \def\hyper@anchorend{%
9535 \Hy@activeanchorfalse
9536 \Hy@RestoreLastskip
9537 }
9538 \def\hyper@linkstart#1#2{%
9539 \Hy@VerboseLinkStart{#1}{#2}%
9540 \expandafter\Hy@colorlink\csname @#1color\endcsname
9541 \special{button: %
9542 10000000 %
9543 \number\baselineskip\space
9544 #2%
9545 }%
9546 }
9547 \def\hyper@linkend{%
9548 \Hy@endcolorlink
9549 }
9550 \def\hyper@link#1#2#3{%
9551 \Hy@VerboseLinkStart{#1}{#2}%
9552 \leavevmode
9553 \ifHy@raiselinks
9554 \Hy@SaveSpaceFactor
9555 \Hy@SaveSavedSpaceFactor
9556 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#3}%
9557 \Hy@RestoreSavedSpaceFactor
9558 \@linkdim\dp\@tempboxa
9559 \lower\@linkdim\hbox{%
9560 \special{button: %
9561 \number\wd\@tempboxa\space
9562 \number\ht\@tempboxa\space
9563 #2%
9564 }%
9565 \expandafter\Hy@colorlink\csname @#1color\endcsname
9566 \Hy@RestoreSpaceFactor
9567 #3\Hy@xspace@end
9568 \Hy@SaveSpaceFactor
9569 \Hy@endcolorlink

```

```

9570 }%
9571 \@linkdim\ht\@tempboxa
9572 \advance\@linkdim by -6.5\p@
9573 \raise\@linkdim\hbox{}%
9574 \Hy@RestoreSpaceFactor
9575 \else
9576 \special{button: %
9577 \number\wd\@tempboxa\space
9578 \number\ht\@tempboxa\space
9579 #2%
9580 }%
9581 \expandafter\Hy@colorlink\csname @#1color\endcsname
9582 #3\Hy@xspace@end
9583 \Hy@endcolorlink
9584 \fi
9585 }
9586 \def\hyper@linkurl#1#2{%
9587 \begingroup
9588 \hyper@chars
9589 \leavevmode
9590 \ifHy@raiselinks
9591 \Hy@SaveSpaceFactor
9592 \Hy@SaveSavedSpaceFactor
9593 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
9594 \Hy@RestoreSavedSpaceFactor
9595 \@linkdim\dp\@tempboxa
9596 \lower\@linkdim\hbox{%
9597 \special{button: %
9598 \number\wd\@tempboxa\space
9599 \number\ht\@tempboxa\space
9600 launch: \wwwbrowser\space
9601 #2%
9602 }%
9603 \Hy@colorlink\@urlcolor
9604 \Hy@RestoreSpaceFactor
9605 #1\Hy@xspace@end
9606 \Hy@SaveSpaceFactor
9607 \Hy@endcolorlink
9608 }%
9609 \@linkdim\ht\@tempboxa
9610 \advance\@linkdim by -6.5\p@
9611 \raise\@linkdim\hbox{}%
9612 \Hy@RestoreSpaceFactor
9613 \else
9614 \special{button: %
9615 \number\wd\@tempboxa\space
9616 \number\ht\@tempboxa\space
9617 launch: \wwwbrowser\space
9618 #2%
9619 }%
9620 \Hy@colorlink\@urlcolor
9621 #1\Hy@xspace@end
9622 \Hy@endcolorlink
9623 \fi

```

```

9624 \endgroup
9625 }
9626 \def\hyper@linkfile#1#2#3{%
9627 \begingroup
9628 \hyper@chars
9629 \leavevmode
9630 \ifHy@raiselinks
9631 \Hy@SaveSpaceFactor
9632 \Hy@SaveSavedSpaceFactor
9633 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
9634 \Hy@RestoreSavedSpaceFactor
9635 \@linkdim\dp\@tempboxa
9636 \lower\@linkdim\hbox{%
9637 \special{button: %
9638 \number\wd\@tempboxa\space
9639 \number\ht\@tempboxa\space
9640 #3,%
9641 file: #2%
9642 }%
9643 \Hy@colorlink\@filecolor
9644 \Hy@RestoreSpaceFactor
9645 #1\Hy@xspace@end
9646 \Hy@SaveSpaceFactor
9647 \Hy@endcolorlink
9648 }%
9649 \@linkdim\ht\@tempboxa
9650 \advance\@linkdim by -6.5\p@
9651 \raise\@linkdim\hbox{}%
9652 \Hy@RestoreSpaceFactor
9653 \else
9654 \special{button: %
9655 \number\wd\@tempboxa\space
9656 \number\ht\@tempboxa\space
9657 #3,%
9658 file: #2%
9659 }%
9660 \Hy@colorlink\@filecolor
9661 #1\Hy@xspace@end
9662 \Hy@endcolorlink
9663 \fi
9664 \endgroup
9665 }
9666 \HyInfo@AddonUnsupportedtrue
9667 \def\PDF@FinishDoc{%
9668 \Hy@UseMaketitleInfos
9669 \HyInfo@TrappedUnsupported
9670 \special{PDF: Keywords \@pdfkeywords}%
9671 \special{PDF: Title \@pdftitle}%
9672 \special{PDF: Creator \@pdfcreator}%
9673 \ifx\@pdfcreationdate\@empty
9674 \else
9675 \special{PDF: CreationDate \@pdfcreationdate}%
9676 \fi
9677 \ifx\@pdfmoddate\@empty

```

```

9678 \else
9679 \special{PDF: ModDate \@pdfmoddate}%
9680 \fi
9681 \special{PDF: Author \@pdfauthor}%
9682 \ifx\@pdfproducer\relax
9683 \else
9684 \special{PDF: Producer \@pdfproducer}%
9685 \fi
9686 \special{PDF: Subject \@pdfsubject}%
9687 \Hy@DisableOption{pdfauthor}%
9688 \Hy@DisableOption{pdftitle}%
9689 \Hy@DisableOption{pdfsubject}%
9690 \Hy@DisableOption{pdfcreator}%
9691 \Hy@DisableOption{addtopdfcreator}%
9692 \Hy@DisableOption{pdfcreationdate}%
9693 \Hy@DisableOption{pdfcreationdate}%
9694 \Hy@DisableOption{pdfmoddate}%
9695 \Hy@DisableOption{pdfproducer}%
9696 \Hy@DisableOption{pdfkeywords}%
9697 \Hy@DisableOption{pdftrapped}%
9698 \Hy@DisableOption{pdfinfo}%
9699 }
9700 \def\PDF@SetupDoc{%
9701 \ifx\@baseurl\@empty
9702 \else
9703 \special{PDF: Base \@baseurl}%
9704 \fi
9705 \ifx\@pdfpagescrop\@empty\else
9706 \special{PDF: BBox \@pdfpagescrop}%
9707 \fi
9708 \def\Hy@temp{}%
9709 \ifx\@pdfstartpage\@empty
9710 \else
9711 \ifx\@pdfstartview\@empty
9712 \else
9713 \edef\Hy@temp{%
9714 ,Page=\@pdfstartpage
9715 ,View=\@pdfstartview
9716 }%
9717 \fi
9718 \fi
9719 \edef\Hy@temp{%
9720 \noexpand\pdfmark{%
9721 pdfmark=/DOCVIEW,%
9722 PageMode=/\@pdfpagemode
9723 \Hy@temp
9724 }%
9725 }%
9726 \Hy@temp
9727 \ifx\@pdfpagescrop\@empty
9728 \else
9729 \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
9730 \fi
9731 \edef\Hy@temp{%

```

```

9732 \ifHy@pdftoolbar\else /HideToolbar true\fi
9733 \ifHy@pdfmenubar\else /HideMenubar true\fi
9734 \ifHy@pdfwindowui\else /HideWindowUI true\fi
9735 \ifHy@pdfitwindow /FitWindow true\fi
9736 \ifHy@pdfcenterwindow /CenterWindow true\fi
9737 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
9738 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
9739 \Hy@UseNameKey{Direction}\@pdfdirection
9740 \Hy@UseNameKey{ViewArea}\@pdfviewarea
9741 \Hy@UseNameKey{ViewClip}\@pdfviewclip
9742 \Hy@UseNameKey{PrintArea}\@pdfprintarea
9743 \Hy@UseNameKey{PrintClip}\@pdfprintclip
9744 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
9745 \Hy@UseNameKey{Duplex}\@pdfduplex
9746 \ifx\@pdfpicktraybypdfsize\@empty
9747 \else
9748 /PickTrayByPDFSize \@pdfpicktraybypdfsize
9749 \fi
9750 \ifx\@pdfprintpagerange\@empty
9751 \else
9752 /PrintPageRange[\@pdfprintpagerange]%
9753 \fi
9754 \ifx\@pdfnumcopies\@empty
9755 \else
9756 /NumCopies \@pdfnumcopies
9757 \fi
9758 }%
9759 \pdfmark{pdfmark=/PUT,%
9760 Raw={%
9761 \string{Catalog\string}<<%
9762 \ifx\Hy@temp\@empty
9763 \else
9764 /ViewerPreferences<<\Hy@temp>>%
9765 \fi
9766 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
9767 \ifx\@pdflang\relax
9768 \else
9769 /Lang(\@pdflang)%
9770 \fi
9771 >>%
9772 }%
9773 }%
9774 }
9775 </dviwindo>
9776 <*\dvipdfm|xetex>

```

43.5 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.

```
9777 \special{dvipdfmx:config C 0x0010}
```



```

9778 \providecommand*\XR@ext}{pdf}
9779 \Hy@setbreaklinks{true}
9780 \def\HyPat@ObjRef{%
9781   @[^ ]+}%
9782 }
9783 \newsavebox{\pdfm@box}
9784 \def\@pdfm@mark#1{\special{pdf:#1}}
9785 \Hy@WrapperDef\@pdfm@dest#1{%
9786   \Hy@SaveLastskip
9787   \Hy@VerboseAnchor{#1}%
9788   \begin{group}
9789     \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
9790     \def\x{XYZ}%
9791     \ifx\x\@pdfview
9792       \def\x{XYZ @xpos @ypos null}%
9793     \else
9794       \def\x{FitH}%
9795       \ifx\x\@pdfview
9796         \def\x{FitH @ypos}%
9797       \else
9798         \def\x{FitBH}%
9799         \ifx\x\@pdfview
9800           \def\x{FitBH @ypos}%
9801         \else
9802           \def\x{FitV}%
9803           \ifx\x\@pdfview
9804             \def\x{FitV @xpos}%
9805           \else
9806             \def\x{FitBV}%
9807             \ifx\x\@pdfview
9808               \def\x{FitBV @xpos}%
9809             \else
9810               \def\x{Fit}%
9811               \ifx\x\@pdfview
9812                 \let\x\@pdfview
9813               \else
9814                 \def\x{FitB}%
9815                 \ifx\x\@pdfview
9816                   \let\x\@pdfview
9817                 \else
9818                   \def\x{FitR}%
9819                   \ifx\x\@pdfview
9820                     \Hy@Warning{'pdfview=FitR' is not supported}%
9821                     \def\x{XYZ @xpos @ypos null}%
9822                   \else
9823                     \@onelevel@sanitize\@pdfview
9824                     \Hy@Warning{%
9825                       Unknown value '\@pdfview' for pdfview%
9826                     }%
9827                     \def\x{XYZ @xpos @ypos null}%
9828                   \fi
9829                 \fi
9830               \fi
9831             \fi

```

```

9832     \fi
9833     \fi
9834     \fi
9835     \fi
9836     \@pdfm@mark{dest (\Hy@pstringDest) [@thispage /\x]}%
9837 \endgroup
9838 \Hy@RestoreLastskip
9839 }
9840 \providecommand*\@pdfview{XYZ}
9841 \providecommand*\@pdfborder{0 0 1}
9842 \providecommand*\@pdfborderstyle{}
9843 \def\hyper@anchor#1{%
9844     \@pdfm@dest{#1}%
9845 }
9846 \def\hyper@anchorstart#1{%
9847     \Hy@activeanchortrue
9848     \@pdfm@dest{#1}%
9849 }
9850 \def\hyper@anchorend{%
9851     \Hy@activeanchorfalse
9852 }
9853 \newcounter{Hy@AnnotLevel}
9854 \ifHy@ocgcolorlinks
9855     \def\OBJ@OCG@view{@OCG@view}%
9856     \@pdfm@mark{%
9857         obj \OBJ@OCG@view <<%
9858         /Type/OCG%
9859         /Name(View)%
9860         /Usage<<%
9861         /Print<<%
9862         /PrintState/OFF%
9863         >>%
9864         /View<<%
9865         /ViewState/ON%
9866         >>%
9867         >>%
9868         >>%
9869     }%
9870     \@pdfm@mark{close \OBJ@OCG@view}%
9871     \def\OBJ@OCG@print{@OCG@print}%
9872     \@pdfm@mark{%
9873         obj \OBJ@OCG@print <<%
9874         /Type/OCG%
9875         /Name(Print)%
9876         /Usage<<%
9877         /Print<<%
9878         /PrintState/ON%
9879         >>%
9880         /View<<%
9881         /ViewState/OFF%
9882         >>%
9883         >>%
9884         >>%

```

```

9885 }%
9886 \@pdfm@mark{close \OBJ@OCG@print}%
9887 \def\OBJ@OCGs{@OCGs}%
9888 \@pdfm@mark{%
9889   obj \OBJ@OCGs [%
9890     \OBJ@OCG@view\space\OBJ@OCG@print
9891   ]%
9892 }%
9893 \@pdfm@mark{close \OBJ@OCGs}%
9894 \@pdfm@mark{%
9895   put @catalog <<%
9896     /OCProperties<<%
9897     /OCGs \OBJ@OCGs
9898     /D<<%
9899     /OFF[\OBJ@OCG@print]%
9900     /AS[%
9901       <<%
9902         /Event/View%
9903         /OCGs \OBJ@OCGs
9904         /Category[/View]%
9905       >>%
9906       <<%
9907         /Event/Print%
9908         /OCGs \OBJ@OCGs
9909         /Category[/Print]%
9910       >>%
9911       <<%
9912         /Event/Export%
9913         /OCGs \OBJ@OCGs
9914         /Category[/Print]%
9915       >>%
9916     ]%
9917   >>%
9918 >>%
9919 >>%
9920 }%
9921 \AtBeginShipout{%
9922   \setbox\AtBeginShipoutBox=\hbox{%
9923     \copy\AtBeginShipoutBox
9924     \@pdfm@mark{%
9925       put @resources <<%
9926         /Properties<<%
9927         /OCView \OBJ@OCG@view
9928         /OCPrint \OBJ@OCG@print
9929       >>%
9930     >>%
9931   }%
9932 }%
9933 }%
9934 \Hy@AtBeginDocument{%
9935   \def\Hy@colorlink#1{%
9936     \begingroup
9937     \ifHy@ocgcolorlinks
9938       \def\Hy@ocgcolor{#1}%

```

```

9939      \setbox0=\hbox\bgroup\color@begingroup
9940      \else
9941      \HyColor@UseColor#1%
9942      \fi
9943  }%
9944  \def\Hy@endcolorlink{%
9945    \ifHy@ocgcolorlinks
9946    \color@endgroup\egroup
9947    \mbox{%
9948      \@pdfm@mark{content /OC/OCPrint BDC}%
9949      \rlap{\copy0}%
9950      \@pdfm@mark{content EMC/OC/OCView BDC}%
9951      \begingroup
9952      \expandafter\HyColor@UseColor\Hy@ocgcolor
9953      \box0 %
9954      \endgroup
9955      \@pdfm@mark{content EMC}%
9956    }%
9957    \fi
9958  \endgroup
9959  }%
9960 }%
9961 \else
9962 \Hy@DisableOption{ocgcolorlinks}%
9963 \fi

```

Use primitive counter arithmetic here to avoid amsmath redefining `\stepcounter` (github issue/13)

```

9964 \def\Hy@BeginAnnot#1{%
9965   \global\advance\c@Hy@AnnotLevel\@ne
9966   \ifnum\c@Hy@AnnotLevel=\@ne
9967     #1%
9968   \fi
9969 }
9970 \def\Hy@endAnnot{%
9971   \ifnum\value{Hy@AnnotLevel}=\@ne
9972     \Hy@endcolorlink
9973     \@pdfm@mark{eann}%
9974   \fi
9975   \global\advance\c@Hy@AnnotLevel\m@ne
9976 }
9977 \def\Hy@undefinedname{UNDEFINED}
9978 \def\hyper@linkstart#1#2{%
9979   \Hy@VerboseLinkStart{#1}{#2}%
9980   \leavevmode
9981   \Hy@BeginAnnot{%
9982     \protected@edef\Hy@testname{#2}%
9983     \ifx\Hy@testname\@empty
9984       \Hy@Warning{%
9985         Empty destination name,\MessageBreak
9986         using '\Hy@undefinedname'%
9987       }%
9988     \let\Hy@testname\Hy@undefinedname
9989   \else

```

```

9990 \Hy@pstringdef\Hy@testname{%
9991 \expandafter\HyperDestNameFilter\expandafter{%
9992 \Hy@testname
9993 }%
9994 }%
9995 \fi
9996 \@pdfm@mark{%
9997 bann<<%
9998 /Type/Annot%
9999 /Subtype/Link%
10000 \ifHy@pdfa /F 4\fi
10001 \Hy@setpdfborder
10002 \Hy@setpdfhighlight
10003 \expandafter\ifx\csname @#1bordercolor\endcsname\relax
10004 \else
10005 /C[\csname @#1bordercolor\endcsname]%
10006 \fi
10007 /A<<%
10008 /S/GoTo%
10009 /D(\Hy@testname)%
10010 \Hy@href@nextactionraw
10011 >>%
10012 >>%
10013 }%
10014 \expandafter\Hy@colorlink\csname @#1color\endcsname
10015 }%
10016 }
10017 \def\hyper@linkend{\Hy@EndAnnot}%
10018 \def\hyper@link#1#2#3{%
10019 \hyper@linkstart{#1}{#2}#3\Hy@xspace@end\hyper@linkend
10020 }
10021 \def\hyper@linkfile#1#2#3{%
10022 \leavevmode
10023 \Hy@BeginAnnot{%
10024 \def\Hy@pstringF{#2}%
10025 \Hy@CleanupFile\Hy@pstringF
10026 \Hy@pstringdef\Hy@pstringF\Hy@pstringF
10027 \Hy@pstringdef\Hy@pstringD{#3}%
10028 \Hy@MakeRemoteAction
10029 \@pdfm@mark{%
10030 bann<<%
10031 /Type/Annot%
10032 /Subtype/Link%
10033 \ifHy@pdfa /F 4\fi
10034 \Hy@setpdfborder
10035 \Hy@setpdfhighlight
10036 \ifx\@filebordercolor\relax
10037 \else
10038 /C[\@filebordercolor]%
10039 \fi
10040 /A<<%
10041 /S/GoToR%
10042 /F(\Hy@pstringF)%
10043 /D%

```

```

10044      \ifx\\#3\\%
10045      [\Hy@href@page\@pdfremotestartview]%
10046      \else
10047      (\Hy@pstringD)%
10048      \fi
10049      \Hy@SetNewWindow
10050      \Hy@href@nextactionraw
10051      >>%
10052      >>%
10053      }%
10054      \Hy@colorlink\@filecolor
10055      }%
10056      #1\Hy@xspace@end
10057      \Hy@EndAnnot
10058      }
10059      \def\@hyper@launch run:#1\\#2#3{% filename, anchor text linkname
10060      \leavevmode
10061      \Hy@BeginAnnot{%
10062      \Hy@pstringdef\Hy@pstringF{#1}%
10063      \Hy@pstringdef\Hy@pstringP{#3}%
10064      \@pdfm@mark{%
10065      bann<<%
10066      /Type/Annot%
10067      /Subtype/Link%
10068      \ifHy@pdfa /F 4\fi
10069      \Hy@setpdfborder
10070      \Hy@setpdfhighlight
10071      \ifx\@runbordercolor\relax
10072      \else
10073      /C[\@runbordercolor]%
10074      \fi
10075      /A<<%
10076      /F(\Hy@pstringF)%
10077      /S/Launch%
10078      \Hy@SetNewWindow
10079      \ifx\\#3\\%
10080      \else
10081      /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
10082      \fi
10083      \Hy@href@nextactionraw
10084      >>%
10085      >>%
10086      }%
10087      \Hy@colorlink\@runcolor
10088      }%
10089      #2\Hy@xspace@end
10090      \Hy@EndAnnot
10091      }
10092      \def\hyper@linkurl#1#2{%
10093      \leavevmode
10094      \Hy@BeginAnnot{%
10095      \Hy@pstringdef\Hy@pstringURI{#2}%
10096      \@pdfm@mark{%
10097      bann<<%

```

```

10098      /Type/Annot%
10099      /Subtype/Link%
10100      \ifHy@pdfa /F 4\fi
10101      \Hy@setpdfborder
10102      \Hy@setpdfhighlight
10103      \ifx\@urlbordercolor\relax
10104      \else
10105        /C[\@urlbordercolor]%
10106      \fi
10107      /A<<%
10108      /S/URI%
10109      /URI(\Hy@pstringURI)%
10110      \ifHy@href@ismap
10111        /IsMap true%
10112      \fi
10113      \Hy@href@nextactionraw
10114      >>%
10115      >>%
10116    }%
10117    \Hy@colorlink\@urlcolor
10118  }%
10119  #1\Hy@xspace@end
10120  \Hy@endAnnot
10121 }
10122 \def\Acrobatmenu#1#2{%
10123   \Hy@Acrobatmenu{#1}{#2}{%
10124     \Hy@BeginAnnot{%
10125       \EdefEscapeName\Hy@temp@menu{#1}%
10126       \@pdfm@mark{%
10127         bann<<%
10128         /Type/Annot%
10129         /Subtype/Link%
10130         \ifHy@pdfa /F 4\fi
10131         \Hy@setpdfborder
10132         \Hy@setpdfhighlight
10133         \ifx\@menubordercolor\relax
10134         \else
10135           /C[\@menubordercolor]%
10136         \fi
10137         /A<<%
10138         /S/Named%
10139         /N/\Hy@temp@menu
10140         \Hy@href@nextactionraw
10141         >>%
10142         >>%
10143       }%
10144       \Hy@colorlink\@menucolor
10145     }%
10146     #2\Hy@xspace@end
10147   \Hy@endAnnot
10148 }%
10149 }
10150
10151 \def\PDF@FinishDoc{%

```

```

10152 \Hy@UseMaketitleInfos
10153 \HyInfo@GenerateAddons
10154 \@pdfm@mark{%
10155   docinfo<<%
10156     /Title(\@pdftitle)%
10157     /Subject(\@pdfsubject)%
10158     /Creator(\@pdfcreator)%
10159     \ifx\@pdfcreationdate\@empty
10160     \else
10161       /CreationDate(\@pdfcreationdate)%
10162     \fi
10163     \ifx\@pdfmoddate\@empty
10164     \else
10165       /ModDate(\@pdfmoddate)%
10166     \fi
10167     /Author(\@pdfauthor)%
10168     \ifx\@pdfproducer\relax
10169     \else
10170       /Producer(\@pdfproducer)%
10171     \fi
10172     /Keywords(\@pdfkeywords)%
10173     \ifx\@pdftrapped\@empty
10174     \else
10175       /Trapped/\@pdftrapped
10176     \fi
10177     \HyInfo@Addons
10178   >>%
10179 }%
10180 \Hy@DisableOption{pdfauthor}%
10181 \Hy@DisableOption{pdftitle}%
10182 \Hy@DisableOption{pdfsubject}%
10183 \Hy@DisableOption{pdfcreator}%
10184 \Hy@DisableOption{addtopdfcreator}%
10185 \Hy@DisableOption{pdfcreationdate}%
10186 \Hy@DisableOption{pdfcreationdate}%
10187 \Hy@DisableOption{pdfmoddate}%
10188 \Hy@DisableOption{pdfproducer}%
10189 \Hy@DisableOption{pdfkeywords}%
10190 \Hy@DisableOption{pdftrapped}%
10191 \Hy@DisableOption{pdfinfo}%
10192 }

10193 \def\PDF@SetupDoc{%
10194   \edef\Hy@temp{%
10195     \ifHy@pdftoolbar\else /HideToolbar true\fi
10196     \ifHy@pdfmenubar\else /HideMenubar true\fi
10197     \ifHy@pdfwindowui\else /HideWindowUI true\fi
10198     \ifHy@pdfwindow /FitWindow true\fi
10199     \ifHy@pdfcenterwindow /CenterWindow true\fi
10200     \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
10201     \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
10202     \Hy@UseNameKey{Direction}\@pdfdirection
10203     \Hy@UseNameKey{ViewArea}\@pdfviewarea
10204     \Hy@UseNameKey{ViewClip}\@pdfviewclip
10205     \Hy@UseNameKey{PrintArea}\@pdfprintarea

```



```

10206 \Hy@UseNameKey{PrintClip}\@pdfprintclip
10207 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
10208 \Hy@UseNameKey{Duplex}\@pdfduplex
10209 \ifx\@pdfpicktraybypdfsize\@empty
10210 \else
10211 /PickTrayByPDFSize \@pdfpicktraybypdfsize
10212 \fi
10213 \ifx\@pdfprintpagerange\@empty
10214 \else
10215 /PrintPageRange[\@pdfprintpagerange]%
10216 \fi
10217 \ifx\@pdfnumcopies\@empty
10218 \else
10219 /NumCopies \@pdfnumcopies
10220 \fi
10221 }%
10222 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
10223 \@pdfm@mark{%
10224 docview<<%
10225 \ifx\@pdfstartpage\@empty
10226 \else
10227 \ifx\@pdfstartview\@empty
10228 \else
10229 /OpenAction[@page\@pdfstartpage\@pdfstartview]%
10230 \fi
10231 \fi
10232 \ifx\@baseurl\@empty
10233 \else
10234 /URI<</Base(\Hy@pstringB)>>%
10235 \fi
10236 /PageMode/\@pdfpagemode
10237 \ifx\Hy@temp\@empty
10238 \else
10239 /ViewerPreferences<<\Hy@temp>>%
10240 \fi
10241 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
10242 \ifx\@pdflang\relax
10243 \else
10244 /Lang(\@pdflang)%
10245 \fi
10246 >>%
10247 }%
10248 \ifx\@pdfpagescrop\@empty
10249 \else
10250 \@pdfm@mark{put @pages <</CropBox[\@pdfpagescrop]>>}%
10251 \fi
10252 }
10253 </dvipdfm | xetex>
10254 <*dvipdfm | xetex>

```

\hyper@pagetransition

```

10255 \def\hyper@pagetransition{%
10256 \ifx\@pdfpagetransition\relax
10257 \else

```

```

10258 \ifx\@pdfpagetransition\@empty
10259 \else
10260 \special{pdf:put @thispage %
10261 <</Trans<</S/\@pdfpagetransition>>>>%
10262 }%
10263 \fi
10264 \fi
10265 }

```

\hyper@pageduration

```

10266 \def\hyper@pageduration{%
10267 \ifx\@pdfpageduration\relax
10268 \else
10269 \ifx\@pdfpageduration\@empty
10270 \else
10271 \special{pdf:put @thispage %
10272 <</Dur \@pdfpageduration>>>%
10273 }%
10274 \fi
10275 \fi
10276 }

```

```

10277 \g@addto@macro\Hy@EveryPageBoxHook{%
10278 \hyper@pagetransition
10279 \hyper@pageduration
10280 }

10281 </dvipdfm | xetex>

```

XeTeX uses pdfTeX's method \pdfpagewidth and \pdfpageheight for setting the paper size.

```

10282 <dvipdfm>
10283 \AtBeginShipoutFirst{%
10284 \ifHy@setpagesize
10285 \begingroup
10286 \ifdim\stockwidth>\z@
10287 \ifdim\stockheight>\z@
10288 \special{papersize=\the\stockwidth,\the\stockheight}%
10289 \else
10290 \ifdim\paperwidth>\z@
10291 \ifdim\paperheight>\z@
10292 \special{papersize=\the\paperwidth,\the\paperheight}%
10293 \fi
10294 \fi
10295 \fi
10296 \else
10297 \ifdim\stockwidth=\z@
10298 \ifdim\paperwidth>\z@
10299 \ifdim\paperheight>\z@
10300 \special{papersize=\the\paperwidth,\the\paperheight}%
10301 \fi
10302 \fi
10303 \fi
10304 \fi
10305 \endgroup

```

```

10306 \fi
10307 \Hy@DisableOption{setpagesize}%
10308 }
10309 </dvipdfm>

```

43.6 VTeX typesetting system

Provided by MicroPress, May 1998. They require VTeX version 6.02 or newer; see <http://www.micropress-inc.com/> for details.

```

10310 <*vtexhtml>
10311 \providecommand*{\XR@ext}{htm}
10312 \RequirePackage{vtexhtml}
10313 \newif\if@Localurl
10314 \let\PDF@FinishDoc\ltx@empty
10315 \def\PDF@SetupDoc{%
10316   \ifx\@baseurl\@empty
10317   \else
10318     \special{!direct <base href="\@baseurl">}%
10319   \fi
10320 }
10321 \def\@urltype{url}
10322 \def\hyper@link#1#2#3{%
10323   \Hy@VerboseLinkStart{#1}{#2}%
10324   \leavevmode
10325   \special{!direct <a href=%
10326     \hyper@quote\hyper@hash\HyperDestNameFilter{#2}\hyper@quote>}%
10327   #3\Hy@xspace@end
10328   \special{!direct </a>}%
10329 }
10330 \def\hyper@linkurl#1#2{%
10331   \begingroup
10332     \hyper@chars
10333     \leavevmode
10334     \MathBSuppress=1\relax
10335     \special{!direct <a href=%
10336       \hyper@quote\HyperDestNameFilter{#2}\hyper@quote>}%
10337     #1\Hy@xspace@end
10338     \MathBSuppress=0\relax
10339     \special{!direct </a>}%
10340   \endgroup
10341 }
10342 \def\hyper@linkfile#1#2#3{%
10343   \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\\else\##3\fi}%
10344 }
10345 \def\hyper@linkstart#1#2{%
10346   \Hy@VerboseLinkStart{#1}{#2}%
10347   \def\Hy@tempa{#1}\ifx\Hy@tempa\@urltype
10348     \@Localurltrue
10349     \special{!direct <a href=\hyper@quote#2\hyper@quote>}%
10350   \else
10351     \@Localurlfalse
10352   \begingroup
10353     \hyper@chars
10354     \special{!aref \HyperDestNameFilter{#2}}%

```

```

10355 \endgroup
10356 \fi
10357 }
10358 \def\hyper@linkend{%
10359 \if@Localurl
10360 \special{!endaref}%
10361 \else
10362 \special{!direct </a>}%
10363 \fi
10364 }
10365 \Hy@WrapperDef\hyper@anchorstart#1{%
10366 \Hy@SaveLastskip
10367 \Hy@VerboseAnchor{#1}%
10368 \begingroup
10369 \hyper@chars
10370 \special{!aname #1}%
10371 \special{!direct <a name=%
10372 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}}%
10373 \endgroup
10374 \Hy@activeanchortrue
10375 }
10376 \def\hyper@anchorend{%
10377 \special{!direct </a>}%
10378 \Hy@activeanchorfalse
10379 \Hy@RestoreLastskip
10380 }
10381 \Hy@WrapperDef\hyper@anchor#1{%
10382 \Hy@SaveLastskip
10383 \Hy@VerboseAnchor{#1}%
10384 \begingroup
10385 \let\protect=\string
10386 \hyper@chars
10387 \leavevmode
10388 \special{!aname #1}%
10389 \special{!direct <a name=%
10390 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}}%
10391 \endgroup
10392 \Hy@activeanchortrue
10393 \bgroup\anchor@spot\egroup
10394 \special{!direct </a>}%
10395 \Hy@activeanchorfalse
10396 \Hy@RestoreLastskip
10397 }
10398 \def\@Form[#1]{%
10399 \Hy@Message{Sorry, TeXpider does not yet support FORMs}%
10400 }
10401 \let\@endForm\ltx@empty
10402 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
10403 \Hy@Message{Sorry, TeXpider does not yet support FORM gauges}%
10404 }
10405 \def\@TextField[#1]#2{% parameters, label
10406 \Hy@Message{Sorry, TeXpider does not yet support FORM text fields}%
10407 }
10408 \def\@CheckBox[#1]#2{% parameters, label

```

```

10409 \Hy@Message{Sorry, TeXpider does not yet support FORM checkboxes}%
10410 }
10411 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
10412 \Hy@Message{Sorry, TeXpider does not yet support FORM choice menus}%
10413 }
10414 \def\@PushButton[#1]#2{% parameters, label
10415 \Hy@Message{Sorry, TeXpider does not yet support FORM pushbuttons}%
10416 }
10417 \def\@Reset[#1]#2{%
10418 \Hy@Message{Sorry, TeXpider does not yet support FORMs}%
10419 }
10420 \def\@Submit[#1]#2{%
10421 \Hy@Message{Sorry, TeXpider does not yet support FORMs}%
10422 }
10423 </vtexhtml>
10424 <*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.

```

10425 \ifcsname mediaheight\endcsname
10426 \ifHy@setpagesize
10427 \providecommand*\VTexInitMediaSize{%
10428 \ifdim\stockwidth>\z@
10429 \ifdim\stockheight>\z@
10430 \setlength\mediaheight\stockheight
10431 \setlength\mediawidth\stockwidth
10432 \else
10433 \ifdim\paperwidth>\z@
10434 \ifdim\paperheight>\z@
10435 \setlength\mediaheight\paperheight
10436 \setlength\mediawidth\paperwidth
10437 \fi
10438 \fi
10439 \fi
10440 \else
10441 \ifdim\stockwidth=\z@
10442 \ifdim\paperwidth>\z@
10443 \ifdim\paperheight>\z@
10444 \setlength\mediaheight\paperheight
10445 \setlength\mediawidth\paperwidth
10446 \fi
10447 \fi
10448 \fi
10449 \fi
10450 }%
10451 \Hy@AtBeginDocument{\VTexInitMediaSize}%
10452 \fi
10453 \Hy@DisableOption{setpagesize}%
10454 \fi

```

Older versions of VTeX require `xyz` in lower case.

```

10455 \providecommand*\@pdfview{xyz}
10456 \providecommand*\@pdfborder{0 0 1}

```

```

10457 \providecommand*\@pdfborderstyle{}
10458 \let\CurrentBorderColor\@linkbordercolor
10459 \Hy@WrapperDef\hyper@anchor#1{%
10460   \Hy@SaveLastskip
10461   \Hy@VerboseAnchor{#1}%
10462   \begingroup
10463     \let\protect=\string
10464     \hyper@chars
10465     \special{!aname \HyperDestNameFilter{#1};\@pdfview}%
10466   \endgroup
10467   \Hy@activeanchortrue
10468   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
10469   \Hy@activeanchorfalse
10470   \Hy@RestoreLastskip
10471 }
10472 \Hy@WrapperDef\hyper@anchorstart#1{%
10473   \Hy@SaveLastskip
10474   \Hy@VerboseAnchor{#1}%
10475   \begingroup
10476     \hyper@chars
10477     \special{!aname \HyperDestNameFilter{#1};\@pdfview}%
10478   \endgroup
10479   \Hy@activeanchortrue
10480 }
10481 \def\hyper@anchorend{%
10482   \Hy@activeanchorfalse
10483   \Hy@RestoreLastskip
10484 }
10485 \def\@urltype{url}
10486 \def\Hy@undefinedname{UNDEFINED}
10487 \def\hyper@linkstart#1#2{%
10488   \Hy@VerboseLinkStart{#1}{#2}%
10489   \Hy@pstringdef\Hy@pstringURI{#2}%
10490   \expandafter\Hy@colorlink\csname @#1color\endcsname
10491   \ltx@ifundefined{#1bordercolor}{%
10492     \let\CurrentBorderColor\relax
10493   }{%
10494     \edef\CurrentBorderColor{%
10495       \csname @#1bordercolor\endcsname
10496     }%
10497   }%
10498   \def\Hy@tempa{#1}%
10499   \ifx\Hy@tempa\@urltype
10500     \special{!%
10501       aref <u=/Type/Action/S/URI/URI(\Hy@pstringURI)%
10502       \ifHy@href@ismap
10503         /IsMap true%
10504       \fi
10505       \Hy@href@nextactionraw
10506       >;%
10507       a=<%
10508       \ifHy@pdfa /F 4\fi
10509       \Hy@setpdfborder
10510       \ifx\CurrentBorderColor\relax

```

```

10511     \else
10512         /C [\CurrentBorderColor]%
10513     \fi
10514     >%
10515     }%
10516 \else
10517     \protected@edef\Hy@testname{#2}%
10518     \ifx\Hy@testname\@empty
10519         \Hy@Warning{%
10520             Empty destination name,\MessageBreak
10521             using `\'Hy@undefinedname'%
10522         }%
10523     \let\Hy@testname\Hy@undefinedname
10524 \fi
10525 \special{!%
10526     aref \expandafter\HyperDestNameFilter
10527         \expandafter{\Hy@testname};%
10528     a=<%
10529     \ifHy@pdfa /F 4\fi
10530     \Hy@setpdfborder
10531     \ifx\CurrentBorderColor\relax
10532     \else
10533         /C [\CurrentBorderColor]%
10534     \fi
10535     >%
10536     }%
10537 \fi
10538 }
10539 \def\hyper@linkend{%
10540     \special{!endaref}%
10541     \Hy@endcolorlink
10542 }
10543 \def\hyper@linkfile#1#2#3{%
10544     \leavevmode
10545     \def\Hy@pstringF{#2}%
10546     \Hy@CleanupFile\Hy@pstringF
10547     \special{!%
10548         aref <%
10549         \ifnum\Hy@VTeXversion>753 \ifHy@pdfnewwindow n\fi\fi
10550         f=\Hy@pstringF>#3;%
10551         a=<%
10552         \ifHy@pdfa /F 4\fi
10553         \Hy@setpdfborder
10554         \ifx\@filebordercolor\relax
10555         \else
10556             /C [\@filebordercolor]%
10557         \fi
10558         >%
10559         }%
10560         \Hy@colorlink\@filecolor
10561         #1\Hy@xspace@end
10562         \Hy@endcolorlink
10563         \special{!endaref}%
10564     }

```

```

10565 \def\hyper@linkurl#1#2{%
10566   \begingroup
10567   \Hy@pstringdef\Hy@pstringURI{#2}%
10568   \hyper@chars
10569   \leavevmode
10570   \special{!%
10571     aref <u=/Type/Action/S/URI/URI(\Hy@pstringURI)%
10572     \ifHy@href@ismap
10573       /IsMap true%
10574     \fi
10575     \Hy@href@nextactionraw
10576     >,%
10577     a=<%
10578     \ifHy@pdfa /F 4\fi
10579     \Hy@setpdfborder
10580     \ifx\@urlbordercolor\relax
10581     \else
10582       /C [\@urlbordercolor]%
10583     \fi
10584     >%
10585   }%
10586   \Hy@colorlink\@urlcolor
10587   #1\Hy@xspace@end
10588   \Hy@endcolorlink
10589   \special{!endaref}%
10590 \endgroup
10591 }
10592 \def\hyper@link#1#2#3{%
10593   \Hy@VerboseLinkStart{#1}{#2}%
10594   \ltx@ifundefined{@#1bordercolor}{%
10595     \let\CurrentBorderColor\relax
10596   }{%
10597     \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
10598   }%
10599   \leavevmode
10600   \protected@edef\Hy@testname{#2}%
10601   \ifx\Hy@testname\@empty
10602     \Hy@Warning{%
10603       Empty destination name,\MessageBreak
10604       using ``\Hy@undefinedname'%
10605     }%
10606     \let\Hy@testname\Hy@undefinedname
10607   \fi
10608   \special{!%
10609     aref \expandafter\HyperDestNameFilter
10610     \expandafter{\Hy@testname};%
10611     a=<%
10612     \ifHy@pdfa /F 4\fi
10613     \Hy@setpdfborder
10614     \ifx\CurrentBorderColor\relax
10615     \else
10616       /C [\CurrentBorderColor]%
10617     \fi
10618     >%

```



```

10619 }%
10620 \expandafter
10621 \Hy@colorlink\csname @#1color\endcsname
10622   #3\Hy@xspace@end
10623 \Hy@endcolorlink
10624 \special{!endaref}%
10625 }
10626 \def\hyper@image#1#2{%
10627 \hyper@linkurl{#2}{#1}%
10628 }
10629 \def\@hyper@launch run:#1\#2#3{%
10630 \Hy@pstringdef\Hy@pstringF{#1}%
10631 \Hy@pstringdef\Hy@pstringP{#3}%
10632 \leavevmode
10633 \special{!aref %
10634   <u=%
10635     /Type/Action%
10636     /S/Launch%
10637     /F(\Hy@pstringF)%
10638     \Hy@SetNewWindow
10639     \ifx\#3\%
10640     \else
10641       /Win<</F(\Hy@pstringF)/P(\Hy@pstringP)>>%
10642     \fi
10643     \Hy@href@nextactionraw
10644   >,%
10645   a=<%
10646     \ifHy@pdfa /F 4\fi
10647     \Hy@setpdfborder
10648     \ifx\@runbordercolor\relax
10649     \else
10650       /C[\@runbordercolor]%
10651     \fi
10652   >%
10653 }%
10654 \Hy@colorlink\@runcolor
10655   #2\Hy@xspace@end
10656 \Hy@endcolorlink
10657 \special{!endaref}%
10658 }
10659 \def\Acrobatmenu#1#2{%
10660 \EdefEscapeName\Hy@temp@menu{#1}%
10661 \Hy@Acrobatmenu{#1}{#2}{%
10662 \special{!%
10663   aref <u=/S /Named /N /\Hy@temp@menu>;%
10664   a=<%
10665     \ifHy@pdfa /F 4\fi
10666     \Hy@setpdfborder
10667     \ifx\@menubordercolor\relax
10668     \else
10669       /C[\@menubordercolor]%
10670     \fi
10671   >%
10672 }%

```

```

10673 \Hy@colorlink\@menucolor
10674 #2\Hy@xspace@end
10675 \Hy@endcolorlink
10676 \special{!endaref}%
10677 }%
10678 }

```

The following code (transition effects) is made by Alex Kostin.

The code below makes sense for V_TE_X 7.02 or later.

Please never use \ifundefined{V_TE_Xversion}{..}{..} *globally*.

```

10679 \ifnum\Hy@VTeXversion<702 %
10680 \else
10681 \def\hyper@pagetransition{%
10682 \ifx\@pdfpagetransition\relax
10683 \else
10684 \ifx\@pdfpagetransition\@empty

```

Standard incantation.

1. Does an old entry have to be deleted? 2. If 1=yes, how to delete?

```

10685 \else
10686 \hvtex@parse@trans\@pdfpagetransition
10687 \fi
10688 \fi
10689 }%

```

I have to write an “honest” parser to convert raw PDF code into V_TE_X \special.
(AVK)

Syntax of V_TE_X \special{!trans <transition_effect>}:

```

<transition_effect> ::= <transition_style>[,<transition_duration>]
<transition_style> ::= <Blinds_effect> | <Box_effect> |
                     <Dissolve_effect> | <Glitter_effect> |
                     <Split_effect> | <Wipe_effect>
<Blinds_effect> ::= B[<effect_dimension>]
<Box_effect> ::= X[<effect_motion>]
<Dissolve_effect> ::= D
<Glitter_effect> ::= G[<effect_direction>]
<Split_effect> ::= S[<effect_motion>][<effect_dimension>]
<Wipe_effect> ::= W[<effect_direction>]
<Replace_effect> ::= R
<effect_direction> ::= <number>
<effect_dimension> ::= H | V
<effect_motion> ::= I | O
<transition_duration> ::= <number>

```

Transition codes:

```

10690 \def\hvtex@trans@effect@Blinds{\def\hvtex@trans@code{B}}%
10691 \def\hvtex@trans@effect@Box{\def\hvtex@trans@code{X}}%
10692 \def\hvtex@trans@effect@Dissolve{\def\hvtex@trans@code{D}}%
10693 \def\hvtex@trans@effect@Glitter{\def\hvtex@trans@code{G}}%
10694 \def\hvtex@trans@effect@Split{\def\hvtex@trans@code{S}}%
10695 \def\hvtex@trans@effect@Wipe{\def\hvtex@trans@code{W}}%
10696 \def\hvtex@trans@effect@R{\def\hvtex@trans@code{R}}%

```

Optional parameters:

```

10697 \def\hvtex@par@dimension{/Dm}%

```

```

10698 \def\hvtex@par@direction{/Di}%
10699 \def\hvtex@par@duration{/D}%
10700 \def\hvtex@par@motion{/M}%

```

Tokenizer:

```

10701 \def\hvtex@gettoken{%
10702   \expandafter\hvtex@gettoken@\hvtex@buffer\@nil
10703 }%

```

Notice that tokens in the input buffer must be space delimited.

```

10704 \def\hvtex@gettoken@#1 #2\@nil{%
10705   \edef\hvtex@token{#1}%
10706   \edef\hvtex@buffer{#2}%
10707 }%
10708 \def\hvtex@parse@trans#1{%

```

Initializing code:

```

10709 \let\hvtex@trans@code\@empty
10710 \let\hvtex@param@dimension\@empty
10711 \let\hvtex@param@direction\@empty
10712 \let\hvtex@param@duration\@empty
10713 \let\hvtex@param@motion\@empty
10714 \edef\hvtex@buffer{#1\space}%

```

First token is the PDF transition name without escape.

```

10715 \hvtex@gettoken
10716 \ifx\hvtex@token\@empty

```

Leading space(s)?

```

10717 \ifx\hvtex@buffer\@empty

```

The buffer is empty, nothing to do.

```

10718 \else
10719   \hvtex@gettoken
10720 \fi
10721 \fi
10722 \csname hvtex@trans@effect@\hvtex@token\endcsname

```

Now is time to parse optional parameters.

```

10723 \hvtex@trans@params
10724 }%

```

Reentrant macro to parse optional parameters.

```

10725 \def\hvtex@trans@params{%
10726   \ifx\hvtex@buffer\@empty
10727   \else
10728     \hvtex@gettoken
10729     \let\hvtex@trans@par\hvtex@token
10730     \ifx\hvtex@buffer\@empty
10731     \else
10732       \hvtex@gettoken
10733       \ifx\hvtex@trans@par\hvtex@par@duration

```

/D is the effect duration in seconds. V_TE_X special takes it in milliseconds.

```

10734       \let\hvtex@param@duration\hvtex@token
10735     \else \ifx\hvtex@trans@par\hvtex@par@motion

```

/M can be either /I or /O

```
10736      \expandafter\edef\expandafter\hvtex@param@motion
10737      \expandafter{\expandafter\@gobble\hvtex@token}%
10738      \else \ifx\hvtex@trans@par\hvtex@par@dimension
```

/Dm can be either /H or /V

```
10739      \expandafter\edef\expandafter\hvtex@param@dimension
10740      \expandafter{\expandafter\@gobble\hvtex@token}%
10741      \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).

```
10742      \let\hvtex@param@direction\hvtex@token
10743      \fi\fi\fi\fi
10744      \fi
10745      \fi
10746      \ifx\hvtex@buffer\@empty
10747      \let\next\hvtex@produce@trans
10748      \else
10749      \let\next\hvtex@trans@params
10750      \fi
10751      \next
10752  }%
```

Merge <transition_effect> and issue the special when possible. Too lazy to validate optional parameters.

```
10753  \def\hvtex@produce@trans{%
10754  \let\vtex@trans@special\@empty
10755  \if S\hvtex@trans@code
10756  \edef\vtex@trans@special{\hvtex@trans@code
10757  \hvtex@param@dimension\hvtex@param@motion}%
10758  \else\if B\hvtex@trans@code
10759  \edef\vtex@trans@special{%
10760  \hvtex@trans@code\hvtex@param@dimension
10761  }%
10762  \else\if X\hvtex@trans@code
10763  \edef\vtex@trans@special{%
10764  \hvtex@trans@code\hvtex@param@motion
10765  }%
10766  \else\if W\hvtex@trans@code
10767  \edef\vtex@trans@special{%
10768  \hvtex@trans@code\hvtex@param@direction
10769  }%
10770  \else\if D\hvtex@trans@code
10771  \let\vtex@trans@special\hvtex@trans@code
10772  \else\if R\hvtex@trans@code
10773  \let\vtex@trans@special\hvtex@trans@code
10774  \else\if G\hvtex@trans@code
10775  \edef\vtex@trans@special{%
10776  \hvtex@trans@code\hvtex@param@direction
10777  }%
10778  \fi\fi\fi\fi\fi\fi
10779  \ifx\vtex@trans@special\@empty
10780  \else
10781  \ifx\hvtex@param@duration\@empty
```

```

10782 \else
10783 \setlength{\dimen@}{\hvtex@param@duration\p@}%

```

I'm not guilty of possible overflow.

```

10784 \multiply\dimen@\@m
10785 \edef\vtex@trans@special{%
10786 \vtex@trans@special,\strip@pt\dimen@
10787 }%
10788 \fi

```

And all the mess is just for this.

```

10789 \special{!trans \vtex@trans@special}%
10790 \fi
10791 }%

10792 \def\hyper@pageduration{%
10793 \ifx\@pdfpageduration\relax
10794 \else
10795 \ifx\@pdfpageduration\@empty
10796 \special{!duration-}%
10797 \else
10798 \special{!duration \@pdfpageduration}%
10799 \fi
10800 \fi
10801 }%
10802 \g@addto@macro\Hy@EveryPageBoxHook{%
10803 \hyper@pagetransition
10804 \hyper@pageduration
10805 }%
10806 \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

```

10807 \ifx\@pdfproducer\relax
10808 \def\@pdfproducer{VTeX}%
10809 \ifnum\Hy@VTeXversion>\z@
10810 \count@\VTeXversion
10811 \divide\count@ 100 %
10812 \edef\@pdfproducer{\@pdfproducer\space v\the\count@}%
10813 \multiply\count@ -100 %
10814 \advance\count@\VTeXversion
10815 \edef\@pdfproducer{%
10816 \@pdfproducer
10817 .\ifnum\count@<10 0\fi\the\count@
10818 \ifx\VTeXOS\@undefined\else
10819 \ifnum\VTeXOS>0 %
10820 \ifnum\VTeXOS<6 %

```

```

10821      \space(
10822      \ifcase\VTexOS
10823      \or Windows\or Linux\or OS/2\or MacOS\or MacOS/X%
10824      \fi
10825      )%
10826    \fi
10827  \fi
10828 \fi
10829 ,\space
10830 \ifnum\OpMode=\@ne PDF\else PS\fi
10831 \space backend%
10832 \ifx\gexmode\@undefined\else
10833 \ifnum\gexmode>\z@\space with GeX\fi
10834 \fi
10835 }%
10836 \fi
10837 \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).

```

10838 \def\PDF@SetupDoc{%
10839   \ifx\@pdfpagescrop\@empty
10840   \else
10841     \special{!pdfinfo b=<\@pdfpagescrop>}%
10842   \fi
10843   \ifx\@pdfstartpage\@empty
10844   \else
10845     \ifx\@pdfstartview\@empty
10846     \else
10847       \special{!onopen Page\@pdfstartpage}%
10848     \fi
10849   \fi
10850   \special{!pdfinfo p=</\@pdfpagemode>}%
10851   \ifx\@baseurl\@empty
10852   \else
10853     \special{!pdfinfo u=<<</Base (\@baseurl)>>>}%
10854   \fi
10855   \special{!pdfinfo v=<<<%
10856     \ifHy@pdftoolbar\else /HideToolbar true\fi
10857     \ifHy@pdfmenubar\else /HideMenubar true\fi
10858     \ifHy@pdfwindowui\else /HideWindowUI true\fi

```

```

10859 \ifHy@pdffitwindow /FitWindow true\fi
10860 \ifHy@pdfcenterwindow /CenterWindow true\fi
10861 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
10862 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
10863 \Hy@UseNameKey{Direction}\@pdfdirection
10864 \Hy@UseNameKey{ViewArea}\@pdfviewarea
10865 \Hy@UseNameKey{ViewClip}\@pdfviewclip
10866 \Hy@UseNameKey{PrintArea}\@pdfprintarea
10867 \Hy@UseNameKey{PrintClip}\@pdfprintclip
10868 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
10869 \Hy@UseNameKey{Duplex}\@pdfduplex
10870 \ifx\@pdfpicktraybypdfsize\@empty
10871 \else
10872 /PickTrayByPDFSize \@pdfpicktraybypdfsize
10873 \fi
10874 \ifx\@pdfprintpagerange\@empty
10875 \else
10876 /PrintPageRange[\@pdfprintpagerange]%
10877 \fi
10878 \ifx\@pdfnumcopies\@empty
10879 \else
10880 /NumCopies \@pdfnumcopies
10881 \fi
10882 >>>}%
10883 \ifx\@pdfpagelayout\@empty
10884 \else
10885 \special{!pdfinfo l=</\@pdfpagelayout\space>}%
10886 \fi
10887 }%
10888 \HyInfo@AddonUnsupportedtrue
10889 \define@key{Hyp}{pdfcreationdate}{%
10890 \Hy@Warning{%
10891 VTeX does not support pdfcreationdate.\MessageBreak
10892 Therefore its setting is ignored%
10893 }%
10894 }
10895 \define@key{Hyp}{pdfmoddate}{%
10896 \Hy@Warning{%
10897 VTeX does not support pdfmoddate.\MessageBreak
10898 Therefore its setting is ignored%
10899 }%
10900 }
10901 \def\PDF@FinishDoc{%
10902 \Hy@UseMaketitleInfos
10903 \HyInfo@TrappedUnsupported
10904 \special{!pdfinfo a=<\@pdfauthor>}%
10905 \special{!pdfinfo t=<\@pdftitle>}%
10906 \special{!pdfinfo s=<\@pdfsubject>}%
10907 \special{!pdfinfo c=<\@pdfcreator>}%
10908 \ifx\@pdfproducer\relax
10909 \else
10910 \special{!pdfinfo r=<\@pdfproducer>}%
10911 \fi
10912 \special{!pdfinfo k=<\@pdfkeywords>}%

```

```

10913 \Hy@DisableOption{pdfauthor}%
10914 \Hy@DisableOption{pdftitle}%
10915 \Hy@DisableOption{pdfsubject}%
10916 \Hy@DisableOption{pdfcreator}%
10917 \Hy@DisableOption{addtopdfcreator}%
10918 \Hy@DisableOption{pdfcreationdate}%
10919 \Hy@DisableOption{pdfcreationdate}%
10920 \Hy@DisableOption{pdfmoddate}%
10921 \Hy@DisableOption{pdfproducer}%
10922 \Hy@DisableOption{pdfkeywords}%
10923 \Hy@DisableOption{pdftrapped}%
10924 \Hy@DisableOption{pdfinfo}%
10925 }
10926 </vtx>

```

43.7 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.

```

10927 <dviwindo>\def\literalps@out#1{\special{ps:#1}}%
10928 <packageEnd>\providecommand*{\Hy@DistillerDestFix}{%
10929 <*pdfmark | dviwindo>
10930 \def\Hy@DistillerDestFix{%
10931 \begingroup
10932 \let\x\literalps@out

```

The fix has to be passed unchanged through GeX, if VTeX in PostScript mode with GeX is used.

```

10933 \ifnum \@ifundefined{OpMode}{0}{%
10934 \ifundefined{gexmode}{0}{%
10935 \ifnum\gexmode>0 \OpMode\else 0\fi
10936 }}>1 %
10937 \def\x##1{%
10938 \immediate\special{!=##1}%
10939 }%
10940 \fi
10941 \x{%
10942 /product where{%
10943 pop %
10944 product(Distiller)search{%
10945 pop pop pop %
10946 version(.)search{%
10947 exch pop exch pop%
10948 (3011)eq{%
10949 gsave %
10950 newpath 0 0 moveto closepath clip%

```



```

10951          /Courier findfont 10 scalefont setfont %
10952          72 72 moveto(.)show %
10953          grestore%
10954          }if%
10955          }{pop}ifelse%
10956          }{pop}ifelse%
10957          }if%
10958          }%
10959 \endgroup
10960 }
10961 </pdfmark | dviwindo>

```

43.8 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

```

```

10962 <*pdfmark>
10963 \Hy@breaklinks@unsupported
10964 \def\HyPat@ObjRef{%
10965   \{[~{}]+\}%
10966 }
10967 \Hy@WrapperDef\hyper@anchor#1{%
10968   \Hy@SaveLastskip
10969   \Hy@VerboseAnchor{#1}%
10970   \begingroup
10971     \pdfmark[\anchor@spot]{%
10972       pdfmark=/DEST,%
10973       linktype=anchor,%
10974       View=/\@pdfview \@pdfviewparams,%
10975       DestAnchor={#1}%
10976     }%
10977   \endgroup
10978   \Hy@RestoreLastskip
10979 }
10980 \ltx@ifundefined{hyper@anchorstart}{-}{\endinput}
10981 \Hy@WrapperDef\hyper@anchorstart#1{%
10982   \Hy@SaveLastskip
10983   \Hy@VerboseAnchor{#1}%
10984   \literalps@out{H.S}%
10985   \Hy@AllowHyphens
10986   \xdef\hyper@currentanchor{#1}%
10987   \Hy@activeanchortrue
10988 }

```

```

10989 \def\hyper@anchorend{%
10990 \literalps@out{\strip@pt@and@otherjunk\baselineskip\space H.A}%
10991 \pdfmark{%
10992   pdfmark=/DEST,%
10993   linktype=anchor,%
10994   View=/\@pdfview \@pdfviewparams,%
10995   DestAnchor=\hyper@currentanchor,%
10996 }%
10997 \Hy@activeanchorfalse
10998 \Hy@RestoreLastskip
10999 }
11000 \def\hyper@linkstart#1#2{%
11001 \Hy@VerboseLinkStart{#1}{#2}%
11002 \ifHy@breaklinks
11003 \else
11004 \leavevmode
11005 \ifmmode
11006 \def\Hy@LinkMath{$}%
11007 \else
11008 \let\Hy@LinkMath\ltx@empty
11009 \fi
11010 \Hy@SaveSpaceFactor
11011 \hbox\bgroup
11012 \Hy@RestoreSpaceFactor
11013 \Hy@LinkMath
11014 \fi
11015 \expandafter\Hy@colorlink\csname @#1color\endcsname
11016 \literalps@out{H.S}%
11017 \Hy@AllowHyphens
11018 \xdef\hyper@currentanchor{#2}%
11019 \gdef\hyper@currentlinktype{#1}%
11020 }
11021 \def\hyper@linkend{%
11022 \literalps@out{\strip@pt@and@otherjunk\baselineskip\space H.L}%
11023 \ltx@ifundefined{@\hyper@currentlinktype bordercolor}{%
11024 \let\Hy@tempcolor\relax
11025 }{%
11026 \edef\Hy@tempcolor{%
11027 \csname @\hyper@currentlinktype bordercolor\endcsname
11028 }%
11029 }%
11030 \pdfmark{%
11031   pdfmark=/ANN,%
11032   linktype=link,%
11033   Subtype=/Link,%
11034   PDFAMFlags=4,%
11035   Dest=\hyper@currentanchor,%
11036   AcroHighlight=\@pdfhighlight,%
11037   Border=\@pdfborder,%
11038   BorderStyle=\@pdfborderstyle,%
11039   Color=\Hy@tempcolor,%
11040   Raw=H.B%
11041 }%
11042 \Hy@endcolorlink

```

```

11043 \ifHy@breaklinks
11044 \else
11045   \Hy@LinkMath
11046   \Hy@SaveSpaceFactor
11047   \egroup
11048   \Hy@RestoreSpaceFactor
11049 \fi
11050 }

```

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.

```

11051 \begingroup
11052   \catcode`P=12 %
11053   \catcode`T=12 %
11054   \lowercase{\endgroup
11055   \gdef\rem@ptetc#1.#2PT#3!{#1\ifnum#2>\z@.#2\fi}%
11056 }
11057 \def\strip@pt@and@otherjunk#1{\expandafter\rem@ptetc\the#1!}

```

`\hyper@pagetransition`

```

11058 \def\hyper@pagetransition{%
11059   \ifx\@pdfpagetransition\relax
11060   \else
11061     \ifx\@pdfpagetransition\@empty
11062       % 1. Does an old entry have to be deleted?
11063       % 2. If 1=yes, how to delete?
11064     \else
11065       \pdfmark{%
11066         pdfmark=/PUT,%
11067         Raw={%
11068           \string{ThisPage\string}%
11069           <</Trans << /S /\@pdfpagetransition\space >> >>%
11070         }%
11071       }%
11072     \fi
11073   \fi
11074 }

```

`\hyper@pageduration`

```

11075 \def\hyper@pageduration{%
11076   \ifx\@pdfpageduration\relax
11077   \else
11078     \ifx\@pdfpageduration\@empty
11079       % 1. Does an old entry have to be deleted?
11080       % 2. If 1=yes, how to delete?
11081     \else
11082       \pdfmark{%
11083         pdfmark=/PUT,%
11084         Raw={%
11085           \string{ThisPage\string}%
11086           <</Dur \@pdfpageduration>>%
11087         }%
11088       }%

```

```

11089 \fi
11090 \fi
11091 }

11092 \g@addto@macro\Hy@EveryPageBoxHook{%
11093 \hyper@pagetransition
11094 \hyper@pageduration
11095 }

11096 \def\hyper@image#1#2{%
11097 \hyper@linkurl{#2}{#1}%
11098 }
11099 \def\Hy@undefinedname{UNDEFINED}
11100 \def\hyper@link#1#2#3{%
11101 \Hy@VerboseLinkStart{#1}{#2}%
11102 \ltx@ifundefined{#1bordercolor}{%
11103 \let\Hy@tempcolor\relax
11104 }{%
11105 \edef\Hy@tempcolor{\csname @#1bordercolor\endcsname}%
11106 }%
11107 \begingroup
11108 \protected@edef\Hy@testname{#2}%
11109 \ifx\Hy@testname\@empty
11110 \Hy@Warning{%
11111 Empty destination name,\MessageBreak
11112 using \Hy@undefinedname'%
11113 }%
11114 \let\Hy@testname\Hy@undefinedname
11115 \fi
11116 \pdfmark[{#3}]{%
11117 Color=\Hy@tempcolor,%
11118 linktype={#1},%
11119 AcroHighlight=\@pdfhighlight,%
11120 Border=\@pdfborder,%
11121 BorderStyle=\@pdfborderstyle,%
11122 pdfmark=/ANN,%
11123 Subtype=/Link,%
11124 PDFAFlags=4,%
11125 Dest=\Hy@testname
11126 }%
11127 \endgroup
11128 }
11129 \newtoks\pdf@docset
11130 \def\PDF@FinishDoc{%
11131 \Hy@UseMaketitleInfos
11132 \Hy@Info@GenerateAddons
11133 \let\Hy@temp\@empty
11134 \ifx\@pdfcreationdate\@empty
11135 \else
11136 \def\Hy@temp{CreationDate=\@pdfcreationdate,}%
11137 \fi
11138 \ifx\@pdfmoddate\@empty
11139 \else
11140 \expandafter\def\expandafter\Hy@temp\expandafter{%
11141 \Hy@temp

```

```

11142     ModDate=\@pdfmoddate,%
11143 }%
11144 \fi
11145 \ifx\@pdfproducer\relax
11146 \else
11147   \expandafter\def\expandafter\Hy@temp\expandafter{%
11148     \Hy@temp
11149     Producer=\@pdfproducer,%
11150   }%
11151 \fi
11152 \expandafter
11153 \pdfmark\expandafter{%
11154   \Hy@temp
11155   pdfmark=/DOCINFO,%
11156   Title=\@pdftitle,%
11157   Subject=\@pdfsubject,%
11158   Creator=\@pdfcreator,%
11159   Author=\@pdfauthor,%
11160   Keywords=\@pdfkeywords,%
11161   Trapped=\@pdftrapped
11162 }%
11163 \ifx\HyInfo@Addons\@empty
11164 \else
11165   \pdfmark{%
11166     pdfmark=/DOCINFO,%
11167     Raw={\HyInfo@Addons}%
11168   }%
11169 \fi
11170 \Hy@DisableOption{pdfauthor}%
11171 \Hy@DisableOption{pdftitle}%
11172 \Hy@DisableOption{pdfsubject}%
11173 \Hy@DisableOption{pdfcreator}%
11174 \Hy@DisableOption{addtopdfcreator}%
11175 \Hy@DisableOption{pdfcreationdate}%
11176 \Hy@DisableOption{pdfcreationdate}%
11177 \Hy@DisableOption{pdfmoddate}%
11178 \Hy@DisableOption{pdfproducer}%
11179 \Hy@DisableOption{pdfkeywords}%
11180 \Hy@DisableOption{pdftrapped}%
11181 \Hy@DisableOption{pdfinfo}%
11182 }
11183 \def\PDF@SetupDoc{%
11184   \def\Hy@temp{}%
11185   \ifx\@pdfstartpage\@empty
11186   \else
11187     \ifx\@pdfstartview\@empty
11188     \else
11189       \edef\Hy@temp{%
11190         ,Page=\@pdfstartpage
11191         ,View=\@pdfstartview
11192       }%
11193     \fi
11194   \fi
11195   \edef\Hy@temp{%

```

```

11196 \noexpand\pdfmark{%
11197 pdfmark=/DOCVIEW,%
11198 PageMode=/\@pdfpagemode
11199 \Hy@temp
11200 }%
11201 }%
11202 \Hy@temp
11203 \ifx\@pdfpagescrop\@empty
11204 \else
11205 \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
11206 \fi
11207 \edef\Hy@temp{%
11208 \ifHy@pdftoolbar\else /HideToolbar true\fi
11209 \ifHy@pdfmenubar\else /HideMenubar true\fi
11210 \ifHy@pdfwindowui\else /HideWindowUI true\fi
11211 \ifHy@pdfwindow /FitWindow true\fi
11212 \ifHy@pdfcenterwindow /CenterWindow true\fi
11213 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
11214 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
11215 \Hy@UseNameKey{Direction}\@pdfdirection
11216 \Hy@UseNameKey{ViewArea}\@pdfviewarea
11217 \Hy@UseNameKey{ViewClip}\@pdfviewclip
11218 \Hy@UseNameKey{PrintArea}\@pdfprintarea
11219 \Hy@UseNameKey{PrintClip}\@pdfprintclip
11220 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
11221 \Hy@UseNameKey{Duplex}\@pdfduplex
11222 \ifx\@pdfpicktraybypdfsize\@empty
11223 \else
11224 /PickTrayByPDFSize \@pdfpicktraybypdfsize
11225 \fi
11226 \ifx\@pdfprintpagerange\@empty
11227 \else
11228 /PrintPageRange[\@pdfprintpagerange]%
11229 \fi
11230 \ifx\@pdfnumcopies\@empty
11231 \else
11232 /NumCopies \@pdfnumcopies
11233 \fi
11234 }%
11235 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
11236 \pdfmark{%
11237 pdfmark=/PUT,%
11238 Raw={%
11239 \string{Catalog\string}<<%
11240 \ifx\Hy@temp\@empty
11241 \else
11242 /ViewerPreferences<<\Hy@temp>>%
11243 \fi
11244 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
11245 \ifx\@pdflang\relax
11246 \else
11247 /Lang(\@pdflang)%
11248 \fi
11249 \ifx\@baseurl\@empty

```

```

11250     \else
11251         /URI<</Base(\Hy@pstringB)>>%
11252     \fi
11253 >>%
11254 }%
11255 }%
11256 }
11257 \pdfmark>
11258 \*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.

```

11259 \newif\ifHy@pdfmarkerror
11260 \def\pdfmark{\@ifnextchar[{\pdfmark@}{\pdfmark@[]}}
11261 \def\pdfmark@[#1]#2{%
11262     \Hy@pdfmarkerrorfalse
11263     \edef\@processme{\noexpand\pdf@toks={\the\pdf@defaulttoks}}%
11264     \@processme
11265     \let\pdf@type\relax
11266     \let\pdf@objdef\ltx@empty
11267     \kvsetkeys{PDF}{#2}%
11268     \ifHy@pdfmarkerror
11269     \else
11270         \ifx\pdf@type\relax
11271             \Hy@WarningNoLine{no pdfmark type specified in #2!!}%
11272             \ifx\#1\%
11273                 \else
11274                     \pdf@rect{#1}%
11275                 \fi
11276             \else
11277                 \ifx\#1\%
11278                     \literalps@out{%
11279                         [%
11280                         \ifx\pdf@objdef\ltx@empty
11281                         \else
11282                             /_objdef\string{\pdf@objdef\string}%
11283                         \fi
11284                         \the\pdf@toks\space\pdf@type\space pdfmark%
11285                     ]%
11286                 \else
11287                     \ltx@ifundefined{@\pdf@linktype color}{%
11288                         \Hy@colorlink\@linkcolor
11289                     }{%
11290                         \expandafter\Hy@colorlink
11291                         \csname @\pdf@linktype color\endcsname
11292                     }%
11293                     \pdf@rect{#1}%
11294                     \literalps@out{%
11295                         [%
11296                         \ifx\pdf@objdef\ltx@empty

```

```

11297         \else
11298         /_objdef\string{\pdf@objdef\string}%
11299         \fi
11300         \the\pdf@toks\space\pdf@type\space pdfmark%
11301     }%
11302     \Hy@endcolorlink
11303 \fi
11304 \fi
11305 \fi
11306 }

```

The complicated bit is working out the right enclosing rectangle of some piece of \TeX 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}

```

```

11307 \newsavebox{\pdf@box}
11308 \providecommand*{\Hy@setouterhbox}{\sbox}
11309 \providecommand*{\Hy@breaklinksunhbox}{\unhbox}
11310 \def\Hy@DEST{/DEST}
11311 \def\pdf@rect#1{%
11312   \begingroup
11313   \chardef\x=1 %
11314   \def\Hy@temp{#1}%
11315   \ifx\Hy@temp\ltx@empty
11316     \chardef\x=0 %
11317   \else
11318     \def\y{\anchor@spot}%
11319     \ifx\Hy@temp\y
11320       \def\y{\relax}%
11321     \ifx\anchor@spot\y
11322       \chardef\x=0 %
11323     \fi
11324   \fi
11325 \fi
11326 \expandafter\endgroup
11327 \ifcase\x
11328   \literalps@out{H.S}%
11329   \literalps@out{H.R}%
11330 \else
11331   \leavevmode
11332   \Hy@SaveSpaceFactor
11333   \ifmmode
11334     \def\Hy@LinkMath{$}%
11335   \else
11336     \let\Hy@LinkMath\ltx@empty

```



```

11337 \fi
11338 \ifHy@breaklinks
11339 \Hy@setouterhbox\pdf@box{%
11340 \Hy@RestoreSpaceFactor
11341 \Hy@LinkMath
11342 \Hy@AllowHyphens#1\Hy@xspace@end
11343 \Hy@LinkMath
11344 \Hy@SaveSpaceFactor
11345 }%
11346 \else
11347 \sbox\pdf@box{%
11348 \Hy@RestoreSpaceFactor
11349 \Hy@LinkMath
11350 #1\Hy@xspace@end
11351 \Hy@LinkMath
11352 \Hy@SaveSpaceFactor
11353 }%
11354 \fi
11355 \dimen@ht\pdf@box
11356 \ifdim\dp\pdf@box=\z@
11357 \literalps@out{H.S}%
11358 \else
11359 \lower\dp\pdf@box\hbox{\literalps@out{H.S}}%
11360 \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...).

```

11361 \ifHy@breaklinks
11362 \ifhmode
11363 \Hy@breaklinkssunhbox\pdf@box
11364 \else
11365 \box\pdf@box
11366 \fi
11367 \else
11368 \expandafter\box\pdf@box
11369 \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

11370 \ifdim\dimen@=\z@
11371 \literalps@out{H.R}%
11372 \else
11373 \raise\dimen@\hbox{\literalps@out{H.R}}%
11374 \fi
11375 \Hy@RestoreSpaceFactor
11376 \fi
11377 \ifx\pdf@type\Hy@DEST
11378 \else
11379 \pdf@addtoksx{H.B}%
11380 \fi
11381 }

```

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.

```

11382 \newtoks\pdf@toks
11383 \newtoks\pdf@defaulttoks
11384 \pdf@defaulttoks={} %
11385 \def\pdf@addtoks#1#2{%
11386   \edef\@processme{\pdf@toks{\the\pdf@toks/#2 #1}} %
11387   \@processme
11388 }
11389 \def\pdf@addtoksx#1{%
11390   \edef\@processme{\pdf@toks{\the\pdf@toks\space #1}} %
11391   \@processme
11392 }
11393 \def\PDFdefaults#1{%
11394   \pdf@defaulttoks={#1} %
11395 }

```

This is the list of allowed keys. See the Acrobat manual for an explanation.

```

11396 % what is the type of pdfmark?
11397 \define@key{PDF}{pdfmark}{\def\pdf@type{#1}}
11398 % what is the link type?
11399 \define@key{PDF}{linktype}{\def\pdf@linktype{#1}}
11400 \def\pdf@linktype{link}
11401 % named object?
11402 \define@key{PDF}{objdef}{\edef\pdf@objdef{#1}}
11403 \let\pdf@objdef\ltx@empty
11404 % parameter is a stream of PDF
11405 \define@key{PDF}{Raw}{\pdf@addtoksx{#1}}
11406 % parameter is a name
11407 \define@key{PDF}{Action}{\pdf@addtoks{#1}{Action}}
11408 % parameter is a array
11409 \define@key{PDF}{Border}{%
11410   \edef\Hy@temp{#1}%
11411   \ifx\Hy@temp\@empty
11412   \else
11413     \pdf@addtoks{[#1]\Hy@BorderArrayPatch}{Border}% hash-ok
11414   \fi
11415 }
11416 \let\Hy@BorderArrayPatch\@empty
11417 % parameter is a dictionary
11418 \define@key{PDF}{BorderStyle}{%
11419   \edef\Hy@temp{#1}%
11420   \ifx\Hy@temp\@empty
11421   \else
11422     \pdf@addtoks{<<#1>>}{BS}%
11423   \fi
11424 }
11425 % parameter is a array
11426 \define@key{PDF}{Color}{%
11427   \ifx\relax#1\relax
11428   \else
11429     \pdf@addtoks{[#1]}{Color}% hash-ok
11430   \fi

```

```

11431 }
11432 % parameter is a string
11433 \define@key{PDF}{Contents}{\pdf@addtoks{(#1)}{Contents}}
11434 % parameter is a integer
11435 \define@key{PDF}{Count}{\pdf@addtoks{#1}{Count}}
11436 % parameter is a array
11437 \define@key{PDF}{CropBox}{\pdf@addtoks{[#1]}{CropBox}}% hash-ok
11438 % parameter is a string
11439 \define@key{PDF}{DOSFile}{\pdf@addtoks{(#1)}{DOSFile}}
11440 % parameter is a string or file
11441 \define@key{PDF}{DataSource}{\pdf@addtoks{(#1)}{DataSource}}
11442 % parameter is a destination
11443 \define@key{PDF}{Dest}{%
11444   \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
11445   \ifx\Hy@pstringDest\@empty
11446     \Hy@pdfmarkerrortrue
11447     \Hy@Warning{Destination with empty name ignored}%
11448   \else
11449     \pdf@addtoks{(\Hy@pstringDest) cvn}{Dest}%
11450   \fi
11451 }
11452 \define@key{PDF}{DestAnchor}{%
11453   \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
11454   \ifx\Hy@pstringDest\@empty
11455     \Hy@pdfmarkerrortrue
11456     \Hy@Warning{Destination with empty name ignored}%
11457   \else
11458     \pdf@addtoks{(\Hy@pstringDest) cvn}{Dest}%
11459   \fi
11460 }
11461 % parameter is a string
11462 \define@key{PDF}{Dir}{\pdf@addtoks{(#1)}{Dir}}
11463 % parameter is a string
11464 \define@key{PDF}{File}{\pdf@addtoks{(#1)}{File}}
11465 % parameter is a int
11466 \define@key{PDF}{Flags}{\pdf@addtoks{#1}{Flags}}
11467 \define@key{PDF}{PDFAFlags}{%
11468   \ifHy@pdfa
11469     \pdf@addtoks{#1}{F}%
11470   \fi
11471 }
11472 % parameter is a name
11473 \define@key{PDF}{AcroHighlight}{%
11474   \begingroup
11475     \edef\x{#1}%
11476     \expandafter\endgroup\ifx\x\@empty
11477   \else
11478     \pdf@addtoks{#1}{H}%
11479   \fi
11480 }
11481 % parameter is a string
11482 \define@key{PDF}{ID}{\pdf@addtoks{[#1]}{ID}}% hash-ok
11483 % parameter is a string
11484 \define@key{PDF}{MacFile}{\pdf@addtoks{(#1)}{MacFile}}

```

```

11485 % parameter is a string
11486 \define@key{PDF}{ModDate}{\pdf@addtoks{(#1)}{ModDate}}
11487 % parameter is a string
11488 \define@key{PDF}{Op}{\pdf@addtoks{(#1)}{Op}}
11489 % parameter is a Boolean
11490 \define@key{PDF}{Open}{\pdf@addtoks{#1}{Open}}
11491 % parameter is a integer or name
11492 \define@key{PDF}{Page}{\pdf@addtoks{#1}{Page}}
11493 % parameter is a name
11494 \define@key{PDF}{PageMode}{\pdf@addtoks{#1}{PageMode}}
11495 % parameter is a string
11496 \define@key{PDF}{Params}{\pdf@addtoks{(#1)}{Params}}
11497 % parameter is a array
11498 \define@key{PDF}{Rect}{\pdf@addtoks{[#1]}{Rect}}% hash-ok
11499 % parameter is a integer
11500 \define@key{PDF}{SrcPg}{\pdf@addtoks{#1}{SrcPg}}
11501 % parameter is a name
11502 \define@key{PDF}{Subtype}{\pdf@addtoks{#1}{Subtype}}
11503 % parameter is a string
11504 \define@key{PDF}{Title}{\pdf@addtoks{(#1)}{Title}}
11505 % parameter is a string
11506 \define@key{PDF}{Unix}{\pdf@addtoks{(#1)}{Unix}}
11507 % parameter is a string
11508 \define@key{PDF}{UnixFile}{\pdf@addtoks{(#1)}{UnixFile}}
11509 % parameter is an array
11510 \define@key{PDF}{View}{\pdf@addtoks{[#1]}{View}}% hash-ok
11511 % parameter is a string
11512 \define@key{PDF}{WinFile}{\pdf@addtoks{(#1)}{WinFile}}

```

These are the keys used in the DOCINFO section.

```

11513 \define@key{PDF}{Author}{\pdf@addtoks{(#1)}{Author}}
11514 \define@key{PDF}{Creator}{\pdf@addtoks{(#1)}{Creator}}
11515 \define@key{PDF}{CreationDate}{\pdf@addtoks{(#1)}{CreationDate}}
11516 \define@key{PDF}{ModDate}{\pdf@addtoks{(#1)}{ModDate}}
11517 \define@key{PDF}{Producer}{\pdf@addtoks{(#1)}{Producer}}
11518 \define@key{PDF}{Subject}{\pdf@addtoks{(#1)}{Subject}}
11519 \define@key{PDF}{Keywords}{\pdf@addtoks{(#1)}{Keywords}}
11520 \define@key{PDF}{ModDate}{\pdf@addtoks{(#1)}{ModDate}}
11521 \define@key{PDF}{Base}{\pdf@addtoks{(#1)}{Base}}
11522 \define@key{PDF}{URI}{\pdf@addtoks{#1}{URI}}
11523 \define@key{PDF}{Trapped}{%
11524   \edef\Hy@temp{#1}%
11525   \ifx\Hy@temp\@empty
11526     \else
11527       \pdf@addtoks{/#1}{Trapped}%
11528     \fi
11529 }
11530
11531 </pdfmarkbase>
11532 <*pdfmark>
11533 \def\Acrobatmenu#1#2{%
11534   \EdefEscapeName\Hy@temp@menu{#1}%
11535   \Hy@Acrobatmenu{#1}{#2}{%
11536     \pdfmark[#{#2}]{%
11537       linktype=menu,%

```

```

11538 pdfmark=/ANN,%
11539 AcroHighlight=\@pdfhighlight,%
11540 Border=\@pdfborder,%
11541 BorderStyle=\@pdfborderstyle,%
11542 Color=\@menubordercolor,%
11543 Action={<</Subtype/Named/N/\Hy@temp@menu>>},%
11544 Subtype=/Link,%
11545 PDFAFlags=4%
11546 }%
11547 }%
11548 }

```

And now for some useful examples:

```

11549 \def\PDFNextPage{\@ifnextchar{\PDFNextPage@}{\PDFNextPage@[]}}
11550 \def\PDFNextPage@[#1]#2{%
11551   \pdfmark[{#2}]{%
11552     #1,%
11553     Border=\@pdfborder,%
11554     BorderStyle=\@pdfborderstyle,%
11555     Color=.2 .1 .5,%
11556     pdfmark=/ANN,%
11557     Subtype=/Link,%
11558     PDFAFlags=4,%
11559     Page=/Next%
11560   }%
11561 }
11562 \def\PDFPreviousPage{%
11563   \@ifnextchar{\PDFPreviousPage@}{\PDFPreviousPage@[]}%
11564 }
11565 \def\PDFPreviousPage@[#1]#2{%
11566   \pdfmark[{#2}]{%
11567     #1,%
11568     Border=\@pdfborder,%
11569     BorderStyle=\@pdfborderstyle,%
11570     Color=.4 .4 .1,%
11571     pdfmark=/ANN,%
11572     Subtype=/Link,%
11573     PDFAFlags=4,%
11574     Page=/Prev%
11575   }%
11576 }
11577 \def\PDFOpen#1{%
11578   \pdfmark{#1,pdfmark=/DOCVIEW}%
11579 }

```

This will only work if you use Distiller 2.1 or higher.

```

11580 \def\hyper@linkurl#1#2{%
11581   \begingroup
11582   \Hy@pstringdef\Hy@pstringURI{#2}%
11583   \hyper@chars
11584   \leavevmode
11585   \pdfmark[{#1}]{%
11586     pdfmark=/ANN,%
11587     linktype=url,%
11588     AcroHighlight=\@pdfhighlight,%

```

```

11589   Border=\@pdfborder,%
11590   BorderStyle=\@pdfborderstyle,%
11591   Color=\@urlbordercolor,%
11592   Action={<<%
11593     /Subtype/URI%
11594     /URI(\Hy@pstringURI)%
11595     \ifHy@href@ismap
11596     /IsMap true%
11597     \fi
11598   >>},%
11599   Subtype=/Link,%
11600   PDFAFlags=4%
11601   }%
11602 \endgroup
11603 }
11604 \def\hyper@linkfile#1#2#3{%
11605 \begingroup
11606   \def\Hy@pstringF{#2}%
11607   \Hy@CleanupFile\Hy@pstringF
11608   \Hy@pstringdef\Hy@pstringF\Hy@pstringF
11609   \Hy@pstringdef\Hy@pstringD{#3}%
11610   \Hy@MakeRemoteAction
11611   \leavevmode
11612   \pdfmark[{#1}]{%
11613     pdfmark=/ANN,%
11614     Subtype=/Link,%
11615     PDFAFlags=4,%
11616     AcroHighlight=\@pdfhighlight,%
11617     Border=\@pdfborder,%
11618     BorderStyle=\@pdfborderstyle,%
11619     linktype=file,%
11620     Color=\@filebordercolor,%
11621     Action={%
11622       <<%
11623         /S/GoToR%
11624         \Hy@SetNewWindow
11625         /F(\Hy@pstringF)%
11626         /D%
11627         \ifx\#3\%
11628           [\Hy@href@page\@pdfremotestartview]%
11629         \else
11630           (\Hy@pstringD)cvn%
11631         \fi
11632         \Hy@href@nextactionraw
11633       >>%
11634     }%
11635   }%
11636 \endgroup
11637 }
11638 \def\@hyper@launch run:#1\#2#3{%
11639 \begingroup
11640   \Hy@pstringdef\Hy@pstringF{#1}%
11641   \Hy@pstringdef\Hy@pstringP{#3}%
11642   \leavevmode

```

```

11643 \pdfmark[{#2}]{%
11644 pdfmark=/ANN,%
11645 Subtype=/Link,%
11646 PDFAFlags=4,%
11647 AcroHighlight=\pdfhighlight,%
11648 Border=\pdfborder,%
11649 BorderStyle=\pdfborderstyle,%
11650 linktype=run,%
11651 Color=\@runbordercolor,%
11652 Action={%
11653 <<%
11654 /S/Launch%
11655 \Hy@SetNewWindow
11656 /F(\Hy@pstringF)%
11657 \ifx\#3\%
11658 \else
11659 /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
11660 \fi
11661 \Hy@href@nextactionraw
11662 >>%
11663 }%
11664 }%
11665 \endgroup
11666 }
11667 \pdfmark>

```

Unfortunately, some parts of the pdfmark PostScript code depend on vagaries of the dvi driver. We isolate here all the problems.

43.9 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.

```

11668 (*dvips)
11669 \providecommand*\XR@ext}{pdf}
11670 \let\Hy@raisedlink\ltx@empty
11671 \def\literalps@out#1{\special{ps:SDict begin #1 end}}%
11672 \def\headerps@out#1{\special{! #1}}%
11673 \input{pdfmark.def}%
11674 \ifx\@pdfproducer\relax
11675 \def\@pdfproducer{dvips + Distiller}%
11676 \fi
11677 \providecommand*\@pdfborder{0 0 1}
11678 \providecommand*\@pdfborderstyle{}
11679 \providecommand*\@pdfview{XYZ}
11680 \providecommand*\@pdfviewparams{ H.V}
11681 \def\Hy@BorderArrayPatch{BorderArrayPatch}
11682 \g@addto@macro\Hy@FirstPageHook{%
11683 \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.

```

11684 /DvipsToPDF{72.27 mul Resolution div} def%
11685 /PDFToDvips{72.27 div Resolution mul} def%
11686 /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.

```

11687 product (Ghostscript) search {pop pop pop revision 927 gt}%
11688 {pop false} ifelse%
11689 {%
11690 /BorderArrayPatch{} def%
11691 }%
11692 {%
11693 /BorderArrayPatch{%
11694 [exch{%
11695 dup dup type/integertype eq exch type/realtype eq or%
11696 {BPToDvips}if%
11697 }forall]%
11698 }def%
11699 } 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.

```

11700 /HyperBorder {1 PDFToDvips} def%
11701 /H.V {pdf@hoff pdf@voff null} def%
11702 /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

```

11703 /H.S {%
11704 currentpoint %
11705 HyperBorder add /pdf@lly exch def %
11706 dup DvipsToPDF 72 add /pdf@hoff exch def %
11707 HyperBorder sub /pdf@llx exch def%
11708 } def%

```

The calculation of upper left y is done without raising the point in \TeX , by simply adding on the current $\backslash\text{baselineskip}$ 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`

```

11709 /H.L {%
11710 2 sub dup%
11711 /HyperBasePt exch def %
11712 PDFToDvips /HyperBaseDvips exch def %
11713 currentpoint %
11714 HyperBaseDvips sub /pdf@ury exch def%
11715 /pdf@urx exch def%
11716 } def%
11717 /H.A {%
11718 H.L %
11719 % | /pdf@voff| = the distance from the top of the page to a point
11720 % | \baselineskip| above the current point in PDF coordinates
11721 currentpoint exch pop %
11722 vsize 72 sub exch DvipsToPDF %
11723 HyperBasePt sub % baseline skip
11724 sub /pdf@voff exch def%
11725 } def%
11726 /H.R {%
11727 currentpoint %
11728 HyperBorder sub /pdf@ury exch def %
11729 HyperBorder add /pdf@urx exch def %
11730 % | /pdf@voff| = the distance from the top of the page to the current point, in
11731 % PDF coordinates
11732 currentpoint exch pop vsize 72 sub %
11733 exch DvipsToPDF sub /pdf@voff exch def%
11734 } def%
11735 }%
11736 }
11737 \AtBeginShipoutFirst{%
11738 \ifHy@setpagesize
11739 \begingroup
11740 \ifdim\stockwidth>\z@
11741 \ifdim\stockheight>\z@
11742 \special{papersize=\the\stockwidth,\the\stockheight}%
11743 \else
11744 \ifdim\paperwidth>\z@
11745 \ifdim\paperheight>\z@
11746 \special{papersize=\the\paperwidth,\the\paperheight}%
11747 \fi
11748 \fi
11749 \fi
11750 \else
11751 \ifdim\stockwidth=\z@
11752 \ifdim\paperwidth>\z@
11753 \ifdim\paperheight>\z@
11754 \special{papersize=\the\paperwidth,\the\paperheight}%
11755 \fi
11756 \fi
11757 \fi
11758 \fi
11759 \endgroup
11760 \fi

```

```

11761 \Hy@DisableOption{setpagesize}%
11762 }

11763 \def\setpdfinkmargin#1{%
11764   \begingroup
11765     \setlength{\dimen@}{#1}%
11766     \literalps@out{%
11767       /HyperBorder{\strip@pt\dimen@\space PDFToDvips}def%
11768     }%
11769   \endgroup
11770 }

11771 </dvips>

```

43.10 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.

```

11772 <*vtexpdfmark>
11773 \providecommand*\XR@ext}{pdf}
11774 \let\Hy@raisedlink\ltx@empty
11775 \def\literalps@out#1{\special{pS:#1}}%
11776 \def\headerps@out#1{\immediate\special{pS:#1}}%
11777 \input{pdfmark.def}%
11778 \ifx\@pdfproducer\relax
11779   \ifnum\OpMode=\@ne
11780     \def\@pdfproducer{VTeX}%
11781   \else
11782     \def\@pdfproducer{VTeX + Distiller}%
11783   \fi
11784 \fi
11785 \providecommand*\@pdfborder{0 0 1}
11786 \providecommand*\@pdfborderstyle{}
11787 \providecommand*\@pdfview{XYZ}
11788 \providecommand*\@pdfviewparams{ H.V}

11789 \g@addto@macro\Hy@FirstPageHook{%
11790   \headerps@out{%
11791     /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.

```

11792   /HyperBorder {1} def%
11793   /H.V {pdf@hoff pdf@voff null} def%
11794   /H.B {/Rect[pdf@llx pdf@lly pdf@urx pdf@ury]} def%

```

H.S (start of anchor, link, or rect) stores the x and y coordinates of the current point, in PDF coordinates: pdf@lly = $Y_c - \text{HyperBorder}$, pdf@hoff = $X_c + 72$, pdf@llx = $X_c - \text{HyperBorder}$

```

11795   /H.S {%
11796     currentpoint %
11797     HyperBorder sub%
11798     /pdf@lly exch def %

```

```

11799      dup 72 add /pdf@hoff exch def %
11800      HyperBorder sub%
11801      /pdf@llx exch def%
11802    } def%

```

The x and y coordinates of the current point, minus the `\baselineskip`: $\text{pdf@ury} = Y_c + \text{HyperBasePt} + \text{HyperBorder}$, $\text{pdf@urx} = X_c + \text{HyperBorder}$

```

11803    /H.L {%
11804      2 sub%
11805      /HyperBasePt exch def %
11806      currentpoint %
11807      HyperBasePt add HyperBorder add%
11808      /pdf@ury exch def %
11809      HyperBorder add%
11810      /pdf@urx exch def%
11811    } def%
11812    /H.A {%
11813      H.L %
11814      currentpoint exch pop %
11815      vsize 72 sub exch %
11816      HyperBasePt add add%
11817      /pdf@voff exch def%
11818    } def%

```

$\text{pdf@ury} = Y_c + \text{HyperBorder}$, $\text{pdf@urx} = X_c + \text{HyperBorder}$

```

11819    /H.R {%
11820      currentpoint %
11821      HyperBorder add%
11822      /pdf@ury exch def %
11823      HyperBorder add%
11824      /pdf@urx exch def %
11825      currentpoint exch pop vsize 72 sub add%
11826      /pdf@voff exch def%
11827    } def%
11828  }%
11829 }

```

```

11830 \def\setpdfinkmargin#1{%
11831   \begingroup
11832     \setlength{\dimen@}{#1}%
11833     \literalps@out{%
11834       /HyperBorder{\strip@pt\dimen@}def%
11835     }%
11836   \endgroup
11837 }
11838 </vtxpdfmark>

```

43.11 Textures

```

11839 <*textures>
11840 \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.

```
11841 \begingroup
11842 \obeylines %
11843 \gdef\Hy@ps@CR{\noexpand
11844 }%
11845 \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`.

```
11846 \def\literalps@out#1{%
11847 \special{postscript 0 0 transform}}%
11848 \special{rawpostscript itransform moveto\Hy@ps@CR #1}%
11849 }%
11850 %
```

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.

```
11851 \def\headerps@out#1{%
11852 \special{%
11853 prepostscript TeXdict begin\Hy@ps@CR
11854 #1\Hy@ps@CR
11855 end%
11856 }%
11857 }%
11858 %
```

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.

```
11859 \g@addto@macro\Hy@FirstPageHook{%
11860 \headerps@out{%
11861 /betterpdfmark {%
11862 systemdict begin %
11863 dup /BP eq%
11864 {cleartomark gsave nulldevice []%
11865 {dup /EP eq%
11866 {cleartomark cleartomark grestore}}%
11867 {cleartomark}}%
```

```

11868         ifelse%
11869     }ifelse %
11870 end%
11871 }def\Hy@ps@CR
11872 ____pdfmark__ not{/pdfmark /betterpdfmark load def}if%
11873 }% end of \headerps@out
11874 }% end of \AtBeginShipoutFirst
11875 %
11876 \input{pdfmark.def}%
11877 %
11878 \ifx\@pdfproducer\relax
11879 \def\@pdfproducer{Textures + Distiller}%
11880 \fi
11881 \providecommand*\@pdfborder{0 0 1}
11882 \providecommand*\@pdfborderstyle{}
11883 \providecommand*\@pdfview{XYZ}
11884 \providecommand*\@pdfviewparams{ H.V}
11885 %

```

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 .

```

11886 \Hy@AtBeginDocument{%
11887 \headerps@out{%

```

`Textures` lives in normal points, I think. So conversion from one coordinate system to another involves doing nothing.

```

11888 /vsize {\Hy@pageheight} def%
11889 /DvipsToPDF {} def%
11890 /PDFToDvips {} def%
11891 /BPToDvips {} def%
11892 /HyperBorder { 1 PDFToDvips } def\Hy@ps@CR
11893 /H.V {pdf@hoff pdf@voff null} def\Hy@ps@CR
11894 /H.B {/Rect[pdf@llx pdf@lly pdf@urx pdf@ury]} def\Hy@ps@CR
11895 /H.S {%
11896     currentpoint %
11897     HyperBorder add /pdf@lly exch def %
11898     dup DvipsToPDF 72 add /pdf@hoff exch def %
11899     HyperBorder sub /pdf@llx exch def%
11900 } def\Hy@ps@CR
11901 /H.L {%
11902     2 sub %
11903     PDFToDvips /HyperBase exch def %
11904     currentpoint %
11905     HyperBase sub /pdf@ury exch def%
11906     /pdf@urx exch def%
11907 } def\Hy@ps@CR
11908 /H.A {%
11909     H.L %
11910     currentpoint exch pop %
11911     vsize 72 sub exch DvipsToPDF %
11912     HyperBase sub % baseline skip

```

```

11913   sub /pdf@voff exch def%
11914   } def\Hy@ps@CR
11915   /H.R {%
11916     currentpoint %
11917     HyperBorder sub /pdf@ury exch def %
11918     HyperBorder add /pdf@urx exch def %
11919     currentpoint exch pop vsize 72 sub %
11920     exch DvipsToPDF sub /pdf@voff exch def%
11921   } def\Hy@ps@CR
11922 }%
11923 }

11924 \def\setpdfinkmargin#1{%
11925   \begingroup
11926     \setlength{\dimen@}{#1}%
11927     \literalps@out{%
11928       /HyperBorder{\strip@pt\dimen@\space PDFToDvips}def%
11929     }%
11930   \endgroup
11931 }

11932 \Hy@AtBeginDocument{%
11933   \ifHy@colorlinks
11934     \headerps@out{/PDFBorder{/Border [0 0 0]}def}%
11935   \fi
11936 }

```

Textures provides built-in support for HyperTeX specials so this part combines code from `hypertex.def` with what is established by loading `pdfmark.def`, or any other driver.

```

11937 \expandafter\let\expandafter\keepPDF@SetupDoc
11938   \csname PDF@SetupDoc\endcsname
11939 \def\PDF@SetupDoc{%
11940   \ifx\@baseurl\@empty
11941     \else
11942       \special{html:<base href="\@baseurl">}%
11943     \fi
11944   \keepPDF@SetupDoc
11945 }

11946 \Hy@WrapperDef\hyper@anchor#1{%
11947   \Hy@SaveLastskip
11948   \Hy@VerboseAnchor{#1}%
11949   \begingroup
11950     \let\protect=\string
11951     \special{html:<a name=%
11952       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
11953   \endgroup
11954   \Hy@activeanchortrue
11955   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
11956   \special{html:</a>}%
11957   \Hy@activeanchorfalse
11958   \Hy@RestoreLastskip
11959 }

11960 \Hy@WrapperDef\hyper@anchorstart#1{%
11961   \Hy@SaveLastskip

```

```

11962 \Hy@VerboseAnchor{#1}%
11963 \begingroup
11964 \hyper@chars
11965 \special{html:<a name=%
11966 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
11967 \endgroup
11968 \Hy@activeanchortrue
11969 }
11970 \def\hyper@anchorend{%
11971 \special{html:</a>}%
11972 \Hy@activeanchorfalse
11973 \Hy@RestoreLastskip
11974 }
11975 \def\@urltype{url}
11976 \def\hyper@linkstart#1#2{%
11977 \Hy@VerboseLinkStart{#1}{#2}%
11978 \expandafter\Hy@colorlink\csname @#1color\endcsname
11979 \def\Hy@tempa{#1}%
11980 \ifx\Hy@tempa\@urltype
11981 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
11982 \else
11983 \begingroup
11984 \hyper@chars
11985 \special{%
11986 html:<a href=%
11987 \hyper@quote\# \HyperDestNameFilter{#2}\hyper@quote>%
11988 }%
11989 \endgroup
11990 \fi
11991 }
11992 \def\hyper@linkend{%
11993 \special{html:</a>}%
11994 \Hy@endcolorlink
11995 }
11996 \def\hyper@linkfile#1#2#3{%
11997 \hyper@linkurl{#1}{%
11998 \Hy@linkfileprefix#2\ifx\#3\\\else\#3\fi
11999 }%
12000 }
12001 \def\hyper@linkurl#1#2{%
12002 \leavevmode
12003 \ifHy@raiselinks
12004 \Hy@SaveSpaceFactor
12005 \Hy@SaveSavedSpaceFactor
12006 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
12007 \Hy@RestoreSavedSpaceFactor
12008 \@linkdim\dp\@tempboxa
12009 \lower\@linkdim\hbox{%
12010 \hyper@chars
12011 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
12012 }%
12013 \Hy@colorlink\@urlcolor
12014 \Hy@RestoreSpaceFactor
12015 #1\Hy@xspace@end

```

```

12016 \Hy@SaveSpaceFactor
12017 \@linkdim\ht\@tempboxa
12018 \advance\@linkdim by -6.5\p@
12019 \raise\@linkdim\hbox{\special{html:</a>}}}%
12020 \Hy@endcolorlink
12021 \Hy@RestoreSpaceFactor
12022 \else
12023 \begingroup
12024 \hyper@chars
12025 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
12026 \Hy@colorlink\@urlcolor#1\Hy@xspace@end
12027 \special{html:</a>}%
12028 \Hy@endcolorlink
12029 \endgroup
12030 \fi
12031 }

```

Very poor implementation of `\hyper@link` without considering #1.

```

12032 \def\hyper@link#1#2#3{%
12033 \Hy@VerboseLinkStart{#1}{#2}%
12034 \hyper@linkurl{#3}{\# \Hy@DestNameFilter{#2}}}%
12035 }
12036 \def\hyper@image#1#2{%
12037 \begingroup
12038 \hyper@chars
12039 \special{html:<img src=\hyper@quote#1\hyper@quote>}%
12040 \endgroup
12041 }
12042 </textures>

```

43.12 dvipsone

```

12043 % \subsection{dvipsone driver}
12044 % Over-ride the default setup macro in pdfmark driver to use Y\&Y
12045 % | \special| commands.
12046 < *dvipsone>
12047 \providecommand*\XR@ext{pdf}
12048 \let\Hy@raisedlink\ltx@empty
12049 \providecommand*\@pdfborder{0 0 1}
12050 \providecommand*\@pdfborderstyle{}
12051 \def\literalps@out#1{\special{ps:#1}}%
12052 \def\headerps@out#1{\special{headertext=#1}}%
12053 \input{pdfmark.def}%
12054 \Hy@Info@AddonUnsupportedtrue
12055 \def\PDF@FinishDoc{%
12056 \Hy@UseMaketitleInfos
12057 \Hy@Info@TrappedUnsupported
12058 \special{PDF: Keywords \@pdfkeywords}%
12059 \special{PDF: Title \@pdftitle}%
12060 \special{PDF: Creator \@pdfcreator}%
12061 \ifx\@pdfcreationdate\@empty
12062 \else
12063 \special{PDF: CreationDate \@pdfcreationdate}%
12064 \fi

```



```

12065 \ifx\@pdfmoddate\@empty
12066 \else
12067   \special{PDF: ModDate \@pdfmoddate}%
12068 \fi
12069 \special{PDF: Author \@pdfauthor}%
12070 \ifx\@pdfproducer\relax
12071 \else
12072   \special{PDF: Producer \@pdfproducer}%
12073 \fi
12074 \special{PDF: Subject \@pdfsubject}%
12075 \Hy@DisableOption{pdfauthor}%
12076 \Hy@DisableOption{pdftitle}%
12077 \Hy@DisableOption{pdfsubject}%
12078 \Hy@DisableOption{pdfcreator}%
12079 \Hy@DisableOption{addtopdfcreator}%
12080 \Hy@DisableOption{pdfcreationdate}%
12081 \Hy@DisableOption{pdfcreationdate}%
12082 \Hy@DisableOption{pdfmoddate}%
12083 \Hy@DisableOption{pdfproducer}%
12084 \Hy@DisableOption{pdfkeywords}%
12085 \Hy@DisableOption{pdftrapped}%
12086 \Hy@DisableOption{pdfinfo}%
12087 }
12088 \def\PDF@SetupDoc{%
12089   \def\Hy@temp{}%
12090   \ifx\@pdfstartpage\@empty
12091   \else
12092     \ifx\@pdfstartview\@empty
12093     \else
12094       \edef\Hy@temp{%
12095         ,Page=\@pdfstartpage
12096         ,View=\@pdfstartview
12097       }%
12098     \fi
12099   \fi
12100   \edef\Hy@temp{%
12101     \noexpand\pdfmark{%
12102       pdfmark=/DOCVIEW,%
12103       PageMode=/\@pdfpagemode
12104     }\Hy@temp
12105   }%
12106 }%
12107 \Hy@temp
12108 \ifx\@pdfpagescrop\@empty
12109 \else
12110   \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
12111 \fi
12112 \edef\Hy@temp{%
12113   \ifHy@pdftoolbar\else /HideToolbar true\fi
12114   \ifHy@pdfmenubar\else /HideMenubar true\fi
12115   \ifHy@pdfwindowui\else /HideWindowUI true\fi
12116   \ifHy@pdffitwindow /FitWindow true\fi
12117   \ifHy@pdfcenterwindow /CenterWindow true\fi
12118   \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi

```

```

12119 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
12120 \Hy@UseNameKey{Direction}\@pdfdirection
12121 \Hy@UseNameKey{ViewArea}\@pdfviewarea
12122 \Hy@UseNameKey{ViewClip}\@pdfviewclip
12123 \Hy@UseNameKey{PrintArea}\@pdfprintarea
12124 \Hy@UseNameKey{PrintClip}\@pdfprintclip
12125 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
12126 \Hy@UseNameKey{Duplex}\@pdfduplex
12127 \ifx\@pdfpicktraybypdfsize\@empty
12128 \else
12129 /PickTrayByPDFSize \@pdfpicktraybypdfsize
12130 \fi
12131 \ifx\@pdfprintpagerange\@empty
12132 \else
12133 /PrintPageRange[\@pdfprintpagerange]%
12134 \fi
12135 \ifx\@pdfnumcopies\@empty
12136 \else
12137 /NumCopies \@pdfnumcopies
12138 \fi
12139 }%
12140 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
12141 \pdfmark{%
12142 pdfmark=/PUT,%
12143 Raw={%
12144 \string{Catalog\string}<<%
12145 \ifx\Hy@temp\@empty
12146 \else
12147 /ViewerPreferences<<\Hy@temp>>%
12148 \fi
12149 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
12150 \ifx\@pdflang\relax
12151 \else
12152 /Lang(\@pdflang)%
12153 \fi
12154 \ifx\@baseurl\@empty
12155 \else
12156 /URI<</Base(\Hy@pstringB)>>%
12157 \fi
12158 >>%
12159 }%
12160 }%
12161 }
12162 \providecommand*\@pdfview{XYZ}
12163 \providecommand*\@pdfviewparams{ %
12164 gsave revscl currentpoint grestore %
12165 72 add exch pop null exch null%
12166 }
12167 \def\Hy@BorderArrayPatch{BorderArrayPatch}

```

These are called at the start and end of unboxed links; their job is to leave available PS variables called `pdf@llx pdf@lly pdf@urx pdf@ury`, which are the coordinates of the bounding rectangle of the link, and `pdf@hoff pdf@voff` which are the PDF page offsets. These latter are currently not used in the dvipsone setup. The Rect

pair are called at the LL and UR corners of a box known to T_EX.

```
12168 \g@addto@macro\Hy@FirstPageHook{%
```

```
12169 \headerps@out{%
```

dvipsone lives in scaled points; does this mean 65536 or 65781?

```
12170 /DvipsToPDF { 65781 div } def%
```

```
12171 /PDFToDvips { 65781 mul } def%
```

```
12172 /BPToDvips{65781 mul}def%
```

```
12173 /HyperBorder { 1 PDFToDvips } def%
```

```
12174 /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.

```
12175 /BorderArrayPatch{%
```

```
12176 [exch{%
```

```
12177 dup dup type/integertype eq exch type/realtype eq or%
```

```
12178 {BPToDvips}if%
```

```
12179 }forall]%
```

```
12180 }def%
```

```
12181 /H.S {%
```

```
12182 currentpoint %
```

```
12183 HyperBorder add /pdf@lly exch def %
```

```
12184 dup DvipsToPDF 72 add /pdf@hoff exch def %
```

```
12185 HyperBorder sub /pdf@llx exch def%
```

```
12186 } def%
```

```
12187 /H.L {%
```

```
12188 2 sub %
```

```
12189 PDFToDvips /HyperBase exch def %
```

```
12190 currentpoint %
```

```
12191 HyperBase sub /pdf@ury exch def%
```

```
12192 /pdf@urx exch def%
```

```
12193 } def%
```

```
12194 /H.A {%
```

```
12195 H.L %
```

```
12196 currentpoint exch pop %
```

```
12197 HyperBase sub % baseline skip
```

```
12198 DvipsToPDF /pdf@voff exch def%
```

```
12199 } def%
```

```
12200 /H.R {%
```

```
12201 currentpoint %
```

```
12202 HyperBorder sub /pdf@ury exch def %
```

```
12203 HyperBorder add /pdf@urx exch def %
```

```
12204 currentpoint exch pop DvipsToPDF /pdf@voff exch def%
```

```
12205 } def%
```

```
12206 }%
```

```
12207 }
```

```
12208 \def\setpdfinkmargin#1{%
```

```
12209 \begingroup
```

```
12210 \setlength{\dimen@}{#1}%
```

```
12211 \literalps@out{%
```

```
12212 /HyperBorder{\strip@pt\dimen@\space PDFToDvips}def%
```

```
12213 }%
```

```
12214 \endgroup
```

```
12215 }
```

12216 \langle /dvipsone \rangle

43.13 TeX4ht

```
12217  $\langle$ *tex4ht $\rangle$ 
12218 \providecommand*{\XR@ext}{html}
12219 \let\Hy@raisedlink\ltx@empty
12220 \@ifpackageloaded{tex4ht}{%
12221   \Hy@InfoNoLine{tex4ht is already loaded}%
12222 }{%
12223   \RequirePackage[hTeX4ht]{tex4ht}%
12224 }
12225 \hyperlinkfileprefix{}
12226 \let\PDF@FinishDoc\ltx@empty
12227 \def\PDF@SetupDoc{%
12228   \ifx\@baseurl\@empty
12229   \else
12230     \special{t4ht=<base href="\@baseurl">}%
12231   \fi
12232 }
12233 \Hy@WrapperDef\hyper@anchor#1{%
12234   \Hy@SaveLastskip
12235   \Hy@VerboseAnchor{#1}%
12236   \begingroup
12237     \let\protect=\string
12238     \special{t4ht=<a name=%
12239       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
12240   \endgroup
12241   \Hy@activeanchortrue
12242   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
12243   \special{t4ht=</a>}%
12244   \Hy@activeanchorfalse
12245   \Hy@RestoreLastskip
12246 }
12247 \Hy@WrapperDef\hyper@anchorstart#1{%
12248   \Hy@SaveLastskip
12249   \Hy@VerboseAnchor{#1}%
12250   \begingroup
12251     \hyper@chars\special{t4ht=<a name=%
12252       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
12253   \endgroup
12254   \Hy@activeanchortrue
12255 }
12256 \def\hyper@anchorend{%
12257   \special{t4ht=</a>}%
12258   \Hy@activeanchorfalse
12259   \Hy@RestoreLastskip
12260 }
12261 \def\@urltype{url}
12262 \def\hyper@linkstart#1#2{%
12263   \Hy@VerboseLinkStart{#1}{#2}%
12264   \expandafter\Hy@colorlink\csname @#1color\endcsname
12265   \def\Hy@tempa{#1}%
12266   \ifx\Hy@tempa\@urltype
12267     \special{t4ht=<a href=\hyper@quote#2\hyper@quote>}%

```

```

12268 \else
12269 \begingroup
12270 \hyper@chars
12271 \special{t4ht=<a href=%
12272 \hyper@quote\#\HyperDestNameFilter{#2}\hyper@quote>}%
12273 \endgroup
12274 \fi
12275 }
12276 \def\hyper@linkend{%
12277 \special{t4ht=</a>}%
12278 \Hy@endcolorlink
12279 }
12280 \def\hyper@linkfile#1#2#3{%
12281 \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\#3\\\else\##3\fi}%
12282 }
12283 \def\hyper@linkurl#1#2{%
12284 \leavevmode
12285 \ifHy@raiselinks
12286 \Hy@SaveSpaceFactor
12287 \Hy@SaveSavedSpaceFactor
12288 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
12289 \Hy@RestoreSavedSpaceFactor
12290 \@linkdim\dp\@tempboxa
12291 \lower\@linkdim\hbox{%
12292 \begingroup
12293 \hyper@chars
12294 \special{%
12295 t4ht=<a href=\hyper@quote#2\hyper@quote>%
12296 }%
12297 \endgroup
12298 }%
12299 \Hy@colorlink\@urlcolor
12300 \Hy@RestoreSpaceFactor
12301 #1\Hy@xspace@end
12302 \Hy@SaveSpaceFactor
12303 \Hy@endcolorlink
12304 \@linkdim\ht\@tempboxa
12305 \advance\@linkdim by -6.5\p@
12306 \raise\@linkdim\hbox{\special{t4ht=</a>}}%
12307 \Hy@RestoreSpaceFactor
12308 \else
12309 \begingroup
12310 \hyper@chars
12311 \special{t4ht=<a href=\hyper@quote#2\hyper@quote>}%
12312 \Hy@colorlink\@urlcolor
12313 #1\Hy@xspace@end
12314 \Hy@endcolorlink
12315 \special{t4ht=</a>}%
12316 \endgroup
12317 \fi
12318 }

```

Poor implementation of \hyper@link without considering #1.

```

12319 \def\hyper@link#1#2#3{%
12320 \Hy@VerboseLinkStart{#1}{#2}%

```

```

12321 \hyper@linkurl{#3}{\# \HyperDestNameFilter{#2}}}%
12322 }
12323 \def\hyper@image#1#2{%
12324 \begingroup
12325 \hyper@chars
12326 \special{t4ht=<img src=\hyper@quote#1\hyper@quote>}%
12327 \endgroup
12328 }
12329 \let\autoref\ref
12330 \ifx \rEFLiNK \UnDef
12331 \def\rEFLiNK #1#2{#2}%
12332 \fi
12333 \let\backref\ltx@gobble

```

Fix for tex4ht.

```

12334 \AtBeginDocument{%
12335 \expandafter
12336 \let\expandafter\Hy@OrgMakeLabel\csname Make:Label\endcsname
12337 \expandafter\def\csname Make:Label\endcsname#1#2{%
12338 \ifhmode
12339 \Hy@SaveSpaceFactor
12340 \else
12341 \global\Hy@SavedSpaceFactor=1000 %
12342 \fi
12343 \Hy@OrgMakeLabel{#1}{%
12344 \Hy@RestoreSpaceFactor
12345 #2\Hy@xspace@end%
12346 \Hy@SaveSpaceFactor
12347 }%
12348 \Hy@RestoreSpaceFactor
12349 }%
12350 }
12351 \</tex4ht>
12352 \< *tex4htcfg>
12353 \IfFileExists{\jobname.cfg}{\endinput}{\}
12354 \Preamble{html}
12355 \begin{document}%
12356 \EndPreamble
12357 \def\TeX{\TeX}
12358 \def\OMEGA{\Omega}
12359 \def\LaTeX{\LaTeX}
12360 \def\LaTeXe{\LaTeX2e}
12361 \def\eTeX{e-TeX}
12362 \def\MF{Metafont}
12363 \def\MP{MetaPost}
12364 \</tex4htcfg>

```

44 Driver-specific form support

44.1 pdfmarks

change 2020-06-20: added /Euro to encoding

```

12365 \< *pdfmark>
12366 \long\def\@Form[#1]{%
12367 \g@addto@macro\Hy@FirstPageHook{%

```

```

12368 \headerps@out{%
12369 [%
12370 /_objdef{pdfDocEncoding}%
12371 /type/dict%
12372 /OBJ pdfmark%
12373 [%
12374 {pdfDocEncoding}%
12375 <<%
12376 /Type/Encoding%
12377 /Differences[%
12378 24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek/ring%
12379 /tilde %
12380 39/quotesingle %
12381 96/grave %
12382 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
12383 /fraction/guilsinglleft/guilsinglright/minus/perthousand%
12384 /quotedblbase/quotedblleft/quotedblright/quoteleft%
12385 /quoteright/quotesinglbase/trademark/fi/fl/Lslash/OE/Scaron%
12386 /Ydieresis/Zcaron/dotlessi/lslash/oe/scaron/zcaron %
12387 160/Euro %
12388 164/currency %
12389 166/brokenbar %
12390 168/dieresis/copyright/ordfeminine %
12391 172/logicalnot/.notdef/registered/macron/degree/plusminus%
12392 /twosuperior/threesuperior/acute/mu %
12393 183/periodcentered/cedilla/onesuperior/ordmasculine %
12394 188/onequarter/onehalf/threequarters %
12395 192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
12396 /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave%
12397 /Iacute/Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute%
12398 /Ocircumflex/Otilde/Odieresis/multiply/Oslash/Ugrave%
12399 /Uacute/UCircumflex/Udieresis/Yacute/Thorn/germandbls%
12400 /agrave/aacute/acircumflex/atilde/adieresis/aring/ae%
12401 /ccedilla/egrave/eacute/ecircumflex/edieresis/igrave%
12402 /iacute/icircumflex/idieresis/eth/ntilde/ograve/oacute%
12403 /ocircumflex/otilde/odieresis/divide/oslash/ugrave/uacute%
12404 /ucircumflex/udieresis/yacute/thorn/ydieresis%
12405 ]%
12406 >>%
12407 /PUT pdfmark%
12408 [%
12409 /_objdef{ZaDb}%
12410 /type/dict%
12411 /OBJ pdfmark%
12412 [%
12413 {ZaDb}%
12414 <<%
12415 /Type/Font%
12416 /Subtype/Type1%
12417 /Name/ZaDb%
12418 /BaseFont/ZapfDingbats%
12419 >>%
12420 /PUT pdfmark%
12421 [%

```

```

12422  /_objdef{Helv}%
12423  /type/dict%
12424  /OBJ pdfmark%
12425  [%
12426   {Helv}%
12427   <<%
12428    /Type/Font%
12429    /Subtype/Type1%
12430    /Name/Helv%
12431    /BaseFont/Helvetica%
12432    /Encoding{pdfDocEncoding}%
12433   >>%
12434  /PUT pdfmark%
12435  [%
12436   /_objdef{aform}%
12437   /type/dict%
12438   /OBJ pdfmark%
12439   [%
12440    /_objdef{afields}%
12441    /type/array%
12442   /OBJ pdfmark%
12443   [%
12444    /_objdef{corder}%
12445    /type/array%
12446   /OBJ pdfmark%
12447   {%
12448   [%
12449    /BBox[0 0 100 100]%
12450    /_objdef{Check}%
12451   /BP pdfmark %
12452   1 0 0 setrgbcolor%
12453   /ZapfDingbats 80 selectfont %
12454   20 20 moveto%
12455   (4)show%
12456   [/EP pdfmark%
12457   [%
12458    /BBox[0 0 100 100]%
12459    /_objdef{Cross}%
12460   /BP pdfmark %
12461   1 0 0 setrgbcolor%
12462   /ZapfDingbats 80 selectfont %
12463   20 20 moveto%
12464   (8)show%
12465   [/EP pdfmark%
12466   [%
12467    /BBox[0 0 250 100]%
12468    /_objdef{Submit}%
12469   /BP pdfmark %
12470   0.6 setgray %
12471   0 0 250 100 rectfill %
12472   1 setgray %
12473   2 2 moveto %
12474   2 98 lineto %
12475   248 98 lineto %

```



```

12476 246 96 lineto %
12477 4 96 lineto %
12478 4 4 lineto %
12479 fill %
12480 0.34 setgray %
12481 248 98 moveto %
12482 248 2 lineto %
12483 2 2 lineto %
12484 4 4 lineto %
12485 246 4 lineto %
12486 246 96 lineto %
12487 fill%
12488 /Helvetica 76 selectfont %
12489 0 setgray %
12490 8 22.5 moveto%
12491 (Submit)show%
12492 [/EP pdfmark%
12493 [%
12494   /BBox[0 0 250 100]%
12495   /_objdef{SubmitP}%
12496 /BP pdfmark %
12497 0.6 setgray %
12498 0 0 250 100 rectfill %
12499 0.34 setgray %
12500 2 2 moveto %
12501 2 98 lineto %
12502 248 98 lineto %
12503 246 96 lineto %
12504 4 96 lineto %
12505 4 4 lineto %
12506 fill %
12507 1 setgray %
12508 248 98 moveto %
12509 248 2 lineto %
12510 2 2 lineto %
12511 4 4 lineto %
12512 246 4 lineto %
12513 246 96 lineto %
12514 fill%
12515 /Helvetica 76 selectfont %
12516 0 setgray %
12517 10 20.5 moveto%
12518 (Submit)show%
12519 [/EP pdfmark%
12520 } ?pdfmark%
12521 [%
12522 {aform}%
12523 <<%
12524   /Fields{afields}%
12525   /DR<<%
12526     /Font<<%
12527       /ZaDb{ZaDb}%
12528       /Helv{Helv}%
12529     >>%

```

```

12530 >>%
12531 /DA(/Helv 10 Tf 0 g)%
12532 /CO{corder}%
12533 \ifHy@pdfa
12534 \else
12535 \ifHyField@NeedAppearances
12536 /NeedAppearances true%
12537 \fi
12538 \fi
12539 >>%
12540 /PUT pdfmark%
12541 [%
12542 {Catalog}%
12543 <<%
12544 /AcroForm{aform}%
12545 >>%
12546 /PUT pdfmark%
12547 }}%
12548 \kvsetkeys{Form}{#1}%
12549 }
12550 \let\@endForm\ltx@empty
12551 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
12552 \Hy@Message{Sorry, pdfmark drivers do not support FORM gauges}%
12553 }

12554 \newcount\HyField@AnnotCount
12555 \HyField@AnnotCount=\z@
12556 \def\HyField@AdvanceAnnotCount{%
12557 \global\advance\HyField@AnnotCount\@ne
12558 }
12559 \def\HyField@TheAnnotCount{%
12560 \the\HyField@AnnotCount
12561 }

12562 \edef\Fld@pageobjref{/P\string{ThisPage\string}}
12563 \def\HyField@AddToFields#1{%
12564 \pdfmark{%
12565 pdfmark=/APPEND,%
12566 Raw={%
12567 \string{afields\string}%
12568 \string{#1\HyField@TheAnnotCount\string}%
12569 }%
12570 }%
12571 \ifx\Fld@calculate@code\ltx@empty
12572 \else
12573 \pdfmark{%
12574 pdfmark=/APPEND,%
12575 Raw={%
12576 \string{corder\string}%
12577 \string{#1\HyField@TheAnnotCount\string}%
12578 }%
12579 }%
12580 \fi
12581 }

12582 \def\@TextField[#1]#2{% parameters, label

```

```

12583 \def\Fld@name{#2}%
12584 \let\Fld@default\ltx@empty
12585 \let\Fld@value\@empty
12586 \def\Fld@width{\DefaultWidthofText}%
12587 \def\Fld@height{%
12588   \ifFld@multiline
12589     \DefaultHeightofTextMultiline
12590   \else
12591     \DefaultHeightofText
12592   \fi
12593 }%
12594 \begingroup
12595   \expandafter\HyField@SetKeys\expandafter{%
12596     \DefaultOptionsofText,#1%
12597   }%
12598   \HyField@FlagsText
12599   \ifFld@hidden\def\Fld@width{1sp}\fi
12600   \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
12601   \HyField@AdvanceAnnotCount
12602   \LayoutTextField{#2}{%
12603     \leavevmode
12604     \Hy@escapeform\PDFForm@Text
12605     \pdfmark[\MakeTextField{\Fld@width}{\Fld@height}]{%
12606       pdfmark=/ANN,%
12607       objdef=text\HyField@TheAnnotCount,%
12608       Raw={\PDFForm@Text}%
12609     }%
12610   }%
12611   \HyField@AddToFields{text}%
12612 \endgroup
12613 }
12614 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
12615   \def\Fld@name{#2}%
12616   \let\Fld@default\relax
12617   \let\Fld@value\relax
12618   \def\Fld@width{\DefaultWidthofChoiceMenu}%
12619   \def\Fld@height{\DefaultHeightofChoiceMenu}%
12620   \begingroup
12621     \Fld@menulength=0 %
12622     \@tempdima\z@
12623     \@for\@curropt:=#3\do{%
12624       \expandafter\Fld@checkequals\@curropt==\%
12625       \Hy@StepCount\Fld@menulength
12626       \settowidth{\@tempdimb}{\@currDisplay}%
12627       \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
12628     }%
12629     \advance\@tempdima by 15\p@
12630     \begingroup
12631       \HyField@SetKeys{#1}%
12632     \edef\x{\endgroup
12633       \noexpand\expandafter
12634       \noexpand\HyField@SetKeys
12635       \noexpand\expandafter{%
12636         \expandafter\noexpand\curname DefaultOptionsof%

```

```

12637     \ifFld@radio
12638         Radio%
12639     \else
12640         \ifFld@combo
12641             \ifFld@popdown
12642                 PopdownBox%
12643             \else
12644                 ComboBox%
12645             \fi
12646         \else
12647             ListBox%
12648         \fi
12649     \fi
12650     \endcsname
12651 }%
12652 }\x
12653 \HyField@SetKeys{#1}%
12654 \ifFld@hidden\def\Fld@width{1sp}\fi
12655 \ifx\Fld@value\relax
12656     \let\Fld@value\Fld@default
12657 \fi
12658 \LayoutChoiceField{#2}{%
12659     \ifFld@radio
12660         \HyField@FlagsRadioButton
12661         \@@Radio{#3}%
12662     \else
12663         \begingroup
12664             \HyField@FlagsChoice
12665             \ifdim\Fld@width<\@tempdima
12666                 \ifdim\@tempdima<1cm\@tempdima1cm\fi
12667                 \edef\Fld@width{\the\@tempdima}%
12668             \fi
12669             \ifFld@combo
12670             \else
12671                 \@tempdima=\the\Fld@menulength\Fld@charsize
12672                 \advance\@tempdima by \Fld@borderwidth bp %
12673                 \advance\@tempdima by \Fld@borderwidth bp %
12674                 \edef\Fld@height{\the\@tempdima}%
12675             \fi
12676             \@@ListBox{#3}%
12677         \endgroup
12678     \fi
12679 }%
12680 \endgroup
12681 }
12682 \def\@@Radio#1{%
12683     \Fld@listcount=0 %
12684     \EdefEscapeName\Fld@default{\Fld@default}%
12685     \@for\@curropt:=#1\do{%
12686         \expandafter\Fld@checkequals\@curropt==\\%
12687         \EdefEscapeName\@currValue{\@currValue}%
12688         \Hy@StepCount\Fld@listcount
12689         \@currDisplay\space
12690         \Hy@escapeform\PDFForm@Radio

```

```

12691 \ifnum\Fld@listcount=1 %
12692 \HyField@AdvanceAnnotCount
12693 \fi
12694 \pdfmark[\MakeRadioField{\Fld@width}{\Fld@height}]{%
12695 pdfmark=/ANN,%
12696 objdef=\ifnum\Fld@listcount=1 radio\HyField@TheAnnotCount\fi,%
12697 Raw={%
12698 \PDFForm@Radio /AP <</N <</\@currValue\space {Check}>> >>%
12699 }%
12700 } % deliberate space between radio buttons
12701 \ifnum\Fld@listcount=1 %
12702 \HyField@AddToFields{radio}%
12703 \fi
12704 }%
12705 }
12706 \newcount\Fld@listcount
12707 \def\@@Listbox#1{%
12708 \HyField@PDFChoices{#1}%
12709 \Hy@escapeform\PDFForm@List
12710 \HyField@AdvanceAnnotCount
12711 \pdfmark[\MakeChoiceField{\Fld@width}{\Fld@height}]{%
12712 pdfmark=/ANN,%
12713 objdef=list\HyField@TheAnnotCount,%
12714 Raw={\PDFForm@List}%
12715 }%
12716 \HyField@AddToFields{list}%
12717 }
12718 \def\@PushButton[#1]#2{% parameters, label
12719 \def\Fld@name{#2}%
12720 \begingroup
12721 \expandafter\HyField@SetKeys\expandafter{%
12722 \DefaultOptionsofPushButton,#1%
12723 }%
12724 \ifHy@pdfa
12725 \Hy@Error{%
12726 PDF/A: Push button with JavaScript is prohibited%
12727 }@ehc
12728 \LayoutPushButtonField{%
12729 \leavevmode
12730 \MakeButtonField{#2}%
12731 }%
12732 \else
12733 \HyField@FlagsPushButton
12734 \ifFld@hidden\def\Fld@width{1sp}\fi
12735 \HyField@AdvanceAnnotCount
12736 \LayoutPushButtonField{%
12737 \leavevmode
12738 \Hy@escapeform\PDFForm@Push
12739 \pdfmark[\MakeButtonField{#2}]{%
12740 pdfmark=/ANN,%
12741 objdef=push\HyField@TheAnnotCount,%
12742 Raw={\PDFForm@Push}%
12743 }%
12744 }%

```

```

12745     \HyField@AddToFields{push}%
12746     \fi
12747 \endgroup
12748 }
12749 \def\@Submit[#1]#2{%
12750 \def\Fld@width{\DefaultWidthofSubmit}%
12751 \def\Fld@height{\DefaultHeightofSubmit}%
12752 \begingroup
12753 \expandafter\HyField@SetKeys\expandafter{%
12754     \DefaultOptionsofSubmit,#1%
12755 }%
12756 \HyField@FlagsPushButton
12757 \HyField@FlagsSubmit
12758 \ifFld@hidden\def\Fld@width{1sp}\fi
12759 \Hy@escapeform\PDFForm@Submit
12760 \HyField@AdvanceAnnotCount
12761 \pdfmark[\MakeButtonField{#2}]{%
12762     pdfmark=/ANN,%
12763     objdef=submit\HyField@TheAnnotCount,%
12764     Raw={\PDFForm@Submit /AP<</N{Submit}/D{SubmitP}>>}%
12765 }%
12766 \HyField@AddToFields{submit}%
12767 \endgroup
12768 }
12769 \def\@Reset[#1]#2{%
12770 \def\Fld@width{\DefaultWidthofReset}%
12771 \def\Fld@height{\DefaultHeightofReset}%
12772 \begingroup
12773 \expandafter\HyField@SetKeys\expandafter{%
12774     \DefaultOptionsofReset,#1%
12775 }%
12776 \leavevmode
12777 \ifHy@pdfa
12778     \Hy@Error{%
12779         PDF/A: Reset action is prohibited%
12780     }\@ehc
12781     \MakeButtonField{#2}%
12782 \else
12783     \HyField@FlagsPushButton
12784     \ifFld@hidden\def\Fld@width{1sp}\fi
12785     \Hy@escapeform\PDFForm@Reset
12786     \HyField@AdvanceAnnotCount
12787     \pdfmark[\MakeButtonField{#2}]{%
12788         pdfmark=/ANN,%
12789         objdef=reset\HyField@TheAnnotCount,%
12790         Raw={\PDFForm@Reset}%
12791     }%
12792     \HyField@AddToFields{reset}%
12793 \fi
12794 \endgroup
12795 }%
12796 \def\@CheckBox[#1]#2{% parameters, label
12797 \def\Fld@name{#2}%
12798 \def\Fld@default{0}%

```

```

12799 \begingroup
12800 \def\Fld@width{\DefaultWidthofCheckBox}%
12801 \def\Fld@height{\DefaultHeightofCheckBox}%
12802 \expandafter\HyField@SetKeys\expandafter{%
12803   \DefaultOptionsofCheckBox,#1%
12804 }%
12805 \HyField@FlagsCheckBox
12806 \ifFld@hidden\def\Fld@width{1sp}\fi
12807 \HyField@AdvanceAnnotCount
12808 \LayoutCheckField{#2}{%
12809   \leavevmode
12810   \Hy@escapeform\PDFForm@Check
12811   \pdfmark[\MakeCheckField{\Fld@width}{\Fld@height}]{%
12812     pdfmark=/ANN,%
12813     objdef=check\HyField@TheAnnotCount,%
12814     Raw={\PDFForm@Check}%
12815   }%
12816 }%
12817 \HyField@AddToFields{check}%
12818 \endgroup
12819 }
12820 \pdfmark>

```

44.2 HyperTeX

```

12821 (*hypertex)
12822 \def\@Form[#1]{%
12823   \Hy@Message{Sorry, HyperTeX does not support FORMs}%
12824 }
12825 \let\@endForm\ltx@empty
12826 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
12827   \Hy@Message{Sorry, HyperTeX does not support FORM gauges}%
12828 }
12829 \def\@TextField[#1]#2{% parameters, label
12830   \Hy@Message{Sorry, HyperTeX does not support FORM text fields}%
12831 }
12832 \def\@CheckBox[#1]#2{% parameters, label
12833   \Hy@Message{Sorry, HyperTeX does not support FORM checkboxes}%
12834 }
12835 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
12836   \Hy@Message{Sorry, HyperTeX does not support FORM choice menus}%
12837 }
12838 \def\@PushButton[#1]#2{% parameters, label
12839   \Hy@Message{Sorry, HyperTeX does not support FORM pushbuttons}%
12840 }
12841 \def\@Reset[#1]#2{%
12842   \Hy@Message{Sorry, HyperTeX does not support FORMs}%
12843 }
12844 \def\@Submit[#1]#2{%
12845   \Hy@Message{Sorry, HyperTeX does not support FORMs}%
12846 }
12847 \hypertex>

```

44.3 TeX4ht

```

12848 (*tex4ht)
12849 \def\@Form[#1]{%
12850   \kvsetkeys{Form}{#1}%
12851   \HCode{<form action="\Form@action" method="\Form@method">}%
12852 }
12853 \def\@endForm{\HCode{</form>}}
12854 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
12855   \Hy@Message{Sorry, TeX4ht does not support gauges}%
12856 }
12857 \def\@TextField[#1]#2{% parameters, label
12858   \let\Hy@reserved@a\@empty
12859   \def\Fld@name{#2}%
12860   \let\Fld@default\ltx@empty
12861   \bgroup
12862     \Field@toks={ }%
12863     \kvsetkeys{Field}{#1}%
12864     \HCode{<label for="\Fld@name">#2</label>}%
12865     \ifFld@password
12866       \@@PasswordField
12867     \else
12868       \@@TextField
12869     \fi
12870   \egroup
12871 }
12872 \def\@@PasswordField{%
12873   \HCode{%
12874     <input type="password" %
12875       id="\Fld@name" %
12876       name="\Fld@name" %
12877       \ifFld@hidden type="hidden" \fi
12878       value="\Fld@default" %
12879       \the\Field@toks
12880     >%
12881   }%
12882 }
12883 \def\@@TextField{%
12884   \ifFld@multiline
12885     \HCode{<textarea %
12886       \ifFld@readonly readonly \fi
12887       id="\Fld@name" %
12888       name="\Fld@name" %
12889       \ifFld@hidden type="hidden" \fi
12890       \the\Field@toks>%
12891     }%
12892     \Fld@default
12893     \HCode{</textarea>}%
12894   \else
12895     \HCode{<input type="text" %
12896       \ifFld@readonly readonly \fi
12897       id="\Fld@name" %
12898       name="\Fld@name" %
12899       \ifFld@hidden type="hidden" \fi
12900       value="\Fld@default" %
12901       \the\Field@toks>%

```



```

12902 }%
12903 \fi
12904 }
12905 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
12906 \def\Fld@name{#2}%
12907 \let\Fld@default\ltx@empty
12908 \let\Hy@reserved@a\relax
12909 \begingroup
12910 \expandafter\Fld@findlength#3\\%
12911 \Field@toks={ }%
12912 \kvsetkeys{Field}{#1}%
12913 #2%
12914 \ifFld@radio
12915 \expandafter\@@Radio#3\\%
12916 \else
12917 \expandafter\@@Menu#3\\%
12918 \fi
12919 \endgroup
12920 }
12921 \def\Fld@findlength#1\\{%
12922 \Fld@menulength=0 %
12923 \@for\@curropt:=#1\do{\Hy@StepCount\Fld@menulength}%
12924 }
12925 \def\@@Menu#1\\{%
12926 \HCode{<select size="\the\Fld@menulength" %
12927 name="\Fld@name" %
12928 \the\Field@toks>%
12929 }%
12930 \@for\@curropt:=#1\do{%
12931 \expandafter\Fld@checkequals\@curropt==\\%
12932 \HCode{<option %
12933 \ifx\@curropt\Fld@default selected \fi
12934 value="\@currValue">\@currDisplay</option>%
12935 }%
12936 }%
12937 \HCode{</select>}%
12938 }
12939 \def\@@Radio#1\\{%
12940 \@for\@curropt:=#1\do{%
12941 \expandafter\Fld@checkequals\@curropt==\\%
12942 \HCode{<input type="radio" %
12943 \ifx\@curropt\Fld@default checked \fi
12944 name="\Fld@name" %
12945 value="\@currValue" %
12946 \the\Field@toks>%
12947 }%
12948 \@currDisplay
12949 }%
12950 }
12951 \def\@PushButton[#1]#2{% parameters, label
12952 \def\Fld@name{#2}%
12953 \bgroup
12954 \Field@toks={ }%
12955 \kvsetkeys{Field}{#1}%

```

```

12956 \HCode{<input type="button" %
12957   name="\Fld@name" %
12958   value="#2" %
12959   \the\Fld@toks>%
12960 }%
12961 \HCode{</button>}%
12962 \egroup
12963 }
12964 \def\@Submit[#1]#2{%
12965 \HCode{<button type="submit">#2</button>}%
12966 }
12967 \def\@Reset[#1]#2{%
12968 \HCode{<button type="reset">#2</button>}%
12969 }
12970 \def\@CheckBox[#1]#2{% parameters, label
12971 \let\Hy@reserved@a\@empty
12972 \def\Fld@name{#2}%
12973 \def\Fld@default{0}%
12974 \bgroup
12975 \Field@toks={ }%
12976 \kvsetkeys{Field}{#1}%
12977 \HCode{<input type="checkbox" %
12978   \ifFld@checked checked \fi
12979   \ifFld@disabled disabled \fi
12980   \ifFld@readonly readonly \fi
12981   name="\Fld@name" %
12982   \ifFld@hidden type="hidden" \fi
12983   value="\Fld@default" %
12984   \the\Fld@toks>%
12985   #2%
12986 }%
12987 \egroup
12988 }
12989 </tex4ht>

```

44.4 pdfTeX

```

12990 <*pdfTeX>
12991 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
12992 \Hy@Message{Sorry, pdfTeX does not support FORM gauges}%
12993 }
12994 \def\MakeFieldObject#1#2{\sbox0{#1}%
12995 \immediate\pdfxform0 %
12996 \expandafter\edef\csname #2Object\endcsname{%
12997 \the\pdflastxform\space 0 R%
12998 }%
12999 % \hbox to 0pt{\hskip-\maxdimen{\pdfrefxform \the\pdflastxform}}}%
13000 }%
13001 \let\HyField@afields\ltx@empty
13002 \let\HyField@cofields\ltx@empty
13003 \@ifundefined{pdflastlink}
13004 {}%
13005 \let\HyField@AddToFields\relax
13006 \PackageInfo{hyperref}{%
13007   You need pdfTeX 1.40.0 for setting the /Fields entry.%

```

```

13008 \MessageBreak
13009 Adobe Reader/Acrobat accepts an empty /Field array,%
13010 \MessageBreak
13011 but other PDF viewers might complain%
13012 }}%
13013 {%
13014 \let\HyField@AuxAddToFields\ltx@gobble
13015 \let\HyField@AuxAddToCoFields\ltx@gobbletwo
13016 \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.
13017 \def\HyField@ABD@AuxAddToCoFields#1#2{%
13018 \begingroup
13019 \Hy@safe@activestrue
13020 \let\ltx@secondoftwo\relax
13021 \ifx\HyField@cofields\ltx@empty
13022 \xdef\HyField@cofields{%
13023 \ltx@secondoftwo{#1}{ #2 0 R}%
13024 }%
13025 \else
13026 \let\ltx@secondoftwo\relax
13027 \def\HyField@AddCoField##1##2##3{%
13028 \ifx##1\ltx@empty
13029 \ltx@secondoftwo{#1}{ #2 0 R}%
13030 \expandafter\ltx@gobble
13031 \else
13032 \ifnum\pdfstrcmp{##2}{#1}>\ltx@zero
13033 \ltx@secondoftwo{#1}{ #2 0 R}%
13034 \ltx@secondoftwo{##2}{##3}%
13035 \expandafter\expandafter\expandafter\ltx@gobble
13036 \else
13037 \ltx@secondoftwo{##2}{##3}%
13038 \fi
13039 \fi
13040 \HyField@AddCoField
13041 }%
13042 \xdef\HyField@cofields{%
13043 \expandafter\HyField@AddCoField
13044 \HyField@cofields\ltx@empty\ltx@empty\ltx@empty
13045 }%
13046 \fi
13047 \endgroup
13048 }%
13049 \Hy@AtBeginDocument{%
13050 \if@files
13051 \immediate\write\@mainaux{%
13052 \string\providecommand\string\HyField@AuxAddToFields[1]{}%
13053 }%
13054 \immediate\write\@mainaux{%
13055 \string\providecommand\string\HyField@AuxAddToCoFields[2]{}%
13056 }%
13057 \fi
13058 \let\HyField@AfterAuxOpen\@firstofone
13059 \def\HyField@AuxAddToFields#1{%

```

```

13060 \xdef\HyField@afields{%
13061 \ifx\HyField@afields\@empty
13062 \else
13063 \HyField@afields
13064 \space
13065 \fi
13066 #1 0 R%
13067 }%
13068 }%
13069 \let\HyField@AuxAddToCoFields\HyField@ABD@AuxAddToCoFields
13070 }%
13071 \def\HyField@AddToFields{%
13072 \expandafter\HyField@@AddToFields\expandafter{%
13073 \the\pdfastlink
13074 }%
13075 \ifx\Fld@calculate@code\ltx@empty
13076 \else
13077 \begingroup
13078 \Hy@safe@activetrue
13079 \edef\Hy@temp{%
13080 \endgroup
13081 \if@filesw
13082 \write\@mainaux{%
13083 \string\HyField@AuxAddToCoFields{%
13084 \Fld@calculate@sortkey
13085 }{%
13086 \the\pdfastlink
13087 }%
13088 }%
13089 \fi
13090 }%
13091 \Hy@temp
13092 \fi
13093 }%
13094 \def\HyField@@AddToFields#1{%
13095 \HyField@AfterAuxOpen{%
13096 \if@filesw
13097 \write\@mainaux{%
13098 \string\HyField@AuxAddToFields{#1}%
13099 }%
13100 \fi
13101 }%
13102 }%
13103 }
13104 \def\@Form[#1]{%
13105 \@ifundefined{textcolor}{\let\textcolor\@gobble}{}%
13106 \kvsetkeys{Form}{#1}%
13107 \pdf@ifdraftmode{}{%
13108 \Hy@FormObjects
13109 \ifnum\pdftexversion>13 %
13110 \pdfrefobj\OBJ@pdfdocencoding
13111 \pdfrefobj\OBJ@ZaDb
13112 \pdfrefobj\OBJ@Helv
13113 \fi

```

```

13114 \AtVeryEndDocument{%
13115 \immediate\pdfobj{%
13116 <<%
13117 /Fields[\HyField@afields]%
13118 \ifx\HyField@cofields\ltx@empty
13119 \else
13120 /CO[\romannumeral-`Q\HyField@cofields]%
13121 \fi
13122 /DR<<%
13123 /Font<<%
13124 /ZaDb \OBJ@ZaDb\space 0 R%
13125 /Helv \OBJ@Helv\space 0 R%
13126 >>%
13127 >>%
13128 /DA[/Helv 10 Tf 0 g]%
13129 \ifHy@pdfa
13130 \else
13131 \ifHyField@NeedAppearances
13132 /NeedAppearances true%
13133 \fi
13134 \fi
13135 >>%
13136 }%
13137 \edef\OBJ@acroform{\the\pdflastobj}%
13138 \pdfcatalog{/AcroForm \OBJ@acroform\space 0 R}%
13139 }%
13140 }%
13141 \MakeFieldObject{%
Same as \ding{123} of package pifont.
13142 \begingroup
13143 \fontfamily{pzd}%
13144 \fontencoding{U}%
13145 \fontseries{m}%
13146 \fontshape{n}%
13147 \selectfont
13148 \char123 %
13149 \endgroup
13150 }{Ding}%
13151 \MakeFieldObject{%
13152 \fbox{\textcolor{yellow}{\textsf{Submit}}}%
13153 }{Submit}%
13154 \MakeFieldObject{%
13155 \fbox{\textcolor{yellow}{\textsf{SubmitP}}}%
13156 }{SubmitP}%
13157 }
13158 \let\@endForm\ltx@empty
13159 \let\HyAnn@AbsPageLabel\ltx@empty
13160 \let\Fld@pageobjref\ltx@empty
13161 \ltx@ifundefined{pdfpageref}{%
13162 }{%
13163 \ltx@ifpackageloaded{zref-abspage}{%
13164 \newcount\HyAnn@Count
13165 \HyAnn@Count=\ltx@zero
13166 \def\HyAnn@AbsPageLabel{%

```

```

13167 \global\advance\HyAnn@Count by\ltx@one
13168 \zref@labelbyprops{HyAnn@\the\HyAnn@Count}{abspage}%
13169 \zref@refused{HyAnn@\the\HyAnn@Count}%
13170 }%
13171 \def\Fld@pageobjref{%
13172 \zref@ifrefundefined{HyAnn@\the\HyAnn@Count}{%
13173 }{%
13174 \zref@ifrefcontainsprop{HyAnn@\the\HyAnn@Count}{abspage}{%
13175 /P \pdfpageref
13176 \zref@extractdefault{HyAnn@\the\HyAnn@Count}{abspage}{1} %
13177 \space 0 R%
13178 }{%
13179 }%
13180 }%
13181 }%
13182 }{%
13183 }%
13184 }

13185 \def\@TextField[#1]#2{% parameters, label
13186 \def\Fld@name{#2}%
13187 \let\Fld@default\ltx@empty
13188 \let\Fld@value\@empty
13189 \def\Fld@width{\DefaultWidthofText}%
13190 \def\Fld@height{%
13191 \ifFld@multiline
13192 \DefaultHeightofTextMultiline
13193 \else
13194 \DefaultHeightofText
13195 \fi
13196 }%
13197 \begingroup
13198 \expandafter\HyField@SetKeys\expandafter{%
13199 \DefaultOptionsofText,#1%
13200 }%
13201 \PDFForm@Name
13202 \HyField@FlagsText
13203 \ifFld@hidden\def\Fld@width{1sp}\fi
13204 \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
13205 \LayoutTextField{#2}{%
13206 \leavevmode
13207 \HyAnn@AbsPageLabel
13208 \Hy@escapeform\PDFForm@Text
13209 \pdfstartlink user {\PDFForm@Text}\relax
13210 \MakeTextField{\Fld@width}{\Fld@height}\pdfendlink
13211 \HyField@AddToFields
13212 }%
13213 \endgroup
13214 }

13215 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
13216 \def\Fld@name{#2}%
13217 \let\Fld@default\relax
13218 \let\Fld@value\relax
13219 \def\Fld@width{\DefaultWidthofChoiceMenu}%
13220 \def\Fld@height{\DefaultHeightofChoiceMenu}%

```

```

13221 \begingroup
13222 \Fld@menulength=0 %
13223 \@tempdima\z@
13224 \@for\@curropt:=#3\do{%
13225   \expandafter\Fld@checkequals\@curropt==\\%
13226   \Hy@StepCount\Fld@menulength
13227   \settowidth{\@tempdimb}{\@currDisplay}%
13228   \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
13229 }%
13230 \advance\@tempdima by 15\p@
13231 \begingroup
13232 \HyField@SetKeys{#1}%
13233 \edef\x{\endgroup
13234   \noexpand\expandafter
13235   \noexpand\HyField@SetKeys
13236   \noexpand\expandafter{%
13237     \expandafter\noexpand\csname DefaultOptionsof%
13238       \ifFld@radio
13239         Radio%
13240       \else
13241         \ifFld@combo
13242         \ifFld@popdown
13243         PopdownBox%
13244       \else
13245         ComboBox%
13246       \fi
13247     \else
13248       ListBox%
13249     \fi
13250   \fi
13251   \endcsname
13252 }%
13253 }\x
13254 \HyField@SetKeys{#1}%
13255 \PDFForm@Name
13256 \ifFld@hidden\def\Fld@width{1sp}\fi
13257 \ifx\Fld@value\relax
13258   \let\Fld@value\Fld@default
13259 \fi
13260 \LayoutChoiceField{#2}{%
13261   \ifFld@radio
13262     \HyField@FlagsRadioButton
13263     \@@Radio{#3}%
13264   \else
13265     \begingroup
13266     \HyField@FlagsChoice
13267     \ifdim\Fld@width<\@tempdima
13268       \ifdim\@tempdima<1cm\@tempdima1cm\fi
13269     \edef\Fld@width{\the\@tempdima}%
13270     \fi
13271     \ifFld@combo
13272     \else
13273       \@tempdima=\the\Fld@menulength\Fld@charsize
13274     \advance\@tempdima by \Fld@borderwidth bp %

```

```

13275         \advance\@tempdima by \Fld@borderwidth bp %
13276         \edef\Fld@height{\the\@tempdima}%
13277         \fi
13278         \@@ListBox{#3}%
13279     \endgroup
13280 \fi
13281 }%
13282 \endgroup
13283 }
13284 \def\@@Radio#1{%
13285     \Fld@listcount=0 %
13286     \EdefEscapeName\Fld@default{\Fld@default}%
13287     \@for\@curropt:=#1\do{%
13288         \expandafter\Fld@checkequals\@curropt==\%
13289         \EdefEscapeName\@currValue{\@currValue}%
13290         \Hy@StepCount\Fld@listcount
13291         \@currDisplay\space
13292         \leavevmode
13293         \HyAnn@AbsPageLabel
13294         \Hy@escapeform\PDFForm@Radio
13295         \pdfstartlink user {%
13296             \PDFForm@Radio
13297             /AP<<%
13298             /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.

```

13299         /\@currValue\space \DingObject
13300     >>%
13301     >>%
13302 }%
13303 \relax
13304 \MakeRadioField{\Fld@width}{\Fld@height}\pdfendlink
13305 \ifnum\Fld@listcount=1 %
13306     \HyField@AddToFields
13307 \fi
13308 \space % deliberate space between radio buttons
13309 }%
13310 }
13311 \newcount\Fld@listcount
13312 \def\@@ListBox#1{%
13313     \HyField@PDFChoices{#1}%
13314     \leavevmode
13315     \HyAnn@AbsPageLabel
13316     \Hy@escapeform\PDFForm@List
13317     \pdfstartlink user {\PDFForm@List}\relax
13318     \MakeChoiceField{\Fld@width}{\Fld@height}%
13319     \pdfendlink
13320     \HyField@AddToFields
13321 }
13322 \def\@PushButton[#1]#2{% parameters, label
13323     \def\Fld@name{#2}%
13324     \begingroup

```



```

13325 \expandafter\HyField@SetKeys\expandafter{%
13326 \DefaultOptionsofPushButton,#1%
13327 }%
13328 \PDFForm@Name
13329 \ifHy@pdfa
13330 \Hy@Error{%
13331 PDF/A: Push button with JavaScript is prohibited%
13332 }\@ehc
13333 \LayoutPushButtonField{%
13334 \leavevmode
13335 \MakeButtonField{#2}%
13336 }%
13337 \else
13338 \HyField@FlagsPushButton
13339 \ifFld@hidden\def\Fld@width{1sp}\fi
13340 \LayoutPushButtonField{%
13341 \leavevmode
13342 \HyAnn@AbsPageLabel
13343 \Hy@escapeform\PDFForm@Push
13344 \pdfstartlink user {\PDFForm@Push}\relax
13345 \MakeButtonField{#2}%
13346 \pdfendlink
13347 \HyField@AddToFields
13348 }%
13349 \fi
13350 \endgroup
13351 }
13352 \def\@Submit[#1]#2{%
13353 \def\Fld@width{\DefaultWidthofSubmit}%
13354 \def\Fld@height{\DefaultHeightofSubmit}%
13355 \begingroup
13356 \expandafter\HyField@SetKeys\expandafter{%
13357 \DefaultOptionsofSubmit,#1%
13358 }%
13359 \HyField@FlagsPushButton
13360 \HyField@FlagsSubmit
13361 \ifFld@hidden\def\Fld@width{1sp}\fi
13362 \leavevmode
13363 \HyAnn@AbsPageLabel
13364 \Hy@escapeform\PDFForm@Submit
13365 \pdfstartlink user {%
13366 \PDFForm@Submit
13367 /AP<</N \SubmitObject/D \SubmitPObject>>%
13368 }%
13369 \relax
13370 \MakeButtonField{#2}%
13371 \pdfendlink
13372 \HyField@AddToFields
13373 \endgroup
13374 }
13375 \def\@Reset[#1]#2{%
13376 \def\Fld@width{\DefaultWidthofReset}%
13377 \def\Fld@height{\DefaultHeightofReset}%
13378 \begingroup

```

```

13379 \expandafter\HyField@SetKeys\expandafter{%
13380 \DefaultOptionsofReset,#1%
13381 }%
13382 \leavevmode
13383 \ifHy@pdfa
13384 \Hy@Error{%
13385 PDF/A: Reset action is prohibited%
13386 }\@ehc
13387 \MakeButtonField{#2}%
13388 \else
13389 \HyField@FlagsPushButton
13390 \ifFld@hidden\def\Fld@width{1sp}\fi
13391 \HyAnn@AbsPageLabel
13392 \Hy@escapeform\PDFForm@Reset
13393 \pdfstartlink user {\PDFForm@Reset}\relax
13394 \MakeButtonField{#2}%
13395 \pdfendlink
13396 \HyField@AddToFields
13397 \fi
13398 \endgroup
13399 }
13400 \def\@CheckBox[#1]#2{% parameters, label
13401 \def\Fld@name{#2}%
13402 \def\Fld@default{0}%
13403 \begingroup
13404 \def\Fld@width{\DefaultWidthofCheckBox}%
13405 \def\Fld@height{\DefaultHeightofCheckBox}%
13406 \expandafter\HyField@SetKeys\expandafter{%
13407 \DefaultOptionsofCheckBox,#1%
13408 }%
13409 \PDFForm@Name
13410 \HyField@FlagsCheckBox
13411 \ifFld@hidden\def\Fld@width{1sp}\fi
13412 \LayoutCheckField{#2}{%
13413 \leavevmode
13414 \HyAnn@AbsPageLabel
13415 \Hy@escapeform\PDFForm@Check
13416 \pdfstartlink user {\PDFForm@Check}\relax
13417 \MakeCheckField{\Fld@width}{\Fld@height}%
13418 \pdfendlink
13419 \HyField@AddToFields
13420 }%
13421 \endgroup
13422 }
13423 \def\Hy@FormObjects{%
13424 \pdfobj {%
13425 <<%
13426 /Type/Encoding%
13427 /Differences[%
13428 24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek%
13429 /ring/tilde %
13430 39/quotesingle %
13431 96/grave %
13432 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%

```

```

13433      /fraction/guilsinglleft/guilsinglright/minus/perthousand%
13434      /quotedblbase/quotedblleft/quotedblright/quoteleft%
13435      /quoteright/quotesinglbase/trademark/fi/fl/Lslash/OE%
13436      /Scaron/Ydieresis/Zcaron/dotlessi/lslash/oe/scaron/zcaron %
13437      160/Euro %
13438      164/currency %
13439      166/brokenbar %
13440      168/dieresis/copyright/ordfeminine %
13441      172/logicalnot/.notdef/registered/macron/degree/plusminus%
13442      /twosuperior/threesuperior/acute/mu %
13443      183/periodcentered/cedilla/onesuperior/ordmasculine %
13444      188/onequarter/onehalf/threequarters %
13445      192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
13446      /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave%
13447      /Iacute/Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute%
13448      /Ocircumflex/Otilde/Odieresis/multiply/Oslash/Ugrave%
13449      /Uacute/Ucircumflex/Udieresis/Yacute/Thorn/germandbls%
13450      /agrave/aacute/acircumflex/atilde/adieresis/aring/ae%
13451      /ccedilla/egrave/eacute/ecircumflex/edieresis/igrave%
13452      /iacute/icircumflex/idieresis/eth/ntilde/ograde/oacute%
13453      /ocircumflex/otilde/odieresis/divide/oshlash/ugrave%
13454      /uacute/ucircumflex/udieresis/yacute/thorn/ydieresis%
13455      ]%
13456      >>%
13457      }%
13458      \xdef\OBJ@pdfdocencoding{\the\pdflastobj}%
13459      \pdfobj{%
13460      <<%
13461      /Type/Font%
13462      /Subtype/Type1%
13463      /Name/ZaDb%
13464      /BaseFont/ZapfDingbats%
13465      >>%
13466      }%
13467      \xdef\OBJ@ZaDb{\the\pdflastobj}%
13468      \pdfobj{%
13469      <<%
13470      /Type/Font%
13471      /Subtype/Type1%
13472      /Name/Helv%
13473      /BaseFont/Helvetica%
13474      /Encoding \OBJ@pdfdocencoding\space 0 R%
13475      >>%
13476      }%
13477      \xdef\OBJ@Helv{\the\pdflastobj}%
13478      \global\let\Hy@FormObjects\relax
13479      }
13480      </pdfTeX>

```

44.5 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.

```
13481 <*dvipdfm | xetex>
```

\@Gauge

```
13482 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
13483 \Hy@Message{Sorry, dvipdfm/XeTeX does not support FORM gauges}%
13484 }
```

\@Form

```
13485 \def\@Form[#1]{%
13486 \ifundefined{textcolor}{\let\textcolor\@gobble}{}%
13487 \kvsetkeys{Form}{#1}%
13488 \Hy@FormObjects
13489 \@pdfm@mark{obj @afields []}%
13490 \@pdfm@mark{obj @corder []}%
13491 \@pdfm@mark{%
13492   obj @aform <<%
13493     /Fields @afields%
13494     /DR<<%
13495     /Font<<%
13496     /ZaDb @OBJZaDb%
13497     /Helv @OBJHelv%
13498     >>%
13499     >>%
13500     /DA(/Helv 10 Tf 0 g)%
13501     /CO @corder%
13502     \ifHy@pdfa
13503     \else
13504     \ifHyField@NeedAppearances
13505     /NeedAppearances true%
13506     \fi
13507     \fi
13508     >>%
13509   }%
13510 \@pdfm@mark{put @catalog <</AcroForm @aform>>}%
13511 }
```

\@endForm

```
13512 \let\@endForm\ltx@empty
```

\dvipdfm@setdim \dvipdfm@setdim sets dimensions for ann using \pdfm@box.

```
13513 \def\dvipdfm@setdim{%
13514   height \the\ht\pdfm@box\space
13515   width \the\wd\pdfm@box\space
13516   depth \the\dp\pdfm@box\space
13517 }
```

\HyField@AnnotCount

```
13518 \newcount\HyField@AnnotCount
13519 \HyField@AnnotCount=\z@
```

\HyField@AdvanceAnnotCount

```
13520 \def\HyField@AdvanceAnnotCount{%
13521   \global\advance\HyField@AnnotCount\@ne
13522 }
```

\HyField@TheAnnotCount

```
13523 \def\HyField@TheAnnotCount{%
13524   \the\HyField@AnnotCount
13525 }
```

\Fld@pageobjref

```
13526 \def\Fld@pageobjref{/P @thispage}%
```

\HyField@AddToFields

```
13527 \def\HyField@AddToFields#1{%
13528   \@pdfm@mark{put @afields @#1\HyField@TheAnnotCount}%
13529   \ifx\Fld@calculate@code\ltx@empty
13530   \else
13531     \@pdfm@mark{put @corder @#1\HyField@TheAnnotCount}%
13532   \fi
13533 }
```

\@TextField

```
13534 \def\@TextField[#1]#2{% parameters, label
13535   \def\Fld@name{#2}%
13536   \let\Fld@default\ltx@empty
13537   \let\Fld@value\@empty
13538   \def\Fld@width{\DefaultWidthofText}%
13539   \def\Fld@height{%
13540     \ifFld@multiline
13541       \DefaultHeightofTextMultiline
13542     \else
13543       \DefaultHeightofText
13544     \fi
13545   }%
13546   \begingroup
13547     \expandafter\HyField@SetKeys\expandafter{%
13548       \DefaultOptionsofText,#1%
13549     }%
13550     \PDFForm@Name
13551     \HyField@FlagsText
13552     \ifFld@hidden\def\Fld@width{1sp}\fi
13553     \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
13554     \setbox\pdfm@box=\hbox{%
13555       \MakeTextField{\Fld@width}{\Fld@height}%
13556     }%
13557     \HyField@AdvanceAnnotCount
13558     \LayoutTextField{#2}{%
13559       \leavevmode
13560       \Hy@escapeform\PDFForm@Text
13561       \@pdfm@mark{%
13562         ann @text\HyField@TheAnnotCount\space
13563         \dvipdfm@setdim << \PDFForm@Text >>%
13564       }%
13565     }%
13566     \unhbox\pdfm@box
13567     \HyField@AddToFields{text}%
13568     % record in @afields array
13569   \endgroup
```

13570 }

\@ChoiceMenu

```
13571 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
13572   \def\Fld@name{#2}%
13573   \let\Fld@default\relax
13574   \let\Fld@value\relax
13575   \def\Fld@width{\DefaultWidthofChoiceMenu}%
13576   \def\Fld@height{\DefaultHeightofChoiceMenu}%
13577   \begingroup
13578     \Fld@menulength=0 %
13579     \@tempdima\z@
13580     \@for\@curropt:=#3\do{%
13581       \expandafter\Fld@checkequals\@curropt==\%
13582       \Hy@StepCount\Fld@menulength
13583       \settowidth{\@tempdimb}{\@currDisplay}%
13584       \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
13585     }%
13586     \advance\@tempdima by 15\p@
13587     \begingroup
13588       \HyField@SetKeys{#1}%
13589     \edef\x{\endgroup
13590       \noexpand\expandafter
13591       \noexpand\HyField@SetKeys
13592       \noexpand\expandafter{%
13593         \expandafter\noexpand\csname DefaultOptionsof%
13594           \ifFld@radio
13595             Radio%
13596           \else
13597             \ifFld@combo
13598               \ifFld@popdown
13599                 PopdownBox%
13600               \else
13601                 ComboBox%
13602               \fi
13603             \else
13604               ListBox%
13605             \fi
13606           \fi
13607         \endcsname
13608       }%
13609     }\x
13610     \HyField@SetKeys{#1}%
13611     \PDFForm@Name
13612     \ifFld@hidden\def\Fld@width{1sp}\fi
13613     \ifx\Fld@value\relax
13614       \let\Fld@value\Fld@default
13615     \fi
13616     \LayoutChoiceField{#2}{%
13617       \ifFld@radio
13618         \HyField@FlagsRadioButton
13619         \@Radio{#3}%
13620       \else
13621         \begingroup
```

```

13622      \HyField@FlagsChoice
13623      \ifdim\Fld@width<\@tempdima
13624      \ifdim\@tempdima<1cm\@tempdima1cm\fi
13625      \edef\Fld@width{\the\@tempdima}%
13626      \fi
13627      \ifFld@combo
13628      \else
13629      \@tempdima=\the\Fld@menulength\Fld@charsize
13630      \advance\@tempdima by \Fld@borderwidth bp %
13631      \advance\@tempdima by \Fld@borderwidth bp %
13632      \edef\Fld@height{\the\@tempdima}%
13633      \fi
13634      \@@ListBox{#3}%
13635      \endgroup
13636      \fi
13637      }%
13638      \endgroup
13639      }

\@@Radio
13640      \def\@@Radio#1{%
13641      \Fld@listcount=0 %
13642      \EdefEscapeName\Fld@default{\Fld@default}%
13643      \setbox\pdfm@box=\hbox{%
13644      \MakeRadioField{\Fld@width}{\Fld@height}%
13645      }%
13646      \@for\@curropt:=#1\do{%
13647      \expandafter\Fld@checkequals\@curropt==\%
13648      \EdefEscapeName\@currValue{\@currValue}%
13649      \Hy@StepCount\Fld@listcount
13650      \@currDisplay\space
13651      \leavevmode
13652      \Hy@escapeform\PDFForm@Radio
13653      \ifnum\Fld@listcount=1 %
13654      \HyField@AdvanceAnnotCount
13655      \fi
13656      \@pdfm@mark{%
13657      ann %
13658      \ifnum\Fld@listcount=1 %
13659      @radio\HyField@TheAnnotCount%
13660      \space
13661      \fi
13662      \dvi pdfm@setdim
13663      <<%
13664      \PDFForm@Radio
13665      /AP<</N<</\@currValue /null>>>>%
13666      >>%
13667      }%
13668      \unhcopy\pdfm@box\space% deliberate space between radio buttons
13669      \ifnum\Fld@listcount=1 %
13670      \HyField@AddToFields{radio}%
13671      \fi
13672      }%
13673      }

```

\Fld@listcount

13674 \newcount\Fld@listcount

\@@Listbox

```
13675 \def\@@Listbox#1{%
13676   \HyField@PDFChoices{#1}%
13677   \setbox\pdfm@box=\hbox{%
13678     \MakeChoiceField{\Fld@width}{\Fld@height}%
13679   }%
13680   \leavevmode
13681   \Hy@escapeform\PDFForm@List
13682   \HyField@AdvanceAnnotCount
13683   \@pdfm@mark{%
13684     ann @list\HyField@TheAnnotCount\space
13685     \dvipdfm@setdim
13686     <<\PDFForm@List>>%
13687   }%
13688   \unhbox\pdfm@box
13689   \HyField@AddToFields{list}%
13690 }
```

\@PushButton

```
13691 \def\@PushButton[#1]#2{% parameters, label
13692   \def\Fld@name{#2}%
13693   \begingroup
13694     \expandafter\HyField@SetKeys\expandafter{%
13695       \DefaultOptionsofPushButton,#1%
13696     }%
13697     \PDFForm@Name
13698     \ifHy@pdfa
13699       \Hy@Error{%
13700         PDF/A: Push button with JavaScript is prohibited%
13701       }\@ehc
13702       \LayoutPushButtonField{%
13703         \leavevmode
13704         \MakeButtonField{#2}%
13705       }%
13706     \else
13707       \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
13708       \HyField@FlagsPushButton
13709       \ifFld@hidden\def\Fld@width{1sp}\fi
13710       \HyField@AdvanceAnnotCount
13711       \LayoutPushButtonField{%
13712         \leavevmode
13713         \Hy@escapeform\PDFForm@Push
13714         \@pdfm@mark{%
13715           ann @push\HyField@TheAnnotCount\space
13716           \dvipdfm@setdim
13717           <<\PDFForm@Push>>%
13718         }%
13719       }%
13720       \unhbox\pdfm@box
13721       \HyField@AddToFields{push}%
13722     \fi
```



```

13723 \endgroup
13724 }

\@Submit
13725 \def\@Submit[#1]#2{%
13726 \def\Fld@width{\DefaultWidthofSubmit}%
13727 \def\Fld@height{\DefaultHeightofSubmit}%
13728 \begingroup
13729 \expandafter\HyField@SetKeys\expandafter{%
13730 \DefaultOptionsofSubmit,#1%
13731 }%
13732 \HyField@FlagsPushButton
13733 \HyField@FlagsSubmit
13734 \ifFld@hidden\def\Fld@width{1sp}\fi
13735 \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
13736 \leavevmode
13737 \Hy@escapeform\PDFForm@Submit
13738 \HyField@AdvanceAnnotCount
13739 \@pdfm@mark{%
13740 ann @submit\HyField@TheAnnotCount\space
13741 \dvi pdfm@setdim
13742 <<\PDFForm@Submit>>%
13743 }%
13744 \unhbox\pdfm@box%
13745 \HyField@AddToFields{submit}%
13746 \endgroup
13747 }

\@Reset
13748 \def\@Reset[#1]#2{%
13749 \def\Fld@width{\DefaultWidthofReset}%
13750 \def\Fld@height{\DefaultHeightofReset}%
13751 \begingroup
13752 \expandafter\HyField@SetKeys\expandafter{%
13753 \DefaultOptionsofReset,#1%
13754 }%
13755 \leavevmode
13756 \ifHy@pdfa
13757 \Hy@Error{%
13758 PDF/A: Reset action is prohibited%
13759 }\@ehc
13760 \MakeButtonField{#2}%
13761 \else
13762 \HyField@FlagsPushButton
13763 \ifFld@hidden\def\Fld@width{1sp}\fi
13764 \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
13765 \Hy@escapeform\PDFForm@Reset
13766 \HyField@AdvanceAnnotCount
13767 \@pdfm@mark{%
13768 ann @reset\HyField@TheAnnotCount\space
13769 \dvi pdfm@setdim
13770 <<\PDFForm@Reset>>%
13771 }%
13772 \unhbox\pdfm@box

```

```

13773 \HyField@AddToFields{reset}%
13774 \fi
13775 \endgroup
13776 }

```

\@CheckBox

```

13777 \def\@CheckBox[#1]#2{% parameters, label
13778 \def\Fld@name{#2}%
13779 \def\Fld@default{0}%
13780 \begingroup
13781 \def\Fld@width{\DefaultWidthofCheckBox}%
13782 \def\Fld@height{\DefaultHeightofCheckBox}%
13783 \expandafter\HyField@SetKeys\expandafter{%
13784 \DefaultOptionsofCheckBox,#1%
13785 }%
13786 \PDFForm@Name
13787 \HyField@FlagsCheckBox
13788 \ifFld@hidden\def\Fld@width{1sp}\fi
13789 \setbox\pdfm@box=\hbox{%
13790 \MakeCheckField{\Fld@width}{\Fld@height}%
13791 }%
13792 \HyField@AdvanceAnnotCount
13793 \LayoutCheckField{#2}{%
13794 \leavevmode
13795 \Hy@escapeform\PDFForm@Check
13796 \@pdfm@mark{%
13797 ann @check\HyField@TheAnnotCount\space
13798 \dvi pdfm@setdim
13799 <<\PDFForm@Check>>%
13800 }%
13801 \unhbox\pdfm@box
13802 \HyField@AddToFields{check}%
13803 }%
13804 \endgroup
13805 }

13806 \def\Hy@FormObjects{%
13807 \@pdfm@mark{obj @OBJpdfdocencoding%
13808 <<%
13809 /Type/Encoding%
13810 /Differences[
13811 24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek/ring/tilde %
13812 39/quotesingle %
13813 96/grave %
13814 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
13815 /fraction/guilsinglleft/guilsinglright/minus/perthousand%
13816 /quotedblbase/quotedblleft/quotedblright/quoteleft/quoteright%
13817 /quotesinglbase/trademark/fi/fl/Lslash/OE/Scaron/Ydieresis%
13818 /Zcaron/dotlessi/lslash/oe/scaron/zcaron %
13819 160/Euro %
13820 164/currency %
13821 166/brokenbar %
13822 168/dieresis/copyright/ordfeminine %
13823 172/logicalnot/.notdef/registered/macron/degree/plusminus%

```

```

13824      /twosuperior/threesuperior/acute/mu %
13825      183/periodcentered/cedilla/onesuperior/ordmasculine %
13826      188/onequarter/onehalf/threequarters %
13827      192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
13828      /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave/Iacute%
13829      /Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute/Ocircumflex%
13830      /Otilde/Odieresis/multiply/Oslash/Ugrave/Uacute/Ucircumflex%
13831      /Udieresis/Yacute/Thorn/germandbls/agrave/aacute/acircumflex%
13832      /atilde/adieresis/aring/ae/ccedilla/egrave/eacute%
13833      /ecircumflex/edieresis/igrave/iacute/icircumflex/idieresis%
13834      /eth/ntilde/ograde/oacute/ocircumflex/otilde/odieresis%
13835      /divide/oslash/ugrave/uacute/ucircumflex/udieresis/yacute%
13836      /thorn/ydieresis%
13837      ]%
13838      >>%
13839      }%
13840      \@pdfm@mark{obj @OBJZaDb%
13841      <<%
13842      /Type/Font%
13843      /Subtype/Type1%
13844      /Name/ZaDb%
13845      /BaseFont/ZapfDingbats%
13846      >>%
13847      }%
13848      \@pdfm@mark{obj @OBJHelv%
13849      <<%
13850      /Type/Font%
13851      /Subtype/Type1%
13852      /Name/Helv%
13853      /BaseFont/Helvetica%
13854      /Encoding @OBJpdfdocencoding%
13855      >>%
13856      }%
13857      \global\let\Hy@FormObjects\relax
13858      }
13859      </dvipdfm | xetex>

```

44.6 Common forms part

```

13860 (*pdfform)

\Fld@pageobjref

13861 \providecommand*{\Fld@pageobjref}{}

\Hy@escapestring

13862 \@ifundefined{pdf@escapestring}
13863 {%
13864   \let\Hy@escapestring\@firstofone
13865   \def\Hy@escapeform#1{%
13866     \ifHy@pdfescapeform
13867       \def\Hy@escapestring##1{%
13868         \noexpand\Hy@escapestring{\noexpand##1}%
13869       }%
13870       \edef\Hy@temp{#1}%

```

```

13871 \expandafter\Hy@@escapeform\Hy@temp\Hy@escapestring{}\@nil
13872 \def\Hy@escapestring##1{%
13873 \ifundefined{Hy@esc@\string##1}{%
13874 ##1%
13875 \ThisShouldNotHappen
13876 }{%
13877 \csname Hy@esc@\string##1\endcsname
13878 }%
13879 }%
13880 \else
13881 \let\Hy@escapestring\@firstofone
13882 \fi
13883 }%
13884 \def\Hy@@escapeform#1\Hy@escapestring#2#3\@nil{%
13885 \ifx\#3\%
13886 \else
13887 \expandafter
13888 \Hy@pstringdef\csname Hy@esc@\string#2\endcsname{#2}%
13889 \ltx@ReturnAfterFi{%
13890 \Hy@@escapeform#3\@nil
13891 }%
13892 \fi
13893 }%
13894 }{%
13895 \def\Hy@escapeform#1{%
13896 \ifHy@pdfescapeform
13897 \let\Hy@escapestring\pdfescapestring
13898 \else
13899 \let\Hy@escapestring\@firstofone
13900 \fi
13901 }%
13902 \Hy@escapeform{}%
13903 }

```

\PDFForm@Name

```

13904 \def\PDFForm@Name{%
13905 \PDFForm@@Name\Fld@name
13906 \ifx\Fld@altname\relax
13907 \else
13908 \PDFForm@@Name\Fld@altname
13909 \fi
13910 \ifx\Fld@mappingname\relax
13911 \else
13912 \PDFForm@@Name\Fld@mappingname
13913 \fi
13914 }

```

\PDFForm@@Name

```

13915 \def\PDFForm@@Name#1{%
13916 \begingroup
13917 \ifnum\Hy@pdf@major@minor@version<105 % implementation note 117, PDF spec 1.7
13918 \ifHy@unicode
13919 \Hy@unicodefalse
13920 \fi

```

```

13921 \fi
13922 \pdfstringdef\Hy@gtemp#1%
13923 \endgroup
13924 \let#1\Hy@gtemp
13925 }

```

\Fld@additionalactions

```

13926 \def\Fld@@additionalactions{%
K input (keystroke) format
13927 \ifx\Fld@keystroke@code\@empty
13928 \else
13929 /K<</S/JavaScript/JS(\Hy@escapestring{\Fld@keystroke@code})>>%
13930 \fi

```

F display format

```

13931 \ifx\Fld@format@code\@empty
13932 \else
13933 /F<</S/JavaScript/JS(\Hy@escapestring{\Fld@format@code})>>%
13934 \fi

```

V validation

```

13935 \ifx\Fld@validate@code\@empty
13936 \else
13937 /V<</S/JavaScript/JS(\Hy@escapestring{\Fld@validate@code})>>%
13938 \fi

```

C calculation

```

13939 \ifx\Fld@calculate@code\@empty
13940 \else
13941 /C<</S/JavaScript/JS(\Hy@escapestring{\Fld@calculate@code})>>%
13942 \fi

```

Fo receiving the input focus

```

13943 \ifx\Fld@onfocus@code\@empty
13944 \else
13945 /Fo<</S/JavaScript/JS(\Hy@escapestring{\Fld@onfocus@code})>>%
13946 \fi

```

Bl loosing the input focus (blurred)

```

13947 \ifx\Fld@onblur@code\@empty
13948 \else
13949 /Bl<</S/JavaScript/JS(\Hy@escapestring{\Fld@onblur@code})>>%
13950 \fi

```

D pressing the mouse button (down)

```

13951 \ifx\Fld@onmousedown@code\@empty
13952 \else
13953 /D<</S/JavaScript/JS(\Hy@escapestring{\Fld@onmousedown@code})>>%
13954 \fi

```

U releasing the mouse button (up)

```

13955 \ifx\Fld@onmouseup@code\@empty
13956 \else
13957 /U<</S/JavaScript/JS(\Hy@escapestring{\Fld@onmouseup@code})>>%
13958 \fi

```

E cursor enters the annotation's active area.

```
13959 \ifx\Fld@onenter@code\@empty
13960 \else
13961 /E<</S/JavaScript/JS(\Hy@escapestring{\Fld@onenter@code})>>%
13962 \fi
```

X cursor exits the annotation's active area.

```
13963 \ifx\Fld@onexit@code\@empty
13964 \else
13965 /X<</S/JavaScript/JS(\Hy@escapestring{\Fld@onexit@code})>>%
13966 \fi
13967 }
13968 \def\Fld@additionalactions{%
13969 \if\Fld@@additionalactions-%
13970 \else
13971 \ifHy@pdfa
13972 \else
13973 /AA<<\Fld@@additionalactions>>%
13974 \fi
13975 \fi
13976 }
```

\Fld@annotnames

```
13977 \def\Fld@annotnames{%
13978 /T(\Fld@name)%
13979 \ifx\Fld@altname\relax
13980 \else
13981 /TU(\Fld@altname)%
13982 \fi
13983 \ifx\Fld@mappingname\relax
13984 \else
13985 /TM(\Fld@mappingname)%
13986 \fi
13987 }
```

\PDFForm@Check

```
13988 \def\PDFForm@Check{%
13989 /Subtype/Widget%
13990 \Fld@annotflags
13991 \Fld@pageobjref
13992 \Fld@annotnames
13993 /FT/Btn%
13994 \Fld@flags
13995 /Q \Fld@align
13996 /BS<</W \Fld@borderwidth /S/\Fld@borderstyle>>%
13997 /AP<< /N <</Yes<<>>>> >> %new string /Yes is from below
13998 /MK<<%
13999 \ifnum\Fld@rotation=z@
14000 \else
14001 /R \Fld@rotation
14002 \fi
14003 \ifx\Fld@bordercolor\relax
14004 \else
14005 /BC[\Fld@bordercolor]%

```

```

14006 \fi
14007 \ifx\Fld@bcolor\relax
14008 \else
14009 /BG[\Fld@bcolor]%
14010 \fi
14011 /CA(\Hy@escapestring{\Fld@cbsymbol})%
14012 >>%
14013 /DA(/ZaDb \strip@pt\Fld@charsize\space Tf%
14014 \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
14015 /H/P%
14016 \ifFld@checked /V/Yes/AS/Yes\else /V/Off/AS/Off\fi
14017 \Fld@additionalactions
14018 }

```

\PDFForm@Push

```

14019 \ifHy@pdfa
14020 \else
14021 \def\PDFForm@Push{%
14022 /Subtype/Widget%
14023 \Fld@annotflags
14024 \Fld@pageobjref
14025 \Fld@annotnames
14026 /FT/Btn%
14027 \Fld@flags
14028 /H/P%
14029 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
14030 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
14031 \ifx\Fld@bordercolor\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 >>%
14044 \fi
14045 /A<</S/JavaScript/JS(\Hy@escapestring{\Fld@onclick@code})>>%
14046 \Fld@additionalactions
14047 }%
14048 \fi

```

\PDFForm@List

```

14049 \def\PDFForm@List{%
14050 /Subtype/Widget%
14051 \Fld@annotflags
14052 \Fld@pageobjref
14053 \Fld@annotnames
14054 /FT/Ch%
14055 \Fld@flags

```

```

14056 /Q \Fld@align
14057 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
14058 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
14059 \ifx\Fld@bordercolor\relax\else 1\fi
14060 \ifx\Fld@bcolor\relax \else 1\fi
14061 \space
14062 \else
14063 /MK<<%
14064 \ifnum\Fld@rotation=\z@
14065 \else
14066 /R \Fld@rotation
14067 \fi
14068 \ifx\Fld@bordercolor\relax
14069 \else
14070 /BC[\Fld@bordercolor]%
14071 \fi
14072 \ifx\Fld@bcolor\relax
14073 \else
14074 /BG[\Fld@bcolor]%
14075 \fi
14076 >>%
14077 \fi
14078 /DA(/Helv \strip@pt\Fld@charsize\space Tf%
14079 \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
14080 \Fld@choices
14081 \Fld@additionalactions
14082 }

```

\PDFForm@Radio

```

14083 \def\PDFForm@Radio{%
14084 /Subtype/Widget%
14085 \Fld@annotflags
14086 \Fld@pageobjref
14087 \Fld@annotnames
14088 /FT/Btn%
14089 \Fld@flags
14090 /H/P%
14091 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
14092 /MK<<%
14093 \ifnum\Fld@rotation=\z@
14094 \else
14095 /R \Fld@rotation
14096 \fi
14097 \ifx\Fld@bordercolor\relax
14098 \else
14099 /BC[\Fld@bordercolor]%
14100 \fi
14101 \ifx\Fld@bcolor\relax
14102 \else
14103 /BG[\Fld@bcolor]%
14104 \fi
14105 /CA(\Hy@escapestring{\Fld@radiosymbol})%
14106 >>%
14107 /DA(/ZaDb \strip@pt\Fld@charsize\space Tf%

```



```
14108 \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
```

New code, the default value is used for all buttons

```
14109 \ifx\Fld@default\@empty
14110 /V/Off%
14111 /DV/Off%
14112 \else
14113 /V/\Fld@default
14114 /DV/\Fld@default
14115 \fi
14116 \Fld@additionalactions
14117 }
```

\PDFForm@Text

```
14118 \def\PDFForm@Text{%
14119 /Subtype/Widget%
14120 \Fld@annotflags
14121 \Fld@pageobjref
14122 \Fld@annotnames
14123 /FT/Tx%
14124 \Fld@flags
14125 /Q \Fld@align
14126 /BS<</W \Fld@borderwidth\space /S /\Fld@borderstyle>>%
14127 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
14128 \ifx\Fld@bordercolor\relax\else 1\fi
14129 \ifx\Fld@bcolor\relax \else 1\fi
14130 \space
14131 \else
14132 /MK<<%
14133 \ifnum\Fld@rotation=\z@
14134 \else
14135 /R \Fld@rotation
14136 \fi
14137 \ifx\Fld@bordercolor\relax
14138 \else
14139 /BC[\Fld@bordercolor]%
14140 \fi
14141 \ifx\Fld@bcolor\relax
14142 \else
14143 /BG[\Fld@bcolor]%
14144 \fi
14145 >>%
14146 \fi
14147 /DA(/Helv \strip@pt\Fld@charsize\space Tf%
14148 \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
14149 /DV(\Hy@escapestring{\Fld@default})%
14150 /V(\Hy@escapestring{\Fld@value})%
14151 \Fld@additionalactions
14152 \ifnum\Fld@maxlen>\z@/MaxLen \Fld@maxlen \fi
14153 }
```

\PDFForm@Submit

```
14154 \def\PDFForm@Submit{%
14155 /Subtype/Widget%
```

```

14156 \Fld@annotflags
14157 \Fld@pageobjref
14158 \Fld@annotnames
14159 /FT/Btn%
14160 \Fld@flags
14161 /H/P%
14162 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
14163 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
14164     \ifx\Fld@bordercolor\relax\else 1\fi
14165     \space
14166 \else
14167     /MK<<%
14168     \ifnum\Fld@rotation=\z@
14169     \else
14170     /R \Fld@rotation
14171     \fi
14172     \ifx\Fld@bordercolor\relax
14173     \else
14174     /BC[\Fld@bordercolor]%
14175     \fi
14176 >>%
14177 \fi
14178 /A<<%
14179 /S/SubmitForm%
14180 /F<<%
14181 /FS/URL%
14182 /F(\Hy@escapestring{\Form@action})%
14183 >>%
14184 \Fld@submitflags
14185 >>%
14186 \Fld@additionalactions
14187 }

```

\PDFForm@Reset

```

14188 \ifHy@pdfa
14189 \else
14190 \def\PDFForm@Reset{%
14191     /Subtype/Widget%
14192     \Fld@annotflags
14193     \Fld@pageobjref
14194     \Fld@annotnames
14195     /FT/Btn%
14196     \Fld@flags
14197     /H/P%
14198     /DA(/Helv \strip@pt\Fld@charsize\space Tf 0 0 1 rg)%
14199     \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
14200         \ifx\Fld@bordercolor\relax\else 1\fi
14201         \space
14202     \else
14203         /MK<<%
14204         \ifnum\Fld@rotation=\z@
14205         \else
14206         /R \Fld@rotation
14207         \fi

```

```

14208     \ifx\Fld@bordercolor\relax
14209     \else
14210         /BC[\Fld@bordercolor]%
14211     \fi
14212 %     /CA (Clear)
14213 %     /AC (Done)
14214     >>%
14215     \fi
14216     /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
14217     /A<</S/ResetForm>>%
14218     \Fld@additionalactions
14219 }%
14220 \fi

14221 </pdfform>
14222 <*packageEnd>

```

45 Bookmarks in the PDF file

This was originally developed by Yannis Haralambous (it was the separate `repere.sty`); it needed the `repere` 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`

```

14223 \def\phantomsection{%
14224   \Hy@MakeCurrentHrefAuto{section*}%
14225   \Hy@raisedlink{\hyper@anchorstart{\@currentHref}\hyper@anchorend}%
14226 }
14227 </packageEnd>

```

45.1 Bookmarks

```
14228 <*outlines>
```

This section was written by Heiko Oberdiek; the code replaces an earlier version by David Carlisle.

The first part of bookmark code is in section 6. Further documentation is available as paper and slides of the talk, that Heiko Oberdiek has given at the EuroTeX'99 meeting in Heidelberg. See `paper.pdf` and `slides.pdf` in the `doc` directory of `hyperref`.

When using the right-to-left typesetting based on $\varepsilon\text{-TeX}$, the order of the `\BOOKMARK` commands written to the `\@outlinefile` could appear wrong, because of mis-feature of $\varepsilon\text{-TeX}$'s implementation (that it processes the shipped out lines left-to-right, instead of the order in which they appear in the document). The wrong order will appear when the file contains two bookmarks on the same line typeset right-to-left.

To work around this problem, the `bookmark@seq@number` counter is used to write the bookmark's sequential number into a comment in the `\@outlinefile`,

which could be used to post-process it to achieve the proper ordering of \BOOK-MARK commands in that file.

```

14229 \def\Hy@writebookmark#1#2#3#4#5{%
14230   % section number, text, label, level, file
14231   \ifx\WriteBookmarks\relax%
14232   \else
14233     \ifnum#4>\Hy@bookmarksdepth\relax
14234     \else
14235       \@@writetorep{#1}{#2}{#3}{#4}{#5}%
14236     \fi
14237   \fi
14238 }
14239 \def\Hy@currentbookmarklevel{0}
14240 \def\Hy@numberline#1{#1 }
14241 \def\@@writetorep#1#2#3#4#5{%
14242   \begingroup
14243     \edef\Hy@tempa{#5}%
14244     \ifx\Hy@tempa\Hy@bookmarkstype
14245       \edef\Hy@level{#4}%
14246       \ifx\Hy@levelcheck Y%
14247         \@tempcnta\Hy@level\relax
14248         \advance\@tempcnta by -1 %
14249         \ifnum\Hy@currentbookmarklevel<\@tempcnta
14250           \advance\@tempcnta by -\Hy@currentbookmarklevel\relax
14251           \advance\@tempcnta by 1 %
14252           \Hy@Warning{%
14253             Difference (\the\@tempcnta) between bookmark levels is %
14254             greater \MessageBreak than one, level fixed%
14255           }%
14256           \@tempcnta\Hy@currentbookmarklevel
14257           \advance\@tempcnta by 1 %
14258           \edef\Hy@level{\the\@tempcnta}%
14259         \fi
14260       \else
14261         \global\let\Hy@levelcheck Y%
14262       \fi
14263       \global\let\Hy@currentbookmarklevel\Hy@level
14264       \@tempcnta\Hy@level\relax
14265       \expandafter\xdef\csname Parent\Hy@level\endcsname{#3}%
14266       \advance\@tempcnta by -1 %
14267       \edef\Hy@tempa{#3}%
14268       \edef\Hy@tempb{\csname Parent\the\@tempcnta\endcsname}%
14269       \ifx\Hy@tempa\Hy@tempb
14270         \Hy@Warning{%
14271           The anchor of a bookmark and its parent's must not%
14272           \MessageBreak be the same. Added a new anchor%
14273         }%
14274       \phantomsection
14275     \fi
14276   \ifHy@bookmarksnumbered
14277     \let\numberline\Hy@numberline
14278     \let\booknumberline\Hy@numberline
14279     \let\partnumberline\Hy@numberline
14280     \let\chapternumberline\Hy@numberline

```

```

14281 \else
14282 \let\numberline\@gobble
14283 \let\booknumberline\@gobble
14284 \let\partnumberline\@gobble
14285 \let\chapternumberline\@gobble
14286 \fi
14287 \pdfstringdef\Hy@tempa{#2}%
14288 \HyPsd@SanitizeForOutFile\Hy@tempa
14289 \if@filesw
14290 \stepcounter{bookmark@seq@number}%
14291 \@ifundefined{@outlinefile}{%
14292 }{%
14293 \protected@write{@outlinefile}{%
14294 \protect\BOOKMARK
14295 [\Hy@level][\@bookmarkopenstatus{\Hy@level}]{#3}%
14296 {\Hy@tempa}{\Hy@tempb}%
14297 \@percentchar\space\thebookmark@seq@number
14298 }%
14299 }%
14300 \fi
14301 \fi
14302 \endgroup
14303 }
14304 \newcounter{bookmark@seq@number}

14305 \begingroup
14306 \lccode`=(`{%
14307 \lccode`=}`}%
14308 \lccode`1=\z@
14309 \lccode`2=\z@
14310 \lccode`3=\z@
14311 \lccode`5=\z@
14312 \lccode`7=\z@
14313 \lccode`\#=\z@
14314 \lccode``=\z@
14315 \lccode`\{=\z@
14316 \lccode`\}= \z@
14317 \lowercase{%
14318 \endgroup
14319 \def\HyPsd@SanitizeForOutFile#1{%
14320 \@onelevel@sanitize\Hy@tempa
14321 \escapechar`\\%
14322 \edef\Hy@tempa{%
14323 \expandafter\HyPsd@SanitizeOut@BraceLeft\Hy@tempa(\@nil
14324 }%
14325 \edef\Hy@tempa{%
14326 \expandafter\HyPsd@SanitizeOut@BraceRight\Hy@tempa)\@nil
14327 }%
14328 }%
14329 \def\HyPsd@SanitizeOut@BraceLeft#1(#2\@nil{%
14330 #1%
14331 \ifx\#2\\%
14332 \expandafter\ltx@gobble
14333 \else
14334 \expandafter\ltx@firstofone

```

```

14335 \fi
14336 {%
14337 \string\173%
14338 \HyPsd@SanitizeOut@BraceLeft#2\@nil
14339 }%
14340 }%
14341 \def\HyPsd@SanitizeOut@BraceRight#1)#2\@nil{%
14342 #1%
14343 \ifx\#2\%
14344 \expandafter\ltx@gobble
14345 \else
14346 \expandafter\ltx@firstofone
14347 \fi
14348 {%
14349 \string\175%
14350 \HyPsd@SanitizeOut@BraceRight#2\@nil
14351 }%
14352 }%
14353 }

```

In the call of `\BOOKMARK` the braces around `#4` are omitted, because it is not likely, that the level number contains `]`.

```

14354 \newcommand{\currentpdfbookmark}{%
14355 \pdfbookmark[\Hy@currentbookmarklevel]%
14356 }
14357 \newcommand{\subpdfbookmark}{%
14358 \@tempcnta\Hy@currentbookmarklevel
14359 \Hy@StepCount\@tempcnta
14360 \expandafter\pdfbookmark\expandafter[\the\@tempcnta]%
14361 }
14362 \newcommand{\belowpdfbookmark}[2]{%
14363 \@tempcnta\Hy@currentbookmarklevel
14364 \Hy@StepCount\@tempcnta
14365 \expandafter\pdfbookmark\expandafter[\the\@tempcnta]{#1}{#2}%
14366 \advance\@tempcnta by -1 %
14367 \xdef\Hy@currentbookmarklevel{\the\@tempcnta}%
14368 }

```

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.

```

14369 \renewcommand\pdfbookmark[3][0]{%
14370 \Hy@writebookmark{#2}{#3.#1}{#1}{toc}%
14371 \hyper@anchorstart{#3.#1}\hyper@anchorend
14372 }
14373 \def\BOOKMARK{%
14374 \ifnextchar{\@BOOKMARK}{\@@BOOKMARK[1][-]}%
14375 }
14376 \def\@BOOKMARK[#1]{%
14377 \ifnextchar{\@@BOOKMARK[#1]]}{\@@BOOKMARK[#1][-]}%
14378 }

```

The macros for calculating structure of outlines are derived from those by Petr Olsak used in the `texinfopdf` macros.

45.1.1 Rerun warning

`\Hy@OutlineRerunCheck`

```

14379 \RequirePackage{rerunfilecheck}[2009/12/10]
14380 \def\Hy@OutlineRerunCheck{%
14381   \RerunFileCheck{\jobname.out}{%
14382     \immediate\closeout\@outlinefile
14383   }{%
14384     Rerun to get outlines right\MessageBreak
14385     or use package `bookmark'%
14386   }%
14387 }
```

45.1.2 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.

```

14388 <*vtex>
14389 \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.

```

14390 \begingroup
14391   \catcode`\'=12 %
14392   \ifnum\Hy@VTeXversion<650 %
14393     \catcode`\#=12 %
14394     \gdef\hv@pdf@char#1#2#3{%
14395       \char
14396       \ifcase'#1#2#3 %
14397         "00\or"01\or"02\or"03\or"04\or"05\or"06\or"07%
14398         \or"08\or"09\or"0A\or"0B\or"0C\or"0D\or"0E\or"0F%
14399         \or"10\or"11\or"12\or"13\or"14\or"15\or"16\or"17%
14400         \or"18\or"19\or"1A\or"1B\or"1C\or"1D\or"1E\or"1F%
14401         \or"20\or"21\or"22\or"23\or"24\or"25\or"26\or"27%
14402         \or"28\or"29\or"2A\or"2B\or"2C\or"2D\or"2E\or"2F%
14403         \or"30\or"31\or"32\or"33\or"34\or"35\or"36\or"37%
14404         \or"38\or"39\or"3A\or"3B\or"3C\or"3D\or"3E\or"3F%
14405         \or"40\or"41\or"42\or"43\or"44\or"45\or"46\or"47%
14406         \or"48\or"49\or"4A\or"4B\or"4C\or"4D\or"4E\or"4F%
14407         \or"50\or"51\or"52\or"53\or"54\or"55\or"56\or"57%
14408         \or"58\or"59\or"5A\or"5B\or"5C\or"5D\or"5E\or"5F%
14409         \or"60\or"61\or"62\or"63\or"64\or"65\or"66\or"67%
14410         \or"68\or"69\or"6A\or"6B\or"6C\or"6D\or"6E\or"6F%
14411         \or"70\or"71\or"72\or"73\or"74\or"75\or"76\or"77%
14412         \or"78\or"79\or"7A\or"7B\or"7C\or"7D\or"7E\or"7F%
14413         \or"80\or"81\or"82\or"83\or"84\or"85\or"86\or"87%
14414         \or"88\or"89\or"8A\or"8B\or"8C\or"8D\or"8E\or"8F%
14415         \or"90\or"91\or"92\or"93\or"94\or"95\or"96\or"97%
14416         \or"98\or"99\or"9A\or"9B\or"9C\or"9D\or"9E\or"9F%
14417         \or"A0\or"A1\or"A2\or"A3\or"A4\or"A5\or"A6\or"A7%
```

```

14418 \or"A8\or"A9\or"AA\or"AB\or"AC\or"AD\or"AE\or"AF%
14419 \or"B0\or"B1\or"B2\or"B3\or"B4\or"B5\or"B6\or"B7%
14420 \or"B8\or"B9\or"BA\or"BB\or"BC\or"BD\or"BE\or"BF%
14421 \or"C0\or"C1\or"C2\or"C3\or"C4\or"C5\or"C6\or"C7%
14422 \or"C8\or"C9\or"CA\or"CB\or"CC\or"CD\or"CE\or"CF%
14423 \or"D0\or"D1\or"D2\or"D3\or"D4\or"D5\or"D6\or"D7%
14424 \or"D8\or"D9\or"DA\or"DB\or"DC\or"DD\or"DE\or"DF%
14425 \or"E0\or"E1\or"E2\or"E3\or"E4\or"E5\or"E6\or"E7%
14426 \or"E8\or"E9\or"EA\or"EB\or"EC\or"ED\or"EE\or"EF%
14427 \or"F0\or"F1\or"F2\or"F3\or"F4\or"F5\or"F6\or"F7%
14428 \or"F8\or"F9\or"FA\or"FB\or"FC\or"FD\or"FE\or"FF%
14429 \fi
14430 }%
14431 \else
14432 \gdef\hv@pdf@char{\char'}%
14433 \fi
14434 \endgroup

```

\@@BOOKMARK

```

14435 \def\@@BOOKMARK[#1][#2]#3#4#5{%
14436 \expandafter\edef\csname @count@#3\endcsname{%
14437 \the\@serial@counter
14438 }%
14439 \edef\@mycount{\the\@serial@counter}%
14440 \Hy@StepCount\@serial@counter
14441 \edef\@parcount{%
14442 \expandafter\ifx\csname @count@#5\endcsname\relax
14443 0%
14444 \else
14445 \csname @count@#5\endcsname
14446 \fi
14447 }%
14448 \immediate\special{%
14449 !outline \HyperDestNameFilter{#3};p=\@parcount,i=\@mycount,%
14450 s=\ifx#2-c\else o\fi,t=#4%
14451 }%
14452 }%

```

\ReadBookmarks

```

14453 \def\ReadBookmarks{%
14454 \begingroup
14455 \def\0{\hv@pdf@char 0}%
14456 \def\1{\hv@pdf@char 1}%
14457 \def\2{\hv@pdf@char 2}%
14458 \def\3{\hv@pdf@char 3}%
14459 \def\({}%
14460 \def\)}%
14461 \def\do##1{%
14462 \ifnum\catcode`##1=\active
14463 \@makeother##1%
14464 \else
14465 \ifnum\catcode`##1=6 %
14466 \@makeother##1%
14467 \fi

```



```

14468 \fi
14469 }%
14470 \dospecials
14471 \Hy@safe@activetrue
14472 \InputIfFileExists{\jobname.out}{-}{-}%
14473 \endgroup
14474 \ifx\WriteBookmarks\relax
14475 \else
14476 \if@filesw
14477 \newwrite\@outlinefile
14478 \Hy@OutlineRerunCheck
14479 \immediate\openout\@outlinefile=\jobname.out\relax
14480 \fi
14481 \fi
14482 }

14483 </vtex>
14484 <!*vtex>
14485 \def\ReadBookmarks{%
14486 \pdf@ifdraftmode{-}{-}%
14487 \begingroup
14488 \def\do##1{%
14489 \ifnum\catcode`##1=\active
14490 \@makeother##1%
14491 \else
14492 \ifnum\catcode`##1=6 %
14493 \@makeother##1%
14494 \fi
14495 \fi
14496 }%
14497 \dospecials
14498 \Hy@safe@activetrue
14499 \escapechar=`\%
14500 \def\@@BOOKMARK[##1][##2]##3##4##5{%
14501 \calc@bm@number{##5}%
14502 }%
14503 \InputIfFileExists{\jobname.out}{-}{-}%
14504 \ifx\WriteBookmarks\relax
14505 \global\let\WriteBookmarks\relax
14506 \fi
14507 \def\@@BOOKMARK[##1][##2]##3##4##5{%
14508 \def\Hy@temp{##4}%
14509 <*pdfTeX>
14510 \Hy@pstringdef\Hy@pstringName{\HyperDestNameFilter{##3}}%
14511 \Hy@OutlineName{}\Hy@pstringName{%
14512 ##2\check@bm@number{##3}%
14513 }{%
14514 \expandafter\strip@prefix\meaning\Hy@temp
14515 }%
14516 </pdfTeX>
14517 <*pdfmark>
14518 \pdfmark{%
14519 pdfmark=/OUT,%
14520 Count={##2\check@bm@number{##3}},%

```

```

14521     Dest={##3},%
14522     Title=\expandafter\strip@prefix\meaning\Hy@temp
14523 }%
14524 \pdfmark
14525 \*dvipdfm|xetex
14526 \Hy@pstringdef\Hy@pstringName{\HyperDestNameFilter{##3}}%
14527 \@pdfm@mark{%
14528   outline \ifHy@DvipdfmxOutlineOpen
14529     [%
14530     \ifnum##21>\z@
14531     \else
14532     -%
14533     \fi
14534     ] %
14535     \fi
14536     ##1<<%
14537     /Title(\expandafter\strip@prefix\meaning\Hy@temp)%
14538     /A<<%
14539     /S/GoTo%
14540     /D(\Hy@pstringName)%
14541     >>%
14542     >>%
14543   }%
14544 \dvipdfm|xetex
14545 }%
14546 \begingroup
14547 \def\WriteBookmarks{0}%
14548 \InputIfFileExists{jobname.out}{-}{-}%
14549 \endgroup
14550 %{\escapechar\m@ne\InputIfFileExists{jobname.out}{-}{-}}%
14551 \endgroup
14552 }%
14553 \ifx\WriteBookmarks\relax
14554 \else
14555 \if@filesw
14556 \newwrite\@outlinefile
14557 \Hy@OutlineRerunCheck
14558 \immediate\openout\@outlinefile=jobname.out\relax
14559 \fi
14560 \fi
14561 }
14562 \*pdfTeX
14563 \def\Hy@OutlineName#1#2#3#4{%
14564 \pdfoutline goto name{#2}count#3{#4}%
14565 }
14566 \pdfTeX
14567 \def\check@bm@number#1{%
14568 \expandafter\ifx\csname B_#1\endcsname\relax
14569 0%
14570 \else
14571 \csname B_#1\endcsname
14572 \fi
14573 }
14574 \def\calc@bm@number#1{%

```

```

14575 \@tempcnta=\check@bm@number{#1}\relax
14576 \advance\@tempcnta by 1 %
14577 \expandafter\xdef\csname B_#1\endcsname{\the\@tempcnta}%
14578 }
14579 \</!vtex>

14580 \ifHy@implicit
14581 \else
14582 \expandafter\endinput
14583 \fi

14584 \</outlines>
14585 \< *outlines | hypertex>

14586 \newlength\Hy@SectionHShift
14587 \def\Hy@SectionAnchorHref#1{%
14588 \ifx\protect\@typeset@protect
14589 \Hy@@@SectionAnchor{#1}%
14590 \fi
14591 }
14592 \DeclareRobustCommand*{\Hy@@@SectionAnchor}[1]{%
14593 \leavevmode
14594 \hbox to 0pt{%
14595 \kern-\Hy@SectionHShift
14596 \Hy@raisedlink{%
14597 \hyper@anchorstart{#1}\hyper@anchorend
14598 }%
14599 \hss
14600 }%
14601 }
14602 \@ifundefined{hyper@nopatch@sectioning}
14603 {
14604 \let\H@old@ssect\@ssect
14605 \def\@ssect#1#2#3#4#5{%
14606 \Hy@MakeCurrentHrefAuto{section*}%
14607 \setlength{\Hy@SectionHShift}{#1}%
14608 \begingroup
14609 \toks@{\H@old@ssect{#1}{#2}{#3}{#4}}%
14610 \toks\tw@\expandafter{%
14611 \expandafter\Hy@SectionAnchorHref\expandafter{\@currentHref}%
14612 #5%
14613 }%
14614 \edef\x{\endgroup
14615 \the\toks@{\the\toks\tw@}}%
14616 }\x
14617 }
14618 \let\H@old@schapter\@schapter
14619 \def\@schapter#1{%
14620 \begingroup
14621 \let\@mkboth\@gobbletwo
14622 \Hy@MakeCurrentHrefAuto{\Hy@chapapp*}%
14623 \Hy@raisedlink{%
14624 \hyper@anchorstart{\@currentHref}\hyper@anchorend
14625 }%
14626 \endgroup
14627 \H@old@schapter{#1}%

```

14628 }

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:

```
14629 \ltx@ifundefined{@chapter}{}{%
14630   \let\Hy@org@chapter\@chapter
14631   \def\@chapter{%
14632     \def\Hy@next{%
14633       \Hy@MakeCurrentHrefAuto{\Hy@chapapp*}%
14634       \Hy@raisedlink{%
14635         \hyper@anchorstart{\@currentHref}\hyper@anchorend
14636       }%
14637     }%
14638     \ifnum\c@secnumdepth>\m@ne
14639       \ltx@ifundefined{if@mainmatter}%
14640       \iftrue{\csname if@mainmatter\endcsname}%
14641       \let\Hy@next\relax
14642     \fi
14643     \fi
14644     \Hy@next
14645     \Hy@org@chapter
14646   }%
14647 }

14648 \let\H@old@part\@part
14649 \@ifundefined{chapter}
14650   {\let\Hy@secnum@part\z@}
14651   {\let\Hy@secnum@part\m@ne}
14652 \def\@part{%
14653   \ifnum\Hy@secnum@part>\c@secnumdepth
14654     \phantomsection
14655     \fi
14656   \H@old@part
14657 }

14658 \let\H@old@spart\@spart
14659 \def\@spart#1{%
14660   \Hy@MakeCurrentHrefAuto{part*}%
14661   \Hy@raisedlink{%
14662     \hyper@anchorstart{\@currentHref}\hyper@anchorend
14663   }%
14664   \H@old@spart{#1}%
14665 }

14666 \let\H@old@sect\@sect
14667 \def\@sect#1#2#3#4#5#6[#7]#8{%
14668   \ifnum #2>\c@secnumdepth
14669     \expandafter\@firstoftwo
14670   \else
14671     \expandafter\@secondoftwo
14672   \fi
14673   {%
14674     \Hy@MakeCurrentHrefAuto{section*}%
14675     \setlength{\Hy@SectionHShift}{#3}%
14676     \begingroup
```

```

14677 \toks@{\H@old@sect{#1}{#2}{#3}{#4}{#5}{#6}{{#7}}}%
14678 \toks\tw@\expandafter{%
14679 \expandafter\Hy@SectionAnchorHref\expandafter{\@currentHref}%
14680 #8%
14681 }%
14682 \edef\x{\endgroup
14683 \the\toks@{\the\toks\tw@}%
14684 }\x
14685 }{%
14686 \H@old@sect{#1}{#2}{#3}{#4}{#5}{#6}{{#7}}{#8}%
14687 }%
14688 }
14689 }{}

14690 </outlines | hypertex>
14691 <*outlines>

14692 \expandafter\def\csname Parent-4\endcsname{}
14693 \expandafter\def\csname Parent-3\endcsname{}
14694 \expandafter\def\csname Parent-2\endcsname{}
14695 \expandafter\def\csname Parent-1\endcsname{}
14696 \expandafter\def\csname Parent0\endcsname{}
14697 \expandafter\def\csname Parent1\endcsname{}
14698 \expandafter\def\csname Parent2\endcsname{}
14699 \expandafter\def\csname Parent3\endcsname{}
14700 \expandafter\def\csname Parent4\endcsname{}

14701 </outlines>

```

46 Encoding definition files for encodings of PDF strings

This was contributed by Heiko Oberdiek.

46.1 PD1 encoding

```

14702 <*pd1enc>
14703 \DeclareFontEncoding{PD1}{}{}

Accents
14704 \DeclareTextAccent{\`}{PD1}{\textasciigrave}
14705 \DeclareTextAccent{\'}{PD1}{\textacute}
14706 \DeclareTextAccent{\~}{PD1}{\textasciicircum}
14707 \DeclareTextAccent{\~}{PD1}{\texttilde}
14708 \DeclareTextAccent{\"}{PD1}{\textasciidieresis}
14709 \DeclareTextAccent{\r}{PD1}{\textring}
14710 \DeclareTextAccent{\v}{PD1}{\textasciicaron}
14711 \DeclareTextAccent{\.}{PD1}{\textdotaccent}
14712 \DeclareTextAccent{\c}{PD1}{\textcedilla}
14713 \DeclareTextAccent{\=}{PD1}{\textasciimacron}
14714 \DeclareTextAccent{\b}{PD1}{\textmacronbelow}
14715 \DeclareTextAccent{\d}{PD1}{\textdotbelow}
14716 \DeclareTextCompositeCommand{\`}{PD1}{\@empty}{\textasciigrave}
14717 \DeclareTextCompositeCommand{\'}{PD1}{\@empty}{\textacute}
14718 \DeclareTextCompositeCommand{\~}{PD1}{\@empty}{\textasciicircum}

```

```

14719 \DeclareTextCompositeCommand{\~}{PD1}{\@empty}{\texttilde}
14720 \DeclareTextCompositeCommand{"}{PD1}{\@empty}{\textasciidieresis}
14721 \DeclareTextCompositeCommand{\r}{PD1}{\@empty}{\textring}
14722 \DeclareTextCompositeCommand{\v}{PD1}{\@empty}{\textasciicaron}
14723 \DeclareTextCompositeCommand{\.}{PD1}{\@empty}{\textdotaccent}
14724 \DeclareTextCompositeCommand{\c}{PD1}{\@empty}{\textcedilla}
14725 \DeclareTextCompositeCommand{=}{PD1}{\@empty}{\textasciimacron}
14726 \DeclareTextCompositeCommand{\b}{PD1}{\@empty}{\textmacronbelow}
14727 \DeclareTextCompositeCommand{\d}{PD1}{\@empty}{\textdotbelow}
14728 \DeclareTextCompositeCommand{\`}{PD1}{\ }{\textasciigrave}
14729 \DeclareTextCompositeCommand{\'}{PD1}{\ }{\textacute}
14730 \DeclareTextCompositeCommand{\^}{PD1}{\ }{\textasciicircum}
14731 \DeclareTextCompositeCommand{\~}{PD1}{\ }{\texttilde}
14732 \DeclareTextCompositeCommand{"}{PD1}{\ }{\textasciidieresis}
14733 \DeclareTextCompositeCommand{\r}{PD1}{\ }{\textring}
14734 \DeclareTextCompositeCommand{\v}{PD1}{\ }{\textasciicaron}
14735 \DeclareTextCompositeCommand{\.}{PD1}{\ }{\textdotaccent}
14736 \DeclareTextCompositeCommand{\c}{PD1}{\ }{\textcedilla}
14737 \DeclareTextCompositeCommand{=}{PD1}{\ }{\textasciimacron}
14738 \DeclareTextCompositeCommand{\b}{PD1}{\ }{\textmacronbelow}
14739 \DeclareTextCompositeCommand{\d}{PD1}{\ }{\textdotbelow}
14740 \DeclareTextCommand{\k}{PD1}[1]{\TextSymbolUnavailable{\k{#1}}#1}
14741 \DeclareTextCommand{\t}{PD1}[1]{\TextSymbolUnavailable{\t{#1}}#1}
14742 \DeclareTextCommand{\newtie}{PD1}[1]{%
14743   \TextSymbolUnavailable{\newtie{#1}}#1%
14744 }

```

Special white space escape characters not for use in bookmarks but for other PDF strings.

```

14745 % U+0009 (CHARACTER TABULATION)
14746 \DeclareTextCommand{\textHT}{PD1}{\011}% U+0009
14747 % U+000A (LINE FEED)
14748 \DeclareTextCommand{\textLF}{PD1}{\012}% U+000A
14749 % U+000D (CARRIAGE RETURN)
14750 \DeclareTextCommand{\textCR}{PD1}{\015}% U+000D

```

Accent glyph names

```

14751 % U+02D8 BREVE; breve
14752 \DeclareTextCommand{\textasciibreve}{PD1}{\030}% U+02D8
14753 % U+02C7 CARON; caron
14754 \DeclareTextCommand{\textasciicaron}{PD1}{\031}% U+02C7
14755 % U+02C6 MODIFIER LETTER CIRCUMFLEX ACCENT; circumflex
14756 \DeclareTextCommand{\textcircumflex}{PD1}{\032}% U+02C6
14757 % U+02D9 DOT ABOVE; dotaccent
14758 \DeclareTextCommand{\textdotaccent}{PD1}{\033}% U+02D9
14759 % U+02DD DOUBLE ACUTE ACCENT; hungarumlaut
14760 \DeclareTextCommand{\texthungarumlaut}{PD1}{\034}% U+02DD
14761 % U+02DB OGONEK; ogonek
14762 \DeclareTextCommand{\textogonek}{PD1}{\035}% U+02DB
14763 % U+02DA RING ABOVE; ring
14764 \DeclareTextCommand{\textring}{PD1}{\036}% U+02DA
14765 % U+02DC SMALL TILDE; ilde, *tilde
14766 \DeclareTextCommand{\texttilde}{PD1}{\037}% U+02DC

```

\040: U+0020 SPACE; *space, spacehackarabic

\041: U+0021 EXCLAMATION MARK; exclam

14767 % U+0022 QUOTATION MARK; quotedbl
 14768 \DeclareTextCommand{\textquotedbl}{PD1}{"}% \042 U+0022
 14769 % U+0023 NUMBER SIGN; numbersign
 14770 \DeclareTextCommand{\textnumbersign}{PD1}{\043}% U+0023
 14771 % U+0024 DOLLAR SIGN; dollar
 14772 \DeclareTextCommand{\textdollar}{PD1}{\044}% U+0024
 14773 % U+0025 PERCENT SIGN; percent
 14774 \DeclareTextCommand{\textpercent}{PD1}{\045}% U+0025
 14775 % U+0026 AMPERSAND; ampersand
 14776 \DeclareTextCommand{\textampersand}{PD1}{\046}% U+0026
 \047: U+0027 APOSTROPHE; quotesingle

 14777 % U+0028 LEFT PARENTHESIS; parenleft
 14778 \DeclareTextCommand{\textparenleft}{PD1}{\string\{}% \050 U+0028
 14779 % U+0029 RIGHT PARENTHESIS; parenright
 14780 \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
 14781 % U+002E FULL STOP; period
 14782 \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
 14783 % U+003C LESS-THAN SIGN; less
 14784 \DeclareTextCommand{\textless}{PD1}{<}% \074 U+003C
 \075: U+003D EQUALS SIGN; equal
 14785 % U+003E GREATER-THAN SIGN; greater
 14786 \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
 14787 % U+005C REVERSE SOLIDUS; backslash
 14788 \DeclareTextCommand{\textbackslash}{PD1}{\134}% U+005C
 14789 % "U+2216 SET MINUS" simulated by "U+005C REVERSE SOLIDUS"
 14790 \DeclareTextCommand{\textsetminus}{PD1}{\textbackslash}
 \135: U+005D RIGHT SQUARE BRACKET; bracketright
 14791 % U+005E CIRCUMFLEX ACCENT; asciicircum
 14792 \DeclareTextCommand{\textasciicircum}{PD1}{\136}% U+005E
 14793 % U+005F LOW LINE; underscore
 14794 \DeclareTextCommand{\textunderscore}{PD1}{\137}% U+005F
 14795 \DeclareTextCommand{\textmacronbelow}{PD1}{\137}% U+005F
 14796 % U+0060 GRAVE ACCENT; grave

14797 \DeclareTextCommand{\textasciigrave}{PD1}{\140}% U+0060
 \141: U+0061 LATIN SMALL LETTER A; a
 ...
 \150: U+0068 LATIN SMALL LETTER H; h
 14798 % U+0069 LATIN SMALL LETTER I; i
 14799 \DeclareTextCompositeCommand{\.}{PD1}{i}{i}% \151 U+0069
 \152: U+006A LATIN SMALL LETTER J; j
 ...
 \172: U+007A LATIN SMALL LETTER Z; z
 14800 % U+007B LEFT CURLY BRACKET; braceleft
 14801 \DeclareTextCommand{\textbraceleft}{PD1}{\173}% U+007B
 14802 % U+007C VERTICAL LINE; *bar, verticalbar
 14803 \DeclareTextCommand{\textbar}{PD1}{|}% U+007C
 14804 % U+007D RIGHT CURLY BRACKET; braceright
 14805 \DeclareTextCommand{\textbraceright}{PD1}{\175}% U+007D
 14806 % U+007E TILDE; asciitilde
 14807 \DeclareTextCommand{\textasciitilde}{PD1}{\176}% U+007E
 Slot \177 (0x7F) is undefined in PDFDocEncoding.
 14808 % U+2022 BULLET; bullet
 14809 \DeclareTextCommand{\textbullet}{PD1}{\200}% U+2022
 14810 % U+2020 DAGGER; dagger
 14811 \DeclareTextCommand{\textdagger}{PD1}{\201}% U+2020
 14812 % U+2021 DOUBLE DAGGER; daggerdbl; \ddagger (LaTeX)
 14813 \DeclareTextCommand{\textdaggerdbl}{PD1}{\202}% U+2021
 14814 \DeclareTextCommand{\textddagger}{PD1}{\textddagger}
 14815 % U+2026 HORIZONTAL ELLIPSIS; ellipsis
 14816 \DeclareTextCommand{\textellipsis}{PD1}{\203}% U+2026
 14817 % U+2014 EM DASH; emdash
 14818 \DeclareTextCommand{\textemdash}{PD1}{\204}% U+2014
 14819 % U+2013 EN DASH; endash
 14820 \DeclareTextCommand{\textendash}{PD1}{\205}% U+2013
 14821 % U+0192 LATIN SMALL LETTER F WITH HOOK; florin
 14822 \DeclareTextCommand{\textflorin}{PD1}{\206}% U+0192
 14823 % U+2044 FRACTION SLASH; fraction
 14824 \DeclareTextCommand{\textfractionsolidus}{PD1}{\207}% U+2044
 14825 % U+2039 SINGLE LEFT-POINTING ANGLE QUOTATION MARK; guil-
 left
 14826 \DeclareTextCommand{\guilsinglleft}{PD1}{\210}% U+2039
 14827 % U+203A SINGLE RIGHT-POINTING ANGLE QUOTATION MARK; guil-
 singlright
 14828 \DeclareTextCommand{\guilsinglright}{PD1}{\211}% U+203A
 14829 % U+2212 MINUS SIGN; minus
 14830 \DeclareTextCommand{\textminus}{PD1}{\212}% U+2212
 14831 % U+2030 PER MILLE SIGN; perthousand
 14832 \DeclareTextCommand{\textperthousand}{PD1}{\213}% U+2030
 14833 % U+201E DOUBLE LOW-9 QUOTATION MARK; quotedblbase
 14834 \DeclareTextCommand{\quotedblbase}{PD1}{\214}% U+201E
 14835 % U+201C LEFT DOUBLE QUOTATION MARK; quotedblleft
 14836 \DeclareTextCommand{\textquotedblleft}{PD1}{\215}% U+201C
 14837 % U+201D RIGHT DOUBLE QUOTATION MARK; quotedblright
 14838 \DeclareTextCommand{\textquotedblright}{PD1}{\216}% U+201D
 14839 % U+2018 LEFT SINGLE QUOTATION MARK; quoteleft
 14840 \DeclareTextCommand{\textquoteleft}{PD1}{\217}% U+2018

14841 % U+2019 RIGHT SINGLE QUOTATION MARK; quoteright
 14842 \DeclareTextCommand{\textquoteright}{PD1}{\220}% U+2019
 14843 % U+201A SINGLE LOW-9 QUOTATION MARK; quotesinglbase
 14844 \DeclareTextCommand{\quotesinglbase}{PD1}{\221}% U+201A
 14845 % U+2122 TRADE MARK SIGN; trademark
 14846 \DeclareTextCommand{\texttrademark}{PD1}{\222}% U+2122
 14847 % U+FB01 LATIN SMALL LIGATURE FI; fi
 14848 \DeclareTextCommand{\textfi}{PD1}{\223}% U+FB01
 14849 % U+FB02 LATIN SMALL LIGATURE FL; fl
 14850 \DeclareTextCommand{\textfl}{PD1}{\224}% U+FB02
 14851 % U+0141 LATIN CAPITAL LETTER L WITH STROKE; Lslash
 14852 \DeclareTextCommand{\L}{PD1}{\225}% U+0141
 14853 % U+0152 LATIN CAPITAL LIGATURE OE; OE
 14854 \DeclareTextCommand{\OE}{PD1}{\226}% U+0152
 14855 % U+0160 LATIN CAPITAL LETTER S WITH CARON; Scaron
 14856 \DeclareTextCompositeCommand{\v}{PD1}{S}{\227}% U+0160
 14857 % U+0178 LATIN CAPITAL LETTER Y WITH DIAERESIS; Ydieresis
 14858 \DeclareTextCompositeCommand{\Y}{PD1}{Y}{\230}% U+0178
 14859 \DeclareTextCommand{\IJ}{PD1}{IJ}% ligature U+0049 U+004A
 14860 % U+017D LATIN CAPITAL LETTER Z WITH CARON; Zcaron
 14861 \DeclareTextCompositeCommand{\v}{PD1}{Z}{\231}% U+017D
 14862 % U+0131 LATIN SMALL LETTER DOTLESS I; dotlessi
 14863 \DeclareTextCommand{\i}{PD1}{\232}% U+0131
 14864 % U+0142 LATIN SMALL LETTER L WITH STROKE; lslash
 14865 \DeclareTextCommand{\l}{PD1}{\233}% U+0142
 14866 % U+0153 LATIN SMALL LIGATURE OE; oe
 14867 \DeclareTextCommand{\oe}{PD1}{\234}% U+0153
 14868 % U+0161 LATIN SMALL LETTER S WITH CARON; scaron
 14869 \DeclareTextCompositeCommand{\v}{PD1}{s}{\235}% U+0161
 14870 % U+017E LATIN SMALL LETTER Z WITH CARON; zcaron
 14871 \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.
 14872 % U+20AC EURO SIGN; *Euro, euro
 14873 \DeclareTextCommand{\texteuro}{PD1}{\240}% U+20AC
 14874 % U+00A1 INVERTED EXCLAMATION MARK; exclamdown
 14875 \DeclareTextCommand{\textexclamdown}{PD1}{\241}% U+00A1
 14876 % U+00A2 CENT SIGN; cent
 14877 \DeclareTextCommand{\textcent}{PD1}{\242}% U+00A2
 14878 % U+00A3 POUND SIGN; sterling
 14879 \DeclareTextCommand{\textsterling}{PD1}{\243}% U+00A3
 14880 % U+00A4 CURRENCY SIGN; currency
 14881 \DeclareTextCommand{\textcurrency}{PD1}{\244}% U+00A4
 14882 % U+00A5 YEN SIGN; yen
 14883 \DeclareTextCommand{\textyen}{PD1}{\245}% U+00A5
 14884 % U+00A6 BROKEN BAR; brokenbar
 14885 \DeclareTextCommand{\textbrokenbar}{PD1}{\246}% U+00A6
 14886 % U+00A7 SECTION SIGN; section
 14887 \DeclareTextCommand{\textsection}{PD1}{\247}% U+00A7
 14888 % U+00A8 DIAERESIS; dieresis
 14889 \DeclareTextCommand{\textasciidieresis}{PD1}{\250}% U+00A8
 14890 % U+00A9 COPYRIGHT SIGN; copyright
 14891 \DeclareTextCommand{\textcopyright}{PD1}{\251}% U+00A9
 14892 % U+00AA FEMININE ORDINAL INDICATOR; ordfeminine

14893 \DeclareTextCommand{\textordfeminine}{PD1}{\252}% U+00AA
14894 % U+00AB LEFT-POINTING DOUBLE ANGLE QUOTATION MARK; guillemetleft
14895 \DeclareTextCommand{\guillemotleft}{PD1}{\253}% U+00AB
14896 \DeclareTextCommand{\guillemetleft}{PD1}{\253}% U+00AB
14897 % U+00AC NOT SIGN; logicalnot
14898 \DeclareTextCommand{\textlogicalnot}{PD1}{\254}% U+00AC
14899 \DeclareTextCommand{\textlnot}{PD1}{\254}% logical not
No glyph \255 in PDFDocEncoding.
14900 % U+00AE REGISTERED SIGN; registered
14901 \DeclareTextCommand{\textregistered}{PD1}{\256}% U+00AE
14902 % U+00AF MACRON; *macron, overscore
14903 \DeclareTextCommand{\textasciimacron}{PD1}{\257}% U+00AF
14904 % U+00B0 DEGREE SIGN; degree
14905 \DeclareTextCommand{\textdegree}{PD1}{\260}% U+00B0
14906 % U+00B1 PLUS-MINUS SIGN; plusminus
14907 \DeclareTextCommand{\textplusminus}{PD1}{\261}% U+00B1
14908 % U+00B2 SUPERSCRIPT TWO; twosuperior
14909 \DeclareTextCommand{\texttwosuperior}{PD1}{\262}%* U+00B2
14910 % U+00B3 SUPERSCRIPT THREE; threesuperior
14911 \DeclareTextCommand{\textthreesuperior}{PD1}{\263}%* U+00B3
14912 % U+00B4 ACUTE ACCENT; acute
14913 \DeclareTextCommand{\textacute}{PD1}{\264}% U+00B4
14914 % U+00B5 MICRO SIGN; mu, mul
14915 \DeclareTextCommand{\textmu}{PD1}{\265}% U+00B5
14916 % U+00B6 PILCROW SIGN; paragraph
14917 \DeclareTextCommand{\textparagraph}{PD1}{\266}% U+00B6
14918 % U+00B7 MIDDLE DOT; middot, *periodcentered
14919 \DeclareTextCommand{\textperiodcentered}{PD1}{\267}% U+00B7
14920 % U+00B8 CEDILLA; cedilla
14921 \DeclareTextCommand{\textcedilla}{PD1}{\270}% U+00B8
14922 % U+00B9 SUPERSCRIPT ONE; onesuperior
14923 \DeclareTextCommand{\textonesuperior}{PD1}{\271}%* U+00B9
14924 % U+00BA MASCULINE ORDINAL INDICATOR; ordmasculine
14925 \DeclareTextCommand{\textordmasculine}{PD1}{\272}% U+00BA
14926 % U+00BB RIGHT-POINTING DOUBLE ANGLE QUOTATION MARK; guillemetright
14927 \DeclareTextCommand{\guillemotright}{PD1}{\273}% U+00BB
14928 \DeclareTextCommand{\guillemetright}{PD1}{\273}% U+00BB
14929 % U+00BC VULGAR FRACTION ONE QUARTER; onequarter
14930 \DeclareTextCommand{\textonequarter}{PD1}{\274}% U+00BC
14931 % U+00BD VULGAR FRACTION ONE HALF; onehalf
14932 \DeclareTextCommand{\textonehalf}{PD1}{\275}% U+00BD
14933 % U+00BE VULGAR FRACTION THREE QUARTERS; threequarters
14934 \DeclareTextCommand{\textthreequarters}{PD1}{\276}% U+00BE
14935 % U+00BF INVERTED QUESTION MARK; questiondown
14936 \DeclareTextCommand{\textquestiondown}{PD1}{\277}% U+00BF
14937 % U+00C0 LATIN CAPITAL LETTER A WITH GRAVE; Agrave
14938 \DeclareTextCompositeCommand{\`}{PD1}{A}{\300}% U+00C0
14939 % U+00C1 LATIN CAPITAL LETTER A WITH ACUTE; Aacute
14940 \DeclareTextCompositeCommand{\'}{PD1}{A}{\301}% U+00C1
14941 % U+00C2 LATIN CAPITAL LETTER A WITH CIRCUMFLEX; Acircumflex
14942 \DeclareTextCompositeCommand{\^}{PD1}{A}{\302}% U+00C2
14943 % U+00C3 LATIN CAPITAL LETTER A WITH TILDE; Atilde
14944 \DeclareTextCompositeCommand{\~}{PD1}{A}{\303}% U+00C3
14945 % U+00C4 LATIN CAPITAL LETTER A WITH DIAERESIS; Adieresis

14946 \DeclareTextCompositeCommand{"}{PD1}{A}{\304}% U+00C4
14947 % U+00C5 LATIN CAPITAL LETTER A WITH RING ABOVE; Aring
14948 \DeclareTextCompositeCommand{\r}{PD1}{A}{\305}% U+00C5
14949 % U+00C6 LATIN CAPITAL LETTER AE; AE
14950 \DeclareTextCommand{\AE}{PD1}{\306}% U+00C6
14951 % U+00C7 LATIN CAPITAL LETTER C WITH CEDILLA; Ccedilla
14952 \DeclareTextCompositeCommand{\c}{PD1}{C}{\307}% U+00C7
14953 % U+00C8 LATIN CAPITAL LETTER E WITH GRAVE; Egrave
14954 \DeclareTextCompositeCommand{\`}{PD1}{E}{\310}% U+00C8
14955 % U+00C9 LATIN CAPITAL LETTER E WITH ACUTE; Eacute
14956 \DeclareTextCompositeCommand{\'}{PD1}{E}{\311}% U+00C9
14957 % U+00CA LATIN CAPITAL LETTER E WITH CIRCUMFLEX; Ecircumflex
14958 \DeclareTextCompositeCommand{\^}{PD1}{E}{\312}% U+00CA
14959 % U+00CB LATIN CAPITAL LETTER E WITH DIAERESIS; Edieresis
14960 \DeclareTextCompositeCommand{"}{PD1}{E}{\313}% U+00CB
14961 % U+00CC LATIN CAPITAL LETTER I WITH GRAVE; Igrave
14962 \DeclareTextCompositeCommand{\`}{PD1}{I}{\314}% U+00CC
14963 % U+00CD LATIN CAPITAL LETTER I WITH ACUTE; Iacute
14964 \DeclareTextCompositeCommand{\'}{PD1}{I}{\315}% U+00CD
14965 % U+00CE LATIN CAPITAL LETTER I WITH CIRCUMFLEX; Icircumflex
14966 \DeclareTextCompositeCommand{\^}{PD1}{I}{\316}% U+00CE
14967 % U+00CF LATIN CAPITAL LETTER I WITH DIAERESIS; Idieresis
14968 \DeclareTextCompositeCommand{"}{PD1}{I}{\317}% U+00CF
14969 % U+00D0 LATIN CAPITAL LETTER ETH; Eth
14970 \DeclareTextCommand{\DH}{PD1}{\320}% U+00D0
14971 \DeclareTextCommand{\DJ}{PD1}{\320}% U+00D0
14972 % U+00D1 LATIN CAPITAL LETTER N WITH TILDE; Ntilde
14973 \DeclareTextCompositeCommand{\~}{PD1}{N}{\321}% U+00D1
14974 % U+00D2 LATIN CAPITAL LETTER O WITH GRAVE; Ograve
14975 \DeclareTextCompositeCommand{\`}{PD1}{O}{\322}% U+00D2
14976 % U+00D3 LATIN CAPITAL LETTER O WITH ACUTE; Oacute
14977 \DeclareTextCompositeCommand{\'}{PD1}{O}{\323}% U+00D3
14978 % U+00D4 LATIN CAPITAL LETTER O WITH CIRCUMFLEX; Ocircumflex
14979 \DeclareTextCompositeCommand{\^}{PD1}{O}{\324}% U+00D4
14980 % U+00D5 LATIN CAPITAL LETTER O WITH TILDE; Otilde
14981 \DeclareTextCompositeCommand{\~}{PD1}{O}{\325}% U+00D5
14982 % U+00D6 LATIN CAPITAL LETTER O WITH DIAERESIS; Odieresis
14983 \DeclareTextCompositeCommand{"}{PD1}{O}{\326}% U+00D6
14984 % U+00D7 MULTIPLICATION SIGN; multiply
14985 \DeclareTextCommand{\textmultiply}{PD1}{\327}% U+00D7
14986 % U+00D8 LATIN CAPITAL LETTER O WITH STROKE; Oslash
14987 \DeclareTextCommand{\O}{PD1}{\330}% U+00D8
14988 % U+00D9 LATIN CAPITAL LETTER U WITH GRAVE; Ugrave
14989 \DeclareTextCompositeCommand{\`}{PD1}{U}{\331}% U+00D9
14990 % U+00DA LATIN CAPITAL LETTER U WITH ACUTE; Uacute
14991 \DeclareTextCompositeCommand{\'}{PD1}{U}{\332}% U+00DA
14992 % U+00DB LATIN CAPITAL LETTER U WITH CIRCUMFLEX; Ucircumflex
14993 \DeclareTextCompositeCommand{\^}{PD1}{U}{\333}% U+00DB
14994 % U+00DC LATIN CAPITAL LETTER U WITH DIAERESIS; Udieresis
14995 \DeclareTextCompositeCommand{"}{PD1}{U}{\334}% U+00DC
14996 % U+00DD LATIN CAPITAL LETTER Y WITH ACUTE; Yacute
14997 \DeclareTextCompositeCommand{\'}{PD1}{Y}{\335}% U+00DD
14998 % U+00DE LATIN CAPITAL LETTER THORN; Thorn; \TH, \Thorn (wasysym)
14999 \DeclareTextCommand{\TH}{PD1}{\336}% U+00DE

15000 \DeclareTextCommand{\textThorn}{PD1}{\336}%* U+00DE
15001 % U+00DF LATIN SMALL LETTER SHARP S; germandbls
15002 \DeclareTextCommand{\ss}{PD1}{\337}% U+00DF
15003 % U+00E0 LATIN SMALL LETTER A WITH GRAVE; agrave
15004 \DeclareTextCompositeCommand{\`}{PD1}{a}{\340}% U+00E0
15005 % U+00E1 LATIN SMALL LETTER A WITH ACUTE; aacute
15006 \DeclareTextCompositeCommand{\'}{PD1}{a}{\341}% U+00E1
15007 % U+00E2 LATIN SMALL LETTER A WITH CIRCUMFLEX; acircumflex
15008 \DeclareTextCompositeCommand{\^}{PD1}{a}{\342}% U+00E2
15009 % U+00E3 LATIN SMALL LETTER A WITH TILDE; atilde
15010 \DeclareTextCompositeCommand{\~}{PD1}{a}{\343}% U+00E3
15011 % U+00E4 LATIN SMALL LETTER A WITH DIAERESIS; adieresis
15012 \DeclareTextCompositeCommand{\"}{PD1}{a}{\344}% U+00E4
15013 % U+00E5 LATIN SMALL LETTER A WITH RING ABOVE; aring
15014 \DeclareTextCompositeCommand{\r}{PD1}{a}{\345}% U+00E5
15015 % U+00E6 LATIN SMALL LETTER AE; ae
15016 \DeclareTextCommand{\ae}{PD1}{\346}% U+00E6
15017 % U+00E7 LATIN SMALL LETTER C WITH CEDILLA; ccedilla
15018 \DeclareTextCompositeCommand{\c}{PD1}{c}{\347}% U+00E7
15019 % U+00E8 LATIN SMALL LETTER E WITH GRAVE; egrave
15020 \DeclareTextCompositeCommand{\`}{PD1}{e}{\350}% U+00E8
15021 % U+00E9 LATIN SMALL LETTER E WITH ACUTE; eacute
15022 \DeclareTextCompositeCommand{\'}{PD1}{e}{\351}% U+00E9
15023 % U+00EA LATIN SMALL LETTER E WITH CIRCUMFLEX; ecircumflex
15024 \DeclareTextCompositeCommand{\^}{PD1}{e}{\352}% U+00EA
15025 % U+00EB LATIN SMALL LETTER E WITH DIAERESIS; edieresis
15026 \DeclareTextCompositeCommand{\"}{PD1}{e}{\353}% U+00EB
15027 % U+00EC LATIN SMALL LETTER I WITH GRAVE; igrave
15028 \DeclareTextCompositeCommand{\`}{PD1}{i}{\354}% U+00EC
15029 \DeclareTextCompositeCommand{\'}{PD1}{i}{\354}% U+00EC
15030 % U+00ED LATIN SMALL LETTER I WITH ACUTE; iacute
15031 \DeclareTextCompositeCommand{\'}{PD1}{i}{\355}% U+00ED
15032 \DeclareTextCompositeCommand{\'}{PD1}{i}{\355}% U+00ED
15033 % U+00EE LATIN SMALL LETTER I WITH CIRCUMFLEX; icircumflex
15034 \DeclareTextCompositeCommand{\^}{PD1}{i}{\356}% U+00EE
15035 \DeclareTextCompositeCommand{\^}{PD1}{i}{\356}% U+00EE
15036 % U+00EF LATIN SMALL LETTER I WITH DIAERESIS; idieresis
15037 \DeclareTextCompositeCommand{\"}{PD1}{i}{\357}% U+00EF
15038 \DeclareTextCompositeCommand{\"}{PD1}{i}{\357}% U+00EF
15039 % U+00F0 LATIN SMALL LETTER ETH; eth
15040 \DeclareTextCommand{\dh}{PD1}{\360}% U+00F0
15041 % U+00F1 LATIN SMALL LETTER N WITH TILDE; ntilde
15042 \DeclareTextCompositeCommand{\~}{PD1}{n}{\361}% U+00F1
15043 % U+00F2 LATIN SMALL LETTER O WITH GRAVE; ograve
15044 \DeclareTextCompositeCommand{\`}{PD1}{o}{\362}% U+00F2
15045 % U+00F3 LATIN SMALL LETTER O WITH ACUTE; oacute
15046 \DeclareTextCompositeCommand{\'}{PD1}{o}{\363}% U+00F3
15047 % U+00F4 LATIN SMALL LETTER O WITH CIRCUMFLEX; ocircumflex
15048 \DeclareTextCompositeCommand{\^}{PD1}{o}{\364}% U+00F4
15049 % U+00F5 LATIN SMALL LETTER O WITH TILDE; otilde
15050 \DeclareTextCompositeCommand{\~}{PD1}{o}{\365}% U+00F5
15051 % U+00F6 LATIN SMALL LETTER O WITH DIAERESIS; odieresis
15052 \DeclareTextCompositeCommand{\"}{PD1}{o}{\366}% U+00F6
15053 % U+00F7 DIVISION SIGN; divide

```

15054 \DeclareTextCommand{\textdivide}{PD1}{\367}% U+00F7
15055 % U+00F8 LATIN SMALL LETTER O WITH STROKE; oslash
15056 \DeclareTextCommand{\o}{PD1}{\370}% U+00F8
15057 % U+00F9 LATIN SMALL LETTER U WITH GRAVE; ugrave
15058 \DeclareTextCompositeCommand{\`}{PD1}{u}{\371}% U+00F9
15059 % U+00FA LATIN SMALL LETTER U WITH ACUTE; uacute
15060 \DeclareTextCompositeCommand{\'}{PD1}{u}{\372}% U+00FA
15061 % U+00FB LATIN SMALL LETTER U WITH CIRCUMFLEX; ucircumflex
15062 \DeclareTextCompositeCommand{\^}{PD1}{u}{\373}% U+00FB
15063 % U+00FC LATIN SMALL LETTER U WITH DIAERESIS; udieresis
15064 \DeclareTextCompositeCommand{\"}{PD1}{u}{\374}% U+00FC
15065 % U+00FD LATIN SMALL LETTER Y WITH ACUTE; yacute
15066 \DeclareTextCompositeCommand{\'}{PD1}{y}{\375}% U+00FD
15067 % U+00FE LATIN SMALL LETTER THORN; thorn; \th, \thorn (wasysym)
15068 \DeclareTextCommand{\th}{PD1}{\376}% U+00FE
15069 \DeclareTextCommand{\textthorn}{PD1}{\376}%* U+00FE
15070 % U+00FF LATIN SMALL LETTER Y WITH DIAERESIS; ydieresis
15071 \DeclareTextCompositeCommand{\"}{PD1}{y}{\377}% U+00FF
15072 \DeclareTextCommand{\ij}{PD1}{ij}% ligature U+0069 U+006A

```

Glyphs that consist of several characters.

```

15073 \DeclareTextCommand{\SS}{PD1}{SS}%
15074 \DeclareTextCommand{\textcelsius}{PD1}{\textdegree C}%

```

Aliases (german.sty)

```

15075 \DeclareTextCommand{\textglqq}{PD1}{\quotedblbase}%
15076 \DeclareTextCommand{\textgrqq}{PD1}{\textquotedblleft}%
15077 \DeclareTextCommand{\textglq}{PD1}{\quotesinglbase}%
15078 \DeclareTextCommand{\textgrq}{PD1}{\textquoteleft}%
15079 \DeclareTextCommand{\textflqq}{PD1}{\guillemetleft}%
15080 \DeclareTextCommand{\textfrqq}{PD1}{\guillemetright}%
15081 \DeclareTextCommand{\textflq}{PD1}{\guilsinglleft}%
15082 \DeclareTextCommand{\textfrq}{PD1}{\guilsinglright}%

```

Aliases (math names)

```

15083 \DeclareTextCommand{\textneg}{PD1}{\textlogicalnot}%
15084 \DeclareTextCommand{\texttimes}{PD1}{\textmultiply}%
15085 \DeclareTextCommand{\textdiv}{PD1}{\textdivide}%
15086 \DeclareTextCommand{\textpm}{PD1}{\textplusminus}%
15087 \DeclareTextCommand{\textcdot}{PD1}{\textperiodcentered}%
15088 \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).

```

15089 \DeclareTextCompositeCommand{\k}{PD1}{a}{a}% aogonek
15090 \DeclareTextCompositeCommand{\'}{PD1}{c}{c}% cacute
15091 \DeclareTextCompositeCommand{\k}{PD1}{e}{e}% eogonek
15092 \DeclareTextCompositeCommand{\'}{PD1}{n}{n}% nacute
15093 \DeclareTextCompositeCommand{\'}{PD1}{s}{s}% sacute
15094 \DeclareTextCompositeCommand{\'}{PD1}{z}{z}% zacute
15095 \DeclareTextCompositeCommand{\.}{PD1}{z}{z}% zdot
15096 \DeclareTextCompositeCommand{\k}{PD1}{A}{A}% Aogonek
15097 \DeclareTextCompositeCommand{\'}{PD1}{C}{C}% Cacute
15098 \DeclareTextCompositeCommand{\k}{PD1}{E}{E}% Eogonek
15099 \DeclareTextCompositeCommand{\'}{PD1}{N}{N}% Nacute

```

```

15100 \DeclareTextCompositeCommand{\'}{PD1}{S}{S}% Sacute
15101 \DeclareTextCompositeCommand{\'}{PD1}{Z}{Z}% Zacute
15102 \DeclareTextCompositeCommand{\.}{PD1}{Z}{Z}% Zdot
15103 </pd1enc>

```

46.2 PU encoding

```

15104 <*puenc>
15105 \DeclareFontEncoding{PU}{}{}

```

46.2.1 NFSS2 accents

```

15106 % U+0300 COMBINING GRAVE ACCENT; gravecmb, *gravecomb
15107 \DeclareTextCommand{\`}{PU}[1]{#1\83\000}% U+0300
15108 % U+0301 COMBINING ACUTE ACCENT; acutecmb, *acutecomb
15109 \DeclareTextCommand{\'}{PU}[1]{#1\83\001}% U+0301
15110 % U+0302 COMBINING CIRCUMFLEX ACCENT; circumflexcmb
15111 \DeclareTextCommand{\^}{PU}[1]{#1\83\002}% U+0302
15112 % U+0303 COMBINING TILDE; tildecmb, *tildecmb
15113 \DeclareTextCommand{\~}{PU}[1]{#1\83\003}% U+0303
15114 % U+0304 COMBINING MACRON; macroncmb
15115 \DeclareTextCommand{\=}{PU}[1]{#1\83\004}% U+0304
15116 % U+0306 COMBINING BREVE; brevecmb
15117 \DeclareTextCommand{\u}{PU}[1]{#1\83\006}% U+0306
15118 \ifx\CYRDZE\@undefined \else
15119 \DeclareTextCommand{\U}{PU}[1]{#1\83\006}% U+0306
15120 \fi
15121 % U+0307 COMBINING DOT ABOVE; dotaccentcmb
15122 \DeclareTextCommand{\.}{PU}[1]{#1\83\007}% U+0307
15123 % U+0308 COMBINING DIAERESIS; dieresiscmb
15124 \DeclareTextCommand{\"}{PU}[1]{#1\83\010}% U+0308
15125 % U+030A COMBINING RING ABOVE; ringcmb
15126 \DeclareTextCommand{\r}{PU}[1]{#1\83\012}% U+030A
15127 % U+030B COMBINING DOUBLE ACUTE ACCENT; hungarumlautcmb
15128 \DeclareTextCommand{\H}{PU}[1]{#1\83\013}% U+030B
15129 % U+030C COMBINING CARON; caroncmb
15130 \DeclareTextCommand{\v}{PU}[1]{#1\83\014}% U+030C
15131 </puenc>
15132 % U+030F COMBINING DOUBLE GRAVE ACCENT; dblgravecmb
15133 (puextra)\DeclareTextCommand{\G}{PU}[1]{#1\83\017}% U+030F
15134 <*puenc>
15135 \ifx\CYRDZE\@undefined \else
15136 \DeclareTextCommand{\C}{PU}[1]{#1\83\017}% U+030F
15137 \fi
15138 % U+0311 COMBINING INVERTED BREVE; breveinvertedcmb
15139 \DeclareTextCommand{\textinvbreve}{PU}[1]{#1\83\021}% U+0311
15140 \DeclareTextCommand{\newtie}{PU}[1]{#1\83\021}% U+0311
15141 % U+0323 COMBINING DOT BELOW; dotbelowcmb, *dotbelowcomb
15142 \DeclareTextCommand{\d}{PU}[1]{#1\83\043}% U+0323
15143 % U+0324 COMBINING DIAERESIS BELOW; dieresisbelowcmb; \textsubum-
    laut (tipa)
15144 \DeclareTextCommand{\textsubumlaut}{PU}[1]{#1\83\044}% U+0324
15145 % U+0325 COMBINING RING BELOW; ringbelowcmb; \textsubring (tipa)
15146 \DeclareTextCommand{\textsubring}{PU}[1]{#1\83\045}% U+0325
15147 % U+0327 COMBINING CEDILLA; cedillacmb

```

```

15148 \DeclareTextCommand{\c}{PU}[1]{#1\83\047}% U+0327
15149 % U+0328 COMBINING OGONEK; ogonekcmb
15150 \DeclareTextCommand{\k}{PU}[1]{#1\83\050}% U+0328
15151 % U+032D COMBINING CIRCUMFLEX ACCENT BELOW;
15152 % \textsubcircum (tipa)
15153 \DeclareTextCommand{\textsubcircum}{PU}[1]{#1\83\055}% U+032D
15154 % U+032E COMBINING BREVE BELOW; brevebelowcmb
15155 \DeclareTextCommand{\textsubbreve}{PU}[1]{#1\83\056}% U+032E
15156 % U+0330 COMBINING TILDE BELOW; tildebelowcmb; \textsubtilde (tipa)
15157 \DeclareTextCommand{\textsubtilde}{PU}[1]{#1\83\060}% U+0330
15158 % U+0331 COMBINING MACRON BELOW; macronbelowcmb
15159 \DeclareTextCommand{\b}{PU}[1]{#1\83\061}% U+0331
15160 % U+0361 COMBINING DOUBLE INVERTED BREVE; breveinverteddoub-
      lecmb
15161 \DeclareTextCommand{\t}{PU}[1]{#1\83\141}% U+0361
15162 % U+20DD COMBINING ENCLOSING CIRCLE
15163 \DeclareTextCommand{\textcircled}{PU}[1]{#1\9040\335}% U+20DD

```

Double accents.

```

15164 \DeclareTextCommand{\textacutemacron}{PU}[1]{#1\83\001\83\004}% U+0301 U+0304
15165 \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.

```

15166 \DeclareTextCompositeCommand{\`}{PU}{\@empty}{\textasciigrave}%
15167 \DeclareTextCompositeCommand{\'}{PU}{\@empty}{\textacute}%
15168 \DeclareTextCompositeCommand{\^}{PU}{\@empty}{\textasciicircum}%
15169 \DeclareTextCompositeCommand{\~}{PU}{\@empty}{\texttilde}%
15170 \DeclareTextCompositeCommand{\"}{PU}{\@empty}{\textasciidieresis}%
15171 \DeclareTextCompositeCommand{\r}{PU}{\@empty}{\textring}%
15172 \DeclareTextCompositeCommand{\v}{PU}{\@empty}{\textasciicaron}%
15173 \DeclareTextCompositeCommand{\.}{PU}{\@empty}{\textdotaccent}%
15174 \DeclareTextCompositeCommand{\c}{PU}{\@empty}{\textcedilla}%
15175 \DeclareTextCompositeCommand{\u}{PU}{\@empty}{\textasciibreve}%
15176 (/puenc)
15177 (puextra)\DeclareTextCompositeCommand{\G}{PU}{\@empty}{\textdoublegrave}%
15178 (*puenc)
15179 \DeclareTextCompositeCommand{\=}{PU}{\@empty}{\textasciimacron}%
15180 \DeclareTextCompositeCommand{\H}{PU}{\@empty}{\texthungarumlaut}%
15181 \DeclareTextCompositeCommand{\k}{PU}{\@empty}{\textogonek}%
15182 \DeclareTextCompositeCommand{\textinvbreve}{PU}{\@empty}{\{ \83\021\}}% U+0311
15183 \DeclareTextCompositeCommand{\textsubumlaut}{PU}{\@empty}{\{ \83\044\}}% U+0324
15184 \DeclareTextCompositeCommand{\textsubring}{PU}{\@empty}{\textringlow}%
15185 \DeclareTextCompositeCommand{\textsubcircum}{PU}{\@empty}{\textcircum-
      low}%
15186 \DeclareTextCompositeCommand{\textsubbreve}{PU}{\@empty}{\{ \83\056\}}% U+032E
15187 \DeclareTextCompositeCommand{\textsubtilde}{PU}{\@empty}{\texttildebelow}%
15188 \DeclareTextCompositeCommand{\b}{PU}{\@empty}{\textmacronbelow}%
15189 \DeclareTextCompositeCommand{\d}{PU}{\@empty}{\textdotbelow}%
15190 \DeclareTextCompositeCommand{\t}{PU}{\@empty}{\texttie}%
15191 \DeclareTextCompositeCommand{\newtie}{PU}{\@empty}{\textnewtie}%
15192 \DeclareTextCompositeCommand{\textcircled}{PU}{\@empty}{\textbigcircle}%
15193 \DeclareTextCompositeCommand{\textacutemacron}{PU}{\@empty}{\{ \83\001\83\004\}}% U+0301 U
15194 \DeclareTextCompositeCommand{\textgravemacron}{PU}{\@empty}{\{ \83\000\83\004\}}% U+0300 U
15195 \DeclareTextCompositeCommand{\`}{PU}{\ }{\textasciigrave}%

```

```

15196 \DeclareTextCompositeCommand{\'}{PU}{\ }{\textacute}%
15197 \DeclareTextCompositeCommand{\^}{PU}{\ }{\textasciicircum}%
15198 \DeclareTextCompositeCommand{\~}{PU}{\ }{\texttilde}%
15199 \DeclareTextCompositeCommand{\"}{PU}{\ }{\textasciidieresis}%
15200 \DeclareTextCompositeCommand{\r}{PU}{\ }{\textring}%
15201 \DeclareTextCompositeCommand{\v}{PU}{\ }{\textasciicaron}%
15202 \DeclareTextCompositeCommand{\.}{PU}{\ }{\textdotaccent}%
15203 \DeclareTextCompositeCommand{\c}{PU}{\ }{\textcedilla}%
15204 \DeclareTextCompositeCommand{\u}{PU}{\ }{\textasciibreve}%
15205 </puenc>
15206 <puextra>\DeclareTextCompositeCommand{\G}{PU}{\ }{\textdoublegrave}%
15207 <*puenc>
15208 \DeclareTextCompositeCommand{\=}{PU}{\ }{\textasciimacron}%
15209 \DeclareTextCompositeCommand{\H}{PU}{\ }{\texthungarumlaut}%
15210 \DeclareTextCompositeCommand{\k}{PU}{\ }{\textogonek}%
15211 \DeclareTextCompositeCommand{\textinvbreve}{PU}{\ }{\{ \83\021\}}% U+0311
15212 \DeclareTextCompositeCommand{\textsubumlaut}{PU}{\ }{\{ \83\044\}}% U+0324
15213 \DeclareTextCompositeCommand{\textsubring}{PU}{\ }{\textringlow}%
15214 \DeclareTextCompositeCommand{\textsubcircum}{PU}{\ }{\textcircumlow}%
15215 \DeclareTextCompositeCommand{\textsubbreve}{PU}{\ }{\{ \83\056\}}% U+032E
15216 \DeclareTextCompositeCommand{\textsubtilde}{PU}{\ }{\texttildelow}%
15217 \DeclareTextCompositeCommand{\b}{PU}{\ }{\textmacronbelow}%
15218 \DeclareTextCompositeCommand{\d}{PU}{\ }{\textdotbelow}%
15219 \DeclareTextCompositeCommand{\t}{PU}{\ }{\texttie}%
15220 \DeclareTextCompositeCommand{\newtie}{PU}{\ }{\textnewtie}%
15221 \DeclareTextCompositeCommand{\textcircled}{PU}{\ }{\textbigcircle}%
15222 \DeclareTextCompositeCommand{\textacutemacron}{PU}{\ }{\{ \83\001\83\004\}}% U+0301 U+0304
15223 \DeclareTextCompositeCommand{\textgravemacron}{PU}{\ }{\{ \83\000\83\004\}}% U+0300 U+0304

```

Accents for capitals (see encoding TS1)

```

15224 \DeclareTextCommand{\capitalcedilla}{PU}[1]{\c{#1}}%
15225 \DeclareTextCommand{\capitalogonek}{PU}[1]{\k{#1}}%
15226 \DeclareTextCommand{\capitalgrave}{PU}[1]{\`{#1}}%
15227 \DeclareTextCommand{\capitalacute}{PU}[1]{\'{#1}}%
15228 \DeclareTextCommand{\capitalcircumflex}{PU}[1]{\^{#1}}%
15229 \DeclareTextCommand{\capitaltilde}{PU}[1]{\~{#1}}%
15230 \DeclareTextCommand{\capitaldieresis}{PU}[1]{\"{#1}}%
15231 \DeclareTextCommand{\capitalhungarumlaut}{PU}[1]{\H{#1}}%
15232 \DeclareTextCommand{\capitalring}{PU}[1]{\r{#1}}%
15233 \DeclareTextCommand{\capitalcaron}{PU}[1]{\v{#1}}%
15234 \DeclareTextCommand{\capitalbreve}{PU}[1]{\u{#1}}%
15235 \DeclareTextCommand{\capitalmacron}{PU}[1]{\={#1}}%
15236 \DeclareTextCommand{\capitaldotaccent}{PU}[1]{\.\{#1}}%
15237 \DeclareTextCommand{\capitaltie}{PU}[1]{\t{#1}}%
15238 \DeclareTextCommand{\capitalnewtie}{PU}[1]{\newtie{#1}}%

```

46.2.2 Basic Latin: U+0000 to U+007F

Special white space escape characters.

```

15239 % U+0009 (CHARACTER TABULATION)
15240 \DeclareTextCommand{\textHT}{PU}{\80\011}% U+0009
15241 % U+000A (LINE FEED)
15242 \DeclareTextCommand{\textLF}{PU}{\80\012}% U+000A
15243 % U+000D (CARRIAGE RETURN)
15244 \DeclareTextCommand{\textCR}{PU}{\80\015}% U+000D

```


\80\040: U+0020 SPACE; space, spacehackarabic
 \80\041: U+0021 EXCLAMATION MARK; exclam
 15245 % U+0022 QUOTATION MARK; quotedbl
 15246 \DeclareTextCommand{\textquotedbl}{PU}{"}% \80\042 U+0022
 15247 % U+0023 NUMBER SIGN; numbersign
 15248 \DeclareTextCommand{\textnumbersign}{PU}{\80\043}% U+0023
 15249 % U+0024 DOLLAR SIGN; dollar
 15250 \DeclareTextCommand{\textdollar}{PU}{\80\044}% U+0024
 15251 %* \textdollar -> \mathdollar
 15252 %* \textdollar -> \EyesDollar (marvosym)
 15253 % U+0025 PERCENT SIGN; percent
 15254 \DeclareTextCommand{\textpercent}{PU}{\80\045}% U+0025
 15255 % U+0026 AMPERSAND; ampersand
 15256 \DeclareTextCommand{\textampersand}{PU}{\80\046}% U+0026
 15257 %* \textampersand -> \binampersand (stmaryrd)
 15258 %* \textampersand -> \with (cml)
 15259 % U+0027 APOSTROPHE; quotesingle
 15260 \DeclareTextCommand{\textquotesingle}{PU}{\80\047}% U+0027
 15261 % U+0028 LEFT PARENTHESIS; parenleft
 15262 \DeclareTextCommand{\textparenleft}{PU}{\80\050}% U+0028
 15263 % U+0029 RIGHT PARENTHESIS; parenright
 15264 \DeclareTextCommand{\textparenright}{PU}{\80\051}% U+0029
 15265 % U+002A ASTERISK; asterisk; (?)
 15266 \DeclareTextCommand{\textasteriskcentered}{PU}{\80\052}% U+002A
 15267 % U+002B PLUS SIGN; plus; \MVPlus (marvosym)
 15268 \DeclareTextCommand{\textMVPlus}{PU}{\80\053}%* U+002B
 15269 % U+002C COMMA; comma; \MVComma (marvosym)
 15270 \DeclareTextCommand{\textMVComma}{PU}{\80\054}%* U+002C
 15271 % U+002D HYPHEN-MINUS; hyphen; \MVMinus (marvosym)
 15272 \DeclareTextCommand{\textMVMinus}{PU}{\80\055}%* U+002D
 15273 % U+002E FULL STOP; period; \MVPeriod (marvosym)
 15274 \DeclareTextCommand{\textMVPeriod}{PU}{\80\056}%* U+002E
 15275 % U+002F SOLIDUS; slash; \MVDivision (marvosym)
 15276 \DeclareTextCommand{\textMVDivision}{PU}{\80\057}%* U+002F
 15277 % U+0030 DIGIT ZERO; zero; \MVZero (marvosym)
 15278 \DeclareTextCommand{\textMVZero}{PU}{\80\060}%* U+0030
 15279 % U+0031 DIGIT ONE; one; \MVOne (marvosym)
 15280 \DeclareTextCommand{\textMVOne}{PU}{\80\061}%* U+0031
 15281 % U+0032 DIGIT TWO; two; \MVTwo (marvosym)
 15282 \DeclareTextCommand{\textMVTwo}{PU}{\80\062}%* U+0032
 15283 % U+0033 DIGIT THREE; three; \MVThree (marvosym)
 15284 \DeclareTextCommand{\textMVThree}{PU}{\80\063}%* U+0033
 15285 % U+0034 DIGIT FOUR; four; \MVFfour (marvosym)
 15286 \DeclareTextCommand{\textMVFfour}{PU}{\80\064}%* U+0034
 15287 % U+0035 DIGIT FIVE; five; \MVFfive (marvosym)
 15288 \DeclareTextCommand{\textMVFfive}{PU}{\80\065}%* U+0035
 15289 % U+0036 DIGIT SIX; six; \MVSix (marvosym)
 15290 \DeclareTextCommand{\textMVSix}{PU}{\80\066}%* U+0036
 15291 % U+0037 DIGIT SEVEN; seven; \MVSeven (marvosym)
 15292 \DeclareTextCommand{\textMVSeven}{PU}{\80\067}%* U+0037
 15293 % U+0038 DIGIT EIGHT; eight; \MVEight (marvosym)
 15294 \DeclareTextCommand{\textMVEight}{PU}{\80\070}%* U+0038
 15295 % U+0039 DIGIT NINE; nine; \MVNine (marvosym)
 15296 \DeclareTextCommand{\textMVNine}{PU}{\80\071}%* U+0039

$\backslash 80\backslash 072$: U+003A COLON; colon
 $\backslash 80\backslash 073$: U+003B SEMICOLON; semicolon
15297 % U+003C LESS-THAN SIGN; less
15298 $\backslash \text{DeclareTextCommand}\{\backslash \text{textless}\}\{\text{PU}\}\{<\}\%$ $\backslash 80\backslash 074$ U+003C
 $\backslash 80\backslash 075$: U+003D EQUALS SIGN; equal
15299 % U+003E GREATER-THAN SIGN; greater
15300 $\backslash \text{DeclareTextCommand}\{\backslash \text{textgreater}\}\{\text{PU}\}\{>\}\%$ $\backslash 80\backslash 076$ U+003E
 $\backslash 80\backslash 077$: U+003F QUESTION MARK; question
15301 % U+0040 COMMERCIAL AT; at; $\backslash \text{MVAt}$ (marvosym)
15302 $\backslash \text{DeclareTextCommand}\{\backslash \text{textMVAt}\}\{\text{PU}\}\{\backslash 80\backslash 100\}\%$ U+0040
 $\backslash 80\backslash 101$: U+0041 LATIN CAPITAL LETTER A; A
...
 $\backslash 80\backslash 132$: U+005A LATIN CAPITAL LETTER Z; Z
 $\backslash 80\backslash 133$: U+005B LEFT SQUARE BRACKET; bracketleft
15303 % U+005C REVERSE SOLIDUS; backslash
15304 $\backslash \text{DeclareTextCommand}\{\backslash \text{textbackslash}\}\{\text{PU}\}\{\backslash 80\backslash 134\}\%$ U+005C
 $\backslash 80\backslash 135$: U+005D RIGHT SQUARE BRACKET; bracketright
15305 % U+005E CIRCUMFLEX ACCENT; asciicircum
15306 $\backslash \text{DeclareTextCommand}\{\backslash \text{textasciicircum}\}\{\text{PU}\}\{\backslash 80\backslash 136\}\%$ U+005E
15307 % U+005F LOW LINE; underscore
15308 $\backslash \text{DeclareTextCommand}\{\backslash \text{textunderscore}\}\{\text{PU}\}\{\backslash 80\backslash 137\}\%$ U+005F
15309 %* $\backslash \text{textunderscore} \rightarrow \backslash \text{mathunderscore}$ (LaTeX)
15310 % U+0060 GRAVE ACCENT; grave
15311 $\backslash \text{DeclareTextCommand}\{\backslash \text{textasciigrave}\}\{\text{PU}\}\{\backslash 80\backslash 140\}\%$ U+0060
 $\backslash 80\backslash 141$: U+0061 LATIN SMALL LETTER A; a
...
 $\backslash 80\backslash 150$: U+0068 LATIN SMALL LETTER H; h
15312 % U+0069 LATIN SMALL LETTER I; i
15313 $\backslash \text{DeclareTextCompositeCommand}\{\backslash \cdot\}\{\text{PU}\}\{\backslash i\}\{i\}\%$ $\backslash 80\backslash 151$ U+0069
15314 $\backslash \text{DeclareTextCompositeCommand}\{\backslash \cdot\}\{\text{PU}\}\{\backslash i\}\{i\}\%$ $\backslash 80\backslash 151$ U+0069
 $\backslash 80\backslash 152$: U+006A LATIN SMALL LETTER J; j
...
 $\backslash 80\backslash 172$: U+007A LATIN SMALL LETTER Z; z
15315 % U+007B LEFT CURLY BRACKET; braceleft
15316 $\backslash \text{DeclareTextCommand}\{\backslash \text{textbraceleft}\}\{\text{PU}\}\{\backslash 80\backslash 173\}\%$ U+007B
15317 % U+007C VERTICAL LINE; *bar, verticalbar
15318 $\backslash \text{DeclareTextCommand}\{\backslash \text{textbar}\}\{\text{PU}\}\{\backslash |\}\%$ $\backslash 80\backslash 174$ U+007C
15319 %* $\backslash \text{textbar} \rightarrow \backslash \text{textvertline}$ (tipa)
15320 % U+007D RIGHT CURLY BRACKET; braceright
15321 $\backslash \text{DeclareTextCommand}\{\backslash \text{textbraceright}\}\{\text{PU}\}\{\backslash 80\backslash 175\}\%$ U+007D
15322 % U+007E TILDE; asciitilde
15323 $\backslash \text{DeclareTextCommand}\{\backslash \text{textasciitilde}\}\{\text{PU}\}\{\backslash 80\backslash 176\}\%$ U+007E

46.2.3 Latin-1 Supplement: U+0080 to U+00FF

$\backslash 80\backslash 240$: U+00A0 NO-BREAK SPACE; nbspace, nonbreakingspace
15324 % U+00A1 INVERTED EXCLAMATION MARK; exclamdown
15325 $\backslash \text{DeclareTextCommand}\{\backslash \text{textexclamdown}\}\{\text{PU}\}\{\backslash 80\backslash 241\}\%$ U+00A1
15326 % U+00A2 CENT SIGN; cent

15327 \DeclareTextCommand{\textcent}{PU}{\80\242}% U+00A2
15328 % U+00A3 POUND SIGN; sterling
15329 \DeclareTextCommand{\textsterling}{PU}{\80\243}% U+00A3
15330 %* \textsterling -> \mathsterling (LaTeX)
15331 %* \textsterling -> \pounds (LaTeX)
15332 % U+00A4 CURRENCY SIGN; currency
15333 \DeclareTextCommand{\textcurrency}{PU}{\80\244}% U+00A4
15334 % U+00A5 YEN SIGN; yen
15335 \DeclareTextCommand{\textyen}{PU}{\80\245}% U+00A5
15336 % U+00A6 BROKEN BAR; brokenbar
15337 \DeclareTextCommand{\textbrokenbar}{PU}{\80\246}% U+00A6
15338 %* \textbrokenbar -> \brokenvert (wasysym)
15339 % U+00A7 SECTION SIGN; section
15340 \DeclareTextCommand{\textsection}{PU}{\80\247}% U+00A7
15341 %* \textsection -> \mathsection (LaTeX)
15342 %* \textsection -> \S (LaTeX)
15343 % U+00A8 DIAERESIS; dieresis
15344 \DeclareTextCommand{\textasciidieresis}{PU}{\80\250}% U+00A8
15345 % U+00A9 COPYRIGHT SIGN; copyright
15346 \DeclareTextCommand{\textcopyright}{PU}{\80\251}%* U+00A9
15347 % U+00AA FEMININE ORDINAL INDICATOR; ordfeminine
15348 \DeclareTextCommand{\textordfeminine}{PU}{\80\252}% U+00AA
15349 % U+00AB LEFT-POINTING DOUBLE ANGLE QUOTATION MARK; guillemetleft
15350 \DeclareTextCommand{\guillemotleft}{PU}{\80\253}% U+00AB
15351 \DeclareTextCommand{\guillemetleft}{PU}{\80\253}% U+00AB
15352 % U+00AC NOT SIGN; logicalnot
15353 \DeclareTextCommand{\textlogicalnot}{PU}{\80\254}% U+00AC
15354 \DeclareTextCommand{\textlnot}{PU}{\80\254}% U+00AC
\80\255: U+00AD SOFT HYPHEN; sftyphen, softyphen
15355 % U+00AE REGISTERED SIGN; registered
15356 \DeclareTextCommand{\textregistered}{PU}{\80\256}% U+00AE
15357 % U+00AF MACRON; *macron, overscore
15358 \DeclareTextCommand{\textasciimacron}{PU}{\80\257}% U+00AF
15359 % U+00B0 DEGREE SIGN; degree
15360 \DeclareTextCommand{\textdegree}{PU}{\80\260}% U+00B0
15361 % U+00B1 PLUS-MINUS SIGN; plusminus
15362 \DeclareTextCommand{\textplusminus}{PU}{\80\261}% U+00B1
15363 % U+00B2 SUPERSCRIPT TWO; twosuperior
15364 \DeclareTextCommand{\texttwosuperior}{PU}{\80\262}%* U+00B2
15365 % U+00B3 SUPERSCRIPT THREE; threesuperior
15366 \DeclareTextCommand{\textthreesuperior}{PU}{\80\263}%* U+00B3
15367 % U+00B4 ACUTE ACCENT; acute
15368 \DeclareTextCommand{\textacute}{PU}{\80\264}% U+00B4
15369 \DeclareTextCommand{\textasciacute}{PU}{\80\264}% U+00B4
15370 % U+00B5 MICRO SIGN; mu, mul
15371 \DeclareTextCommand{\textmu}{PU}{\80\265}% U+00B5
15372 % U+00B6 PILCROW SIGN; paragraph
15373 \DeclareTextCommand{\textparagraph}{PU}{\80\266}% U+00B6
15374 %* \textparagraph -> \mathparagraph (LaTeX)
15375 % U+00B7 MIDDLE DOT; middot, *periodcentered
15376 \DeclareTextCommand{\textperiodcentered}{PU}{\80\267}% U+00B7
15377 %* \textperiodcentered -> \MultiplicationDot (marvosym)
15378 %* \textperiodcentered -> \Squaredot (marvosym)
15379 % U+00B8 CEDILLA; cedilla

15380 \DeclareTextCommand{\textcedilla}{PU}{\80\270}% U+00B8
15381 % U+00B9 SUPERSCRIPT ONE; onesuperior
15382 \DeclareTextCommand{\textonesuperior}{PU}{\80\271}%* U+00B9
15383 % U+00BA MASCULINE ORDINAL INDICATOR; ordmasculine
15384 \DeclareTextCommand{\textordmasculine}{PU}{\80\272}% U+00BA
15385 % U+00BB RIGHT-POINTING DOUBLE ANGLE QUOTATION MARK; guillemetright
15386 \DeclareTextCommand{\guillemotright}{PU}{\80\273}% U+00BB
15387 \DeclareTextCommand{\guillemetright}{PU}{\80\273}% U+00BB
15388 % U+00BC VULGAR FRACTION ONE QUARTER; onequarter
15389 \DeclareTextCommand{\textonequarter}{PU}{\80\274}% U+00BC
15390 % U+00BD VULGAR FRACTION ONE HALF; onehalf
15391 \DeclareTextCommand{\textonehalf}{PU}{\80\275}% U+00BD
15392 % U+00BE VULGAR FRACTION THREE QUARTERS; threequarters
15393 \DeclareTextCommand{\textthreequarters}{PU}{\80\276}% U+00BE
15394 % U+00BF INVERTED QUESTION MARK; questiondown
15395 \DeclareTextCommand{\textquestiondown}{PU}{\80\277}% U+00BF
15396 % U+00C0 LATIN CAPITAL LETTER A WITH GRAVE; Agrave
15397 \DeclareTextCompositeCommand{\`}{PU}{A}{\80\300}% U+00C0
15398 % U+00C1 LATIN CAPITAL LETTER A WITH ACUTE; Aacute
15399 \DeclareTextCompositeCommand{\'}{PU}{A}{\80\301}% U+00C1
15400 % U+00C2 LATIN CAPITAL LETTER A WITH CIRCUMFLEX; Acircumflex
15401 \DeclareTextCompositeCommand{\^}{PU}{A}{\80\302}% U+00C2
15402 % U+00C3 LATIN CAPITAL LETTER A WITH TILDE; Atilde
15403 \DeclareTextCompositeCommand{\~}{PU}{A}{\80\303}% U+00C3
15404 % U+00C4 LATIN CAPITAL LETTER A WITH DIAERESIS; Adieresis
15405 \DeclareTextCompositeCommand{\\"}{PU}{A}{\80\304}% U+00C4
15406 % U+00C5 LATIN CAPITAL LETTER A WITH RING ABOVE; Aring
15407 \DeclareTextCompositeCommand{\r}{PU}{A}{\80\305}% U+00C5
15408 % U+00C6 LATIN CAPITAL LETTER AE; AE
15409 \DeclareTextCommand{\AE}{PU}{\80\306}% U+00C6
15410 % U+00C7 LATIN CAPITAL LETTER C WITH CEDILLA; Ccedilla
15411 \DeclareTextCompositeCommand{\c}{PU}{C}{\80\307}% U+00C7
15412 % U+00C8 LATIN CAPITAL LETTER E WITH GRAVE; Egrave
15413 \DeclareTextCompositeCommand{\`}{PU}{E}{\80\310}% U+00C8
15414 % U+00C9 LATIN CAPITAL LETTER E WITH ACUTE; Eacute
15415 \DeclareTextCompositeCommand{\'}{PU}{E}{\80\311}% U+00C9
15416 % U+00CA LATIN CAPITAL LETTER E WITH CIRCUMFLEX; Ecircumflex
15417 \DeclareTextCompositeCommand{\^}{PU}{E}{\80\312}% U+00CA
15418 % U+00CB LATIN CAPITAL LETTER E WITH DIAERESIS; Edieresis
15419 \DeclareTextCompositeCommand{\\"}{PU}{E}{\80\313}% U+00CB
15420 % U+00CC LATIN CAPITAL LETTER I WITH GRAVE; Igrave
15421 \DeclareTextCompositeCommand{\`}{PU}{I}{\80\314}% U+00CC
15422 % U+00CD LATIN CAPITAL LETTER I WITH ACUTE; Iacute
15423 \DeclareTextCompositeCommand{\'}{PU}{I}{\80\315}% U+00CD
15424 % U+00CE LATIN CAPITAL LETTER I WITH CIRCUMFLEX; Icircumflex
15425 \DeclareTextCompositeCommand{\^}{PU}{I}{\80\316}% U+00CE
15426 % U+00CF LATIN CAPITAL LETTER I WITH DIAERESIS; Idieresis
15427 \DeclareTextCompositeCommand{\\"}{PU}{I}{\80\317}% U+00CF
15428 % U+00D0 LATIN CAPITAL LETTER ETH; Eth
15429 \DeclareTextCommand{\DH}{PU}{\80\320}% U+00D0
15430 % U+00D1 LATIN CAPITAL LETTER N WITH TILDE; Ntilde
15431 \DeclareTextCompositeCommand{\~}{PU}{N}{\80\321}% U+00D1
15432 % U+00D2 LATIN CAPITAL LETTER O WITH GRAVE; Ograve
15433 \DeclareTextCompositeCommand{\`}{PU}{O}{\80\322}% U+00D2

15434 % U+00D3 LATIN CAPITAL LETTER O WITH ACUTE; Oacute
15435 \DeclareTextCompositeCommand{\'}{PU}{O}{\80\323}% U+00D3
15436 % U+00D4 LATIN CAPITAL LETTER O WITH CIRCUMFLEX; Ocircumflex
15437 \DeclareTextCompositeCommand{\^}{PU}{O}{\80\324}% U+00D4
15438 % U+00D5 LATIN CAPITAL LETTER O WITH TILDE; Otilde
15439 \DeclareTextCompositeCommand{\~}{PU}{O}{\80\325}% U+00D5
15440 % U+00D6 LATIN CAPITAL LETTER O WITH DIAERESIS; Odieresis
15441 \DeclareTextCompositeCommand{\"}{PU}{O}{\80\326}% U+00D6
15442 % U+00D7 MULTIPLICATION SIGN; multiply
15443 \DeclareTextCommand{\textmultiply}{PU}{\80\327}% U+00D7
15444 %* \textmultiply -> \vartimes (stmaryrd)
15445 %* \textmultiply -> \MVMultiplication (marvosym)
15446 % U+00D8 LATIN CAPITAL LETTER O WITH STROKE; Oslash
15447 \DeclareTextCommand{\O}{PU}{\80\330}% U+00D8
15448 % U+00D9 LATIN CAPITAL LETTER U WITH GRAVE; Ugrave
15449 \DeclareTextCompositeCommand{\`}{PU}{U}{\80\331}% U+00D9
15450 % U+00DA LATIN CAPITAL LETTER U WITH ACUTE; Uacute
15451 \DeclareTextCompositeCommand{\'}{PU}{U}{\80\332}% U+00DA
15452 % U+00DB LATIN CAPITAL LETTER U WITH CIRCUMFLEX; Ucircumflex
15453 \DeclareTextCompositeCommand{\^}{PU}{U}{\80\333}% U+00DB
15454 % U+00DC LATIN CAPITAL LETTER U WITH DIAERESIS; Udieresis
15455 \DeclareTextCompositeCommand{\"}{PU}{U}{\80\334}% U+00DC
15456 % U+00DD LATIN CAPITAL LETTER Y WITH ACUTE; Yacute
15457 \DeclareTextCompositeCommand{\'}{PU}{Y}{\80\335}% U+00DD
15458 % U+00DE LATIN CAPITAL LETTER THORN; Thorn; \TH, \Thorn (wasysym)
15459 \DeclareTextCommand{\TH}{PU}{\80\336}% U+00DE
15460 \DeclareTextCommand{\textThorn}{PU}{\80\336}%* U+00DE
15461 % U+00DF LATIN SMALL LETTER SHARP S; germandbls
15462 \DeclareTextCommand{\ss}{PU}{\80\337}% U+00DF
15463 % U+00E0 LATIN SMALL LETTER A WITH GRAVE; agrave
15464 \DeclareTextCompositeCommand{\`}{PU}{a}{\80\340}% U+00E0
15465 % U+00E1 LATIN SMALL LETTER A WITH ACUTE; aacute
15466 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\341}% U+00E1
15467 % U+00E2 LATIN SMALL LETTER A WITH CIRCUMFLEX; acircumflex
15468 \DeclareTextCompositeCommand{\^}{PU}{a}{\80\342}% U+00E2
15469 % U+00E3 LATIN SMALL LETTER A WITH TILDE; atilde
15470 \DeclareTextCompositeCommand{\~}{PU}{a}{\80\343}% U+00E3
15471 % U+00E4 LATIN SMALL LETTER A WITH DIAERESIS; adieresis
15472 \DeclareTextCompositeCommand{\"}{PU}{a}{\80\344}% U+00E4
15473 % U+00E5 LATIN SMALL LETTER A WITH RING ABOVE; aring
15474 \DeclareTextCompositeCommand{\r}{PU}{a}{\80\345}% U+00E5
15475 % U+00E6 LATIN SMALL LETTER AE; ae
15476 \DeclareTextCommand{\ae}{PU}{\80\346}% U+00E6
15477 % U+00E7 LATIN SMALL LETTER C WITH CEDILLA; ccedilla
15478 \DeclareTextCompositeCommand{\c}{PU}{c}{\80\347}% U+00E7
15479 % U+00E8 LATIN SMALL LETTER E WITH GRAVE; egrave
15480 \DeclareTextCompositeCommand{\`}{PU}{e}{\80\350}% U+00E8
15481 % U+00E9 LATIN SMALL LETTER E WITH ACUTE; eacute
15482 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\351}% U+00E9
15483 % U+00EA LATIN SMALL LETTER E WITH CIRCUMFLEX; ecircumflex
15484 \DeclareTextCompositeCommand{\^}{PU}{e}{\80\352}% U+00EA
15485 % U+00EB LATIN SMALL LETTER E WITH DIAERESIS; edieresis
15486 \DeclareTextCompositeCommand{\"}{PU}{e}{\80\353}% U+00EB
15487 % U+00EC LATIN SMALL LETTER I WITH GRAVE; igrave

15488 \DeclareTextCompositeCommand{\`}{PU}{i}{\80\354}% U+00EC
15489 \DeclareTextCompositeCommand{\`}{PU}{i}{\80\354}% U+00EC
15490 % U+00ED LATIN SMALL LETTER I WITH ACUTE; iacute
15491 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}% U+00ED
15492 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}% U+00ED
15493 % U+00EE LATIN SMALL LETTER I WITH CIRCUMFLEX; icircumflex
15494 \DeclareTextCompositeCommand{\^}{PU}{i}{\80\356}% U+00EE
15495 \DeclareTextCompositeCommand{\^}{PU}{i}{\80\356}% U+00EE
15496 % U+00EF LATIN SMALL LETTER I WITH DIAERESIS; idieresis
15497 \DeclareTextCompositeCommand{\"}{PU}{i}{\80\357}% U+00EF
15498 \DeclareTextCompositeCommand{\"}{PU}{i}{\80\357}% U+00EF
15499 % U+00F0 LATIN SMALL LETTER ETH; eth
15500 \DeclareTextCommand{\dh}{PU}{\80\360}% U+00F0
15501 %* \dh -> \eth (wsuipa, phonetic)
15502 % U+00F1 LATIN SMALL LETTER N WITH TILDE; ntilde
15503 \DeclareTextCompositeCommand{\~}{PU}{n}{\80\361}% U+00F1
15504 % U+00F2 LATIN SMALL LETTER O WITH GRAVE; ograve
15505 \DeclareTextCompositeCommand{\`}{PU}{o}{\80\362}% U+00F2
15506 % U+00F3 LATIN SMALL LETTER O WITH ACUTE; oacute
15507 \DeclareTextCompositeCommand{\'}{PU}{o}{\80\363}% U+00F3
15508 % U+00F4 LATIN SMALL LETTER O WITH CIRCUMFLEX; ocircumflex
15509 \DeclareTextCompositeCommand{\^}{PU}{o}{\80\364}% U+00F4
15510 % U+00F5 LATIN SMALL LETTER O WITH TILDE; otilde
15511 \DeclareTextCompositeCommand{\~}{PU}{o}{\80\365}% U+00F5
15512 % U+00F6 LATIN SMALL LETTER O WITH DIAERESIS; odieresis
15513 \DeclareTextCompositeCommand{\"}{PU}{o}{\80\366}% U+00F6
15514 % U+00F7 DIVISION SIGN; divide
15515 \DeclareTextCommand{\textdivide}{PU}{\80\367}% U+00F7
15516 % U+00F8 LATIN SMALL LETTER O WITH STROKE; oslash
15517 \DeclareTextCommand{\o}{PU}{\80\370}% U+00F8
15518 % U+00F9 LATIN SMALL LETTER U WITH GRAVE; ugrave
15519 \DeclareTextCompositeCommand{\`}{PU}{u}{\80\371}% U+00F9
15520 % U+00FA LATIN SMALL LETTER U WITH ACUTE; uacute
15521 \DeclareTextCompositeCommand{\'}{PU}{u}{\80\372}% U+00FA
15522 % U+00FB LATIN SMALL LETTER U WITH CIRCUMFLEX; ucircumflex
15523 \DeclareTextCompositeCommand{\^}{PU}{u}{\80\373}% U+00FB
15524 % U+00FC LATIN SMALL LETTER U WITH DIAERESIS; udieresis
15525 \DeclareTextCompositeCommand{\"}{PU}{u}{\80\374}% U+00FC
15526 % U+00FD LATIN SMALL LETTER Y WITH ACUTE; yacute
15527 \DeclareTextCompositeCommand{\'}{PU}{y}{\80\375}% U+00FD
15528 % U+00FE LATIN SMALL LETTER THORN; thorn;
15529 % \th, \thorn (wasysym), \textthorn (tipa)
15530 \DeclareTextCommand{\th}{PU}{\80\376}% U+00FE
15531 \DeclareTextCommand{\textthorn}{PU}{\80\376}%* U+00FE
15532 % U+00FF LATIN SMALL LETTER Y WITH DIAERESIS; ydieresis
15533 \DeclareTextCompositeCommand{\"}{PU}{y}{\80\377}% U+00FF

46.2.4 Latin Extended-A: U+0080 to U+017F

15534 % U+0100 LATIN CAPITAL LETTER A WITH MACRON; Amacron
15535 \DeclareTextCompositeCommand{=} {PU}{A}{\81\000}% U+0100
15536 % U+0101 LATIN SMALL LETTER A WITH MACRON; amacron
15537 \DeclareTextCompositeCommand{=} {PU}{a}{\81\001}% U+0101
15538 % U+0102 LATIN CAPITAL LETTER A WITH BREVE; Abreve

15539 \DeclareTextCompositeCommand{\u}{PU}{A}{\81\002}% U+0102
15540 % U+0103 LATIN SMALL LETTER A WITH BREVE; abreve
15541 \DeclareTextCompositeCommand{\u}{PU}{a}{\81\003}% U+0103
15542 % U+0104 LATIN CAPITAL LETTER A WITH OGONEK; Aogonek
15543 \DeclareTextCompositeCommand{\k}{PU}{A}{\81\004}% U+0104
15544 % U+0105 LATIN SMALL LETTER A WITH OGONEK; aogonek
15545 \DeclareTextCompositeCommand{\k}{PU}{a}{\81\005}% U+0105
15546 % U+0106 LATIN CAPITAL LETTER C WITH ACUTE; Cacute
15547 \DeclareTextCompositeCommand{\'}{PU}{C}{\81\006}% U+0106
15548 % U+0107 LATIN SMALL LETTER C WITH ACUTE; cacute
15549 \DeclareTextCompositeCommand{\'}{PU}{c}{\81\007}% U+0107
15550 % U+0108 LATIN CAPITAL LETTER C WITH CIRCUMFLEX; Ccircumflex
15551 \DeclareTextCompositeCommand{\^}{PU}{C}{\81\010}% U+0108
15552 % U+0109 LATIN SMALL LETTER C WITH CIRCUMFLEX; ccircumflex
15553 \DeclareTextCompositeCommand{\^}{PU}{c}{\81\011}% U+0109
15554 % U+010A LATIN CAPITAL LETTER C WITH DOT ABOVE; Cdot, Cdotaccent
15555 \DeclareTextCompositeCommand{\.}{PU}{C}{\81\012}% U+010A
15556 % U+010B LATIN SMALL LETTER C WITH DOT ABOVE; cdot, cdotaccent
15557 \DeclareTextCompositeCommand{\.}{PU}{c}{\81\013}% U+010B
15558 % U+010C LATIN CAPITAL LETTER C WITH CARON; Ccaron
15559 \DeclareTextCompositeCommand{\v}{PU}{C}{\81\014}% U+010C
15560 % U+010D LATIN SMALL LETTER C WITH CARON; ccaron
15561 \DeclareTextCompositeCommand{\v}{PU}{c}{\81\015}% U+010D
15562 % U+010E LATIN CAPITAL LETTER D WITH CARON; Dcaron
15563 \DeclareTextCompositeCommand{\v}{PU}{D}{\81\016}% U+010E
15564 % U+010F LATIN SMALL LETTER D WITH CARON; dcaron
15565 \DeclareTextCompositeCommand{\v}{PU}{d}{\81\017}% U+010F
15566 % U+0110 LATIN CAPITAL LETTER D WITH STROKE; Dcroat, Dslash
15567 \DeclareTextCommand{\DJ}{PU}{\81\020}% U+0110
15568 % U+0111 LATIN SMALL LETTER D WITH STROKE; dcroat, dmacron;
15569 % \textcrd (tipa)
15570 \DeclareTextCommand{\dj}{PU}{\81\021}% U+0111
15571 \DeclareTextCommand{\textcrd}{PU}{\81\021}% U+0111
15572 %* \textcrd -> \crossd (wsuipa)
15573 % An alternate glyph with the stroke through the bowl:
15574 %* \textcrd -> \textbard (tipa)
15575 %* \textcrd -> \bard (wsuipa)
15576 % U+0112 LATIN CAPITAL LETTER E WITH MACRON; Emacron
15577 \DeclareTextCompositeCommand{\=}{PU}{E}{\81\022}% U+0112
15578 % U+0113 LATIN SMALL LETTER E WITH MACRON; emacron
15579 \DeclareTextCompositeCommand{\=}{PU}{e}{\81\023}% U+0113
15580 % U+0114 LATIN CAPITAL LETTER E WITH BREVE; Ebreve
15581 \DeclareTextCompositeCommand{\u}{PU}{E}{\81\024}% U+0114
15582 % U+0115 LATIN SMALL LETTER E WITH BREVE; ebreve
15583 \DeclareTextCompositeCommand{\u}{PU}{e}{\81\025}% U+0115
15584 % U+0116 LATIN CAPITAL LETTER E WITH DOT ABOVE; Edot, Edotaccent
15585 \DeclareTextCompositeCommand{\.}{PU}{E}{\81\026}% U+0116
15586 % U+0117 LATIN SMALL LETTER E WITH DOT ABOVE; edot, edotaccent
15587 \DeclareTextCompositeCommand{\.}{PU}{e}{\81\027}% U+0117
15588 % U+0118 LATIN CAPITAL LETTER E WITH OGONEK; Eogonek
15589 \DeclareTextCompositeCommand{\k}{PU}{E}{\81\030}% U+0118
15590 % U+0119 LATIN SMALL LETTER E WITH OGONEK; eogonek
15591 \DeclareTextCompositeCommand{\k}{PU}{e}{\81\031}% U+0119

15592 % U+011A LATIN CAPITAL LETTER E WITH CARON; Ecaron
15593 \DeclareTextCompositeCommand{\v}{PU}{E}{\81\032}% U+011A
15594 % U+011B LATIN SMALL LETTER E WITH CARON; ecaron
15595 \DeclareTextCompositeCommand{\v}{PU}{e}{\81\033}% U+011B
15596 % U+011C LATIN CAPITAL LETTER G WITH CIRCUMFLEX; Gcircumflex
15597 \DeclareTextCompositeCommand{\^}{PU}{G}{\81\034}% U+011C
15598 % U+011D LATIN SMALL LETTER G WITH CIRCUMFLEX; gcircumflex
15599 \DeclareTextCompositeCommand{\^}{PU}{g}{\81\035}% U+011D
15600 % U+011E LATIN CAPITAL LETTER G WITH BREVE; Gbreve
15601 \DeclareTextCompositeCommand{\u}{PU}{G}{\81\036}% U+011E
15602 % U+011F LATIN SMALL LETTER G WITH BREVE; gbreve
15603 \DeclareTextCompositeCommand{\u}{PU}{g}{\81\037}% U+011F
15604 % U+0120 LATIN CAPITAL LETTER G WITH DOT ABOVE; Gdot, Gdotac-
cent
15605 \DeclareTextCompositeCommand{\.}{PU}{G}{\81\040}% U+0120
15606 % U+0121 LATIN SMALL LETTER G WITH DOT ABOVE; gdot, gdotaccent
15607 \DeclareTextCompositeCommand{\.}{PU}{g}{\81\041}% U+0121
15608 % U+0122 LATIN CAPITAL LETTER G WITH CEDILLA; Gcedilla, Gcom-
maaccent
15609 \DeclareTextCompositeCommand{\c}{PU}{G}{\81\042}% U+0122
15610 % U+0123 LATIN SMALL LETTER G WITH CEDILLA; gcedilla, gcommaaccent
15611 \DeclareTextCompositeCommand{\c}{PU}{g}{\81\043}% U+0123
15612 % U+0124 LATIN CAPITAL LETTER H WITH CIRCUMFLEX; Hcircumflex
15613 \DeclareTextCompositeCommand{\^}{PU}{H}{\81\044}% U+0124
15614 % U+0125 LATIN SMALL LETTER H WITH CIRCUMFLEX; hcircumflex
15615 \DeclareTextCompositeCommand{\^}{PU}{h}{\81\045}% U+0125
15616 % U+0126 LATIN CAPITAL LETTER H WITH STROKE; Hbar
15617 \DeclareTextCommand{\textHslash}{PU}{\81\046}% U+0126
15618 % U+0127 LATIN SMALL LETTER H WITH STROKE; hbar; \hbar (Ams)
15619 \DeclareTextCommand{\texthbar}{PU}{\81\047}%* U+0127
15620 %* \texthbar -> \textcrh (tipa)
15621 %* \texthbar -> \crossh (wsuipa)
15622 %* \texthbar -> \planck (phonetic)
15623 % U+0128 LATIN CAPITAL LETTER I WITH TILDE; Itilde
15624 \DeclareTextCompositeCommand{\~}{PU}{I}{\81\050}% U+0128
15625 % U+0129 LATIN SMALL LETTER I WITH TILDE; itilde
15626 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}% U+0129
15627 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}% U+0129
15628 % U+012A LATIN CAPITAL LETTER I WITH MACRON; Imacron
15629 \DeclareTextCompositeCommand{\=}{PU}{I}{\81\052}% U+012A
15630 % U+012B LATIN SMALL LETTER I WITH MACRON; imacron
15631 \DeclareTextCompositeCommand{\=}{PU}{i}{\81\053}% U+012B
15632 \DeclareTextCompositeCommand{\=}{PU}{i}{\81\053}% U+012B
15633 % U+012C LATIN CAPITAL LETTER I WITH BREVE; Ibreve
15634 \DeclareTextCompositeCommand{\u}{PU}{I}{\81\054}% U+012C
15635 % U+012D LATIN SMALL LETTER I WITH BREVE; ibreve
15636 \DeclareTextCompositeCommand{\u}{PU}{i}{\81\055}% U+012D
15637 \DeclareTextCompositeCommand{\u}{PU}{i}{\81\055}% U+012D
15638 % U+012E LATIN CAPITAL LETTER I WITH OGONEK; Iogonek
15639 \DeclareTextCompositeCommand{\k}{PU}{I}{\81\056}% U+012E
15640 % U+012F LATIN SMALL LETTER I WITH OGONEK; iogonek
15641 \DeclareTextCompositeCommand{\k}{PU}{i}{\81\057}% U+012F
15642 \DeclareTextCompositeCommand{\k}{PU}{i}{\81\057}% U+012F
15643 % U+0130 LATIN CAPITAL LETTER I WITH DOT ABOVE; Idot, Idotaccent

15644 \DeclareTextCompositeCommand{\.}{PU}{I}{\81\060}% U+0130
 15645 % U+0131 LATIN SMALL LETTER DOTLESS I; dotlessi
 15646 \DeclareTextCommand{\i}{PU}{\81\061}% U+0131
 15647 % U+0132 LATIN CAPITAL LIGATURE IJ; IJ
 15648 \DeclareTextCommand{\IJ}{PU}{\81\062}% U+0132
 15649 % U+0133 LATIN SMALL LIGATURE IJ; ij
 15650 \DeclareTextCommand{\ij}{PU}{\81\063}% U+0133
 15651 % U+0134 LATIN CAPITAL LETTER J WITH CIRCUMFLEX; Jcircumflex
 15652 \DeclareTextCompositeCommand{\^}{PU}{J}{\81\064}% U+0134
 15653 % U+0135 LATIN SMALL LETTER J WITH CIRCUMFLEX; jcircumflex
 15654 \DeclareTextCompositeCommand{\^}{PU}{j}{\81\065}% U+0135
 15655 \DeclareTextCompositeCommand{\^}{PU}{\j}{\81\065}% U+0135
 15656 % U+0136 LATIN CAPITAL LETTER K WITH CEDILLA; Kcedilla, Kcommaac-
 cent
 15657 \DeclareTextCompositeCommand{\c}{PU}{K}{\81\066}% U+0136
 15658 % U+0137 LATIN SMALL LETTER K WITH CEDILLA; kcedilla, kcommaaccent
 15659 \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`.

15660 % U+0138 LATIN SMALL LETTER KRA; kgreenlandic
 15661 \DeclareTextCommand{\textkra}{PU}{\81\070}% U+0138
 15662 % U+0139 LATIN CAPITAL LETTER L WITH ACUTE; Lacute
 15663 \DeclareTextCompositeCommand{\'}{PU}{L}{\81\071}% U+0139
 15664 % U+013A LATIN SMALL LETTER L WITH ACUTE; lacute
 15665 \DeclareTextCompositeCommand{\'}{PU}{l}{\81\072}% U+013A
 15666 % U+013B LATIN CAPITAL LETTER L WITH CEDILLA; Lcedilla, Lcommaac-
 cent
 15667 \DeclareTextCompositeCommand{\c}{PU}{L}{\81\073}% U+013B
 15668 % U+013C LATIN SMALL LETTER L WITH CEDILLA; lcedilla, lcommaaccent
 15669 \DeclareTextCompositeCommand{\c}{PU}{l}{\81\074}% U+013C
 15670 % U+013D LATIN CAPITAL LETTER L WITH CARON; Lcaron
 15671 \DeclareTextCompositeCommand{\v}{PU}{L}{\81\075}% U+013D
 15672 % U+013E LATIN SMALL LETTER L WITH CARON; lcaron
 15673 \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`.

15674 % U+013F LATIN CAPITAL LETTER L WITH MIDDLE DOT; Ldot, Ldotac-
 cent
 15675 \DeclareTextCompositeCommand{\.}{PU}{L}{\81\077}% U+013F
 15676 % U+0140 LATIN SMALL LETTER L WITH MIDDLE DOT; ldot, ldotaccent
 15677 \DeclareTextCompositeCommand{\.}{PU}{l}{\81\100}% U+0140
 15678 % U+0141 LATIN CAPITAL LETTER L WITH STROKE; Lslash
 15679 \DeclareTextCommand{\L}{PU}{\81\101}% U+0141
 15680 % U+0142 LATIN SMALL LETTER L WITH STROKE; lslash
 15681 \DeclareTextCommand{\l}{PU}{\81\102}% U+0142
 15682 % U+0143 LATIN CAPITAL LETTER N WITH ACUTE; Nacute
 15683 \DeclareTextCompositeCommand{\'}{PU}{N}{\81\103}% U+0143
 15684 % U+0144 LATIN SMALL LETTER N WITH ACUTE; nacute
 15685 \DeclareTextCompositeCommand{\'}{PU}{n}{\81\104}% U+0144
 15686 % U+0145 LATIN CAPITAL LETTER N WITH CEDILLA; Ncedilla, Ncommaac-
 cent

15687 \DeclareTextCompositeCommand{\c}{PU}{N}{\81\105}% U+0145
15688 % U+0146 LATIN SMALL LETTER N WITH CEDILLA; ncedilla, ncommaaccent
15689 \DeclareTextCompositeCommand{\c}{PU}{n}{\81\106}% U+0146
15690 % U+0147 LATIN CAPITAL LETTER N WITH CARON; Ncaron
15691 \DeclareTextCompositeCommand{\v}{PU}{N}{\81\107}% U+0147
15692 % U+0148 LATIN SMALL LETTER N WITH CARON; ncaron
15693 \DeclareTextCompositeCommand{\v}{PU}{n}{\81\110}% U+0148
15694 % U+0149 LATIN SMALL LETTER N PRECEDED BY APOSTROPHE; napostrophe, quoterightn
15695 \DeclareTextCommand{\textnapostrophe}{PU}{\81\111}% U+0149
15696 % U+014A LATIN CAPITAL LETTER ENG; Eng
15697 \DeclareTextCommand{\NG}{PU}{\81\112}% U+014A
15698 % U+014B LATIN SMALL LETTER ENG; eng
15699 \DeclareTextCommand{\ng}{PU}{\81\113}% U+014B
15700 %* \ng -> \eng (wsuipa)
15701 %* \ng -> \engma (phonetic)
15702 % U+014C LATIN CAPITAL LETTER O WITH MACRON; Omacron
15703 \DeclareTextCompositeCommand{=} {PU}{O}{\81\114}% U+014C
15704 % U+014D LATIN SMALL LETTER O WITH MACRON; omacron
15705 \DeclareTextCompositeCommand{=} {PU}{o}{\81\115}% U+014D
15706 % U+014E LATIN CAPITAL LETTER O WITH BREVE; Obreve
15707 \DeclareTextCompositeCommand{\u}{PU}{O}{\81\116}% U+014E
15708 % U+014F LATIN SMALL LETTER O WITH BREVE; obreve
15709 \DeclareTextCompositeCommand{\u}{PU}{o}{\81\117}% U+014F
15710 % U+0150 LATIN CAPITAL LETTER O WITH DOUBLE ACUTE; Odblacute, Ohungarumlaut
15711 \DeclareTextCompositeCommand{\H}{PU}{O}{\81\120}% U+0150
15712 % U+0151 LATIN SMALL LETTER O WITH DOUBLE ACUTE; odblacute, ohungarumlaut
15713 \DeclareTextCompositeCommand{\H}{PU}{o}{\81\121}% U+0151
15714 % U+0152 LATIN CAPITAL LIGATURE OE; OE
15715 \DeclareTextCommand{\OE}{PU}{\81\122}% U+0152
15716 % U+0153 LATIN SMALL LIGATURE OE; oe
15717 \DeclareTextCommand{\oe}{PU}{\81\123}% U+0153
15718 % U+0154 LATIN CAPITAL LETTER R WITH ACUTE; Racute
15719 \DeclareTextCompositeCommand{\'}{PU}{R}{\81\124}% U+0154
15720 % U+0155 LATIN SMALL LETTER R WITH ACUTE; racute
15721 \DeclareTextCompositeCommand{\'}{PU}{r}{\81\125}% U+0155
15722 % U+0156 LATIN CAPITAL LETTER R WITH CEDILLA; Rcedilla, Rcommaaccent
15723 \DeclareTextCompositeCommand{\c}{PU}{R}{\81\126}% U+0156
15724 % U+0157 LATIN SMALL LETTER R WITH CEDILLA; rcedilla, rcommaaccent
15725 \DeclareTextCompositeCommand{\c}{PU}{r}{\81\127}% U+0157
15726 % U+0158 LATIN CAPITAL LETTER R WITH CARON; Rcaron
15727 \DeclareTextCompositeCommand{\v}{PU}{R}{\81\130}% U+0158
15728 % U+0159 LATIN SMALL LETTER R WITH CARON; rcaron
15729 \DeclareTextCompositeCommand{\v}{PU}{r}{\81\131}% U+0159
15730 % U+015A LATIN CAPITAL LETTER S WITH ACUTE; Sacute
15731 \DeclareTextCompositeCommand{\'}{PU}{S}{\81\132}% U+015A
15732 % U+015B LATIN SMALL LETTER S WITH ACUTE; sacute
15733 \DeclareTextCompositeCommand{\'}{PU}{s}{\81\133}% U+015B
15734 % U+015C LATIN CAPITAL LETTER S WITH CIRCUMFLEX; Scircumflex
15735 \DeclareTextCompositeCommand{\^}{PU}{S}{\81\134}% U+015C
15736 % U+015D LATIN SMALL LETTER S WITH CIRCUMFLEX; scircumflex

15737 \DeclareTextCompositeCommand{\~}{PU}{s}{\81\135}% U+015D
15738 % U+015E LATIN CAPITAL LETTER S WITH CEDILLA; Scedilla
15739 \DeclareTextCompositeCommand{\c}{PU}{S}{\81\136}% U+015E
15740 % U+015F LATIN SMALL LETTER S WITH CEDILLA; scedilla
15741 \DeclareTextCompositeCommand{\c}{PU}{s}{\81\137}% U+015F
15742 % U+0160 LATIN CAPITAL LETTER S WITH CARON; Scaron
15743 \DeclareTextCompositeCommand{\v}{PU}{S}{\81\140}% U+0160
15744 % U+0161 LATIN SMALL LETTER S WITH CARON; scaron
15745 \DeclareTextCompositeCommand{\v}{PU}{s}{\81\141}% U+0161
15746 % U+0162 LATIN CAPITAL LETTER T WITH CEDILLA; Tcedilla, Tcommaac-
cent
15747 \DeclareTextCompositeCommand{\c}{PU}{T}{\81\142}% U+0162
15748 % U+0163 LATIN SMALL LETTER T WITH CEDILLA; tcedilla, tcommaaccent
15749 \DeclareTextCompositeCommand{\c}{PU}{t}{\81\143}% U+0163
15750 % U+0164 LATIN CAPITAL LETTER T WITH CARON; Tcaron
15751 \DeclareTextCompositeCommand{\v}{PU}{T}{\81\144}% U+0164
15752 % U+0165 LATIN SMALL LETTER T WITH CARON; tcaron
15753 \DeclareTextCompositeCommand{\v}{PU}{t}{\81\145}% U+0165
15754 % U+0166 LATIN CAPITAL LETTER T WITH STROKE; Tbar
15755 \DeclareTextCommand{\textTslash}{PU}{\81\146}% U+0166
15756 % U+0167 LATIN SMALL LETTER T WITH STROKE; tbar
15757 \DeclareTextCommand{\texttslash}{PU}{\81\147}% U+0167
15758 % U+0168 LATIN CAPITAL LETTER U WITH TILDE; Utilde
15759 \DeclareTextCompositeCommand{\~}{PU}{U}{\81\150}% U+0168
15760 % U+0169 LATIN SMALL LETTER U WITH TILDE; utilde
15761 \DeclareTextCompositeCommand{\~}{PU}{u}{\81\151}% U+0169
15762 % U+016A LATIN CAPITAL LETTER U WITH MACRON; Umacron
15763 \DeclareTextCompositeCommand{\=}{PU}{U}{\81\152}% U+016A
15764 % U+016B LATIN SMALL LETTER U WITH MACRON; umacron
15765 \DeclareTextCompositeCommand{\=}{PU}{u}{\81\153}% U+016B
15766 % U+016C LATIN CAPITAL LETTER U WITH BREVE; Ubreve
15767 \DeclareTextCompositeCommand{\u}{PU}{U}{\81\154}% U+016C
15768 % U+016D LATIN SMALL LETTER U WITH BREVE; ubreve
15769 \DeclareTextCompositeCommand{\u}{PU}{u}{\81\155}% U+016D
15770 % U+016E LATIN CAPITAL LETTER U WITH RING ABOVE; Uring
15771 \DeclareTextCompositeCommand{\r}{PU}{U}{\81\156}% U+016E
15772 % U+016F LATIN SMALL LETTER U WITH RING ABOVE; uring
15773 \DeclareTextCompositeCommand{\r}{PU}{u}{\81\157}% U+016F
15774 % U+0170 LATIN CAPITAL LETTER U WITH DOUBLE ACUTE; Udbla-
cute, Uhungarumlaut
15775 \DeclareTextCompositeCommand{\H}{PU}{U}{\81\160}% U+0170
15776 % U+0171 LATIN SMALL LETTER U WITH DOUBLE ACUTE; udbla-
cute, uhungarumlaut
15777 \DeclareTextCompositeCommand{\H}{PU}{u}{\81\161}% U+0171
15778 % U+0172 LATIN CAPITAL LETTER U WITH OGONEK; Uogonek
15779 \DeclareTextCompositeCommand{\k}{PU}{U}{\81\162}% U+0172
15780 % U+0173 LATIN SMALL LETTER U WITH OGONEK; uogonek
15781 \DeclareTextCompositeCommand{\k}{PU}{u}{\81\163}% U+0173
15782 % U+0174 LATIN CAPITAL LETTER W WITH CIRCUMFLEX; Wcircumflex
15783 \DeclareTextCompositeCommand{\^}{PU}{W}{\81\164}% U+0174
15784 % U+0175 LATIN SMALL LETTER W WITH CIRCUMFLEX; wcircumflex
15785 \DeclareTextCompositeCommand{\^}{PU}{w}{\81\165}% U+0175
15786 % U+0176 LATIN CAPITAL LETTER Y WITH CIRCUMFLEX; Ycircumflex
15787 \DeclareTextCompositeCommand{\^}{PU}{Y}{\81\166}% U+0176

15788 % U+0177 LATIN SMALL LETTER Y WITH CIRCUMFLEX; ycircumflex
 15789 \DeclareTextCompositeCommand{\~}{PU}{y}{\81\167}% U+0177
 15790 % U+0178 LATIN CAPITAL LETTER Y WITH DIAERESIS; Ydieresis
 15791 \DeclareTextCompositeCommand{\\"}{PU}{Y}{\81\170}% U+0178
 15792 % U+0179 LATIN CAPITAL LETTER Z WITH ACUTE; Zacute
 15793 \DeclareTextCompositeCommand{\'}{PU}{Z}{\81\171}% U+0179
 15794 % U+017A LATIN SMALL LETTER Z WITH ACUTE; zacute
 15795 \DeclareTextCompositeCommand{\'}{PU}{z}{\81\172}% U+017A
 15796 % U+017B LATIN CAPITAL LETTER Z WITH DOT ABOVE; Zdot, Zdotaccent
 15797 \DeclareTextCompositeCommand{\.}{PU}{Z}{\81\173}% U+017B
 15798 % U+017C LATIN SMALL LETTER Z WITH DOT ABOVE; zdot, zdotaccent
 15799 \DeclareTextCompositeCommand{\.}{PU}{z}{\81\174}% U+017C
 15800 % U+017D LATIN CAPITAL LETTER Z WITH CARON; Zcaron
 15801 \DeclareTextCompositeCommand{\v}{PU}{Z}{\81\175}% U+017D
 15802 % U+017E LATIN SMALL LETTER Z WITH CARON; zcaron
 15803 \DeclareTextCompositeCommand{\v}{PU}{z}{\81\176}% U+017E
 15804 % U+017F LATIN SMALL LETTER LONG S; longs, slong
 15805 \DeclareTextCommand{\textlongS}{PU}{\81\177}% U+017F

46.2.5 Latin Extended-B: U+0180 to U+024F

15806 % U+0180 LATIN SMALL LETTER B WITH STROKE; bstroke; \textcrb (tipa)
 15807 \DeclareTextCommand{\textcrb}{PU}{\81\200}% U+0180
 15808 %* \textcrb -> \crossb (wsuipa)
 15809 % An alternate glyph with the stroke through the bowl:
 15810 %* \textcrb -> \textbarb (tipa)
 15811 %* \textcrb -> \barb (wsuipa)
 15812 % U+0181 LATIN CAPITAL LETTER B WITH HOOK; Bhook; \hausab (pho-
 netic)
 15813 \DeclareTextCommand{\texthausaB}{PU}{\81\201}%* U+0181
 15814 % U+0188 LATIN SMALL LETTER C WITH HOOK; chook; \texthtc (tipa)
 15815 \DeclareTextCommand{\texthtc}{PU}{\81\210}% U+0188
 15816 % U+018A LATIN CAPITAL LETTER D WITH HOOK; Dhook; \hausad (pho-
 netic)
 15817 \DeclareTextCommand{\texthausaD}{PU}{\81\212}%* U+018A
 15818 % U+018E LATIN CAPITAL LETTER REVERSED E; Eversed
 15819 \DeclareTextCommand{\textEversed}{PU}{\81\216}% U+018E
 15820 \DeclareTextCommand{\textrevE}{PU}{\81\216}% U+018E
 15821 % U+0192 LATIN SMALL LETTER F WITH HOOK; florin
 15822 \DeclareTextCommand{\textflorin}{PU}{\81\222}% U+0192
 15823 %* \textflorin -> \Florin (marvosym)
 15824 % U+0195 LATIN SMALL LETTER HV; hv; \texthvlig (tipa)
 15825 \DeclareTextCommand{\texthvlig}{PU}{\81\225}% U+0195
 15826 %* \texthvlig -> \hv (wsuipa)
 15827 % U+0198 LATIN CAPITAL LETTER K WITH HOOK; Khook; \hausak (pho-
 netic)
 15828 \DeclareTextCommand{\texthausaK}{PU}{\81\230}%* U+0198
 15829 % U+0199 LATIN SMALL LETTER K WITH HOOK; khook; \texthtk (tipa)
 15830 \DeclareTextCommand{\texthtk}{PU}{\81\231}% U+0199
 15831 %* \texthtk -> \hausak (phonetic)
 15832 % U+019A LATIN SMALL LETTER L WITH BAR; lbar;
 15833 % \textbarl (tipa), \barl (wsuipa)
 15834 \DeclareTextCommand{\textbarl}{PU}{\81\232}%* U+019A
 15835 % U+019B LATIN SMALL LETTER LAMBDA WITH STROKE/
 15836 % LATIN SMALL LETTER BARRED LAMBDA; lambdastroke;

15837 % \textcrlambda (tipa)
 15838 \DeclareTextCommand{\textcrlambda}{PU}{\81\233}% U+019B
 15839 %* \textcrlambda -> \crossnilambda (wsuipa)
 15840 %* \textcrlambda -> \barlambda (phonetic)
 15841 %* \textcrlambda -> \lambdabar (txfonts/pxfonts)
 15842 %* \textcrlambda -> \lambdaslash (txfonts/pxfonts)
 15843 % U+019E LATIN SMALL LETTER N WITH LONG RIGHT LEG; nlegright-
 long;
 15844 % \textnrleg (tipx)
 15845 \DeclareTextCommand{\textPUnrleg}{PU}{\81\236}% U+019E
 15846 %* \textPUnrleg -> \textnrleg (tipx)
 15847 % U+01A5 LATIN SMALL LETTER P WITH HOOK; phook; \texthtp (tipa)
 15848 \DeclareTextCommand{\texthtp}{PU}{\81\245}% U+01A5
 15849 % U+01AB LATIN SMALL LETTER T WITH PALATAL HOOK; tpalatalhook;
 15850 % \textlhookt (tipa)
 15851 \DeclareTextCommand{\textlhookt}{PU}{\81\253}% U+01AB
 15852 % U+01AD LATIN SMALL LETTER T WITH HOOK; thook; \texthtt (tipa)
 15853 \DeclareTextCommand{\texthtt}{PU}{\81\255}% U+01AD
 15854 % U+01B9 LATIN SMALL LETTER EZH REVERSED/
 15855 % LATIN SMALL LETTER REVERSED YOGH; \textrevyogh (tipa)
 15856 \DeclareTextCommand{\textrevyogh}{PU}{\81\271}% U+01B9
 15857 % U+01BB LATIN LETTER TWO WITH STROKE; twostroke; \textcrtwo (tipa)
 15858 \DeclareTextCommand{\textcrtwo}{PU}{\81\273}% U+01BB
 15859 % U+01BE LATIN LETTER INVERTED GLOTTAL STOP WITH STROKE;
 15860 % glottalinvertedstroke; \textcrinvglotstop (tipa)
 15861 \DeclareTextCommand{\textcrinvglotstop}{PU}{\81\276}% U+01BE
 15862 % U+01BF LATIN LETTER WYNN; wynn; \textwynn (tipa)
 15863 \DeclareTextCommand{\textwynn}{PU}{\81\277}% U+01BF
 15864 % U+01C0 LATIN LETTER DENTAL CLICK/LATIN LETTER PIPE; clickden-
 tal;
 15865 % \textpipe (tipa)
 15866 \DeclareTextCommand{\textpipe}{PU}{\81\300}% U+01C0
 15867 %* \textpipe -> \textpipevar (tipx)
 15868 % U+01C1 LATIN LETTER LATERAL CLICK/LATIN LETTER
 15869 % DOUBLE PIPE; clicklateral; \textdoublepipe (tipa)
 15870 \DeclareTextCommand{\textdoublepipe}{PU}{\81\301}% U+01C1
 15871 %* \textdoublepipe -> \textdoublepipevar (tipx)
 15872 % U+01C2 LATIN LETTER ALVEOLAR CLICK/LATIN LETTER PIPE DOU-
 BLE BAR;
 15873 % clickalveolar; \textdoublebarpipe (tipa)
 15874 \DeclareTextCommand{\textdoublebarpipe}{PU}{\81\302}% U+01C2
 15875 %* \textdoublebarpipe -> \textdoublebarpipevar (tipx)
 15876 % U+01CD LATIN CAPITAL LETTER A WITH CARON; Acaron
 15877 \DeclareTextCompositeCommand{\v}{PU}{A}{\81\315}% U+01CD
 15878 % U+01CE LATIN SMALL LETTER A WITH CARON; acarón
 15879 \DeclareTextCompositeCommand{\v}{PU}{a}{\81\316}% U+01CE
 15880 % U+01CF LATIN CAPITAL LETTER I WITH CARON; Icaron
 15881 \DeclareTextCompositeCommand{\v}{PU}{I}{\81\317}% U+01CF
 15882 % U+01D0 LATIN SMALL LETTER I WITH CARON; icarón
 15883 \DeclareTextCompositeCommand{\v}{PU}{i}{\81\320}% U+01D0
 15884 \DeclareTextCompositeCommand{\v}{PU}{i}{\81\320}% U+01D0
 15885 % U+01D1 LATIN CAPITAL LETTER O WITH CARON; Ocaron
 15886 \DeclareTextCompositeCommand{\v}{PU}{O}{\81\321}% U+01D1
 15887 % U+01D2 LATIN SMALL LETTER O WITH CARON; ocaron

15888 \DeclareTextCompositeCommand{\v}{PU}{o}{\81\322}% U+01D2
15889 % U+01D3 LATIN CAPITAL LETTER U WITH CARON; Ucaron
15890 \DeclareTextCompositeCommand{\v}{PU}{U}{\81\323}% U+01D3
15891 % U+01D4 LATIN SMALL LETTER U WITH CARON; ucaron
15892 \DeclareTextCompositeCommand{\v}{PU}{u}{\81\324}% U+01D4
15893 % U+01DD LATIN SMALL LETTER TURNED E; eturned; \inve (wasysym)
15894 \DeclareTextCommand{\textinve}{PU}{\81\335}%* U+01DD
15895 % U+01E4 LATIN CAPITAL LETTER G WITH STROKE; Gstroke
15896 \DeclareTextCommand{\textGslash}{PU}{\81\344}% U+01E4
15897 % U+01E5 LATIN SMALL LETTER G WITH STROKE; gstroke
15898 \DeclareTextCommand{\textgslash}{PU}{\81\345}% U+01E5
15899 %* \textgslash -> \textcrg (tipa)
15900 % U+01E6 LATIN CAPITAL LETTER G WITH CARON; Gcaron
15901 \DeclareTextCompositeCommand{\v}{PU}{G}{\81\346}% U+01E6
15902 % U+01E7 LATIN SMALL LETTER G WITH CARON; gcaron
15903 \DeclareTextCompositeCommand{\v}{PU}{g}{\81\347}% U+01E7
15904 % U+01E8 LATIN CAPITAL LETTER K WITH CARON; Kcaron
15905 \DeclareTextCompositeCommand{\v}{PU}{K}{\81\350}% U+01E8
15906 % U+01E9 LATIN SMALL LETTER K WITH CARON; kcaron
15907 \DeclareTextCompositeCommand{\v}{PU}{k}{\81\351}% U+01E9
15908 % U+01EA LATIN CAPITAL LETTER O WITH OGONEK; Oogonek
15909 \DeclareTextCompositeCommand{\k}{PU}{O}{\81\352}% U+01EA
15910 % U+01EB LATIN SMALL LETTER O WITH OGONEK; oogonek
15911 \DeclareTextCompositeCommand{\k}{PU}{o}{\81\353}% U+01EB
15912 % U+01F0 LATIN SMALL LETTER J WITH CARON; jcaron
15913 \DeclareTextCompositeCommand{\v}{PU}{j}{\81\360}% U+01F0
15914 \DeclareTextCompositeCommand{\v}{PU}{j}{\81\360}% U+01F0
15915 % U+01F4 LATIN CAPITAL LETTER G WITH ACUTE; Gacute
15916 \DeclareTextCompositeCommand{\'}{PU}{G}{\81\364}% U+01F4
15917 % U+01F5 LATIN SMALL LETTER G WITH ACUTE; gacute
15918 \DeclareTextCompositeCommand{\'}{PU}{g}{\81\365}% U+01F5
15919 % U+01F8 LATIN CAPITAL LETTER N WITH GRAVE
15920 \DeclareTextCompositeCommand{\`}{PU}{N}{\81\370}% U+01F8
15921 % U+01F9 LATIN SMALL LETTER N WITH GRAVE
15922 \DeclareTextCompositeCommand{\`}{PU}{n}{\81\371}% U+01F9
15923 % U+01FC LATIN CAPITAL LETTER AE WITH ACUTE; AEacute
15924 \DeclareTextCompositeCommand{\'}{PU}{\AE}{\81\374}% U+01FC
15925 % U+01FD LATIN SMALL LETTER AE WITH ACUTE; aeacute
15926 \DeclareTextCompositeCommand{\'}{PU}{\ae}{\81\375}% U+01FD
15927 % U+01FE LATIN CAPITAL LETTER O WITH STROKE AND ACUTE;
15928 % *Oslashacute, Ostrokeacute
15929 \DeclareTextCompositeCommand{\'}{PU}{\O}{\81\376}% U+01FE
15930 % U+01FF LATIN SMALL LETTER O WITH STROKE AND ACUTE;
15931 % *oslashacute, ostrokeacute
15932 \DeclareTextCompositeCommand{\'}{PU}{\o}{\81\377}% U+01FF
15933 </puenc>
15934 <*puextra>
15935 % U+0200 LATIN CAPITAL LETTER A WITH DOUBLE GRAVE; Adblgrave
15936 \DeclareTextCompositeCommand{\G}{PU}{A}{\82\000}% U+0200
15937 % U+0201 LATIN SMALL LETTER A WITH DOUBLE GRAVE; adblgrave
15938 \DeclareTextCompositeCommand{\G}{PU}{a}{\82\001}% U+0201
15939 % U+0204 LATIN CAPITAL LETTER E WITH DOUBLE GRAVE; Edblgrave
15940 \DeclareTextCompositeCommand{\G}{PU}{E}{\82\004}% U+0204
15941 % U+0205 LATIN SMALL LETTER E WITH DOUBLE GRAVE; edblgrave

15942 \DeclareTextCompositeCommand{\G}{PU}{e}{\82\005}% U+0205
15943 </puextra>
15944 <*puenc>
15945 % U+0206 LATIN CAPITAL LETTER E WITH INVERTED BREVE; Einvert-
edbreve
15946 \DeclareTextCompositeCommand{\textinvbreve}{PU}{E}{\82\006}% U+0206
15947 % U+0207 LATIN SMALL LETTER E WITH INVERTED BREVE; einvert-
breve
15948 \DeclareTextCompositeCommand{\textinvbreve}{PU}{e}{\82\007}% U+0207
15949 </puenc>
15950 <*puextra>
15951 % U+0208 LATIN CAPITAL LETTER I WITH DOUBLE GRAVE; Idblgrave
15952 \DeclareTextCompositeCommand{\G}{PU}{I}{\82\010}% U+0208
15953 % U+0209 LATIN SMALL LETTER I WITH DOUBLE GRAVE; idblgrave
15954 \DeclareTextCompositeCommand{\G}{PU}{i}{\82\011}% U+0209
15955 \DeclareTextCompositeCommand{\G}{PU}{i}{\82\011}% U+0209
15956 </puextra>
15957 <*puenc>
15958 % U+020A LATIN CAPITAL LETTER I WITH INVERTED BREVE; Iinvert-
breve
15959 \DeclareTextCompositeCommand{\textinvbreve}{PU}{I}{\82\012}% U+020A
15960 % U+020B LATIN SMALL LETTER I WITH INVERTED BREVE; iinvert-
breve
15961 \DeclareTextCompositeCommand{\textinvbreve}{PU}{i}{\82\013}% U+020B
15962 \DeclareTextCompositeCommand{\textinvbreve}{PU}{i}{\82\013}% U+020B
15963 </puenc>
15964 <*puextra>
15965 % U+020C LATIN CAPITAL LETTER O WITH DOUBLE GRAVE; Odblgrave
15966 \DeclareTextCompositeCommand{\G}{PU}{O}{\82\014}% U+020C
15967 % U+020D LATIN SMALL LETTER O WITH DOUBLE GRAVE; odblgrave
15968 \DeclareTextCompositeCommand{\G}{PU}{o}{\82\015}% U+020D
15969 </puextra>
15970 <*puenc>
15971 % U+020E LATIN CAPITAL LETTER O WITH INVERTED BREVE; Oinvert-
edbreve
15972 \DeclareTextCompositeCommand{\textinvbreve}{PU}{O}{\82\016}% U+020E
15973 % U+020F LATIN SMALL LETTER O WITH INVERTED BREVE; oinvert-
breve
15974 \DeclareTextCompositeCommand{\textinvbreve}{PU}{o}{\82\017}% U+020F
15975 </puenc>
15976 <*puextra>
15977 % U+0210 LATIN CAPITAL LETTER R WITH DOUBLE GRAVE; Rdblgrave
15978 \DeclareTextCompositeCommand{\G}{PU}{R}{\82\020}% U+0210
15979 % U+0211 LATIN SMALL LETTER R WITH DOUBLE GRAVE; rdblgrave
15980 \DeclareTextCompositeCommand{\G}{PU}{r}{\82\021}% U+0211
15981 % U+0214 LATIN CAPITAL LETTER U WITH DOUBLE GRAVE; Udblgrave
15982 \DeclareTextCompositeCommand{\G}{PU}{U}{\82\024}% U+0214
15983 % U+0215 LATIN SMALL LETTER U WITH DOUBLE GRAVE; udblgrave
15984 \DeclareTextCompositeCommand{\G}{PU}{u}{\82\025}% U+0215
15985 </puextra>
15986 <*puenc>
15987 % U+0216 LATIN CAPITAL LETTER U WITH INVERTED BREVE; Uinvert-
edbreve
15988 \DeclareTextCompositeCommand{\textinvbreve}{PU}{U}{\82\026}% U+0216

15989 % U+0217 LATIN SMALL LETTER U WITH INVERTED BREVE; uninverted-breve
 15990 \DeclareTextCompositeCommand{\textinvbreve}{PU}{u}{\82\027}% U+0217
 15991 % U+021E LATIN CAPITAL LETTER H WITH CARON
 15992 \DeclareTextCompositeCommand{\v}{PU}{H}{\82\036}% U+021E
 15993 % U+021F LATIN SMALL LETTER H WITH CARON
 15994 \DeclareTextCompositeCommand{\v}{PU}{h}{\82\037}% U+021F
 15995 % U+0221 LATIN SMALL LETTER D WITH CURL; \textctd (tipa)
 15996 \DeclareTextCommand{\textctd}{PU}{\82\041}% U+0221
 15997 % U+0225 LATIN SMALL LETTER Z WITH HOOK; \textcommatailz (tipa)
 15998 \DeclareTextCommand{\textcommatailz}{PU}{\82\045}% U+0225
 15999 % U+0226 LATIN CAPITAL LETTER A WITH DOT ABOVE
 16000 \DeclareTextCompositeCommand{\.}{PU}{A}{\82\046}% U+0226
 16001 % U+0227 LATIN SMALL LETTER A WITH DOT ABOVE
 16002 \DeclareTextCompositeCommand{\.}{PU}{a}{\82\047}% U+0227
 16003 % U+0228 LATIN CAPITAL LETTER E WITH CEDILLA
 16004 \DeclareTextCompositeCommand{\c}{PU}{E}{\82\050}% U+0228
 16005 % U+0229 LATIN SMALL LETTER E WITH CEDILLA
 16006 \DeclareTextCompositeCommand{\c}{PU}{e}{\82\051}% U+0229
 16007 % U+022E LATIN CAPITAL LETTER O WITH DOT ABOVE
 16008 \DeclareTextCompositeCommand{\.}{PU}{O}{\82\056}% U+022E
 16009 % U+022F LATIN SMALL LETTER O WITH DOT ABOVE
 16010 \DeclareTextCompositeCommand{\.}{PU}{o}{\82\057}% U+022F
 16011 % U+0232 LATIN CAPITAL LETTER Y WITH MACRON
 16012 \DeclareTextCompositeCommand{=} {PU}{Y}{\82\062}% U+0232
 16013 % U+0233 LATIN SMALL LETTER Y WITH MACRON
 16014 \DeclareTextCompositeCommand{=} {PU}{y}{\82\063}% U+0233
 16015 % U+0235 LATIN SMALL LETTER N WITH CURL; \textctn (tipa)
 16016 \DeclareTextCommand{\textctn}{PU}{\82\065}% U+0235
 16017 % U+0236 LATIN SMALL LETTER T WITH CURL; \textctt (tipa)
 16018 \DeclareTextCommand{\textctt}{PU}{\82\066}% U+0236
 16019 % U+0237 LATIN SMALL LETTER DOTLESS J
 16020 \DeclareTextCommand{\j}{PU}{\82\067}% U+0237
 16021 % U+0238 LATIN SMALL LETTER DB DIGRAPH; \textdblig (tipx)
 16022 \DeclareTextCommand{\textPUdblig}{PU}{\82\070}% U+0238
 16023 %* \textPUdblig -> \textdblig (tipx)
 16024 % U+0239 LATIN SMALL LETTER QP DIGRAPH; \textqplig (tipx)
 16025 \DeclareTextCommand{\textPUqplig}{PU}{\82\071}% U+0239
 16026 %* \textPUqplig -> \textqplig (tipx)
 16027 % U+023C LATIN SMALL LETTER C WITH STROKE; \slashc (wsuipa)
 16028 \DeclareTextCommand{\textslashc}{PU}{\82\074}%* U+023C
 16029 %* \textslashc -> \textcentoldstyle (textcomp)
 16030 % With bar instead of stroke:
 16031 %* \textslashc -> \textbarc (tipa)

46.2.6 IPA Extensions: U+0250 to U+02AF

16032 % U+0250 LATIN SMALL LETTER TURNED A; aturned; \textturna (tipa)
 16033 \DeclareTextCommand{\textturna}{PU}{\82\120}% U+0250
 16034 %* \textturna -> \inva (wasysym)
 16035 % U+0251 LATIN SMALL LETTER ALPHA/LATIN SMALL LETTER
 16036 % SCRIPT A; ascript; \textscripta (tipa), \scripta (wsuipa)
 16037 \DeclareTextCommand{\textscripta}{PU}{\82\121}%* U+0251
 16038 %* \textscripta -> \vara (phonetic)
 16039 % U+0252 LATIN SMALL LETTER TURNED ALPHA; ascriptturned;

16040 % \textturnscripta (tipa)
16041 \DeclareTextCommand{\textturnscripta}{PU}{\82\122}% U+0252
16042 %* \textturnscripta -> \invscripta (wsuipa)
16043 %* \textturnscripta -> \rotvara (phonetic)
16044 % U+0253 LATIN CAPITAL LETTER B WITH HOOK; bhook; \texthtb (tipa)
16045 \DeclareTextCommand{\texthtb}{PU}{\82\123}% U+0253
16046 %* \texthtb -> \hookb (wsuipa)
16047 %* \texthtb -> \hausab (phonetic)
16048 % U+0254 LATIN SMALL LETTER OPEN O; oopen;
16049 % \textopeno (tipa), \openo (wasysym)
16050 \DeclareTextCommand{\textopeno}{PU}{\82\124}% U+0254
16051 %* \textopeno -> \varopeno (phonetic)
16052 % U+0255 LATIN SMALL LETTER C WITH CURL; ccurl; \textctc (tipa)
16053 \DeclareTextCommand{\textctc}{PU}{\82\125}% U+0255
16054 %* \textctc -> \curlyc (wsuipa)
16055 % U+0256 LATIN SMALL LETTER D WITH TAIL; dtail; \textrtaild (tipa)
16056 \DeclareTextCommand{\textrtaild}{PU}{\82\126}% U+0256
16057 %* \textrtaild -> \taild (wsuipa)
16058 % U+0257 LATIN SMALL LETTER D WITH HOOK; dhook; \texthtd (tipa)
16059 \DeclareTextCommand{\texthtd}{PU}{\82\127}% U+0257
16060 %* \texthtd -> \hookd (wsuipa)
16061 %* \texthtd -> \hausad (phonetic)
16062 % U+0258 LATIN SMALL LETTER REVERSED E; ereversed;
16063 % \textreve (tipa), \reve (wsuipa)
16064 \DeclareTextCommand{\textreve}{PU}{\82\130}% U+0258
16065 % U+0259 LATIN SMALL LETTER SCHWA; schwa;
16066 % \textschwa (tipa), \schwa (wsuipa, phonetic)
16067 \DeclareTextCommand{\textschwa}{PU}{\82\131}% U+0259
16068 % U+025A LATIN SMALL LETTER SCHWA WITH HOOK; schwahook;
16069 % \textrhookschwa (tipa)
16070 \DeclareTextCommand{\textrhookschwa}{PU}{\82\132}% U+025A
16071 %* \textrhookschwa -> \er (wsuipa)
16072 % U+025B LATIN SMALL LETTER OPEN E/LATIN SMALL LETTER EP-
SILON; eopen;
16073 % \niepsilon (wsuipa)
16074 \DeclareTextCommand{\textniepsilon}{PU}{\82\133}% U+025B
16075 %* \textniepsilon -> \epsi (phonetic)
16076 % U+025C LATIN SMALL LETTER REVERSED OPEN E; eopenreversed;
16077 % \textrevepsilon (tipa), \revepsilon (wsuipa)
16078 \DeclareTextCommand{\textrevepsilon}{PU}{\82\134}% U+025C
16079 % U+025D LATIN SMALL LETTER REVERSED OPEN E WITH HOOK; eopen-
reversedhook;
16080 % \textrhookrevepsilon (tipa)
16081 \DeclareTextCommand{\textrhookrevepsilon}{PU}{\82\135}% U+025D
16082 %* \textrhookrevepsilon -> \hookrevepsilon (wsuipa)
16083 % U+025E LATIN SMALL LETTER CLOSED REVERSED OPEN E; eopenre-
versedclosed;
16084 % \textcloserevepsilon (tipa)
16085 \DeclareTextCommand{\textcloserevepsilon}{PU}{\82\136}% U+025E
16086 %* \textcloserevepsilon -> \closedrevepsilon (wsuipa)
16087 % U+025F LATIN SMALL LETTER DOTLESS J WITH STROKE; jdot-
lessstroke;
16088 % \textbardotlessj (tipa)
16089 \DeclareTextCommand{\textbardotlessj}{PU}{\82\137}% U+025F

16090 %* \textbardotlessj -> \barj (phonetic)
 16091 % U+0260 LATIN SMALL LETTER G WITH HOOK; ghook; \texthtg (tipa)
 16092 \DeclareTextCommand{\texthtg}{PU}{\82\140}% U+0260
 16093 %* \texthtg -> \hookg (wsuipa)
 16094 % U+0261 LATIN SMALL LETTER SCRIPT G; gscript;
 16095 % \textscriptg (tipa), \scriptg (wsuipa)
 16096 \DeclareTextCommand{\textscriptg}{PU}{\82\141}%* U+0261
 16097 %* \textscriptg -> \varg (phonetic)
 16098 % U+0262 LATIN LETTER SMALL CAPITAL G; \textscg (tipa), \scg (wsuipa)
 16099 \DeclareTextCommand{\textscg}{PU}{\82\142}%* U+0262
 16100 % U+0263 LATIN SMALL LETTER GAMMA; gammadlatinsmall;
 16101 % \ipagamma (wsuipa), \vod (phonetic)
 16102 \DeclareTextCommand{\textipagamma}{PU}{\82\143}%* U+0263
 16103 %* \textipagamma -> \vod (pnonetic)
 16104 % U+0264 LATIN SMALL LETTER RAMS HORN; ramshorn;
 16105 % \babygamma (wsuipa)
 16106 \DeclareTextCommand{\textbabygamma}{PU}{\82\144}%* U+0264
 16107 % U+0265 LATIN SMALL LETTER TURNED H; hturned; \textturnh (tipa)
 16108 \DeclareTextCommand{\textturnh}{PU}{\82\145}% U+0265
 16109 %* \textturnh -> \invh (wsuipa)
 16110 %* \textturnh -> \udesc (phonetic)
 16111 % U+0266 LATIN SMALL LETTER H WITH HOOK; hhook; \texthth (tipa)
 16112 \DeclareTextCommand{\texthth}{PU}{\82\146}% U+0266
 16113 %* \texthth -> \hookh (wsuipa)
 16114 %* \texthth -> \voicedh (phonetic)
 16115 % U+0267 LATIN SMALL LETTER HENG WITH HOOK; henghook; \tex-
 ththeng (tipa)
 16116 \DeclareTextCommand{\texththeng}{PU}{\82\147}% U+0267
 16117 %* \texththeng -> \hookheng (wsuipa)
 16118 % U+0268 LATIN SMALL LETTER I WITH STROKE;
 16119 % \textbari (tipa), \bari (wsuipa)
 16120 \DeclareTextCommand{\textbari}{PU}{\82\150}%* U+0268
 16121 %* \textbari -> \ibar (phonetic)
 16122 % U+0269 LATIN SMALL LETTER IOTA; iotalatin; \niiota (wsuipa)
 16123 \DeclareTextCommand{\textniiota}{PU}{\82\151}%* U+0269
 16124 %* \textniiota -> \vari (phonetic)
 16125 % U+026A LATIN LETTER SMALL CAPITAL I; \textsci (tipa), \sci (wsuipa)
 16126 \DeclareTextCommand{\textsci}{PU}{\82\152}%* U+026A
 16127 % U+026B LATIN SMALL LETTER L WITH MIDDLE TILDE; lmiddletilde;
 16128 % \textltilde (tipa)
 16129 \DeclareTextCommand{\textltilde}{PU}{\82\153}% U+026B
 16130 %* \textltilde -> \tildel (wsuipa)
 16131 % U+026C LATIN SMALL LETTER L WITH BELT; lbelt; \textbeltl (tipa)
 16132 \DeclareTextCommand{\textbeltl}{PU}{\82\154}% U+026C
 16133 %* \textbeltl -> \latfric (wsuipa)
 16134 % U+026D LATIN SMALL LETTER L WITH RETROFLEX HOOK;
 16135 % \hookretroflex; \textrtaill (tipa)
 16136 \DeclareTextCommand{\textrtaill}{PU}{\82\155}% U+026D
 16137 %* \textrtaill -> \taill (wsuipa)
 16138 % U+026E LATIN SMALL LETTER LEZH; lezh; \textlyoghlig (tipa)
 16139 \DeclareTextCommand{\textlyoghlig}{PU}{\82\156}% U+026E
 16140 %* \textlyoghlig -> \lz (wsuipa)
 16141 % U+026F LATIN SMALL LETTER TURNED M; mturned; \textturnm (tipa)
 16142 \DeclareTextCommand{\textturnm}{PU}{\82\157}% U+026F

16143 %* \textturnm -> \invm (wsuipa)
16144 %* \textturnm -> \rotm (phonetic)
16145 % U+0270 LATIN SMALL LETTER TURNED M WITH LONG LEG; mlongleg-
turned;
16146 % \textturnmrleg (tipa)
16147 \DeclareTextCommand{\textturnmrleg}{PU}{\82\160}% U+0270
16148 %* \textturnmrleg -> \legm (wsuipa)
16149 % U+0271 LATIN SMALL LETTER M WITH HOOK; mhook; \textltailm (tipa)
16150 \DeclareTextCommand{\textltailm}{PU}{\82\161}% U+0271
16151 %* \textltailm -> \labdentainas (wsuipa)
16152 %* \textltailm -> \emgma (phonetic)
16153 % U+0272 LATIN SMALL LETTER N WITH LEFT HOOK; nhookleft; \textl-
tailn (tipa)
16154 \DeclareTextCommand{\textltailn}{PU}{\82\162}% U+0272
16155 %* \textltailn -> \nj (wsuipa)
16156 %* \textltailn -> \enya (phonetic)
16157 % U+0273 LATIN SMALL LETTER N WITH RETROFLEX HOOK;
16158 % nhookretroflex; \textrtailn (tipa)
16159 \DeclareTextCommand{\textrtailn}{PU}{\82\163}% U+0273
16160 %* \textrtailn -> \tailn (wsuipa)
16161 % U+0274 LATIN LETTER SMALL CAPITAL N; \textscn (tipa), \scn (wsuipa)
16162 \DeclareTextCommand{\textscn}{PU}{\82\164}% U+0274
16163 % U+0275 LATIN CAPITAL LETTER O WITH MIDDLE TILDE/
16164 % LATIN CAPITAL LETTER BARRED O; obarred;
16165 % \textbaro (tipa), \baro (wsuipa)
16166 % But \baro from stmaryrd is different!
16167 \DeclareTextCommand{\textbaro}{PU}{\82\165}% U+0275
16168 % U+0276 LATIN LETTER SMALL CAPITAL OE; \textscelig (tipa)
16169 \DeclareTextCommand{\textscelig}{PU}{\82\166}% U+0276
16170 % U+0277 LATIN SMALL LETTER CLOSED OMEGA; omegalatinclosed;
16171 % \textcloseomega (tipa)
16172 \DeclareTextCommand{\textcloseomega}{PU}{\82\167}% U+0277
16173 %* \textcloseomega -> \closedniomega (wsuipa)
16174 %* \textcloseomega -> \varomega (phonetic)
16175 % U+0278 LATIN SMALL LETTER PHI; philatin; \nippi (wsuipa)
16176 \DeclareTextCommand{\textnippi}{PU}{\82\170}% U+0278
16177 % U+0279 LATIN SMALL LETTER TURNED R; rturned; \textturnr (tipa)
16178 \DeclareTextCommand{\textturnr}{PU}{\82\171}% U+0279
16179 %* \textturnr -> \invr (wsuipa)
16180 %* \textturnr -> \rotr (phonetic)
16181 % U+027A LATIN SMALL LETTER TURNED R WITH LONG LEG;
16182 % rlonglegturned; \textturnlongleg (tipa)
16183 \DeclareTextCommand{\textturnlongleg}{PU}{\82\172}% U+027A
16184 %* \textturnlongleg -> \invleg (wsuipa)
16185 % U+027B LATIN SMALL LETTER TURNED R WITH HOOK; rhookturned;
16186 % \textturnrrtail (tipa)
16187 \DeclareTextCommand{\textturnrrtail}{PU}{\82\173}% U+027B
16188 %* \textturnrrtail -> \tailinvr (wsuipa)
16189 % U+027C LATIN SMALL LETTER R WITH LONG LEG; rlongleg; \textlon-
glegr (tipa)
16190 \DeclareTextCommand{\textlongleg}{PU}{\82\174}% U+027C
16191 %* \textlongleg -> \leg (wsuipa)
16192 % U+027D LATIN SMALL LETTER R WITH TAIL; rhook; \textrtailr (tipa)
16193 \DeclareTextCommand{\textrtailr}{PU}{\82\175}% U+027D

16194 %* \textrtailr -> \tailr (wsuipa)
16195 % U+027E LATIN SMALL LETTER R WITH FISHHOOK; rfishhook;
16196 % \textfishhookr (tipa)
16197 \DeclareTextCommand{\textfishhookr}{PU}{\82\176}% U+027E
16198 %* \textfishhookr -> \flapr (wsuipa)
16199 %* \textfishhookr -> \flap (phonetic)
16200 % U+027F LATIN SMALL LETTER REVERSED R WITH FISHHOOK; rfishhookreversed;
16201 % \textlhtlongi (tipa)
16202 \DeclareTextCommand{\textlhtlongi}{PU}{\82\177}% U+027F
16203 % U+0280 LATIN LETTER SMALL CAPITAL R; \textscr (tipa), \scr (wsuipa)
16204 \DeclareTextCommand{\textscr}{PU}{\82\200}%* U+0280
16205 % U+0281 LATIN LETTER SMALL CAPITAL INVERTED R; Rsmallinverted;
16206 % \textinvscr (tipa), \invscr (wsuipa)
16207 \DeclareTextCommand{\textinvscr}{PU}{\82\201}%* U+0281
16208 % U+0282 LATIN SMALL LETTER S WITH HOOK; shook; \textrtails (tipa)
16209 \DeclareTextCommand{\textrtails}{PU}{\82\202}% U+0282
16210 %* \textrtails -> \tails (wsuipa)
16211 % U+0283 LATIN SMALL LETTER ESH; esh; \textesh (tipa), \esh (wsuipa)
16212 \DeclareTextCommand{\textesh}{PU}{\82\203}%* U+0283
16213 % U+0284 LATIN SMALL LETTER DOTLESS J WITH STROKE AND HOOK;
16214 % dotlessjstrokehook; \texthtbardotlessj (tipa)
16215 \DeclareTextCommand{\texthtbardotlessj}{PU}{\82\204}% U+0284
16216 % U+0285 LATIN SMALL LETTER SQUAT REVERSED ESH; eshsquatreversed;
16217 % \textvibyi (tipa)
16218 \DeclareTextCommand{\textvibyi}{PU}{\82\205}% U+0285
16219 % U+0286 LATIN SMALL LETTER ESH WITH CURL; eshcurl; \textctesh (tipa)
16220 \DeclareTextCommand{\textctesh}{PU}{\82\206}% U+0286
16221 %* \textctesh -> \curlyesh (wsuipa)
16222 % U+0287 LATIN SMALL LETTER TURNED T; tturned; \textturnt (tipa)
16223 \DeclareTextCommand{\textturnt}{PU}{\82\207}% U+0287
16224 %* \textturnt -> \clickt (wsuipa)
16225 % U+0288 LATIN SMALL LETTER T WITH RETROFLEX HOOK; retroflexhook;
16226 % \textrtailt (tipa)
16227 \DeclareTextCommand{\textrtailt}{PU}{\82\210}% U+0288
16228 %* \textrtailt -> \tailt (wsuipa)
16229 % U+0289 LATIN SMALL LETTER U BAR; ubar;
16230 % \textbaru (tipa), \baru (wsuipa)
16231 \DeclareTextCommand{\textbaru}{PU}{\82\211}%* U+0289
16232 %* \textbaru -> \ubar (phonetic)
16233 % U+028A LATIN SMALL LETTER UPSILON; \niupsilon (wsuipa)
16234 \DeclareTextCommand{\textniupsilon}{PU}{\82\212}%* U+028A
16235 %* \textniupsilon -> \rotOmega (phonetic)
16236 % U+028B LATIN SMALL LETTER V WITH HOOK/LATIN SMALL LETTER SCRIPT V;
16237 % vhook; \textscriptv (tipa), \scriptv (wsuipa)
16238 \DeclareTextCommand{\textscriptv}{PU}{\82\213}%* U+028B
16239 % U+028C LATIN SMALL LETTER TURNED V; vturned; \textturnv (tipa)
16240 \DeclareTextCommand{\textturnv}{PU}{\82\214}%* U+028C
16241 %* \textturnv -> \invv (wsuipa)
16242 %* \textturnv -> \pwedge (phonetic)
16243 % U+028D LATIN SMALL LETTER TURNED W; wturned; \textturnw (tipa)

16244 \DeclareTextCommand{\textturnw}{PU}{\82\215}%* U+028D
16245 %* \textturnw -> \invw (wsuipa)
16246 %* \textturnw -> \rotw (phonetic)
16247 % U+028E LATIN SMALL LETTER TURNED Y; yturned; \textturny (tipa)
16248 \DeclareTextCommand{\textturny}{PU}{\82\216}%* U+028E
16249 %* \textturny -> \invy (wsuipa)
16250 %* \textturny -> \roty (phonetic)
16251 % U+028F LATIN LETTER SMALL CAPITAL Y; \textscy (tipa), \scy (wsuipa)
16252 \DeclareTextCommand{\textscy}{PU}{\82\217}%* U+028F
16253 % U+0290 LATIN SMALL LETTER Z WITH RETROFLEX HOOK; zretroflex-hook;
16254 % \textrtailz (tipa)
16255 \DeclareTextCommand{\textrtailz}{PU}{\82\220}% U+0290
16256 %* \textrtailz -> \tailz (wsuipa)
16257 % U+0291 LATIN SMALL LETTER Z WITH CURL; zcurl; \textctz (tipa)
16258 \DeclareTextCommand{\textctz}{PU}{\82\221}% U+0291
16259 %* \textctz -> \curlyz (wsuipa)
16260 % U+0292 LATIN SMALL LETTER EZH/LATIN SMALL LETTER YOGH; ezh;
16261 % \textyogh (tipa), \yogh (wsuipa)
16262 \DeclareTextCommand{\textyogh}{PU}{\82\222}%* U+0292
16263 % U+0293 LATIN SMALL LETTER EZH WITH CURL/LATIN SMALL LETTER YOGH CURL;
16264 % ezhcurl; \textctyogh (tipa)
16265 \DeclareTextCommand{\textctyogh}{PU}{\82\223}% U+0293
16266 %* \textctyogh -> \curlyyogh (wsuipa)
16267 % U+0294 LATIN LETTER GLOTTAL STOP; glottalstop;
16268 % \textglotstop (tipa), \glotstop (wsuipa)
16269 \DeclareTextCommand{\textglotstop}{PU}{\82\224}%* U+0294
16270 %* \textglotstop -> \ejjective (wsuipa)
16271 %* \textglotstop -> \glottal (phonetic)
16272 % U+0295 LATIN LETTER PHARYNGEAL VOICED FRICATIVE/
16273 % LATIN LETTER REVERSED GLOTTAL STOP; glottalstopreversed;
16274 % \textrevglotstop (tipa), \revglotstop (wsuipa)
16275 \DeclareTextCommand{\textrevglotstop}{PU}{\82\225}%* U+0295
16276 %* \textrevglotstop -> \reveject (wsuipa)
16277 % U+0296 LATIN LETTER INVERTED GLOTTAL STOP; glottalstopinverted;
16278 % \textinvglotstop (tipa), \invglotstop (wsuipa)
16279 \DeclareTextCommand{\textinvglotstop}{PU}{\82\226}%* U+0296
16280 % U+0297 LATIN LETTER STRETCHED C; cstretched; \textstretchc (tipa)
16281 \DeclareTextCommand{\textstretchc}{PU}{\82\227}% U+0297
16282 %* \textstretchc -> \clickc (wsuipa)
16283 %* \textstretchc -> \textstretchcvar (tipx)
16284 % U+0298 LATIN LETTER BILABIAL CLICK; bilabialclick;
16285 % \textbullseye (tipa)
16286 \DeclareTextCommand{\textbullseye}{PU}{\82\230}% U+0298
16287 %* \textbullseye -> \clickb (wsuipa)
16288 %* \textbullseye -> \textObullseye (tipx)
16289 % U+0299 LATIN LETTER SMALL CAPITAL B; \textscb (tipa)
16290 \DeclareTextCommand{\textscb}{PU}{\82\231}% U+0299
16291 % U+029A LATIN SMALL LETTER CLOSED OPEN E; eopenclosed;
16292 % \textcloseepsilon (tipa)
16293 \DeclareTextCommand{\textcloseepsilon}{PU}{\82\232}% U+029A
16294 % U+029B LATIN LETTER SMALL CAPITAL G WITH HOOK; Gsmallhook;
16295 % \texthtscg (tipa)

16296 \DeclareTextCommand{\texthtscg}{PU}{\82\233}% U+029B
 16297 % U+029C LATIN LETTER SMALL CAPITAL H; \textsch (tipa)
 16298 \DeclareTextCommand{\textsch}{PU}{\82\234}% U+029C
 16299 % U+029D LATIN SMALL LETTER J WITH CROSSED-TAIL; jcros-
 tail; \textcdj (tipa)
 16300 \DeclareTextCommand{\textctj}{PU}{\82\235}% U+029D
 16301 %* \textctj -> \textctjvar (tipx)
 16302 % U+029E LATIN SMALL LETTER TURNED K; kturned; \textturnk (tipa)
 16303 \DeclareTextCommand{\textturnk}{PU}{\82\236}% U+029E
 16304 %* \textturnk -> \textturnsck (tipx)
 16305 % U+029F LATIN LETTER SMALL CAPITAL L; \textscsl (tipa)
 16306 \DeclareTextCommand{\textscsl}{PU}{\82\237}% U+029F
 16307 % U+02A0 LATIN SMALL LETTER Q WITH HOOK; qhook; \texthtq (tipa)
 16308 \DeclareTextCommand{\texthtq}{PU}{\82\240}% U+02A0
 16309 % U+02A1 LATIN LETTER GLOTTAL STOP WITH STROKE; glottalstop-
 stroke;
 16310 % \textbarglotstop (tipa)
 16311 \DeclareTextCommand{\textbarglotstop}{PU}{\82\241}% U+02A1
 16312 % U+02A2 LATIN LETTER REVERSED GLOTTAL STOP WITH STROKE/
 16313 % LATIN LETTER REVERSED GLOTTAL STOP BAR; glottalstopstrokere-
 versed;
 16314 % \textbarrevglotstop (tipa)
 16315 \DeclareTextCommand{\textbarrevglotstop}{PU}{\82\242}% U+02A2
 16316 % U+02A3 LATIN SMALL LETTER DZ DIGRAPH; dzaltone; \textdzlig (tipa)
 16317 \DeclareTextCommand{\textdzlig}{PU}{\82\243}% U+02A3
 16318 %* \textdzlig -> \dz (wsupipa)
 16319 % U+02A4 LATIN SMALL LETTER DEZH DIGRAPH; dezh; \textdyogh-
 lig (tipa)
 16320 \DeclareTextCommand{\textdyoghlig}{PU}{\82\244}% U+02A4
 16321 % U+02A5 LATIN SMALL LETTER DZ DIGRAPH WITH CURL; dzcurl;
 16322 % \textdctzlig (tipa)
 16323 \DeclareTextCommand{\textdctzlig}{PU}{\82\245}% U+02A5
 16324 % U+02A6 LATIN SMALL LETTER TS DIGRAPH; ts; \texttslig (tipa)
 16325 \DeclareTextCommand{\texttslig}{PU}{\82\246}% U+02A6
 16326 % U+02A7 LATIN SMALL LETTER TESH DIGRAPH; tesh; \textteshlig (tipa)
 16327 \DeclareTextCommand{\textteshlig}{PU}{\82\247}% U+02A7
 16328 %* \textteshlig -> \tesh (wsuipa)
 16329 % U+02A8 LATIN SMALL LETTER TC DIGRAPH WITH CURL; tccurl;
 16330 % \texttctclig (tipa)
 16331 \DeclareTextCommand{\texttctclig}{PU}{\82\250}% U+02A8
 16332 % U+02AE LATIN SMALL LETTER TURNED H WITH FISHHOOK;
 16333 % \textlhtlongy (tipa)
 16334 \DeclareTextCommand{\textlhtlongy}{PU}{\82\256}% U+02AE
 16335 % U+02AF LATIN SMALL LETTER TURNED H WITH FISHHOOK AND TAIL;
 16336 % \textvibyy (tipa)
 16337 \DeclareTextCommand{\textvibyy}{PU}{\82\257}% U+02AF

46.2.7 Spacing Modifier Letters: U+02B0 to U+02FF

16338 % U+02BD MODIFIER LETTER REVERSED COMMA;
 16339 % commareversedmod, afi64937; \textrevapostrophe (tipa)
 16340 \DeclareTextCommand{\textrevapostrophe}{PU}{\82\275}% U+02BD
 16341 % U+02C0 MODIFIER LETTER GLOTTAL STOP; glottalstopmod;
 16342 % \textraiseglotstop (tipa)
 16343 \DeclareTextCommand{\textraiseglotstop}{PU}{\82\300}% U+02C0

16344 % U+02C2 MODIFIER LETTER LEFT ARROWHEAD; arrowheadleftmod;
 16345 % \textlptr (tipa)
 16346 \DeclareTextCommand{\textlptr}{PU}{\82\302}% U+02C2
 16347 % U+02C3 MODIFIER LETTER RIGHT ARROWHEAD; arrowheadrightmod;
 16348 % \textrptr (tipa)
 16349 \DeclareTextCommand{\textrptr}{PU}{\82\303}% U+02C3
 16350 % U+02C7 CARON; caron
 16351 \DeclareTextCommand{\textasciicaron}{PU}{\82\307}% U+02C7
 16352 % U+02C8 MODIFIER LETTER VERTICAL LINE; verticallinemod;
 16353 % \textprimstress (tipa)
 16354 \DeclareTextCommand{\textprimstress}{PU}{\82\310}% U+02C8
 16355 % U+02CC MODIFIER LETTER LOW VERTICAL LINE; verticallinelowmod;
 16356 % \textsecstress (tipa)
 16357 \DeclareTextCommand{\textsecstress}{PU}{\82\314}% U+02CC
 16358 % U+02D0 MODIFIER LETTER TRIANGULAR COLON; colontriangularmod;
 16359 % \textlengthmark (tipa)
 16360 \DeclareTextCommand{\textlengthmark}{PU}{\82\320}% U+02D0
 16361 % U+02D1 MODIFIER LETTER HALF TRIANGULAR COLON; colontriangularhalfmod;
 16362 % \texthalflength (tipa)
 16363 \DeclareTextCommand{\texthalflength}{PU}{\82\321}% U+02D1
 16364 % U+02D8 BREVE; breve
 16365 \DeclareTextCommand{\textasciibreve}{PU}{\82\330}% U+02D8
 16366 % U+02D9 DOT ABOVE; dotaccent
 16367 \DeclareTextCommand{\textdotaccent}{PU}{\82\331}% U+02D9
 16368 % U+02DA RING ABOVE; ring
 16369 \DeclareTextCommand{\textring}{PU}{\82\332}% U+02DA
 16370 % U+02DB OGONEK; ogonek
 16371 \DeclareTextCommand{\textogonek}{PU}{\82\333}% U+02DB
 16372 % U+02DC SMALL TILDE; ilde, *tilde
 16373 \DeclareTextCommand{\texttilde}{PU}{\82\334}% U+02DC
 16374 % U+02DD DOUBLE ACUTE ACCENT; hungarumlaut
 16375 \DeclareTextCommand{\texthungarumlaut}{PU}{\82\335}% U+02DD
 16376 \DeclareTextCommand{\textacutedbl}{PU}{\82\335}% U+02DD
 16377 % U+02F3 MODIFIER LETTER LOW RING
 16378 \DeclareTextCommand{\textringlow}{PU}{\82\363}% U+02F3
 16379 % U+02F5 MODIFIER LETTER MIDDLE DOUBLE GRAVE ACCENT
 16380 \DeclareTextCommand{\textgravedbl}{PU}{\82\365}% U+02F5
 16381 % U+02F7 MODIFIER LETTER LOW TILDE
 16382 \DeclareTextCommand{\texttildelow}{PU}{\82\367}% U+02F7
 16383 % U+02F9 MODIFIER LETTER BEGIN HIGH TONE; \textopencorner (tipa)
 16384 \DeclareTextCommand{\textopencorner}{PU}{\82\371}% U+02F9
 16385 % U+02FA MODIFIER LETTER END HIGH TONE; \textcorner (tipa)
 16386 \DeclareTextCommand{\textcorner}{PU}{\82\372}% U+02FA

46.2.8 Combining Diacritical Marks: U+0300 to U+036F

16387 % U+030F COMBINING DOUBLE GRAVE ACCENT; dblgravecmb
 16388 \DeclareTextCommand{\textdoublegrave}{PU}{\83\017}% U+030F
 16389 % U+0311 COMBINING INVERTED BREVE; breveinvertedcmb
 16390 \DeclareTextCommand{\textnewtie}{PU}{\83\021}% U+0311
 16391 % U+0323 COMBINING DOT BELOW; dotbelowcmb, *dotbelowcmb
 16392 \DeclareTextCommand{\textdotbelow}{PU}{\83\043}% U+0323
 16393 % U+0331 COMBINING MACRON BELOW; macronbelowcmb
 16394 \DeclareTextCommand{\textmacronbelow}{PU}{\83\061}% U+0331

16395 % U+0361 COMBINING DOUBLE INVERTED BREVE; breveinverteddoublecmb

16396 \DeclareTextCommand{\texttie}{PU}{\83\141}% U+0361

46.2.9 Greek and Coptic: U+0370 to U+03FF

Greek is only loaded if \textBeta is defined.

16397 \ifx\textBeta\@undefined \else

16398 \input{puenc-greekbasic.def}

16399 \fi

16400 \end{puenc}

16401 \end{pugreek}

16402 % U+0374 GREEK NUMERAL SIGN; numeralsigngreek

16403 \DeclareTextCommand{\textnumeralsigngreek}{PU}{\83\164}% U+0374

16404 \DeclareTextCommand{\textdexiakeraia}{PU}{\83\164}% U+0374

16405 % U+0375 GREEK LOWER NUMERAL SIGN; numeralsignlowergreek

16406 \DeclareTextCommand{\textnumeralsignlowergreek}{PU}{\83\165}% U+0375

16407 \DeclareTextCommand{\textaristerikeraia}{PU}{\83\165}% U+0375

16408 % U+0386 GREEK CAPITAL LETTER ALPHA WITH TONOS; Alphanos

16409 \DeclareTextCompositeCommand{\'}{PU}{\textAlpha}{\83\206}% U+0386

16410 % U+0388 GREEK CAPITAL LETTER EPSILON WITH TONOS; Epsilontonos

16411 \DeclareTextCompositeCommand{\'}{PU}{\textEpsilon}{\83\210}% U+0388

16412 % U+0389 GREEK CAPITAL LETTER ETA WITH TONOS; Etatonos

16413 \DeclareTextCompositeCommand{\'}{PU}{\textEta}{\83\211}% U+0389

16414 % U+038A GREEK CAPITAL LETTER IOTA WITH TONOS; Iotatonos

16415 \DeclareTextCompositeCommand{\'}{PU}{\textIota}{\83\212}% U+038A

16416 % U+038C GREEK CAPITAL LETTER OMICRON WITH TONOS; Omicrontonos

16417 \DeclareTextCompositeCommand{\'}{PU}{\textOmicron}{\83\214}% U+038C

16418 % U+038E GREEK CAPITAL LETTER UPSILON WITH TONOS; Upsilononos

16419 \DeclareTextCompositeCommand{\'}{PU}{\textUpsilon}{\83\216}% U+038E

16420 % U+038F GREEK CAPITAL LETTER OMEGA WITH TONOS; Omegatonos

16421 \DeclareTextCompositeCommand{\'}{PU}{\textOmega}{\83\217}% U+038F

16422 % U+0390 GREEK SMALL LETTER IOTA WITH DIALYTIKA AND TONOS;

16423 % iotadieresisonos

16424 \DeclareTextCompositeCommand{\'}{PU}{\textIotadieresis}{\83\220}% U+0390

16425 % U+0391 GREEK CAPITAL LETTER ALPHA; Alpha

16426 \DeclareTextCommand{\textAlpha}{PU}{\83\221}% U+0391

16427 % U+0392 GREEK CAPITAL LETTER BETA; Beta

16428 \DeclareTextCommand{\textBeta}{PU}{\83\222}% U+0392

16429 % U+0393 GREEK CAPITAL LETTER GAMMA; Gamma; \Gamma (LaTeX)

16430 \DeclareTextCommand{\textGamma}{PU}{\83\223}% U+0393

16431 % U+0394 GREEK CAPITAL LETTER DELTA; Deltagreek, *Delta; \Delta (LaTeX)

16432 \DeclareTextCommand{\textDelta}{PU}{\83\224}% U+0394

16433 % U+0395 GREEK CAPITAL LETTER EPSILON; Epsilon

16434 \DeclareTextCommand{\textEpsilon}{PU}{\83\225}% U+0395

16435 % U+0396 GREEK CAPITAL LETTER ZETA; Zeta

16436 \DeclareTextCommand{\textZeta}{PU}{\83\226}% U+0396

16437 % U+0397 GREEK CAPITAL LETTER ETA; Eta

16438 \DeclareTextCommand{\textEta}{PU}{\83\227}% U+0397

16439 % U+0398 GREEK CAPITAL LETTER THETA; Theta; \Theta (LaTeX)

16440 \DeclareTextCommand{\textTheta}{PU}{\83\230}% U+0398

16441 % U+0399 GREEK CAPITAL LETTER IOTA; Iota

16442 \DeclareTextCommand{\textIota}{PU}{\83\231}% U+0399

16443 % U+039A GREEK CAPITAL LETTER KAPPA; Kappa
16444 \DeclareTextCommand{\textKappa}{PU}{\83\232}% U+039A
16445 % U+039B GREEK CAPITAL LETTER LAMDA; Lambda; \Lambda (LaTeX)
16446 \DeclareTextCommand{\textLambda}{PU}{\83\233}%* U+039B
16447 % U+039C GREEK CAPITAL LETTER MU; Mu
16448 \DeclareTextCommand{\textMu}{PU}{\83\234}% U+039C
16449 % U+039D GREEK CAPITAL LETTER NU; Nu
16450 \DeclareTextCommand{\textNu}{PU}{\83\235}% U+039D
16451 % U+039E GREEK CAPITAL LETTER XI; Xi; \Xi (LaTeX)
16452 \DeclareTextCommand{\textXi}{PU}{\83\236}%* U+039E
16453 % U+039F GREEK CAPITAL LETTER OMICRON; Omicron
16454 \DeclareTextCommand{\textOmicron}{PU}{\83\237}% U+039F
16455 % U+03A0 GREEK CAPITAL LETTER PI; Pi
16456 \DeclareTextCommand{\textPi}{PU}{\83\240}%* U+03A0
16457 % U+03A1 GREEK CAPITAL LETTER RHO; Rho
16458 \DeclareTextCommand{\textRho}{PU}{\83\241}% U+03A1
16459 % U+03A3 GREEK CAPITAL LETTER SIGMA; Sigma; \Sigma (LaTeX)
16460 \DeclareTextCommand{\textSigma}{PU}{\83\243}%* U+03A3
16461 % U+03A4 GREEK CAPITAL LETTER TAU; Tau
16462 \DeclareTextCommand{\textTau}{PU}{\83\244}% U+03A4
16463 % U+03A5 GREEK CAPITAL LETTER UPSILON; Upsilon; \Upsilon (LaTeX)
16464 \DeclareTextCommand{\textUpsilon}{PU}{\83\245}%* U+03A5
16465 % U+03A6 GREEK CAPITAL LETTER PHI; Phi; \Phi (LaTeX)
16466 \DeclareTextCommand{\textPhi}{PU}{\83\246}%* U+03A6
16467 % U+03A7 GREEK CAPITAL LETTER CHI; Chi
16468 \DeclareTextCommand{\textChi}{PU}{\83\247}% U+03A7
16469 % U+03A8 GREEK CAPITAL LETTER PSI; Psi; \Psi (LaTeX)
16470 \DeclareTextCommand{\textPsi}{PU}{\83\250}%* U+03A8
16471 % U+03A9 GREEK CAPITAL LETTER OMEGA; Omegagreek, *Omega;
16472 % \Omega (LaTeX)
16473 \DeclareTextCommand{\textOmega}{PU}{\83\251}%* U+03A9
16474 % U+03AA GREEK CAPITAL LETTER IOTA WITH DIALYTIKA; Iotadieresis
16475 \DeclareTextCommand{\textIotadieresis}{PU}{\83\252}% U+03AA
16476 \DeclareTextCompositeCommand{"}{PU}{\textIota}{\83\252}% U+03AA
16477 % U+03AB GREEK CAPITAL LETTER UPSILON WITH DIALYTIKA; Up-
silonadieresis
16478 \DeclareTextCompositeCommand{"}{PU}{\textUpsilon}{\83\253}% U+03AB
16479 % U+03AC GREEK SMALL LETTER ALPHA WITH TONOS; alphanos
16480 \DeclareTextCompositeCommand{'}{PU}{\textalpha}{\83\254}%* U+03AC
16481 % U+03AD GREEK SMALL LETTER EPSILON WITH TONOS; epsilontonos
16482 \DeclareTextCompositeCommand{'}{PU}{\textepsilon}{\83\255}% U+03AD
16483 % U+03AE GREEK SMALL LETTER ETA WITH TONOS; etatonos
16484 \DeclareTextCompositeCommand{'}{PU}{\texteta}{\83\256}% U+03AE
16485 % U+03AF GREEK SMALL LETTER IOTA WITH TONOS; iotatonos
16486 \DeclareTextCompositeCommand{'}{PU}{\textiota}{\83\257}% U+03AF
16487 % U+03B0 GREEK SMALL LETTER UPSILON WITH DIALYTIKA
16488 % AND TONOS; upsilonadieresis
16489 \DeclareTextCompositeCommand{"}{PU}{\textupsilonacute}{\83\260}% U+03B0
16490 % U+03B1 GREEK SMALL LETTER ALPHA; alpha; \alpha (LaTeX)
16491 \DeclareTextCommand{\textalpha}{PU}{\83\261}%* U+03B1
16492 % U+03B2 GREEK SMALL LETTER BETA; beta; \beta (LaTeX)
16493 \DeclareTextCommand{\textbeta}{PU}{\83\262}%* U+03B2
16494 % U+03B3 GREEK SMALL LETTER GAMMA; gamma; \gamma (LaTeX)
16495 \DeclareTextCommand{\textgamma}{PU}{\83\263}%* U+03B3

16496 % U+03B4 GREEK SMALL LETTER DELTA; delta; \delta (LaTeX)
16497 \DeclareTextCommand{\textdelta}{PU}{\83\264}%* U+03B4
16498 % U+03B5 GREEK SMALL LETTER EPSILON; epsilon; \epsilon (LaTeX)
16499 \DeclareTextCommand{\textepsilon}{PU}{\83\265}%* U+03B5
16500 % U+03B6 GREEK SMALL LETTER ZETA; zeta; \zeta (LaTeX)
16501 \DeclareTextCommand{\textzeta}{PU}{\83\266}%* U+03B6
16502 % U+03B7 GREEK SMALL LETTER ETA; eta; \eta (LaTeX)
16503 \DeclareTextCommand{\texteta}{PU}{\83\267}%* U+03B7
16504 % U+03B8 GREEK SMALL LETTER THETA; theta; \theta (LaTeX)
16505 \DeclareTextCommand{\texttheta}{PU}{\83\270}%* U+03B8
16506 % U+03B9 GREEK SMALL LETTER IOTA; iota; \iota (LaTeX)
16507 \DeclareTextCommand{\textiota}{PU}{\83\271}%* U+03B9
16508 % U+03BA GREEK SMALL LETTER KAPPA; kappa; \kappa (LaTeX)
16509 \DeclareTextCommand{\textkappa}{PU}{\83\272}%* U+03BA
16510 % U+03BB GREEK SMALL LETTER LAMDA; lambda; \lambda (LaTeX)
16511 \DeclareTextCommand{\textlambda}{PU}{\83\273}%* U+03BB
16512 % U+03BC GREEK SMALL LETTER MU; mugreek, *mu; \mu (LaTeX)
16513 \DeclareTextCommand{\textmugreek}{PU}{\83\274}%* U+03BC
16514 % U+03BD GREEK SMALL LETTER NU; nu; \nu (LaTeX)
16515 \DeclareTextCommand{\textnu}{PU}{\83\275}%* U+03BD
16516 % U+03BE GREEK SMALL LETTER XI; xi; \xi (LaTeX)
16517 \DeclareTextCommand{\textxi}{PU}{\83\276}%* U+03BE
16518 % U+03BF GREEK SMALL LETTER OMICRON; omicron
16519 \DeclareTextCommand{\textomicron}{PU}{\83\277}% U+03BF
16520 % U+03C0 GREEK SMALL LETTER PI; pi; \pi (LaTeX)
16521 \DeclareTextCommand{\textpi}{PU}{\83\300}%* U+03C0
16522 % U+03C1 GREEK SMALL LETTER RHO; rho; \rho (LaTeX)
16523 \DeclareTextCommand{\textrho}{PU}{\83\301}%* U+03C1
16524 % U+03C2 GREEK SMALL LETTER FINAL SIGMA; *sigma1, sigmafinal
16525 \DeclareTextCommand{\textvarsigma}{PU}{\83\302}%* U+03C2
16526 % U+03C3 GREEK SMALL LETTER SIGMA; sigma; \sigma (LaTeX)
16527 \DeclareTextCommand{\textsigma}{PU}{\83\303}%* U+03C3
16528 % U+03C4 GREEK SMALL LETTER TAU; tau; \tau (LaTeX)
16529 \DeclareTextCommand{\texttau}{PU}{\83\304}%* U+03C4
16530 % U+03C5 GREEK SMALL LETTER UPSILON; upsilon; \upsilon (LaTeX)
16531 \DeclareTextCommand{\textupsilon}{PU}{\83\305}%* U+03C5
16532 % U+03C6 GREEK SMALL LETTER PHI; phi; \phi (LaTeX)
16533 \DeclareTextCommand{\textphi}{PU}{\83\306}%* U+03C6
16534 % U+03C7 GREEK SMALL LETTER CHI; chi; \chi (LaTeX)
16535 \DeclareTextCommand{\textchi}{PU}{\83\307}%* U+03C7
16536 % U+03C8 GREEK SMALL LETTER PSI; psi; \psi (LaTeX)
16537 \DeclareTextCommand{\textpsi}{PU}{\83\310}%* U+03C8
16538 % U+03C9 GREEK SMALL LETTER OMEGA; omega; \omega (LaTeX)
16539 \DeclareTextCommand{\textomega}{PU}{\83\311}%* U+03C9
16540 % U+03CA GREEK SMALL LETTER IOTA WITH DIALYTIKA; iotadieresis
16541 \DeclareTextCompositeCommand{"}{PU}{\textiota}{\83\312}% U+03CA
16542 % U+03CB GREEK SMALL LETTER UPSILON WITH DIALYTIKA; up-
silondieresis
16543 \DeclareTextCompositeCommand{"}{PU}{\textupsilon}{\83\313}% U+03CB
16544 % U+03CC GREEK SMALL LETTER OMICRON WITH TONOS; omicrontonos
16545 \DeclareTextCompositeCommand{'}{PU}{\textomicron}{\83\314}% U+03CC
16546 % U+03CD GREEK SMALL LETTER UPSILON WITH TONOS; upsilontonos
16547 \DeclareTextCommand{\textupsilonacute}{PU}{\83\315}% U+03CD
16548 \DeclareTextCompositeCommand{'}{PU}{\textupsilon}{\83\315}% U+03CD

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16549 % U+03CE GREEK SMALL LETTER OMEGA WITH TONOS; omegatonos
16550 \DeclareTextCompositeCommand{\'}{PU}{\textomega}{\83\316}% U+03CE
16551 % U+03D8 GREEK LETTER ARCHAIC KOPPA;
16552 \DeclareTextCommand{\textQoppa}{PU}{\83\330}% U+03D8
16553 % U+03D9 GREEK SMALL LETTER ARCHAIC KOPPA;
16554 \DeclareTextCommand{\textqoppa}{PU}{\83\331}% U+03D9
16555 % U+03DA GREEK LETTER STIGMA; Stigmatreek
16556 \DeclareTextCommand{\textStigmatreek}{PU}{\83\332}% U+03DA
16557 \DeclareTextCommand{\textStigma}{PU}{\83\332}% U+03DA
16558 % U+03DB GREEK SMALL LETTER STIGMA
16559 \DeclareTextCommand{\textstigmatreek}{PU}{\83\333}% U+03DB
16560 \DeclareTextCommand{\textstigma}{PU}{\83\333}% U+03DB
16561 % U+03DC GREEK LETTER DIGAMMA; Digammagreek
16562 \DeclareTextCommand{\textDigammagreek}{PU}{\83\334}% U+03DC
16563 \DeclareTextCommand{\textDigamma}{PU}{\83\334}% U+03DC
16564 % U+03DD GREEK SMALL LETTER DIGAMMA
16565 \DeclareTextCommand{\textdigammagreek}{PU}{\83\335}% U+03DD
16566 \DeclareTextCommand{\textdigamma}{PU}{\83\335}% U+03DD
16567 %* \textdigammagreek -> \digamma (AmS)
16568 % U+03DE GREEK LETTER KOPPA; Koppagreek
16569 \DeclareTextCommand{\textKoppa}{PU}{\83\336}% U+03DE
16570 \DeclareTextCommand{\textKoppagreek}{PU}{\83\336}% U+03DE
16571 % U+03DF GREEK SMALL LETTER KOPPA
16572 \DeclareTextCommand{\textkoppa}{PU}{\83\337}% U+03DF
16573 \DeclareTextCommand{\textkoppagreek}{PU}{\83\337}% U+03DF
16574 % U+03E0 GREEK LETTER SAMPI; Sampigreek
16575 \DeclareTextCommand{\textSampigreek}{PU}{\83\340}% U+03E0
16576 \DeclareTextCommand{\textSampi}{PU}{\83\340}% U+03E0
16577 % U+03E1 GREEK SMALL LETTER SAMPI
16578 \DeclareTextCommand{\textsampigreek}{PU}{\83\341}% U+03E1
16579 \DeclareTextCommand{\textsampi}{PU}{\83\341}% U+03E1
16580 % U+03F6 GREEK REVERSED LUNATE EPSILON SYMBOL;
16581 % \backepsilon (AmS)
16582 \DeclareTextCommand{\textbackepsilon}{PU}{\83\366}% U+03F6
16583 \pugreek

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46.2.10 Cyrillic: U+0400 to U+04FF

Thanks to Vladimir Volovich (vvv@vvv.vsu.ru) for the help with the Cyrillic glyph names. Cyrillic only loaded if \CYRDZE is defined.

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16584 (*puenc)
16585 \ifx\CYRDZE\@undefined \else
16586 % U+0400 CYRILLIC CAPITAL LETTER IE WITH GRAVE
16587 \DeclareTextCompositeCommand{\'}{PU}{\CYRE}{\84\000}% U+0400
16588 % U+0401 CYRILLIC CAPITAL LETTER IO; Iocyrillic, *afi10023
16589 \DeclareTextCommand{\CYRYO}{PU}{\84\001}% U+0401
16590 \DeclareTextCompositeCommand{\"}{PU}{\CYRE}{\84\001}% U+0401
16591 % U+0402 CYRILLIC CAPITAL LETTER DJE; Djecyrillic, *afi10051
16592 \DeclareTextCommand{\CYRDJE}{PU}{\84\002}% U+0402
16593 % U+0403 CYRILLIC CAPITAL LETTER GJE; Gjecyrillic, *afi10052
16594 \DeclareTextCompositeCommand{\'}{PU}{\CYRG}{\84\003}% U+0403
16595 % U+0404 CYRILLIC CAPITAL LETTER UKRAINIAN IE; Ecyrillic, *afi10053
16596 \DeclareTextCommand{\CYRIE}{PU}{\84\004}% U+0404
16597 % U+0405 CYRILLIC CAPITAL LETTER DZE; Dzecyrillic, *afi10054

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16598 \DeclareTextCommand{\CYRDZE}{PU}{\84\005}% U+0405
16599 % U+0406 CYRILLIC CAPITAL LETTER BYELORUSSIAN-UKRAINIAN I;
16600 % Icyrillic, *afii10055
16601 \DeclareTextCommand{\CYRII}{PU}{\84\006}% U+0406
16602 % U+0407 CYRILLIC CAPITAL LETTER YI; Yicyrillic, *afii10056
16603 \DeclareTextCommand{\CYRYI}{PU}{\84\007}% U+0407
16604 \DeclareTextCompositeCommand{"}{PU}{\CYRII}{\84\007}% U+0407
16605 % U+0408 CYRILLIC CAPITAL LETTER JE; Jecyrillic, *afii10057
16606 \DeclareTextCommand{\CYRJE}{PU}{\84\010}% U+0408
16607 % U+0409 CYRILLIC CAPITAL LETTER LJE; Ljecyrillic, *afii10058
16608 \DeclareTextCommand{\CYRLJE}{PU}{\84\011}% U+0409
16609 % U+040A CYRILLIC CAPITAL LETTER NJE; Njecyrillic, *afii10059
16610 \DeclareTextCommand{\CYRNJE}{PU}{\84\012}% U+040A
16611 % U+040B CYRILLIC CAPITAL LETTER TSHE; Tshecyrillic, *afii10060
16612 \DeclareTextCommand{\CYRTSHE}{PU}{\84\013}% U+040B
16613 % U+040C CYRILLIC CAPITAL LETTER KJE; Kjecyrillic, *afii10061
16614 \DeclareTextCompositeCommand{'}{PU}{\CYRK}{\84\014}% U+040C
16615 % U+040D CYRILLIC CAPITAL LETTER I WITH GRAVE
16616 \DeclareTextCompositeCommand`{PU}{\CYRI}{\84\015}% U+040D
16617 % U+040E CYRILLIC CAPITAL LETTER SHORT U; Ushortcyrillic, *afii10062
16618 \DeclareTextCommand{\CYRUSHRT}{PU}{\84\016}% U+040E
16619 \DeclareTextCompositeCommand{\U}{PU}{\CYRU}{\84\016}% U+040E
16620 % U+040F CYRILLIC CAPITAL LETTER DZHE; Dzhecyrillic, *afii10145
16621 \DeclareTextCommand{\CYRDZHE}{PU}{\84\017}% U+040F
16622 % U+0410 CYRILLIC CAPITAL LETTER A; Acyrillic, *afii10017
16623 \DeclareTextCommand{\CYRA}{PU}{\84\020}% U+0410
16624 % U+0411 CYRILLIC CAPITAL LETTER BE; Becyrillic, *afii10018
16625 \DeclareTextCommand{\CYRB}{PU}{\84\021}% U+0411
16626 % U+0412 CYRILLIC CAPITAL LETTER VE; Vecyrillic, *afii10019
16627 \DeclareTextCommand{\CYRV}{PU}{\84\022}% U+0412
16628 % U+0413 CYRILLIC CAPITAL LETTER GHE; Gecyrillic, *afii10020
16629 \DeclareTextCommand{\CYRG}{PU}{\84\023}% U+0413
16630 % U+0414 CYRILLIC CAPITAL LETTER DE; Decyrillic, *afii10021
16631 \DeclareTextCommand{\CYRD}{PU}{\84\024}% U+0414
16632 % U+0415 CYRILLIC CAPITAL LETTER IE; Iecyrillic, *afii10022
16633 \DeclareTextCommand{\CYRE}{PU}{\84\025}% U+0415
16634 % U+0416 CYRILLIC CAPITAL LETTER ZHE; Zhecyrillic, *afii10024
16635 \DeclareTextCommand{\CYRZH}{PU}{\84\026}% U+0416
16636 % U+0417 CYRILLIC CAPITAL LETTER ZE; Zecyrillic, *afii10025
16637 \DeclareTextCommand{\CYRZ}{PU}{\84\027}% U+0417
16638 % U+0418 CYRILLIC CAPITAL LETTER I; Iicyrillic, *afii10026
16639 \DeclareTextCommand{\CYRI}{PU}{\84\030}% U+0418
16640 % U+0419 CYRILLIC CAPITAL LETTER SHORT I; Iishortcyrillic, *afii10027
16641 \DeclareTextCommand{\CYRISHRT}{PU}{\84\031}% U+0419
16642 \DeclareTextCompositeCommand{\U}{PU}{\CYRI}{\84\031}% U+0419
16643 % U+041A CYRILLIC CAPITAL LETTER KA; Kacyrillic, *afii10028
16644 \DeclareTextCommand{\CYRK}{PU}{\84\032}% U+041A
16645 % U+041B CYRILLIC CAPITAL LETTER EL; Elcyrillic, *afii10029
16646 \DeclareTextCommand{\CYRL}{PU}{\84\033}% U+041B
16647 % U+041C CYRILLIC CAPITAL LETTER EM; Emcyrillic, *afii10030
16648 \DeclareTextCommand{\CYRM}{PU}{\84\034}% U+041C
16649 % U+041D CYRILLIC CAPITAL LETTER EN; Encyrillic, *afii10031
16650 \DeclareTextCommand{\CYRN}{PU}{\84\035}% U+041D
16651 % U+041E CYRILLIC CAPITAL LETTER O; Ocyrillic, *afii10032

16652 \DeclareTextCommand{\CYRO}{PU}{\84\036}% U+041E
16653 % U+041F CYRILLIC CAPITAL LETTER PE; Pecyrillic, *afii10033
16654 \DeclareTextCommand{\CYRP}{PU}{\84\037}% U+041F
16655 % U+0420 CYRILLIC CAPITAL LETTER ER; Ercyrillic, *afii10034
16656 \DeclareTextCommand{\CYRR}{PU}{\84\040}% U+0420
16657 % U+0421 CYRILLIC CAPITAL LETTER ES; Escyrillic, *afii10035
16658 \DeclareTextCommand{\CYRS}{PU}{\84\041}% U+0421
16659 % U+0422 CYRILLIC CAPITAL LETTER TE; Tecyrillic, *afii10036
16660 \DeclareTextCommand{\CYRT}{PU}{\84\042}% U+0422
16661 % U+0423 CYRILLIC CAPITAL LETTER U; Ucyrillic, *afii10037
16662 \DeclareTextCommand{\CYRU}{PU}{\84\043}% U+0423
16663 % U+0424 CYRILLIC CAPITAL LETTER EF; Efcyrillic, *afii10038
16664 \DeclareTextCommand{\CYRF}{PU}{\84\044}% U+0424
16665 % U+0425 CYRILLIC CAPITAL LETTER HA; Khacyrillic, *afii10039
16666 \DeclareTextCommand{\CYRH}{PU}{\84\045}% U+0425
16667 % U+0426 CYRILLIC CAPITAL LETTER TSE; Tsecyrillic, *afii10040
16668 \DeclareTextCommand{\CYRC}{PU}{\84\046}% U+0426
16669 % U+0427 CYRILLIC CAPITAL LETTER CHE; Checyrillic, *afii10041
16670 \DeclareTextCommand{\CYRCH}{PU}{\84\047}% U+0427
16671 % U+0428 CYRILLIC CAPITAL LETTER SHA; Shacyrillic, *afii10042
16672 \DeclareTextCommand{\CYRSH}{PU}{\84\050}% U+0428
16673 % U+0429 CYRILLIC CAPITAL LETTER SHCHA; Shchacyrillic, *afii10043
16674 \DeclareTextCommand{\CYRSHCH}{PU}{\84\051}% U+0429
16675 % U+042A CYRILLIC CAPITAL LETTER HARD SIGN;
16676 % Hardsigncyrillic, *afii10044
16677 \DeclareTextCommand{\CYRHRDSN}{PU}{\84\052}% U+042A
16678 % U+042B CYRILLIC CAPITAL LETTER YERU; Yericyrillic, *afii10045
16679 \DeclareTextCommand{\CYRERY}{PU}{\84\053}% U+042B
16680 % U+042C CYRILLIC CAPITAL LETTER SOFT SIGN;
16681 % Softsigncyrillic, *afii10046
16682 \DeclareTextCommand{\CYRSFTSN}{PU}{\84\054}% U+042C
16683 % U+042D CYRILLIC CAPITAL LETTER E; Eversedcyrillic, *afii10047
16684 \DeclareTextCommand{\CYREREV}{PU}{\84\055}% U+042D
16685 % U+042E CYRILLIC CAPITAL LETTER YU; IUCyrillic, *afii10048
16686 \DeclareTextCommand{\CYRYU}{PU}{\84\056}% U+042E
16687 % U+042F CYRILLIC CAPITAL LETTER YA; IAcyrillic, *afii10049
16688 \DeclareTextCommand{\CYRYA}{PU}{\84\057}% U+042F
16689 % U+0430 CYRILLIC SMALL LETTER A; acyrillic, *afii10065
16690 \DeclareTextCommand{\cyra}{PU}{\84\060}% U+0430
16691 % U+0431 CYRILLIC SMALL LETTER BE; *afii10066, becyrillic
16692 \DeclareTextCommand{\cyrb}{PU}{\84\061}% U+0431
16693 % U+0432 CYRILLIC SMALL LETTER VE; *afii10067, vecyrillic
16694 \DeclareTextCommand{\cyrv}{PU}{\84\062}% U+0432
16695 % U+0433 CYRILLIC SMALL LETTER GHE; *afii10068, gecyrillic
16696 \DeclareTextCommand{\cyrg}{PU}{\84\063}% U+0433
16697 % U+0434 CYRILLIC SMALL LETTER DE; *afii10069, decyrillic
16698 \DeclareTextCommand{\cyrd}{PU}{\84\064}% U+0434
16699 % U+0435 CYRILLIC SMALL LETTER IE; *afii10070, iecyrillic
16700 \DeclareTextCommand{\cyre}{PU}{\84\065}% U+0435
16701 % U+0436 CYRILLIC SMALL LETTER ZHE; *afii10072, zhacyrillic
16702 \DeclareTextCommand{\cyrzh}{PU}{\84\066}% U+0436
16703 % U+0437 CYRILLIC SMALL LETTER ZE; *afii10073, zecyrillic
16704 \DeclareTextCommand{\cyrz}{PU}{\84\067}% U+0437
16705 % U+0438 CYRILLIC SMALL LETTER I; *afii10074, iicyrillic

16706 \DeclareTextCommand{\cyri}{PU}{\84\070}% U+0438
16707 % U+0439 CYRILLIC SMALL LETTER SHORT I; *afii10075, iishortcyrillic
16708 \DeclareTextCommand{\cyrishrt}{PU}{\84\071}% U+0439
16709 \DeclareTextCompositeCommand{\U}{PU}{\cyri}{\84\071}% U+0439
16710 % U+043A CYRILLIC SMALL LETTER KA; *afii10076, kacyrillic
16711 \DeclareTextCommand{\cyrk}{PU}{\84\072}% U+043A
16712 % U+043B CYRILLIC SMALL LETTER EL; *afii10077, elcyrillic
16713 \DeclareTextCommand{\cyrll}{PU}{\84\073}% U+043B
16714 % U+043C CYRILLIC SMALL LETTER EM; *afii10078, emcyrillic
16715 \DeclareTextCommand{\cyrml}{PU}{\84\074}% U+043C
16716 % U+043D CYRILLIC SMALL LETTER EN; *afii10079, encyrillic
16717 \DeclareTextCommand{\cyrn}{PU}{\84\075}% U+043D
16718 % U+043E CYRILLIC SMALL LETTER O; *afii10080, ocyrillic
16719 \DeclareTextCommand{\cyro}{PU}{\84\076}% U+043E
16720 % U+043F CYRILLIC SMALL LETTER PE; *afii10081, pecyrillic
16721 \DeclareTextCommand{\cyrp}{PU}{\84\077}% U+043F
16722 % U+0440 CYRILLIC SMALL LETTER ER; *afii10082, ercyrillic
16723 \DeclareTextCommand{\cyrre}{PU}{\84\100}% U+0440
16724 % U+0441 CYRILLIC SMALL LETTER ES; *afii10083, escyrillic
16725 \DeclareTextCommand{\cyrse}{PU}{\84\101}% U+0441
16726 % U+0442 CYRILLIC SMALL LETTER TE; *afii10084, tecyrillic
16727 \DeclareTextCommand{\cyrte}{PU}{\84\102}% U+0442
16728 % U+0443 CYRILLIC SMALL LETTER U; *afii10085, ucyrillic
16729 \DeclareTextCommand{\cyrue}{PU}{\84\103}% U+0443
16730 % U+0444 CYRILLIC SMALL LETTER EF; *afii10086, efcyrillic
16731 \DeclareTextCommand{\cyrfe}{PU}{\84\104}% U+0444
16732 % U+0445 CYRILLIC SMALL LETTER HA; *afii10087, khacyrillic
16733 \DeclareTextCommand{\cyrhe}{PU}{\84\105}% U+0445
16734 % U+0446 CYRILLIC SMALL LETTER TSE; *afii10088, tsecyrillic
16735 \DeclareTextCommand{\cyrte}{PU}{\84\106}% U+0446
16736 % U+0447 CYRILLIC SMALL LETTER CHE; *afii10089, checyrillic
16737 \DeclareTextCommand{\cyrche}{PU}{\84\107}% U+0447
16738 % U+0448 CYRILLIC SMALL LETTER SHA; *afii10090, shacyrillic
16739 \DeclareTextCommand{\cyrsh}{PU}{\84\110}% U+0448
16740 % U+0449 CYRILLIC SMALL LETTER SHCHA; *afii10091, shchacyrillic
16741 \DeclareTextCommand{\cyrshch}{PU}{\84\111}% U+0449
16742 % U+044A CYRILLIC SMALL LETTER HARD SIGN; *afii10092, hardsigncyrillic
16743 \DeclareTextCommand{\cyrhrdsn}{PU}{\84\112}% U+044A
16744 %* \cyrhrdsn -> \hardsign (tipa)
16745 % U+044B CYRILLIC SMALL LETTER YERU; *afii10093, yericyrillic
16746 \DeclareTextCommand{\cyrery}{PU}{\84\113}% U+044B
16747 % U+044C CYRILLIC SMALL LETTER SOFT SIGN; *afii10094, softsigncyrillic
16748 \DeclareTextCommand{\cyrstsn}{PU}{\84\114}% U+044C
16749 %* \cyrstsn -> \softsign (tipa)
16750 % U+044D CYRILLIC SMALL LETTER E; *afii10095, ereversedcyrillic
16751 \DeclareTextCommand{\cyrerev}{PU}{\84\115}% U+044D
16752 % U+044E CYRILLIC SMALL LETTER YU; *afii10096, iucyrillic
16753 \DeclareTextCommand{\cyrue}{PU}{\84\116}% U+044E
16754 % U+044F CYRILLIC SMALL LETTER YA; *afii10097, iacyrillic
16755 \DeclareTextCommand{\cyrue}{PU}{\84\117}% U+044F
16756 % U+0450 CYRILLIC SMALL LETTER IE WITH GRAVE
16757 \DeclareTextCompositeCommand{\`}{PU}{\cyre}{\84\120}% U+0450
16758 % U+0451 CYRILLIC SMALL LETTER IO; *afii10071, iocyrillic

16759 \DeclareTextCommand{\cyryo}{PU}{\84\121}% U+0451
 16760 \DeclareTextCompositeCommand{\"}{PU}{\cyre}{\84\121}% U+0451
 16761 % U+0452 CYRILLIC SMALL LETTER DJE; *afii10099, djecyrillic
 16762 \DeclareTextCommand{\cyrdje}{PU}{\84\122}% U+0452
 16763 % U+0453 CYRILLIC SMALL LETTER GJE; *afii10100, gjecyrillic
 16764 \DeclareTextCompositeCommand{\'}{PU}{\cyrg}{\84\123}% U+0453
 16765 % U+0454 CYRILLIC SMALL LETTER UKRAINIAN IE; *afii10101, ecyrillic
 16766 \DeclareTextCommand{\cyrie}{PU}{\84\124}% U+0454
 16767 % U+0455 CYRILLIC SMALL LETTER DZE; *afii10102, dzecyrillic
 16768 \DeclareTextCommand{\cyrdze}{PU}{\84\125}% U+0455
 16769 % U+0456 CYRILLIC SMALL LETTER BYELORUSSIAN-UKRAINIAN I;
 16770 % *afii10103, icyrillic
 16771 \DeclareTextCommand{\cyrii}{PU}{\84\126}% U+0456
 16772 % U+0457 CYRILLIC SMALL LETTER YI; *afii10104, yicyrillic
 16773 \DeclareTextCommand{\cyryi}{PU}{\84\127}% U+0457
 16774 \DeclareTextCompositeCommand{\"}{PU}{\cyrii}{\84\127}% U+0457
 16775 % U+0458 CYRILLIC SMALL LETTER JE; *afii10105, jecyrillic
 16776 \DeclareTextCommand{\cyrje}{PU}{\84\130}% U+0458
 16777 % U+0459 CYRILLIC SMALL LETTER LJE; *afii10106, ljecyrillic
 16778 \DeclareTextCommand{\cyrkje}{PU}{\84\131}% U+0459
 16779 % U+045A CYRILLIC SMALL LETTER NJE; *afii10107, njecyrillic
 16780 \DeclareTextCommand{\cyrnje}{PU}{\84\132}% U+045A
 16781 % U+045B CYRILLIC SMALL LETTER TSHE; *afii10108, tshecyrillic
 16782 \DeclareTextCommand{\cyrtshe}{PU}{\84\133}% U+045B
 16783 % U+045C CYRILLIC SMALL LETTER KJE; *afii10109, kjecyrillic
 16784 \DeclareTextCompositeCommand{\'}{PU}{\cyrk}{\84\134}% U+045C
 16785 % U+045D CYRILLIC SMALL LETTER I WITH GRAVE
 16786 \DeclareTextCompositeCommand{\`}{PU}{\cyri}{\84\135}% U+045D
 16787 % U+045E CYRILLIC SMALL LETTER SHORT U; *afii10110, ushortcyrillic
 16788 \DeclareTextCommand{\cyrushrt}{PU}{\84\136}% U+045E
 16789 \DeclareTextCompositeCommand{\U}{PU}{\curu}{\84\136}% U+045E
 16790 % U+045F CYRILLIC SMALL LETTER DZHE; *afii10193, dzhecyrillic
 16791 \DeclareTextCommand{\cyrdzhe}{PU}{\84\137}% U+045F
 16792 % U+0460 CYRILLIC CAPITAL LETTER OMEGA; Omegacyrillic
 16793 \DeclareTextCommand{\CYROMEGA}{PU}{\84\140}% U+0460
 16794 % U+0461 CYRILLIC SMALL LETTER OMEGA; omegacyrillic
 16795 \DeclareTextCommand{\cyromega}{PU}{\84\141}% U+0461
 16796 % U+0462 CYRILLIC CAPITAL LETTER YAT; Yatcyrillic, *afii10146
 16797 \DeclareTextCommand{\CYRYAT}{PU}{\84\142}% U+0462
 16798 % U+0463 CYRILLIC SMALL LETTER YAT; *afii10194, yatcyrillic
 16799 \DeclareTextCommand{\cyryat}{PU}{\84\143}% U+0463
 16800 % U+0464 CYRILLIC CAPITAL LETTER IOTIFIED E; Eiotifiedcyrillic
 16801 \DeclareTextCommand{\CYRIOTE}{PU}{\84\144}% U+0464
 16802 % U+0465 CYRILLIC SMALL LETTER IOTIFIED E; eiotifiedcyrillic
 16803 \DeclareTextCommand{\cyriote}{PU}{\84\145}% U+0465
 16804 % U+0466 CYRILLIC CAPITAL LETTER LITTLE YUS; Yuslitlecyrillic
 16805 \DeclareTextCommand{\CYRLYUS}{PU}{\84\146}% U+0466
 16806 % U+0467 CYRILLIC SMALL LETTER LITTLE YUS; yuslitlecyrillic
 16807 \DeclareTextCommand{\cyrlyus}{PU}{\84\147}% U+0467
 16808 % U+0468 CYRILLIC CAPITAL LETTER IOTIFIED LITTLE YUS; Yuslitlei-
 otifiedcyrillic
 16809 \DeclareTextCommand{\CYRIOTLYUS}{PU}{\84\150}% U+0468
 16810 % U+0469 CYRILLIC SMALL LETTER IOTIFIED LITTLE YUS; yuslitleioti-
 fiedcyrillic

16811 \DeclareTextCommand{\cyriotlyus}{PU}{\84\151}% U+0469
 16812 % U+046A CYRILLIC CAPITAL LETTER BIG YUS; Yusbigcyrillic
 16813 \DeclareTextCommand{\CYRBYUS}{PU}{\84\152}% U+046A
 16814 % U+046B CYRILLIC SMALL LETTER BIG YUS; yusbigcyrillic
 16815 \DeclareTextCommand{\cyrbyus}{PU}{\84\153}% U+046B
 16816 % U+046C CYRILLIC CAPITAL LETTER IOTIFIED BIG YUS; Yusbigiotified-
 cyrillic
 16817 \DeclareTextCommand{\CYRIOTBYUS}{PU}{\84\154}% U+046C
 16818 % U+046D CYRILLIC SMALL LETTER IOTIFIED BIG YUS; yusbigiotified-
 cyrillic
 16819 \DeclareTextCommand{\cyriotbyus}{PU}{\84\155}% U+046D
 16820 % U+046E CYRILLIC CAPITAL LETTER KSI; Ksicyrillic
 16821 \DeclareTextCommand{\CYRKSI}{PU}{\84\156}% U+046E
 16822 % U+046F CYRILLIC SMALL LETTER KSI; ksicyrillic
 16823 \DeclareTextCommand{\cyrksi}{PU}{\84\157}% U+046F
 16824 % U+0470 CYRILLIC CAPITAL LETTER PSI; Psicyrillic
 16825 \DeclareTextCommand{\CYRPSI}{PU}{\84\160}% U+0470
 16826 % U+0471 CYRILLIC SMALL LETTER PSI; psicyrillic
 16827 \DeclareTextCommand{\cyrpsi}{PU}{\84\161}% U+0471
 16828 % U+0472 CYRILLIC CAPITAL LETTER FITA; Fitacyrillic, *afii10147
 16829 \DeclareTextCommand{\CYRFITA}{PU}{\84\162}% U+0472
 16830 % U+0473 CYRILLIC SMALL LETTER FITA; *afii10195, fitacyrillic
 16831 \DeclareTextCommand{\cyrfita}{PU}{\84\163}% U+0473
 16832 % U+0474 CYRILLIC CAPITAL LETTER IZHITSA; Izhitsacyrillic, *afii10148
 16833 \DeclareTextCommand{\CYRIZH}{PU}{\84\164}% U+0474
 16834 % U+0475 CYRILLIC SMALL LETTER IZHITSA; *afii10196, izhitsacyrillic
 16835 \DeclareTextCommand{\cyrizh}{PU}{\84\165}% U+0475
 16836 % U+0476 CYRILLIC CAPITAL LETTER IZHITSA WITH DOUBLE
 16837 % GRAVE ACCENT; Izhitsadblgravecyrillic
 16838 \DeclareTextCompositeCommand{\C}{PU}{\CYRIZH}{\84\166}% U+0476
 16839 % U+0477 CYRILLIC SMALL LETTER IZHITSA WITH DOUBLE
 16840 % GRAVE ACCENT; izhitsadblgravecyrillic
 16841 \DeclareTextCompositeCommand{\C}{PU}{\cyrizh}{\84\167}% U+0477
 16842 % U+0478 CYRILLIC CAPITAL LETTER UK; Ukcyrillic
 16843 \DeclareTextCommand{\CYRUK}{PU}{\84\170}% U+0478
 16844 % U+0479 CYRILLIC SMALL LETTER UK; ukcyrillic
 16845 \DeclareTextCommand{\cyruk}{PU}{\84\171}% U+0479
 16846 % U+047A CYRILLIC CAPITAL LETTER ROUND OMEGA; Omegaroundcyril-
 lic
 16847 \DeclareTextCommand{\CYROMEGARND}{PU}{\84\172}% U+047A
 16848 % U+047B CYRILLIC SMALL LETTER ROUND OMEGA; omegaroundcyrillic
 16849 \DeclareTextCommand{\cyromegarnd}{PU}{\84\173}% U+047B
 16850 % U+047C CYRILLIC CAPITAL LETTER OMEGA WITH TITLO; Omegatit-
 locyrillic
 16851 \DeclareTextCommand{\CYROMEGATITLO}{PU}{\84\174}% U+047C
 16852 % U+047D CYRILLIC SMALL LETTER OMEGA WITH TITLO; omegatitlo-
 cyrillic
 16853 \DeclareTextCommand{\cyromegatitlo}{PU}{\84\175}% U+047D
 16854 % U+047E CYRILLIC CAPITAL LETTER OT; Otcyrillic
 16855 \DeclareTextCommand{\CYROT}{PU}{\84\176}% U+047E
 16856 % U+047F CYRILLIC SMALL LETTER OT; otcyrillic
 16857 \DeclareTextCommand{\cyrot}{PU}{\84\177}% U+047F
 16858 % U+0480 CYRILLIC CAPITAL LETTER KOPPA; Koppacyrillic
 16859 \DeclareTextCommand{\CYRKOPPA}{PU}{\84\200}% U+0480

16860 % U+0481 CYRILLIC SMALL LETTER KOPPA; koppacyrillic
 16861 \DeclareTextCommand{\cyrkoppa}{PU}{\84\201}% U+0481
 16862 % U+0482 CYRILLIC THOUSANDS SIGN; thousandcyrillic
 16863 \DeclareTextCommand{\cyrthousands}{PU}{\84\202}% U+0482
 \84\203: U+0483 COMBINING CYRILLIC TITLO; titlocyrilliccmb
 \84\204: U+0484 COMBINING CYRILLIC PALATALIZATION; palatalization-cyrilliccmb
 \84\205: U+0485 COMBINING CYRILLIC DASIA PNEUMATA; dasiapneumatacyrilliccmb
 \84\206: U+0486 COMBINING CYRILLIC PSILI PNEUMATA; psilipneumatacyrilliccmb
 \84\207: U+0487 COMBINING CYRILLIC POKRYTIE
 \84\210: U+0488 COMBINING CYRILLIC HUNDRED THOUSANDS SIGN
 \84\211: U+0489 COMBINING CYRILLIC MILLIONS SIGN
 16864 % U+048A CYRILLIC CAPITAL LETTER SHORT I WITH TAIL
 16865 \DeclareTextCommand{\CYRISHRTDSC}{PU}{\84\212}% U+048A
 16866 % U+048B CYRILLIC SMALL LETTER SHORT I WITH TAIL
 16867 \DeclareTextCommand{\cyrishrtdsc}{PU}{\84\213}% U+048B
 16868 % U+048C CYRILLIC CAPITAL LETTER SEMISOFT SIGN
 16869 \DeclareTextCommand{\CYRSEMISFTSN}{PU}{\84\214}% U+048C
 16870 % U+048D CYRILLIC SMALL LETTER SEMISOFT SIGN
 16871 \DeclareTextCommand{\cyrsemisftsn}{PU}{\84\215}% U+048D
 16872 % U+048E CYRILLIC CAPITAL LETTER ER WITH TICK
 16873 \DeclareTextCommand{\CYRRTICK}{PU}{\84\216}% U+048E
 16874 % U+048F CYRILLIC SMALL LETTER ER WITH TICK
 16875 \DeclareTextCommand{\cyrrtick}{PU}{\84\217}% U+048F
 16876 % U+0490 CYRILLIC CAPITAL LETTER GHE WITH UPTURN; Gheupturn-cyrillic, *afii10050
 16877 \DeclareTextCommand{\CYRGUP}{PU}{\84\220}% U+0490
 16878 % U+0491 CYRILLIC SMALL LETTER GHE WITH UPTURN; *afii10098, gheupturncyrillic
 16879 \DeclareTextCommand{\cyrgup}{PU}{\84\221}% U+0491
 16880 % U+0492 CYRILLIC CAPITAL LETTER GHE WITH STROKE; Ghestroke-cyrillic
 16881 \DeclareTextCommand{\CYRGHCRS}{PU}{\84\222}% U+0492
 16882 % U+0493 CYRILLIC SMALL LETTER GHE WITH STROKE; ghestrokecyrillic
 16883 \DeclareTextCommand{\cyrghcrs}{PU}{\84\223}% U+0493
 16884 % U+0494 CYRILLIC CAPITAL LETTER GHE WITH MIDDLE HOOK;
 16885 % Ghemiddlehookcyrillic
 16886 \DeclareTextCommand{\CYRGHK}{PU}{\84\224}% U+0494
 16887 % U+0495 CYRILLIC SMALL LETTER GHE WITH MIDDLE HOOK;
 16888 % ghemiddlehookcyrillic
 16889 \DeclareTextCommand{\cyrghk}{PU}{\84\225}% U+0495
 16890 % U+0496 CYRILLIC CAPITAL LETTER ZHE WITH DESCENDER;
 16891 % Zhedescendercyrillic
 16892 \DeclareTextCommand{\CYRZHDSC}{PU}{\84\226}% U+0496
 16893 % U+0497 CYRILLIC SMALL LETTER ZHE WITH DESCENDER;
 16894 % zhedescendercyrillic
 16895 \DeclareTextCommand{\cyrzhds}{PU}{\84\227}% U+0497
 16896 % U+0498 CYRILLIC CAPITAL LETTER ZE WITH DESCENDER; Zedescendercyrillic
 16897 \DeclareTextCommand{\CYRZDSC}{PU}{\84\230}% U+0498
 16898 \DeclareTextCompositeCommand{\c}{PU}{\CYRZ}{\84\230}% U+0498

16899 % U+0499 CYRILLIC SMALL LETTER ZE WITH DESCENDER; zedescender-cyrillic
 16900 \DeclareTextCommand{\cyrzdsc}{PU}{\84\231}% U+0499
 16901 \DeclareTextCompositeCommand{\c}{PU}{\cyrz}{\84\231}% U+0499
 16902 % U+049A CYRILLIC CAPITAL LETTER KA WITH DESCENDER; Kadescendercyrillic
 16903 \DeclareTextCommand{\CYRKDSC}{PU}{\84\232}% U+049A
 16904 % U+049B CYRILLIC SMALL LETTER KA WITH DESCENDER; kadescendercyrillic
 16905 \DeclareTextCommand{\cyrkdsc}{PU}{\84\233}% U+049B
 16906 % U+049C CYRILLIC CAPITAL LETTER KA WITH VERTICAL STROKE;
 16907 % Kavertikalstrokecyrillic
 16908 \DeclareTextCommand{\CYRKVCRS}{PU}{\84\234}% U+049C
 16909 % U+049D CYRILLIC SMALL LETTER KA WITH VERTICAL STROKE;
 16910 % kavertikalstrokecyrillic
 16911 \DeclareTextCommand{\cyrkvcrs}{PU}{\84\235}% U+049D
 16912 % U+049E CYRILLIC CAPITAL LETTER KA WITH STROKE; Kastrokecyrillic
 16913 \DeclareTextCommand{\CYRKHCRS}{PU}{\84\236}% U+049E
 16914 % U+049F CYRILLIC SMALL LETTER KA WITH STROKE; kastrokecyrillic
 16915 \DeclareTextCommand{\cyrkhcrs}{PU}{\84\237}% U+049F
 16916 % U+04A0 CYRILLIC CAPITAL LETTER BASHKIR KA; Kabashkircyrillic
 16917 \DeclareTextCommand{\CYRKBEAK}{PU}{\84\240}% U+04A0
 16918 % U+04A1 CYRILLIC SMALL LETTER BASHKIR KA; kabashkircyrillic
 16919 \DeclareTextCommand{\cyrkbeak}{PU}{\84\241}% U+04A1
 16920 % U+04A2 CYRILLIC CAPITAL LETTER EN WITH DESCENDER; Endescendercyrillic
 16921 \DeclareTextCommand{\CYRNDSC}{PU}{\84\242}% U+04A2
 16922 % U+04A3 CYRILLIC SMALL LETTER EN WITH DESCENDER; endescendercyrillic
 16923 \DeclareTextCommand{\cyrndsc}{PU}{\84\243}% U+04A3
 16924 % U+04A4 CYRILLIC CAPITAL LIGATURE EN GHE; Enghecyrillic
 16925 \DeclareTextCommand{\CYRNG}{PU}{\84\244}% U+04A4
 16926 % U+04A5 CYRILLIC SMALL LIGATURE EN GHE; enghecyrillic
 16927 \DeclareTextCommand{\cyrng}{PU}{\84\245}% U+04A5
 16928 % U+04A6 CYRILLIC CAPITAL LETTER PE WITH MIDDLE HOOK; Pemiddlehookcyrillic
 16929 \DeclareTextCommand{\CYRPHK}{PU}{\84\246}% U+04A6
 16930 % U+04A7 CYRILLIC SMALL LETTER PE WITH MIDDLE HOOK; pemiddlehookcyrillic
 16931 \DeclareTextCommand{\cyrphk}{PU}{\84\247}% U+04A7
 16932 % U+04A8 CYRILLIC CAPITAL LETTER ABKHASIAN HA; Haabkhasiancyrillic
 16933 \DeclareTextCommand{\CYRABHHA}{PU}{\84\250}% U+04A8
 16934 % U+04A9 CYRILLIC SMALL LETTER ABKHASIAN HA; haabkhasiancyrillic
 16935 \DeclareTextCommand{\cyrabhha}{PU}{\84\251}% U+04A9
 16936 % U+04AA CYRILLIC CAPITAL LETTER ES WITH DESCENDER; Esdescendercyrillic
 16937 \DeclareTextCommand{\CYRSDSC}{PU}{\84\252}% U+04AA
 16938 \DeclareTextCompositeCommand{\CYRSDSC}{PU}{\CYRS}{\84\252}% U+04AA
 16939 % U+04AB CYRILLIC SMALL LETTER ES WITH DESCENDER; esdescendercyrillic
 16940 \DeclareTextCommand{\cyrsdsc}{PU}{\84\253}% U+04AB
 16941 \DeclareTextCompositeCommand{\k}{PU}{\cyrs}{\84\253}% U+04AB
 16942 % U+04AC CYRILLIC CAPITAL LETTER TE WITH DESCENDER; Tedescen-

dercyrillic
 16943 \DeclareTextCommand{\CYRTDSC}{PU}{\84\254}% U+04AC
 16944 % U+04AD CYRILLIC SMALL LETTER TE WITH DESCENDER; tedescendercyrillic
 16945 \DeclareTextCommand{\cyrt dsc}{PU}{\84\255}% U+04AD
 16946 % U+04AE CYRILLIC CAPITAL LETTER STRAIGHT U; Ustraightcyrillic
 16947 \DeclareTextCommand{\CYRY}{PU}{\84\256}% U+04AE
 16948 % U+04AF CYRILLIC SMALL LETTER STRAIGHT U; ustraightcyrillic
 16949 \DeclareTextCommand{\cyry}{PU}{\84\257}% U+04AF
 16950 % U+04B0 CYRILLIC CAPITAL LETTER STRAIGHT U WITH STROKE; Ustraightstrokecyrillic
 16951 \DeclareTextCommand{\CYRYHCRS}{PU}{\84\260}% U+04B0
 16952 % U+04B1 CYRILLIC SMALL LETTER STRAIGHT U WITH STROKE; ustraightstrokecyrillic
 16953 \DeclareTextCommand{\cyryhcrs}{PU}{\84\261}% U+04B1
 16954 % U+04B2 CYRILLIC CAPITAL LETTER HA WITH DESCENDER; Hadesendercyrillic
 16955 \DeclareTextCommand{\CYRHDSC}{PU}{\84\262}% U+04B2
 16956 % U+04B3 CYRILLIC SMALL LETTER HA WITH DESCENDER; hadescendercyrillic
 16957 \DeclareTextCommand{\cyrh dsc}{PU}{\84\263}% U+04B3
 16958 % U+04B4 CYRILLIC CAPITAL LIGATURE TE TSE; Tetsecyrillic
 16959 \DeclareTextCommand{\CYRTETSE}{PU}{\84\264}% U+04B4
 16960 % U+04B5 CYRILLIC SMALL LIGATURE TE TSE; tetsecyrillic
 16961 \DeclareTextCommand{\cyrtetse}{PU}{\84\265}% U+04B5
 16962 % U+04B6 CYRILLIC CAPITAL LETTER CHE WITH DESCENDER;
 16963 % Chedescendercyrillic
 16964 \DeclareTextCommand{\CYRCHRDSC}{PU}{\84\266}% U+04B6
 16965 % U+04B7 CYRILLIC SMALL LETTER CHE WITH DESCENDER; chedescendercyrillic
 16966 \DeclareTextCommand{\cyrchrdsc}{PU}{\84\267}% U+04B7
 16967 % U+04B8 CYRILLIC CAPITAL LETTER CHE WITH VERTICAL STROKE;
 16968 % Cheverticalstrokecyrillic
 16969 \DeclareTextCommand{\CYRCHVCRS}{PU}{\84\270}% U+04B8
 16970 % U+04B9 CYRILLIC SMALL LETTER CHE WITH VERTICAL STROKE;
 16971 % cheverticalstrokecyrillic
 16972 \DeclareTextCommand{\cyrchvcrs}{PU}{\84\271}% U+04B9
 16973 % U+04BA CYRILLIC CAPITAL LETTER SHHA; Shhacyrillic
 16974 \DeclareTextCommand{\CYRSHHA}{PU}{\84\272}% U+04BA
 16975 % U+04BB CYRILLIC SMALL LETTER SHHA; shhacyrillic
 16976 \DeclareTextCommand{\cyrshha}{PU}{\84\273}% U+04BB
 16977 % U+04BC CYRILLIC CAPITAL LETTER ABKHASIAN CHE; Cheabkhasiancyrillic
 16978 \DeclareTextCommand{\CYRABHCH}{PU}{\84\274}% U+04BC
 16979 % U+04BD CYRILLIC SMALL LETTER ABKHASIAN CHE; cheabkhasiancyrillic
 16980 \DeclareTextCommand{\cyrabhch}{PU}{\84\275}% U+04BD
 16981 % U+04BE CYRILLIC CAPITAL LETTER ABKHASIAN CHE WITH DESCENDER; Chedescenderabkhasiancyrillic
 16982 \DeclareTextCommand{\CYRABHCHDSC}{PU}{\84\276}% U+04BE
 16983 \DeclareTextCompositeCommand{\k}{PU}{\CYRABHCH}{\84\276}% U+04BE
 16984 % U+04BF CYRILLIC SMALL LETTER ABKHASIAN CHE WITH DESCENDER; chedescenderabkhasiancyrillic
 16985 \DeclareTextCommand{\cyrabhchdsc}{PU}{\84\277}% U+04BF

16986 \DeclareTextCompositeCommand{\k}{PU}{\cyrabhch}{\84\277}% U+04BF
 16987 % U+04C0 CYRILLIC LETTER PALOCHKA; palochkacyrillic
 16988 \DeclareTextCommand{\CYRpalochka}{PU}{\84\300}% U+04C0
 16989 % U+04C1 CYRILLIC CAPITAL LETTER ZHE WITH BREVE; Zhebrevecyrillic
 16990 \DeclareTextCompositeCommand{\U}{PU}{\CYRZH}{\84\301}% U+04C1
 16991 % U+04C2 CYRILLIC SMALL LETTER ZHE WITH BREVE; zhebrevecyrillic
 16992 \DeclareTextCompositeCommand{\U}{PU}{\cyrzh}{\84\302}% U+04C2
 16993 % U+04C3 CYRILLIC CAPITAL LETTER KA WITH HOOK; Kahookcyrillic
 16994 \DeclareTextCommand{\CYRKHK}{PU}{\84\303}% U+04C3
 16995 % U+04C4 CYRILLIC SMALL LETTER KA WITH HOOK; kahookcyrillic
 16996 \DeclareTextCommand{\cyrkhk}{PU}{\84\304}% U+04C4
 16997 % U+04C5 CYRILLIC CAPITAL LETTER EL WITH TAIL
 16998 \DeclareTextCommand{\CYRLDSC}{PU}{\84\305}% U+04C5
 16999 % U+04C6 CYRILLIC SMALL LETTER EL WITH TAIL
 17000 \DeclareTextCommand{\cyrldsc}{PU}{\84\306}% U+04C6
 17001 % U+04C7 CYRILLIC CAPITAL LETTER EN WITH HOOK; Enhookcyrillic
 17002 \DeclareTextCommand{\CYRNHK}{PU}{\84\307}% U+04C7
 17003 % U+04C8 CYRILLIC SMALL LETTER EN WITH HOOK; enhookcyrillic
 17004 \DeclareTextCommand{\cyrnhk}{PU}{\84\310}% U+04C8
 17005 % U+04CB CYRILLIC CAPITAL LETTER KHAKASSIAN CHE; Chekhakas-
 siancyrillic
 17006 \DeclareTextCommand{\CYRCHLDSC}{PU}{\84\313}% U+04CB
 17007 % U+04CC CYRILLIC SMALL LETTER KHAKASSIAN CHE; chekhakassian-
 cyrillic
 17008 \DeclareTextCommand{\cyrchldsc}{PU}{\84\314}% U+04CC
 17009 % U+04CD CYRILLIC CAPITAL LETTER EM WITH TAIL
 17010 \DeclareTextCommand{\CYRMDSC}{PU}{\84\315}% U+04CD
 17011 % U+04CE CYRILLIC SMALL LETTER EM WITH TAIL
 17012 \DeclareTextCommand{\cyrmdsc}{PU}{\84\316}% U+04CE
 \84\317: U+04CF CYRILLIC SMALL LETTER PALOCHKA
 17013 % U+04D0 CYRILLIC CAPITAL LETTER A WITH BREVE; Abrevecyrillic
 17014 \DeclareTextCompositeCommand{\U}{PU}{\CYRA}{\84\320}% U+04D0
 17015 % U+04D1 CYRILLIC SMALL LETTER A WITH BREVE; abrevecyrillic
 17016 \DeclareTextCompositeCommand{\U}{PU}{\cyra}{\84\321}% U+04D1
 17017 % U+04D2 CYRILLIC CAPITAL LETTER A WITH DIAERESIS; Adieresiscyril-
 lic
 17018 \DeclareTextCompositeCommand{\"}{PU}{\CYRA}{\84\322}% U+04D2
 17019 % U+04D3 CYRILLIC SMALL LETTER A WITH DIAERESIS; adieresiscyrillic
 17020 \DeclareTextCompositeCommand{\"}{PU}{\cyra}{\84\323}% U+04D3
 17021 % U+04D4 CYRILLIC CAPITAL LIGATURE A IE; Aiecyrillic
 17022 \DeclareTextCommand{\CYRAE}{PU}{\84\324}% U+04D4
 17023 % U+04D5 CYRILLIC SMALL LIGATURE A IE; aiecyrillic
 17024 \DeclareTextCommand{\cyrae}{PU}{\84\325}% U+04D5
 17025 % U+04D6 CYRILLIC CAPITAL LETTER IE WITH BREVE; Iebrevecyrillic
 17026 \DeclareTextCompositeCommand{\U}{PU}{\CYRE}{\84\326}% U+04D6
 17027 % U+04D7 CYRILLIC SMALL LETTER IE WITH BREVE; iebrevecyrillic
 17028 \DeclareTextCompositeCommand{\U}{PU}{\cyre}{\84\327}% U+04D7
 17029 % U+04D8 CYRILLIC CAPITAL LETTER SCHWA; Schwacyrillic
 17030 \DeclareTextCommand{\CYRSCHWA}{PU}{\84\330}% U+04D8
 17031 % U+04D9 CYRILLIC SMALL LETTER SCHWA; *afii10846, schwacyrillic
 17032 \DeclareTextCommand{\cyrschw}{PU}{\84\331}% U+04D9
 17033 % U+04DA CYRILLIC CAPITAL LETTER SCHWA WITH DIAERESIS;
 17034 % Schwadieresiscyrillic
 17035 \DeclareTextCompositeCommand{\"}{PU}{\CYRSCHWA}{\84\332}% U+04DA

17036 % U+04DB CYRILLIC SMALL LETTER SCHWA WITH DIAERESIS;
 17037 % schwadieresiscyrillic
 17038 \DeclareTextCompositeCommand{"}{PU}{\cyrschwa}{\84\333}% U+04DB
 17039 % U+04DC CYRILLIC CAPITAL LETTER ZHE WITH DIAERESIS; Zhediere-
 siscyrillic
 17040 \DeclareTextCompositeCommand{"}{PU}{\CYRZH}{\84\334}% U+04DC
 17041 % U+04DD CYRILLIC SMALL LETTER ZHE WITH DIAERESIS; zhedieresis-
 cyrillic
 17042 \DeclareTextCompositeCommand{"}{PU}{\cyrz}{\84\335}% U+04DD
 17043 % U+04DE CYRILLIC CAPITAL LETTER ZE WITH DIAERESIS; Zedieresis-
 cyrillic
 17044 \DeclareTextCompositeCommand{"}{PU}{\CYRZ}{\84\336}% U+04DE
 17045 % U+04DF CYRILLIC SMALL LETTER ZE WITH DIAERESIS; zedieresiscyril-
 lic
 17046 \DeclareTextCompositeCommand{"}{PU}{\cyrz}{\84\337}% U+04DF
 17047 % U+04E0 CYRILLIC CAPITAL LETTER ABKHASIAN DZE; Dzeabkhasian-
 cyrillic
 17048 \DeclareTextCommand{\CYRABHDZE}{PU}{\84\340}% U+04E0
 17049 % U+04E1 CYRILLIC SMALL LETTER ABKHASIAN DZE; dzeabkhasiancyril-
 lic
 17050 \DeclareTextCommand{\cyrabhdze}{PU}{\84\341}% U+04E1
 17051 % U+04E2 CYRILLIC CAPITAL LETTER I WITH MACRON; Imacroncyrillic
 17052 \DeclareTextCompositeCommand{=}{PU}{\CYRI}{\84\342}% U+04E2
 17053 % U+04E3 CYRILLIC SMALL LETTER I WITH MACRON; imacroncyrillic
 17054 \DeclareTextCompositeCommand{=}{PU}{\cyri}{\84\343}% U+04E3
 17055 % U+04E4 CYRILLIC CAPITAL LETTER I WITH DIAERESIS; Idieresiscyrillic
 17056 \DeclareTextCompositeCommand{"}{PU}{\CYRI}{\84\344}% U+04E4
 17057 % U+04E5 CYRILLIC SMALL LETTER I WITH DIAERESIS; idieresiscyrillic
 17058 \DeclareTextCompositeCommand{"}{PU}{\cyri}{\84\345}% U+04E5
 17059 % U+04E6 CYRILLIC CAPITAL LETTER O WITH DIAERESIS; Odieresiscyril-
 lic
 17060 \DeclareTextCompositeCommand{"}{PU}{\CYRO}{\84\346}% U+04E6
 17061 % U+04E7 CYRILLIC SMALL LETTER O WITH DIAERESIS; odieresiscyrillic
 17062 \DeclareTextCompositeCommand{"}{PU}{\cyro}{\84\347}% U+04E7
 17063 % U+04E8 CYRILLIC CAPITAL LETTER BARRED O; Obarredcyrillic
 17064 \DeclareTextCommand{\CYROTLD}{PU}{\84\350}% U+04E8
 17065 % U+04E9 CYRILLIC SMALL LETTER BARRED O; obarredcyrillic
 17066 \DeclareTextCommand{\cyrotld}{PU}{\84\351}% U+04E9
 17067 % U+04EA CYRILLIC CAPITAL LETTER BARRED O WITH DIAERESIS;
 17068 % Obarreddieresiscyrillic
 17069 \DeclareTextCompositeCommand{"}{PU}{\CYROTLD}{\84\352}% U+04EA
 17070 % U+04EB CYRILLIC SMALL LETTER BARRED O WITH DIAERESIS;
 17071 % obarreddieresiscyrillic
 17072 \DeclareTextCompositeCommand{"}{PU}{\cyrotld}{\84\353}% U+04EB
 17073 % U+04EC CYRILLIC CAPITAL LETTER E WITH DIAERESIS
 17074 \DeclareTextCompositeCommand{"}{PU}{\CYREREV}{\84\354}% U+04EC
 17075 % U+04ED CYRILLIC SMALL LETTER E WITH DIAERESIS
 17076 \DeclareTextCompositeCommand{"}{PU}{\cyreref}{\84\355}% U+04ED
 17077 % U+04EE CYRILLIC CAPITAL LETTER U WITH MACRON; Umacroncyrillic
 17078 \DeclareTextCompositeCommand{=}{PU}{\CYRU}{\84\356}% U+04EE
 17079 % U+04EF CYRILLIC SMALL LETTER U WITH MACRON; umacroncyrillic
 17080 \DeclareTextCompositeCommand{=}{PU}{\cyru}{\84\357}% U+04EF
 17081 % U+04F0 CYRILLIC CAPITAL LETTER U WITH DIAERESIS; Udieresiscyril-
 lic

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17082 \DeclareTextCompositeCommand{"}{PU}{\CYRU}{\84\360}% U+04F0
17083 % U+04F1 CYRILLIC SMALL LETTER U WITH DIAERESIS; udieresiscyrillic
17084 \DeclareTextCompositeCommand{"}{PU}{\cyru}{\84\361}% U+04F1
17085 % U+04F2 CYRILLIC CAPITAL LETTER U WITH DOUBLE ACUTE; Uhun-
garumlautcyrillic
17086 \DeclareTextCompositeCommand{"}{PU}{\CYRU}{\84\362}% U+04F2
17087 % U+04F3 CYRILLIC SMALL LETTER U WITH DOUBLE ACUTE; uhun-
garumlautcyrillic
17088 \DeclareTextCompositeCommand{"}{PU}{\cyru}{\84\363}% U+04F3
17089 % U+04F4 CYRILLIC CAPITAL LETTER CHE WITH DIAERESIS; Chediere-
siscyrillic
17090 \DeclareTextCompositeCommand{"}{PU}{\CYRCH}{\84\364}% U+04F4
17091 % U+04F5 CYRILLIC SMALL LETTER CHE WITH DIAERESIS; chedieresis-
cyrillic
17092 \DeclareTextCompositeCommand{"}{PU}{\cyrch}{\84\365}% U+04F5
17093 % U+04F6 CYRILLIC CAPITAL LETTER GHE WITH DESCENDER
17094 \DeclareTextCommand{\CYRGDSC}{PU}{\84\366}% U+04F6
17095 % U+04F7 CYRILLIC SMALL LETTER GHE WITH DESCENDER
17096 \DeclareTextCommand{\cyrgdsc}{PU}{\84\367}% U+04F7
17097 % U+04F8 CYRILLIC CAPITAL LETTER YERU WITH DIAERESIS; Yerudiere-
siscyrillic
17098 \DeclareTextCompositeCommand{"}{PU}{\CYRERY}{\84\370}% U+04F8
17099 % U+04F9 CYRILLIC SMALL LETTER YERU WITH DIAERESIS; yerudiere-
siscyrillic
17100 \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
17101 % U+04FC CYRILLIC CAPITAL LETTER HA WITH HOOK
17102 \DeclareTextCommand{\CYRHHK}{PU}{\84\374}% U+04FC
17103 % U+04FD CYRILLIC SMALL LETTER HA WITH HOOK
17104 \DeclareTextCommand{\cyrhkh}{PU}{\84\375}% U+04FD
17105 \fi
\84\376: U+04FE CYRILLIC CAPITAL LETTER HA WITH STROKE
\84\377: U+04FF CYRILLIC SMALL LETTER HA WITH STROKE

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46.2.11 Hebrew: U+0590 to U+05FF

Macro names are taken from `he8enc.def`. `hebrew` is only loaded if `\hebdalet` is defined

```

17106 \ifx\hebdalet\@undefined\else
17107 % U+05C3 HEBREW PUNCTUATION SOF PASUQ
17108 \DeclareTextCommand{\sofpasuq}{PU}{\85\303}% U+05C3
17109 % U+05D0 HEBREW LETTER ALEF
17110 \DeclareTextCommand{\hebalef}{PU}{\85\320}% U+05D0
17111 % U+05D1 HEBREW LETTER BET
17112 \DeclareTextCommand{\hebbet}{PU}{\85\321}% U+05D1
17113 % U+05D2 HEBREW LETTER GIMEL
17114 \DeclareTextCommand{\hebgimel}{PU}{\85\322}% U+05D2
17115 % U+05D3 HEBREW LETTER DALET
17116 \DeclareTextCommand{\hebdalet}{PU}{\85\323}% U+05D3

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17117 % U+05D4 HEBREW LETTER HE
 17118 \DeclareTextCommand{\hebhe}{PU}{\85\324}% U+05D4
 17119 % U+05D5 HEBREW LETTER VAV
 17120 \DeclareTextCommand{\hebvav}{PU}{\85\325}% U+05D5
 17121 % U+05D6 HEBREW LETTER ZAYIN
 17122 \DeclareTextCommand{\hebzayin}{PU}{\85\326}% U+05D6
 17123 % U+05D7 HEBREW LETTER HET
 17124 \DeclareTextCommand{\hebhet}{PU}{\85\327}% U+05D7
 17125 % U+05D8 HEBREW LETTER TET
 17126 \DeclareTextCommand{\hebtet}{PU}{\85\330}% U+05D8
 17127 % U+05D9 HEBREW LETTER YOD
 17128 \DeclareTextCommand{\hebyod}{PU}{\85\331}% U+05D9
 17129 % U+05DA HEBREW LETTER FINAL KAF
 17130 \DeclareTextCommand{\hebfinalkaf}{PU}{\85\332}% U+05DA
 17131 % U+05DB HEBREW LETTER KAF
 17132 \DeclareTextCommand{\hebkaf}{PU}{\85\333}% U+05DB
 17133 % U+05DC HEBREW LETTER LAMED
 17134 \DeclareTextCommand{\heblamed}{PU}{\85\334}% U+05DC
 17135 % U+05DD HEBREW LETTER FINAL MEM
 17136 \DeclareTextCommand{\hebfinalmem}{PU}{\85\335}% U+05DD
 17137 % U+05DE HEBREW LETTER MEM
 17138 \DeclareTextCommand{\hebmeme}{PU}{\85\336}% U+05DE
 17139 % U+05DF HEBREW LETTER FINAL NUN
 17140 \DeclareTextCommand{\hebfinalnun}{PU}{\85\337}% U+05DF
 17141 % U+05E0 HEBREW LETTER NUN
 17142 \DeclareTextCommand{\hebnun}{PU}{\85\340}% U+05E0
 17143 % U+05E1 HEBREW LETTER SAMEKH
 17144 \DeclareTextCommand{\hebsamekh}{PU}{\85\341}% U+05E1
 17145 % U+05E2 HEBREW LETTER AYIN
 17146 \DeclareTextCommand{\hebayin}{PU}{\85\342}% U+05E2
 17147 % U+05E3 HEBREW LETTER FINAL PE
 17148 \DeclareTextCommand{\hebfinalpe}{PU}{\85\343}% U+05E3
 17149 % U+05E4 HEBREW LETTER PE
 17150 \DeclareTextCommand{\hebpe}{PU}{\85\344}% U+05E4
 17151 % U+05E5 HEBREW LETTER FINAL TSADI
 17152 \DeclareTextCommand{\hebfinaltsadi}{PU}{\85\345}% U+05E5
 17153 % U+05E6 HEBREW LETTER TSADI
 17154 \DeclareTextCommand{\hebtsadi}{PU}{\85\346}% U+05E6
 17155 % U+05E7 HEBREW LETTER QOF
 17156 \DeclareTextCommand{\hebqof}{PU}{\85\347}% U+05E7
 17157 % U+05E8 HEBREW LETTER RESH
 17158 \DeclareTextCommand{\hebresh}{PU}{\85\350}% U+05E8
 17159 % U+05E9 HEBREW LETTER SHIN
 17160 \DeclareTextCommand{\hebshin}{PU}{\85\351}% U+05E9
 17161 %* \hebshin -> \hebsin (he8)
 17162 % U+05EA HEBREW LETTER TAV
 17163 \DeclareTextCommand{\hebtav}{PU}{\85\352}% U+05EA
 17164 % U+05F0 HEBREW LIGATURE YIDDISH DOUBLE VAV
 17165 \DeclareTextCommand{\doublevav}{PU}{\85\360}% U+05F0
 17166 % U+05F1 HEBREW LIGATURE YIDDISH VAV YOD
 17167 \DeclareTextCommand{\vavyod}{PU}{\85\361}% U+05F1
 17168 % U+05F2 HEBREW LIGATURE YIDDISH DOUBLE YOD
 17169 \DeclareTextCommand{\doubleyod}{PU}{\85\362}% U+05F2
 17170 \fi

46.2.12 Thai: U+0E00 to U+0E7F

17171 % U+0E3F THAI CURRENCY SYMBOL BAHT; bahtthai
17172 \DeclareTextCommand{\textbaht}{PU}{\9016\077}% U+0E3F

46.2.13 Phonetic Extensions: U+1D00 to U+1D7F

17173 % U+1D00 LATIN LETTER SMALL CAPITAL A; \textasca (tipa)
17174 \DeclareTextCommand{\textasca}{PU}{\9035\000}% U+1D00
17175 % U+1D05 LATIN LETTER SMALL CAPITAL D; \scd (wsuipa)
17176 \DeclareTextCommand{\textscd}{PU}{\9035\005}%* U+1D05
17177 % U+1D07 LATIN LETTER SMALL CAPITAL E; \textsce (tipa)
17178 \DeclareTextCommand{\textsce}{PU}{\9035\007}% U+1D07
17179 % U+1D0A LATIN LETTER SMALL CAPITAL J; \textscj (tipa)
17180 \DeclareTextCommand{\textscj}{PU}{\9035\012}% U+1D0A
17181 % U+1D0B LATIN LETTER SMALL CAPITAL K; \textस्क (tipx)
17182 \DeclareTextCommand{\textPUस्क}{PU}{\9035\013}% U+1D0B
17183 %* \textPUस्क -> \textस्क (tipx)
17184 % U+1D0D LATIN LETTER SMALL CAPITAL M; \textscm (tipx)
17185 \DeclareTextCommand{\textPUscm}{PU}{\9035\015}% U+1D0D
17186 %* \textPUscm -> \textscm (tipx)
17187 % U+1D18 LATIN LETTER SMALL CAPITAL P; \textscp (tipx)
17188 \DeclareTextCommand{\textPUscp}{PU}{\9035\030}% U+1D18
17189 %* \textPUscp -> \textscp (tipx)
17190 % U+1D19 LATIN LETTER SMALL CAPITAL REVERSED R; \textrevscr (tipx)
17191 \DeclareTextCommand{\textPUrevscr}{PU}{\9035\031}% U+1D19
17192 %* \textPUrevscr -> \textrevscr (tipx)
17193 % U+1D1C LATIN LETTER SMALL CAPITAL U; \textscu (tipa), \scu (wsuipa)
17194 \DeclareTextCommand{\textscu}{PU}{\9035\034}%* U+1D1C
17195 % U+1D62 LATIN SUBSCRIPT SMALL LETTER I
17196 \DeclareTextCommand{\textiinferior}{PU}{\9035\142}%* U+1D62
17197 % U+1D63 LATIN SUBSCRIPT SMALL LETTER R
17198 \DeclareTextCommand{\textrinferior}{PU}{\9035\143}%* U+1D63
17199 % U+1D64 LATIN SUBSCRIPT SMALL LETTER U
17200 \DeclareTextCommand{\textuinferior}{PU}{\9035\144}%* U+1D64
17201 % U+1D65 LATIN SUBSCRIPT SMALL LETTER V
17202 \DeclareTextCommand{\textvinferior}{PU}{\9035\145}%* U+1D65
17203 % U+1D66 GREEK SUBSCRIPT SMALL LETTER BETA
17204 \DeclareTextCommand{\textbetainferior}{PU}{\9035\146}%* U+1D66
17205 % U+1D67 GREEK SUBSCRIPT SMALL LETTER GAMMA
17206 \DeclareTextCommand{\textgammainferior}{PU}{\9035\147}%* U+1D67
17207 % U+1D68 GREEK SUBSCRIPT SMALL LETTER RHO
17208 \DeclareTextCommand{\textrhoinferior}{PU}{\9035\150}%* U+1D68
17209 % U+1D69 GREEK SUBSCRIPT SMALL LETTER PHI
17210 \DeclareTextCommand{\textphiinferior}{PU}{\9035\151}%* U+1D69
17211 % U+1D6A GREEK SUBSCRIPT SMALL LETTER CHI
17212 \DeclareTextCommand{\textchiinferior}{PU}{\9035\152}%* U+1D6A
17213 % U+1D7B LATIN SMALL CAPITAL LETTER I WITH STROKE;
17214 % \barsci (wsuipa)
17215 \DeclareTextCommand{\textbarsci}{PU}{\9035\173}%* U+1D7B
17216 % U+1D7D LATIN SMALL LETTER P WITH STROKE; \barp (wsuipa)
17217 \DeclareTextCommand{\textbarp}{PU}{\9035\175}%* U+1D7D
17218 % U+1D7E LATIN SMALL CAPITAL LETTER U WITH STROKE;
17219 % \barscu (wsuipa)
17220 \DeclareTextCommand{\textbarscu}{PU}{\9035\176}%* U+1D7E

46.2.14 Phonetic Extensions Supplement: U+1D80 to U+1DBF

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17221 % U+1D8F LATIN SMALL LETTER A WITH RETROFLEX HOOK; \tex-
      trhooka (tipx)
17222 \DeclareTextCommand{\textPurhooka}{PU}{\9035\217}% U+1D8F
17223 %* \textPurhooka -> \textrhooka (tipx)
17224 % U+1D91 LATIN SMALL LETTER D WITH HOOK AND TAIL; \texthtr-
      taild (tipa)
17225 \DeclareTextCommand{\texthtrtaild}{PU}{\9035\221}%* U+1D91
17226 % U+1D92 LATIN SMALL LETTER E WITH RETROFLEX HOOK; \tex-
      trhooke (tipx)
17227 \DeclareTextCommand{\textPurhooke}{PU}{\9035\222}% U+1D92
17228 %* \textPurhooke -> \textrhooke (tipx)
17229 % U+1D93 LATIN SMALL LETTER OPEN E WITH RETROFLEX HOOK;
17230 % \textrhookepsilon (tipx)
17231 \DeclareTextCommand{\textPurhookepsilon}{PU}{\9035\223}% U+1D93
17232 %* \textPurhookepsilon -> \textrhookepsilon (tipx)
17233 % U+1D97 LATIN SMALL LETTER OPEN O WITH RETROFLEX HOOK;
17234 % \textrhookopeno (tipx)
17235 \DeclareTextCommand{\textPurhookopeno}{PU}{\9035\227}% U+1D97
17236 %* \textPurhookopeno -> \textrhookopeno (tipx)

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46.2.15 Latin Extended Additional: U+1E00 to U+1EFF

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17237 % U+1E00 LATIN CAPITAL LETTER A WITH RING BELOW; Aringbelow
17238 \DeclareTextCompositeCommand{\textsubring}{PU}{A}{\9036\000}% U+1E00
17239 % U+1E01 LATIN SMALL LETTER A WITH RING BELOW; aringbelow
17240 \DeclareTextCompositeCommand{\textsubring}{PU}{a}{\9036\001}% U+1E01
17241 % U+1E02 LATIN CAPITAL LETTER B WITH DOT ABOVE; Bdotaccent
17242 \DeclareTextCompositeCommand{\.}{PU}{B}{\9036\002}% U+1E02
17243 % U+1E03 LATIN SMALL LETTER B WITH DOT ABOVE; bdotaccent
17244 \DeclareTextCompositeCommand{\.}{PU}{b}{\9036\003}% U+1E03
17245 % U+1E04 LATIN CAPITAL LETTER B WITH DOT BELOW; Bdotbelow
17246 \DeclareTextCompositeCommand{\d}{PU}{B}{\9036\004}% U+1E04
17247 % U+1E05 LATIN SMALL LETTER B WITH DOT BELOW; bdotbelow
17248 \DeclareTextCompositeCommand{\d}{PU}{b}{\9036\005}% U+1E05
17249 % U+1E06 LATIN CAPITAL LETTER B WITH LINE BELOW; Blinebelow
17250 \DeclareTextCompositeCommand{\b}{PU}{B}{\9036\006}% U+1E06
17251 % U+1E07 LATIN SMALL LETTER B WITH LINE BELOW; blinebelow
17252 \DeclareTextCompositeCommand{\b}{PU}{b}{\9036\007}% U+1E07
17253 % U+1E0A LATIN CAPITAL LETTER D WITH DOT ABOVE; Ddotaccent
17254 \DeclareTextCompositeCommand{\.}{PU}{D}{\9036\012}% U+1E0A
17255 % U+1E0B LATIN SMALL LETTER D WITH DOT ABOVE; ddotaccent
17256 \DeclareTextCompositeCommand{\.}{PU}{d}{\9036\013}% U+1E0B
17257 % U+1E0C LATIN CAPITAL LETTER D WITH DOT BELOW; Ddotbelow
17258 \DeclareTextCompositeCommand{\d}{PU}{D}{\9036\014}% U+1E0C
17259 % U+1E0D LATIN SMALL LETTER D WITH DOT BELOW; ddotbelow
17260 \DeclareTextCompositeCommand{\d}{PU}{d}{\9036\015}% U+1E0D
17261 % U+1E0E LATIN CAPITAL LETTER D WITH LINE BELOW; Dlinebelow
17262 \DeclareTextCompositeCommand{\b}{PU}{D}{\9036\016}% U+1E0E
17263 % U+1E0F LATIN SMALL LETTER D WITH LINE BELOW; dlinebelow
17264 \DeclareTextCompositeCommand{\b}{PU}{d}{\9036\017}% U+1E0F
17265 % U+1E10 LATIN CAPITAL LETTER D WITH CEDILLA; Dcedilla
17266 \DeclareTextCompositeCommand{\c}{PU}{D}{\9036\020}% U+1E10
17267 % U+1E11 LATIN SMALL LETTER D WITH CEDILLA; dcedilla

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17268 \DeclareTextCompositeCommand{\c}{PU}{d}{\9036\021}% U+1E11
17269 % U+1E12 LATIN CAPITAL LETTER D WITH CIRCUMFLEX BELOW; Dcir-
cumflexbelow
17270 \DeclareTextCompositeCommand{\textsubcircum}{PU}{D}{\9036\022}% U+1E12
17271 % U+1E13 LATIN SMALL LETTER D WITH CIRCUMFLEX BELOW; dcir-
cumflexbelow
17272 \DeclareTextCompositeCommand{\textsubcircum}{PU}{d}{\9036\023}% U+1E13
17273 % U+1E14 LATIN CAPITAL LETTER E WITH MACRON AND GRAVE;
17274 % Emacrongrave
17275 \DeclareTextCompositeCommand{\textgravemacron}{PU}{E}{\9036\024}% U+1E14
17276 % U+1E15 LATIN SMALL LETTER E WITH MACRON AND GRAVE;
17277 % emacrongrave
17278 \DeclareTextCompositeCommand{\textgravemacron}{PU}{e}{\9036\025}% U+1E15
17279 % U+1E16 LATIN CAPITAL LETTER E WITH MACRON AND ACUTE;
17280 % Emacronacute
17281 \DeclareTextCompositeCommand{\textacutemacron}{PU}{E}{\9036\026}% U+1E16
17282 % U+1E17 LATIN SMALL LETTER E WITH MACRON AND ACUTE;
17283 % emacronacute
17284 \DeclareTextCompositeCommand{\textacutemacron}{PU}{e}{\9036\027}% U+1E17
17285 % U+1E18 LATIN CAPITAL LETTER E WITH CIRCUMFLEX BELOW; Ecir-
cumflexbelow
17286 \DeclareTextCompositeCommand{\textsubcircum}{PU}{E}{\9036\030}% U+1E18
17287 % U+1E19 LATIN SMALL LETTER E WITH CIRCUMFLEX BELOW; ecir-
cumflexbelow
17288 \DeclareTextCompositeCommand{\textsubcircum}{PU}{e}{\9036\031}% U+1E19
17289 % U+1E1A LATIN CAPITAL LETTER E WITH TILDE BELOW; Etildebelow
17290 \DeclareTextCompositeCommand{\textsubtilde}{PU}{E}{\9036\032}% U+1E1A
17291 % U+1E1B LATIN SMALL LETTER E WITH TILDE BELOW; etildebelow
17292 \DeclareTextCompositeCommand{\textsubtilde}{PU}{e}{\9036\033}% U+1E1B
17293 % U+1E1E LATIN CAPITAL LETTER F WITH DOT ABOVE; Fdotaccent
17294 \DeclareTextCompositeCommand{\.}{PU}{F}{\9036\036}% U+1E1E
17295 % U+1E1F LATIN SMALL LETTER F WITH DOT ABOVE; fdotaccent
17296 \DeclareTextCompositeCommand{\.}{PU}{f}{\9036\037}% U+1E1F
17297 % U+1E20 LATIN CAPITAL LETTER G WITH MACRON; Gmacron
17298 \DeclareTextCompositeCommand{\=}{PU}{G}{\9036\040}% U+1E20
17299 % U+1E21 LATIN SMALL LETTER G WITH MACRON; gmacron
17300 \DeclareTextCompositeCommand{\=}{PU}{g}{\9036\041}% U+1E21
17301 % U+1E22 LATIN CAPITAL LETTER H WITH DOT ABOVE; Hdotaccent
17302 \DeclareTextCompositeCommand{\.}{PU}{H}{\9036\042}% U+1E22
17303 % U+1E23 LATIN SMALL LETTER H WITH DOT ABOVE; hdotaccent
17304 \DeclareTextCompositeCommand{\.}{PU}{h}{\9036\043}% U+1E23
17305 % U+1E24 LATIN CAPITAL LETTER H WITH DOT BELOW; Hdotbelow
17306 \DeclareTextCompositeCommand{\d}{PU}{H}{\9036\044}% U+1E24
17307 % U+1E25 LATIN SMALL LETTER H WITH DOT BELOW; hdotbelow
17308 \DeclareTextCompositeCommand{\d}{PU}{h}{\9036\045}% U+1E25
17309 % U+1E26 LATIN CAPITAL LETTER H WITH DIAERESIS; Hdieresis
17310 \DeclareTextCompositeCommand{\"}{PU}{H}{\9036\046}% U+1E26
17311 % U+1E27 LATIN SMALL LETTER H WITH DIAERESIS; hdieresis
17312 \DeclareTextCompositeCommand{\"}{PU}{h}{\9036\047}% U+1E27
17313 % U+1E28 LATIN CAPITAL LETTER H WITH CEDILLA; Hcedilla
17314 \DeclareTextCompositeCommand{\c}{PU}{H}{\9036\050}% U+1E28
17315 % U+1E29 LATIN SMALL LETTER H WITH CEDILLA; hcedilla
17316 \DeclareTextCompositeCommand{\c}{PU}{h}{\9036\051}% U+1E29
17317 % U+1E2A LATIN CAPITAL LETTER H WITH BREVE BELOW; Hbrevebelow

17318 \DeclareTextCompositeCommand{\textsubbreve}{PU}{H}{\9036\052}% U+1E2A
17319 % U+1E2B LATIN SMALL LETTER H WITH BREVE BELOW; hbrevebelow
17320 \DeclareTextCompositeCommand{\textsubbreve}{PU}{h}{\9036\053}% U+1E2B
17321 % U+1E2C LATIN CAPITAL LETTER I WITH TILDE BELOW; Itildebelow
17322 \DeclareTextCompositeCommand{\textsubtilde}{PU}{I}{\9036\054}% U+1E2C
17323 % U+1E2D LATIN SMALL LETTER I WITH TILDE BELOW; itildebelow
17324 \DeclareTextCompositeCommand{\textsubtilde}{PU}{i}{\9036\055}% U+1E2D
17325 % U+1E30 LATIN CAPITAL LETTER K WITH ACUTE; Kacute
17326 \DeclareTextCompositeCommand{\'}{PU}{K}{\9036\060}% U+1E30
17327 % U+1E31 LATIN SMALL LETTER K WITH ACUTE; kacute
17328 \DeclareTextCompositeCommand{\'}{PU}{k}{\9036\061}% U+1E31
17329 % U+1E32 LATIN CAPITAL LETTER K WITH DOT BELOW; Kdotbelow
17330 \DeclareTextCompositeCommand{\d}{PU}{K}{\9036\062}% U+1E32
17331 % U+1E33 LATIN SMALL LETTER K WITH DOT BELOW; kdotbelow
17332 \DeclareTextCompositeCommand{\d}{PU}{k}{\9036\063}% U+1E33
17333 % U+1E34 LATIN CAPITAL LETTER K WITH LINE BELOW; Klinebelow
17334 \DeclareTextCompositeCommand{\b}{PU}{K}{\9036\064}% U+1E34
17335 % U+1E35 LATIN SMALL LETTER K WITH LINE BELOW; klinebelow
17336 \DeclareTextCompositeCommand{\b}{PU}{k}{\9036\065}% U+1E35
17337 % U+1E36 LATIN CAPITAL LETTER L WITH DOT BELOW; Ldotbelow
17338 \DeclareTextCompositeCommand{\d}{PU}{L}{\9036\066}% U+1E36
17339 % U+1E37 LATIN SMALL LETTER L WITH DOT BELOW; ldotbelow
17340 \DeclareTextCompositeCommand{\d}{PU}{l}{\9036\067}% U+1E37
17341 % U+1E3A LATIN CAPITAL LETTER L WITH LINE BELOW; Llinebelow
17342 \DeclareTextCompositeCommand{\b}{PU}{L}{\9036\072}% U+1E3A
17343 % U+1E3B LATIN SMALL LETTER L WITH LINE BELOW; llinebelow
17344 \DeclareTextCompositeCommand{\b}{PU}{l}{\9036\073}% U+1E3B
17345 % U+1E3C LATIN CAPITAL LETTER L WITH CIRCUMFLEX BELOW; Lcir-
cumflexbelow
17346 \DeclareTextCompositeCommand{\textsubcircum}{PU}{L}{\9036\074}% U+1E3C
17347 % U+1E3D LATIN SMALL LETTER L WITH CIRCUMFLEX BELOW; lcir-
cumflexbelow
17348 \DeclareTextCompositeCommand{\textsubcircum}{PU}{l}{\9036\075}% U+1E3D
17349 % U+1E3E LATIN CAPITAL LETTER M WITH ACUTE; Macute
17350 \DeclareTextCompositeCommand{\'}{PU}{M}{\9036\076}% U+1E3E
17351 % U+1E3F LATIN SMALL LETTER M WITH ACUTE; macute
17352 \DeclareTextCompositeCommand{\'}{PU}{m}{\9036\077}% U+1E3F
17353 % U+1E40 LATIN CAPITAL LETTER M WITH DOT ABOVE; Mdotaccent
17354 \DeclareTextCompositeCommand{\.}{PU}{M}{\9036\100}% U+1E40
17355 % U+1E41 LATIN SMALL LETTER M WITH DOT ABOVE; mdotaccent
17356 \DeclareTextCompositeCommand{\.}{PU}{m}{\9036\101}% U+1E41
17357 % U+1E42 LATIN CAPITAL LETTER M WITH DOT BELOW; Mdotbelow
17358 \DeclareTextCompositeCommand{\d}{PU}{M}{\9036\102}% U+1E42
17359 % U+1E43 LATIN SMALL LETTER M WITH DOT BELOW; mdotbelow
17360 \DeclareTextCompositeCommand{\d}{PU}{m}{\9036\103}% U+1E43
17361 % U+1E44 LATIN CAPITAL LETTER N WITH DOT ABOVE; Ndotaccent
17362 \DeclareTextCompositeCommand{\.}{PU}{N}{\9036\104}% U+1E44
17363 % U+1E45 LATIN SMALL LETTER N WITH DOT ABOVE; ndotaccent
17364 \DeclareTextCompositeCommand{\.}{PU}{n}{\9036\105}% U+1E45
17365 % U+1E46 LATIN CAPITAL LETTER N WITH DOT BELOW; Ndotbelow
17366 \DeclareTextCompositeCommand{\d}{PU}{N}{\9036\106}% U+1E46
17367 % U+1E47 LATIN SMALL LETTER N WITH DOT BELOW; ndotbelow
17368 \DeclareTextCompositeCommand{\d}{PU}{n}{\9036\107}% U+1E47
17369 % U+1E48 LATIN CAPITAL LETTER N WITH LINE BELOW; Nlinebelow

17370 \DeclareTextCompositeCommand{\b}{PU}{N}{\9036\110}% U+1E48
17371 % U+1E49 LATIN SMALL LETTER N WITH LINE BELOW; nlinebelow
17372 \DeclareTextCompositeCommand{\b}{PU}{n}{\9036\111}% U+1E49
17373 % U+1E4A LATIN CAPITAL LETTER N WITH CIRCUMFLEX BELOW; Ncir-
cumflexbelow
17374 \DeclareTextCompositeCommand{\textsubcircum}{PU}{N}{\9036\112}% U+1E4A
17375 % U+1E4B LATIN SMALL LETTER N WITH CIRCUMFLEX BELOW; ncir-
cumflexbelow
17376 \DeclareTextCompositeCommand{\textsubcircum}{PU}{n}{\9036\113}% U+1E4B
17377 % U+1E50 LATIN CAPITAL LETTER O WITH MACRON AND GRAVE;
17378 % Omacrongrave
17379 \DeclareTextCompositeCommand{\textgravemacron}{PU}{O}{\9036\120}% U+1E50
17380 % U+1E51 LATIN SMALL LETTER O WITH MACRON AND GRAVE;
17381 % omacrongrave
17382 \DeclareTextCompositeCommand{\textgravemacron}{PU}{o}{\9036\121}% U+1E51
17383 % U+1E52 LATIN CAPITAL LETTER O WITH MACRON AND ACUTE;
17384 % Omacronacute
17385 \DeclareTextCompositeCommand{\textacutemacron}{PU}{O}{\9036\122}% U+1E52
17386 % U+1E53 LATIN SMALL LETTER O WITH MACRON AND ACUTE;
17387 % omacronacute
17388 \DeclareTextCompositeCommand{\textacutemacron}{PU}{o}{\9036\123}% U+1E53
17389 % U+1E54 LATIN CAPITAL LETTER P WITH ACUTE; Pacute
17390 \DeclareTextCompositeCommand{\'}{PU}{P}{\9036\124}% U+1E54
17391 % U+1E55 LATIN SMALL LETTER P WITH ACUTE; pacute
17392 \DeclareTextCompositeCommand{\'}{PU}{p}{\9036\125}% U+1E55
17393 % U+1E56 LATIN CAPITAL LETTER P WITH DOT ABOVE; Pdotaccent
17394 \DeclareTextCompositeCommand{\.}{PU}{P}{\9036\126}% U+1E56
17395 % U+1E57 LATIN SMALL LETTER P WITH DOT ABOVE; pdotaccent
17396 \DeclareTextCompositeCommand{\.}{PU}{p}{\9036\127}% U+1E57
17397 % U+1E58 LATIN CAPITAL LETTER R WITH DOT ABOVE; Rdotaccent
17398 \DeclareTextCompositeCommand{\.}{PU}{R}{\9036\130}% U+1E58
17399 % U+1E59 LATIN SMALL LETTER R WITH DOT ABOVE; rdotaccent
17400 \DeclareTextCompositeCommand{\.}{PU}{r}{\9036\131}% U+1E59
17401 % U+1E5A LATIN CAPITAL LETTER R WITH DOT BELOW; Rdotbelow
17402 \DeclareTextCompositeCommand{\d}{PU}{R}{\9036\132}% U+1E5A
17403 % U+1E5B LATIN SMALL LETTER R WITH DOT BELOW; rdotbelow
17404 \DeclareTextCompositeCommand{\d}{PU}{r}{\9036\133}% U+1E5B
17405 % U+1E5E LATIN CAPITAL LETTER R WITH LINE BELOW; Rlinebelow
17406 \DeclareTextCompositeCommand{\b}{PU}{R}{\9036\136}% U+1E5E
17407 % U+1E5F LATIN SMALL LETTER R WITH LINE BELOW; rlinebelow
17408 \DeclareTextCompositeCommand{\b}{PU}{r}{\9036\137}% U+1E5F
17409 % U+1E60 LATIN CAPITAL LETTER S WITH DOT ABOVE; Sdotaccent
17410 \DeclareTextCompositeCommand{\.}{PU}{S}{\9036\140}% U+1E60
17411 % U+1E61 LATIN SMALL LETTER S WITH DOT ABOVE; sdotaccent
17412 \DeclareTextCompositeCommand{\.}{PU}{s}{\9036\141}% U+1E61
17413 % U+1E62 LATIN CAPITAL LETTER S WITH DOT BELOW; Sdotbelow
17414 \DeclareTextCompositeCommand{\d}{PU}{S}{\9036\142}% U+1E62
17415 % U+1E63 LATIN SMALL LETTER S WITH DOT BELOW; sdotbelow
17416 \DeclareTextCompositeCommand{\d}{PU}{s}{\9036\143}% U+1E63
17417 % U+1E6A LATIN CAPITAL LETTER T WITH DOT ABOVE; Tdotaccent
17418 \DeclareTextCompositeCommand{\.}{PU}{T}{\9036\152}% U+1E6A
17419 % U+1E6B LATIN SMALL LETTER T WITH DOT ABOVE; tdotaccent
17420 \DeclareTextCompositeCommand{\.}{PU}{t}{\9036\153}% U+1E6B
17421 % U+1E6C LATIN CAPITAL LETTER T WITH DOT BELOW; Tdotbelow

17422 \DeclareTextCompositeCommand{\d}{PU}{T}{\9036\154}% U+1E6C
17423 % U+1E6D LATIN SMALL LETTER T WITH DOT BELOW; tdotbelow
17424 \DeclareTextCompositeCommand{\d}{PU}{t}{\9036\155}% U+1E6D
17425 % U+1E6E LATIN CAPITAL LETTER T WITH LINE BELOW; Tlinebelow
17426 \DeclareTextCompositeCommand{\b}{PU}{T}{\9036\156}% U+1E6E
17427 % U+1E6F LATIN SMALL LETTER T WITH LINE BELOW; tlinebelow
17428 \DeclareTextCompositeCommand{\b}{PU}{t}{\9036\157}% U+1E6F
17429 % U+1E70 LATIN CAPITAL LETTER T WITH CIRCUMFLEX BELOW; Tcir-
cumflexbelow
17430 \DeclareTextCompositeCommand{\textsubcircum}{PU}{T}{\9036\160}% U+1E70
17431 % U+1E71 LATIN SMALL LETTER T WITH CIRCUMFLEX BELOW; tcir-
cumflexbelow
17432 \DeclareTextCompositeCommand{\textsubcircum}{PU}{t}{\9036\161}% U+1E71
17433 % U+1E72 LATIN CAPITAL LETTER U WITH DIAERESIS BELOW; Udiere-
sisbelow
17434 \DeclareTextCompositeCommand{\textsubumlaut}{PU}{U}{\9036\162}% U+1E72
17435 % U+1E73 LATIN SMALL LETTER U WITH DIAERESIS BELOW; udiere-
sisbelow
17436 \DeclareTextCompositeCommand{\textsubumlaut}{PU}{u}{\9036\163}% U+1E73
17437 % U+1E74 LATIN CAPITAL LETTER U WITH TILDE BELOW; Utildebelow
17438 \DeclareTextCompositeCommand{\textsubtilde}{PU}{U}{\9036\164}% U+1E74
17439 % U+1E75 LATIN SMALL LETTER U WITH TILDE BELOW; utildebelow
17440 \DeclareTextCompositeCommand{\textsubtilde}{PU}{u}{\9036\165}% U+1E75
17441 % U+1E76 LATIN CAPITAL LETTER U WITH CIRCUMFLEX BELOW; Ucir-
cumflexbelow
17442 \DeclareTextCompositeCommand{\textsubcircum}{PU}{U}{\9036\166}% U+1E76
17443 % U+1E77 LATIN SMALL LETTER U WITH CIRCUMFLEX BELOW; ucir-
cumflexbelow
17444 \DeclareTextCompositeCommand{\textsubcircum}{PU}{u}{\9036\167}% U+1E77
17445 % U+1E7C LATIN CAPITAL LETTER V WITH TILDE; Vtilde
17446 \DeclareTextCompositeCommand{\~}{PU}{V}{\9036\174}% U+1E7C
17447 % U+1E7D LATIN SMALL LETTER V WITH TILDE; vtilde
17448 \DeclareTextCompositeCommand{\~}{PU}{v}{\9036\175}% U+1E7D
17449 % U+1E7E LATIN CAPITAL LETTER V WITH DOT BELOW; Vdotbelow
17450 \DeclareTextCompositeCommand{\d}{PU}{V}{\9036\176}% U+1E7E
17451 % U+1E7F LATIN SMALL LETTER V WITH DOT BELOW; vdotbelow
17452 \DeclareTextCompositeCommand{\d}{PU}{v}{\9036\177}% U+1E7F
17453 % U+1E80 LATIN CAPITAL LETTER W WITH GRAVE; Wgrave
17454 \DeclareTextCompositeCommand{\`}{PU}{W}{\9036\200}% U+1E80
17455 % U+1E81 LATIN SMALL LETTER W WITH GRAVE; wgrave
17456 \DeclareTextCompositeCommand{\`}{PU}{w}{\9036\201}% U+1E81
17457 % U+1E82 LATIN CAPITAL LETTER W WITH ACUTE; Wacute
17458 \DeclareTextCompositeCommand{\'}{PU}{W}{\9036\202}% U+1E82
17459 % U+1E83 LATIN SMALL LETTER W WITH ACUTE; wacute
17460 \DeclareTextCompositeCommand{\'}{PU}{w}{\9036\203}% U+1E83
17461 % U+1E84 LATIN CAPITAL LETTER W WITH DIAERESIS; Wdieresis
17462 \DeclareTextCompositeCommand{\"}{PU}{W}{\9036\204}% U+1E84
17463 % U+1E85 LATIN SMALL LETTER W WITH DIAERESIS; wdieresis
17464 \DeclareTextCompositeCommand{\"}{PU}{w}{\9036\205}% U+1E85
17465 % U+1E86 LATIN CAPITAL LETTER W WITH DOT ABOVE; Wdotaccent
17466 \DeclareTextCompositeCommand{.}{PU}{W}{\9036\206}% U+1E86
17467 % U+1E87 LATIN SMALL LETTER W WITH DOT ABOVE; wdotaccent
17468 \DeclareTextCompositeCommand{.}{PU}{w}{\9036\207}% U+1E87
17469 % U+1E88 LATIN CAPITAL LETTER W WITH DOT BELOW; wdotbelow

17470 \DeclareTextCompositeCommand{\d}{PU}{W}{\9036\210}% U+1E88
17471 % U+1E89 LATIN SMALL LETTER W WITH DOT BELOW; wdotbelow
17472 \DeclareTextCompositeCommand{\d}{PU}{w}{\9036\211}% U+1E89
17473 % U+1E8A LATIN CAPITAL LETTER X WITH DOT ABOVE; Xdotaccent
17474 \DeclareTextCompositeCommand{\.}{PU}{X}{\9036\212}% U+1E8A
17475 % U+1E8B LATIN SMALL LETTER X WITH DOT ABOVE; xdotaccent
17476 \DeclareTextCompositeCommand{\.}{PU}{x}{\9036\213}% U+1E8B
17477 % U+1E8C LATIN CAPITAL LETTER X WITH DIAERESIS; Xdieresis
17478 \DeclareTextCompositeCommand{"}{PU}{X}{\9036\214}% U+1E8C
17479 % U+1E8D LATIN SMALL LETTER X WITH DIAERESIS; xdieresis
17480 \DeclareTextCompositeCommand{"}{PU}{x}{\9036\215}% U+1E8D
17481 % U+1E8E LATIN CAPITAL LETTER Y WITH DOT ABOVE; Ydotaccent
17482 \DeclareTextCompositeCommand{\.}{PU}{Y}{\9036\216}% U+1E8E
17483 % U+1E8F LATIN SMALL LETTER Y WITH DOT ABOVE; ydotaccent
17484 \DeclareTextCompositeCommand{\.}{PU}{y}{\9036\217}% U+1E8F
17485 % U+1E90 LATIN CAPITAL LETTER Z WITH CIRCUMFLEX; Zcircumflex
17486 \DeclareTextCompositeCommand{\^}{PU}{Z}{\9036\220}% U+1E90
17487 % U+1E91 LATIN SMALL LETTER Z WITH CIRCUMFLEX; zcircumflex
17488 \DeclareTextCompositeCommand{\^}{PU}{z}{\9036\221}% U+1E91
17489 % U+1E92 LATIN CAPITAL LETTER Z WITH DOT BELOW; Zdotbelow
17490 \DeclareTextCompositeCommand{\d}{PU}{Z}{\9036\222}% U+1E92
17491 % U+1E93 LATIN SMALL LETTER Z WITH DOT BELOW; zdotbelow
17492 \DeclareTextCompositeCommand{\d}{PU}{z}{\9036\223}% U+1E93
17493 % U+1E94 LATIN CAPITAL LETTER Z WITH LINE BELOW; Zlinebelow
17494 \DeclareTextCompositeCommand{\b}{PU}{Z}{\9036\224}% U+1E94
17495 % U+1E95 LATIN SMALL LETTER Z WITH LINE BELOW; zlinebelow
17496 \DeclareTextCompositeCommand{\b}{PU}{z}{\9036\225}% U+1E95
17497 % U+1E96 LATIN SMALL LETTER H WITH LINE BELOW; hlinebelow
17498 \DeclareTextCompositeCommand{\b}{PU}{h}{\9036\226}% U+1E96
17499 % U+1E97 LATIN SMALL LETTER T WITH DIAERESIS; tdieresis
17500 \DeclareTextCompositeCommand{"}{PU}{t}{\9036\227}% U+1E97
17501 % U+1E98 LATIN SMALL LETTER W WITH RING ABOVE; wring
17502 \DeclareTextCompositeCommand{\r}{PU}{w}{\9036\230}% U+1E98
17503 % U+1E99 LATIN SMALL LETTER Y WITH RING ABOVE; yring
17504 \DeclareTextCompositeCommand{\r}{PU}{y}{\9036\231}% U+1E99
17505 % U+1E9B LATIN SMALL LETTER LONG S WITH DOT ABOVE; slongdotaccent
17506 \DeclareTextCompositeCommand{\.}{PU}{\textlongs}{\9036\233}% U+1E9B
17507 % U+1EA0 LATIN CAPITAL LETTER A WITH DOT BELOW; Adotbelow
17508 \DeclareTextCompositeCommand{\d}{PU}{A}{\9036\240}% U+1EA0
17509 % U+1EA1 LATIN SMALL LETTER A WITH DOT BELOW; adotbelow
17510 \DeclareTextCompositeCommand{\d}{PU}{a}{\9036\241}% U+1EA1
17511 % U+1EB8 LATIN CAPITAL LETTER E WITH DOT BELOW; Edotbelow
17512 \DeclareTextCompositeCommand{\d}{PU}{E}{\9036\270}% U+1EB8
17513 % U+1EB9 LATIN SMALL LETTER E WITH DOT BELOW; edotbelow
17514 \DeclareTextCompositeCommand{\d}{PU}{e}{\9036\271}% U+1EB9
17515 % U+1EBC LATIN CAPITAL LETTER E WITH TILDE; Etilde
17516 \DeclareTextCompositeCommand{\~}{PU}{E}{\9036\274}% U+1EBC
17517 % U+1EBD LATIN SMALL LETTER E WITH TILDE; etilde
17518 \DeclareTextCompositeCommand{\~}{PU}{e}{\9036\275}% U+1EBD
17519 % U+1ECA LATIN CAPITAL LETTER I WITH DOT BELOW; Idotbelow
17520 \DeclareTextCompositeCommand{\d}{PU}{I}{\9036\312}% U+1ECA
17521 % U+1ECB LATIN SMALL LETTER I WITH DOT BELOW; idotbelow
17522 \DeclareTextCompositeCommand{\d}{PU}{i}{\9036\313}% U+1ECB

17523 % U+1ECC LATIN CAPITAL LETTER O WITH DOT BELOW; Odotbelow
 17524 \DeclareTextCompositeCommand{\d}{PU}{O}{\9036\314}% U+1ECC
 17525 % U+1ECD LATIN SMALL LETTER O WITH DOT BELOW; odotbelow
 17526 \DeclareTextCompositeCommand{\d}{PU}{o}{\9036\315}% U+1ECD
 17527 % U+1EE4 LATIN CAPITAL LETTER U WITH DOT BELOW; Udotbelow
 17528 \DeclareTextCompositeCommand{\d}{PU}{U}{\9036\344}% U+1EE4
 17529 % U+1EE5 LATIN SMALL LETTER U WITH DOT BELOW; udotbelow
 17530 \DeclareTextCompositeCommand{\d}{PU}{u}{\9036\345}% U+1EE5
 17531 % U+1EF2 LATIN CAPITAL LETTER Y WITH GRAVE; Ygrave
 17532 \DeclareTextCompositeCommand{\`}{PU}{Y}{\9036\362}% U+1EF2
 17533 % U+1EF3 LATIN SMALL LETTER Y WITH GRAVE; ygrave
 17534 \DeclareTextCompositeCommand{\`}{PU}{y}{\9036\363}% U+1EF3
 17535 % U+1EF4 LATIN CAPITAL LETTER Y WITH DOT BELOW; Ydotbelow
 17536 \DeclareTextCompositeCommand{\d}{PU}{Y}{\9036\364}% U+1EF4
 17537 % U+1EF5 LATIN SMALL LETTER Y WITH DOT BELOW; ydotbelow
 17538 \DeclareTextCompositeCommand{\d}{PU}{y}{\9036\365}% U+1EF5
 17539 % U+1EF8 LATIN CAPITAL LETTER Y WITH TILDE; Ytilde
 17540 \DeclareTextCompositeCommand{\~}{PU}{Y}{\9036\370}% U+1EF8
 17541 % U+1EF9 LATIN SMALL LETTER Y WITH TILDE; ytilde
 17542 \DeclareTextCompositeCommand{\~}{PU}{y}{\9036\371}% U+1EF9

46.2.16 General Punctuation: U+2000 to U+206F

17543 % U+200C ZERO WIDTH NON-JOINER; *afii61664, zerowidthnonjoiner
 17544 \DeclareTextCommand{\textcompwordmark}{PU}{\9040\014}% U+200C
 17545 % U+2013 EN DASH; endash
 17546 \DeclareTextCommand{\textendash}{PU}{\9040\023}% U+2013
 17547 % U+2014 EM DASH; emdash
 17548 \DeclareTextCommand{\textemdash}{PU}{\9040\024}% U+2014
 17549 % U+2016 DOUBLE VERTICAL LINE; dblverticalbar
 17550 \DeclareTextCommand{\textbardbl}{PU}{\9040\026}% U+2016
 17551 %* \textbardbl -> \textdoublevertline (tipa)
 17552 % U+2018 LEFT SINGLE QUOTATION MARK; quoteleft
 17553 \DeclareTextCommand{\textquoteleft}{PU}{\9040\030}% U+2018
 17554 % U+2019 RIGHT SINGLE QUOTATION MARK; quoteright
 17555 \DeclareTextCommand{\textquoteright}{PU}{\9040\031}% U+2019
 17556 % U+201A SINGLE LOW-9 QUOTATION MARK; quotesinglbase
 17557 \DeclareTextCommand{\quotesinglbase}{PU}{\9040\032}% U+201A
 17558 % U+201C LEFT DOUBLE QUOTATION MARK; quotedblleft
 17559 \DeclareTextCommand{\textquotedblleft}{PU}{\9040\034}% U+201C
 17560 % U+201D RIGHT DOUBLE QUOTATION MARK; quotedblright
 17561 \DeclareTextCommand{\textquotedblright}{PU}{\9040\035}% U+201D
 17562 % U+201E DOUBLE LOW-9 QUOTATION MARK; quotedblbase
 17563 \DeclareTextCommand{\quotedblbase}{PU}{\9040\036}% U+201E
 17564 % U+2020 DAGGER; dagger
 17565 \DeclareTextCommand{\textdagger}{PU}{\9040\040}%* U+2020
 17566 %* \textdagger -> \dag (LaTeX)
 17567 % U+2021 DOUBLE DAGGER; daggerdbl; ddagger (LaTeX)
 17568 \DeclareTextCommand{\textdaggerdbl}{PU}{\9040\041}% U+2021
 17569 %* \textdaggerdbl -> \ddagger (LaTeX)
 17570 %* \textdaggerdbl -> \ddag (LaTeX)
 17571 % U+2022 BULLET; bullet
 17572 \DeclareTextCommand{\textbullet}{PU}{\9040\042}%* U+2022
 17573 % U+2025 TWO DOT LEADER; \hdotfor (MnSymbol)
 17574 \DeclareTextCommand{\texthdotfor}{PU}{\9040\045}%* U+2025

17575 % U+2026 HORIZONTAL ELLIPSIS; ellipsis
 17576 \DeclareTextCommand{\textellipsis}{PU}{\9040\046}% U+2026
 17577 %* \textellipsis -> \mathellipsis
 17578 % U+2030 PER MILLE SIGN; perthousand
 17579 \DeclareTextCommand{\textperthousand}{PU}{\9040\060}% U+2030
 17580 % U+2031 PER TEN THOUSAND SIGN
 17581 \DeclareTextCommand{\textpertenthousand}{PU}{\9040\061}% U+2031
 17582 % U+2032 PRIME; minute; \prime (MnSymbol)
 17583 \DeclareTextCommand{\textprime}{PU}{\9040\062}%* U+2032
 17584 % U+2033 DOUBLE PRIME; \second (mathabx)
 17585 \DeclareTextCommand{\textsecond}{PU}{\9040\063}%* U+2033
 17586 % U+2034 TRIPLE PRIME; \third (mathabx)
 17587 \DeclareTextCommand{\textthird}{PU}{\9040\064}%* U+2034
 17588 % U+2035 REVERSED PRIME; \backprime (AmS)
 17589 \DeclareTextCommand{\textbackprime}{PU}{\9040\065}%* U+2035
 17590 % U+2039 SINGLE LEFT-POINTING ANGLE QUOTATION MARK; guil-
 lingleft
 17591 \DeclareTextCommand{\guilsingleft}{PU}{\9040\071}% U+2039
 17592 % U+203A SINGLE RIGHT-POINTING ANGLE QUOTATION MARK; guil-
 lingright
 17593 \DeclareTextCommand{\guilsingright}{PU}{\9040\072}% U+203A
 17594 % U+203B REFERENCE MARK; referencemark
 17595 \DeclareTextCommand{\textreferencemark}{PU}{\9040\073}% U+203B
 17596 % U+203D INTERROBANG
 17597 \DeclareTextCommand{\textinterrobang}{PU}{\9040\075}% U+203D
 17598 % U+2044 FRACTION SLASH; fraction
 17599 \DeclareTextCommand{\textfractionsolidus}{PU}{\9040\104}% U+2044
 17600 % U+2045 LEFT SQUARE BRACKET WITH QUILL
 17601 \DeclareTextCommand{\textlquill}{PU}{\9040\105}% U+2045
 17602 % U+2046 RIGHT SQUARE BRACKET WITH QUILL
 17603 \DeclareTextCommand{\textrquill}{PU}{\9040\106}% U+2046
 17604 % U+2052 COMMERCIAL MINUS SIGN
 17605 \DeclareTextCommand{\textdiscount}{PU}{\9040\122}% U+2052
 17606 % U+2056 THREE DOT PUNCTUATION; \lefttherefore (MnSymbol)
 17607 \DeclareTextCommand{\textlefttherefore}{PU}{\9040\126}%* U+2056
 17608 % U+2057 QUADRUPLE PRIME; \fourth (mathabx)
 17609 \DeclareTextCommand{\textfourth}{PU}{\9040\127}%* U+2057
 17610 % U+2058 FOUR DOT PUNCTUATION; \diamonddots (MnSymbol)
 17611 \DeclareTextCommand{\textdiamonddots}{PU}{\9040\130}%* U+2058

46.2.17 Superscripts and Subscripts: U+2070 to U+209F

17612 % U+2070 SUPERSCRIPT ZERO; zerosuperior
 17613 \DeclareTextCommand{\textzerosuperior}{PU}{\9040\160}%* U+2070
 17614 % U+2071 SUPERSCRIPT LATIN SMALL LETTER I
 17615 \DeclareTextCommand{\textisuperior}{PU}{\9040\161}%* U+2071
 17616 % U+2074 SUPERSCRIPT FOUR; foursuperior
 17617 \DeclareTextCommand{\textfoursuperior}{PU}{\9040\164}%* U+2074
 17618 % U+2075 SUPERSCRIPT FIVE; fivesuperior
 17619 \DeclareTextCommand{\textfivesuperior}{PU}{\9040\165}%* U+2075
 17620 % U+2076 SUPERSCRIPT SIX; sixsuperior
 17621 \DeclareTextCommand{\textsixsuperior}{PU}{\9040\166}%* U+2076
 17622 % U+2077 SUPERSCRIPT SEVEN; sevensuperior
 17623 \DeclareTextCommand{\textsevensuperior}{PU}{\9040\167}%* U+2077
 17624 % U+2078 SUPERSCRIPT EIGHT; eightsuperior

17625 \DeclareTextCommand{\texteightsuperior}{PU}{\9040\170}%* U+2078
17626 % U+2079 SUPERSCRIPT NINE; ninesuperior
17627 \DeclareTextCommand{\textninesuperior}{PU}{\9040\171}%* U+2079
17628 % U+207A SUPERSCRIPT PLUS SIGN; plussuperior
17629 \DeclareTextCommand{\textplussuperior}{PU}{\9040\172}%* U+207A
17630 % U+207B SUPERSCRIPT MINUS
17631 \DeclareTextCommand{\textminussuperior}{PU}{\9040\173}%* U+207B
17632 % U+207C SUPERSCRIPT EQUALS SIGN; equalsuperior
17633 \DeclareTextCommand{\textequalssuperior}{PU}{\9040\174}%* U+207C
17634 % U+207D SUPERSCRIPT LEFT PARENTHESIS; parenleftsuperior
17635 \DeclareTextCommand{\textparenleftsuperior}{PU}{\9040\175}%* U+207D
17636 % U+207E SUPERSCRIPT RIGHT PARENTHESIS; parenrightsuperior
17637 \DeclareTextCommand{\textparenrightsuperior}{PU}{\9040\176}%* U+207E
17638 % U+207F SUPERSCRIPT LATIN SMALL LETTER N; nsuperior
17639 \DeclareTextCommand{\textnsuperior}{PU}{\9040\177}%* U+207F
17640 % U+2080 SUBSCRIPT ZERO; zeroinferior
17641 \DeclareTextCommand{\textzeroinferior}{PU}{\9040\200}%* U+2080
17642 % U+2081 SUBSCRIPT ONE; oneinferior
17643 \DeclareTextCommand{\textoneinferior}{PU}{\9040\201}%* U+2081
17644 % U+2082 SUBSCRIPT TWO; twoinferior
17645 \DeclareTextCommand{\texttwoinferior}{PU}{\9040\202}%* U+2082
17646 % U+2083 SUBSCRIPT THREE; threeinferior
17647 \DeclareTextCommand{\textthreeinferior}{PU}{\9040\203}%* U+2083
17648 % U+2084 SUBSCRIPT FOUR; fourinferior
17649 \DeclareTextCommand{\textfourinferior}{PU}{\9040\204}%* U+2084
17650 % U+2085 SUBSCRIPT FIVE; fiveinferior
17651 \DeclareTextCommand{\textfiveinferior}{PU}{\9040\205}%* U+2085
17652 % U+2086 SUBSCRIPT SIX; sixinferior
17653 \DeclareTextCommand{\textsixinferior}{PU}{\9040\206}%* U+2086
17654 % U+2087 SUBSCRIPT SEVEN; seveninferior
17655 \DeclareTextCommand{\textseveninferior}{PU}{\9040\207}%* U+2087
17656 % U+2088 SUBSCRIPT EIGHT; eightinferior
17657 \DeclareTextCommand{\texteightinferior}{PU}{\9040\210}%* U+2088
17658 % U+2089 SUBSCRIPT NINE; nineinferior
17659 \DeclareTextCommand{\textnineinferior}{PU}{\9040\211}%* U+2089
17660 % U+208A SUBSCRIPT PLUS SIGN
17661 \DeclareTextCommand{\textplusinferior}{PU}{\9040\212}%* U+208A
17662 % U+208B SUBSCRIPT MINUS
17663 \DeclareTextCommand{\textminusinferior}{PU}{\9040\213}%* U+208B
17664 % U+208C SUBSCRIPT EQUALS SIGN
17665 \DeclareTextCommand{\textequalsinferior}{PU}{\9040\214}%* U+208C
17666 % U+208D SUBSCRIPT LEFT PARENTHESIS; parenleftinferior
17667 \DeclareTextCommand{\textparenleftinferior}{PU}{\9040\215}%* U+208D
17668 % U+208E SUBSCRIPT RIGHT PARENTHESIS; parenrightinferior
17669 \DeclareTextCommand{\textparenrightinferior}{PU}{\9040\216}%* U+208E
17670 % U+2090 LATIN SUBSCRIPT SMALL LETTER A
17671 \DeclareTextCommand{\textainferior}{PU}{\9040\220}%* U+2090
17672 % U+2091 LATIN SUBSCRIPT SMALL LETTER E
17673 \DeclareTextCommand{\texteinferior}{PU}{\9040\221}%* U+2091
17674 % U+2092 LATIN SUBSCRIPT SMALL LETTER O
17675 \DeclareTextCommand{\textoinferior}{PU}{\9040\222}%* U+2092
17676 % U+2093 LATIN SUBSCRIPT SMALL LETTER X
17677 \DeclareTextCommand{\textxinferior}{PU}{\9040\223}%* U+2093
17678 % U+2094 LATIN SUBSCRIPT SMALL LETTER SCHWA

17679 \DeclareTextCommand{\textschwainferior}{PU}{\9040\224}%* U+2094
 17680 % U+2095 LATIN SUBSCRIPT SMALL LETTER H
 17681 \DeclareTextCommand{\texthinferior}{PU}{\9040\225}%* U+2095
 17682 % U+2096 LATIN SUBSCRIPT SMALL LETTER K
 17683 \DeclareTextCommand{\textkinferior}{PU}{\9040\226}%* U+2096
 17684 % U+2097 LATIN SUBSCRIPT SMALL LETTER L
 17685 \DeclareTextCommand{\textlinferior}{PU}{\9040\227}%* U+2097
 17686 % U+2098 LATIN SUBSCRIPT SMALL LETTER M
 17687 \DeclareTextCommand{\textminferior}{PU}{\9040\230}%* U+2098
 17688 % U+2099 LATIN SUBSCRIPT SMALL LETTER N
 17689 \DeclareTextCommand{\textninferior}{PU}{\9040\231}%* U+2099
 17690 % U+209A LATIN SUBSCRIPT SMALL LETTER P
 17691 \DeclareTextCommand{\textpinferior}{PU}{\9040\232}%* U+209A
 17692 % U+209B LATIN SUBSCRIPT SMALL LETTER S
 17693 \DeclareTextCommand{\textsinferior}{PU}{\9040\233}%* U+209B
 17694 % U+209C LATIN SUBSCRIPT SMALL LETTER T
 17695 \DeclareTextCommand{\texttinferior}{PU}{\9040\234}%* U+209C

46.2.18 Currency Symbols: U+20A0 to U+20CF

17696 % U+20A1 COLON SIGN; *colonmonetary, colonsign
 17697 \DeclareTextCommand{\textcolonmonetary}{PU}{\9040\241}% U+20A1
 17698 % U+20A4 LIRA SIGN; afi08941, *lira
 17699 \DeclareTextCommand{\textlira}{PU}{\9040\244}% U+20A4
 17700 % U+20A6 NAIRA SIGN
 17701 \DeclareTextCommand{\textnaira}{PU}{\9040\246}% U+20A6
 17702 % U+20A7 PESETA SIGN; peseta
 17703 \DeclareTextCommand{\textpeseta}{PU}{\9040\247}% U+20A7
 17704 % U+20A9 WON SIGN; won
 17705 \DeclareTextCommand{\textwon}{PU}{\9040\251}% U+20A9
 17706 % U+20AB DONG SIGN; dong
 17707 \DeclareTextCommand{\textdong}{PU}{\9040\253}% U+20AB
 17708 % U+20AC EURO SIGN; *Euro, euro
 17709 \DeclareTextCommand{\texteuro}{PU}{\9040\254}% U+20AC
 17710 %* \texteuro -> \EurDig (marvosym)
 17711 %* \texteuro -> \EURdig (marvosym)
 17712 %* \texteuro -> \EurHv (marvosym)
 17713 %* \texteuro -> \EURhv (marvosym)
 17714 %* \texteuro -> \EurCr (marvosym)
 17715 %* \texteuro -> \EURcr (marvosym)
 17716 %* \texteuro -> \EurTm (marvosym)
 17717 %* \texteuro -> \EURtm (marvosym)
 17718 %* \texteuro -> \Eur (marvosym)
 17719 % U+20B0 GERMAN PENNY SIGN; \Deleatur (marvosym)
 17720 \DeclareTextCommand{\textDeleatur}{PU}{\9040\260}%* U+20B0
 17721 %* \textDeleatur -> \Denarius (marvosym)
 17722 % U+20B1 PESO SIGN
 17723 \DeclareTextCommand{\textpeso}{PU}{\9040\261}% U+20B1
 17724 % U+20B2 GUARANI SIGN
 17725 \DeclareTextCommand{\textguarani}{PU}{\9040\262}% U+20B2

46.2.19 Letterlike Symbols: U+2100 to U+214F

17726 % U+2103 DEGREE CELSIUS; centigrade
 17727 \DeclareTextCommand{\textcelsius}{PU}{\9041\003}% U+2103
 17728 % U+210F PLANCK CONSTANT OVER TWO PI; \hslash (AmS)

17729 \DeclareTextCommand{\textslash}{PU}{\9041\017}%* U+210F
17730 % U+2111 BLACK-LETTER CAPITAL I (=imaginary part); Ifraktur; \Im (LaTeX)
17731 \DeclareTextCommand{\textIm}{PU}{\9041\021}%* U+2111
17732 % U+2113 SCRIPT SMALL L (=ell, liter); afii61289, lsquare; \ell (LaTeX)
17733 \DeclareTextCommand{\textell}{PU}{\9041\023}%* U+2113
17734 % U+2116 NUMERO SIGN; *afii61352, numero
17735 \DeclareTextCommand{\textnumero}{PU}{\9041\026}% U+2116
17736 % U+2117 SOUND RECORDING COPYRIGHT
17737 \DeclareTextCommand{\textcircledP}{PU}{\9041\027}% U+2117
17738 % U+2118 SCRIPT CAPITAL P (=Weierstrass elliptic function);
17739 % weierstrass; \wp (LaTeX)
17740 \DeclareTextCommand{\textwp}{PU}{\9041\030}%* U+2118
17741 % U+211C BLACK-LETTER CAPITAL R (=real part); Rfraktur; \Re (LaTeX)
17742 \DeclareTextCommand{\textRe}{PU}{\9041\034}%* U+211C
17743 % U+211E PRESCRIPTION TAKE; prescription
17744 \DeclareTextCommand{\textrecipe}{PU}{\9041\036}% U+211E
17745 % U+2120 SERVICE MARK
17746 \DeclareTextCommand{\textservicemark}{PU}{\9041\040}% U+2120
17747 % U+2122 TRADE MARK SIGN; trademark
17748 \DeclareTextCommand{\texttrademark}{PU}{\9041\042}% U+2122
17749 % U+2126 OHM SIGN; Ohm, Omega
17750 \DeclareTextCommand{\textohm}{PU}{\9041\046}% U+2126
17751 % U+2127 INVERTED OHM SIGN
17752 \DeclareTextCommand{\textmho}{PU}{\9041\047}%* U+2127
17753 %* \textmho -> \agemO (wasysym)
17754 % U+2129 TURNED GREEK SMALL LETTER IOTA; \riota (phonetic)
17755 \DeclareTextCommand{\textriota}{PU}{\9041\051}%* U+2129
17756 % U+212B ANGSTROM SIGN; angstrom
17757 \DeclareTextCommand{\textangstrom}{PU}{\9041\053}% U+212B
17758 % U+212E ESTIMATED SYMBOL; estimated
17759 \DeclareTextCommand{\textestimated}{PU}{\9041\056}% U+212E
17760 %* \textestimated -> \EstimatedSign (marvosym)
17761 %* \textestimated -> \Ecommerce (marvosym)
17762 % U+2132 TURNED CAPITAL F; \Finv (AmS)
17763 \DeclareTextCommand{\textFinv}{PU}{\9041\062}%* U+2132
17764 % U+2135 ALEF SYMBOL; aleph; \aleph (LaTeX)
17765 \DeclareTextCommand{\textaleph}{PU}{\9041\065}%* U+2135
17766 % U+2136 BET SYMBOL; \beth (AmS, MnSymbol)
17767 \DeclareTextCommand{\textbeth}{PU}{\9041\066}%* U+2136
17768 % U+2137 GIMEL SYMBOL; \gimel (AmS, MnSymbol)
17769 \DeclareTextCommand{\textgimel}{PU}{\9041\067}%* U+2137
17770 % U+2138 DALET SYMBOL; \daleth (AmS, MnSymbol)
17771 \DeclareTextCommand{\textdaleth}{PU}{\9041\070}%* U+2138
17772 % U+213B FACSIMILE SIGN; \fax (marvosym)
17773 \DeclareTextCommand{\textfax}{PU}{\9041\073}%* U+213B
17774 % U+2141 TURNED SANS-SERIF CAPITAL G (=game); \Game
17775 \DeclareTextCommand{\textGame}{PU}{\9041\101}%* U+2141
17776 % U+214B TURNED AMPERSAND; \invamp (txfonts/pxfonts)
17777 \DeclareTextCommand{\textinvamp}{PU}{\9041\113}% U+214B
17778 %* \textinvamp -> \bindnasrepma (stmaryrd)
17779 %* \textinvamp -> \parr (cml)

46.2.20 Number Forms: U+2150 to U+218F

17780 % U+2150 VULGAR FRACTION ONE SEVENTH
 17781 \DeclareTextCommand{\textoneseventh}{PU}{\9041\120}% U+2150
 17782 % U+2151 VULGAR FRACTION ONE NINTH
 17783 \DeclareTextCommand{\textoneninth}{PU}{\9041\121}% U+2151
 17784 % U+2152 VULGAR FRACTION ONE TENTH
 17785 \DeclareTextCommand{\textonetenth}{PU}{\9041\122}% U+2152
 17786 % U+2153 VULGAR FRACTION ONE THIRD; onethird
 17787 \DeclareTextCommand{\textonethird}{PU}{\9041\123}% U+2153
 17788 % U+2154 VULGAR FRACTION TWO THIRDS; twothirds
 17789 \DeclareTextCommand{\texttwothirds}{PU}{\9041\124}% U+2154
 17790 % U+2155 VULGAR FRACTION ONE FIFTH
 17791 \DeclareTextCommand{\textonefifth}{PU}{\9041\125}% U+2155
 17792 % U+2156 VULGAR FRACTION TWO FIFTHS
 17793 \DeclareTextCommand{\texttwofifths}{PU}{\9041\126}% U+2156
 17794 % U+2157 VULGAR FRACTION THREE FIFTHS
 17795 \DeclareTextCommand{\textthreefifths}{PU}{\9041\127}% U+2157
 17796 % U+2158 VULGAR FRACTION FOUR FIFTHS
 17797 \DeclareTextCommand{\textfourfifths}{PU}{\9041\130}% U+2158
 17798 % U+2159 VULGAR FRACTION ONE SIXTH
 17799 \DeclareTextCommand{\textonesixth}{PU}{\9041\131}% U+2159
 17800 % U+215A VULGAR FRACTION FIVE SIXTHS
 17801 \DeclareTextCommand{\textfivesixths}{PU}{\9041\132}% U+215A
 17802 % U+215B VULGAR FRACTION ONE EIGHTH; oneeighth
 17803 \DeclareTextCommand{\textoneeighth}{PU}{\9041\133}% U+215B
 17804 % U+215C VULGAR FRACTION THREE EIGHTHS; threeeighths
 17805 \DeclareTextCommand{\textthreeeighths}{PU}{\9041\134}% U+215C
 17806 % U+215D VULGAR FRACTION FIVE EIGHTHS; fiveeighths
 17807 \DeclareTextCommand{\textfiveeighths}{PU}{\9041\135}% U+215D
 17808 % U+215E VULGAR FRACTION SEVEN EIGHTHS; seveneighths
 17809 \DeclareTextCommand{\textseveneighths}{PU}{\9041\136}% U+215E
 17810 % U+2184 LATIN SMALL LETTER REVERSED C
 17811 \DeclareTextCommand{\textrevc}{PU}{\9041\204}% U+2184
 17812 % U+2189 VULGAR FRACTION ZERO THIRDS
 17813 \DeclareTextCommand{\textzerthirds}{PU}{\9041\211}% U+2189

46.2.21 Arrows: U+2190 to U+21FF

17814 % U+2190 LEFTWARDS ARROW; arrowleft
 17815 \DeclareTextCommand{\textleftarrow}{PU}{\9041\220}%* U+2190
 17816 % U+2191 UPWARDS ARROW; arrowup
 17817 \DeclareTextCommand{\textuparrow}{PU}{\9041\221}%* U+2191
 17818 % U+2192 RIGHTWARDS ARROW; arrowright
 17819 \DeclareTextCommand{\textrightarrow}{PU}{\9041\222}%* U+2192
 17820 %* \textrightarrow -> \MVRightArrow (marvosym)
 17821 %* \textrightarrow -> \MVRightarrow (marvosym)
 17822 % U+2193 DOWNWARDS ARROW; arrowdown
 17823 \DeclareTextCommand{\textdownarrow}{PU}{\9041\223}%* U+2193
 17824 %* \textdownarrow -> \MVAArrowDown (marvosym)
 17825 %* \textdownarrow -> \Force (marvosym)
 17826 % U+2194 LEFT RIGHT ARROW; arrowboth; \leftrightarrow (LaTeX)
 17827 \DeclareTextCommand{\textleftrightarrow}{PU}{\9041\224}%* U+2194
 17828 % U+2195 UP DOWN ARROW; arrowupdn; \updownarrow (LaTeX)
 17829 \DeclareTextCommand{\textupdownarrow}{PU}{\9041\225}%* U+2195
 17830 % U+2196 NORTH WEST ARROW; arrowupleft; \nwarrow (LaTeX)
 17831 \DeclareTextCommand{\textnwarrow}{PU}{\9041\226}%* U+2196

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17832 % U+2197 NORTH EAST ARROW; arrowupright; \nearrow (LaTeX)
17833 \DeclareTextCommand{\textnearrow}{PU}{\9041\227}%* U+2197
17834 %* \textnearrow -> \textglobrise (tipa)
17835 % U+2198 SOUTH EAST ARROW; arrowdownright; \searrow (LaTeX)
17836 \DeclareTextCommand{\textsearrow}{PU}{\9041\230}%* U+2198
17837 %* \textsearrow -> \textglobfall (tipa)
17838 % U+2199 SOUTH WEST ARROW; arrowdownleft; \swarrow (LaTeX)
17839 \DeclareTextCommand{\textswarrow}{PU}{\9041\231}%* U+2199
17840 % U+219A LEFTWARDS ARROW WITH STROKE; \leftarrow (AmS)
17841 \DeclareTextCommand{\textleftarrow}{PU}{\9041\232}%* U+219A
17842 % U+219B RIGHTWARDS ARROW WITH STROKE; \rightarrow (AmS)
17843 \DeclareTextCommand{\textrightarrow}{PU}{\9041\233}%* U+219B
17844 % U+219E LEFTWARDS TWO HEADED ARROW; \twoheadleftarrow (AmS)
17845 \DeclareTextCommand{\texttwoheadleftarrow}{PU}{\9041\236}%* U+219E
17846 % \ntwoheadleftarrow (txfonts/pxfonts)
17847 \DeclareTextCommand{\textntwoheadleftarrow}{PU}{\9041\236\83\070}%* U+219E U+0338
17848 % U+219F UPWARDS TWO HEADED ARROW; \twoheaduparrow (MnSymbol)
17849 \DeclareTextCommand{\texttwoheaduparrow}{PU}{\9041\237}%* U+219F
17850 % U+21A0 RIGHTWARDS TWO HEADED ARROW;
17851 % \twoheadrightarrow (AmS)
17852 \DeclareTextCommand{\texttwoheadrightarrow}{PU}{\9041\240}%* U+21A0
17853 % \ntwoheadrightarrow (txfonts/pxfonts)
17854 \DeclareTextCommand{\textntwoheadrightarrow}{PU}{\9041\240\83\070}%* U+21A0 U+0338
17855 % U+21A1 DOWNWARDS TWO HEADED ARROW; \twoheaddownarrow (Mn-
      Symbol)
17856 \DeclareTextCommand{\texttwoheaddownarrow}{PU}{\9041\241}%* U+21A1
17857 % U+21A2 LEFTWARDS ARROW WITH TAIL; \leftarrowtail (AmS)
17858 \DeclareTextCommand{\textleftarrowtail}{PU}{\9041\242}%* U+21A2
17859 % U+21A3 RIGHTWARDS ARROW WITH TAIL; \rightarrowtail (AmS)
17860 \DeclareTextCommand{\textrightarrowtail}{PU}{\9041\243}%* U+21A3
17861 % U+21A6 RIGHTWARDS ARROW FROM BAR; \mapsto (LaTeX)
17862 \DeclareTextCommand{\textmapsto}{PU}{\9041\246}%* U+21A6
17863 % U+21A9 LEFTWARDS ARROW WITH HOOK; \hookleftarrow (LaTeX)
17864 \DeclareTextCommand{\texthookleftarrow}{PU}{\9041\251}%* U+21A9
17865 % U+21AA RIGHTWARDS ARROW WITH HOOK; \hookrightarrow (LaTeX)
17866 \DeclareTextCommand{\texthookrightarrow}{PU}{\9041\252}%* U+21AA
17867 % U+21AB LEFTWARDS ARROW WITH LOOP; \looparrowleft (AmS)
17868 \DeclareTextCommand{\textlooparrowleft}{PU}{\9041\253}%* U+21AB
17869 % U+21AC RIGHTWARDS ARROW WITH LOOP; \looparrowright (AmS)
17870 \DeclareTextCommand{\textlooparrowright}{PU}{\9041\254}%* U+21AC
17871 % U+21AE LEFT RIGHT ARROW WITH STROKE; \leftrightharrow (AmS)
17872 \DeclareTextCommand{\textleftrightharrow}{PU}{\9041\256}%* U+21AE
17873 % U+21AF DOWNWARDS ZIGZAG ARROW; \lightning (stmaryrd)
17874 \DeclareTextCommand{\textlightning}{PU}{\9041\257}%* U+21AF
17875 %* \textlightning -> \Lightning (marvosym)
17876 % U+21B5 DOWNWARDS ARROW WITH CORNER LEFTWARDS;
17877 % \dls (mathabx)
17878 \DeclareTextCommand{\textdls}{PU}{\9041\265}%* U+21B5
17879 % U+21B6 ANTICLOCKWISE TOP SEMICIRCLE ARROW;
17880 % \curvearrowleft (AmS)
17881 \DeclareTextCommand{\textcurvearrowleft}{PU}{\9041\266}%* U+21B6
17882 % U+21B7 CLOCKWISE TOP SEMICIRCLE ARROW; \curvearrowright (AmS)
17883 \DeclareTextCommand{\textcurvearrowright}{PU}{\9041\267}%* U+21B7
17884 % U+21BC LEFTWARDS HARPOON WITH BARB UPWARDS; harpoonleft-

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        barbup;
17885 % \leftharpoonup (LaTeX)
17886 \DeclareTextCommand{\textleftharpoonup}{PU}{\9041\274}%* U+21BC
17887 % U+21BD LEFTWARDS HARPOON WITH BARB DOWNWARDS;
17888 % \leftharpoondown (LaTeX)
17889 \DeclareTextCommand{\textleftharpoondown}{PU}{\9041\275}%* U+21BD
17890 % U+21BE UPWARDS HARPOON WITH BARB RIGHTWARDS;
17891 % \upharpoonright (AmS)
17892 \DeclareTextCommand{\textupharpoonright}{PU}{\9041\276}%* U+21BE
17893 % U+21BF UPWARDS HARPOON WITH BARB LEFTWARDS;
17894 % \upharpoonleft (AmS)
17895 \DeclareTextCommand{\textupharpoonleft}{PU}{\9041\277}%* U+21BF
17896 % U+21C0 RIGHTWARDS HARPOON WITH BARB UPWARDS; harpoonright-
        barbup
17897 % \rightharpoonup (LaTeX)
17898 \DeclareTextCommand{\textrightharpoonup}{PU}{\9041\300}%* U+21C0
17899 % U+21C1 RIGHTWARDS HARPOON WITH BARB DOWNWARDS;
17900 % \rightharpoondown (LaTeX)
17901 \DeclareTextCommand{\textrightharpoondown}{PU}{\9041\301}%* U+21C1
17902 % U+21C2 DOWNWARDS HARPOON WITH BARB RIGHTWARDS;
17903 % \downharpoonright (AmS)
17904 \DeclareTextCommand{\textdownharpoonright}{PU}{\9041\302}%* U+21C2
17905 % U+21C3 DOWNWARDS HARPOON WITH BARB LEFTWARDS;
17906 % \downharpoonleft (AmS)
17907 \DeclareTextCommand{\textdownharpoonleft}{PU}{\9041\303}%* U+21C3
17908 % U+21C4 RIGHTWARDS ARROW OVER LEFTWARDS ARROW;
17909 % arrowrightoverleft; \rightleftarrows (MnSymbol)
17910 \DeclareTextCommand{\textrightleftarrows}{PU}{\9041\304}%* U+21C4
17911 % U+21C5 UPWARDS ARROW LEFTWARDS OF DOWNWARDS ARROW; ar-
        rowupleftofdown;
17912 % \updownarrows (MnSymbol)
17913 \DeclareTextCommand{\textupdownarrows}{PU}{\9041\305}%* U+21C5
17914 % U+21C6 LEFTWARDS ARROW OVER RIGHTWARDS ARROW; arrowleft-
        overright;
17915 % \leftrightarrows (AmS)
17916 \DeclareTextCommand{\textleftrightarrows}{PU}{\9041\306}%* U+21C6
17917 % U+21C7 LEFTWARDS PAIRED ARROWS; \leftleftarrows (AmS)
17918 \DeclareTextCommand{\textleftleftarrows}{PU}{\9041\307}%* U+21C7
17919 % U+21C8 UPWARDS PAIRED ARROWS; \upuparrows (AmS)
17920 \DeclareTextCommand{\textupuparrows}{PU}{\9041\310}%* U+21C8
17921 % U+21C9 RIGHTWARDS PAIRED ARROWS; \rightrightarrows (AmS)
17922 \DeclareTextCommand{\textrightarrows}{PU}{\9041\311}%* U+21C9
17923 % U+21CA DOWNWARDS PAIRED ARROWS; \downdownarrows (AmS)
17924 \DeclareTextCommand{\textdowndownarrows}{PU}{\9041\312}%* U+21CA
17925 % U+21CB LEFTWARDS HARPOON OVER RIGHTWARDS HARPOON;
17926 % \leftrightharpoons (AmS);
17927 \DeclareTextCommand{\textleftrightharpoons}{PU}{\9041\313}%* U+21CB
17928 % U+21CC RIGHTWARDS HARPOON OVER LEFTWARDS HARPOON;
17929 % \rightleftharpoons (LaTeX, AmS)
17930 \DeclareTextCommand{\textrightleftharpoons}{PU}{\9041\314}%* U+21CC
17931 % U+21CD LEFTWARDS DOUBLE ARROW WITH STROKE; arrowleftd-
        blstroke;
17932 % \nLeftarrow (AmS)
17933 \DeclareTextCommand{\textnLeftarrow}{PU}{\9041\315}%* U+21CD

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17934 % U+21CE LEFT RIGHT DOUBLE ARROW WITH STROKE; \nLeftrightarrow (AmS)
17935 \DeclareTextCommand{\textnLeftrightarrow}{PU}{\9041\316}%* U+21CE
17936 % U+21CF RIGHTWARDS DOUBLE ARROW WITH STROKE; arrowrightdblstroke;
17937 % \nRrightarrow (AmS)
17938 \DeclareTextCommand{\textnRrightarrow}{PU}{\9041\317}%* U+21CF
17939 % U+21D0 LEFTWARDS DOUBLE ARROW; arrowdblleft, arrowleftdbl;
17940 % \Leftarrow (LaTeX)
17941 \DeclareTextCommand{\textLeftarrow}{PU}{\9041\320}%* U+21D0
17942 % U+21D1 UPWARDS DOUBLE ARROW; arrowdblup; \Uparrow (LaTeX)
17943 \DeclareTextCommand{\textUparrow}{PU}{\9041\321}%* U+21D1
17944 % U+21D2 RIGHTWARDS DOUBLE ARROW; arrowdblright, dblarrowright;
17945 % \Rrightarrow (LaTeX)
17946 \DeclareTextCommand{\textRrightarrow}{PU}{\9041\322}%* U+21D2
17947 %* \textRrightarrow -> \Conclusion (marvosym)
17948 % U+21D3 DOWNWARDS DOUBLE ARROW; arrowdbldown; \Downarrow (LaTeX)
17949 \DeclareTextCommand{\textDownarrow}{PU}{\9041\323}%* U+21D3
17950 % U+21D4 LEFT RIGHT DOUBLE ARROW; arrowdblboth;
17951 % \Leftrightarrow (LaTeX)
17952 \DeclareTextCommand{\textLeftrightarrow}{PU}{\9041\324}%* U+21D4
17953 %* \textLeftrightarrow -> \Equivalence (marvosym)
17954 % U+21D5 UP DOWN DOUBLE ARROW; \Updownarrow (LaTeX)
17955 \DeclareTextCommand{\textUpdownarrow}{PU}{\9041\325}%* U+21D5
17956 % U+21D6 NORTH WEST DOUBLE ARROW; \Nwarrow (MnSymbol)
17957 \DeclareTextCommand{\textNwarrow}{PU}{\9041\326}%* U+21D6
17958 % U+21D7 NORTH EAST DOUBLE ARROW; \Nearrow (MnSymbol)
17959 \DeclareTextCommand{\textNearrow}{PU}{\9041\327}%* U+21D7
17960 % U+21D8 SOUTH EAST DOUBLE ARROW; \Searrow (MnSymbol)
17961 \DeclareTextCommand{\textSearrow}{PU}{\9041\330}%* U+21D8
17962 % U+21D9 SOUTH WEST DOUBLE ARROW; \Swarrow (MnSymbol)
17963 \DeclareTextCommand{\textSwarrow}{PU}{\9041\331}%* U+21D9
17964 % U+21DA LEFTWARDS TRIPLE ARROW; \Lleftarrow (AmS)
17965 \DeclareTextCommand{\textLleftarrow}{PU}{\9041\332}%* U+21DA
17966 % U+21DB RIGHTWARDS TRIPLE ARROW; \Rrightarrow (MnSymbol)
17967 \DeclareTextCommand{\textRrightarrow}{PU}{\9041\333}%* U+21DB
17968 % U+21DC LEFTWARDS SQUIGGLE ARROW; \leftsquigarrow (mathabx)
17969 \DeclareTextCommand{\textleftsquigarrow}{PU}{\9041\334}%* U+21DC
17970 % U+21DD RIGHTWARDS SQUIGGLE ARROW; \rightsquigarrow (mathabx)
17971 \DeclareTextCommand{\textright squigarrow}{PU}{\9041\335}%* U+21DD
17972 % U+21E0 LEFTWARDS DASHED ARROW; arrowdashleft;
17973 % \dashleftarrow (AmS)
17974 \DeclareTextCommand{\textdashleftarrow}{PU}{\9041\340}%* U+21E0
17975 %* \textdashleftarrow -> \dashedleftarrow (MnSymbol)
17976 % U+21E1 UPWARDS DASHED ARROW; arrowdashup; \dasheduparrow (MnSymbol)
17977 \DeclareTextCommand{\textdasheduparrow}{PU}{\9041\341}%* U+21E1
17978 % U+21E2 RIGHTWARDS DASHED ARROW; arrowdashright; \dashrightarrow (AmS)
17979 \DeclareTextCommand{\textdashrightarrow}{PU}{\9041\342}%* U+21E2
17980 %* \textdashrightarrow -> \dashedrightarrow (MnSymbol)
17981 % U+21E3 DOWNWARDS DASHED ARROW; arrowdashdown; \dasheddownarrow (MnSymbol)

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17982 \DeclareTextCommand{\textdasheddownarrow}{PU}{\9041\343}%* U+21E3
17983 % U+21E8 RIGHTWARDS WHITE ARROW; \pointer (wasysym)
17984 \DeclareTextCommand{\textpointer}{PU}{\9041\350}%* U+21E8
17985 % U+21F5 DOWNWARDS ARROW LEFTWARDS OF UPWARDS ARROW;
17986 % \downuparrows (MnSymbol)
17987 \DeclareTextCommand{\textdownuparrows}{PU}{\9041\365}%* U+21F5
17988 % U+21FD LEFTWARDS OPEN-HEADED ARROW; \leftarrowtriangle (stmaryrd)
17989 \DeclareTextCommand{\textleftarrowtriangle}{PU}{\9041\375}%* U+21FD
17990 % U+21FE RIGHTWARDS OPEN-HEADED ARROW; \rightarrowtriangle (stmaryrd)
17991 \DeclareTextCommand{\textrightarrowtriangle}{PU}{\9041\376}%* U+21FE
17992 % U+21FF LEFT RIGHT OPEN-HEADED ARROW; \leftrightarrowtriangle
17993 \DeclareTextCommand{\textleftrightarrowtriangle}{PU}{\9041\377}%* U+21FF

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46.2.22 Mathematical Operators: U+2200 to U+22FF

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17994 % U+2200 FOR ALL; forall; \forall (LaTeX)
17995 \DeclareTextCommand{\textforall}{PU}{\9042\000}%* U+2200
17996 % U+2201 COMPLEMENT; \complement (AmS)
17997 \DeclareTextCommand{\textcomplement}{PU}{\9042\001}%* U+2201
17998 % U+2202 PARTIAL DIFFERENTIAL; partialdiff; \partial (LaTeX)
17999 \DeclareTextCommand{\textpartial}{PU}{\9042\002}%* U+2202
18000 % U+2203 THERE EXISTS; existential; \exists (LaTeX)
18001 \DeclareTextCommand{\textexists}{PU}{\9042\003}%* U+2203
18002 % U+2204 THERE DOES NOT EXIST; \nexists (AmS)
18003 \DeclareTextCommand{\textnexists}{PU}{\9042\004}%* U+2204
18004 % U+2205 EMPTY SET; emptyset; \emptyset (LaTeX), \varnothing (AmS)
18005 \DeclareTextCommand{\textemptyset}{PU}{\9042\005}%* U+2205
18006 %* \textemptyset -> \varnothing (AmS)
18007 % U+2206 INCREMENT; increment, Delta; \triangle (LaTeX)
18008 \DeclareTextCommand{\texttriangle}{PU}{\9042\006}%* U+2206
18009 % U+2207 NABLA; nabla, gradient; \nabla (LaTeX)
18010 \DeclareTextCommand{\textnabla}{PU}{\9042\007}%* U+2207
18011 % U+2208 ELEMENT OF; element; \in (LaTeX)
18012 \DeclareTextCommand{\textin}{PU}{\9042\010}%* U+2208
18013 % U+2209 NOT AN ELEMENT OF; notelement, notelementof; \notin (LaTeX)
18014 \DeclareTextCommand{\textnotin}{PU}{\9042\011}%* U+2209
18015 % U+220A SMALL ELEMENT OF; \smallin (mathdesign)
18016 \DeclareTextCommand{\textsmallin}{PU}{\9042\012}%* U+220A
18017 % U+220B CONTAINS AS MEMBER; suchthat; \ni (LaTeX)
18018 \DeclareTextCommand{\textni}{PU}{\9042\013}%* U+220B
18019 %* \textni -> \owns (mathabx)
18020 % U+220C DOES NOT CONTAIN AS MEMBER; \notowner (mathabx)
18021 \DeclareTextCommand{\textnotowner}{PU}{\9042\014}%* U+220C
18022 %* \textnotowner -> \notni (txfonts/pxfonts)
18023 % U+220D SMALL CONTAINS AS MEMBER; \smallowns (mathdesign)
18024 \DeclareTextCommand{\textsmallowns}{PU}{\9042\015}%* U+220D
18025 % U+220F N-ARY PRODUCT; \prod (LaTeX)
18026 \DeclareTextCommand{\textprod}{PU}{\9042\017}%* U+220F
18027 % U+2210 N-ARY COPRODUCT; \amalg (LaTeX)
18028 \DeclareTextCommand{\textamalg}{PU}{\9042\020}%* U+2210
18029 % U+2211 N-ARY SUMMATION; summation; \sum (LaTeX)
18030 \DeclareTextCommand{\textsum}{PU}{\9042\021}%* U+2211
18031 % U+2212 MINUS SIGN; minus
18032 \DeclareTextCommand{\textminus}{PU}{\9042\022}% U+2212

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18033 % U+2213 MINUS-OR-PLUS SIGN; minusplus; \mp (LaTeX)
18034 \DeclareTextCommand{\textmp}{PU}{\9042\023}%* U+2213
18035 % U+2214 DOT PLUS; \dotplus (AmS)
18036 \DeclareTextCommand{\textdotplus}{PU}{\9042\024}%* U+2214
18037 % U+2215 DIVISION SLASH; divisionslash; \Divides (marvosym)
18038 \DeclareTextCommand{\textDivides}{PU}{\9042\025}%* U+2215
18039 % \DividesNot (marvosym)
18040 \DeclareTextCommand{\textDividesNot}{PU}{\9042\025\9040\322}%* U+2215 U+20D2
18041 % U+2216 SET MINUS; \setminus (LaTeX)
18042 \DeclareTextCommand{\textsetminus}{PU}{\9042\026}%* U+2216
18043 % U+2217 ASTERISK OPERATOR; asteriskmath; \ast (LaTeX)
18044 \DeclareTextCommand{\textast}{PU}{\9042\027}%* U+2217
18045 % U+2218 RING OPERATOR; \circ (LaTeX)
18046 \DeclareTextCommand{\textcirc}{PU}{\9042\030}%* U+2218
18047 % U+2219 BULLET OPERATOR; bulletoperator; \bullet (LaTeX)
18048 \DeclareTextCommand{\textbulletoperator}{PU}{\9042\031}% U+2219
18049 % U+221A SQUARE ROOT; radical
18050 \DeclareTextCommand{\textsurd}{PU}{\9042\032}%* U+221A
18051 % U+221D PROPORTIONAL TO; proportional; \propto (LaTeX)
18052 \DeclareTextCommand{\textpropto}{PU}{\9042\035}%* U+221D
18053 %* \textpropto -> \varprop (wasysym)
18054 % U+221E INFINITY; infinity; \infty (LaTeX)
18055 \DeclareTextCommand{\textinfty}{PU}{\9042\036}%* U+221E
18056 % U+2220 ANGLE; angle; \angle (LaTeX)
18057 \DeclareTextCommand{\textangle}{PU}{\9042\040}%* U+2220
18058 % U+2221 MEASURED ANGLE; \measuredangle (mathabx, MnSymbol)
18059 \DeclareTextCommand{\textmeasuredangle}{PU}{\9042\041}%* U+2221
18060 % U+2222 SPHERICAL ANGLE; \sphericalangle (AmS)
18061 \DeclareTextCommand{\textsphericalangle}{PU}{\9042\042}%* U+2222
18062 %* \textsphericalangle -> \varangle (wasysym)
18063 %* \textsphericalangle -> \Anglesign (marvosym)
18064 %* \textsphericalangle -> \AngleSign (marvosym)
18065 % U+2223 DIVIDES; divides; \mid (LaTeX)
18066 \DeclareTextCommand{\textmid}{PU}{\9042\043}%* U+2223
18067 % U+2224 DOES NOT DIVIDE; \nmid (AmS)
18068 \DeclareTextCommand{\textnmid}{PU}{\9042\044}%* U+2224
18069 %* \textnmid -> \notdivides (mathabx)
18070 % U+2225 PARALLEL TO; parallel; \parallel (LaTeX)
18071 \DeclareTextCommand{\textparallel}{PU}{\9042\045}%* U+2225
18072 % U+2226 NOT PARALLEL TO; notparallel; \nparallel (AmS)
18073 \DeclareTextCommand{\textnparallel}{PU}{\9042\046}%* U+2226
18074 %* \textnparallel -> nUpdownline (MnSymbol)
18075 % U+2227 LOGICAL AND; logicaland; \wedge (LaTeX)
18076 \DeclareTextCommand{\textwedge}{PU}{\9042\047}%* U+2227
18077 % \owedge (stmaryrd)
18078 \DeclareTextCommand{\textowedge}{PU}{\9042\047\9040\335}%* U+2227 U+20DD
18079 %* \textowedge -> \varowedge (stmaryrd)
18080 % U+2228 LOGICAL OR; logicalor; \vee (LaTeX)
18081 \DeclareTextCommand{\textvee}{PU}{\9042\050}%* U+2228
18082 % \ovee (stmaryrd)
18083 \DeclareTextCommand{\textovee}{PU}{\9042\050\9040\335}%* U+2228 U+20DD
18084 %* \textovee -> \varovee (stmaryrd)
18085 % U+2229 INTERSECTION; intersection; \cap (LaTeX)
18086 \DeclareTextCommand{\textcap}{PU}{\9042\051}%* U+2229

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18087 % U+222A UNION; union; \cup (LaTeX)
18088 \DeclareTextCommand{\textcup}{PU}{\9042\052}%* U+222A
18089 % U+222B INTEGRAL; integral; \int (LaTeX)
18090 \DeclareTextCommand{\textint}{PU}{\9042\053}%* U+222B
18091 %* \textint -> \varint (wasysym)
18092 % U+222C DOUBLE INTEGRAL; dblintegral; \iint (AmS)
18093 \DeclareTextCommand{\textiint}{PU}{\9042\054}%* U+222C
18094 % U+222D TRIPLE INTEGRAL; \iiint (AmS)
18095 \DeclareTextCommand{\textiiint}{PU}{\9042\055}%* U+222D
18096 % U+222E CONTOUR INTEGRAL; contourintegral; \oint (LaTeX)
18097 \DeclareTextCommand{\textoint}{PU}{\9042\056}%* U+222E
18098 %* \textoint -> \varoint (wasysym)
18099 % U+222F SURFACE INTEGRAL; \oiint (wasysym)
18100 \DeclareTextCommand{\textoint}{PU}{\9042\057}%* U+222F
18101 % U+2232 CLOCKWISE CONTOUR INTEGRAL;
18102 % \ointclockwise (txfonts/pxfonts)
18103 \DeclareTextCommand{\textointclockwise}{PU}{\9042\062}%* U+2232
18104 % U+2233 ANTICLOCKWISE CONTOUR INTEGRAL; \ointctrclockwise (tx-
18105 % \DeclareTextCommand{\textointctrclockwise}{PU}{\9042\063}%* U+2233
18106 % U+2234 THEREFORE; therefore; \therefore (AmS)
18107 \DeclareTextCommand{\texttherefore}{PU}{\9042\064}%* U+2234
18108 %* \texttherefore -> uptherefore (MnSymbol)
18109 % U+2235 BECAUSE; because; \because (AmS)
18110 \DeclareTextCommand{\textbecause}{PU}{\9042\065}%* U+2235
18111 %* \textbecause -> \downtherefore (MnSymbol)
18112 % U+2236 RATIO; \vdots (MnSymbol)
18113 \DeclareTextCommand{\textvdots}{PU}{\9042\066}%* U+2236
18114 % U+2237 PROPORTION; \squaredots (MnSymbol)
18115 \DeclareTextCommand{\textsquaredots}{PU}{\9042\067}%* U+2237
18116 % U+2238 DOT MINUS; \dotminus (MnSymbol)
18117 \DeclareTextCommand{\textdotminus}{PU}{\9042\070}%* U+2238
18118 %* \textdotminus -> \textdotdiv (mathabx)
18119 % U+2239 EXCESS; \eqcolon (txfonts/pxfonts)
18120 \DeclareTextCommand{\texteqcolon}{PU}{\9042\071}%* U+2239
18121 % U+223C TILDE OPERATOR; similar; \sim (LaTeX)
18122 \DeclareTextCommand{\textsim}{PU}{\9042\074}%* U+223C
18123 %* \textsim -> \AC (wasysym)
18124 % U+223D REVERSED TILDE; reversedtilde; \backsim (AmS)
18125 \DeclareTextCommand{\textbacksim}{PU}{\9042\075}%* U+223D
18126 % \nbacksim (txfonts/pxfonts)
18127 \DeclareTextCommand{\textnbacksim}{PU}{\9042\075\83\070}%* U+223D U+0338
18128 % U+2240 WREATH PRODUCT; \wr (LaTeX)
18129 \DeclareTextCommand{\textwr}{PU}{\9042\100}%* U+2240
18130 %* \textwr -> \wreath (MnSymbol)
18131 % U+2241 NOT TILDE; \nsim (AmS)
18132 \DeclareTextCommand{\textnsim}{PU}{\9042\101}%* U+2241
18133 % U+2242 MINUS TILDE; \eqsim (MnSymbol)
18134 \DeclareTextCommand{\texteqsim}{PU}{\9042\102}%* U+2242
18135 % \neqsim (MnSymbol)
18136 \DeclareTextCommand{\textneqsim}{PU}{\9042\102\83\070}%* U+2242 U+0338
18137 % U+2243 ASYMPTOTICALLY EQUAL TO; asymptoticallyequal; \simeq (La-
18138 % \DeclareTextCommand{\textsimeq}{PU}{\9042\103}%* U+2243

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18139 % U+2244 NOT ASYMPTOTICALLY EQUAL TO; \nsimeq (txfonts/pxfonts)
18140 \DeclareTextCommand{\textnsimeq}{PU}{\9042\104}%* U+2244
18141 % U+2245 APPROXIMATELY EQUAL TO; approximatelyequal; \cong (LaTeX)
18142 \DeclareTextCommand{\textcong}{PU}{\9042\105}%* U+2245
18143 % U+2247 NEITHER APPROXIMATELY NOR ACTUALLY EQUAL TO;
18144 % \ncong (AmS)
18145 \DeclareTextCommand{\textncong}{PU}{\9042\107}%* U+2247
18146 % U+2248 ALMOST EQUAL TO; approxequal; \approx (LaTeX)
18147 \DeclareTextCommand{\textapprox}{PU}{\9042\110}%* U+2248
18148 % U+2249 NOT ALMOST EQUAL TO; \napprox (txfonts/pxfonts)
18149 \DeclareTextCommand{\textnapprox}{PU}{\9042\111}%* U+2249
18150 %* \textnapprox -> \nthickapprox (txfonts/pxfonts)
18151 % U+224A ALMOST EQUAL OR EQUAL TO; \approxeq (AmS)
18152 \DeclareTextCommand{\textapproxeq}{PU}{\9042\112}%* U+224A
18153 % \napproxeq (txfonts/pxfonts)
18154 \DeclareTextCommand{\textnapproxeq}{PU}{\9042\112\83\070}%* U+224A U+0338
18155 % U+224B TRIPLE TILDE; \triplesim (MnSymbol)
18156 \DeclareTextCommand{\texttriplesim}{PU}{\9042\113}%* U+224B
18157 %* \texttriplesim -> \VHF (wasysym)
18158 % \ntriplesim (MnSymbol)
18159 \DeclareTextCommand{\textntriplesim}{PU}{\9042\113\83\070}%* U+224B U+0338
18160 % U+224C ALL EQUAL TO; allequal; \backcong (MnSymbol)
18161 \DeclareTextCommand{\textbackcong}{PU}{\9042\114}%* U+224C
18162 % \nbackcong (MnSymbol)
18163 \DeclareTextCommand{\textnbackcong}{PU}{\9042\114\83\070}%* U+224C U+0338
18164 % U+224D EQUIVALENT TO; \asymp (LaTeX)
18165 \DeclareTextCommand{\textasymp}{PU}{\9042\115}%* U+224D
18166 % \nasymp (txfonts/pxfonts)
18167 \DeclareTextCommand{\textnasymp}{PU}{\9042\115\83\070}%* U+224D U+0338
18168 %* \textnasymp -> \notasympt (mathabx)
18169 % U+224E GEOMETRICALLY EQUIVALENT TO; \Bumpeq (AmS)
18170 \DeclareTextCommand{\textBumpeq}{PU}{\9042\116}%* U+224E
18171 % \nBumpeq (txfonts/pxfonts)
18172 \DeclareTextCommand{\textnBumpeq}{PU}{\9042\116\83\070}%* U+224E U+0338
18173 % U+224F DIFFERENCE BETWEEN; \bumpeq (AmS)
18174 \DeclareTextCommand{\textbumpeq}{PU}{\9042\117}%* U+224F
18175 % \nbumpeq (txfonts/pxfonts)
18176 \DeclareTextCommand{\textnbumpeq}{PU}{\9042\117\83\070}%* U+224F U+0338
18177 % U+2250 APPROACHES THE LIMIT; approaches; \doteq (LaTeX)
18178 \DeclareTextCommand{\textdoteq}{PU}{\9042\120}%* U+2250
18179 % \ndoteq (MnSymbol)
18180 \DeclareTextCommand{\textndoteq}{PU}{\9042\120\83\070}%* U+2250 U+0338
18181 % U+2251 GEOMETRICALLY EQUAL TO; geometricallyequal;
18182 % \doteqdot (AmS)
18183 \DeclareTextCommand{\textdoteqdot}{PU}{\9042\121}%* U+2251
18184 %* \textdoteqdot -> \Doteq (MnSymbol)
18185 % \nDoteq (MnSymbol)
18186 \DeclareTextCommand{\textnDoteq}{PU}{\9042\121\83\070}%* U+2251 U+0338
18187 % U+2252 APPROXIMATELY EQUAL TO OR THE IMAGE OF; approx-
qualorimage;
18188 % \fallingdotseq (AmS)
18189 \DeclareTextCommand{\textfallingdotseq}{PU}{\9042\122}%* U+2252
18190 % \nfallingdotseq (MnSymbol)
18191 \DeclareTextCommand{\textnfallingdotseq}{PU}{\9042\122\83\070}%* U+2252 U+0338

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18192 % U+2253 IMAGE OF OR APPROXIMATELY EQUAL TO; imageorapproximatelyequal;
 18193 % \risingdotseq (AmS)
 18194 \DeclareTextCommand{\textrisingdotseq}{PU}{\9042\123}%* U+2253
 18195 % \nrisingdoteq (MnSymbol)
 18196 \DeclareTextCommand{\textnrisingdoteq}{PU}{\9042\123\83\070}%* U+2253 U+0338
 18197 % U+2254 COLON EQUALS; \colonequals (colonequals)
 18198 \DeclareTextCommand{\textcolonequals}{PU}{\9042\124}%* U+2254
 18199 % U+2255 EQUALS COLON; \equalscolon (colonequals)
 18200 \DeclareTextCommand{\textequalscolon}{PU}{\9042\125}%* U+2255
 18201 % U+2256 RING IN EQUAL TO; \eqcirc (AmS)
 18202 \DeclareTextCommand{\texteqcirc}{PU}{\9042\126}%* U+2256
 18203 % \neqcirc (MnSymbol)
 18204 \DeclareTextCommand{\textneqcirc}{PU}{\9042\126\83\070}%* U+2256 U+0338
 18205 % U+2257 RING EQUAL TO; \circeq (AmS)
 18206 \DeclareTextCommand{\textcirceq}{PU}{\9042\127}%* U+2257
 18207 % \ncirceq (MnSymbol)
 18208 \DeclareTextCommand{\textncirceq}{PU}{\9042\127\83\070}%* U+2257 U+0338
 18209 % U+2259 ESTIMATES; \hateq (MnSymbol)
 18210 \DeclareTextCommand{\texthateq}{PU}{\9042\131}%* U+2259
 18211 %* \texthateq -> \corresponds (mathabx)
 18212 %* \texthateq -> \Corresponds (marvosym)
 18213 % \nhateq (MnSymbol)
 18214 \DeclareTextCommand{\textnhateq}{PU}{\9042\131\83\070}%* U+2259 U+0338
 18215 % U+225C DELTA EQUAL TO; \triangleeq (AmS)
 18216 \DeclareTextCommand{\texttriangleeq}{PU}{\9042\134}%* U+225C
 18217 % U+2260 NOT EQUAL TO; notequal; \ne (LaTeX), \neq (LaTeX)
 18218 \DeclareTextCommand{\textneq}{PU}{\9042\140}%* U+2260
 18219 \DeclareTextCommand{\textne}{PU}{\9042\140}%* U+2260
 18220 %* \textneq -> \nequal (MnSymbol)
 18221 % U+2261 IDENTICAL TO; equivalence; \equiv (LaTeX)
 18222 \DeclareTextCommand{\textequiv}{PU}{\9042\141}%* U+2261
 18223 %* \textequiv -> \Congruent (marvosym)
 18224 % U+2262 NOT IDENTICAL TO; notidentical; \nequiv (txfonts/pxfonts)
 18225 \DeclareTextCommand{\textnequiv}{PU}{\9042\142}%* U+2262
 18226 %* \textnequiv -> \NotCongruent (marvosym)
 18227 %* \textnequiv -> \notequiv (mathabx)
 18228 % U+2264 LESS-THAN OR EQUAL TO; lessequal; \le (LaTeX), \leq (LaTeX)
 18229 \DeclareTextCommand{\textleq}{PU}{\9042\144}%* U+2264
 18230 \DeclareTextCommand{\textle}{PU}{\9042\144}%* U+2264
 18231 %* \textleq -> \LessOrEqual (marvosym)
 18232 % U+2265 GREATER-THAN OR EQUAL TO; greaterequal;
 18233 % \ge (LaTeX), \geq (LaTeX)
 18234 \DeclareTextCommand{\textgeq}{PU}{\9042\145}%* U+2265
 18235 \DeclareTextCommand{\textge}{PU}{\9042\145}%* U+2265
 18236 %* \textgeq -> \LargerOrEqual (marvosym)
 18237 % U+2266 LESS-THAN OVER EQUAL TO; lessorequal; \leqq (AmS)
 18238 \DeclareTextCommand{\textleqq}{PU}{\9042\146}%* U+2266
 18239 % \nleqq (txfonts/pxfonts)
 18240 \DeclareTextCommand{\textnleqq}{PU}{\9042\146\83\070}%* U+2266 U+0338
 18241 % U+2267 GREATER-THAN OVER EQUAL TO; greaterorequal; \geqq (AmS)
 18242 \DeclareTextCommand{\textgeqq}{PU}{\9042\147}%* U+2267
 18243 % \ngeqq (txfonts/pxfonts)
 18244 \DeclareTextCommand{\textngeqq}{PU}{\9042\147\83\070}%* U+2267 U+0338

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18245 % U+2268 LESS-THAN BUT NOT EQUAL TO; \lneqq (AmS)
18246 \DeclareTextCommand{\textlneqq}{PU}{\9042\150}%* U+2268
18247 % U+2269 GREATER-THAN BUT NOT EQUAL TO; \gneqq (AmS)
18248 \DeclareTextCommand{\textgneqq}{PU}{\9042\151}%* U+2269
18249 % U+226A MUCH LESS-THAN; muchless; \ll (LaTeX)
18250 \DeclareTextCommand{\textll}{PU}{\9042\152}%* U+226A
18251 % \nll (txfonts/pxfonts)
18252 \DeclareTextCommand{\textnll}{PU}{\9042\152\83\070}%* U+226A U+0338
18253 % U+226B MUCH GREATER-THAN; muchgreater; \gg (LaTeX)
18254 \DeclareTextCommand{\textgg}{PU}{\9042\153}%* U+226B
18255 % \ngg (txfonts/pxfonts)
18256 \DeclareTextCommand{\textngg}{PU}{\9042\153\83\070}%* U+226B U+0338
18257 % U+226C BETWEEN; \between (AmS)
18258 \DeclareTextCommand{\textbetween}{PU}{\9042\154}%* U+226C
18259 % U+226E NOT LESS-THAN; notless; \nless (AmS)
18260 \DeclareTextCommand{\textnless}{PU}{\9042\156}%* U+226E
18261 % U+226F NOT GREATER-THAN; notgreater; \ngtr (AmS)
18262 \DeclareTextCommand{\textngtr}{PU}{\9042\157}%* U+226F
18263 % U+2270 NEITHER LESS-THAN NOR EQUAL TO; notlessnorequal;
18264 % \nleq (AmS)
18265 \DeclareTextCommand{\textnleq}{PU}{\9042\160}%* U+2270
18266 % U+2271 NEITHER GREATER-THAN NOR EQUAL TO; notgreaternorequal; \ngeq (AmS)
18267 \DeclareTextCommand{\textngeq}{PU}{\9042\161}%* U+2271
18268 % U+2272 LESS-THAN OR EQUIVALENT TO; lessorequivalent; \lessim (AmS)
18269 \DeclareTextCommand{\textlessim}{PU}{\9042\162}%* U+2272
18270 %* \textlessim -> \apprle (wasysym)
18271 % U+2273 GREATER-THAN OR EQUIVALENT TO; greaterorequivalent; \gtrsim (AmS)
18272 \DeclareTextCommand{\textgtrsim}{PU}{\9042\163}%* U+2273
18273 %* \textgtrsim -> \apprge (wasysym)
18274 % U+2274 NEITHER LESS-THAN NOR EQUIVALENT TO; \nlessim (txfonts/pxfonts)
18275 \DeclareTextCommand{\textnlessim}{PU}{\9042\164}%* U+2274
18276 % U+2275 NEITHER GREATER-THAN NOR EQUIVALENT TO; \ngtrsim (txfonts/pxfonts)
18277 \DeclareTextCommand{\textngtrsim}{PU}{\9042\165}%* U+2275
18278 % U+2276 LESS-THAN OR GREATER-THAN; lessorgreater; \lessgtr (AmS)
18279 \DeclareTextCommand{\textlessgtr}{PU}{\9042\166}%* U+2276
18280 % U+2277 GREATER-THAN OR LESS-THAN; greaterorless; \gtrless (AmS)
18281 \DeclareTextCommand{\textgtrless}{PU}{\9042\167}%* U+2277
18282 % U+2278 NEITHER LESS-THAN NOR GREATER-THAN; \ngtrless (txfonts/pxfonts)
18283 \DeclareTextCommand{\textngtrless}{PU}{\9042\170}%* U+2278
18284 % U+2279 NEITHER GREATER-THAN NOR LESS-THAN; \nlessgtr (txfonts/pxfonts)
18285 \DeclareTextCommand{\textnlessgtr}{PU}{\9042\171}%* U+2279
18286 % U+227A PRECEDES; precedes; \prec (LaTeX)
18287 \DeclareTextCommand{\textprec}{PU}{\9042\172}%* U+227A
18288 % U+227B SUCCEEDS; succeeds; \succ (LaTeX)
18289 \DeclareTextCommand{\textsucc}{PU}{\9042\173}%* U+227B
18290 % U+227C PRECEDES OR EQUAL TO; \preccurlyeq (AmS)
18291 \DeclareTextCommand{\textpreccurlyeq}{PU}{\9042\174}%* U+227C
18292 % U+227D SUCCEEDS OR EQUAL TO; \succcurlyeq (AmS)

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18293 \DeclareTextCommand{\textsuccurlyeq}{PU}{\9042\175}%* U+227D
18294 % U+227E PRECEDES OR EQUIVALENT TO; \precsim (AmS)
18295 \DeclareTextCommand{\textprecsim}{PU}{\9042\176}%* U+227E
18296 % \nprecsim (txfonts/pxfonts)
18297 \DeclareTextCommand{\textnprecsim}{PU}{\9042\176\83\070}%* U+227E U+0338
18298 % U+227F SUCCEEDS OR EQUIVALENT TO; \succsim (AmS)
18299 \DeclareTextCommand{\textsuccsim}{PU}{\9042\177}%* U+227F
18300 % \nsuccsim (txfonts/pxfonts)
18301 \DeclareTextCommand{\textnsuccsim}{PU}{\9042\177\83\070}%* U+227F U+0338
18302 % U+2280 DOES NOT PRECEDE; notprecedes; \nprec (AmS)
18303 \DeclareTextCommand{\textnprec}{PU}{\9042\200}%* U+2280
18304 % U+2281 DOES NOT SUCCEED; notsucceds; \nsucc (AmS)
18305 \DeclareTextCommand{\textnsucc}{PU}{\9042\201}%* U+2281
18306 % U+2282 SUBSET OF; propersubset; \subset (LaTeX)
18307 \DeclareTextCommand{\textsubset}{PU}{\9042\202}%* U+2282
18308 % U+2283 SUPERSET OF; propersuperset; \supset (LaTeX)
18309 \DeclareTextCommand{\textsupset}{PU}{\9042\203}%* U+2283
18310 % U+2284 NOT A SUBSET OF; notsubset; \nsubset (mathabx)
18311 \DeclareTextCommand{\textnsubset}{PU}{\9042\204}%* U+2284
18312 % U+2285 NOT A SUPERSET OF; notsuperset; \nsupset (mathabx)
18313 \DeclareTextCommand{\textnsupset}{PU}{\9042\205}%* U+2285
18314 % U+2286 SUBSET OF OR EQUAL TO; reflexsubset; \subseteq (LaTeX)
18315 \DeclareTextCommand{\textsubseteq}{PU}{\9042\206}%* U+2286
18316 % U+2287 SUPERSET OF OR EQUAL TO; reflexsuperset; \supseteq (LaTeX)
18317 \DeclareTextCommand{\textsupseteq}{PU}{\9042\207}%* U+2287
18318 % U+2288 NEITHER A SUBSET OF NOR EQUAL TO; \nsubseteq (AmS)
18319 \DeclareTextCommand{\textnsubseteq}{PU}{\9042\210}%* U+2288
18320 % U+2289 NEITHER A SUPERSET OF NOR EQUAL TO; \nsupseteq (AmS)
18321 \DeclareTextCommand{\textnsupseteq}{PU}{\9042\211}%* U+2289
18322 % U+228A SUBSET OF WITH NOT EQUAL TO; subsetnotequal; \subset-
    neq (AmS)
18323 \DeclareTextCommand{\textsubsetneq}{PU}{\9042\212}%* U+228A
18324 % U+228B SUPERSET OF WITH NOT EQUAL TO; supersetnotequal; \supset-
    neq (AmS)
18325 \DeclareTextCommand{\textsupsetneq}{PU}{\9042\213}%* U+228B
18326 % U+228D MULTISSET MULTIPLICATION; \cupdot (MnSymbol)
18327 \DeclareTextCommand{\textcupdot}{PU}{\9042\215}%* U+228D
18328 % U+228E MULTISSET UNION; \cupplus (MnSymbol)
18329 \DeclareTextCommand{\textcupplus}{PU}{\9042\216}%* U+228E
18330 % U+228F SQUARE IMAGE OF; \sqsubset (latexsym, ...)
18331 \DeclareTextCommand{\textsqsubset}{PU}{\9042\217}%* U+228F
18332 % \nsqsubset (txfonts/pxfonts)
18333 \DeclareTextCommand{\textnsqsubset}{PU}{\9042\217\83\070}%* U+228F U+0338
18334 % U+2290 SQUARE ORIGINAL OF; \sqsupset (latexsym, ...)
18335 \DeclareTextCommand{\textsqsupset}{PU}{\9042\220}%* U+2290
18336 % \nsqsupset (txfonts/pxfonts)
18337 \DeclareTextCommand{\textnsqsupset}{PU}{\9042\220\83\070}%* U+2290 U+0338
18338 % U+2291 SQUARE IMAGE OF OR EQUAL TO; \sqsubseteq (LaTeX)
18339 \DeclareTextCommand{\textsqsubseteq}{PU}{\9042\221}%* U+2291
18340 % \nsqsubseteq (txfonts/pxfonts)
18341 \DeclareTextCommand{\textnsqsubseteq}{PU}{\9042\221\83\070}%* U+2291 U+0338
18342 % U+2292 SQUARE ORIGINAL OF OR EQUAL TO; \sqsupseteq (LaTeX)
18343 \DeclareTextCommand{\textsqsupseteq}{PU}{\9042\222}%* U+2292
18344 % \nsqsupseteq (txfonts/pxfonts)

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18345 \DeclareTextCommand{\textnsqsupseteq}{PU}{\9042\222\83\070}%* U+2292 U+0338
18346 % U+2293 SQUARE CAP; \sqcap (LaTeX)
18347 \DeclareTextCommand{\textsqcap}{PU}{\9042\223}%* U+2293
18348 % U+2294 SQUARE CUP; \sqcup (LaTeX)
18349 \DeclareTextCommand{\textsqcup}{PU}{\9042\224}%* U+2294
18350 % U+2295 CIRCLED PLUS; circleplus; \oplus (LaTeX)
18351 \DeclareTextCommand{\textoplus}{PU}{\9042\225}%* U+2295
18352 %* \textoplus -> \varoplus (stmaryrd)
18353 % U+2296 CIRCLED MINUS; minuscircle; \ominus (LaTeX)
18354 \DeclareTextCommand{\textominus}{PU}{\9042\226}%* U+2296
18355 %* \textominus -> \varominus (stmaryrd)
18356 % U+2297 CIRCLED TIMES; circlemultiply; \otimes (LaTeX)
18357 \DeclareTextCommand{\textotimes}{PU}{\9042\227}%* U+2297
18358 %* \textotimes -> \varotimes (stmaryrd)
18359 % U+2298 CIRCLED DIVISION SLASH; \oslash (LaTeX)
18360 \DeclareTextCommand{\textoslash}{PU}{\9042\230}%* U+2298
18361 %* \textoslash -> \varoslash (stmaryrd)
18362 % U+2299 CIRCLED DOT OPERATOR; circle(d?)ot; \odot (LaTeX)
18363 \DeclareTextCommand{\textodot}{PU}{\9042\231}%* U+2299
18364 %* \textodot -> \varodot (stmaryrd)
18365 % U+229A CIRCLED RING OPERATOR; \circledcirc (AmS)
18366 \DeclareTextCommand{\textcircledcirc}{PU}{\9042\232}%* U+229A
18367 %* \textcircledcirc -> \ocirc (mathabx)
18368 %* \textcircledcirc -> \varocircle (stmaryrd)
18369 % U+229B CIRCLED ASTERISK OPERATOR; \circledast (AmS)
18370 \DeclareTextCommand{\textcircledast}{PU}{\9042\233}%* U+229B
18371 %* \textcircledast -> \varoast (stmaryrd)
18372 %* \textcircledast -> \oasterisk (mathabx)
18373 % U+229D CIRCLED DASH; \circleddash (AmS)
18374 \DeclareTextCommand{\textcircleddash}{PU}{\9042\235}%* U+229D
18375 % U+229E SQUARED PLUS; \boxplus (AmS)
18376 \DeclareTextCommand{\textboxplus}{PU}{\9042\236}%* U+229E
18377 % U+229F SQUARED MINUS; \boxminus (AmS)
18378 \DeclareTextCommand{\textboxminus}{PU}{\9042\237}%* U+229F
18379 % U+22A0 SQUARED TIMES; \boxtimes (AmS)
18380 \DeclareTextCommand{\textboxtimes}{PU}{\9042\240}%* U+22A0
18381 % U+22A1 SQUARED DOT OPERATOR; \boxdot (AmS)
18382 \DeclareTextCommand{\textboxdot}{PU}{\9042\241}%* U+22A1
18383 % U+22A2 RIGHT TACK; \vdash (LaTeX)
18384 \DeclareTextCommand{\textvdash}{PU}{\9042\242}%* U+22A2
18385 %* \textvdash -> \rightvdash (MnSymbol)
18386 % U+22A3 LEFT TACK; \dashleftarrow; \dashv (LaTeX)
18387 \DeclareTextCommand{\textdashv}{PU}{\9042\243}%* U+22A3
18388 %* \textdashv -> \leftvdash (MnSymbol)
18389 % \ndashv (mathabx)
18390 \DeclareTextCommand{\textndashv}{PU}{\9042\243\83\070}%* U+22A3 U+0338
18391 %* \textndashv -> \nleftvdash (MnSymbol)
18392 % U+22A4 DOWN TACK (=top); \dashrightarrow; \top (LaTeX)
18393 \DeclareTextCommand{\texttop}{PU}{\9042\244}%* U+22A4
18394 %* \texttop -> \downvdash (MnSymbol)
18395 % \ndownvdash (MnSymbol)
18396 \DeclareTextCommand{\textndownvdash}{PU}{\9042\244\83\070}%* U+22A4 U+0338
18397 % U+22A5 UP TACK (=base, bottom); \bot (LaTeX)
18398 \DeclareTextCommand{\textbot}{PU}{\9042\245}%* U+22A5

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18399 %* \textbot -> \upvdash (MnSymbol)
18400 % \nupvdash (MnSymbol)
18401 \DeclareTextCommand{\textnupvdash}{PU}{\9042\245\83\070}%* U+22A5 U+0338
18402 %* \textnupvdash -> \nperp (MnSymbol)
18403 % U+22A8 TRUE; \vDash (AmS)
18404 \DeclareTextCommand{\textvDash}{PU}{\9042\250}%* U+22A8
18405 %* \textvDash -> \models (LaTeX)
18406 %* \textvDash -> \rightmodels (MnSymbol)
18407 % U+22A9 FORCES; \Vdash (AmS)
18408 \DeclareTextCommand{\textVdash}{PU}{\9042\251}%* U+22A9
18409 %* \textVdash -> \rightVdash (MnSymbol)
18410 % U+22AA TRIPLE VERTICAL BAR RIGHT TURNSTILE; \Vvdash (AmS)
18411 \DeclareTextCommand{\textVvdash}{PU}{\9042\252}%* U+22AA
18412 % \nVdash (mathabx)
18413 \DeclareTextCommand{\textnVdash}{PU}{\9042\252\83\070}%* U+22AA U+0338
18414 % U+22AB DOUBLE VERTICAL BAR DOUBLE RIGHT TURNSTILE;
18415 % \VDash (mathabx)
18416 \DeclareTextCommand{\textVDash}{PU}{\9042\253}%* U+22AB
18417 %* \textVDash -> \rightModels (MnSymbol)
18418 % U+22AC DOES NOT PROVE; \nvDash (AmS)
18419 \DeclareTextCommand{\textnvDash}{PU}{\9042\254}%* U+22AC
18420 %* \textnvDash -> \nrighnvDash (MnSymbol)
18421 % U+22AD NOT TRUE; \nVDash (AmS)
18422 \DeclareTextCommand{\textnVDash}{PU}{\9042\255}%* U+22AD
18423 %* \textnVDash -> \nrighmodels (MnSymbol)
18424 %* \textnVDash -> \nmodels (MnSymbol)
18425 % U+22AE DOES NOT FORCE; \nVdash (txfonts/pxfonts)
18426 \DeclareTextCommand{\textnVdash}{PU}{\9042\256}%* U+22AE
18427 %* \textnVdash -> \nrighVdash (MnSymbol)
18428 % U+22AF NEGATED DOUBLE VERTICAL BAR DOUBLE RIGHT TURN-
      STILE; \nVDash (AmS)
18429 \DeclareTextCommand{\textnVDash}{PU}{\9042\257}%* U+22AF
18430 %* \textnVDash -> \nrighModels (MnSymbol)
18431 % U+22B2 NORMAL SUBGROUP OF; \lhd (latexsym, ...)
18432 \DeclareTextCommand{\textlhd}{PU}{\9042\262}%* U+22B2
18433 %* \textlhd -> \lessclosed (MnSymbol)
18434 % U+22B3 CONTAINS AS NORMAL SUBGROUP; \rhd (latexsym, ...)
18435 \DeclareTextCommand{\textrhd}{PU}{\9042\263}%* U+22B3
18436 %* \textrhd -> \gtrclosed (MnSymbol)
18437 % U+22B4 NORMAL SUBGROUP OF OR EQUAL TO; \unlhd (latexsym, ...)
18438 \DeclareTextCommand{\textunlhd}{PU}{\9042\264}%* U+22B4
18439 %* \textunlhd -> \leqclosed (MnSymbol)
18440 %* \textunlhd -> \trianglelefteq (MnSymbol)
18441 % U+22B5 CONTAINS AS NORMAL SUBGROUP OR EQUAL TO; \unrhd (la-
      texsym, ...)
18442 \DeclareTextCommand{\textunrhd}{PU}{\9042\265}%* U+22B5
18443 %* \textunrhd -> \geqclosed (MnSymbol)
18444 %* \textunrhd -> \trianglerighteq (MnSymbol)
18445 % U+22B6 ORIGINAL OF; \multimapdotbothA (txfonts/pxfonts)
18446 \DeclareTextCommand{\textmultimapdotbothA}{PU}{\9042\266}%* U+22B6
18447 % U+22B7 IMAGE OF; \multimapdotbothB (txfonts/pxfonts)
18448 \DeclareTextCommand{\textmultimapdotbothB}{PU}{\9042\267}%* U+22B7
18449 % U+22B8 MULTIMAP; \multimap (AmS, txfonts/pxfonts)
18450 \DeclareTextCommand{\textmultimap}{PU}{\9042\270}%* U+22B8

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18451 % U+22BB XOR; \veebar (AmS)
18452 \DeclareTextCommand{\textveebar}{PU}{\9042\273}%* U+22BB
18453 % U+22BC NAND; \barwedge (mathabx)
18454 \DeclareTextCommand{\textbarwedge}{PU}{\9042\274}%* U+22BC
18455 % U+22C6 STAR OPERATOR; \star (LaTeX)
18456 \DeclareTextCommand{\textstar}{PU}{\9042\306}%* U+22C6
18457 % U+22C7 DIVISION TIMES; \divideontimes (AmS)
18458 \DeclareTextCommand{\textdivideontimes}{PU}{\9042\307}%* U+22C7
18459 % U+22C8 BOWTIE; \bowtie (LaTeX)
18460 \DeclareTextCommand{\textbowtie}{PU}{\9042\310}%* U+22C8
18461 %* \textbowtie -> \Bowtie (wasysym)
18462 % U+22C9 LEFT NORMAL FACTOR SEMIDIRECT PRODUCT; \ltimes (AmS)
18463 \DeclareTextCommand{\textltimes}{PU}{\9042\311}%* U+22C9
18464 % U+22CA RIGHT NORMAL FACTOR SEMIDIRECT PRODUCT;
18465 % \rtimes (AmS)
18466 \DeclareTextCommand{\textrtimes}{PU}{\9042\312}%* U+22CA
18467 % U+22CB LEFT SEMIDIRECT PRODUCT; \leftthreetimes (AmS)
18468 \DeclareTextCommand{\textleftthreetimes}{PU}{\9042\313}%* U+22CB
18469 % U+22CC RIGHT SEMIDIRECT PRODUCT; \rightthreetimes (AmS)
18470 \DeclareTextCommand{\textrightthreetimes}{PU}{\9042\314}%* U+22CC
18471 % U+22CD REVERSED TILDE EQUALS; \backsimeq (AmS)
18472 \DeclareTextCommand{\textbacksimeq}{PU}{\9042\315}%* U+22CD
18473 % \nbacksimeq (txfonts/pxfonts)
18474 \DeclareTextCommand{\textnbacksimeq}{PU}{\9042\315\83\070}%* U+22CD U+0338
18475 % U+22CE CURLY LOGICAL OR; curlyor; \curlyvee (AmS)
18476 \DeclareTextCommand{\textcurlyvee}{PU}{\9042\316}%* U+22CE
18477 %* \textcurlyvee -> \varcurlyvee (stmaryrd)
18478 % U+22CF CURLY LOGICAL AND; curlyand; \curlywedge (AmS)
18479 \DeclareTextCommand{\textcurlywedge}{PU}{\9042\317}%* U+22CF
18480 %* \textcurlywedge -> \varcurlywedge (stmaryrd)
18481 % U+22D0 DOUBLE SUBSET; \Subset (AmS)
18482 \DeclareTextCommand{\textSubset}{PU}{\9042\320}%* U+22D0
18483 % \nSubset (txfonts/pxfonts)
18484 \DeclareTextCommand{\textnSubset}{PU}{\9042\320\83\070}%* U+22D0 U+0338
18485 % U+22D1 DOUBLE SUPERSET; \Supset (AmS)
18486 \DeclareTextCommand{\textSupset}{PU}{\9042\321}%* U+22D1
18487 % \nSupset (txfonts/pxfonts)
18488 \DeclareTextCommand{\textnSupset}{PU}{\9042\321\83\070}%* U+22D1 U+0338
18489 % U+22D2 DOUBLE INTERSECTION; \Cap (AmS)
18490 \DeclareTextCommand{\textCap}{PU}{\9042\322}%* U+22D2
18491 %* \textCap -> \doublecap (mathabx)
18492 % U+22D3 DOUBLE UNION; \Cup (AmS)
18493 \DeclareTextCommand{\textCup}{PU}{\9042\323}%* U+22D3
18494 %* \textCup -> \doublecup (mathabx)
18495 % U+22D4 PITCHFORK; \pitchfork (mathabx)
18496 \DeclareTextCommand{\textpitchfork}{PU}{\9042\324}%* U+22D4
18497 % U+22D6 LESS-THAN WITH DOT; \lessdot (AmS)
18498 \DeclareTextCommand{\textlessdot}{PU}{\9042\326}%* U+22D6
18499 % U+22D7 GREATER-THAN WITH DOT; \gtrdot (AmS)
18500 \DeclareTextCommand{\textgtrdot}{PU}{\9042\327}%* U+22D7
18501 % U+22D8 VERY MUCH LESS-THAN; \lll (AmS)
18502 \DeclareTextCommand{\textlll}{PU}{\9042\330}%* U+22D8
18503 % U+22D9 VERY MUCH GREATER-THAN; \ggg (AmS)
18504 \DeclareTextCommand{\textggg}{PU}{\9042\331}%* U+22D9

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18505 % U+22DA LESS-THAN EQUAL TO OR GREATER-THAN; lessequalorgreater;
18506 % \lesseqgtr (AmS)
18507 \DeclareTextCommand{\textlesseqgtr}{PU}{\9042\332}%* U+22DA
18508 % U+22DB GREATER-THAN EQUAL TO OR LESS-THAN; greaterequalorless;
18509 % \gtreqless (AmS)
18510 \DeclareTextCommand{\textgtreqless}{PU}{\9042\333}%* U+22DB
18511 % U+22DE EQUAL TO OR PRECEDES; \curlyeqprec (MnSymbol)
18512 \DeclareTextCommand{\textcurlyeqprec}{PU}{\9042\336}%* U+22DE
18513 % \ncurlyeqprec (mathabx)
18514 \DeclareTextCommand{\textncurlyeqprec}{PU}{\9042\336\83\070}%* U+22DE U+0338
18515 % U+22DF EQUAL TO OR SUCCEEDS; \curlyeqsucc (MnSymbol)
18516 \DeclareTextCommand{\textcurlyeqsucc}{PU}{\9042\337}%* U+22DF
18517 % \ncurlyeqsucc (mathabx)
18518 \DeclareTextCommand{\textncurlyeqsucc}{PU}{\9042\337\83\070}%* U+22DF U+0338
18519 % U+22E0 DOES NOT PRECEDE OR EQUAL; \npreccurlyeq (txfonts/pxfonts)
18520 \DeclareTextCommand{\textnpreccurlyeq}{PU}{\9042\340}%* U+22E0
18521 % U+22E1 DOES NOT SUCCEED OR EQUAL; \nsucccurlyeq (txfonts/pxfonts)
18522 \DeclareTextCommand{\textnsucccurlyeq}{PU}{\9042\341}%* U+22E1
18523 % U+22E2 NOT SQUARE IMAGE OF OR EQUAL TO; \nssubseteq (tx-
    fonts/pxfonts)
18524 \DeclareTextCommand{\textnssubseteq}{PU}{\9042\342}%* U+22E2
18525 % U+22E3 NOT SQUARE ORIGINAL OF OR EQUAL TO; \nssupseteq (tx-
    fonts/pxfonts)
18526 \DeclareTextCommand{\textnssupseteq}{PU}{\9042\343}%* U+22E3
18527 % U+22E4 SQUARE IMAGE OF OR NOT EQUAL TO; \sqsubsetneq (mathabx)
18528 \DeclareTextCommand{\textsqsubsetneq}{PU}{\9042\344}%* U+22E4
18529 %* \textsqsubsetneq -> \varsqsubsetneq (mathabx)
18530 % U+22E5 SQUARE ORIGINAL OF OR NOT EQUAL TO; \sqsupsetneq (math-
    abx)
18531 \DeclareTextCommand{\textsqsupsetneq}{PU}{\9042\345}%* U+22E5
18532 %* \textsqsupsetneq -> \varsqsupsetneq (mathabx)
18533 % U+22E6 LESS-THAN BUT NOT EQUIVALENT TO; \lnsim (AmS)
18534 \DeclareTextCommand{\textlnsim}{PU}{\9042\346}%* U+22E6
18535 % U+22E7 GREATER-THAN BUT NOT EQUIVALENT TO; \gnsim (AmS)
18536 \DeclareTextCommand{\textgnsim}{PU}{\9042\347}%* U+22E7
18537 % U+22E8 PRECEDES BUT NOT EQUIVALENT TO; \preccsim (AmS)
18538 \DeclareTextCommand{\textpreccsim}{PU}{\9042\350}%* U+22E8
18539 % U+22E9 SUCCEEDS BUT NOT EQUIVALENT TO; \succsim (AmS)
18540 \DeclareTextCommand{\textsuccsim}{PU}{\9042\351}%* U+22E9
18541 % U+22EA NOT NORMAL SUBGROUP OF; \ntriangleleft (AmS)
18542 \DeclareTextCommand{\textntriangleleft}{PU}{\9042\352}%* U+22EA
18543 %* \textntriangleleft -> \nlessclosed (MnSymbol)
18544 % U+22EB DOES NOT CONTAIN AS NORMAL SUBGROUP; \ntriang-
    leright (AmS)
18545 \DeclareTextCommand{\textntriangleright}{PU}{\9042\353}%* U+22EB
18546 %* \textntriangleright -> \ngtrclosed (MnSymbol)
18547 % U+22EC NOT NORMAL SUBGROUP OF OR EQUAL TO;
18548 % \ntrianglelefteq (AmS)
18549 \DeclareTextCommand{\textntrianglelefteq}{PU}{\9042\354}%* U+22EC
18550 % U+22ED DOES NOT CONTAIN AS NORMAL SUBGROUP OR EQUAL;
18551 % \ntrianglerighteq (AmS)
18552 \DeclareTextCommand{\textntrianglerighteq}{PU}{\9042\355}%* U+22ED
18553 %* \textntrianglerighteq -> \textngeqclosed
18554 % U+22EE VERTICAL ELLIPSIS; ellipsisvertical; \vdots (LaTeX)

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18555 \DeclareTextCommand{\textvdots}{PU}{\9042\356}%* U+22EE
18556 % U+22EF MIDLINE HORIZONTAL ELLIPSIS; \cdots (LaTeX)
18557 \DeclareTextCommand{\textcdots}{PU}{\9042\357}%* U+22EF
18558 % U+22F0 UP RIGHT DIAGONAL ELLIPSIS; \udots (MnSymbol)
18559 \DeclareTextCommand{\textudots}{PU}{\9042\360}%* U+22F0
18560 % U+22F1 DOWN RIGHT DIAGONAL ELLIPSIS; \ddots (LaTeX)
18561 \DeclareTextCommand{\textddots}{PU}{\9042\361}%* U+22F1
18562 % U+22F6 ELEMENT OF WITH OVERBAR; \barin (mathabx)
18563 \DeclareTextCommand{\textbarin}{PU}{\9042\366}%* U+22F6

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46.2.23 Miscellaneous Technical: U+2300 to U+23FF

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18564 % U+2300 DIAMETER SIGN; \diameter (mathabx,wasysym)
18565 \DeclareTextCommand{\textdiameter}{PU}{\9043\000}%* U+2300
18566 % U+2310 REVERSED NOT SIGN; \backneg (MnSymbol)
18567 \DeclareTextCommand{\textbackneg}{PU}{\9043\020}%* U+2310
18568 % U+2311 SQUARE LOZENGE; \wasylozenge (wasysym)
18569 \DeclareTextCommand{\textwasylozenge}{PU}{\9043\021}%* U+2311
18570 % U+2319 TURNED NOT SIGN; \invbackneg (MnSymbol)
18571 \DeclareTextCommand{\textinvbackneg}{PU}{\9043\031}%* U+2319
18572 % U+231A WATCH; \clock (wasysym)
18573 \DeclareTextCommand{\textclock}{PU}{\9043\032}%* U+231A
18574 %* \textclock -> \Clocklogo (marvosym)
18575 %* \textclock -> \ClockLogo (marvosym)
18576 % U+231C TOP LEFT CORNER; \ulcorner (AmS)
18577 \DeclareTextCommand{\textulcorner}{PU}{\9043\034}%* U+231C
18578 % U+231D TOP RIGHT CORNER; \urcorner (AmS)
18579 \DeclareTextCommand{\texturcorner}{PU}{\9043\035}%* U+231D
18580 % U+231E BOTTOM LEFT CORNER; \llcorner (AmS)
18581 \DeclareTextCommand{\textllcorner}{PU}{\9043\036}%* U+231E
18582 % U+231F BOTTOM RIGHT CORNER; \lrcorner (AmS)
18583 \DeclareTextCommand{\textlrcorner}{PU}{\9043\037}%* U+231F
18584 % U+2322 FROWN; \frown (LaTeX)
18585 \DeclareTextCommand{\textfrown}{PU}{\9043\042}%* U+2322
18586 % U+2323 SMILE; \smile (LaTeX)
18587 \DeclareTextCommand{\textsmile}{PU}{\9043\043}%* U+2323
18588 % U+2328 KEYBOARD; \Keyboard (marvosym)
18589 \DeclareTextCommand{\textKeyboard}{PU}{\9043\050}%* U+2328
18590 % U+2329 LEFT-POINTING ANGLE BRACKET; \angleleft; \langle (LaTeX)
18591 \DeclareTextCommand{\textlangle}{PU}{\9043\051}%* U+2329
18592 % U+232A RIGHT-POINTING ANGLE BRACKET; \angleright; \rangle (LaTeX)
18593 \DeclareTextCommand{\textrangle}{PU}{\9043\052}%* U+232A
18594 % U+2339 APL FUNCTIONAL SYMBOL QUAD DIVIDE; \APLinv (wasysym)
18595 \DeclareTextCommand{\textAPLinv}{PU}{\9043\071}%* U+2339
18596 % U+233C APL FUNCTIONAL SYMBOL QUAD CIRCLE; \Tumbler (marvosym)
18597 \DeclareTextCommand{\textTumbler}{PU}{\9043\074}%* U+233C
18598 % U+233D APL FUNCTIONAL SYMBOL CIRCLE STILE; \baro (stmaryrd)
18599 \DeclareTextCommand{\textstmaryrdbaro}{PU}{\9043\075}%* U+233D
18600 %* \textstmaryrdbaro -> \baro (stmaryrd)
18601 % U+233F APL FUNCTIONAL SYMBOL SLASH BAR; \notslash (wasysym)
18602 \DeclareTextCommand{\textnotslash}{PU}{\9043\077}%* U+233F
18603 % U+2340 APL FUNCTIONAL SYMBOL BACKSLASH BAR;
18604 % \notbackslash (wasysym)
18605 \DeclareTextCommand{\textnotbackslash}{PU}{\9043\100}%* U+2340

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18606 % U+2342 APL FUNCTIONAL SYMBOL QUAD BACKSLASH; \boxbackslash (mathabx)

18607 \DeclareTextCommand{\textboxbackslash}{PU}{\9043\102}%* U+2342

18608 % U+2347 APL FUNCTIONAL SYMBOL QUAD LEFTWARDS ARROW;

18609 % \APLleftarrowbox (wasysym)

18610 \DeclareTextCommand{\textAPLleftarrowbox}{PU}{\9043\107}%* U+2347

18611 % U+2348 APL FUNCTIONAL SYMBOL QUAD RIGHTWARDS ARROW;

18612 % \APLrightarrowbox (wasysym)

18613 \DeclareTextCommand{\textAPLrightarrowbox}{PU}{\9043\110}%* U+2348

18614 % U+2350 APL FUNCTIONAL SYMBOL QUAD UPWARDS ARROW; \APLuparrowbox (wasysym)

18615 \DeclareTextCommand{\textAPLuparrowbox}{PU}{\9043\120}%* U+2350

18616 % U+2357 APL FUNCTIONAL SYMBOL QUAD DOWNWARDS ARROW;

18617 % \APLdownarrowbox (wasysym)

18618 \DeclareTextCommand{\textAPLdownarrowbox}{PU}{\9043\127}%* U+2357

18619 % U+235E APL FUNCTIONAL SYMBOL QUOTE QUAD;

18620 % \APLinput (wasysym)

18621 \DeclareTextCommand{\textAPLinput}{PU}{\9043\136}%* U+235E

18622 % U+2370 APL FUNCTIONAL SYMBOL QUAD QUESTION; \Request (china2e)

18623 \DeclareTextCommand{\textRequest}{PU}{\9043\160}%* U+2370

18624 % U+2393 DIRECT CURRENT SYMBOL FORM TWO; \Beam (marvosym)

18625 \DeclareTextCommand{\textBeam}{PU}{\9043\223}%* U+2393

18626 % U+2394 SOFTWARE-FUNCTION SYMBOL; \hexagon (wasysym)

18627 \DeclareTextCommand{\texthexagon}{PU}{\9043\224}%* U+2394

18628 % U+2395 APL FUNCTIONAL SYMBOL QUAD; \APLbox (wasysym)

18629 \DeclareTextCommand{\textAPLbox}{PU}{\9043\225}%* U+2395

18630 % U+23ED BLACK RIGHT-POINTING DOUBLE TRIANGLE WITH VERTICAL BAR;

18631 % \ForwardToIndex (marvosym)

18632 \DeclareTextCommand{\textForwardToIndex}{PU}{\9043\355}%* U+23ED

18633 % U+23EE BLACK LEFT-POINTING DOUBLE TRIANGLE WITH VERTICAL BAR;

18634 % \RewindToIndex (marvosym)

18635 \DeclareTextCommand{\textRewindToIndex}{PU}{\9043\356}%* U+23EE

46.2.24 Control Pictures: U+2400 to U+243F

18636 % U+2422 BLANK SYMBOL

18637 \DeclareTextCommand{\textblank}{PU}{\9044\042}% U+2422

18638 % U+2423 OPEN BOX; blank

18639 \DeclareTextCommand{\textvisiblespace}{PU}{\9044\043}% U+2423

46.2.25 Optical Character Recognition: U+2440 to U+245F

18640 % U+244A OCR DOUBLE BACKSLASH; \bbslash (stmaryrd)

18641 \DeclareTextCommand{\textbbslash}{PU}{\9044\112}%* U+244A

18642 %* \textbbslash -> \varparallelinv (txfonts/pxfonts)

46.2.26 Enclosed Alphanumerics: U+2460 to U+24FF

18643 % U+2460 CIRCLED DIGIT ONE; onecircle

18644 \DeclareTextCompositeCommand{\textcircled}{PU}{1}{\9044\140}% U+2460

18645 % U+2461 CIRCLED DIGIT TWO; twocircle

18646 \DeclareTextCompositeCommand{\textcircled}{PU}{2}{\9044\141}% U+2461

18647 % U+2462 CIRCLED DIGIT THREE; threecircle

18648 \DeclareTextCompositeCommand{\textcircled}{PU}{3}{\9044\142}% U+2462

18649 % U+2463 CIRCLED DIGIT FOUR; fourcircle

18650 \DeclareTextCompositeCommand{\textcircled}{PU}{4}{\9044\143}% U+2463
18651 % U+2464 CIRCLED DIGIT FIVE; fivecircle
18652 \DeclareTextCompositeCommand{\textcircled}{PU}{5}{\9044\144}% U+2464
18653 % U+2465 CIRCLED DIGIT SIX; sixcircle
18654 \DeclareTextCompositeCommand{\textcircled}{PU}{6}{\9044\145}% U+2465
18655 % U+2466 CIRCLED DIGIT SEVEN; sevencircle
18656 \DeclareTextCompositeCommand{\textcircled}{PU}{7}{\9044\146}% U+2466
18657 % U+2467 CIRCLED DIGIT EIGHT; eightcircle
18658 \DeclareTextCompositeCommand{\textcircled}{PU}{8}{\9044\147}% U+2467
18659 % U+2468 CIRCLED DIGIT NINE; ninecircle
18660 \DeclareTextCompositeCommand{\textcircled}{PU}{9}{\9044\150}% U+2468
18661 % U+2469 CIRCLED NUMBER TEN; tencircle
18662 \DeclareTextCompositeCommand{\textcircled}{PU}{10}{\9044\151}% U+2469
18663 % U+246A CIRCLED NUMBER ELEVEN; elevencircle
18664 \DeclareTextCompositeCommand{\textcircled}{PU}{11}{\9044\152}% U+246A
18665 % U+246B CIRCLED NUMBER TWELVE; twelvecircle
18666 \DeclareTextCompositeCommand{\textcircled}{PU}{12}{\9044\153}% U+246B
18667 % U+246C CIRCLED NUMBER THIRTEEN; thirteencircle
18668 \DeclareTextCompositeCommand{\textcircled}{PU}{13}{\9044\154}% U+246C
18669 % U+246D CIRCLED NUMBER FOURTEEN; fourteencircle
18670 \DeclareTextCompositeCommand{\textcircled}{PU}{14}{\9044\155}% U+246D
18671 % U+246E CIRCLED NUMBER FIFTEEN; fifteencircle
18672 \DeclareTextCompositeCommand{\textcircled}{PU}{15}{\9044\156}% U+246E
18673 % U+246F CIRCLED NUMBER SIXTEEN; sixteencircle
18674 \DeclareTextCompositeCommand{\textcircled}{PU}{16}{\9044\157}% U+246F
18675 % U+2470 CIRCLED NUMBER SEVENTEEN; seventeencircle
18676 \DeclareTextCompositeCommand{\textcircled}{PU}{17}{\9044\160}% U+2470
18677 % U+2471 CIRCLED NUMBER EIGHTEEN; eighteencircle
18678 \DeclareTextCompositeCommand{\textcircled}{PU}{18}{\9044\161}% U+2471
18679 % U+2472 CIRCLED NUMBER NINETEEN; nineteencircle
18680 \DeclareTextCompositeCommand{\textcircled}{PU}{19}{\9044\162}% U+2472
18681 % U+2473 CIRCLED NUMBER TWENTY; twentycircle
18682 \DeclareTextCompositeCommand{\textcircled}{PU}{20}{\9044\163}% U+2473
18683 % U+24B6 CIRCLED LATIN CAPITAL LETTER A; Acircle
18684 \DeclareTextCompositeCommand{\textcircled}{PU}{A}{\9044\266}% U+24B6
18685 % \CircledA (marvosym)
18686 \DeclareTextCommand{\textCircledA}{PU}{\9044\266}%* U+24B6
18687 %* \textCircledA -> \CleaningA
18688 % U+24B7 CIRCLED LATIN CAPITAL LETTER B; Bcircle
18689 \DeclareTextCompositeCommand{\textcircled}{PU}{B}{\9044\267}% U+24B7
18690 % U+24B8 CIRCLED LATIN CAPITAL LETTER C; Ccircle
18691 \DeclareTextCompositeCommand{\textcircled}{PU}{C}{\9044\270}% U+24B8
18692 % U+24B9 CIRCLED LATIN CAPITAL LETTER D; Dcircle
18693 \DeclareTextCompositeCommand{\textcircled}{PU}{D}{\9044\271}% U+24B9
18694 % U+24BA CIRCLED LATIN CAPITAL LETTER E; Ecircle
18695 \DeclareTextCompositeCommand{\textcircled}{PU}{E}{\9044\272}% U+24BA
18696 % U+24BB CIRCLED LATIN CAPITAL LETTER F; Fcircle
18697 \DeclareTextCompositeCommand{\textcircled}{PU}{F}{\9044\273}% U+24BB
18698 % \CleaningF (marvosym)
18699 \DeclareTextCommand{\textCleaningF}{PU}{\9044\273}%* U+24BB
18700 % \CleaningFF (marvosym)
18701 \DeclareTextCommand{\textCleaningFF}{PU}{\9044\273\83\062}%* U+24BB U+0332
18702 % U+24BC CIRCLED LATIN CAPITAL LETTER G; Gcircle
18703 \DeclareTextCompositeCommand{\textcircled}{PU}{G}{\9044\274}% U+24BC

18704 % U+24BD CIRCLED LATIN CAPITAL LETTER H; Hcircle
 18705 \DeclareTextCompositeCommand{\textcircled}{PU}{H}{\9044\275}% U+24BD
 18706 % U+24BE CIRCLED LATIN CAPITAL LETTER I; Icircle
 18707 \DeclareTextCompositeCommand{\textcircled}{PU}{I}{\9044\276}% U+24BE
 18708 % U+24BF CIRCLED LATIN CAPITAL LETTER J; Jcircle
 18709 \DeclareTextCompositeCommand{\textcircled}{PU}{J}{\9044\277}% U+24BF
 18710 % U+24C0 CIRCLED LATIN CAPITAL LETTER K; Kcircle
 18711 \DeclareTextCompositeCommand{\textcircled}{PU}{K}{\9044\300}% U+24C0
 18712 % U+24C1 CIRCLED LATIN CAPITAL LETTER L; Lcircle
 18713 \DeclareTextCompositeCommand{\textcircled}{PU}{L}{\9044\301}% U+24C1
 18714 % U+24C2 CIRCLED LATIN CAPITAL LETTER M; Mcircle
 18715 \DeclareTextCompositeCommand{\textcircled}{PU}{M}{\9044\302}% U+24C2
 18716 % U+24C3 CIRCLED LATIN CAPITAL LETTER N; Ncircle
 18717 \DeclareTextCompositeCommand{\textcircled}{PU}{N}{\9044\303}% U+24C3
 18718 % U+24C4 CIRCLED LATIN CAPITAL LETTER O; Ocircle
 18719 \DeclareTextCompositeCommand{\textcircled}{PU}{O}{\9044\304}% U+24C4
 18720 % U+24C5 CIRCLED LATIN CAPITAL LETTER P; Pcircle
 18721 \DeclareTextCompositeCommand{\textcircled}{PU}{P}{\9044\305}% U+24C5
 18722 % \CleaningP (marvosym)
 18723 \DeclareTextCommand{\textCleaningP}{PU}{\9044\305}%* U+24C5
 18724 % \CleaningPP (marvosym)
 18725 \DeclareTextCommand{\textCleaningPP}{PU}{\9044\305\83\062}%* U+24C5 U+0332
 18726 % U+24C6 CIRCLED LATIN CAPITAL LETTER Q; Qcircle
 18727 \DeclareTextCompositeCommand{\textcircled}{PU}{Q}{\9044\306}% U+24C6
 18728 % U+24C7 CIRCLED LATIN CAPITAL LETTER R; Rcircle
 18729 \DeclareTextCompositeCommand{\textcircled}{PU}{R}{\9044\307}% U+24C7
 18730 % U+24C8 CIRCLED LATIN CAPITAL LETTER S; Scircle
 18731 \DeclareTextCompositeCommand{\textcircled}{PU}{S}{\9044\310}% U+24C8
 18732 % U+24C9 CIRCLED LATIN CAPITAL LETTER T; Tcircle
 18733 \DeclareTextCompositeCommand{\textcircled}{PU}{T}{\9044\311}% U+24C9
 18734 % U+24CA CIRCLED LATIN CAPITAL LETTER U; Ucircle
 18735 \DeclareTextCompositeCommand{\textcircled}{PU}{U}{\9044\312}% U+24CA
 18736 % U+24CB CIRCLED LATIN CAPITAL LETTER V; Vcircle
 18737 \DeclareTextCompositeCommand{\textcircled}{PU}{V}{\9044\313}% U+24CB
 18738 % U+24CC CIRCLED LATIN CAPITAL LETTER W; Wcircle
 18739 \DeclareTextCompositeCommand{\textcircled}{PU}{W}{\9044\314}% U+24CC
 18740 % U+24CD CIRCLED LATIN CAPITAL LETTER X; Xcircle
 18741 \DeclareTextCompositeCommand{\textcircled}{PU}{X}{\9044\315}% U+24CD
 18742 % U+24CE CIRCLED LATIN CAPITAL LETTER Y; Ycircle
 18743 \DeclareTextCompositeCommand{\textcircled}{PU}{Y}{\9044\316}% U+24CE
 18744 % U+24CF CIRCLED LATIN CAPITAL LETTER Z; Zcircle
 18745 \DeclareTextCompositeCommand{\textcircled}{PU}{Z}{\9044\317}% U+24CF
 18746 % U+24D0 CIRCLED LATIN SMALL LETTER A; acircle
 18747 \DeclareTextCompositeCommand{\textcircled}{PU}{a}{\9044\320}% U+24D0
 18748 % U+24D1 CIRCLED LATIN SMALL LETTER B; bcircle
 18749 \DeclareTextCompositeCommand{\textcircled}{PU}{b}{\9044\321}% U+24D1
 18750 % U+24D2 CIRCLED LATIN SMALL LETTER C; ccircle
 18751 \DeclareTextCompositeCommand{\textcircled}{PU}{c}{\9044\322}% U+24D2
 18752 % U+24D3 CIRCLED LATIN SMALL LETTER D; dcircle
 18753 \DeclareTextCompositeCommand{\textcircled}{PU}{d}{\9044\323}% U+24D3
 18754 % U+24D4 CIRCLED LATIN SMALL LETTER E; ecircle
 18755 \DeclareTextCompositeCommand{\textcircled}{PU}{e}{\9044\324}% U+24D4
 18756 % U+24D5 CIRCLED LATIN SMALL LETTER F; fcircle
 18757 \DeclareTextCompositeCommand{\textcircled}{PU}{f}{\9044\325}% U+24D5

18758 % U+24D6 CIRCLED LATIN SMALL LETTER G; gcircle
 18759 \DeclareTextCompositeCommand{\textcircled}{PU}{g}{\9044\326}% U+24D6
 18760 % U+24D7 CIRCLED LATIN SMALL LETTER H; hcircle
 18761 \DeclareTextCompositeCommand{\textcircled}{PU}{h}{\9044\327}% U+24D7
 18762 % U+24D8 CIRCLED LATIN SMALL LETTER I; icircle
 18763 \DeclareTextCompositeCommand{\textcircled}{PU}{i}{\9044\330}% U+24D8
 18764 % U+24D9 CIRCLED LATIN SMALL LETTER J; jcircle
 18765 \DeclareTextCompositeCommand{\textcircled}{PU}{j}{\9044\331}% U+24D9
 18766 % U+24DA CIRCLED LATIN SMALL LETTER K; kcircle
 18767 \DeclareTextCompositeCommand{\textcircled}{PU}{k}{\9044\332}% U+24DA
 18768 % U+24DB CIRCLED LATIN SMALL LETTER L; lcircle
 18769 \DeclareTextCompositeCommand{\textcircled}{PU}{l}{\9044\333}% U+24DB
 18770 % U+24DC CIRCLED LATIN SMALL LETTER M; mcircle
 18771 \DeclareTextCompositeCommand{\textcircled}{PU}{m}{\9044\334}% U+24DC
 18772 % U+24DD CIRCLED LATIN SMALL LETTER N; ncircle
 18773 \DeclareTextCompositeCommand{\textcircled}{PU}{n}{\9044\335}% U+24DD
 18774 % U+24DE CIRCLED LATIN SMALL LETTER O; ocircle
 18775 \DeclareTextCompositeCommand{\textcircled}{PU}{o}{\9044\336}% U+24DE
 18776 % U+24DF CIRCLED LATIN SMALL LETTER P; pcircle
 18777 \DeclareTextCompositeCommand{\textcircled}{PU}{p}{\9044\337}% U+24DF
 18778 % U+24E0 CIRCLED LATIN SMALL LETTER Q; qcircle
 18779 \DeclareTextCompositeCommand{\textcircled}{PU}{q}{\9044\340}% U+24E0
 18780 % U+24E1 CIRCLED LATIN SMALL LETTER R; rcircle
 18781 \DeclareTextCompositeCommand{\textcircled}{PU}{r}{\9044\341}% U+24E1
 18782 % U+24E2 CIRCLED LATIN SMALL LETTER S; scircle
 18783 \DeclareTextCompositeCommand{\textcircled}{PU}{s}{\9044\342}% U+24E2
 18784 % U+24E3 CIRCLED LATIN SMALL LETTER T; tcircle
 18785 \DeclareTextCompositeCommand{\textcircled}{PU}{t}{\9044\343}% U+24E3
 18786 % U+24E4 CIRCLED LATIN SMALL LETTER U; ucircle
 18787 \DeclareTextCompositeCommand{\textcircled}{PU}{u}{\9044\344}% U+24E4
 18788 % U+24E5 CIRCLED LATIN SMALL LETTER V; vcircle
 18789 \DeclareTextCompositeCommand{\textcircled}{PU}{v}{\9044\345}% U+24E5
 18790 % U+24E6 CIRCLED LATIN SMALL LETTER W; wcircle
 18791 \DeclareTextCompositeCommand{\textcircled}{PU}{w}{\9044\346}% U+24E6
 18792 % U+24E7 CIRCLED LATIN SMALL LETTER X; xcircle
 18793 \DeclareTextCompositeCommand{\textcircled}{PU}{x}{\9044\347}% U+24E7
 18794 % U+24E8 CIRCLED LATIN SMALL LETTER Y; ycircle
 18795 \DeclareTextCompositeCommand{\textcircled}{PU}{y}{\9044\350}% U+24E8
 18796 % U+24E9 CIRCLED LATIN SMALL LETTER Z; zcircle
 18797 \DeclareTextCompositeCommand{\textcircled}{PU}{z}{\9044\351}% U+24E9
 18798 % U+24EA CIRCLED DIGIT ZERO
 18799 \DeclareTextCompositeCommand{\textcircled}{PU}{0}{\9044\352}% U+24EA

46.2.27 Box Drawing: U+2500 to 257F

18800 % U+2504 BOX DRAWINGS LIGHT TRIPLE DASH HORIZONTAL; \Cutting-
 Line (marvosym)
 18801 \DeclareTextCommand{\textCuttingLine}{PU}{\9045\004}%* U+2504
 18802 %* \textCuttingLine -> \Kutline (marvosym)
 18803 %* \textCuttingLine -> \CutLine (marvosym)
 18804 %* \textCuttingLine -> \Cutline (marvosym)

46.2.28 Geometric Shapes: U+25A0 to U+25FF

18805 % U+25B2 BLACK UP-POINTING TRIANGLE; \UParrow (wasysym)
 18806 \DeclareTextCommand{\textUParrow}{PU}{\9045\262}%* U+25B2

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18807 %* \textUParrow -> \MoveUp (marvosym)
18808 % U+25B3 WHITE UP-POINTING TRIANGLE; whiteuppointingtriangle;
18809 % \bigtriangleup (LaTeX)
18810 \DeclareTextCommand{\textbigtriangleup}{PU}{\9045\263}%* U+25B3
18811 %* \textbigtriangleup -> \APLup (wasysym)
18812 %* \textbigtriangleup -> \Bleech (marvosym)
18813 % U+25B6 BLACK RIGHT-POINTING TRIANGLE; \Forward (marvosym)
18814 \DeclareTextCommand{\textForward}{PU}{\9045\266}%* U+25B6
18815 % U+25B7 WHITE RIGHT-POINTING TRIANGLE (= z notation range restric-
tion);
18816 % whiterightpointingtriangle; \triangleright (LaTeX)
18817 \DeclareTextCommand{\texttriangleright}{PU}{\9045\267}%* U+25B7
18818 % U+25BA BLACK RIGHT-POINTING POINTER; \RHD (wasysym)
18819 \DeclareTextCommand{\textRHD}{PU}{\9045\272}%* U+25BA
18820 % U+25BC BLACK DOWN-POINTING TRIANGLE; \DOWNarrow (wasysym)
18821 \DeclareTextCommand{\textDOWNarrow}{PU}{\9045\274}%* U+25BC
18822 %* \textDOWNarrow -> \MoveDown (marvosym)
18823 % U+25BD WHITE DOWN-POINTING TRIANGLE; whitedownpointingtrian-
gle;
18824 % \bigtriangledown (LaTeX)
18825 \DeclareTextCommand{\textbigtriangledown}{PU}{\9045\275}%* U+25BD
18826 %* \textbigtriangledown -> \APLdown (wasysym)
18827 % U+25C0 BLACK LEFT-POINTING TRIANGLE; \Rewind (marvosym)
18828 \DeclareTextCommand{\textRewind}{PU}{\9045\300}%* U+25C0
18829 % U+25C1 WHITE RIGHT-POINTING TRIANGLE (= z notation domain re-
striction);
18830 % whiteleftpointingtriangle; \triangleleft (LaTeX)
18831 \DeclareTextCommand{\texttriangleleft}{PU}{\9045\301}%* U+25C1
18832 % U+25C4 BLACK LEFT-POINTING POINTER; \LHD (wasysym)
18833 \DeclareTextCommand{\textLHD}{PU}{\9045\304}%* U+25C4
18834 % U+25C7 WHITE DIAMOND; whitediamond; \diamond (LaTeX)
18835 \DeclareTextCommand{\textdiamond}{PU}{\9045\307}%* U+25C7
18836 %* \textdiamond -> \Diamond (wasysym)
18837 % U+25CA LOZENGE; lozenge; \lozenge (AMS)
18838 \DeclareTextCommand{\textlozenge}{PU}{\9045\312}%* U+25CA
18839 % U+25D6 LEFT HALF BLACK CIRCLE; \LEFTCIRCLE (wasysym)
18840 \DeclareTextCommand{\textLEFTCIRCLE}{PU}{\9045\326}%* U+25D6
18841 % U+25D7 RIGHT HALF BLACK CIRCLE; \RIGHTCIRCLE (wasysym)
18842 \DeclareTextCommand{\textRIGHTCIRCLE}{PU}{\9045\327}%* U+25D7
18843 % U+25E6 WHITE BULLET; *openbullet, whitebullet
18844 \DeclareTextCommand{\textopenbullet}{PU}{\9045\346}%* U+25E6
18845 % U+25EB WHITE SQUARE WITH VERTICAL BISECTING LINE;
18846 % \boxbar (stmaryrd)
18847 \DeclareTextCommand{\textboxbar}{PU}{\9045\353}%* U+25EB
18848 % U+25EF LARGE CIRCLE; largecircle
18849 \DeclareTextCommand{\textbigcircle}{PU}{\9045\357}%* U+25EF
18850 %* \textbigcircle -> \varbigcirc (stmaryrd)
18851 %

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46.2.29 Miscellaneous Symbols: U+2600 to U+26FF

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18852 % U+2601 CLOUD; \Cloud (ifsym)
18853 \DeclareTextCommand{\textCloud}{PU}{\9046\001}%* U+2601
18854 % U+2605 BLACK STAR; \FiveStar (bbding)
18855 \DeclareTextCommand{\textFiveStar}{PU}{\9046\005}%* U+2605

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18856 % U+2606 WHITE STAR; \FiveStarOpen (bding)
18857 \DeclareTextCommand{\textFiveStarOpen}{PU}{\9046\006}%* U+2606
18858 % U+260E BLACK TELEPHONE; telephoneblack; \Phone (bding)
18859 \DeclareTextCommand{\textPhone}{PU}{\9046\016}%* U+260E
18860 %* \textPhone -> \Telefon (marvosym)
18861 % U+2610 BALLOT BOX; \boxempty (stmaryrd)
18862 \DeclareTextCommand{\textboxempty}{PU}{\9046\020}%* U+2610
18863 %* \textboxempty -> \Box (wasysym)
18864 % U+2611 BALLOT BOX WITH CHECK; \Checkedbox (marvosym)
18865 \DeclareTextCommand{\textCheckedbox}{PU}{\9046\021}%* U+2611
18866 %* \textCheckedbox -> \CheckedBox (marvosym)
18867 % U+2612 BALLOT BOX WITH X; \Crossedbox (marvosym)
18868 \DeclareTextCommand{\textCrossedbox}{PU}{\9046\022}%* U+2612
18869 %* \textCrossedbox -> \XBox (wasysym)
18870 %* \textCrossedbox -> \CrossedBox (marvosym)
18871 % U+2615 HOT BEVERAGE; \Coffeecup (marvosym)
18872 \DeclareTextCommand{\textCoffeecup}{PU}{\9046\025}%* U+2615
18873 % U+261A BLACK LEFT POINTING INDEX; \HandCuffLeft (bding)
18874 \DeclareTextCommand{\textHandCuffLeft}{PU}{\9046\032}%* U+261A
18875 % U+261B BLACK RIGHT POINTING INDEX; \HandCuffRight (bding)
18876 \DeclareTextCommand{\textHandCuffRight}{PU}{\9046\033}%* U+261B
18877 % U+261C WHITE LEFT POINTING INDEX; \HandLeft (bding)
18878 \DeclareTextCommand{\textHandLeft}{PU}{\9046\034}%* U+261C
18879 %* \textHandLeft -> \rightpointleft (fourier)
18880 % U+261E WHITE RIGHT POINTING INDEX; \HandRight (bding)
18881 \DeclareTextCommand{\textHandRight}{PU}{\9046\036}%* U+261E
18882 %* \textHandRight -> \leftpointright (fourier)
18883 %* \textHandRight -> \PointingHand (marvosym)
18884 %* \textHandRight -> \Pointinghand (marvosym)
18885 % U+2622 RADIOACTIVE SIGN; \Radioactivity (marvosym)
18886 \DeclareTextCommand{\textRadioactivity}{PU}{\9046\042}%* U+2622
18887 %* \textRadioactivity -> \Radiation (ifsym)
18888 % U+2623 BIOHAZARD SIGN; \Biohazard (marvosym)
18889 \DeclareTextCommand{\textBiohazard}{PU}{\9046\043}%* U+2623
18890 % U+2625 ANKH; \Ankh (marvosym)
18891 \DeclareTextCommand{\textAnkh}{PU}{\9046\045}%* U+2625
18892 % U+262F YIN YANG; \YinYang (marvosym)
18893 \DeclareTextCommand{\textYinYang}{PU}{\9046\057}%* U+262F
18894 %* \textYinYang -> \Yinyang (marvosym)
18895 %* \textYinYang -> \YingYang (marvosym)
18896 %* \textYinYang -> \Yingyang (marvosym)
18897 % U+2639 WHITE FROWNING FACE; \frownie (wasysym)
18898 \DeclareTextCommand{\textfrownie}{PU}{\9046\071}%* U+2639
18899 %* \textfrownie -> \Frowny (marvosym)
18900 % U+263A WHITE SMILING FACE; \smiley (wasysym)
18901 \DeclareTextCommand{\textsmiley}{PU}{\9046\072}%* U+263A
18902 %* \textsmiley -> \Smiley (marvosym)
18903 % U+263B BLACK SMILING FACE; \blacksmiley (wasysym)
18904 \DeclareTextCommand{\textblacksmiley}{PU}{\9046\073}%* U+263B
18905 % U+263C WHITE SUN WITH RAYS; \sun (wasysym)
18906 \DeclareTextCommand{\textsun}{PU}{\9046\074}%* U+263C
18907 %* \textsun -> \Sun (marvosym)
18908 % U+263D FIRST QUARTER MOON; \leftmoon (wasysym, mathabx)
18909 \DeclareTextCommand{\textleftmoon}{PU}{\9046\075}%* U+263D

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18910 % U+263E LAST QUARTER MOON; \rightmoon (wasysym, mathabx)
18911 \DeclareTextCommand{\textrightmoon}{PU}{\9046\076}%* U+263E
18912 % U+263F MERCURY; \mercury (wasysym)
18913 \DeclareTextCommand{\textmercury}{PU}{\9046\077}%* U+263F
18914 %* \textmercury -> \Mercury (marvosym)
18915 % U+2640 FEMALE SIGN; female; \female (wasysym)
18916 \DeclareTextCommand{\textPUfemale}{PU}{\9046\100}% U+2640
18917 %* \textPUfemale -> \textfemale (tipx)
18918 %* \textPUfemale -> \female (wasysym)
18919 %* \textPUfemale -> \venus (wasysym)
18920 %* \textPUfemale -> \Venus (marvosym)
18921 %* \textPUfemale -> \Female (marvosym)
18922 % U+2641 EARTH; \earth (wasysym)
18923 \DeclareTextCommand{\textearth}{PU}{\9046\101}%* U+2641
18924 %* \textearth -> \Earth (marvosym)
18925 % U+2642 MALE SIGN; male, mars; \male (wasysym)
18926 \DeclareTextCommand{\textmale}{PU}{\9046\102}%* U+2642
18927 %* \textmale -> \mars (wasysym)
18928 %* \textmale -> \Mars (marvosym)
18929 %* \textmale -> \Male (marvosym)
18930 % U+2643 JUPITER; \jupiter (wasysym)
18931 \DeclareTextCommand{\textjupiter}{PU}{\9046\103}%* U+2643
18932 %* \textjupiter -> \Jupiter (marvosym)
18933 % U+2644 SATURN; \saturn (wasysym)
18934 \DeclareTextCommand{\textsaturn}{PU}{\9046\104}%* U+2644
18935 %* \textsaturn -> \Saturn (marvosym)
18936 % U+2645 URANUS; \uranus (wasysym)
18937 \DeclareTextCommand{\texturanus}{PU}{\9046\105}%* U+2645
18938 %* \texturanus -> \Uranus (marvosym)
18939 % U+2646 NEPTUNE; \neptune (wasysym)
18940 \DeclareTextCommand{\textneptune}{PU}{\9046\106}%* U+2646
18941 %* \textneptune -> \Neptune (marvosym)
18942 % U+2647 PLUTO; \pluto (wasysym)
18943 \DeclareTextCommand{\textpluto}{PU}{\9046\107}%* U+2647
18944 %* \textpluto -> \Pluto (marvosym)
18945 % U+2648 ARIES; \aries (wasysym)
18946 \DeclareTextCommand{\textaries}{PU}{\9046\110}%* U+2648
18947 %* \textaries -> \Aries (marvosym)
18948 % U+2649 TAURUS; \taurus (wasysym)
18949 \DeclareTextCommand{\texttaurus}{PU}{\9046\111}%* U+2649
18950 %* \texttaurus -> \Taurus (marvosym)
18951 % U+264A GEMINI; \gemini (wasysym)
18952 \DeclareTextCommand{\textgemini}{PU}{\9046\112}%* U+264A
18953 %* \textgemini -> \Gemini (marvosym)
18954 % U+264B CANCER; \cancer (wasysym)
18955 \DeclareTextCommand{\textcancer}{PU}{\9046\113}%* U+264B
18956 %* \textcancer -> \Cancer (marvosym)
18957 % U+264C LEO; \leo (wasysym)
18958 \DeclareTextCommand{\textleo}{PU}{\9046\114}%* U+264C
18959 %* \textleo -> \Leo (marvosym)
18960 % U+264D VIRGO; \virgo (wasysym)
18961 \DeclareTextCommand{\textvirgo}{PU}{\9046\115}%* U+264D
18962 %* \textvirgo -> \Virgo (marvosym)
18963 % U+264E LIBRA; \libra (wasysym)

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18964 \DeclareTextCommand{\textlibra}{PU}{\9046\116}%* U+264E
18965 %* \textlibra -> \Libra (marvosym)
18966 % U+264F SCORPIO; \scorpio (wasysym)
18967 \DeclareTextCommand{\textscorpio}{PU}{\9046\117}%* U+264F
18968 %* \textscorpio -> \Scorpio (marvosym)
18969 % U+2650 SAGITTARIUS; \sagittarius (wasysym)
18970 \DeclareTextCommand{\textsagittarius}{PU}{\9046\120}%* U+2650
18971 %* \textsagittarius -> \Sagittarius (marvosym)
18972 % U+2651 CAPRICORN; \capricornus (wasysym)
18973 \DeclareTextCommand{\textcapricornus}{PU}{\9046\121}%* U+2651
18974 %* \textcapricornus -> \Capricorn (marvosym)
18975 % U+2652 AQUARIUS; \aquarius (wasysym)
18976 \DeclareTextCommand{\textaquarius}{PU}{\9046\122}%* U+2652
18977 %* \textaquarius -> \Aquarius (marvosym)
18978 % U+2653 PISCES; \pisces (wasysym)
18979 \DeclareTextCommand{\textpisces}{PU}{\9046\123}%* U+2653
18980 %* \textpisces -> \Pisces (marvosym)
18981 % U+2660 BLACK SPADE SUIT; spade, spadesuitblack; \spadesuit (LaTeX)
18982 \DeclareTextCommand{\textspadesuitblack}{PU}{\9046\140}% U+2660
18983 %* \textspadesuitblack -> \spadesuit (MnSymbol)
18984 % U+2661 WHITE HEART SUIT; heartsuitwhite; \heartsuit (LaTeX)
18985 \DeclareTextCommand{\textheartsuitwhite}{PU}{\9046\141}% U+2661
18986 %* \textheartsuitwhite -> \Heart (marvosym)
18987 %* \textheartsuitwhite -> \heartsuit (MnSymbol)
18988 % U+2662 WHITE DIAMOND SUIT; diamondsuitwhite; \diamondsuit (LaTeX)
18989 \DeclareTextCommand{\textdiamondsuitwhite}{PU}{\9046\142}% U+2662
18990 %* \textdiamondsuitwhite -> \diamondsuit (MnSymbol)
18991 % U+2663 BLACK CLUB SUIT; club, clubsuitblack; \clubsuit (LaTeX)
18992 \DeclareTextCommand{\textclubsuitblack}{PU}{\9046\143}% U+2663
18993 %* \textclubsuitblack -> \clubsuit (MnSymbol)
18994 % U+2664 WHITE SPADE SUIT; spadesuitwhite
18995 \DeclareTextCommand{\textspadesuitwhite}{PU}{\9046\144}% U+2664
18996 % U+2665 BLACK HEART SUIT; heartsuitblack, heart
18997 \DeclareTextCommand{\textheartsuitblack}{PU}{\9046\145}% U+2665
18998 % U+2666 BLACK DIAMOND SUIT; diamond
18999 \DeclareTextCommand{\textdiamondsuitblack}{PU}{\9046\146}% U+2666
19000 % U+2667 WHITE CLUB SUIT; clubsuitwhite
19001 \DeclareTextCommand{\textclubsuitwhite}{PU}{\9046\147}% U+2667
19002 % U+2669 QUARTER NOTE; quarternote; \quarternote (wasysym, arev)
19003 \DeclareTextCommand{\textquarternote}{PU}{\9046\151}%* U+2669
19004 % U+266A EIGHTH NOTE; musicalnote; \textmusicalnote (textcomp)
19005 \DeclareTextCommand{\textmusicalnote}{PU}{\9046\152}% U+266A
19006 %* \textmusicalnote -> \eighthnote (wasysym, arev)
19007 % U+266B BEAMED EIGHTH NOTES; eighthnotebeamed; \twonotes (wasysym)
19008 \DeclareTextCommand{\texttwonotes}{PU}{\9046\153}%* U+266B
19009 % U+266C BEAMED SIXTEENTH NOTES; beamedsixteenthnotes; \sixteenth-
    note (arev)
19010 \DeclareTextCommand{\textsixteenthnote}{PU}{\9046\154}%* U+266C
19011 % U+266D MUSIC FLAT SIGN; musicflatsign; \flat (LaTeX)
19012 \DeclareTextCommand{\textflat}{PU}{\9046\155}%* U+266D
19013 % U+266E MUSIC NATURAL SIGN; \natural (LaTeX)
19014 \DeclareTextCommand{\textnatural}{PU}{\9046\156}%* U+266E
19015 % U+266F MUSIC SHARP SIGN; musicsharpsign; \sharp (LaTeX)
19016 \DeclareTextCommand{\textsharp}{PU}{\9046\157}%* U+266F

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19017 % U+2672 UNIVERSAL RECYCLING SYMBOL; \recycle (recycle)
 19018 \DeclareTextCommand{\textrecycle}{PU}{\9046\162}%* U+2672
 19019 %* \textrecycle -> \Recycling (marvosym)
 19020 % U+267F WHEELCHAIR SYMBOL; \Wheelchair (marvosym)
 19021 \DeclareTextCommand{\textWheelchair}{PU}{\9046\177}%* U+267F
 19022 % U+2691 BLACK FLAG; \Flag (ifsym)
 19023 \DeclareTextCommand{\textFlag}{PU}{\9046\221}%* U+2691
 19024 %* \textFlag -> \VarFlag (ifsym)
 19025 % U+2692 HAMMER AND PICK; \MineSign (marvosym)
 19026 \DeclareTextCommand{\textMineSign}{PU}{\9046\222}%* U+2692
 19027 % U+2694 CROSSED SWORDS; \dsmlilitary (dictsym)
 19028 \DeclareTextCommand{\textdsmlilitary}{PU}{\9046\224}%* U+2694
 19029 %* \textdsmlilitary -> \textxswup (fourier)
 19030 % U+2695 STAFF OF AESCULAPIUS; \dsmedical (dictsym)
 19031 \DeclareTextCommand{\textdsmedical}{PU}{\9046\225}%* U+2695
 19032 % U+2696 SCALES; \dsjuridical (dictsym)
 19033 \DeclareTextCommand{\textdsjuridical}{PU}{\9046\226}%* U+2696
 19034 % U+2697 ALEMBIC; \dschemical (dictsym)
 19035 \DeclareTextCommand{\textdschemical}{PU}{\9046\227}%* U+2697
 19036 % U+2698 FLOWER; \dsbiological (dictsym)
 19037 \DeclareTextCommand{\textdsbiological}{PU}{\9046\230}%* U+2698
 19038 % U+269A STAFF OF HERMES; \dscommercial (dictsym)
 19039 \DeclareTextCommand{\textdscommercial}{PU}{\9046\232}%* U+269A
 19040 % U+269D OUTLINED WHITE STAR; \manstar (manfnt)
 19041 \DeclareTextCommand{\textmanstar}{PU}{\9046\235}%* U+269D
 19042 % U+26A0 WARNING SIGN; \danger (fourier)
 19043 \DeclareTextCommand{\textdanger}{PU}{\9046\240}%* U+26A0
 19044 % U+26A2 DOUBLED FEMALE SIGN; \FemaleFemale (marvosym)
 19045 \DeclareTextCommand{\textFemaleFemale}{PU}{\9046\242}%* U+26A2
 19046 % U+26A3 DOUBLED MALE SIGN; \MaleMale (marvosym)
 19047 \DeclareTextCommand{\textMaleMale}{PU}{\9046\243}%* U+26A3
 19048 % U+26A4 INTERLOCKED FEMALE AND MALE SIGN; \FemaleMale (marvosym)
 19049 \DeclareTextCommand{\textFemaleMale}{PU}{\9046\244}%* U+26A4
 19050 % U+26A5 MALE AND FEMALE SIGN; \Hermaphrodite (marvosym)
 19051 \DeclareTextCommand{\textHermaphrodite}{PU}{\9046\245}%* U+26A5
 19052 % U+26AA MEDIUM WHITE CIRCLE; \Neural (marvosym)
 19053 \DeclareTextCommand{\textNeutral}{PU}{\9046\252}%* U+26AA
 19054 % U+26AD MARRIAGE SYMBOL
 19055 \DeclareTextCommand{\textmarried}{PU}{\9046\255}% U+26AD
 19056 % U+26AE DIVORCE SYMBOL
 19057 \DeclareTextCommand{\textdivorced}{PU}{\9046\256}% U+26AE
 19058 % U+26B2 NEUTER; \textuncrfemale (tipx)
 19059 \DeclareTextCommand{\textPUuncrfemale}{PU}{\9046\262}% U+26B2
 19060 %* \textPUuncrfemale -> \textuncrfemale (tipx)
 19061 % U+26B9 SEXTILE; \hexstar (wasysym)
 19062 \DeclareTextCommand{\texthexstar}{PU}{\9046\271}%* U+26B9
 19063 % U+26BD SOCCER BALL; \Football (marvosym)
 19064 \DeclareTextCommand{\textSoccerBall}{PU}{\9046\275}% U+26BD
 19065 %* \textSoccerBall -> \Football (marvosym)
 19066 % U+26C5 SUN BEHIND CLOUD; \SunCloud (ifsym)
 19067 \DeclareTextCommand{\textSunCloud}{PU}{\9046\305}%* U+26C5
 19068 % U+26C6 RAIN; \Rain (ifsym)
 19069 \DeclareTextCommand{\textRain}{PU}{\9046\306}%* U+26C6

19070 % U+26D4 NO ENTRY; \noway (fourier)
 19071 \DeclareTextCommand{\textnoway}{PU}{\9046\324}%* U+26D4
 19072 % U+26F0 MOUNTAIN; \Mountain (ifsym)
 19073 \DeclareTextCommand{\textMountain}{PU}{\9046\360}%* U+26F0
 19074 % U+26FA TENT; \Tent (ifsym)
 19075 \DeclareTextCommand{\textTent}{PU}{\9046\372}%* U+26FA

46.2.30 Dingbats: U+2700 to U+27BF

19076 % U+2701 UPPER BLADE SCISSORS; \ScissorRightBrokenBottom (bbling)
 19077 \DeclareTextCommand{\textScissorRightBrokenBottom}{PU}{\9047\001}% U+2701
 19078 %* \textScissorRightBrokenBottom -> \CutLeft (marvosym)
 19079 %* \textScissorRightBrokenBottom -> \Cutright (marvosym)
 19080 % U+2702 BLACK SCISSORS; \ScissorRight (bbling)
 19081 \DeclareTextCommand{\textScissorRight}{PU}{\9047\002}%* U+2702
 19082 %* \textScissorRight -> \RightScissors (marvosym)
 19083 %* \textScissorRight -> \Leftscissors (marvosym)
 19084 % U+2703 LOWER BLADE SCISSORS; \ScissorRightBrokenTop (bbling)
 19085 \DeclareTextCommand{\textScissorRightBrokenTop}{PU}{\9047\003}%* U+2703
 19086 % U+2704 WHITE SCISSORS; \ScissorHollowRight (bbling)
 19087 \DeclareTextCommand{\textScissorHollowRight}{PU}{\9047\004}%* U+2704
 19088 % U+2706 TELEPHONE LOCATION SIGN; \PhoneHandset (bbling)
 19089 \DeclareTextCommand{\textPhoneHandset}{PU}{\9047\006}%* U+2706
 19090 % U+2707 TAPE DRIVE; \Tape (bbling)
 19091 \DeclareTextCommand{\textTape}{PU}{\9047\007}%* U+2707
 19092 % U+2708 AIRPLANE; \Plane (bbling)
 19093 \DeclareTextCommand{\textPlane}{PU}{\9047\010}%* U+2708
 19094 % U+2709 ENVELOPE; \Envelope (bbling),
 19095 \DeclareTextCommand{\textEnvelope}{PU}{\9047\011}%* U+2709
 19096 %* \textEnvelope -> \Letter (marvosym)
 19097 % U+270C VICTORY HAND; \Peace (bbling)
 19098 \DeclareTextCommand{\textPeace}{PU}{\9047\014}%* U+270C
 19099 % U+270D WRITING HAND; \WritingHand (marvosym)
 19100 \DeclareTextCommand{\textWritingHand}{PU}{\9047\015}%* U+270D
 19101 %* \textWritingHand -> \Writinghand (marvosym)
 19102 % U+270E LOWER RIGHT PENCIL; \PencilRightDown (bbling)
 19103 \DeclareTextCommand{\textPencilRightDown}{PU}{\9047\016}%* U+270E
 19104 % U+270F PENCIL; \PencilRight (bbling)
 19105 \DeclareTextCommand{\textPencilRight}{PU}{\9047\017}%* U+270F
 19106 % U+2710 UPPER RIGHT PENCIL; \PencilRightUp (bbling)
 19107 \DeclareTextCommand{\textPencilRightUp}{PU}{\9047\020}%* U+2710
 19108 % U+2711 WHITE NIB; \NibRight (bbling)
 19109 \DeclareTextCommand{\textNibRight}{PU}{\9047\021}%* U+2711
 19110 % U+2712 BLACK NIB; \NibSolidRight (bbling)
 19111 \DeclareTextCommand{\textNibSolidRight}{PU}{\9047\022}%* U+2712
 19112 % U+2713 CHECK MARK; checkmark; \Checkmark (bbling)
 19113 \DeclareTextCommand{\textCheckmark}{PU}{\9047\023}%* U+2713
 19114 %* \textCheckmark -> \checkmark (MnSymbol)
 19115 % U+2714 HEAVY CHECK MARK; \CheckmarkBold (bbling)
 19116 \DeclareTextCommand{\textCheckmarkBold}{PU}{\9047\024}%* U+2714
 19117 % U+2715 MULTIPLICATION X; \XSolid (bbling)
 19118 \DeclareTextCommand{\textXSolid}{PU}{\9047\025}%* U+2715
 19119 % U+2716 HEAVY MULTIPLICATION X; \XSolidBold (bbling)
 19120 \DeclareTextCommand{\textXSolidBold}{PU}{\9047\026}%* U+2716
 19121 % U+2717 BALLOT X; \XSolidBrush (bbling)

19122 \DeclareTextCommand{\textXSolidBrush}{PU}{\9047\027}%* U+2717
 19123 % U+2719 OUTLINED GREEK CROSS; \PlusOutline (bding)
 19124 \DeclareTextCommand{\textPlusOutline}{PU}{\9047\031}%* U+2719
 19125 % U+271A HEAVY GREEK CROSS; \Plus (bding)
 19126 \DeclareTextCommand{\textPlus}{PU}{\9047\032}%* U+271A
 19127 % U+271B OPEN CENTRE CROSS; \PlusThinCenterOpen (bding)
 19128 \DeclareTextCommand{\textPlusThinCenterOpen}{PU}{\9047\033}%* U+271B
 19129 % U+271C HEAVY OPEN CENTRE CROSS; \PlusCenterOpen (bding)
 19130 \DeclareTextCommand{\textPlusCenterOpen}{PU}{\9047\034}%* U+271C
 19131 % U+271D LATIN CROSS; \Cross (bding)
 19132 \DeclareTextCommand{\textCross}{PU}{\9047\035}%* U+271D
 19133 % U+271E SHADOWED WHITE LATIN CROSS; \CrossOpenShadow (bding)
 19134 \DeclareTextCommand{\textCrossOpenShadow}{PU}{\9047\036}%* U+271E
 19135 % U+271F OUTLINED LATIN CROSS; \CrossOutline (bding)
 19136 \DeclareTextCommand{\textCrossOutline}{PU}{\9047\037}%* U+271F
 19137 % U+2720 MALTESE CROSS; \CrossMaltese (bding)
 19138 \DeclareTextCommand{\textCrossMaltese}{PU}{\9047\040}%* U+2720
 19139 % U+2721 STAR OF DAVID; \DavidStar (bding)
 19140 \DeclareTextCommand{\textDavidStar}{PU}{\9047\041}%* U+2721
 19141 %* \textDavidStar -> \davidstar (wasysym)
 19142 % U+2722 FOUR TEARDROP-SPOKED ASTERISK; \FourAsterisk (bding)
 19143 \DeclareTextCommand{\textFourAsterisk}{PU}{\9047\042}%* U+2722
 19144 % U+2723 FOUR BALLOON-SPOKED ASTERISK; \JackStar (bding)
 19145 \DeclareTextCommand{\textJackStar}{PU}{\9047\043}%* U+2723
 19146 % U+2724 HEAVY FOUR BALLOON-SPOKED ASTERISK; \JackStarBold (bding)
 19147 \DeclareTextCommand{\textJackStarBold}{PU}{\9047\044}%* U+2724
 19148 % U+2725 FOUR CLUB-SPOKED ASTERISK; \CrossClowerTips (bding)
 19149 \DeclareTextCommand{\textClowerTips}{PU}{\9047\045}%* U+2725
 19150 % U+2726 BLACK FOUR POINTED STAR; \FourStar (bding)
 19151 \DeclareTextCommand{\textFourStar}{PU}{\9047\046}%* U+2726
 19152 % U+2727 WHITE FOUR POINTED STAR; \FourStarOpen (bding)
 19153 \DeclareTextCommand{\textFourStarOpen}{PU}{\9047\047}%* U+2727
 19154 % U+272A CIRCLED WHITE STAR; \FiveStarOpenCircled (bding)
 19155 \DeclareTextCommand{\textFiveStarOpenCircled}{PU}{\9047\052}%* U+272A
 19156 % U+272B OPEN CENTRE BLACK STAR; \FiveStarCenterOpen (bding)
 19157 \DeclareTextCommand{\textFiveStarCenterOpen}{PU}{\9047\053}%* U+272B
 19158 % U+272C BLACK CENTRE WHITE STAR; \FiveStarOpenDotted (bding)
 19159 \DeclareTextCommand{\textFiveStarOpenDotted}{PU}{\9047\054}%* U+272C
 19160 % U+272D OUTLINED BLACK STAR; \FiveStarOutline (bding)
 19161 \DeclareTextCommand{\textFiveStarOutline}{PU}{\9047\055}%* U+272D
 19162 % U+272E HEAVY OUTLINED BLACK STAR; \FiveStarOutlineHeavy (bding)
 19163 \DeclareTextCommand{\textFiveStarOutlineHeavy}{PU}{\9047\056}%* U+272E
 19164 % U+272F PINWHEEL STAR; \FiveStarConvex (bding)
 19165 \DeclareTextCommand{\textFiveStarConvex}{PU}{\9047\057}%* U+272F
 19166 % U+2730 SHADOWED WHITE STAR; \FiveStarShadow (bding)
 19167 \DeclareTextCommand{\textFiveStarShadow}{PU}{\9047\060}%* U+2730
 19168 % U+2731 HEAVY ASTERISK; \AsteriskBold (bding)
 19169 \DeclareTextCommand{\textAsteriskBold}{PU}{\9047\061}%* U+2731
 19170 % U+2732 OPEN CENTRE ASTERISK; \AsteriskCenterOpen (bding)
 19171 \DeclareTextCommand{\textAsteriskCenterOpen}{PU}{\9047\062}%* U+2732
 19172 % U+2734 EIGHT POINTED BLACK STAR; \EightStarTaper (bding)
 19173 \DeclareTextCommand{\textEightStarTaper}{PU}{\9047\064}%* U+2734
 19174 % U+2735 EIGHT POINTED PINWHEEL STAR; \EightStarConvex (bding)

19175 \DeclareTextCommand{\textEightStarConvex}{PU}{\9047\065}%* U+2735
19176 % U+2736 SIX POINTED BLACK STAR; \SixStar (bding)
19177 \DeclareTextCommand{\textSixStar}{PU}{\9047\066}%* U+2736
19178 % U+2737 EIGHT POINTED RECTILINEAR BLACK STAR; \EightStar (bding)
19179 \DeclareTextCommand{\textEightStar}{PU}{\9047\067}%* U+2737
19180 % U+2738 HEAVY EIGHT POINTED RECTILINEAR BLACK STAR; \EightStarBold (bding)
19181 \DeclareTextCommand{\textEightStarBold}{PU}{\9047\070}%* U+2738
19182 % U+2739 TWELVE POINTED BLACK STAR; \TwelveStar (bding)
19183 \DeclareTextCommand{\textTwelveStar}{PU}{\9047\071}%* U+2739
19184 % U+273A SIXTEEN POINTED ASTERISK; \SixteenStarLight (bding)
19185 \DeclareTextCommand{\textSixteenStarLight}{PU}{\9047\072}%* U+273A
19186 % U+273B TEARDROP-SPOKED ASTERISK; \SixFlowerPetalRemoved (bding)
19187 \DeclareTextCommand{\textSixFlowerPetalRemoved}{PU}{\9047\073}%* U+273B
19188 % U+273C OPEN CENTRE TEARDROP-SPOKED ASTERISK;
19189 % \SixFlowerOpenCenter (bding)
19190 \DeclareTextCommand{\textSixFlowerOpenCenter}{PU}{\9047\074}%* U+273C
19191 % U+273D HEAVY TEARDROP-SPOKED ASTERISK; \Asterisk (bding)
19192 \DeclareTextCommand{\textAsterisk}{PU}{\9047\075}%* U+273D
19193 % U+273E SIX PETALLED BLACK AND WHITE FLORETTE; \SixFlowerAlternate (bding)
19194 \DeclareTextCommand{\textSixFlowerAlternate}{PU}{\9047\076}%* U+273E
19195 % U+273F BLACK FLORETTE; \FiveFlowerPetal (bding)
19196 \DeclareTextCommand{\textFiveFlowerPetal}{PU}{\9047\077}%* U+273F
19197 % U+2740 WHITE FLORETTE; \FiveFlowerOpen (bding)
19198 \DeclareTextCommand{\textFiveFlowerOpen}{PU}{\9047\100}%* U+2740
19199 % U+2741 EIGHT PETALLED OUTLINED BLACK FLORETTE; \EightFlowerPetal (bding)
19200 \DeclareTextCommand{\textEightFlowerPetal}{PU}{\9047\101}%* U+2741
19201 % U+2742 CIRCLED OPEN CENTRE EIGHT POINTED STAR; \SunshineOpenCircled (bding)
19202 \DeclareTextCommand{\textSunshineOpenCircled}{PU}{\9047\102}%* U+2742
19203 % U+2743 HEAVY TEARDROP-SPOKED PINWHEEL ASTERISK; \SixFlowerAltPetal (bding)
19204 \DeclareTextCommand{\textSixFlowerAltPetal}{PU}{\9047\103}%* U+2743
19205 % U+2744 SNOWFLAKE; \SnowflakeChevron (bding)
19206 \DeclareTextCommand{\textSnowflakeChevron}{PU}{\9047\104}%* U+2744
19207 % U+2745 TIGHT TRIFOLIATE SNOWFLAKE; \Snowflake (bding)
19208 \DeclareTextCommand{\textSnowflake}{PU}{\9047\105}%* U+2745
19209 % U+2746 HEAVY CHEVRON SNOWFLAKE; \SnowflakeChevronBold (bding)
19210 \DeclareTextCommand{\textSnowflakeChevronBold}{PU}{\9047\106}%* U+2746
19211 % U+2747 SPARKLE; \Sparkle (bding)
19212 \DeclareTextCommand{\textSparkle}{PU}{\9047\107}%* U+2747
19213 % U+2748 HEAVY SPARKLE; \SparkleBold (bding)
19214 \DeclareTextCommand{\textSparkleBold}{PU}{\9047\110}%* U+2748
19215 % U+2749 BALLOON-SPOKED ASTERISK; \AsteriskRoundedEnds (bding)
19216 \DeclareTextCommand{\textAsteriskRoundedEnds}{PU}{\9047\111}%* U+2749
19217 % U+274A EIGHT TEARDROP-SPOKED PROPELLER ASTERISK;
19218 % \EightFlowerPetalRemoved (bding)
19219 \DeclareTextCommand{\textEightFlowerPetalRemoved}{PU}{\9047\112}%* U+274A
19220 % U+274B HEAVY EIGHT TEARDROP-SPOKED PROPELLER ASTERISK;
19221 % \EightAsterisk (bding)

19222 \DeclareTextCommand{\textEightAsterisk}{PU}{\9047\113}%* U+274B
 19223 % U+274D SHADOWED WHITE CIRCLE; \CircleShadow (bbding)
 19224 \DeclareTextCommand{\textCircleShadow}{PU}{\9047\115}%* U+274D
 19225 % U+274F LOWER RIGHT DROP-SHADOWED WHITE SQUARE;
 19226 % \SquareShadowBottomRight (bbding)
 19227 \DeclareTextCommand{\textSquareShadowBottomRight}{PU}{\9047\117}%* U+274F
 19228 % U+2750 UPPER RIGHT DROP-SHADOWED WHITE SQUARE;
 19229 % \SquareShadowTopRight (bbding)
 19230 \DeclareTextCommand{\textSquareTopRight}{PU}{\9047\120}%* U+2750
 19231 % U+2751 LOWER RIGHT SHADOWED WHITE SQUARE;
 19232 % \SquareCastShadowBottomRight (bbding)
 19233 \DeclareTextCommand{\textSquareCastShadowBottomRight}{PU}{\9047\121}%* U+2751
 19234 % U+2752 UPPER RIGHT SHADOWED WHITE SQUARE;
 19235 % \SquareCastShadowTopRight (bbding)
 19236 \DeclareTextCommand{\textSquareCastShadowTopRight}{PU}{\9047\122}%* U+2752
 19237 % U+2756 BLACK DIAMOND MINUS WHITE X; \OrnamentDiamandSolid (bb-
 ding)
 19238 \DeclareTextCommand{\textDiamandSolid}{PU}{\9047\126}%* U+2756
 19239 % U+2758 LIGHT VERTICAL BAR; \RectangleThin (bbding)
 19240 \DeclareTextCommand{\textRectangleThin}{PU}{\9047\130}%* U+2758
 19241 % U+2759 MEDIUM VERTICAL BAR; \Rectangle (bbding)
 19242 \DeclareTextCommand{\textRectangle}{PU}{\9047\131}%* U+2759
 19243 % U+275A HEAVY VERTICAL BAR; \RectangleBold (bbding)
 19244 \DeclareTextCommand{\textRectangleBold}{PU}{\9047\132}%* U+275A

46.2.31 Miscellaneous Mathematical Symbols-A: U+27C0 to U+27EF

19245 % U+27C2 PERPENDICULAR; perpendicular; \perp (LaTeX)
 19246 \DeclareTextCommand{\textperp}{PU}{\9047\302}%* U+27C2
 19247 % \notperp (mathabx)
 19248 \DeclareTextCommand{\textnotperp}{PU}{\9047\302\83\070}%* U+27C2 U+0338
 19249 % U+27C7 OR WITH DOT INSIDE; \veedot (MnSymbol)
 19250 \DeclareTextCommand{\textveedot}{PU}{\9047\307}%* U+27C7
 19251 % U+27D1 AND WITH DOT; \wedgedot (MnSymbol)
 19252 \DeclareTextCommand{\textwedgedot}{PU}{\9047\321}%* U+27D1
 19253 % U+27DC LEFT MULTIMAP; \leftspoon (MnSymbol)
 19254 \DeclareTextCommand{\textleftspoon}{PU}{\9047\334}%* U+27DC
 19255 % U+27E6 MATHEMATICAL LEFT WHITE SQUARE BRACKET
 19256 \DeclareTextCommand{\textlbrackdbl}{PU}{\9047\346}%* U+27E6
 19257 %* \textlbrackdbl -> \llbracket (stmaryrd)
 19258 % U+27E7 MATHEMATICAL RIGHT WHITE SQUARE BRACKET
 19259 \DeclareTextCommand{\textrbrackdbl}{PU}{\9047\347}%* U+27E7
 19260 %* \textrbrackdbl -> \rrbracket (stmaryrd)

46.2.32 Supplemental Arrows-A: U+27F0 to U+27FF

19261 % U+27F2 ANTICLOCKWISE GAPPED CIRCLE ARROW;
 19262 % \circlearrowleft (AmS)
 19263 \DeclareTextCommand{\textcirclearrowleft}{PU}{\9047\362}%* U+27F2
 19264 % U+27F3 CLOCKWISE GAPPED CIRCLE ARROW; \circlearrowright (AmS)
 19265 \DeclareTextCommand{\textcirclearrowright}{PU}{\9047\363}%* U+27F3
 19266 % U+27F5 LONG LEFTWARDS ARROW; \longleftarrow (AmS)
 19267 \DeclareTextCommand{\textlongleftarrow}{PU}{\9047\365}%* U+27F5
 19268 % U+27F6 LONG RIGHTWARDS ARROW; \longrightarrow (AmS)
 19269 \DeclareTextCommand{\textlongrightarrow}{PU}{\9047\366}%* U+27F6
 19270 % U+27F7 LONG LEFT RIGHT ARROW; \longlefttrightarrow (AmS)

19271 \DeclareTextCommand{\textlongleftarrow}{PU}{\9047\367}%* U+27F7
 19272 % U+27F8 LONG LEFTWARDS DOUBLE ARROW; \Longleftarrow (AmS)
 19273 \DeclareTextCommand{\textLongleftarrow}{PU}{\9047\370}%* U+27F8
 19274 % U+27F9 LONG RIGHTWARDS DOUBLE ARROW; \Longrightarrow (AmS)
 19275 \DeclareTextCommand{\textLongrightarrow}{PU}{\9047\371}%* U+27F9
 19276 % U+27FA LONG LEFT RIGHT DOUBLE ARROW; \Longleftrightarrow (AmS)
 19277 \DeclareTextCommand{\textLongleftrightarrow}{PU}{\9047\372}%* U+27FA
 19278 % U+27FC LONG RIGHTWARDS ARROW FROM BAR; \longmapsto (AmS)
 19279 \DeclareTextCommand{\textlongmapsto}{PU}{\9047\374}%* U+27FC
 19280 % U+27FD LONG LEFTWARDS DOUBLE ARROW FROM BAR; \Longmaps-
 from (stmaryrd)
 19281 \DeclareTextCommand{\textLongmapsfrom}{PU}{\9047\375}%* U+27FD
 19282 % U+27FE LONG RIGHTWARDS DOUBLE ARROW FROM BAR; \Longmap-
 sto (stmaryrd)
 19283 \DeclareTextCommand{\textLongmapsto}{PU}{\9047\376}%* U+27FE

46.2.33 Supplemental Arrows-B: U+2900 to U+297F

19284 % U+2921 NORTH WEST AND SOUTH EAST ARROW; \nwsearrow (MnSym-
 bol)
 19285 \DeclareTextCommand{\textnwsearrow}{PU}{\9051\041}%* U+2921
 19286 % U+2922 NORTH EAST AND SOUTH WEST ARROW; \neswarrow (MnSym-
 bol)
 19287 \DeclareTextCommand{\textneswarrow}{PU}{\9051\042}%* U+2922
 19288 % U+2923 NORTH WEST ARROW WITH HOOK; \hooknwarrow (MnSymbol)
 19289 \DeclareTextCommand{\texthooknwarrow}{PU}{\9051\043}%* U+2923
 19290 % U+2924 NORTH EAST ARROW WITH HOOK; \hooknearrow (MnSymbol)
 19291 \DeclareTextCommand{\textrhooknearrow}{PU}{\9051\044}%* U+2924
 19292 % U+2925 SOUTH EAST ARROW WITH HOOK; \hooksearrow (MnSymbol)
 19293 \DeclareTextCommand{\texthooksearrow}{PU}{\9051\045}%* U+2925
 19294 % U+2926 SOUTH WEST ARROW WITH HOOK; \hookswarrow (MnSymbol)
 19295 \DeclareTextCommand{\textrhookswarrow}{PU}{\9051\046}%* U+2926
 19296 % U+2933 WAVE ARROW POINTING DIRECTLY RIGHT; \leadsto (wasysym)
 19297 \DeclareTextCommand{\textleadsto}{PU}{\9051\063}%* U+2933
 19298 % U+2934 ARROW POINTING RIGHTWARDS THEN CURVING UPWARDS;
 19299 % \rcurvearrowne (MnSymbol)
 19300 \DeclareTextCommand{\textrcurvearrowne}{PU}{\9051\064}%* U+2934
 19301 % U+2935 ARROW POINTING RIGHTWARDS THEN CURVING DOWN-
 WARDS;
 19302 % \lcurvearrowse (MnSymbol)
 19303 \DeclareTextCommand{\textlcurvearrowse}{PU}{\9051\065}%* U+2935
 19304 % U+2936 ARROW POINTING DOWNWARDS THEN CURVING LEFT-
 WARDS;
 19305 % \lcurvearrowsw (MnSymbol)
 19306 \DeclareTextCommand{\textlcurvearrowsw}{PU}{\9051\066}%* U+2936
 19307 % U+2937 ARROW POINTING DOWNWARDS THEN CURVING RIGHT-
 WARDS;
 19308 % \rcurvearrowse (MnSymbol)
 19309 \DeclareTextCommand{\textrcurvearrowse}{PU}{\9051\067}%* U+2937
 19310 % U+2938 RIGHT-SIDE ARC CLOCKWISE ARROW; \lcurvearrowdown (Mn-
 Symbol)
 19311 \DeclareTextCommand{\textlcurvearrowdown}{PU}{\9051\070}%* U+2938
 19312 %* \textlcurvearrowdown -> \RightTorque (marvosym)
 19313 %* \textlcurvearrowdown -> \Righttorque (marvosym)
 19314 % U+2939 LEFT-SIDE ARC ANTICLOCKWISE ARROW;

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19315 % \rcurvearrowdown (MnSymbol)
19316 \DeclareTextCommand{\texttrcurvearrowdown}{PU}{\9051\071}%* U+2939
19317 %* \texttrcurvearrowdown -> \LeftTorque (marvosym)
19318 %* \texttrcurvearrowdown -> \Lefttorque (marvosym)
19319 % U+293A TOP ARC ANTICLOCKWISE ARROW; \rcurvearrowleft (MnSym-
bol)
19320 \DeclareTextCommand{\texttrcurvearrowleft}{PU}{\9051\072}%* U+293A
19321 % U+293B BOTTOM ARC ANTICLOCKWISE ARROW;
19322 % \rcurvearrowright (MnSymbol)
19323 \DeclareTextCommand{\texttrcurvearrowright}{PU}{\9051\073}%* U+293B
19324 % U+294A LEFT BARB UP RIGHT BARB DOWN HARPOON; \leftrighthar-
poon (mathabx)
19325 \DeclareTextCommand{\textleftrightharpoon}{PU}{\9051\112}%* U+294A
19326 % U+294B LEFT BARB DOWN RIGHT BARB UP HARPOON; \rightlefthar-
poon (mathabx)
19327 \DeclareTextCommand{\textrightleftharpoon}{PU}{\9051\113}%* U+294B
19328 % U+294C UP BARB RIGHT DOWN BARB LEFT HARPOON;
19329 % \updownharpoonrightleft (MnSymbol)
19330 \DeclareTextCommand{\textupdownharpoonrightleft}{PU}{\9051\114}%* U+294C
19331 % U+294D UP BARB LEFT DOWN BARB RIGHT HARPOON;
19332 % \updownharpoonleftright (MnSymbol)
19333 \DeclareTextCommand{\textupdownharpoonleftright}{PU}{\9051\115}%* U+294D
19334 % U+2962 LEFTWARDS HARPOON WITH BARB UP ABOVE LEFTWARDS
19335 % HARPOON WITH BARB DOWN; \leftleftharpoons (mathabx)
19336 \DeclareTextCommand{\textleftleftharpoons}{PU}{\9051\142}%* U+2962
19337 % U+2963 UPWARDS HARPOON WITH BARB LEFT BESIDE UPWARDS
19338 % HARPOON WITH BARB RIGHT; \upupharpoons (mathabx)
19339 \DeclareTextCommand{\textupupharpoons}{PU}{\9051\143}%* U+2963
19340 % U+2964 RIGHTWARDS HARPOON WITH BARB UP ABOVE RIGHT-
WARDS HARPOON
19341 % WITH BARB DOWN; \rightrightarpoons (mathabx)
19342 \DeclareTextCommand{\textrightarpoons}{PU}{\9051\144}%* U+2964
19343 % U+2965 DOWNWARDS HARPOON WITH BARB LEFT BESIDE DOWN-
WARDS HARPOON
19344 % WITH BARB RIGHT; \downdownharpoons (mathabx)
19345 \DeclareTextCommand{\textdowndownharpoons}{PU}{\9051\145}%* U+2965
19346 % U+296A LEFTWARDS HARPOON WITH BARB UP ABOVE LONG DASH;
19347 % \leftbarharpoon (mathabx)
19348 \DeclareTextCommand{\textleftbarharpoon}{PU}{\9051\152}%* U+296A
19349 % U+296B LEFTWARDS HARPOON WITH BARB DOWN BELOW
19350 % LONG DASH; \barleftharpoon (mathabx)
19351 \DeclareTextCommand{\textbarleftharpoon}{PU}{\9051\153}%* U+296B
19352 % U+296C RIGHTWARDS HARPOON WITH BARB UP ABOVE
19353 % LONG DASH; \rightbarharpoon (mathabx)
19354 \DeclareTextCommand{\textrightbarharpoon}{PU}{\9051\154}%* U+296C
19355 % U+296D RIGHTWARDS HARPOON WITH BARB DOWN BELOW
19356 % LONG DASH; \barrightharpoon (mathabx)
19357 \DeclareTextCommand{\textbarrightharpoon}{PU}{\9051\155}%* U+296D
19358 % U+296E UPWARDS HARPOON WITH BARB LEFT BESIDE DOWN-
WARDS HARPOON
19359 % WITH BARB RIGHT; \updownharpoons (mathabx)
19360 \DeclareTextCommand{\textupdownharpoons}{PU}{\9051\156}%* U+296E
19361 % U+296F DOWNWARDS HARPOON WITH BARB LEFT BESIDE UP-
WARDS HARPOON

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19362 % WITH BARB RIGHT; \downupharpoons (mathabx)
 19363 \DeclareTextCommand{\textdownupharpoons}{PU}{\9051\157}%* U+296F
 19364 % U+297F DOWN FISH TAIL
 19365 \DeclareTextCommand{\textmoo}{PU}{\9051\177\83\066}%* U+297F U+0336

46.2.34 Miscellaneous Mathematical Symbols-B: U+2980 to U+29FF

19366 % U+2987 Z NOTATION LEFT IMAGE BRACKET; \lparenthesis (stmaryrd)
 19367 \DeclareTextCommand{\textlparenthesis}{PU}{\9051\207}%* U+2987
 19368 % U+2988 Z NOTATION RIGHT IMAGE BRACKET; \rrparenthesis (stmaryrd)
 19369 \DeclareTextCommand{\textrrparenthesis}{PU}{\9051\210}%* U+2988
 19370 % U+29B0 REVERSED EMPTY SET; \invdiameter (wasysym)
 19371 \DeclareTextCommand{\textinvdiameter}{PU}{\9051\260}%* U+29B0
 19372 % U+29B6 CIRCLED VERTICAL BAR; \obar (stmaryrd)
 19373 \DeclareTextCommand{\textobar}{PU}{\9051\266}%* U+29B6
 19374 %* \textobar -> \textvarobar (stmaryrd)
 19375 % U+29B8 CIRCLED REVERSE SOLIDUS; \obslash (stmaryrd)
 19376 \DeclareTextCommand{\textobslash}{PU}{\9051\270}%* U+29B8
 19377 %* \textobslash -> \circledbslash (txfonts/pxfonts)
 19378 %* \textobslash -> \obackslash (mathabx)
 19379 %* \textobslash -> \varobslash (stmaryrd)
 19380 % U+29BA CIRCLE DIVIDED BY HORIZONTAL BAR AND TOP HALF
 19381 % DIVIDED BY VERTICAL BAR; \obot (mathabx)
 19382 \DeclareTextCommand{\textobot}{PU}{\9051\272}%* U+29BA
 19383 %* \textobot -> \odplus (ulsy)
 19384 % U+29BB CIRCLE WITH SUPERIMPOSED X; \NoChemicalCleaning (marvosym)
 19385 \DeclareTextCommand{\textNoChemicalCleaning}{PU}{\9051\273}%* U+29BB
 19386 % U+29C0 CIRCLED LESS-THAN; \olessthan (stmaryrd)
 19387 \DeclareTextCommand{\textolessthan}{PU}{\9051\300}%* U+29C0
 19388 %* \textolessthan -> \varolessthan (stmaryrd)
 19389 % U+29C1 CIRCLED GREATER-THAN; \ogreaterthan (stmaryrd)
 19390 \DeclareTextCommand{\textogreaterthan}{PU}{\9051\301}%* U+29C1
 19391 %* \textogreaterthan -> \varogreaterthan (stmaryrd)
 19392 % U+29C4 SQUARED RISING DIAGONAL SLASH; \boxslash (mathabx, stmaryrd)
 19393 \DeclareTextCommand{\textboxslash}{PU}{\9051\304}%* U+29C4
 19394 % U+29C5 SQUARED FALLING DIAGONAL SLASH; \boxbslash (stmaryrd)
 19395 \DeclareTextCommand{\textboxbslash}{PU}{\9051\305}%* U+29C5
 19396 % U+29C6 SQUARED ASTERISK; \boxast (stmaryrd)
 19397 \DeclareTextCommand{\textboxast}{PU}{\9051\306}%* U+29C6
 19398 % U+29C7 SQUARED SMALL CIRCLE; \boxcircle (stmaryrd)
 19399 \DeclareTextCommand{\textboxcircle}{PU}{\9051\307}%* U+29C7
 19400 % U+29C8 SQUARED SQUARE; \boxbox (stmaryrd)
 19401 \DeclareTextCommand{\textboxbox}{PU}{\9051\310}%* U+29C8
 19402 % U+29D3 BLACK BOWTIE; \Valve (marvosym)
 19403 \DeclareTextCommand{\textValve}{PU}{\9051\323}%* U+29D3
 19404 % U+29DF DOUBLE-ENDED MULTIMAP; \multimapboth (txfonts/pxfonts)
 19405 \DeclareTextCommand{\textmultimapboth}{PU}{\9051\337}%* U+29DF
 19406 % U+29E2 SHUFFLE PRODUCT; \shuffle (shuffle)
 19407 \DeclareTextCommand{\textshuffle}{PU}{\9051\342}%* U+29E2

46.2.35 Supplemental Mathematical Operators: U+2A00 to U+2AFF

19408 % U+2A04 N-ARY UNION OPERATOR WITH PLUS; \uplus (LaTeX)
 19409 \DeclareTextCommand{\textuplus}{PU}{\9052\004}%* U+2A04
 19410 % U+2A07 TWO LOGICAL AND OPERATOR; \bigdoublewedge (MnSymbol)

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19411 \DeclareTextCommand{\textbigdoublewedge}{PU}{\9052\007}%* U+2A07
19412 % U+2A08 TWO LOGICAL OR OPERATOR; \bigdoublevee (MnSymbol)
19413 \DeclareTextCommand{\textbigdoublevee}{PU}{\9052\010}%* U+2A08
19414 % U+2A1D JOIN; \Join (latexsym, amsfonts, amssymb, mathabx, txfonts,
19415 %   pxfonts, wasysym)
19416 \DeclareTextCommand{\textJoin}{PU}{\9052\035}%* U+2A1D
19417 % U+2A1F Z NOTATION SCHEMA COMPOSITION; \fatsemi (stmaryrd)
19418 \DeclareTextCommand{\textfatsemi}{PU}{\9052\037}%* U+2A1F
19419 % U+2A22 PLUS SIGN WITH SMALL CIRCLE ABOVE; \circplus (mathabx)
19420 \DeclareTextCommand{\textcircplus}{PU}{\9052\042}%* U+2A22
19421 % U+2A2A MINUS SIGN WITH DOT BELOW; \minusdot (MnSymbol)
19422 \DeclareTextCommand{\textminusdot}{PU}{\9052\052}%* U+2A2A
19423 %* \textminusdot -> \divdot (mathabx)
19424 % U+2A30 MULTIPLICATION SIGN WITH DOT ABOVE; \dottimes (mathabx)
19425 \DeclareTextCommand{\textdottimes}{PU}{\9052\060}%* U+2A30
19426 % U+2A32 SEMIDIRECT PRODUCT WITH BOTTOM CLOSED;
19427 %   \dtimes (mathdesign)
19428 \DeclareTextCommand{\textdtimes}{PU}{\9052\062}%* U+2A32
19429 % U+2A38 CIRCLED DIVISION SIGN; \odiv (mathabx)
19430 \DeclareTextCommand{\textodiv}{PU}{\9052\070}%* U+2A38
19431 % U+2A3C INTERIOR PRODUCT; \invneg (MnSymbol)
19432 \DeclareTextCommand{\textinvneg}{PU}{\9052\074}%* U+2A3C
19433 % U+2A4E DOUBLE SQUARE INTERSECTION; \sqdoublecap (mathabx)
19434 \DeclareTextCommand{\textsqdoublecap}{PU}{\9052\116}%* U+2A4E
19435 %* \textsqdoublecap -> \doublesqcap (MnSymbol)
19436 % U+2A40 INTERSECTION WITH DOT; \capdot (MnSymbol)
19437 \DeclareTextCommand{\textcapdot}{PU}{\9052\100}%* U+2A40
19438 % U+2A4F DOUBLE SQUARE UNION; \sqdoublecup (mathabx)
19439 \DeclareTextCommand{\textsqdoublecup}{PU}{\9052\117}%* U+2A4F
19440 %* \textsqdoublecup -> \doublesqcup (MnSymbol)
19441 % U+2A55 TWO INTERSECTING LOGICAL AND; \doublewedge (MnSymbol)
19442 \DeclareTextCommand{\textdoublewedge}{PU}{\9052\125}%* U+2A55
19443 % U+2A56 TWO INTERSECTING LOGICAL OR; \doublevee (MnSymbol)
19444 \DeclareTextCommand{\textdoublevee}{PU}{\9052\126}%* U+2A56
19445 %* \textdoublevee -> \merge (stmaryrd)
19446 % U+2A5E LOGICAL AND WITH DOUBLE OVERBAR;
19447 %   \doublebarwedge (AmS)
19448 \DeclareTextCommand{\textdoublebarwedge}{PU}{\9052\136}%* U+2A5E
19449 % U+2A63 LOGICAL OR WITH DOUBLE UNDERBAR;
19450 %   \veedoublebar (mahtabx)
19451 \DeclareTextCommand{\textveedoublebar}{PU}{\9052\143}%* U+2A63
19452 % U+2A66 EQUALS SIGN WITH DOT BELOW; \eqdot (MnSymbol)
19453 \DeclareTextCommand{\texteqdot}{PU}{\9052\146}%* U+2A66
19454 % \neqdot (MnSymbol)
19455 \DeclareTextCommand{\textneqdot}{PU}{\9052\146\83\070}%* U+2A66 U+0338
19456 % U+2A74 DOUBLE COLON EQUAL; \coloncolonequals (colonequals)
19457 \DeclareTextCommand{\textcoloncolonequals}{PU}{\9052\164}%* U+2A74
19458 % U+2A7D LESS-THAN OR SLANTED EQUAL TO; \leqslant (AmS)
19459 \DeclareTextCommand{\textleqslant}{PU}{\9052\175}%* U+2A7D
19460 % \nleqslant (txfonts/pxfonts)
19461 \DeclareTextCommand{\textnleqslant}{PU}{\9052\175\83\070}%* U+2A7D U+0338
19462 % U+2A7E GREATER-THAN OR SLANTED EQUAL TO; \geqslant (AmS)
19463 \DeclareTextCommand{\textgeqslant}{PU}{\9052\176}%* U+2A7E
19464 % \ngeqslant (txfonts/pxfonts)

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19465 \DeclareTextCommand{\textngeqslant}{PU}{\9052\176\83\070}%* U+2A7E U+0338
 19466 % U+2A85 LESS-THAN OR APPROXIMATE; \lessapprox (AmS)
 19467 \DeclareTextCommand{\textlessapprox}{PU}{\9052\205}%* U+2A85
 19468 % \lessapprox (txfonts/pxfonts)
 19469 \DeclareTextCommand{\textnlessapprox}{PU}{\9052\205\83\070}%* U+2A85 U+0338
 19470 % U+2A86 GREATER-THAN OR APPROXIMATE; \gtrapprox (AmS)
 19471 \DeclareTextCommand{\textgtrapprox}{PU}{\9052\206}%* U+2A86
 19472 % \ngtrapprox (txfonts/pxfonts)
 19473 \DeclareTextCommand{\textngtrapprox}{PU}{\9052\206\83\070}%* U+2A86 U+0338
 19474 % U+2A87 LESS-THAN AND SINGLE-LINE NOT EQUAL TO; \lneq (AmS)
 19475 \DeclareTextCommand{\textlneq}{PU}{\9052\207}%* U+2A87
 19476 % U+2A88 GREATER-THAN AND SINGLE-LINE NOT EQUAL TO;
 19477 % \gneq (AmS)
 19478 \DeclareTextCommand{\textgneq}{PU}{\9052\210}%* U+2A88
 19479 % U+2A89 LESS-THAN AND NOT APPROXIMATE; \lnapprox (AmS)
 19480 \DeclareTextCommand{\textlnapprox}{PU}{\9052\211}%* U+2A89
 19481 % U+2A8A GREATER-THAN AND NOT APPROXIMATE; \gnapprox (AmS)
 19482 \DeclareTextCommand{\textgnapprox}{PU}{\9052\212}%* U+2A8A
 19483 % U+2A8B LESS-THAN ABOVE DOUBLE-LINE EQUAL ABOVE GREATER-
 THAN;
 19484 % \lesseqqgtr (AmS)
 19485 \DeclareTextCommand{\textlesseqqgtr}{PU}{\9052\213}%* U+2A8B
 19486 % U+2A8C GREATER-THAN ABOVE DOUBLE-LINE EQUAL ABOVE LESS-
 THAN;
 19487 % \gtreqqless (AmS)
 19488 \DeclareTextCommand{\textgtreqqless}{PU}{\9052\214}%* U+2A8C
 19489 % U+2A95 SLANTED EQUAL TO OR LESS-THAN; \eqslantless (AmS)
 19490 \DeclareTextCommand{\texteqslantless}{PU}{\9052\225}%* U+2A95
 19491 % U+2A96 SLANTED EQUAL TO OR GREATER-THAN; \eqslantgtr (AmS)
 19492 \DeclareTextCommand{\texteqslantgtr}{PU}{\9052\226}%* U+2A96
 19493 % U+2AA6 LESS-THAN CLOSED BY CURVE; \leftslice (stmaryrd)
 19494 \DeclareTextCommand{\textleftslice}{PU}{\9052\246}%* U+2AA6
 19495 % U+2AA7 GREATER-THAN CLOSED BY CURVE; \rightslice (stmaryrd)
 19496 \DeclareTextCommand{\textright slice}{PU}{\9052\247}%* U+2AA7
 19497 % U+2AAF PRECEDES ABOVE SINGLE-LINE EQUALS SIGN; \preceq (Mn-
 Symbol)
 19498 \DeclareTextCommand{\textpreceq}{PU}{\9052\257}%* U+2AAF
 19499 % \npreceq (txfonts/pxfonts)
 19500 \DeclareTextCommand{\textnpreceq}{PU}{\9052\257\83\070}%* U+2AAF U+0338
 19501 % U+2AB0 SUCCEEDS ABOVE SINGLE-LINE EQUALS SIGN; \succeq (Mn-
 Symbol)
 19502 \DeclareTextCommand{\textsucceq}{PU}{\9052\260}%* U+2AB0
 19503 % \nsucceq (txfonts/pxfonts)
 19504 \DeclareTextCommand{\textnsucceq}{PU}{\9052\260\83\070}%* U+2AB0 U+0338
 19505 % U+2AB1 PRECEDES ABOVE SINGLE-LINE NOT EQUAL TO; \prec-
 neq (mathabx)
 19506 \DeclareTextCommand{\textprecneq}{PU}{\9052\261}%* U+2AB1
 19507 % U+2AB2 SUCCEEDS ABOVE SINGLE-LINE NOT EQUAL TO; \succ-
 neq (mathabx)
 19508 \DeclareTextCommand{\textsuccneq}{PU}{\9052\262}%* U+2AB2
 19509 % U+2AB3 PRECEDES ABOVE EQUALS SIGN; \preceqq (txfonts/pxfonts)
 19510 \DeclareTextCommand{\textpreceqq}{PU}{\9052\263}%* U+2AB3
 19511 % \npreceqq (txfonts/pxfonts)
 19512 \DeclareTextCommand{\textnpreceqq}{PU}{\9052\263\83\070}%* U+2AB3 U+0338

19513 % U+2AB4 SUCCEEDS ABOVE EQUALS SIGN; \succeqq (txfonts/pxfonts)
 19514 \DeclareTextCommand{\textsucceqq}{PU}{\9052\264}%* U+2AB4
 19515 % \nsucceqq (txfonts/pxfonts)
 19516 \DeclareTextCommand{\textnsucceqq}{PU}{\9052\264\83\070}%* U+2AB4 U+0338
 19517 % U+2AB5 PRECEDES ABOVE NOT EQUAL TO; \precneqq (txfonts/pxfonts)
 19518 \DeclareTextCommand{\textprecneqq}{PU}{\9052\265}%* U+2AB5
 19519 % U+2AB6 SUCCEEDS ABOVE NOT EQUAL TO; \succneqq (txfonts/pxfonts)
 19520 \DeclareTextCommand{\textsuccneqq}{PU}{\9052\266}%* U+2AB6
 19521 % U+2AB7 PRECEDES ABOVE ALMOST EQUAL TO; \precapprox (AmS)
 19522 \DeclareTextCommand{\textprecapprox}{PU}{\9052\267}%* U+2AB7
 19523 % \nprecapprox (txfonts/pxfonts)
 19524 \DeclareTextCommand{\textnprecapprox}{PU}{\9052\267\83\070}%* U+2AB7 U+0338
 19525 % U+2AB8 SUCCEEDS ABOVE ALMOST EQUAL TO; \succapprox (AmS)
 19526 \DeclareTextCommand{\textsuccapprox}{PU}{\9052\270}%* U+2AB8
 19527 % \nsuccapprox (txfonts/pxfonts)
 19528 \DeclareTextCommand{\textnsuccapprox}{PU}{\9052\270\83\070}%* U+2AB8 U+0338
 19529 % U+2AB9 PRECEDES ABOVE NOT ALMOST EQUAL TO; \precnapprox (AmS)
 19530 \DeclareTextCommand{\textprecnapprox}{PU}{\9052\271}%* U+2AB9
 19531 % U+2ABA SUCCEEDS ABOVE NOT ALMOST EQUAL TO; \succnapprox (AmS)
 19532 \DeclareTextCommand{\textsuccnapprox}{PU}{\9052\272}%* U+2ABA
 19533 % U+2AC5 SUBSET OF ABOVE EQUALS SIGN; \subseteqq (AmS)
 19534 \DeclareTextCommand{\textsubseteqq}{PU}{\9052\305}%* U+2AC5
 19535 % \nsubseteqq (txfonts/pxfonts, mathabx)
 19536 \DeclareTextCommand{\textnsubseteqq}{PU}{\9052\305\83\070}%* U+2AC5 U+0338
 19537 % U+2AC6 SUPERSET OF ABOVE EQUALS SIGN; \supseteqq (AmS)
 19538 \DeclareTextCommand{\textsupseteqq}{PU}{\9052\306}%* U+2AC6
 19539 % \nsupseteqq (mathabx)
 19540 \DeclareTextCommand{\textnsupseteqq}{PU}{\9052\306\83\070}%* U+2AC6 U+0338
 19541 % U+2AE3 DOUBLE VERTICAL BAR LEFT TURNSTILE
 19542 \DeclareTextCommand{\textdashV}{PU}{\9052\343}%* U+2AE3
 19543 %* \textdashV -> \leftVdash (MnSymbol)
 19544 % \ndashV (mathabx)
 19545 \DeclareTextCommand{\textndashV}{PU}{\9052\343\83\070}%* U+2AE3 U+0338
 19546 %* \textndashV -> \nleftVdash (MnSymbol)
 19547 % U+2AE4 VERTICAL BAR DOUBLE LEFT TURNSTILE; \Dashv (mathabx)
 19548 \DeclareTextCommand{\textDashv}{PU}{\9052\344}%* U+2AE4
 19549 %* \textDashv -> \leftmodels (MnSymbol)
 19550 % \nDashv (mathabx)
 19551 \DeclareTextCommand{\textnDashv}{PU}{\9052\344\83\070}%* U+2AE4 U+0338
 19552 %* \textnDashv -> \nleftmodels (MnSymbol)
 19553 % U+2AE5 DOUBLE VERTICAL BAR DOUBLE LEFT TURNSTILE;
 19554 % \DashV (mathabx)
 19555 \DeclareTextCommand{\textDashV}{PU}{\9052\345}%* U+2AE5
 19556 %* \textDashV -> \leftModels (MnSymbol)
 19557 % \nDashV (mathabx)
 19558 \DeclareTextCommand{\textnDashV}{PU}{\9052\345\83\070}%* U+2AE5 U+0338
 19559 %* \textnDashV -> \nleftModels (MnSymbol)
 19560 % U+2AEA DOUBLE DOWN TACK; \downmodels (MnSymbol)
 19561 \DeclareTextCommand{\textdownmodels}{PU}{\9052\352}%* U+2AEA
 19562 % \ndownmodels (MnSymbol)
 19563 \DeclareTextCommand{\textndownmodels}{PU}{\9052\352\83\070}%* U+2AEA U+0338
 19564 % U+2AEB DOUBLE UP TACK; \upmodels (MnSymbol)

19565 \DeclareTextCommand{\textupmodels}{PU}{\9052\353}%* U+2AEB
 19566 % \nupmodels (MnSymbol)
 19567 \DeclareTextCommand{\textnupmodels}{PU}{\9052\353\83\070}%* U+2AEB U+0338
 19568 % U+2AEF VERTICAL LINE WITH CIRCLE ABOVE; \upspoon (MnSymbol)
 19569 \DeclareTextCommand{\textupspoon}{PU}{\9052\357}%* U+2AEF
 19570 % U+2AF4 TRIPLE VERTICAL BAR BINARY RELATION;
 19571 % \interleave (stmaryrd)
 19572 \DeclareTextCommand{\textinterleave}{PU}{\9052\364}%* U+2AF4
 19573 % U+2AFD DOUBLE SOLIDUS OPERATOR; \sslash (stmaryrd)
 19574 \DeclareTextCommand{\textsslash}{PU}{\9052\375}%* U+2AFD
 19575 %* \textsslash -> \varparallel (txfonts\pxfonts)

46.2.36 Miscellaneous Symbols and Arrows: U+2B00 to U+2BFF

19576 % U+2B20 WHITE PENTAGON; \pentagon (wasysym)
 19577 \DeclareTextCommand{\textpentagon}{PU}{\9053\040}%* U+2B20
 19578 % U+2B21 WHITE HEXAGON; \varhexagon (wasysym)
 19579 \DeclareTextCommand{\textvarhexagon}{PU}{\9053\041}%* U+2B21

46.2.37 Latin Extended-C: U+2C60 to U+2C7F

19580 % U+2C7C LATIN SUBSCRIPT SMALL LETTER J
 19581 \DeclareTextCommand{\textjinferior}{PU}{\9054\174}%* U+2C7C

46.2.38 Supplemental Punctuation: U+2E00 to U+2E7F

19582 % U+2E13 DOTTED OBELOS; \slashdiv (MnSymbol)
 19583 \DeclareTextCommand{\textslashdiv}{PU}{\9056\023}%* U+2E13
 19584 % U+2E18 INVERTED INTERROBANG; \textinterrobangdown (textcomp)
 19585 \DeclareTextCommand{\textinterrobangdown}{PU}{\9056\030}% U+2E18
 19586 % U+2E2D FIVE DOT MARK; \fivedots (MnSymbol)
 19587 \DeclareTextCommand{\textfivedots}{PU}{\9056\055}%* U+2E2D

46.2.39 Modifier Tone Letters: U+A700 to U+A71F

19588 % U+A71B MODIFIER LETTER RAISED UP ARROW; \textupstep (tipa)
 19589 \DeclareTextCommand{\textupstep}{PU}{\9247\033}% U+A71B
 19590 % U+A71C MODIFIER LETTER RAISED DOWN ARROW;
 19591 % \textdownstep (tipa)
 19592 \DeclareTextCommand{\textdownstep}{PU}{\9247\034}% U+A71C

46.2.40 Latin Extended-D: U+A720 to U+A7FF

19593 % U+A727 LATIN SMALL LETTER HENG; \textheng (tipx)
 19594 \DeclareTextCommand{\textPUheng}{PU}{\9247\047}% U+A727
 19595 %* \textPUheng -> \textheng (tipx)
 19596 % U+A72C LATIN CAPITAL LETTER CUATRILLO; \textlhookfour (tipx)
 19597 \DeclareTextCommand{\textPULhookfour}{PU}{\9247\054}% U+A72C
 19598 %* \textPULhookfour -> \textlhookfour (tipx)
 19599 % U+A730 LATIN LETTER SMALL CAPITAL F; \textscf (tipx)
 19600 \DeclareTextCommand{\textPUscf}{PU}{\9247\060}% U+A730
 19601 %* \textPUscf -> \textscf (tipx)
 19602 % U+A735 LATIN SMALL LETTER AO; \textao lig (tipx)
 19603 \DeclareTextCommand{\textPUaolig}{PU}{\9247\065}% U+A735
 19604 %* \textPUaolig -> \textao lig (tipx)
 19605 % U+A74F LATIN SMALL LETTER OO; \oo (wsuipa)
 19606 \DeclareTextCommand{\textoo}{PU}{\9247\117}%* U+A74F
 19607 % U+A788 MODIFIER LETTER LOW CIRCUMFLEX ACCENT
 19608 \DeclareTextCommand{\textcircumlow}{PU}{\9247\210}% U+A788

46.2.41 Alphabetic Presentation Forms: U+FB00 to U+FB4F

19609 % U+FB01 LATIN SMALL LIGATURE FI; fi
19610 \DeclareTextCommand{\textfi}{PU}{\9373\001}% U+FB01
19611 % U+FB02 LATIN SMALL LIGATURE FL; fl
19612 \DeclareTextCommand{\textfl}{PU}{\9373\002}% U+FB02

46.2.42 Musical Symbols: U+1D100 to U+1D1FF

19613 % U+1D13B MUSICAL SYMBOL WHOLE REST; \GaPa (harmony)
19614 \DeclareTextCommand{\textGaPa}{PU}{\9330\064\9335\073}%* U+1D13B
19615 % U+1D13C MUSICAL SYMBOL HALF REST; \HaPa (harmony)
19616 \DeclareTextCommand{\textHaPa}{PU}{\9330\064\9335\074}%* U+1D13C
19617 % U+1D13D MUSICAL SYMBOL QUARTER REST; \ViPa (harmony)
19618 \DeclareTextCommand{\textViPa}{PU}{\9330\064\9335\075}%* U+1D13D
19619 % U+1D13E MUSICAL SYMBOL EIGHTH REST; \AcPa (harmony)
19620 \DeclareTextCommand{\textAcPa}{PU}{\9330\064\9335\076}%* U+1D13E
19621 % U+1D13F MUSICAL SYMBOL SIXTEENTH REST; \SePa (harmony)
19622 \DeclareTextCommand{\textSePa}{PU}{\9330\064\9335\077}%* U+1D13F
19623 % U+1D140 MUSICAL SYMBOL THIRTY-SECOND REST; \ZwPa (harmony)
19624 \DeclareTextCommand{\textZwPa}{PU}{\9330\064\9335\100}%* U+1D140
19625 % U+1D15D MUSICAL SYMBOL WHOLE NOTE; \fullnote (wasysym)
19626 \DeclareTextCommand{\textfullnote}{PU}{\9330\064\9335\135}%* U+1D15D
19627 %* \textfullnote -> \Ganz (harmony)
19628 % U+1D15E MUSICAL SYMBOL HALF NOTE; \halfnote (wasysym)
19629 \DeclareTextCommand{\texthalfnote}{PU}{\9330\064\9335\136}%* U+1D15E
19630 %* \texthalfnote -> \Halb (harmony)
19631 % U+1D15F MUSICAL SYMBOL QUARTER NOTE; \Vier (harmony)
19632 \DeclareTextCommand{\textVier}{PU}{\9330\064\9335\137}%* U+1D15F
19633 % U+1D160 MUSICAL SYMBOL EIGHTH NOTE; \Acht (harmony)
19634 \DeclareTextCommand{\textAcht}{PU}{\9330\064\9335\140}%* U+1D160
19635 % U+1D161 MUSICAL SYMBOL SIXTEENTH NOTE; \Sech (harmony)
19636 \DeclareTextCommand{\textSech}{PU}{\9330\064\9335\141}%* U+1D161
19637 % U+1D162 MUSICAL SYMBOL THIRTY-SECOND NOTE; \Zwdr (harmony)
19638 \DeclareTextCommand{\textZwdr}{PU}{\9330\064\9335\142}%* U+1D162

46.2.43 Miscellaneous Symbols and Pictographs: U+1F300 to U+1F5FF

19639 % U+1F30D EARTH GLOBE EUROPE-AFRICA; \Mundus (marvosym)
19640 \DeclareTextCommand{\textMundus}{PU}{\9330\074\9337\015}%* U+1F30D
19641 % U+1F319 CRESCENT MOON; \Moon (marvosym)
19642 \DeclareTextCommand{\textMoon}{PU}{\9330\074\9337\031}%* U+1F319
19643 % U+1F468 MAN; \ManFace (marvosym)
19644 \DeclareTextCommand{\textManFace}{PU}{\9330\075\9334\150}%* U+1F468
19645 % U+1F469 WOMAN; \WomanFace (marvosym)
19646 \DeclareTextCommand{\textWomanFace}{PU}{\9330\075\9334\151}%* U+1F469
19647 %* \textWomanFace -> \Womanface (marvosym)
19648 % U+1F4E0 FAX MACHINE; \Fax (marvosym)
19649 \DeclareTextCommand{\textFax}{PU}{\9330\075\9334\340}%* U+1F4E0
19650 %* \textFax -> \Faxmachine (marvosym)
19651 % U+1F525 FIRE; \Fire (ifsym)
19652 \DeclareTextCommand{\textFire}{PU}{\9330\075\9335\045}%* U+1F525

46.2.44 Transport and Map Symbols: U+1F680 to U+1F6FF

19653 % U+1F6B2 BICYCLE; \Bicycle (marvosym)
19654 \DeclareTextCommand{\textBicycle}{PU}{\9330\075\9336\262}%* U+1F6B2


```

19655 % U+1F6B9 MENS SYMBOL; \Gentsroom (marvosym)
19656 \DeclareTextCommand{\textGentsroom}{PU}{\9330\075\9336\271}%* U+1F6B9
19657 % U+1F6BA WOMENS SYMBOL; \Ladiesroom (marvosym)
19658 \DeclareTextCommand{\textLadiesroom}{PU}{\9330\075\9336\272}%* U+1F6BA

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46.2.45 Miscellaneous

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19659 \DeclareTextCommand{\SS}{PU}{SS}%
19660 % \textcopyleft (textcomp)
19661 \DeclareTextCommand{\textcopyleft}{PU}{\9041\204\9040\335}% U+2184 U+20DD
19662 % \ccnc (ccllicenses)
19663 \DeclareTextCommand{\textccnc}{PU}{\80\044\9040\340}%* U+0024 U+20E0
19664 % \ccnd (ccllicenses)
19665 \DeclareTextCommand{\textccnd}{PU}{=\9040\335}%* U+003D U+20DD
19666 % \ccsa (ccllicenses)
19667 \DeclareTextCommand{\textccsa}{PU}{\9047\362\9040\335}%* U+27F2 U+20DD
19668 % \Info (marvosym, china2e)
19669 \DeclareTextCommand{\textInfo}{PU}{\9330\065\9334\042\9040\336}%* U+1D422 U+20DE
19670 % \CESign (marvosym)
19671 \DeclareTextCommand{\textCESign}{PU}{\80\103\80\105}%* U+0043 U+0045
19672 %* \textCESign -> \CESign (marvosym)

```

46.2.46 Aliases

Aliases (german.sty)

```

19673 \DeclareTextCommand{\textglqq}{PU}{\quotedblbase}%
19674 \DeclareTextCommand{\textgrqq}{PU}{\textquotedblleft}%
19675 \DeclareTextCommand{\textglq}{PU}{\quotesinglbase}%
19676 \DeclareTextCommand{\textgrq}{PU}{\textquoteleft}%
19677 \DeclareTextCommand{\textflqq}{PU}{\guillemetleft}%
19678 \DeclareTextCommand{\textfrqq}{PU}{\guillemetright}%
19679 \DeclareTextCommand{\textflq}{PU}{\guilsinglleft}%
19680 \DeclareTextCommand{\textfrq}{PU}{\guilsinglright}%

```

Aliases (math names)

```

19681 \DeclareTextCommand{\textneg}{PU}{\textlogicalnot}%*
19682 \DeclareTextCommand{\texttimes}{PU}{\textmultiply}%*
19683 \DeclareTextCommand{\textdiv}{PU}{\textdivide}%*
19684 \DeclareTextCommand{\textpm}{PU}{\textplusminus}%*
19685 \DeclareTextCommand{\textcdot}{PU}{\textperiodcentered}%*
19686 </puenc>

```

46.3 PU encoding, additions for VnTeX

This file is provided by Han The Thanh.

```

19687 < *puvnenc >
19688 \DeclareTextCommand{\abreve}{PU}{\81\003}% U+0103
19689 \DeclareTextCommand{\acircumflex}{PU}{\80\342}% U+00E2
19690 \DeclareTextCommand{\ecircumflex}{PU}{\80\352}% U+00EA
19691 \DeclareTextCommand{\ocircumflex}{PU}{\80\364}% U+00F4
19692 \DeclareTextCommand{\ohorn}{PU}{\81\241}% U+01A1
19693 \DeclareTextCommand{\uhorn}{PU}{\81\260}% U+01B0
19694 \DeclareTextCommand{\ABREVE}{PU}{\81\002}% U+0102
19695 \DeclareTextCommand{\ACIRCUMFLEX}{PU}{\80\302}% U+00C2

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19696 \DeclareTextCommand{\ECIRCUMFLEX}{PU}{\80\312}% U+00CA
 19697 \DeclareTextCommand{\OCIRCUMFLEX}{PU}{\80\324}% U+00D4
 19698 \DeclareTextCommand{\OHORN}{PU}{\81\240}% U+01A0
 19699 \DeclareTextCommand{\UHORN}{PU}{\81\257}% U+01AF

 19700 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\341}% U+00E1
 19701 \DeclareTextCompositeCommand{\d}{PU}{a}{\9036\241}% U+1EA1
 19702 \DeclareTextCompositeCommand{\`}{PU}{a}{\80\340}% U+00E0
 19703 \DeclareTextCompositeCommand{\h}{PU}{a}{\9036\243}% U+1EA3
 19704 \DeclareTextCompositeCommand{\~}{PU}{a}{\80\343}% U+00E3
 19705 \DeclareTextCompositeCommand{\'}{PU}{\abreve}{\9036\257}% U+1EAF
 19706 \DeclareTextCompositeCommand{\d}{PU}{\abreve}{\9036\267}% U+1EB7
 19707 \DeclareTextCompositeCommand{\`}{PU}{\abreve}{\9036\261}% U+1EB1
 19708 \DeclareTextCompositeCommand{\h}{PU}{\abreve}{\9036\263}% U+1EB3
 19709 \DeclareTextCompositeCommand{\~}{PU}{\abreve}{\9036\265}% U+1EB5
 19710 \DeclareTextCompositeCommand{\'}{PU}{\acircumflex}{\9036\245}% U+1EA5
 19711 \DeclareTextCompositeCommand{\d}{PU}{\acircumflex}{\9036\255}% U+1EAD
 19712 \DeclareTextCompositeCommand{\`}{PU}{\acircumflex}{\9036\247}% U+1EA7
 19713 \DeclareTextCompositeCommand{\h}{PU}{\acircumflex}{\9036\251}% U+1EA9
 19714 \DeclareTextCompositeCommand{\~}{PU}{\acircumflex}{\9036\253}% U+1EAB
 19715 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\351}% U+00E9
 19716 \DeclareTextCompositeCommand{\d}{PU}{e}{\9036\271}% U+1EB9
 19717 \DeclareTextCompositeCommand{\`}{PU}{e}{\80\350}% U+00E8
 19718 \DeclareTextCompositeCommand{\h}{PU}{e}{\9036\273}% U+1EBB
 19719 \DeclareTextCompositeCommand{\~}{PU}{e}{\9036\275}% U+1EBD
 19720 \DeclareTextCompositeCommand{\'}{PU}{\ecircumflex}{\9036\277}% U+1EBF
 19721 \DeclareTextCompositeCommand{\d}{PU}{\ecircumflex}{\9036\307}% U+1EC7
 19722 \DeclareTextCompositeCommand{\`}{PU}{\ecircumflex}{\9036\301}% U+1EC1
 19723 \DeclareTextCompositeCommand{\h}{PU}{\ecircumflex}{\9036\303}% U+1EC3
 19724 \DeclareTextCompositeCommand{\~}{PU}{\ecircumflex}{\9036\305}% U+1EC5
 19725 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}% U+00ED
 19726 \DeclareTextCompositeCommand{\d}{PU}{i}{\9036\313}% U+1ECB
 19727 \DeclareTextCompositeCommand{\`}{PU}{i}{\80\354}% U+00EC
 19728 \DeclareTextCompositeCommand{\h}{PU}{i}{\9036\311}% U+1EC9
 19729 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}% U+0129
 19730 \DeclareTextCompositeCommand{\'}{PU}{o}{\80\363}% U+00F3
 19731 \DeclareTextCompositeCommand{\d}{PU}{o}{\9036\315}% U+1ECD
 19732 \DeclareTextCompositeCommand{\`}{PU}{o}{\80\362}% U+00F2
 19733 \DeclareTextCompositeCommand{\h}{PU}{o}{\9036\317}% U+1ECF
 19734 \DeclareTextCompositeCommand{\~}{PU}{o}{\80\365}% U+00F5
 19735 \DeclareTextCompositeCommand{\'}{PU}{\ocircumflex}{\9036\321}% U+1ED1
 19736 \DeclareTextCompositeCommand{\d}{PU}{\ocircumflex}{\9036\331}% U+1ED9
 19737 \DeclareTextCompositeCommand{\`}{PU}{\ocircumflex}{\9036\323}% U+1ED3
 19738 \DeclareTextCompositeCommand{\h}{PU}{\ocircumflex}{\9036\325}% U+1ED5
 19739 \DeclareTextCompositeCommand{\~}{PU}{\ocircumflex}{\9036\327}% U+1ED7
 19740 \DeclareTextCompositeCommand{\'}{PU}{\ohorn}{\9036\333}% U+1EDB
 19741 \DeclareTextCompositeCommand{\d}{PU}{\ohorn}{\9036\343}% U+1EE3
 19742 \DeclareTextCompositeCommand{\`}{PU}{\ohorn}{\9036\335}% U+1EDD
 19743 \DeclareTextCompositeCommand{\h}{PU}{\ohorn}{\9036\337}% U+1EDF
 19744 \DeclareTextCompositeCommand{\~}{PU}{\ohorn}{\9036\341}% U+1EE1
 19745 \DeclareTextCompositeCommand{\'}{PU}{u}{\80\372}% U+00FA
 19746 \DeclareTextCompositeCommand{\d}{PU}{u}{\9036\345}% U+1EE5
 19747 \DeclareTextCompositeCommand{\`}{PU}{u}{\80\371}% U+00F9
 19748 \DeclareTextCompositeCommand{\h}{PU}{u}{\9036\347}% U+1EE7
 19749 \DeclareTextCompositeCommand{\~}{PU}{u}{\81\151}% U+0169

19750 \DeclareTextCompositeCommand{\'}{PU}{\uhorn}{\9036\351}% U+1EE9
19751 \DeclareTextCompositeCommand{\d}{PU}{\uhorn}{\9036\361}% U+1EF1
19752 \DeclareTextCompositeCommand{\`}{PU}{\uhorn}{\9036\353}% U+1EEB
19753 \DeclareTextCompositeCommand{\h}{PU}{\uhorn}{\9036\355}% U+1EED
19754 \DeclareTextCompositeCommand{\~}{PU}{\uhorn}{\9036\357}% U+1EEF
19755 \DeclareTextCompositeCommand{\'}{PU}{y}{\80\375}% U+00FD
19756 \DeclareTextCompositeCommand{\d}{PU}{y}{\9036\365}% U+1EF5
19757 \DeclareTextCompositeCommand{\`}{PU}{y}{\9036\363}% U+1EF3
19758 \DeclareTextCompositeCommand{\h}{PU}{y}{\9036\367}% U+1EF7
19759 \DeclareTextCompositeCommand{\~}{PU}{y}{\9036\371}% U+1EF9
19760 \DeclareTextCompositeCommand{\'}{PU}{A}{\80\301}% U+00C1
19761 \DeclareTextCompositeCommand{\d}{PU}{A}{\9036\240}% U+1EA0
19762 \DeclareTextCompositeCommand{\`}{PU}{A}{\80\300}% U+00C0
19763 \DeclareTextCompositeCommand{\h}{PU}{A}{\9036\242}% U+1EA2
19764 \DeclareTextCompositeCommand{\~}{PU}{A}{\80\303}% U+00C3
19765 \DeclareTextCompositeCommand{\'}{PU}{\ABREVE}{\9036\256}% U+1EAE
19766 \DeclareTextCompositeCommand{\d}{PU}{\ABREVE}{\9036\266}% U+1EB6
19767 \DeclareTextCompositeCommand{\`}{PU}{\ABREVE}{\9036\260}% U+1EB0
19768 \DeclareTextCompositeCommand{\h}{PU}{\ABREVE}{\9036\262}% U+1EB2
19769 \DeclareTextCompositeCommand{\~}{PU}{\ABREVE}{\9036\264}% U+1EB4
19770 \DeclareTextCompositeCommand{\'}{PU}{\ACIRCUMFLEX}{\9036\244}% U+1EA4
19771 \DeclareTextCompositeCommand{\d}{PU}{\ACIRCUMFLEX}{\9036\254}% U+1EAC
19772 \DeclareTextCompositeCommand{\`}{PU}{\ACIRCUMFLEX}{\9036\246}% U+1EA6
19773 \DeclareTextCompositeCommand{\h}{PU}{\ACIRCUMFLEX}{\9036\250}% U+1EA8
19774 \DeclareTextCompositeCommand{\~}{PU}{\ACIRCUMFLEX}{\9036\252}% U+1EAA
19775 \DeclareTextCompositeCommand{\'}{PU}{E}{\80\311}% U+00C9
19776 \DeclareTextCompositeCommand{\d}{PU}{E}{\9036\270}% U+1EB8
19777 \DeclareTextCompositeCommand{\`}{PU}{E}{\80\310}% U+00C8
19778 \DeclareTextCompositeCommand{\h}{PU}{E}{\9036\272}% U+1EBA
19779 \DeclareTextCompositeCommand{\~}{PU}{E}{\9036\274}% U+1EBC
19780 \DeclareTextCompositeCommand{\'}{PU}{\ECIRCUMFLEX}{\9036\276}% U+1EBE
19781 \DeclareTextCompositeCommand{\d}{PU}{\ECIRCUMFLEX}{\9036\306}% U+1EC6
19782 \DeclareTextCompositeCommand{\`}{PU}{\ECIRCUMFLEX}{\9036\300}% U+1EC0
19783 \DeclareTextCompositeCommand{\h}{PU}{\ECIRCUMFLEX}{\9036\302}% U+1EC2
19784 \DeclareTextCompositeCommand{\~}{PU}{\ECIRCUMFLEX}{\9036\304}% U+1EC4
19785 \DeclareTextCompositeCommand{\'}{PU}{I}{\80\315}% U+00CD
19786 \DeclareTextCompositeCommand{\d}{PU}{I}{\9036\312}% U+1ECA
19787 \DeclareTextCompositeCommand{\`}{PU}{I}{\80\314}% U+00CC
19788 \DeclareTextCompositeCommand{\h}{PU}{I}{\9036\310}% U+1EC8
19789 \DeclareTextCompositeCommand{\~}{PU}{I}{\81\050}% U+0128
19790 \DeclareTextCompositeCommand{\'}{PU}{O}{\80\323}% U+00D3
19791 \DeclareTextCompositeCommand{\d}{PU}{O}{\9036\314}% U+1ECC
19792 \DeclareTextCompositeCommand{\`}{PU}{O}{\80\322}% U+00D2
19793 \DeclareTextCompositeCommand{\h}{PU}{O}{\9036\316}% U+1ECE
19794 \DeclareTextCompositeCommand{\~}{PU}{O}{\80\325}% U+00D5
19795 \DeclareTextCompositeCommand{\'}{PU}{\OCIRCUMFLEX}{\9036\320}% U+1ED0
19796 \DeclareTextCompositeCommand{\d}{PU}{\OCIRCUMFLEX}{\9036\330}% U+1ED8
19797 \DeclareTextCompositeCommand{\`}{PU}{\OCIRCUMFLEX}{\9036\322}% U+1ED2
19798 \DeclareTextCompositeCommand{\h}{PU}{\OCIRCUMFLEX}{\9036\324}% U+1ED4
19799 \DeclareTextCompositeCommand{\~}{PU}{\OCIRCUMFLEX}{\9036\326}% U+1ED6
19800 \DeclareTextCompositeCommand{\'}{PU}{\OHORN}{\9036\332}% U+1EDA
19801 \DeclareTextCompositeCommand{\d}{PU}{\OHORN}{\9036\342}% U+1EE2
19802 \DeclareTextCompositeCommand{\`}{PU}{\OHORN}{\9036\334}% U+1EDC
19803 \DeclareTextCompositeCommand{\h}{PU}{\OHORN}{\9036\336}% U+1EDE

```

19804 \DeclareTextCompositeCommand{\~}{PU}{\OHORN}{\9036\340}% U+1EE0
19805 \DeclareTextCompositeCommand{\'}{PU}{U}{\80\332}% U+00DA
19806 \DeclareTextCompositeCommand{\d}{PU}{U}{\9036\344}% U+1EE4
19807 \DeclareTextCompositeCommand{\`}{PU}{U}{\80\331}% U+00D9
19808 \DeclareTextCompositeCommand{\h}{PU}{U}{\9036\346}% U+1EE6
19809 \DeclareTextCompositeCommand{\~}{PU}{U}{\81\150}% U+0168
19810 \DeclareTextCompositeCommand{\'}{PU}{\UHORN}{\9036\350}% U+1EE8
19811 \DeclareTextCompositeCommand{\d}{PU}{\UHORN}{\9036\360}% U+1EF0
19812 \DeclareTextCompositeCommand{\`}{PU}{\UHORN}{\9036\352}% U+1EEA
19813 \DeclareTextCompositeCommand{\h}{PU}{\UHORN}{\9036\354}% U+1EEC
19814 \DeclareTextCompositeCommand{\~}{PU}{\UHORN}{\9036\356}% U+1EEE
19815 \DeclareTextCompositeCommand{\'}{PU}{Y}{\80\335}% U+00DD
19816 \DeclareTextCompositeCommand{\d}{PU}{Y}{\9036\364}% U+1EF4
19817 \DeclareTextCompositeCommand{\`}{PU}{Y}{\9036\362}% U+1EF2
19818 \DeclareTextCompositeCommand{\h}{PU}{Y}{\9036\366}% U+1EF6
19819 \DeclareTextCompositeCommand{\~}{PU}{Y}{\9036\370}% U+1EF8
19820 </puvnenc>

```

46.4 PU encoding, additions for Arabi

This file is provided and maintained by Youssef Jabri.

```

19821 <*puarenc>
19822 % U+0621;afii57409;ARABIC LETTER HAMZA
19823 \DeclareTextCommand{\hamza}{PU}{\86\041}% U+0621
19824 % U+0622;afii57410;ARABIC LETTER ALEF WITH MADDA ABOVE
19825 \DeclareTextCommand{\alefmadda}{PU}{\86\042}% U+0622
19826 % U+0623;afii57411;ARABIC LETTER ALEF WITH HAMZA ABOVE
19827 \DeclareTextCommand{\alefhamza}{PU}{\86\043}% U+0623
19828 % U+0624;afii57412;ARABIC LETTER WAW WITH HAMZA ABOVE
19829 \DeclareTextCommand{\wawhamza}{PU}{\86\044}% U+0624
19830 % U+0625;afii57413;ARABIC LETTER ALEF WITH HAMZA BELOW
19831 \DeclareTextCommand{\aleflowerhamza}{PU}{\86\045}% U+0625
19832 % U+0626;afii57414;ARABIC LETTER YEH WITH HAMZA ABOVE
19833 \DeclareTextCommand{\yahamza}{PU}{\86\046}% U+0626
19834 % U+0627;afii57415;ARABIC LETTER ALEF
19835 \DeclareTextCommand{\alef}{PU}{\86\047}% U+0627
19836 % U+0628;afii57416;ARABIC LETTER BEH
19837 \DeclareTextCommand{\baa}{PU}{\86\050}% U+0628
19838 % U+0629;afii57417;ARABIC LETTER TEH MARBUTA
19839 \DeclareTextCommand{\T}{PU}{\86\051}% U+0629
19840 % U+062A;afii57418;ARABIC LETTER TEH
19841 \DeclareTextCommand{\taa}{PU}{\86\052}% U+062A
19842 % U+062B;afii57419;ARABIC LETTER THEH
19843 \DeclareTextCommand{\thaa}{PU}{\86\053}% U+062B
19844 % U+062C;afii57420;ARABIC LETTER JEEM
19845 \DeclareTextCommand{\jeem}{PU}{\86\054}% U+062C
19846 % U+062D;afii57421;ARABIC LETTER HAH
19847 \DeclareTextCommand{\Haa}{PU}{\86\055}% U+062D
19848 % U+062E;afii57422;ARABIC LETTER KHAH
19849 \DeclareTextCommand{\kha}{PU}{\86\056}% U+062E
19850 % U+062F;afii57423;ARABIC LETTER DAL
19851 \DeclareTextCommand{\dal}{PU}{\86\057}% U+062F
19852 % U+0630;afii57424;ARABIC LETTER THAL

```

19853 \DeclareTextCommand{\dhal}{PU}{\86\060}% U+0630
 19854 % U+0631;afii57425;ARABIC LETTER REH
 19855 \DeclareTextCommand{\ra}{PU}{\86\061}% U+0631
 19856 % U+0632;afii57426;ARABIC LETTER ZAIN
 19857 \DeclareTextCommand{\zay}{PU}{\86\062}% U+0632
 19858 % U+0633;afii57427;ARABIC LETTER SEEN
 19859 \DeclareTextCommand{\seen}{PU}{\86\063}% U+0633
 19860 % U+0634;afii57428;ARABIC LETTER SHEEN
 19861 \DeclareTextCommand{\sheen}{PU}{\86\064}% U+0634
 19862 % U+0635;afii57429;ARABIC LETTER SAD
 19863 \DeclareTextCommand{\sad}{PU}{\86\065}% U+0635
 19864 % U+0636;afii57430;ARABIC LETTER DAD
 19865 \DeclareTextCommand{\dad}{PU}{\86\066}% U+0636
 19866 % U+0637;afii57431;ARABIC LETTER TAH
 19867 \DeclareTextCommand{\Ta}{PU}{\86\067}% U+0637
 19868 % U+0638;afii57432;ARABIC LETTER ZAH
 19869 \DeclareTextCommand{\za}{PU}{\86\070}% U+0638
 19870 % U+0639;afii57433;ARABIC LETTER AIN
 19871 \DeclareTextCommand{\ayn}{PU}{\86\071}% U+0639
 19872 % U+063A;afii57434;ARABIC LETTER GHAIN
 19873 \DeclareTextCommand{\ghayn}{PU}{\86\072}% U+063A
 19874 % U+0640;afii57440;ARABIC TATWEEL
 19875 \DeclareTextCommand{\tatweel}{PU}{\86\100}% U+0640
 19876 % U+0641;afii57441;ARABIC LETTER FEH
 19877 \DeclareTextCommand{\fa}{PU}{\86\101}% U+0641
 19878 % U+0642;afii57442;ARABIC LETTER QAF
 19879 \DeclareTextCommand{\qaf}{PU}{\86\102}% U+0642
 19880 % U+0643;afii57443;ARABIC LETTER KAF
 19881 \DeclareTextCommand{\kaf}{PU}{\86\103}% U+0643
 19882 % U+0644;afii57444;ARABIC LETTER LAM
 19883 \DeclareTextCommand{\lam}{PU}{\86\104}% U+0644
 19884 % U+0645;afii57445;ARABIC LETTER MEEM
 19885 \DeclareTextCommand{\meem}{PU}{\86\105}% U+0645
 19886 % U+0646;afii57446;ARABIC LETTER NOON
 19887 \DeclareTextCommand{\nun}{PU}{\86\106}% U+0646
 19888 % U+0647;afii57470;ARABIC LETTER HEH
 19889 \DeclareTextCommand{\ha}{PU}{\86\107}% U+0647
 19890 % U+0648;afii57448;ARABIC LETTER WAW
 19891 \DeclareTextCommand{\waw}{PU}{\86\110}% U+0648
 19892 % U+0649;afii57449;ARABIC LETTER ALEF MAKSURA
 19893 \DeclareTextCommand{\alefmaqsura}{PU}{\86\111}% U+0649
 19894 % U+064A;afii57450;ARABIC LETTER YEH
 19895 \DeclareTextCommand{\ya}{PU}{\86\112}% U+064A
 19896 % U+064B;afii57451;ARABIC FATHATAN
 19897 \DeclareTextCommand{\nasb}{PU}{\86\113}% U+064B
 19898 % U+064C;afii57452;ARABIC DAMMATAN
 19899 \DeclareTextCommand{\raff}{PU}{\86\114}% U+064C
 19900 % U+064D;afii57453;ARABIC KASRATAN
 19901 \DeclareTextCommand{\jarr}{PU}{\86\115}% U+064D
 19902 % U+064E;afii57454;ARABIC FATHA
 19903 \DeclareTextCommand{\fatha}{PU}{\86\116}% U+064E
 19904 % U+064F;afii57455;ARABIC DAMMA
 19905 \DeclareTextCommand{\damma}{PU}{\86\117}% U+064F
 19906 % U+0650;afii57456;ARABIC KASRA

19907 \DeclareTextCommand{\kasra}{PU}{\86\120}% U+0650
 19908 % U+0651;afi57457;ARABIC SHADDA
 19909 \DeclareTextCommand{\shadda}{PU}{\86\121}% U+0651
 19910 % U+0652;afi57458;ARABIC SUKUN
 19911 \DeclareTextCommand{\sukun}{PU}{\86\122}% U+0652

 Farsi
 19912 % U+067E ARABIC LETTER PEH; afi57506
 19913 \DeclareTextCommand{\peh}{PU}{\86\176}% U+067E
 19914 % U+0686 ARABIC LETTER TCHEH; afi57507
 19915 \DeclareTextCommand{\tcheh}{PU}{\86\206}% U+0686
 19916 % U+0698 ARABIC LETTER JEH; afi57508
 19917 \DeclareTextCommand{\jeh}{PU}{\86\230}% U+0698
 19918 % U+06A9 ARABIC LETTER KEHEH
 19919 \DeclareTextCommand{\farsikaf}{PU}{\86\251}% U+06A9
 19920 % U+06AF ARABIC LETTER GAF; afi57509
 19921 \DeclareTextCommand{\gaf}{PU}{\86\257}% U+06AF
 19922 % U+06CC ARABIC LETTER FARSI YEH
 19923 \DeclareTextCommand{\farsiya}{PU}{\86\314}% U+06CC

 19924 % U+200C ZERO WIDTH NON-JOINER; afi61664
 19925 \DeclareTextCommand{\ZWNJ}{PU}{\9040\014}% U+200C
 19926 % U+200D ZERO WIDTH JOINER; afi301
 19927 \DeclareTextCommand{\textEncodingNoboundary}{PU}{\9040\015}% U+200D

 19928 </psdextra>
 19929 <*psdextra>
 19930 \Hy@VersionCheck{psdextra.def}
 19931 \newcommand*{\psdmapshortnames}{%
 19932 \let\MVPlus\textMVPlus
 19933 \let\MVComma\textMVComma
 19934 \let\MVMinus\textMVMinus
 19935 \let\MVPeriod\textMVPeriod
 19936 \let\MVDivision\textMVDivision
 19937 \let\MVZero\textMVZero
 19938 \let\MVOne\textMVOne
 19939 \let\MVTwo\textMVTwo
 19940 \let\MVThree\textMVThree
 19941 \let\MVFour\textMVFour
 19942 \let\MVFive\textMVFive
 19943 \let\MVSix\textMVSix
 19944 \let\MVSeven\textMVSeven
 19945 \let\MVEight\textMVEight
 19946 \let\MVNine\textMVNine
 19947 \let\MVAt\textMVAt
 19948 \let\copyright\textcopyright
 19949 \let\twosuperior\texttwosuperior
 19950 \let\treesuperior\texttreesuperior
 19951 \let\onesuperior\textonesuperior
 19952 \let\Thorn\textThorn
 19953 \let\thorn\textthorn
 19954 \let\hbar\texthbar
 19955 \let\hausaB\texthausaB
 19956 \let\hausaD\texthausaD
 19957 \let\hausaK\texthausaK

19958 \let\barl\textbarl
 19959 \let\inve\textinve
 19960 \let\slashc\textslashc
 19961 \let\scripta\textscripta
 19962 \let\openo\textopeno
 19963 \let\rtaild\textrtaild
 19964 \let\reve\textreve
 19965 \let\schwa\textschwa
 19966 \let\niepsilon\textniepsilon
 19967 \let\revepsilon\textrevepsilon
 19968 \let\rhookrevepsilon\texthookrevepsilon
 19969 \let\scriptg\textscriptg
 19970 \let\scg\textscg
 19971 \let\ipagamma\textipagamma
 19972 \let\babygamma\textbabygamma
 19973 \let\bari\textbari
 19974 \let\niiota\textniiota
 19975 \let\sci\textsci
 19976 \let\scn\textscn
 19977 \let\niphi\textniphi
 19978 \let\longlegr\textlonglegr
 19979 \let\scr\textscr
 19980 \let\invscr\textinvscr
 19981 \let\esh\textesh
 19982 \let\baru\textbaru
 19983 \let\niupsilon\textniupsilon
 19984 \let\scriptv\textscriptv
 19985 \let\turnv\textturnv
 19986 \let\turnw\textturnw
 19987 \let\turny\textturny
 19988 \let\scy\textscy
 19989 \let\yogh\textyogh
 19990 \let\glotstop\textglotstop
 19991 \let\revglotstop\textrevglotstop
 19992 \let\invglotstop\textinvglotstop
 19993 \let\Gamma\textGamma
 19994 \let\Delta\textDelta
 19995 \let\Theta\textTheta
 19996 \let\Lambda\textLambda
 19997 \let\Xi\textXi
 19998 \let\Pi\textPi
 19999 \let\Sigma\textSigma
 20000 \let\Upsilon\textUpsilon
 20001 \let\Phi\textPhi
 20002 \let\Psi\textPsi
 20003 \let\Omega\textOmega
 20004 \let\alpha\textalpha
 20005 \let\beta\textbeta
 20006 \let\gamma\textgamma
 20007 \let\delta\textdelta
 20008 \let\epsilon\textepsilon
 20009 \let\zeta\textzeta
 20010 \let\eta\texteta
 20011 \let\theta\texttheta

20012 \let\iota\textiota
 20013 \let\kappa\textkappa
 20014 \let\lambda\textlambda
 20015 \let\mu\textmu
 20016 \let\mugreek\textmugreek
 20017 \let\nu\textnu
 20018 \let\xi\textxi
 20019 \let\pi\textpi
 20020 \let\rho\textrho
 20021 \let\varsigma\textvarsigma
 20022 \let\sigma\textsigma
 20023 \let\tau\texttau
 20024 \let\upsilon\textupsilon
 20025 \let\phi\textphi
 20026 \let\chi\textchi
 20027 \let\psi\textpsi
 20028 \let\omega\textomega
 20029 \let\scd\textscd
 20030 \let\scu\textscu
 20031 \let\iinferior\textiinferior
 20032 \let\rinferior\extrinferior
 20033 \let\uiinferior\textuiinferior
 20034 \let\vinferior\textvinferior
 20035 \let\betainferior\textbetainferior
 20036 \let\gammainferior\textgammainferior
 20037 \let\rhoinferior\extrhoinferior
 20038 \let\phiinferior\textphiinferior
 20039 \let\chiinferior\textchiinferior
 20040 \let\barsci\textbarsci
 20041 \let\barp\textbarp
 20042 \let\barscu\textbarscu
 20043 \let\htrtaild\texthtrtaild
 20044 \let\dagger\textdagger
 20045 \let\bullet\textbullet
 20046 \let\hdotfor\texthdotfor
 20047 \let\prime\textprime
 20048 \let\second\textsecond
 20049 \let\third\textthird
 20050 \let\backprime\textbackprime
 20051 \let\lefttherefore\textlefttherefore
 20052 \let\fourth\textfourth
 20053 \let\diamonddots\textdiamonddots
 20054 \let\zerosuperior\textzerosuperior
 20055 \let\isuperior\textisuperior
 20056 \let\foursuperior\textfoursuperior
 20057 \let\fivesuperior\textfivesuperior
 20058 \let\sixsuperior\textsixsuperior
 20059 \let\sevensuperior\textsevensuperior
 20060 \let\eightsuperior\texteightsuperior
 20061 \let\ninesuperior\textninesuperior
 20062 \let\plussuperior\textplussuperior
 20063 \let\minussuperior\textminussuperior
 20064 \let\equalsuperior\textequalsuperior
 20065 \let\parenleftsuperior\textparenleftsuperior

20066 \let\parenrightsuperior\textparenrightsuperior
 20067 \let\nsuperior\textnsuperior
 20068 \let\zeroinferior\textzeroinferior
 20069 \let\oneinferior\textoneinferior
 20070 \let\twoinferior\texttwoinferior
 20071 \let\threeinferior\textthreeinferior
 20072 \let\fourinferior\textfourinferior
 20073 \let\fiveinferior\textfiveinferior
 20074 \let\sixinferior\textsixinferior
 20075 \let\seveninferior\textseveninferior
 20076 \let\eightinferior\texteightinferior
 20077 \let\nineinferior\textnineinferior
 20078 \let\plusinferior\textplusinferior
 20079 \let\minusinferior\textminusinferior
 20080 \let\equalsinferior\textequalsinferior
 20081 \let\parenleftinferior\textparenleftinferior
 20082 \let\parenrightinferior\textparenrightinferior
 20083 \let\ainferior\textainferior
 20084 \let\einferior\texteinferior
 20085 \let\oinferior\textoinferior
 20086 \let\xinferior\textxinferior
 20087 \let\schwainferior\textschwainferior
 20088 \let\hinferior\texthinferior
 20089 \let\kinferior\textkinferior
 20090 \let\linferior\textlinferior
 20091 \let\minferior\textminferior
 20092 \let\ninferior\textninferior
 20093 \let\pinferior\textpinferior
 20094 \let\sinferior\textsinferior
 20095 \let\tinferior\texttinferior
 20096 \let\Deleatur\textDeleatur
 20097 \let\hslash\texthslash
 20098 \let\Im\textIm
 20099 \let\ell\textell
 20100 \let\wp\textwp
 20101 \let\Re\textRe
 20102 \let\mho\textmho
 20103 \let\riota\textriota
 20104 \let\Finv\textFinv
 20105 \let\aleph\textaleph
 20106 \let\beth\textbeth
 20107 \let\gimel\textgimel
 20108 \let\daleth\textdaleth
 20109 \let\xfax\textfax
 20110 \let\Game\textGame
 20111 \let\leftarrow\textleftarrow
 20112 \let\uparrow\textuparrow
 20113 \let\rightarrow\textrightarrow
 20114 \let\downarrow\textdownarrow
 20115 \let\leftrightarrow\textleftrightarrow
 20116 \let\updownarrow\textupdownarrow
 20117 \let\nwarrow\textnwarrow
 20118 \let\nearrow\textnearrow
 20119 \let\searrow\textsearrow

20120 `\let\swarrow\textswarrow`
 20121 `\let\nleftarrow\textnleftarrow`
 20122 `\let\nrightarrow\textnrightarrow`
 20123 `\let\twoheadleftarrow\texttwoheadleftarrow`
 20124 `\let\ntwoheadleftarrow\textntwoheadleftarrow`
 20125 `\let\twoheaduparrow\texttwoheaduparrow`
 20126 `\let\twoheadrightarrow\texttwoheadrightarrow`
 20127 `\let\ntwoheadrightarrow\textntwoheadrightarrow`
 20128 `\let\twoheaddownarrow\texttwoheaddownarrow`
 20129 `\let\leftarrowtail\textleftarrowtail`
 20130 `\let\rightarrowtail\textrightarrowtail`
 20131 `\let\mapsto\textmapsto`
 20132 `\let\hookleftarrow\texthookleftarrow`
 20133 `\let\hookrightarrow\texthookrightarrow`
 20134 `\let\looparrowleft\textlooparrowleft`
 20135 `\let\looparrowright\textlooparrowright`
 20136 `\let\nlefttrightharpoonup\textnlefttrightharpoonup`
 20137 `\let\lightning\textlightning`
 20138 `\let\dlsh\textdlsh`
 20139 `\let\curvearrowleft\textcurvearrowleft`
 20140 `\let\curvearrowright\textcurvearrowright`
 20141 `\let\leftharpoonup\textleftharpoonup`
 20142 `\let\leftharpoondown\textleftharpoondown`
 20143 `\let\upharpoonright\textupharpoonright`
 20144 `\let\upharpoonleft\textupharpoonleft`
 20145 `\let\rightharpoonup\textrightharpoonup`
 20146 `\let\rightharpoondown\textrightharpoondown`
 20147 `\let\downharpoonright\textdownharpoonright`
 20148 `\let\downharpoonleft\textdownharpoonleft`
 20149 `\let\rightleftarrows\textrightleftarrows`
 20150 `\let\updownarrows\textupdownarrows`
 20151 `\let\leftrightarrows\textleftrightarrows`
 20152 `\let\leftleftarrows\textleftleftarrows`
 20153 `\let\upuparrows\textupuparrows`
 20154 `\let\righttrightarrows\textrighttrightarrows`
 20155 `\let\downdownarrows\textdowndownarrows`
 20156 `\let\leftrightharpoons\textleftrightharpoons`
 20157 `\let\rightleftharpoons\textrightleftharpoons`
 20158 `\let\nLeftarrow\textnLeftarrow`
 20159 `\let\nLeftrightarrow\textnLeftrightarrow`
 20160 `\let\nRrightarrow\textnRrightarrow`
 20161 `\let\Leftarrow\textLeftarrow`
 20162 `\let\Uparrow\textUparrow`
 20163 `\let\Rrightarrow\textRrightarrow`
 20164 `\let\Downarrow\textDownarrow`
 20165 `\let\Leftrightarrow\textLeftrightarrow`
 20166 `\let\Updownarrow\textUpdownarrow`
 20167 `\let\Nrightarrow\textNrightarrow`
 20168 `\let\Nearrow\textNearrow`
 20169 `\let\Searrow\textSearrow`
 20170 `\let\Swarrow\textSwarrow`
 20171 `\let\Lleftarrow\textLleftarrow`
 20172 `\let\Rrightarrow\textRrightarrow`
 20173 `\let\leftsquigarrow\textleftsquigarrow`

20174 $\backslash\mathrm{rightsquigarrow}\text{rightsquigarrow}$
 20175 $\backslash\mathrm{dashleftarrow}\text{dashleftarrow}$
 20176 $\backslash\mathrm{dasheduparrow}\text{dasheduparrow}$
 20177 $\backslash\mathrm{dashrightarrow}\text{dashrightarrow}$
 20178 $\backslash\mathrm{dasheddownarrow}\text{dasheddownarrow}$
 20179 $\backslash\mathrm{pointer}\text{pointer}$
 20180 $\backslash\mathrm{downuparrows}\text{downuparrows}$
 20181 $\backslash\mathrm{leftarrowtriangle}\text{leftarrowtriangle}$
 20182 $\backslash\mathrm{rightarrowtriangle}\text{rightarrowtriangle}$
 20183 $\backslash\mathrm{leftrightarrowtriangle}\text{leftrightarrowtriangle}$
 20184 $\backslash\mathrm{forall}\text{forall}$
 20185 $\backslash\mathrm{complement}\text{complement}$
 20186 $\backslash\mathrm{partial}\text{partial}$
 20187 $\backslash\mathrm{exists}\text{exists}$
 20188 $\backslash\mathrm{nexists}\text{nexists}$
 20189 $\backslash\mathrm{emptyset}\text{emptyset}$
 20190 $\backslash\mathrm{triangle}\text{triangle}$
 20191 $\backslash\mathrm{nabla}\text{nabla}$
 20192 $\backslash\mathrm{in}\text{in}$
 20193 $\backslash\mathrm{notin}\text{notin}$
 20194 $\backslash\mathrm{smallin}\text{smallin}$
 20195 $\backslash\mathrm{ni}\text{ni}$
 20196 $\backslash\mathrm{notowner}\text{notowner}$
 20197 $\backslash\mathrm{smallowns}\text{smallowns}$
 20198 $\backslash\mathrm{prod}\text{prod}$
 20199 $\backslash\mathrm{amalg}\text{amalg}$
 20200 $\backslash\mathrm{sum}\text{sum}$
 20201 $\backslash\mathrm{mp}\text{mp}$
 20202 $\backslash\mathrm{dotplus}\text{dotplus}$
 20203 $\backslash\mathrm{Divides}\text{Divides}$
 20204 $\backslash\mathrm{DividesNot}\text{DividesNot}$
 20205 $\backslash\mathrm{setminus}\text{setminus}$
 20206 $\backslash\mathrm{ast}\text{ast}$
 20207 $\backslash\mathrm{circ}\text{circ}$
 20208 $\backslash\mathrm{surd}\text{surd}$
 20209 $\backslash\mathrm{propto}\text{propto}$
 20210 $\backslash\mathrm{infty}\text{infty}$
 20211 $\backslash\mathrm{angle}\text{angle}$
 20212 $\backslash\mathrm{measuredangle}\text{measuredangle}$
 20213 $\backslash\mathrm{sphericalangle}\text{sphericalangle}$
 20214 $\backslash\mathrm{mid}\text{mid}$
 20215 $\backslash\mathrm{nmid}\text{nmid}$
 20216 $\backslash\mathrm{parallel}\text{parallel}$
 20217 $\backslash\mathrm{nparallel}\text{nparallel}$
 20218 $\backslash\mathrm{wedge}\text{wedge}$
 20219 $\backslash\mathrm{owedge}\text{owedge}$
 20220 $\backslash\mathrm{vee}\text{vee}$
 20221 $\backslash\mathrm{ovee}\text{ovee}$
 20222 $\backslash\mathrm{cap}\text{cap}$
 20223 $\backslash\mathrm{cup}\text{cup}$
 20224 $\backslash\mathrm{int}\text{int}$
 20225 $\backslash\mathrm{iint}\text{iint}$
 20226 $\backslash\mathrm{iiint}\text{iiint}$
 20227 $\backslash\mathrm{oint}\text{oint}$

20228 \oint
 20229 \ointclockwise
 20230 \ointctrlockwise
 20231 \therefore
 20232 \because
 20233 \vdots
 20234 squaredots
 20235 $\dot{-}$
 20236 eqcolon
 20237 \sim
 20238 \backsim
 20239 \nbacksim
 20240 \wr
 20241 \nsim
 20242 \eqsim
 20243 \neqsim
 20244 \simeq
 20245 \nsimeq
 20246 \cong
 20247 \ncong
 20248 \approx
 20249 \napprox
 20250 \approxeq
 20251 \napproxeq
 20252 \triplesim
 20253 \ntriplesim
 20254 \backcong
 20255 \nbackcong
 20256 \asymp
 20257 \nasympt
 20258 \Bumpeq
 20259 \nBumpeq
 20260 \bumpeq
 20261 \nbumpeq
 20262 \doteq
 20263 \ndoteq
 20264 \doteqdot
 20265 \nDoteq
 20266 \fallingdoteq
 20267 \nfallingdoteq
 20268 \risingdoteq
 20269 \nrisingdoteq
 20270 \colonequals
 20271 \equalscolon
 20272 \eqcirc
 20273 \neqcirc
 20274 \circeq
 20275 \ncirceq
 20276 \hateq
 20277 \nhateq
 20278 \triangleeq
 20279 \neq
 20280 \ne
 20281 \equiv

20282 \let\nequiv\textnequiv
 20283 \let\leq\textleq
 20284 \let\le\textle
 20285 \let\geq\textgeq
 20286 \let\ge\textge
 20287 \let\leqq\textleqq
 20288 \let\leqq\textnleqq
 20289 \let\geqq\textgeqq
 20290 \let\geqq\textngeqq
 20291 \let\leqq\textlneqq
 20292 \let\gneqq\textgneqq
 20293 \let\ll\textll
 20294 \let\nll\textnll
 20295 \let\gg\textgg
 20296 \let\ngg\textngg
 20297 \let\between\textbetween
 20298 \let\nless\textnless
 20299 \let\ngtr\textngtr
 20300 \let\nleq\textnleq
 20301 \let\ngeq\textngeq
 20302 \let\lesssim\textlesssim
 20303 \let\gtrsim\textgtrsim
 20304 \let\nlesssim\textnlesssim
 20305 \let\ngtrsim\textngtrsim
 20306 \let\lessgtr\textlessgtr
 20307 \let\gtrless\textgtrless
 20308 \let\ngtrless\textngtrless
 20309 \let\nlessgtr\textnlessgtr
 20310 \let\prec\textprec
 20311 \let\succ\textsucc
 20312 \let\preccurlyeq\textpreccurlyeq
 20313 \let\succcurlyeq\textsucccurlyeq
 20314 \let\precsim\textprecsim
 20315 \let\nprecsim\textnprecsim
 20316 \let\succsim\textsuccsim
 20317 \let\nsuccsim\textnsuccsim
 20318 \let\nprec\textnprec
 20319 \let\nsucc\textnsucc
 20320 \let\subset\textsubset
 20321 \let\supset\textsupset
 20322 \let\nsubset\textnsubset
 20323 \let\nsupset\textnsupset
 20324 \let\subsepeq\textsubsepeq
 20325 \let\supseteq\textsupseteq
 20326 \let\nsubsepeq\textnsubsepeq
 20327 \let\nsupseteq\textnsupseteq
 20328 \let\subsetneq\textsubsetneq
 20329 \let\supsetneq\textsupsetneq
 20330 \let\cupdot\textcupdot
 20331 \let\cupplus\textcupplus
 20332 \let\sqsubset\textsqssubset
 20333 \let\nsqsubset\textnsqsubset
 20334 \let\sqsupset\textsqsupset
 20335 \let\nsqsupset\textnsqsupset

20336 $\backslash\text{let}\backslash\text{sqsubseteq}\backslash\text{textsqsubseteq}$
 20337 $\backslash\text{let}\backslash\text{nsqsubseteq}\backslash\text{textnsqsubseteq}$
 20338 $\backslash\text{let}\backslash\text{sqsupseteq}\backslash\text{textsqsupseteq}$
 20339 $\backslash\text{let}\backslash\text{nsqsupseteq}\backslash\text{textnsqsupseteq}$
 20340 $\backslash\text{let}\backslash\text{sqcap}\backslash\text{textsqcap}$
 20341 $\backslash\text{let}\backslash\text{sqcup}\backslash\text{textsqcup}$
 20342 $\backslash\text{let}\backslash\text{oplus}\backslash\text{textoplus}$
 20343 $\backslash\text{let}\backslash\text{ominus}\backslash\text{textominus}$
 20344 $\backslash\text{let}\backslash\text{otimes}\backslash\text{textotimes}$
 20345 $\backslash\text{let}\backslash\text{oslash}\backslash\text{textoslash}$
 20346 $\backslash\text{let}\backslash\text{odot}\backslash\text{textodot}$
 20347 $\backslash\text{let}\backslash\text{circledcirc}\backslash\text{textcircledcirc}$
 20348 $\backslash\text{let}\backslash\text{circledast}\backslash\text{textcircledast}$
 20349 $\backslash\text{let}\backslash\text{circleddash}\backslash\text{textcircleddash}$
 20350 $\backslash\text{let}\backslash\text{boxplus}\backslash\text{textboxplus}$
 20351 $\backslash\text{let}\backslash\text{boxminus}\backslash\text{textboxminus}$
 20352 $\backslash\text{let}\backslash\text{boxtimes}\backslash\text{textboxtimes}$
 20353 $\backslash\text{let}\backslash\text{boxdot}\backslash\text{textboxdot}$
 20354 $\backslash\text{let}\backslash\text{vdash}\backslash\text{textvdash}$
 20355 $\backslash\text{let}\backslash\text{dashv}\backslash\text{texdashv}$
 20356 $\backslash\text{let}\backslash\text{ndashv}\backslash\text{textndashv}$
 20357 $\backslash\text{let}\backslash\text{top}\backslash\text{texttop}$
 20358 $\backslash\text{let}\backslash\text{ndownvdash}\backslash\text{textndownvdash}$
 20359 $\backslash\text{let}\backslash\text{bot}\backslash\text{textbot}$
 20360 $\backslash\text{let}\backslash\text{nupvdash}\backslash\text{textnupvdash}$
 20361 $\backslash\text{let}\backslash\text{vDash}\backslash\text{textvDash}$
 20362 $\backslash\text{let}\backslash\text{VDash}\backslash\text{textVDash}$
 20363 $\backslash\text{let}\backslash\text{Vvdash}\backslash\text{textVvdash}$
 20364 $\backslash\text{let}\backslash\text{nVdash}\backslash\text{textnVdash}$
 20365 $\backslash\text{let}\backslash\text{VDash}\backslash\text{textVDash}$
 20366 $\backslash\text{let}\backslash\text{nvDash}\backslash\text{textnvDash}$
 20367 $\backslash\text{let}\backslash\text{nvDash}\backslash\text{textnvDash}$
 20368 $\backslash\text{let}\backslash\text{nVdash}\backslash\text{textnVdash}$
 20369 $\backslash\text{let}\backslash\text{nVDash}\backslash\text{textnVDash}$
 20370 $\backslash\text{let}\backslash\text{lhs}\backslash\text{textrhs}$
 20371 $\backslash\text{let}\backslash\text{rhd}\backslash\text{textrhd}$
 20372 $\backslash\text{let}\backslash\text{unlhd}\backslash\text{textunlhd}$
 20373 $\backslash\text{let}\backslash\text{unrhd}\backslash\text{textunrhd}$
 20374 $\backslash\text{let}\backslash\text{multimapdotbothA}\backslash\text{textmultimapdotbothA}$
 20375 $\backslash\text{let}\backslash\text{multimapdotbothB}\backslash\text{textmultimapdotbothB}$
 20376 $\backslash\text{let}\backslash\text{multimap}\backslash\text{textmultimap}$
 20377 $\backslash\text{let}\backslash\text{veebar}\backslash\text{textveebar}$
 20378 $\backslash\text{let}\backslash\text{barwedge}\backslash\text{textbarwedge}$
 20379 $\backslash\text{let}\backslash\text{star}\backslash\text{textstar}$
 20380 $\backslash\text{let}\backslash\text{divideontimes}\backslash\text{textdivideontimes}$
 20381 $\backslash\text{let}\backslash\text{bowtie}\backslash\text{textbowtie}$
 20382 $\backslash\text{let}\backslash\text{ltimes}\backslash\text{textrtimes}$
 20383 $\backslash\text{let}\backslash\text{rtimes}\backslash\text{textrtimes}$
 20384 $\backslash\text{let}\backslash\text{leftthreetimes}\backslash\text{textleftthreetimes}$
 20385 $\backslash\text{let}\backslash\text{rightthreetimes}\backslash\text{textrightthreetimes}$
 20386 $\backslash\text{let}\backslash\text{backsimeq}\backslash\text{textbacksimeq}$
 20387 $\backslash\text{let}\backslash\text{nbacksimeq}\backslash\text{textnbacksimeq}$
 20388 $\backslash\text{let}\backslash\text{curlyvee}\backslash\text{textcurlyvee}$
 20389 $\backslash\text{let}\backslash\text{curlywedge}\backslash\text{textcurlywedge}$

20390 \let\Subset\textSubset
 20391 \let\NSubset\textNSubset
 20392 \let\Supset\textSupset
 20393 \let\NSupset\textNSupset
 20394 \let\Cap\textCap
 20395 \let\Cup\textCup
 20396 \let\pitchfork\textpitchfork
 20397 \let\lessdot\textlessdot
 20398 \let\gtrdot\textgtrdot
 20399 \let\lll\textlll
 20400 \let\ggg\textggg
 20401 \let\lesseqgtr\textlesseqgtr
 20402 \let\gtreqless\textgtreqless
 20403 \let\curlyeqprec\textcurlyeqprec
 20404 \let\ncurlyeqprec\textncurlyeqprec
 20405 \let\curlyeqsucc\textcurlyeqsucc
 20406 \let\ncurlyeqsucc\textncurlyeqsucc
 20407 \let\preccurlyeq\textpreccurlyeq
 20408 \let\nsucccurlyeq\textnsucccurlyeq
 20409 \let\sqsubseteq\textsqsubseteq
 20410 \let\sqsupseteq\textsqsupseteq
 20411 \let\sqsubsetneq\textsqsubsetneq
 20412 \let\sqsupsetneq\textsqsupsetneq
 20413 \let\lnsim\textlnsim
 20414 \let\gnsim\textgnsim
 20415 \let\precnsim\textprecnsim
 20416 \let\succnsim\textsuccnsim
 20417 \let\triangleleft\texttriangleleft
 20418 \let\triangleright\texttriangleright
 20419 \let\trianglelefteq\texttrianglelefteq
 20420 \let\trianglerighteq\texttrianglerighteq
 20421 \let\vdots\textvdots
 20422 \let\cdots\textcdots
 20423 \let\udots\textudots
 20424 \let\ddots\textddots
 20425 \let\barin\textbarin
 20426 \let\diameter\textdiameter
 20427 \let\backneg\textbackneg
 20428 \let\wasylozenge\textwasylozenge
 20429 \let\invbackneg\textinvbackneg
 20430 \let\clock\textclock
 20431 \let\ulcorner\textulcorner
 20432 \let\urcorner\texturcorner
 20433 \let\llcorner\textllcorner
 20434 \let\lrcorner\textlrcorner
 20435 \let\frown\textfrown
 20436 \let\smile\textsmile
 20437 \let\Keyboard\textKeyboard
 20438 \let\langle\textlangle
 20439 \let\rangle\textrangle
 20440 \let\APLinv\textAPLinv
 20441 \let\Tumbler\textTumbler
 20442 \let\notslash\textnotslash
 20443 \let\notbackslash\textnotbackslash

20444 \let\boxbackslash\textboxbackslash
 20445 \let\APLleftarrowbox\textAPLleftarrowbox
 20446 \let\APLrightarrowbox\textAPLrightarrowbox
 20447 \let\APLuparrowbox\textAPLuparrowbox
 20448 \let\APLdownarrowbox\textAPLdownarrowbox
 20449 \let\APLinput\textAPLinput
 20450 \let\Request\textRequest
 20451 \let\Beam\textBeam
 20452 \let\hexagon\texthexagon
 20453 \let\APLbox\textAPLbox
 20454 \let\ForwardToIndex\textForwardToIndex
 20455 \let\RewindToIndex\textRewindToIndex
 20456 \let\bbslash\textbbslash
 20457 \let\CircledA\textCircledA
 20458 \let\CleaningF\textCleaningF
 20459 \let\CleaningFF\textCleaningFF
 20460 \let\CleaningP\textCleaningP
 20461 \let\CleaningPP\textCleaningPP
 20462 \let\CuttingLine\textCuttingLine
 20463 \let\UParrow\textUParrow
 20464 \let\bigtriangleup\textbigtriangleup
 20465 \let\Forward\textForward
 20466 \let\triangleright\texttriangleright
 20467 \let\RHD\textRHD
 20468 \let\DOWNarrow\textDOWNarrow
 20469 \let\bigtriangledown\textbigtriangledown
 20470 \let\Rewind\textRewind
 20471 \let\triangleleft\texttriangleleft
 20472 \let\LHD\textLHD
 20473 \let\diamond\textdiamond
 20474 \let\lozenge\textlozenge
 20475 \let\LEFTCIRCLE\textLEFTCIRCLE
 20476 \let\RIGHTCIRCLE\textRIGHTCIRCLE
 20477 \let\openbullet\textopenbullet
 20478 \let\boxbar\textboxbar
 20479 \let\bigcircle\textbigcircle
 20480 \let\Cloud\textCloud
 20481 \let\FiveStar\textFiveStar
 20482 \let\FiveStarOpen\textFiveStarOpen
 20483 \let\Phone\textPhone
 20484 \let\boxempty\textboxempty
 20485 \let\Checkedbox\textCheckedbox
 20486 \let\Crossedbox\textCrossedbox
 20487 \let\Coffeecup\textCoffeecup
 20488 \let\HandCuffLeft\textHandCuffLeft
 20489 \let\HandCuffRight\textHandCuffRight
 20490 \let\HandLeft\textHandLeft
 20491 \let\HandRight\textHandRight
 20492 \let\Radioactivity\textRadioactivity
 20493 \let\Biohazard\textBiohazard
 20494 \let\Ankh\textAnkh
 20495 \let\YinYang\textYinYang
 20496 \let\frownie\textfrownie
 20497 \let\smiley\textsmiley

20498 \let\blacksmiley\textblacksmiley
 20499 \let\sun\textsun
 20500 \let\leftmoon\textleftmoon
 20501 \let\rightmoon\textrightmoon
 20502 \let\mercury\textmercury
 20503 \let\earth\textearth
 20504 \let\male\textmale
 20505 \let\jupiter\textjupiter
 20506 \let\saturn\textsaturn
 20507 \let\uranus\texturanus
 20508 \let\neptune\textneptune
 20509 \let\pluto\textpluto
 20510 \let\aries\textaries
 20511 \let\taurus\texttaurus
 20512 \let\gemini\textgemini
 20513 \let\cancer\textcancer
 20514 \let\leo\textleo
 20515 \let\virgo\textvirgo
 20516 \let\libra\textlibra
 20517 \let\scorpio\textscorpio
 20518 \let\sagittarius\textsagittarius
 20519 \let\capricornus\textcapricornus
 20520 \let\aquarius\textaquarius
 20521 \let\pisces\textpisces
 20522 \let\quarternote\textquarternote
 20523 \let\twonotes\texttwonotes
 20524 \let\sixteenthnote\textsixteenthnote
 20525 \let\flat\textflat
 20526 \let\natural\textnatural
 20527 \let\sharp\textsharp
 20528 \let\recycle\textrecycle
 20529 \let\Wheelchair\textWheelchair
 20530 \let\Flag\textFlag
 20531 \let\MineSign\textMineSign
 20532 \let\ds\textds
 20533 \let\ds\textds
 20534 \let\ds\textds
 20535 \let\ds\textds
 20536 \let\ds\textds
 20537 \let\ds\textds
 20538 \let\manstar\textmanstar
 20539 \let\danger\textdanger
 20540 \let\FemaleFemale\textFemaleFemale
 20541 \let\MaleMale\textMaleMale
 20542 \let\FemaleMale\textFemaleMale
 20543 \let\Hermaphrodite\textHermaphrodite
 20544 \let\Neutral\textNeutral
 20545 \let\hexstar\texthexstar
 20546 \let\SunCloud\textSunCloud
 20547 \let\Rain\textRain
 20548 \let\noway\textnoway
 20549 \let\Mountain\textMountain
 20550 \let\Tent\textTent
 20551 \let\ScissorRight\textScissorRight

20552 \let\ScissorRightBrokenTop\textScissorRightBrokenTop
 20553 \let\ScissorHollowRight\textScissorHollowRight
 20554 \let\PhoneHandset\textPhoneHandset
 20555 \let\Tape\textTape
 20556 \let\Plane\textPlane
 20557 \let\Envelope\textEnvelope
 20558 \let\Peace\textPeace
 20559 \let\WritingHand\textWritingHand
 20560 \let\PencilRightDown\textPencilRightDown
 20561 \let\PencilRight\textPencilRight
 20562 \let\PencilRightUp\textPencilRightUp
 20563 \let\NibRight\textNibRight
 20564 \let\NibSolidRight\textNibSolidRight
 20565 \let\Checkmark\textCheckmark
 20566 \let\CheckmarkBold\textCheckmarkBold
 20567 \let\XSolid\textXSolid
 20568 \let\XSolidBold\textXSolidBold
 20569 \let\XSolidBrush\textXSolidBrush
 20570 \let\PlusOutline\textPlusOutline
 20571 \let\Plus\textPlus
 20572 \let\PlusThinCenterOpen\textPlusThinCenterOpen
 20573 \let\PlusCenterOpen\textPlusCenterOpen
 20574 \let\Cross\textCross
 20575 \let\CrossOpenShadow\textCrossOpenShadow
 20576 \let\CrossOutline\textCrossOutline
 20577 \let\CrossMaltese\textCrossMaltese
 20578 \let\DavidStar\textDavidStar
 20579 \let\FourAsterisk\textFourAsterisk
 20580 \let\JackStar\textJackStar
 20581 \let\JackStarBold\textJackStarBold
 20582 \let\ClowerTips\textClowerTips
 20583 \let\FourStar\textFourStar
 20584 \let\FourStarOpen\textFourStarOpen
 20585 \let\FiveStarOpenCircled\textFiveStarOpenCircled
 20586 \let\FiveStarCenterOpen\textFiveStarCenterOpen
 20587 \let\FiveStarOpenDotted\textFiveStarOpenDotted
 20588 \let\FiveStarOutline\textFiveStarOutline
 20589 \let\FiveStarOutlineHeavy\textFiveStarOutlineHeavy
 20590 \let\FiveStarConvex\textFiveStarConvex
 20591 \let\FiveStarShadow\textFiveStarShadow
 20592 \let\AsteriskBold\textAsteriskBold
 20593 \let\AsteriskCenterOpen\textAsteriskCenterOpen
 20594 \let\EightStarTaper\textEightStarTaper
 20595 \let\EightStarConvex\textEightStarConvex
 20596 \let\SixStar\textSixStar
 20597 \let\EightStar\textEightStar
 20598 \let\EightStarBold\textEightStarBold
 20599 \let\TwelveStar\textTwelveStar
 20600 \let\SixteenStarLight\textSixteenStarLight
 20601 \let\SixFlowerPetalRemoved\textSixFlowerPetalRemoved
 20602 \let\SixFlowerOpenCenter\textSixFlowerOpenCenter
 20603 \let\Asterisk\textAsterisk
 20604 \let\SixFlowerAlternate\textSixFlowerAlternate
 20605 \let\FiveFlowerPetal\textFiveFlowerPetal

20606 \let\FiveFlowerOpen\textFiveFlowerOpen
 20607 \let\EightFlowerPetal\textEightFlowerPetal
 20608 \let\SunshineOpenCircled\textSunshineOpenCircled
 20609 \let\SixFlowerAltPetal\textSixFlowerAltPetal
 20610 \let\SnowflakeChevron\textSnowflakeChevron
 20611 \let\Snowflake\textSnowflake
 20612 \let\SnowflakeChevronBold\textSnowflakeChevronBold
 20613 \let\Sparkle\textSparkle
 20614 \let\SparkleBold\textSparkleBold
 20615 \let\AsteriskRoundedEnds\textAsteriskRoundedEnds
 20616 \let\EightFlowerPetalRemoved\textEightFlowerPetalRemoved
 20617 \let\EightAsterisk\textEightAsterisk
 20618 \let\CircleShadow\textCircleShadow
 20619 \let\SquareShadowBottomRight\textSquareShadowBottomRight
 20620 \let\SquareTopRight\textSquareTopRight
 20621 \let\SquareCastShadowBottomRight\textSquareCastShadowBottomRight
 20622 \let\SquareCastShadowTopRight\textSquareCastShadowTopRight
 20623 \let\DiamondSolid\textDiamondSolid
 20624 \let\RectangleThin\textRectangleThin
 20625 \let\Rectangle\textRectangle
 20626 \let\RectangleBold\textRectangleBold
 20627 \let\perp\textperp
 20628 \let\notperp\textnotperp
 20629 \let\veedot\textveedot
 20630 \let\wedgedot\textwedgedot
 20631 \let\leftspoon\textleftspoon
 20632 \let\lbrackdbl\textlbrackdbl
 20633 \let\rbrackdbl\textrbrackdbl
 20634 \let\circlearrowleft\textcirclearrowleft
 20635 \let\circlearrowright\textcirclearrowright
 20636 \let\longleftarrow\textlongleftarrow
 20637 \let\longrightarrow\textlongrightarrow
 20638 \let\longlefttrightarrow\textlonglefttrightarrow
 20639 \let\Longleftarrow\textLongleftarrow
 20640 \let\Longrightarrow\textLongrightarrow
 20641 \let\Longlefttrightarrow\textLonglefttrightarrow
 20642 \let\longmapsto\textlongmapsto
 20643 \let\Longmapsfrom\textLongmapsfrom
 20644 \let\Longmapsto\textLongmapsto
 20645 \let\nwsearrow\textnwsearrow
 20646 \let\neswarrow\textneswarrow
 20647 \let\hookrightarrow\texthookrightarrow
 20648 \let\rhookrightarrow\text\rhookrightarrow
 20649 \let\hookrightarrow\texthookrightarrow
 20650 \let\rhookrightarrow\text\rhookrightarrow
 20651 \let\leadsto\textleadsto
 20652 \let\curvearrowright\textcurvearrowright
 20653 \let\curvearrowleft\textcurvearrowleft
 20654 \let\curvearrowright\textcurvearrowright
 20655 \let\curvearrowright\textcurvearrowright
 20656 \let\curvearrowdown\textcurvearrowdown
 20657 \let\curvearrowdown\textcurvearrowdown
 20658 \let\curvearrowleft\textcurvearrowleft
 20659 \let\curvearrowright\textcurvearrowright

20660 $\backslash\text{let}\backslash\text{leftrightharpoon}\backslash\text{textleftrightharpoon}$
 20661 $\backslash\text{let}\backslash\text{rightleftharpoon}\backslash\text{textrightleftharpoon}$
 20662 $\backslash\text{let}\backslash\text{updownharpoonrightleft}\backslash\text{textupdownharpoonrightleft}$
 20663 $\backslash\text{let}\backslash\text{updownharpoonleftright}\backslash\text{textupdownharpoonleftright}$
 20664 $\backslash\text{let}\backslash\text{leftleftharpoons}\backslash\text{textleftleftharpoons}$
 20665 $\backslash\text{let}\backslash\text{upupharpoons}\backslash\text{textupupharpoons}$
 20666 $\backslash\text{let}\backslash\text{rightrightarpoons}\backslash\text{textrighttrightarpoons}$
 20667 $\backslash\text{let}\backslash\text{downdownharpoons}\backslash\text{textdowndownharpoons}$
 20668 $\backslash\text{let}\backslash\text{leftbarharpoon}\backslash\text{textleftbarharpoon}$
 20669 $\backslash\text{let}\backslash\text{barleftharpoon}\backslash\text{textbarleftharpoon}$
 20670 $\backslash\text{let}\backslash\text{rightbarharpoon}\backslash\text{textrightbarharpoon}$
 20671 $\backslash\text{let}\backslash\text{barrightharpoon}\backslash\text{textbarrightharpoon}$
 20672 $\backslash\text{let}\backslash\text{updownharpoons}\backslash\text{textupdownharpoons}$
 20673 $\backslash\text{let}\backslash\text{downupharpoons}\backslash\text{textdownupharpoons}$
 20674 $\backslash\text{let}\backslash\text{moo}\backslash\text{textmoo}$
 20675 $\backslash\text{let}\backslash\text{llparenthesis}\backslash\text{textllparenthesis}$
 20676 $\backslash\text{let}\backslash\text{rrparenthesis}\backslash\text{textrrparenthesis}$
 20677 $\backslash\text{let}\backslash\text{invdiameter}\backslash\text{textinvdiameter}$
 20678 $\backslash\text{let}\backslash\text{oobar}\backslash\text{textobar}$
 20679 $\backslash\text{let}\backslash\text{obslash}\backslash\text{textobslash}$
 20680 $\backslash\text{let}\backslash\text{obot}\backslash\text{textobot}$
 20681 $\backslash\text{let}\backslash\text{NoChemicalCleaning}\backslash\text{textNoChemicalCleaning}$
 20682 $\backslash\text{let}\backslash\text{olessthan}\backslash\text{textolessthan}$
 20683 $\backslash\text{let}\backslash\text{ogreaterthan}\backslash\text{textogreaterthan}$
 20684 $\backslash\text{let}\backslash\text{boxslash}\backslash\text{textboxslash}$
 20685 $\backslash\text{let}\backslash\text{boxbslash}\backslash\text{textboxbslash}$
 20686 $\backslash\text{let}\backslash\text{boxast}\backslash\text{textboxast}$
 20687 $\backslash\text{let}\backslash\text{boxcircle}\backslash\text{textboxcircle}$
 20688 $\backslash\text{let}\backslash\text{boxbox}\backslash\text{textboxbox}$
 20689 $\backslash\text{let}\backslash\text{Valve}\backslash\text{textValve}$
 20690 $\backslash\text{let}\backslash\text{multimapboth}\backslash\text{textmultimapboth}$
 20691 $\backslash\text{let}\backslash\text{shuffle}\backslash\text{textshuffle}$
 20692 $\backslash\text{let}\backslash\text{uplus}\backslash\text{textuplus}$
 20693 $\backslash\text{let}\backslash\text{bigdoublewedge}\backslash\text{textbigdoublewedge}$
 20694 $\backslash\text{let}\backslash\text{bigdoublevee}\backslash\text{textbigdoublevee}$
 20695 $\backslash\text{let}\backslash\text{Join}\backslash\text{textJoin}$
 20696 $\backslash\text{let}\backslash\text{fatsemi}\backslash\text{textfatsemi}$
 20697 $\backslash\text{let}\backslash\text{cirplus}\backslash\text{textcirplus}$
 20698 $\backslash\text{let}\backslash\text{minusdot}\backslash\text{textminusdot}$
 20699 $\backslash\text{let}\backslash\text{dottimes}\backslash\text{textdottimes}$
 20700 $\backslash\text{let}\backslash\text{dtimes}\backslash\text{textdtimes}$
 20701 $\backslash\text{let}\backslash\text{odiv}\backslash\text{textodiv}$
 20702 $\backslash\text{let}\backslash\text{invneg}\backslash\text{textinvneg}$
 20703 $\backslash\text{let}\backslash\text{sqdoublecap}\backslash\text{textsquaddoublecap}$
 20704 $\backslash\text{let}\backslash\text{capdot}\backslash\text{textcapdot}$
 20705 $\backslash\text{let}\backslash\text{sqdoublecup}\backslash\text{textsquaddoublecup}$
 20706 $\backslash\text{let}\backslash\text{doublewedge}\backslash\text{textdoublewedge}$
 20707 $\backslash\text{let}\backslash\text{doublevee}\backslash\text{textdoublevee}$
 20708 $\backslash\text{let}\backslash\text{doublebarwedge}\backslash\text{textdoublebarwedge}$
 20709 $\backslash\text{let}\backslash\text{veedoublebar}\backslash\text{textveedoublebar}$
 20710 $\backslash\text{let}\backslash\text{eqdot}\backslash\text{texteqdot}$
 20711 $\backslash\text{let}\backslash\text{neqdot}\backslash\text{textneqdot}$
 20712 $\backslash\text{let}\backslash\text{coloncolonequals}\backslash\text{textcoloncolonequals}$
 20713 $\backslash\text{let}\backslash\text{leqslant}\backslash\text{textleqslant}$

20714 `\let\nleqslant\textnleqslant`
 20715 `\let\geqslant\textgeqslant`
 20716 `\let\ngeqslant\textngeqslant`
 20717 `\let\lessapprox\textlessapprox`
 20718 `\let\nlessapprox\textnlessapprox`
 20719 `\let\gtrapprox\textgtrapprox`
 20720 `\let\ngtrapprox\textngtrapprox`
 20721 `\let\lneq\textlneq`
 20722 `\let\gneq\textgneq`
 20723 `\let\lnapprox\textlnapprox`
 20724 `\let\gnapprox\textgnapprox`
 20725 `\let\lesseqqgtr\textlesseqqgtr`
 20726 `\let\gtreqqless\textgtreqqless`
 20727 `\let\eqslantless\texteqslantless`
 20728 `\let\eqslantgtr\texteqslantgtr`
 20729 `\let\leftslice\textleftslice`
 20730 `\let\rightslice\textright slice`
 20731 `\let\preceq\textpreceq`
 20732 `\let\npreceq\textnpreceq`
 20733 `\let\succeq\textsucceq`
 20734 `\let\nsucceq\textnsucceq`
 20735 `\let\precneq\textprecneq`
 20736 `\let\succneq\textsuccneq`
 20737 `\let\preceqq\textpreceqq`
 20738 `\let\npreceqq\textnpreceqq`
 20739 `\let\succeqq\textsucceqq`
 20740 `\let\nsucceqq\textnsucceqq`
 20741 `\let\precneqq\textprecneqq`
 20742 `\let\succneqq\textsuccneqq`
 20743 `\let\precapprox\textprecapprox`
 20744 `\let\nprecapprox\textnprecapprox`
 20745 `\let\succapprox\textsuccapprox`
 20746 `\let\nsuccapprox\textnsuccapprox`
 20747 `\let\precnapprox\textprecnapprox`
 20748 `\let\succnapprox\textsuccnapprox`
 20749 `\let\subseteqq\textsubseteqq`
 20750 `\let\nsubseteqq\textnsubseteqq`
 20751 `\let\supseteqq\textsupseteqq`
 20752 `\let\nsupseteqq\textnsupseteqq`
 20753 `\let\dashV\textdashV`
 20754 `\let\ndashV\textndashV`
 20755 `\let\Dashv\textDashv`
 20756 `\let\NDashv\textNDashv`
 20757 `\let\DashV\textDashV`
 20758 `\let\NDashV\textNDashV`
 20759 `\let\downmodels\textdownmodels`
 20760 `\let\ndownmodels\textndownmodels`
 20761 `\let\upmodels\textupmodels`
 20762 `\let\nupmodels\textnupmodels`
 20763 `\let\upspoon\textupspoon`
 20764 `\let\interleave\textinterleave`
 20765 `\let\slash\textslash`
 20766 `\let\pentagon\textpentagon`
 20767 `\let\varhexagon\textvarhexagon`

20768 \let\jinferior\textjinferior
 20769 \let\slashdiv\textslashdiv
 20770 \let\fivedots\textfivedots
 20771 \let\oo\textoo
 20772 \let\GaPa\textGaPa
 20773 \let\HaPa\textHaPa
 20774 \let\ViPa\textViPa
 20775 \let\AcPa\textAcPa
 20776 \let\SePa\textSePa
 20777 \let\ZwPa\textZwPa
 20778 \let\fullnote\textfullnote
 20779 \let\halfnote\texthalfnote
 20780 \let\Vier\textVier
 20781 \let\Acht\textAcht
 20782 \let\Sech\textSech
 20783 \let\Zwdr\textZwdr
 20784 \let\Mundus\textMundus
 20785 \let\Moon\textMoon
 20786 \let\ManFace\textManFace
 20787 \let\WomanFace\textWomanFace
 20788 \let\Fax\textFax
 20789 \let\Fire\textFire
 20790 \let\Bicycle\textBicycle
 20791 \let\Gentsroom\textGentsroom
 20792 \let\Ladiesroom\textLadiesroom
 20793 \let\ccnc\textccnc
 20794 \let\ccsa\textccsa
 20795 \let\Info\textInfo
 20796 \let\CESign\textCESign
 20797 \let\neg\textneg
 20798 \let\times\texttimes
 20799 \let\div\textdiv
 20800 \let\pm\textpm
 20801 \let\cdot\textcdot
 20802 }% \psdmapshortnames
 20803 \newcommand*{\psdaliasnames}{%
 20804 \let\epsdice\HyPsd@DieFace
 20805 \let\fcdice\HyPsd@DieFace
 20806 \let\MoonPha\HyPsd@MoonPha
 20807 \let\mathdollar\textdollar
 20808 \let\EyesDollar\textdollar
 20809 \let\binampersand\textampersand
 20810 \let\with\textampersand
 20811 \let\mathunderscore\textunderscore
 20812 \let\textvertline\textbar
 20813 \let\mathsterling\textsterling
 20814 \let\pounds\textsterling
 20815 \let\brokenvert\textbrokenbar
 20816 \let\mathsection\textsection
 20817 \let\S\textsection
 20818 \let\mathparagraph\textparagraph
 20819 \let\MultiplicationDot\textperiodcentered
 20820 \let\Squaredot\textperiodcentered
 20821 \let\vartimes\textmultiply

20822 \let\MVMultiplication\textmultiply
 20823 \let\eth\dh
 20824 \let\crossd\textcrd
 20825 \let\textbard\textcrd
 20826 \let\bard\textcrd
 20827 \let\textcrh\texthbar
 20828 \let\crossh\texthbar
 20829 \let\planck\texthbar
 20830 \let\eng\ng
 20831 \let\engma\ng
 20832 \let\crossb\textcrb
 20833 \let\textbarb\textcrb
 20834 \let\barb\textcrb
 20835 \let\Florin\textflorin
 20836 \let\hv\texthvl
 20837 \let\hausak\texthtk
 20838 \let\crossnilambda\textcrlambda
 20839 \let\barlambda\textcrlambda
 20840 \let\lambdabar\textcrlambda
 20841 \let\lambdash\textcrlambda
 20842 \let\textnrleg\textPUnrleg
 20843 \let\textpipevar\textpipe
 20844 \let\textdoublepipevar\textdoublepipe
 20845 \let\textdoublebarpipevar\textdoublebarpipe
 20846 \let\textcrg\textgslash
 20847 \let\textdblig\textPUdblig
 20848 \let\textqplig\textPUqplig
 20849 \let\textcentoldstyle\textslashc
 20850 \let\textbarc\textslashc
 20851 \let\inva\textturna
 20852 \let\vara\textscripta
 20853 \let\invscripta\textturnscripta
 20854 \let\rotvara\textturnscripta
 20855 \let\hookb\texthtb
 20856 \let\hausab\texthtb
 20857 \let\varopeno\textopeno
 20858 \let\curlyc\textctc
 20859 \let\taild\textrtaild
 20860 \let\hookd\texthtd
 20861 \let\hausad\texthtd
 20862 \let\er\textrhookswa
 20863 \let\epsi\textniepsilon
 20864 \let\hookrepsilon\texthookrepsilon
 20865 \let\closedrepsilon\textcloserepsilon
 20866 \let\barj\textbardotlessj
 20867 \let\hookg\texthtg
 20868 \let\varg\textscriptg
 20869 \let\vod\texttipagamma
 20870 \let\invh\textturnh
 20871 \let\udesc\textturnh
 20872 \let\hookh\texthth
 20873 \let\voicedh\texthth
 20874 \let\hookheng\texththeng
 20875 \let\ibar\textbari

20876 \let\vari\textnniota
 20877 \let\tildel\textltilde
 20878 \let\latfric\textbeltl
 20879 \let\tail\texttrtail
 20880 \let\lz\textlyoghlig
 20881 \let\invm\textturnm
 20882 \let\rotr\textturnm
 20883 \let\legm\textturnmrleg
 20884 \let\labdentainas\textltailm
 20885 \let\emgma\textltailm
 20886 \let\nj\textltailn
 20887 \let\enya\textltailn
 20888 \let\tailn\texttrtailn
 20889 \let\closedniomega\textcloseomega
 20890 \let\varomega\textcloseomega
 20891 \let\invr\textturnr
 20892 \let\rotr\textturnr
 20893 \let\invlegr\textturnlonglegr
 20894 \let\tailinvr\textturnrrtail
 20895 \let\legr\textlonglegr
 20896 \let\tailr\texttrtailr
 20897 \let\flapr\textfishhookr
 20898 \let\flap\textfishhookr
 20899 \let\tails\texttrtails
 20900 \let\curlyesh\textctesh
 20901 \let\clickt\textturnt
 20902 \let\tailt\texttrtailt
 20903 \let\ubar\textbaru
 20904 \let\rotOmega\textniupsilon
 20905 \let\invv\textturnv
 20906 \let\pwedge\textturnv
 20907 \let\invw\textturnw
 20908 \let\rotrw\textturnw
 20909 \let\invy\textturny
 20910 \let\roty\textturny
 20911 \let\tailz\texttrtailz
 20912 \let\curlyz\textctz
 20913 \let\curlyyogh\textctyogh
 20914 \let\ejective\textglotstop
 20915 \let\glottal\textglotstop
 20916 \let\reveject\textrevglotstop
 20917 \let\clickc\textstretchc
 20918 \let\textstretchcvar\textstretchc
 20919 \let\clickb\textbullseye
 20920 \let\textObullseye\textbullseye
 20921 \let\textctjvar\textctj
 20922 \let\textturnsck\textturnk
 20923 \let\dz\textdzlig
 20924 \let\tesh\textteshlig
 20925 \let\digamma\textdigammagreek
 20926 \let\hardsign\cyrrhdsn
 20927 \let\softsign\cyrsftsn
 20928 \let\hebsin\hebshin
 20929 \let\textsck\textPUscck

20930 \let\textscm\textPUscm
 20931 \let\textscp\textPUscp
 20932 \let\textrevscr\textPUrevscr
 20933 \let\textrhoaka\textPURhooka
 20934 \let\textrhooke\textPURhooko
 20935 \let\textrhookepsilon\textPURhookoepsilon
 20936 \let\textrhookeno\textPURhookopeno
 20937 \let\textdoublevertline\textbardbl
 20938 \let\dag\textdagger
 20939 \let\ddagger\textdaggerdbl
 20940 \let\ddag\textdaggerdbl
 20941 \let\mathellipsis\textellipsis
 20942 \let\EurDig\texteuro
 20943 \let\EURdig\texteuro
 20944 \let\EurHv\texteuro
 20945 \let\EURhv\texteuro
 20946 \let\EurCr\texteuro
 20947 \let\EURcr\texteuro
 20948 \let\EurTm\texteuro
 20949 \let\EURtm\texteuro
 20950 \let\Eur\texteuro
 20951 \let\Denarius\textDeleatur
 20952 \let\agemO\textmho
 20953 \let\EstimatedSign\textestimated
 20954 \let\Ecommerce\textestimated
 20955 \let\bindnasrepma\textinvamp
 20956 \let\parr\textinvamp
 20957 \let\MVRightArrow\textrightarrow
 20958 \let\MVRightarrow\textrightarrow
 20959 \let\MVArrowDown\textdownarrow
 20960 \let\Force\textdownarrow
 20961 \let\textglobrise\textnearrow
 20962 \let\textglobfall\textsearrow
 20963 \let\Lightning\textlightning
 20964 \let\Conclusion\textrightarrow
 20965 \let\dashedleftarrow\textdashleftarrow
 20966 \let\dashedrightarrow\textdashrightarrow
 20967 \let\varnothing\textemptyset
 20968 \let\owns\textni
 20969 \let\notni\textnotowner
 20970 \let\varprop\textpropto
 20971 \let\varangle\textsphericalangle
 20972 \let\Anglesign\textsphericalangle
 20973 \let\AngleSign\textsphericalangle
 20974 \let\notdivides\textnmid
 20975 \let\varowedge\textowedge
 20976 \let\varovee\textovee
 20977 \let\varint\textint
 20978 \let\varoint\textoint
 20979 \let\downtherefore\textbecause
 20980 \let\textdotdiv\textdotminus
 20981 \let\AC\textsim
 20982 \let\wreath\textwr
 20983 \let\nthickapprox\textnapprox

20984 \let\VHF\texttriplesim
 20985 \let\notasymp\textnasymp
 20986 \let\Doteq\textdoteqdot
 20987 \let\corresponds\texthateq
 20988 \let\Corresponds\texthateq
 20989 \let\nequal\textneq
 20990 \let\Congruent\textequiv
 20991 \let\NotCongruent\textnequiv
 20992 \let\notequiv\textnequiv
 20993 \let\LessOrEqual\textleq
 20994 \let\LargerOrEqual\textgeq
 20995 \let\apprle\textless
 20996 \let\apprge\textgtr
 20997 \let\varoplus\textoplus
 20998 \let\varominus\textominus
 20999 \let\varotimes\textotimes
 21000 \let\varoslash\textoslash
 21001 \let\varodot\textodot
 21002 \let\ocirc\textcircledcirc
 21003 \let\varocircle\textcircledcirc
 21004 \let\varoast\textcircledast
 21005 \let\oasterisk\textcircledast
 21006 \let\rightvdash\textvdash
 21007 \let\leftvdash\textdashv
 21008 \let\leftdashv\textndashv
 21009 \let\downvdash\texttop
 21010 \let\upvdash\textbot
 21011 \let\perp\textnupvdash
 21012 \let\models\textvDash
 21013 \let\rightmodels\textvDash
 21014 \let\rightVdash\textVdash
 21015 \let\rightModels\textVDash
 21016 \let\rightvdash\textnvdash
 21017 \let\rightmodels\textnvDash
 21018 \let\models\textnvDash
 21019 \let\rightVdash\textnVdash
 21020 \let\rightModels\textnVDash
 21021 \let\lessclosed\textlhd
 21022 \let\gtrclosed\textrhd
 21023 \let\leqclosed\textunlhd
 21024 \let\trianglelefteq\textunlhd
 21025 \let\geqclosed\textunrhd
 21026 \let\trianglerighteq\textunrhd
 21027 \let\Bowtie\textbowtie
 21028 \let\varcurlyvee\textcurlyvee
 21029 \let\varcurlywedge\textcurlywedge
 21030 \let\doublecap\textCap
 21031 \let\doublecup\textCup
 21032 \let\varsubsetneq\textsubsetneq
 21033 \let\varsupsetneq\textsupsetneq
 21034 \let\lessclosed\texttriangleleft
 21035 \let\ngtrclosed\texttriangleright
 21036 \let\Clocklogo\textclock
 21037 \let\ClockLogo\textclock

21038 \let\baro\textstmaryrdbaro
 21039 \let\varparallelinv\textbbslash
 21040 \let\CleaningA\textCircledA
 21041 \let\Kutline\textCuttingLine
 21042 \let\CutLine\textCuttingLine
 21043 \let\Cutline\textCuttingLine
 21044 \let\MoveUp\textUParrow
 21045 \let\APLup\textbigtriangleup
 21046 \let\Bleech\textbigtriangleup
 21047 \let\MoveDown\textDOWNarrow
 21048 \let\APLdown\textbigtriangledown
 21049 \let\Diamond\textdiamond
 21050 \let\varbigcirc\textbigcircle
 21051 \let\Telefon\textPhone
 21052 \let\Box\textboxempty
 21053 \let\CheckedBox\textCheckedbox
 21054 \let\XBox\textCrossedbox
 21055 \let\CrossedBox\textCrossedbox
 21056 \let\rightpointleft\textHandLeft
 21057 \let\leftpointright\textHandRight
 21058 \let\PointingHand\textHandRight
 21059 \let\Pointinghand\textHandRight
 21060 \let\Radiation\textRadioactivity
 21061 \let\Yinyang\textYinYang
 21062 \let\YingYang\textYinYang
 21063 \let\Yingyang\textYinYang
 21064 \let\Frowny\textfrownie
 21065 \let\Smiley\textsmiley
 21066 \let\Sun\textsun
 21067 \let\Mercury\textmercury
 21068 \let\textfemale\textPUfemale
 21069 \let\female\textPUfemale
 21070 \let\venus\textPUfemale
 21071 \let\Venus\textPUfemale
 21072 \let\Female\textPUfemale
 21073 \let\Earth\textearth
 21074 \let\mars\textmale
 21075 \let\Mars\textmale
 21076 \let\Male\textmale
 21077 \let\Jupiter\textjupiter
 21078 \let\Saturn\textsaturn
 21079 \let\Uranus\texturanus
 21080 \let\Neptune\textneptune
 21081 \let\Pluto\textpluto
 21082 \let\Aries\textaries
 21083 \let\Taurus\texttaurus
 21084 \let\Gemini\textgemini
 21085 \let\Cancer\textcancer
 21086 \let\Leo\textleo
 21087 \let\Virgo\textvirgo
 21088 \let\Libra\textlibra
 21089 \let\Scorpio\textscorpio
 21090 \let\Sagittarius\textsagittarius
 21091 \let\Capricorn\textcapricornus

21092 \let\Aquarius\textaquarius
 21093 \let\Pisces\textpisces
 21094 \let\spadesuit\textspadesuitblack
 21095 \let\Heart\textheartsuitwhite
 21096 \let\heartsuit\textheartsuitwhite
 21097 \let\diamondsuit\textdiamondsuitwhite
 21098 \let\clubsuit\textclubsuitblack
 21099 \let\eighthnote\textmusicalnote
 21100 \let\Recycling\textrecycle
 21101 \let\VarFlag\textFlag
 21102 \let\textxswup\textdsmilitary
 21103 \let\textuncrfemale\textPUuncrfemale
 21104 \let\Football\textSoccerBall
 21105 \let\CutLeft\textScissorRightBrokenBottom
 21106 \let\Cutright\textScissorRightBrokenBottom
 21107 \let\RightScissors\textScissorRight
 21108 \let\Leftscissors\textScissorRight
 21109 \let\Letter\textEnvelope
 21110 \let\Writinghand\textWritingHand
 21111 \let\checkmark\textCheckmark
 21112 \let\DavidStar\textDavidStar
 21113 \let\llbracket\textlbrackdbl
 21114 \let\rrbracket\textrrbrackdbl
 21115 \let\RightTorque\textlcurvearrowdown
 21116 \let\Righttorque\textlcurvearrowdown
 21117 \let\LeftTorque\textrcurvearrowdown
 21118 \let\Lefttorque\textrcurvearrowdown
 21119 \let\textvarobar\textobar
 21120 \let\circledbslash\textobslash
 21121 \let\obackslash\textobslash
 21122 \let\varobslash\textobslash
 21123 \let\odplus\textobot
 21124 \let\varolessthan\textolessthan
 21125 \let\varogreaterthan\textogreaterthan
 21126 \let\divdot\textminusdot
 21127 \let\doublesqcap\textsqdoublecap
 21128 \let\doublesqcup\textsqdoublecup
 21129 \let\merge\textdoublevee
 21130 \let\leftVdash\textdashV
 21131 \let\nleftVdash\textndashV
 21132 \let\leftmodels\textDashv
 21133 \let\nleftmodels\textnDashv
 21134 \let\leftModels\textDashV
 21135 \let\nleftModels\textnDashV
 21136 \let\varparallel\textsslash
 21137 \let\textheng\textPUheng
 21138 \let\textlhookfour\textPUlhookfour
 21139 \let\textscf\textPUscf
 21140 \let\textaoig\textPUaoig
 21141 \let\Ganz\textfullnote
 21142 \let\Halb\texthalfnote
 21143 \let\Womanface\textWomanFace
 21144 \let\Faxmachine\textFax
 21145 \let\CEsign\textCESign

```
21146 }% \psdaliasnames
21147 </psdextra>
```

47 End of file hycheck.tex

```
21148 <*check>
21149 \typeout{}
21150 \begin{document}
21151 \end{document}
21152 </check>
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