

Hypertext marks in L^AT_EX

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

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1 Documentation overview for hyperref

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


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

ChangeLog This file records the version history.

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

Bookmark talk, paper The paper version of the talk.

Source code documentation:

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

backref.dtx “Back referencing from bibliographical citations”

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

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3 File 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 \RequirePackage{etoolbox}
246 \def\Hy@Error{\@PackageError{hyperref}}
247 \def\Hy@Warning{\@PackageWarning{hyperref}}
248 \def\Hy@WarningNoLine{\@PackageWarningNoLine{hyperref}}
249 \def\Hy@Info{\@PackageInfo{hyperref}}
250 \def\Hy@InfoNoLine{\@PackageInfoNoLine{hyperref}}
251 \def\Hy@Message#1{%
252   \GenericWarning{%
253     (hyperref)\@spaces\@spaces\@spaces\@spaces
254   }{%
255     Package hyperref Message: #1\ltx@gobble
256   }%
257 }

```

4.2 Version check

\Hy@VersionChecked

```

258 \chardef\Hy@VersionChecked=0 %

```

\Hy@VersionCheck

```

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

```

```

293      * \y: hyperref.sty\MessageBreak
294      * \z: \a
295      }\@ehd
296      \fi
297      \fi
298      }%
299      }%
300 \endgroup
301 \chardef\Hy@VersionChecked=1 %
302 }

```

\Hy@@VersionCheck

```

303 \def\Hy@@VersionCheck #1#2 #3 #4\@nil{%
304 \def#1{#2 #3}%
305 }

```

4.3 Checks with regular expressions

```

306 \ltx@ifundefined{pdfmatch}{%
307 \def\Hy@Match#1#2#3#4#5{%
308 }{%
309 \def\Hy@Match#1#2#3{%
310 \begingroup
311 \edef\~{\ltx@backslashchar\string~}%
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?}%
321 \edef\{\{\ltx@backslashchar\ltx@leftbracechar}%
322 \edef\}\{\ltx@rightbracechar}%
323 \edef\\{\ltx@backslashchar\ltx@backslashchar}%
324 \let\ \ltx@space
325 \ifcase\pdfmatch#2{#3}{#1} %
326 \endgroup
327 \expandafter\ltx@secondoftwo
328 \or
329 \endgroup
330 \expandafter\ltx@firstoftwo
331 \else
332 \Hy@Warning{%
333 Internal error: Wrong pattern!\MessageBreak
334 --> #3 <--\MessageBreak
335 Pattern check ignored%
336 }%
337 \endgroup
338 \expandafter\ltx@firstoftwo
339 \fi
340 }%
341 }

```

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`.

```
342 \@ifundefined{AfterBeginDocument}{%
343   \def\AfterBeginDocument{\AtBeginDocument}%
344 }{}%
```

`\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.

```
345 \def\Hy@AtBeginDocument{%
346   \ltx@LocalAppendToMacro\Hy@AtBeginDocumentHook
347 }
```

`\Hy@AtEndOfPackage`

```
348 \def\Hy@AtEndOfPackage{%
349   \ltx@LocalAppendToMacro\Hy@AtEndOfPackageHook
350 }
```

`\Hy@AtBeginDocumentHook`

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

`\Hy@AtEndOfPackageHook`

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

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

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

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

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

4.5 Switches

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

```

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

```

Defaults for the switches are now set.

```

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

```



```

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

```

5 Common help macros

\Hy@StepCount

```

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

```

\Hy@GlobalStepCount

```

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

```

```

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

```

5.1 Macros for recursions

```

464 \let\Hy@ReturnEnd\@empty
465 \long\def\Hy@ReturnAfterFiFiEnd#1\fi#2\Hy@ReturnEnd{\fi\fi#1}
466 \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.

```

467 \def\Hy@safe@activetrue{\csname @safe@activetrue\endcsname}
468 \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`

```

469 \def\hypercalcbp#1{%
470   \strip@pt\dimexpr 0.99626401\dimexpr(#1)\relax\relax
471 }%
472 \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 \TeX 's view PDF strings are written to a file and are expanded only in its mouth. Stomach commands that cannot be expanded further aren't executed, they are written verbatim. But the PDF reader that reads such a string isn't a \TeX interpreter!

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

1. Preprocessing. Here the expansion is prepared. The encoding is set and many commands are redefined, so that they work appropriate.
2. Expansion. The \TeX string is expanded the first time to get a PDF string.
3. Postprocessing. The result of the expansion is checked and converted to the final form.

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

`\MakeUppercaseUnsupportedInPdfStrings`
`\MakeLowercaseUnsupportedInPdfStrings`

```

473 \providecommand*\BCPdata[1]{}
474 \ExplSyntaxOn
475 \@ifundefined{text_uppercase:n}{}
476 {
477   \def\MakeUppercaseUnsupportedInPdfStrings#1
478     {\use:e
479       {\exp_args:Ne
480         \text_uppercase:nn{\BCPdata { casing }}{#1}
481       }
482     }
483   \def\MakeLowercaseUnsupportedInPdfStrings#1
484     {\use:e
485       {\exp_args:Ne
486         \text_lowercase:nn{\BCPdata { casing }}{#1}
487       }
488     }
489 }
490 \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 be processed by \TeX , because the tokens have only cat-codes 10 until 12.

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

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

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

```
492 \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.

```
493 \escapechar`\\%
```

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

```
494 \edef\0{\string\0}%
```

```
495 \edef\1{\string\1}%
```

```
496 \edef\2{\string\2}%
```

```
497 \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.

```
498 \ifHy@unicode
```

```
499 \edef\8{\string\8}%
```

```
500 \edef\9{\string\9}%
```

```
501 \fontencoding{PU}%
```

```

502 \HyPsd@UTFviii
503 \def\ifpdfstringunicode##1##2{##1}%
504 \else
505 \fontencoding{PD1}%
506 \def\ifpdfstringunicode##1##2{##2}%
507 \fi
508 \let\utf@viii@undeferr\HyPsd@utf@viii@undeferr
509 \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).

```

510 \@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).

```

511 \let\@inmathwarn\HyPsd@inmathwarn

```

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

```

512 \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.

```

513 \let\{\textbraceleft
514 \let\}\textbraceright
515 \let\\\textbackslash
516 \let\#\textnumbersign
517 \let\$\textdollar
518 \let\%\textpercent
519 \let\&\textampersand
520 % \let\~\textasciitilde
521 \let\_ \textunderscore
522 \let\P\textparagraph
523 \let\ldots\textellipsis
524 \let\dots\textellipsis
525 \ltx@ifundefined{textEncodingNoboundary}%
526 {}{\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.

```
527 \def\{\pdfstringdefWarn\}%
528 \def\newline{\pdfstringdefWarn\newline}%
```

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

```
529 \def\TeX{\TeX}%
530 \def\LaTeX{La\TeX}%
531 \def\LaTeXe{%
532   \LaTeX2%
533   \ifHy@unicode\83\265\else e\fi
534 }%
535 \def\eTeX{%
536   \ifHy@unicode\83\265\else e\fi
537   -\TeX%
538 }%
539 \def\SliTeX{Sli\TeX}%
540 \def\MF{Metafont}%
541 \def\MP{Metapost}%
```

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

```
542 \let\fontencoding\@gobble
543 \let\fontfamily\@gobble
544 \let\fontseries\@gobble
545 \let\fontshape\@gobble
546 \let\fontsize\@gobbletwo
547 \let\selectfont\@empty
548 \let\usefont\@gobblefour
549 \let\emph\@firstofone
550 \let\textnormal\@firstofone
551 \let\textrm\@firstofone
552 \let\textsf\@firstofone
553 \let\texttt\@firstofone
554 \let\textbf\@firstofone
555 \let\textmd\@firstofone
556 \let\textit\@firstofone
557 \let\textsc\@firstofone
558 \let\textsl\@firstofone
559 \let\textup\@firstofone
560 \let\normalfont\@empty
561 \let\rmfamily\@empty
```

```

562 \let\sfamily\@empty
563 \let\ttfamily\@empty
564 \let\bfseries\@empty
565 \let\mdseries\@empty
566 \let\itshape\@empty
567 \let\scshape\@empty
568 \let\slshape\@empty
569 \let\upshape\@empty
570 \let\em\@empty
571 \let\rm\@empty
572 \let\Huge\@empty
573 \let\LARGE\@empty
574 \let\Large\@empty
575 \let\footnotesize\@empty
576 \let\huge\@empty
577 \let\large\@empty
578 \let\normalsize\@empty
579 \let\scriptsize\@empty
580 \let\small\@empty
581 \let\tiny\@empty
582 \let\mathversion\@gobble
583 \let\phantom\@gobble
584 \let\vphantom\@gobble
585 \let\hphantom\@gobble

```

Package pifont.

```

586 \let\ding\HyPsd@ding
587 \let\Cube\HyPsd@DieFace
588 %* \HyPsd@DieFace -> \epsdice (epsdice)
589 %* \HyPsd@DieFace -> \fcdice (hhcount)

```

Environments.

```

590 \def\begin##1{\csname##1\endcsname}%
591 \def\end##1{\csname end##1\endcsname}%

```

Package color.

```

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

```

Upper- and lowercase.

```

593 \def\MakeUppercase{\MakeUppercaseUnsupportedInPdfStrings}%
594 \def\MakeLowercase{\MakeLowercaseUnsupportedInPdfStrings}%

```

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

```

595 \ifHy@psdextra
596 \ifHy@unicode
597 \csname psdmapshortnames\endcsname
598 \csname psdaliasnames\endcsname
599 \fi
600 \fi

```

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

```
601 \let\foreignlanguage\@secondoftwo
602 \let\textlatin\@firstofone
603 \let\IfUndefined\language@group\@firstofone
604 \let\bbl@info\@gobble
605 \csname HyPsd@babel@\language@group\endcsname
606 }%

607 \let\@safe@activetrue\relax
608 \let\@safe@activesfalse\relax
```

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

```
609 \let\cyr\relax
```

Package german.

```
610 \let\glqq\textglqq
611 \let\grqq\textgrqq
612 \let\glq\textglq
613 \let\grq\textgrq
614 \let\flqq\textflqq
615 \let\frqq\textfrqq
616 \let\flq\textflq
617 \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}
```

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

AMS classes.

```
619 \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.

```
620 \let\hspace\HyPsd@hspace
```

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

```
621 \let\label\@gobble
622 \let\index\@gobble
623 \let\glossary\@gobble
624 \let\href\HyPsd@href
625 \let\@mkboth\@gobbletwo
```


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

```
626 \let\ref\HyPsd@ref
627 \let\pageref\HyPsd@pageref
628 \let\nameref\HyPsd@nameref
629 \let\autoref\HyPsd@autoref
```

Miscellaneous commands.

```
630 \let\leavevmode\@empty
631 \let\mbox\@empty
```

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

```
632 \def\halign{\pdfstringdefWarn\halign\@gobble}%
633 \let\ignorespaces\HyPsd@ignorespaces
634 \let\Hy@SectionAnchorHref\@gobble
635 \let\ensuremath\@firstofone
```

Patch for cjk bookmarks.

```
636 \HyPsd@CJKhook
```

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

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

```
637 \Hy@pdfstringtrue
638 \pdfstringdefPreHook
```

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

```
639 \HyPsd@LetUnexpandableSpace\space
640 \HyPsd@LetUnexpandableSpace\ %
641 \HyPsd@LetUnexpandableSpace~%
642 \HyPsd@LetUnexpandableSpace\nobreakspace
```

Package xspace.

```
643 \ltx@ifundefined{@xspace}{%
644 \let\xspace\HyPsd@ITALCORR
645 }{%
646 \let\xspace\HyPsd@XSPACE
647 }%
648 \let\/\HyPsd@ITALCORR
649 \let\bgroup\/%
650 \let\egroup\/%
```

Redefinitions of miscellaneous commands. Hyphenation does not make sense.

```
651 \let\discretionary\@gobbletwo
```

\@ifstar is defined in L^AT_EX as follows:

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

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

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

```
652 \def\@ifnextchar{\HyPsd@ifnextchar\@ifnextchar}%
```

```
653 \def\kernel@ifnextchar{\HyPsd@ifnextchar\kernel@ifnextchar}%
```

```
654 \def\new@ifnextchar{\HyPsd@ifnextchar\new@ifnextchar}%
```

```
655 \let\@protected@testopt\HyPsd@protected@testopt
```

Support for package 'xargs':

```
656 \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).

```
657 \begingroup
658 \let\GenericError\@gobblefour
659 \let\GenericWarning\@gobbletwo
660 \let\GenericInfo\@gobbletwo
```

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

```
661 \ifx\nofrenchguillemets\@undefined
662 \else
663 \nofrenchguillemets
664 \fi
```

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

```
665 \let\Hy@temp\xdef
666 \let\def\HyPsd@DefCommand
667 \let\gdef\HyPsd@DefCommand
668 \let\edef\HyPsd@DefCommand
669 \let\xdef\HyPsd@DefCommand
670 \let\futurelet\HyPsd@LetCommand
671 \let\let\HyPsd@LetCommand
672 \Hy@temp#1{#2}%
673 \endgroup
```

6.2.3 Postprocessing

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

```
674 \ifx#1\@empty
675 \else
```

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

- `TEX` does not accept a space as an undelimited argument, it cancels space tokens while looking for an undelimited argument. Therefore we must protect the spaces now.
- An argument can be a single token or a group of many tokens. And within curly braces tokens aren't find by `TEX`'s argument scanning process. Third curly braces as grouping characters cannot be expanded further, so they don't vanish by the string expansion above. So these characters with catcode

1 and 2 are removed in the following and replaced by an marker for the xspace support.

- \TeX silently removes the outmost pair of braces of an argument. To prevent this on unwanted places, in the following the character | is appended to the string to make an outer brace to an inner one.

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

```
676 \HyPsd@ProtectSpaces#1%
677 \let\HyPsd@String\@empty
678 \expandafter\HyPsd@RemoveBraces\expandafter{#1|}%
679 \global\let#1\HyPsd@String
```

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

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

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

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

```
680 \let\HyPsd@SPACEOPTI\relax
681 {%
682 \let\HyPsd@String\@empty
683 \expandafter\HyPsd@CheckCatcodes#1\HyPsd@End
684 \global\let#1\HyPsd@String
685 }%
686 \expandafter\HyPsd@RemoveMask\expandafter
687 |\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.

```
688 \expandafter
689 \HyPsd@Subst\expandafter{\HyPsd@GLYPHERR}{\relax}#1%
```

```

690 \let\HyPsd@String\@empty
691 \expandafter\HyPsd@GlyphProcess#1\relax\@empty
692 \global\let#1\HyPsd@String

```

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

```

693 \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.

```

694 \iffHy@unicode
695 \expandafter\HyPsd@StringSubst\cname 80\040\endcsname
696 \HyPsd@SPACEOPTI#1%
697 \edef\Hy@temp@A{\HyPsd@SPACEOPTI\HyPsd@SPACEOPTI\80\273}%
698 \expandafter\HyPsd@Subst\expandafter{\Hy@temp@A}%
699 {\HyPsd@SPACEOPTI\80\273}#1%
700 \else
701 \HyPsd@StringSubst{\040}\HyPsd@SPACEOPTI#1%
702 \expandafter\HyPsd@Subst\expandafter{%
703 \expandafter\HyPsd@SPACEOPTI\expandafter\HyPsd@SPACEOPTI
704 \string\273}\HyPsd@SPACEOPTI\273}#1%
705 \fi

```

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

```

706 \iffHy@unicode
707 \HyPsd@StringSubst{\)}{\80\051}#1%
708 \HyPsd@Subst){\80\051}#1%
709 \let\HyPsd@empty\relax
710 \expandafter\HyPsd@StringSubst\cname 80\051\endcsname
711 {\HyPsd@empty\80\051}#1%
712 \else
713 \HyPsd@StringSubst{\)}{\051}#1%
714 \HyPsd@Subst){\051}#1%
715 \let\HyPsd@empty\relax
716 \HyPsd@StringSubst{\051}\HyPsd@empty\string\)}#1%
717 \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`.

```

718 \expandafter\HyPsd@Subst\expandafter{\}\HyPsd@empty#1%
719 \ltx@ifundefined{@xspace}{%
720 }{%
721 \let\HyPsd@xspace\relax
722 \expandafter\HyPsd@Subst\expandafter
723   {\HyPsd@XSPACE}\HyPsd@xspace#1%
724 \let\HyPsd@xspace\HyPsd@doxspace
725 }%
726 \xdef#1{#1\HyPsd@empty}%

```

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

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

```

727 \HyPsd@Subst{---}\textemdash#1%
728 \HyPsd@Subst{--}\textendash#1%
729 % \HyPsd@Subst{fi}\textfi#1%
730 % \HyPsd@Subst{fl}\textfl#1%
731 \HyPsd@Subst{!`}\textexclamdown#1%
732 \HyPsd@Subst{?`}\textquestiondown#1%

```

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

```

733 \let\HyPsd@empty\@empty

```

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

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

```

734 \ifHy@unicode
735 \HyPsd@StringSubst{\textparenleft#1%
736 \HyPsd@Subst{\textparenleft#1%
737 \else
738 \HyPsd@StringSubst{\{050\}#1%
739 \HyPsd@Subst{\{050\}#1%

```

```

740 \HyPsd@StringSubst{\050}{\string\{ }#1%
741 \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.

```

742 \ifHy@unicode
743 \edef\HyPsd@SPACEOPTI{\80\040}%
744 \else
745 \let\HyPsd@SPACEOPTI\HyPsd@spaceopti
746 \fi
747 \xdef#1{#1\@empty}%
748 \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.

```

749 \endgroup
750 \begingroup
751 \ifHy@unicode
752 \HyPsd@ConvertToUnicode#1%

```

Try conversion back to PDFDocEncoding.

```

753 \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
754 \ltx@ifundefined{StringEncodingConvertTest}{%
755 }{%
756 \EdefUnescapeString\HyPsd@temp#1%
757 \iftutex
758 \let\HyPsd@UnescapedString\HyPsd@temp
759 \StringEncodingConvertTest\HyPsd@temp\HyPsd@temp
760 {utf16be}{ascii-print}{%
761 \EdefEscapeString\HyPsd@temp\HyPsd@temp
762 \global\let#1\HyPsd@temp
763 \HyPsd@EscapeTeX#1%
764 \Hy@unicodedefalse
765 }{%
766 \HyPsd@EscapeTeX#1%
767 }%
768 \else
769 \StringEncodingConvertTest\HyPsd@temp\HyPsd@temp
770 {utf16be}{pdfdoc}{%
771 \EdefEscapeString\HyPsd@temp\HyPsd@temp
772 \global\let#1\HyPsd@temp
773 \HyPsd@EscapeTeX#1%
774 \Hy@unicodedefalse
775 }{}%
776 \fi
777 }%
778 \fi
779 \fi

```

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

```
780 \pdfstringdefPostHook#1%
781 \endgroup
782 }
```

`\Hy@pdfstringdef`

```
783 \def\Hy@pdfstringdef#1#2{%
784 \pdfstringdef\Hy@gtemp{#2}%
785 \let#1\Hy@gtemp
786 }
```

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

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

6.3.3 Catcodes saving and restoring for .def files

`\Hy@SaveCatcodeSettings`

```
806 \def\Hy@SaveCatcodeSettings#1{%
807 \expandafter\edef\csname Hy@cat@#1\endcsname{%
808 \endlinechar=\the\endlinechar\relax
809 \catcode32 \the\catcode32\relax % (space)
810 \catcode34 \the\catcode34\relax % "
811 \catcode35 \the\catcode35\relax % #
812 \catcode37 \the\catcode37\relax % (percent)
813 \catcode40 \the\catcode40\relax % (
814 \catcode41 \the\catcode41\relax % )
815 \catcode42 \the\catcode42\relax % *
```



```

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

```

\Hy@RestoreCatcodeSettings

```

850 \def\Hy@RestoreCatcodeSettings#1{%
851 \csname Hy@cat@#1\endcsname
852 \expandafter\let\csname Hy@cat@#1\endcsname\relax
853 }

```

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.

```

854 \@ifundefined{T@PD1}{%
855 \Hy@SaveCatcodeSettings{pd1}%
856 \input{pd1enc.def}%

```

```

857 \Hy@RestoreCatcodeSettings{pd1}%
858 \HyLinguex@Restore
859 }{}
860 \DeclareFontFamily{PD1}{pdf}{}
861 \DeclareFontShape{PD1}{pdf}{m}{n}{ <-> cmr10 }{}
862 \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`.

```

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

```

`\HyPsd@LoadExtra`

```

876 \def\HyPsd@LoadExtra{%
877   \ifHy@psdextra
878     \ltx@iffileloaded{puenc.def}{}%
879     \ltx@iffileloaded{puenc-greekbasic.def}{}{}%
880     \Hy@SaveCatcodeSettings{pu}%
881     \input{puenc-greekbasic.def}%
882     \Hy@RestoreCatcodeSettings{pu}%
883     \Hy@SaveCatcodeSettings{psdextra}%
884     \input{psdextra.def}%
885     \Hy@RestoreCatcodeSettings{psdextra}%
886     \let\HyPsd@LoadExtra\relax
887   }{}%
888   \fi
889 }

```

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 ar-

guments, the first contains the string that will be set and processed by T_EX's stomach, the second contains the replacement for PDF strings.

```

890 \def\texorpdfstring{%
891   \ifHy@pdfstring
892     \expandafter\@secondoftwo
893   \else
894     \expandafter\@firstoftwo
895   \fi
896 }
```

6.4.2 Hooks for `\pdfstringdef`

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

```

897 \@ifundefined{pdfstringdefPreHook}{%
898   \let\pdfstringdefPreHook\@empty
899 }{}
900 \@ifundefined{pdfstringdefPostHook}{%
901   \let\pdfstringdefPostHook\@gobble
902 }{}
```

`\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`.

```

903 \def\pdfstringdefDisableCommands{%
904   \begingroup
905     \makeatletter
906     \HyPsd@DisableCommands
907 }
```

`\HyPsd@DisableCommands`

```

908 \long\def\HyPsd@DisableCommands#1{%
909   \ltx@GlobalAppendToMacro\pdfstringdefPreHook{#1}%
910   \endgroup
911 }
```

`\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`.

```

912 \def\pdfstringdefWarn#1{%
913   \expandafter\noexpand\csname<>-string#1\endcsname
914 }
```

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.

```

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

```

924 \newif\ifHy@next
925 \</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.

```
926 (*package)
```

6.5.3 CJK patch

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

```
\HyPsd@CJKhook
```

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

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 ($\geq 0x40$).

```
939 \begingroup
940 \catcode"7F=\active
941 \toks@{%
942   \let\CJK@ignorespaces\empty
943   \def\CJK@char#1{\@gobbletwo}%
944   \let\CJK@charx\@gobblefour
945   \let\CJK@punctchar\@gobblefour
946   \def\CJK@punctcharx#1{\@gobblefour}%
947   \catcode"7F=\active
948   \def^^7f#1^^7f#2^^7f{%
949     \string #1\HyPsd@DecimalToOctal{#2}%
950   }%
951   % ... ?
952   \ifHy@unicode
953     \def\Hy@cjkpu{\80}%
954   \else
955     \let\Hy@cjkpu\@empty
956   \fi
957   \HyPsd@CJKActiveChars
```

```

958 }%
959 \count@=127 %
960 \@whilenum\count@<255 \do{%
961   \advance\count@ by 1 %
962   \lccode`~=\count@
963   \lowercase{%
964     \toks@\expandafter{\the\toks@ ~}%
965   }%
966 }%
967 \toks@\expandafter{\the\toks@ !}%
968 \xdef\HyPsd@CJKhook@bookmarks{%
969   \the\toks@
970 }%
971 \endgroup

```

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

```

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

```

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

```

980 \def\HyPsd@DecimalToOctal#1{%
981   \ifcase #1 %
982     \000\or \001\or \002\or \003\or \004\or \005\or \006\or \007%
983     \or \010\or \011\or \012\or \013\or \014\or \015\or \016\or \017%
984     \or \020\or \021\or \022\or \023\or \024\or \025\or \026\or \027%
985     \or \030\or \031\or \032\or \033\or \034\or \035\or \036\or \037%
986     \or \040\or \041\or \042\or \043\or \044\or \045\or \046\or \047%
987     \or \050\or \051\or \052\or \053\or \054\or \055\or \056\or \057%
988     \or 0\or 1\or 2\or 3\or 4\or 5\or 6\or 7%
989     \or 8\or 9\or \072\or \073\or \074\or \075\or \076\or \077%
990     \or @\or A\or B\or C\or D\or E\or F\or G%
991     \or H\or I\or J\or K\or L\or M\or N\or O%
992     \or P\or Q\or R\or S\or T\or U\or V\or W%
993     \or X\or Y\or Z\or \133\or \134\or \135\or \136\or \137%
994     \or \140\or a\or b\or c\or d\or e\or f\or g%
995     \or h\or i\or j\or k\or l\or m\or n\or o%
996     \or p\or q\or r\or s\or t\or u\or v\or w%
997     \or x\or y\or z\or \173\or \174\or \175\or \176\or \177%
998     \or \200\or \201\or \202\or \203\or \204\or \205\or \206\or \207%
999     \or \210\or \211\or \212\or \213\or \214\or \215\or \216\or \217%
1000    \or \220\or \221\or \222\or \223\or \224\or \225\or \226\or \227%
1001    \or \230\or \231\or \232\or \233\or \234\or \235\or \236\or \237%
1002    \or \240\or \241\or \242\or \243\or \244\or \245\or \246\or \247%
1003    \or \250\or \251\or \252\or \253\or \254\or \255\or \256\or \257%
1004    \or \260\or \261\or \262\or \263\or \264\or \265\or \266\or \267%
1005    \or \270\or \271\or \272\or \273\or \274\or \275\or \276\or \277%
1006    \or \300\or \301\or \302\or \303\or \304\or \305\or \306\or \307%

```

```

1007 \or \310\or \311\or \312\or \313\or \314\or \315\or \316\or \317%
1008 \or \320\or \321\or \322\or \323\or \324\or \325\or \326\or \327%
1009 \or \330\or \331\or \332\or \333\or \334\or \335\or \336\or \337%
1010 \or \340\or \341\or \342\or \343\or \344\or \345\or \346\or \347%
1011 \or \350\or \351\or \352\or \353\or \354\or \355\or \356\or \357%
1012 \or \360\or \361\or \362\or \363\or \364\or \365\or \366\or \367%
1013 \or \370\or \371\or \372\or \373\or \374\or \375\or \376\or \377%
1014 \fi
1015 }

```

6.5.5 CJK unicode

\HyPsd@CJKhook@unicode

```

1016 \def\HyPsd@CJKhook@unicode{%
1017 \let\Unicode\HyPsd@CJK@Unicode
1018 \let\CJKnumber\HyPsd@CJKnumber
1019 \let\CJKdigits\HyPsd@CJKdigits
1020 }

```

\HyPsd@CJK@Unicode

```

1021 \def\HyPsd@CJK@Unicode#1#2{%
1022 \ifnum#1<256 %
1023 \HyPsd@DecimalToOctalFirst{#1}%
1024 \HyPsd@DecimalToOctalSecond{#2}%
1025 \else
1026 \933%
1027 \expandafter\expandafter\expandafter\HyPsd@HighA
1028 \intcalcDiv{#1}{4}!%
1029 \933%
1030 \ifcase\intcalcMod{#1}{4} %
1031 4\or 5\or 6\or 7%
1032 \fi
1033 \HyPsd@DecimalToOctalSecond{#2}%
1034 \fi
1035 }

1036 \def\HyPsd@HighA#1{%
1037 \expandafter\expandafter\expandafter\HyPsd@HighB
1038 \IntCalcDiv#1!64!!%
1039 \expandafter\expandafter\expandafter\HyPsd@HighD
1040 \IntCalcMod#1!64!!%
1041 }
1042 \def\HyPsd@HighB#1{%
1043 \expandafter\expandafter\expandafter\HyPsd@HighC
1044 \IntCalcDec#1!!%
1045 }
1046 \def\HyPsd@HighC#1{%
1047 \IntCalcDiv#1!4!%
1048 \@backslashchar
1049 \IntCalcMod#1!4!%
1050 }
1051 \def\HyPsd@HighD#1{%
1052 \ifcase\IntCalcDiv#1!8! %
1053 0\or 1\or 2\or 3\or 4\or 5\or 6\or 7%

```

```

1054 \fi
1055 \ifcase\IntCalcMod#1!8! %
1056 0\or 1\or 2\or 3\or 4\or 5\or 6\or 7%
1057 \fi
1058 }
1059 \def\HyPsd@DecimalToOctalFirst#1{%
1060 \9%
1061 \ifcase#1 %
1062 000\or 001\or 002\or 003\or 004\or 005\or 006\or 007%
1063 \or 010\or 011\or 012\or 013\or 014\or 015\or 016\or 017%
1064 \or 020\or 021\or 022\or 023\or 024\or 025\or 026\or 027%
1065 \or 030\or 031\or 032\or 033\or 034\or 035\or 036\or 037%
1066 \or 040\or 041\or 042\or 043\or 044\or 045\or 046\or 047%
1067 \or 050\or 051\or 052\or 053\or 054\or 055\or 056\or 057%
1068 \or 060\or 061\or 062\or 063\or 064\or 065\or 066\or 067%
1069 \or 070\or 071\or 072\or 073\or 074\or 075\or 076\or 077%
1070 \or 100\or 101\or 102\or 103\or 104\or 105\or 106\or 107%
1071 \or 120\or 111\or 112\or 113\or 114\or 115\or 116\or 117%
1072 \or 120\or 121\or 122\or 123\or 124\or 125\or 126\or 127%
1073 \or 130\or 131\or 132\or 133\or 134\or 135\or 136\or 137%
1074 \or 140\or 141\or 142\or 143\or 144\or 145\or 146\or 147%
1075 \or 150\or 151\or 152\or 153\or 154\or 155\or 156\or 157%
1076 \or 160\or 161\or 162\or 163\or 164\or 165\or 166\or 167%
1077 \or 170\or 171\or 172\or 173\or 174\or 175\or 176\or 177%
1078 \or 200\or 201\or 202\or 203\or 204\or 205\or 206\or 207%
1079 \or 210\or 211\or 212\or 213\or 214\or 215\or 216\or 217%
1080 \or 220\or 221\or 222\or 223\or 224\or 225\or 226\or 227%
1081 \or 230\or 231\or 232\or 233\or 234\or 235\or 236\or 237%
1082 \or 240\or 241\or 242\or 243\or 244\or 245\or 246\or 247%
1083 \or 250\or 251\or 252\or 253\or 254\or 255\or 256\or 257%
1084 \or 260\or 261\or 262\or 263\or 264\or 265\or 266\or 267%
1085 \or 270\or 271\or 272\or 273\or 274\or 275\or 276\or 277%
1086 \or 300\or 301\or 302\or 303\or 304\or 305\or 306\or 307%
1087 \or 310\or 311\or 312\or 313\or 314\or 315\or 316\or 317%
1088 \or 320\or 321\or 322\or 323\or 324\or 325\or 326\or 327%
1089 \or 330\or 331\or 332\or 333\or 334\or 335\or 336\or 337%
1090 \or 340\or 341\or 342\or 343\or 344\or 345\or 346\or 347%
1091 \or 350\or 351\or 352\or 353\or 354\or 355\or 356\or 357%
1092 \or 360\or 361\or 362\or 363\or 364\or 365\or 366\or 367%
1093 \or 370\or 371\or 372\or 373\or 374\or 375\or 376\or 377%
1094 \fi
1095 }
1096 \def\HyPsd@DecimalToOctalSecond#1{%
1097 \ifcase #1 %
1098 \000\or \001\or \002\or \003\or \004\or \005\or \006\or \007%
1099 \or \010\or \011\or \012\or \013\or \014\or \015\or \016\or \017%
1100 \or \020\or \021\or \022\or \023\or \024\or \025\or \026\or \027%
1101 \or \030\or \031\or \032\or \033\or \034\or \035\or \036\or \037%
1102 \or \040\or \041\or \042\or \043\or \044\or \045\or \046\or \047%
1103 \or \050\or \051\or \052\or \053\or \054\or \055\or \056\or \057%
1104 \or \060\or \061\or \062\or \063\or \064\or \065\or \066\or \067%
1105 \or \070\or \071\or \072\or \073\or \074\or \075\or \076\or \077%
1106 \or \100\or \101\or \102\or \103\or \104\or \105\or \106\or \107%
1107 \or \110\or \111\or \112\or \113\or \114\or \115\or \116\or \117%

```



```

1108 \or \120\or \121\or \122\or \123\or \124\or \125\or \126\or \127%
1109 \or \130\or \131\or \132\or \133\or \134\or \135\or \136\or \137%
1110 \or \140\or \141\or \142\or \143\or \144\or \145\or \146\or \147%
1111 \or \150\or \151\or \152\or \153\or \154\or \155\or \156\or \157%
1112 \or \160\or \161\or \162\or \163\or \164\or \165\or \166\or \167%
1113 \or \170\or \171\or \172\or \173\or \174\or \175\or \176\or \177%
1114 \or \200\or \201\or \202\or \203\or \204\or \205\or \206\or \207%
1115 \or \210\or \211\or \212\or \213\or \214\or \215\or \216\or \217%
1116 \or \220\or \221\or \222\or \223\or \224\or \225\or \226\or \227%
1117 \or \230\or \231\or \232\or \233\or \234\or \235\or \236\or \237%
1118 \or \240\or \241\or \242\or \243\or \244\or \245\or \246\or \247%
1119 \or \250\or \251\or \252\or \253\or \254\or \255\or \256\or \257%
1120 \or \260\or \261\or \262\or \263\or \264\or \265\or \266\or \267%
1121 \or \270\or \271\or \272\or \273\or \274\or \275\or \276\or \277%
1122 \or \300\or \301\or \302\or \303\or \304\or \305\or \306\or \307%
1123 \or \310\or \311\or \312\or \313\or \314\or \315\or \316\or \317%
1124 \or \320\or \321\or \322\or \323\or \324\or \325\or \326\or \327%
1125 \or \330\or \331\or \332\or \333\or \334\or \335\or \336\or \337%
1126 \or \340\or \341\or \342\or \343\or \344\or \345\or \346\or \347%
1127 \or \350\or \351\or \352\or \353\or \354\or \355\or \356\or \357%
1128 \or \360\or \361\or \362\or \363\or \364\or \365\or \366\or \367%
1129 \or \370\or \371\or \372\or \373\or \374\or \375\or \376\or \377%
1130 \fi
1131 }

1132 \def\HyPsd@CJkNumber#1{%
1133 \ifnum#1<\z@
1134 \CJk@minus
1135 \expandafter\HyPsd@@CJkNumber\expandafter{\number-\number#1}%
1136 \else
1137 \expandafter\HyPsd@@CJkNumber\expandafter{\number#1}%
1138 \fi
1139 }

1140 \def\HyPsd@@CJkNumber#1{%
1141 \ifcase#1 %
1142 \CJk@zero\or\CJk@one\or\CJk@two\or\CJk@three\or\CJk@four\or
1143 \CJk@five\or\CJk@six\or\CJk@seven\or\CJk@eight\or\CJk@nine\or
1144 \CJk@ten\or\CJk@ten\CJk@one\or\CJk@ten\CJk@two\or
1145 \CJk@ten\CJk@three\or\CJk@ten\CJk@four\or\CJk@ten\CJk@five\or
1146 \CJk@ten\CJk@six\or\CJk@ten\CJk@seven\or\CJk@ten\CJk@eight\or
1147 \CJk@ten\CJk@nine
1148 \else
1149 \ifnum#1<10000 %
1150 \HyPsd@CJkNumberFour#1!\@empty{20}%
1151 \@empty
1152 \else
1153 \ifnum#1<100000000 %
1154 \expandafter\expandafter\expandafter\HyPsd@CJkNumberFour
1155 \IntCalcDiv#1!10000!%
1156 !\{20}%
1157 \CJk@tenthousand
1158 \expandafter\expandafter\expandafter\HyPsd@CJkNumberFour
1159 \IntCalcMod#1!10000!%
1160 !\CJk@zero{10}%
1161 \@empty

```

```

1162 \else
1163 \expandafter\HyPsd@CJKnumberLarge
1164 \number\IntCalcDiv#1!100000000!\expandafter!%
1165 \number\IntCalcMod#1!100000000!!%
1166 \fi
1167 \fi
1168 \fi
1169 }
1170 \def\HyPsd@CJKnumberLarge#1!#2!{%
1171 \HyPsd@CJKnumberFour#1!#{20}%
1172 \CJK@hundredmillion
1173 \ifnum#2=\z@
1174 \else
1175 \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1176 \IntCalcDiv#2!10000!%
1177 !\CJK@zero{10}%
1178 \CJK@tenthousand
1179 \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1180 \IntCalcMod#2!10000!%
1181 !\CJK@zero{10}%
1182 \@empty
1183 \fi
1184 }
1185 \def\HyPsd@CJKnumberFour#1!#2#3{%
1186 \ifnum#1=\z@
1187 \expandafter\@gobble
1188 \else
1189 \ifnum#1<1000 %
1190 #2%
1191 \HyPsd@CJKnumberThree#1!#{3}%
1192 \else
1193 \HyPsd@@@CJKnumber{\IntCalcDiv#1!1000!}%
1194 \CJK@thousand
1195 \expandafter\expandafter\expandafter\HyPsd@CJKnumberThree
1196 \IntCalcMod#1!1000!%
1197 !\CJK@zero{10}%
1198 \fi
1199 \fi
1200 }
1201 \def\HyPsd@CJKnumberThree#1!#2#3{%
1202 \ifnum#1=\z@
1203 \else
1204 \ifnum#1<100 %
1205 #2%
1206 \HyPsd@CJKnumberTwo#1!#{3}%
1207 \else
1208 \HyPsd@@@CJKnumber{\IntCalcDiv#1!100!}%
1209 \CJK@hundred
1210 \expandafter\expandafter\expandafter\HyPsd@CJKnumberTwo
1211 \IntCalcMod#1!100!%
1212 !\CJK@zero{10}%
1213 \fi
1214 \fi
1215 }

```

```

1216 \def\HyPsd@CJKnumberTwo#1!#2#3{%
1217   \ifnum#1=\z@
1218   \else
1219     \ifnum#1<#3 %
1220       #2%
1221       \HyPsd@@@CJKnumber{#1}%
1222     \else
1223       \HyPsd@@@CJKnumber{\IntCalcDiv#1!10!}%
1224       \CJK@ten
1225       \ifnum\IntCalcMod#1!10!=\z@
1226       \else
1227         \HyPsd@@@CJKnumber{\IntCalcMod#1!10!}%
1228       \fi
1229     \fi
1230   \fi
1231 }

1232 \def\HyPsd@CJKdigits#1{%
1233   \ifx*#1\relax
1234     \expandafter\HyPsd@@@CJKdigits\expandafter\CJK@zero
1235   \else
1236     \HyPsd@@@CJKdigits\CJK@null{#1}%
1237   \fi
1238 }

1239 \def\HyPsd@@@CJKdigits#1#2{%
1240   \ifx\#2\%
1241   \else
1242     \HyPsd@@@@CJKdigits#1#2\@nil
1243   \fi
1244 }%

1245 \def\HyPsd@@@@CJKdigits#1#2#3\@nil{%
1246   \HyPsd@CJKdigit#1{#2}%
1247   \ifx\#3\%
1248     \expandafter\@gobble
1249   \else
1250     \expandafter\@firstofone
1251   \fi
1252 }%

1253   \HyPsd@@@@CJKdigits#1#3\@nil
1254 }%
1255 }

1256 \def\HyPsd@CJKdigit#1#2{%
1257   \ifcase#2 %
1258     #1\or
1259     \CJK@one\or\CJK@two\or\CJK@three\or\CJK@four\or
1260     \CJK@five\or\CJK@six\or\CJK@seven\or\CJK@eight\or\CJK@nine
1261   \fi
1262 }

```

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 L^AT_EX 2_ε versions

[1998/06/01] and [1998/12/01]. I expect that versions below [1995/12/01] don't work.

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

```

\def\@current@cmd#1{%
  \ifx\protect\@typeset@protect
    \@inmathwarn#1%
  \else
    \noexpand#1\expandafter\@gobble
  \fi}
\def\@changed@cmd#1#2{%
  \ifx\protect\@typeset@protect
    \@inmathwarn#1%
    \expandafter\ifx\csname\cf@encoding\string#1\endcsname\relax
      \expandafter\ifx\csname?\string#1\endcsname\relax
        \expandafter\def\csname?\string#1\endcsname{%
          \TextSymbolUnavailable#1%
        }%
      \fi
      \global\expandafter\let
        \csname\cf@encoding\string#1\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}

1263 \def\HyPsd@inmathwarn#1#2{%
1264   \ifx#2\expandafter
1265     \expandafter\ifx\csname\cf@encoding\string#1\endcsname\relax
1266       \HyPsd@GLYPHERR
1267       \expandafter\@gobble\string#1%
1268       >%
1269       \expandafter\expandafter\expandafter\HyPsd@EndWithElse
1270     \else
1271       \expandafter\expandafter\expandafter\HyPsd@GobbleFiFi
1272     \fi
1273   \else
1274     \expandafter#2%
1275   \fi
1276 }
1277 \def\HyPsd@GobbleFiFi#1\fi#2\fi{}
```

```
1278 \def\HyPsd@EndWithElse#1\else{\else}
```

\HyPsd@add@accent

```
1279 \def\HyPsd@add@accent#1#2{%
1280 \HyPsd@GLYPHERR\expandafter\@gobble\string#1+\string#2>%
1281 #2%
1282 }%
```

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.

```
1283 \def\HyPsd@LetUnexpandableSpace#1{%
1284 \expandafter\futurelet\expandafter#1\expandafter\@gobble\space\relax
1285 }
```

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

```
1286 \HyPsd@LetUnexpandableSpace\HyPsd@UnexpandableSpace
```

6.5.8 Marker for commands

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

```
1287 \edef\HyPsd@XSPACE{\string#\string X}
1288 \edef\HyPsd@ITALCORR{\string#\string I}
1289 \edef\HyPsd@GLYPHERR{\string#\string G}
```

6.5.9 \hspace fix

\HyPsd@hspace

```
1290 \def\HyPsd@hspace#1{\HyPsd@@hspace#1*\END}
```

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

```
1291 \def\HyPsd@@hspace#1*#2\END{%
1292 \ifx\#2\%
1293 \HyPsd@hspacetest{#1}%
1294 \else
1295 \expandafter\HyPsd@hspacetest
1296 \fi
1297 }
```

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

```
1298 \def\HyPsd@hspacetest#1{\ifdim\dimexpr#1\relax>\z@\space\fi}
```

6.5.10 Fix for AMS classes

```

1299 \ltx@ifundefined{tocsection}{%
1300   \let\HyPsd@AMSclassfix\relax
1301 }{%
1302   \def\HyPsd@AMSclassfix{%
1303     \let\tocpart\HyPsd@tocsection
1304     \let\tocchapter\HyPsd@tocsection
1305     \let\tocappendix\HyPsd@tocsection
1306     \let\tocsection\HyPsd@tocsection
1307     \let\tocsubsection\HyPsd@tocsection
1308     \let\tocsubsubsection\HyPsd@tocsection
1309     \let\tocparagraph\HyPsd@tocsection
1310   }%
1311   \def\HyPsd@tocsection#1#2#3{%
1312     \if @#2@ \else \if @#1@ \else #1 \fi #2. \fi
1313     #3%
1314   }%
1315 }

```

6.5.11 Reference commands

`\HyPsd@href`

```

1316 \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.

```

1317 \def\HyPsd@ref#1{\HyPsd@@ref#1*\END}%

```

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

```

1318 \def\HyPsd@@ref#1*#2\END{%
1319   \ifx\#2\%
1320     \HyPsd@@@ref{#1}%
1321   \else
1322     \expandafter\HyPsd@@@ref
1323   \fi
1324 }%

```

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

```

1325 \def\HyPsd@@@ref#1{%
1326   \expandafter\ifx\csname r@#1\endcsname\relax
1327     ??%
1328   \else
1329     \expandafter\expandafter\expandafter
1330     \@car\csname r@#1\endcsname\@nil
1331   \fi
1332 }

```

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

```

1333 \def\HyPsd@pageref#1{\HyPsd@@pageref#1*\END}

```

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

```

1334 \def\HyPsd@@pageref#1*#2\END{%

```

```

1335 \ifx\|#2\|%
1336 \HyPsd@@@pageref{#1}%
1337 \else
1338 \expandafter\HyPsd@@@pageref
1339 \fi
1340 }

```

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

```

1341 \def\HyPsd@@@pageref#1{%
1342 \expandafter\ifx\csname r@#1\endcsname\relax
1343 ??%
1344 \else
1345 \expandafter\expandafter\expandafter\expandafter
1346 \expandafter\expandafter\expandafter\@car
1347 \expandafter\expandafter\expandafter\@gobble
1348 \csname r@#1\endcsname{}\@nil
1349 \fi
1350 }

```

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

```

1351 \def\HyPsd@nameref#1{\HyPsd@@nameref#1*\END}

```

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

```

1352 \def\HyPsd@@nameref#1*#2\END{%
1353 \ifx\|#2\|%
1354 \HyPsd@@@nameref{#1}%
1355 \else
1356 \expandafter\HyPsd@@@nameref
1357 \fi
1358 }

```

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

```

1359 \def\HyPsd@@@nameref#1{%
1360 \expandafter\ifx\csname r@#1\endcsname\relax
1361 ??%
1362 \else
1363 \expandafter\expandafter\expandafter\expandafter
1364 \expandafter\expandafter\expandafter\@car
1365 \expandafter\expandafter\expandafter\@gobbletwo
1366 \csname r@#1\endcsname{}\@nil
1367 \fi
1368 }

```

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

```

1369 \def\HyPsd@autoref#1{\HyPsd@@autoref#1*\END}

```

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

```

1370 \def\HyPsd@@autoref#1*#2\END{%
1371 \ifx\|#2\|%
1372 \HyPsd@@@autoref{#1}%
1373 \else

```

```

1374 \expandafter\HyPsd@@@autoref
1375 \fi
1376 }

```

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

```

1377 \def\HyPsd@@@autoref#1{%
1378 \expandafter\ifx\csname r@#1\endcsname\relax
1379 ??%
1380 \else
1381 \expandafter\expandafter\expandafter\HyPsd@autorefname
1382 \csname r@#1\endcsname\}\}\}\}\@nil
1383 \expandafter\expandafter\expandafter
1384 \@car\csname r@#1\endcsname\@nil
1385 \fi
1386 }

```

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

```

1387 \def\HyPsd@autorefname#1#2#3#4#5\@nil{%
1388 \ifx\#4\%
1389 \else
1390 \HyPsd@@autorefname#4.\@nil
1391 \fi
1392 }

```

`\HyPsd@@autorefname`

```

1393 \def\HyPsd@@autorefname#1.#2\@nil{%
1394 \ltx@ifundefined{#1autorefname}{%
1395 \ltx@ifundefined{#1name}{%
1396 }{%
1397 \csname#1name\endcsname\space
1398 }%
1399 }{%
1400 \csname#1autorefname\endcsname\space
1401 }%
1402 }

```

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 1403 \begingroup
1404   \def\x#1#2{%
1405     \endgroup
1406     \let#1\def
1407     \def\HyPsd@DefCommand##1##2###{%
1408       #1%
1409       \expandafter\noexpand
1410       \csname\expandafter\@gobble\string##1\@empty\endcsname
1411       \@gobble
1412     }%
1413     \let#2\let
1414     \def\HyPsd@@LetCommand##1{%
1415       \expandafter\ifx\csname##1\expandafter\endcsname
1416         \csname iftrue\endcsname
1417         \pdfstringdefWarn\let
1418         \expandafter\@gobble
1419       \else
1420         \expandafter\ifx\csname##1\expandafter\endcsname
1421           \csname iffalse\endcsname
1422           \pdfstringdefWarn\let
1423           \expandafter\expandafter\expandafter\@gobble
1424         \else
1425           #2%
1426           \expandafter\noexpand
1427           \csname##1\expandafter\expandafter\expandafter\endcsname
1428         \fi
1429       \fi
1430     }%
1431   }%
1432   \expandafter\x\csname <def>-command\expandafter\endcsname
1433     \csname <let>-command\endcsname
1434   \def\HyPsd@LetCommand#1{%
1435     \expandafter\expandafter\expandafter\HyPsd@@LetCommand
1436     \expandafter\expandafter\expandafter{%
1437       \expandafter\@gobble\string#1\@empty
1438     }%
1439   }

```

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).

```
1440 \def\HyPsd@ifnextchar#1{%
1441   \pdfstringdefWarn#1%
1442   \expandafter\@gobbletwo\@gobble
1443 }
```

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`.

```
1444 \def\HyPsd@protected@testopt#1{%
1445   \pdfstringdefWarn#1%
1446   \@gobbletwo
1447 }
```

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:

```
1448 \def\HyPsd@Warning#1{%
1449   \begingroup
1450   \let\space\ltx@space
1451   \Hy@Warning{#1}%
1452   \endgroup
1453 }
```

6.6.2 Protecting spaces

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

```
1454 \let\HyPsd@fi\fi
```

```

1455 \def\HyPsd@ProtectSpaces#1{%
1456   \xdef#1{%
1457     \iftrue
1458       \expandafter\HyPsd@@ProtectSpacesFi
1459       \expandafter|\expandafter\@empty#1| %
1460     \HyPsd@fi
1461   }%
1462   \expandafter\HyPsd@RemoveMask#1\HyPsd@End#1%
1463 }%

```

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

```

1464 \def\HyPsd@@ProtectSpacesFi#1 #2\HyPsd@fi{%
1465   \fi
1466   \unexpanded{#1}%
1467   \ifx\scrollmode#2\scrollmode
1468   \else
1469     \HyPsd@@ProtectSpacesFi\HyPsd@UnexpandableSpace#2%
1470   \HyPsd@fi
1471 }%

```

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.

```

1472 \def\HyPsd@RemoveMask|#1|\HyPsd@End#2{%
1473   \xdef#2{\unexpanded\expandafter{#1}}%
1474 }%

```

6.6.3 Remove grouping braces

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

```

1475 \def\HyPsd@RemoveBraces#1{%
1476   \ifx\scrollmode#1\scrollmode
1477   \else
1478     \HyPsd@@RemoveBracesFi#1\HyPsd@End{#1}%
1479   \fi
1480 }

```

`\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`.

```

1481 \def\HyPsd@@RemoveBracesFi#1#2\HyPsd@End#3\fi{%

```

```

1482 \fi
1483 \def\Hy@temp@A{#1#2}%
1484 \def\Hy@temp@B{#3}%
1485 \ifx\Hy@temp@A\Hy@temp@B
1486 \expandafter\def\expandafter\HyPsd@String\expandafter{%
1487 \HyPsd@String#1%
1488 }%
1489 \ifx\scrollmode#2\scrollmode
1490 \else
1491 \Hy@ReturnAfterFiFiEnd{%
1492 \HyPsd@RemoveBraces{#2}%
1493 }%
1494 \fi
1495 \else
1496 \def\Hy@temp@A{#1}%
1497 \HyPsd@AppendItalcrr\HyPsd@String
1498 \ifx\Hy@temp@A\@empty
1499 \Hy@ReturnAfterElseFiFiEnd{%
1500 \HyPsd@RemoveBraces{#2}%
1501 }%
1502 \else
1503 \HyPsd@ProtectSpaces\Hy@temp@A
1504 \HyPsd@AppendItalcrr\Hy@temp@A
1505 \Hy@ReturnAfterFiFiEnd{%
1506 \expandafter\HyPsd@RemoveBraces\expandafter
1507 {\Hy@temp@A#2}%
1508 }%
1509 \fi
1510 \fi
1511 \Hy@ReturnEnd
1512 }

```

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

```

1513 \def\HyPsd@AppendItalcrr#1{%
1514 \expandafter\HyPsd@@AppendItalcrr\expandafter{\/#1%
1515 }
1516 \def\HyPsd@@AppendItalcrr#1#2{%
1517 \expandafter\def\expandafter#2\expandafter{#2#1}%
1518 }

```

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>.

```

1519 \ltx@ifundefined{directlua}{%
1520 }{%
1521 \expandafter\ifx\csname\endcsname\relax\fi
1522 }

```

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`.

```

1523 \begingroup
1524 \catcode`\Q=\active
1525 \let Q\ltx@empty
1526 \gdef\HyPsd@CheckCatcodes#1#2\HyPsd@end{%
1527 \global\let\HyPsd@Rest\relax
1528 \ifcat\relax\noexpand#1\relax
1529 \ifx#1\protect
1530 \else
1531 \ifx#1\penalty
1532 \setbox\z@=\hbox{%
1533 \afterassignment\HyPsd@AfterCountRemove
1534 \count@=#2\HyPsd@end
1535 }%
1536 \else
1537 \ifx#1\kern
1538 \setbox\z@=\hbox{%
1539 \afterassignment\HyPsd@AfterDimenRemove
1540 \dimen@=#2\HyPsd@end
1541 }%
1542 \else
1543 \ifx#1\hskip
1544 \setbox\z@=\hbox{%
1545 \afterassignment\HyPsd@AfterSkipRemove
1546 \skip@=#2\HyPsd@end
1547 }%
1548 \else
1549 \HyPsd@CatcodeWarning{#1}%
1550 \fi
1551 \fi
1552 \fi
1553 \fi
1554 \else
1555 \ifcat\noexpand#1\noexpandQ% active character
1556 \expandafter\expandafter\expandafter\def
1557 \expandafter\expandafter\expandafter\HyPsd@String
1558 \expandafter\expandafter\expandafter{%
1559 \expandafter\HyPsd@String\string#1%
1560 }%
1561 \else
1562 \ifcat#1A% letter
1563 \expandafter\def\expandafter\HyPsd@String\expandafter{%

```

```

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

```

Remove counts, dimens, skips.

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

```

1613 \def\HyPsd@AfterCountRemove#1\HyPsd@End{%

```

```

1614 \gdef\HyPsd@Rest{#1}%
1615 }

```

`\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.

```

1616 \def\HyPsd@AfterDimenRemove#1\HyPsd@end{%
1617 \ifdim\ifx\HyPsd@String\@empty\z@\else\dimen@>1ex %
1618 \HyPsd@ReplaceSpaceWarning{\string\kern\space\the\dimen@}%
1619 \gdef\HyPsd@Rest{\HyPsd@UnexpandableSpace #1}%
1620 \else
1621 \ifdim\dimen@=\z@
1622 \else
1623 \HyPsd@RemoveSpaceWarning{\string\kern\space\the\dimen@}%
1624 \fi
1625 \gdef\HyPsd@Rest{#1}%
1626 \fi
1627 }

```

`\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).

```

1628 \def\HyPsd@AfterSkipRemove#1\HyPsd@end{%
1629 \ifdim\ifx\HyPsd@String\@empty\z@\else\skip@>1ex %
1630 \HyPsd@ReplaceSpaceWarning{\string\hskip\space\the\skip@}%
1631 \gdef\HyPsd@Rest{\HyPsd@UnexpandableSpace #1}%
1632 \else
1633 \ifdim\skip@=\z@
1634 \else
1635 \HyPsd@RemoveSpaceWarning{\string\kern\space\the\skip@}%
1636 \fi
1637 \gdef\HyPsd@Rest{#1}%
1638 \fi
1639 }

```

Catcode warnings.

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

```

1640 \def\HyPsd@CatcodeWarning#1{%
1641 \HyPsd@Warning{%
1642 Token not allowed in a PDF string (%)
1643 \ifHy@unicode
1644 Unicode%
1645 \else
1646 PDFDocEncoding%
1647 \fi
1648 }:%
1649 \MessageBreak removing ``\HyPsd@RemoveCmdPrefix#1'%
1650 }%
1651 }
1652 \begingroup
1653 \catcode`\|=0 %
1654 \catcode`\|=12 %

```

```

1655 |gdef|HyPsd@RemoveCmdPrefix#1{%
1656   |expandafter|HyPsd@@RemoveCmdPrefix
1657   |string#1|@empty\<>-|@empty|@empty
1658 }%
1659 |gdef|HyPsd@@RemoveCmdPrefix#1\<>-#2|@empty#3|@empty{#1#2}%
1660 |endgroup

```

\HyPsd@RemoveSpaceWarning

```

1661 \def\HyPsd@RemoveSpaceWarning#1{%
1662   \HyPsd@Warning{%
1663     Token not allowed in a PDF string (%)
1664     \ifHy@unicode
1665       Unicode%
1666     \else
1667       PDFDocEncoding%
1668     \fi
1669   }:%
1670   \MessageBreak #1\MessageBreak
1671   removed%
1672 }%
1673 }

```

\HyPsd@ReplaceSpaceWarning

```

1674 \def\HyPsd@ReplaceSpaceWarning#1{%
1675   \HyPsd@Warning{%
1676     Token not allowed in a PDF string (%)
1677     \ifHy@unicode
1678       Unicode%
1679     \else
1680       PDFDocEncoding%
1681     \fi
1682   }:%
1683   \MessageBreak #1\MessageBreak
1684   replaced by space%
1685 }%
1686 }

```

6.6.5 Check for wrong glyphs

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

```

1687 \def\HyPsd@GlyphProcess#1\relax#2\@empty{%
1688   \expandafter\def\expandafter\HyPsd@String\expandafter{%
1689     \HyPsd@String#1%
1690   }%
1691   \ifx\#2\%
1692   \else
1693     \ltx@ReturnAfterFi{%
1694       \HyPsd@GlyphProcessWarning#2\@empty
1695     }%
1696   \fi
1697 }
1698 \def\HyPsd@GlyphProcessWarning#1>#2\@empty{%
1699   \HyPsd@@GlyphProcessWarning#1++>%

```



```

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

```

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`.

```

1718 \def\HyPsd@spaceopti#1{ % first space
1719 \ifx\HyPsd@spaceopti#1%
1720 \040%
1721 \else
1722 #1%
1723 \fi
1724 }%

```

6.6.6 Replacing tokens

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

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

```

1725 \def\HyPsd@Subst#1#2#3{%
1726 \def\HyPsd@@ReplaceFi##1#1##2\END\fi{%
1727 \fi
1728 ##1%
1729 \ifx\scrollmode##2\scrollmode
1730 \else
1731 #2%
1732 \HyPsd@@ReplaceFi##2\END
1733 \fi
1734 }%
1735 \xdef#3{%
1736 \iftrue

```

```

1737 \expandafter\HyPsd@@ReplaceFi#3#1\END
1738 \fi
1739 }%
1740 }

```

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

```

1741 \def\HyPsd@StringSubst#1{%
1742 \expandafter\HyPsd@Subst\expandafter{\string#1}%
1743 }

```

`\HyPsd@EscapeTeX`

```

1744 \begingroup
1745 \lccode`\!=`\%%
1746 \lccode`\|=`\%%
1747 \lccode`\(=\`\{%
1748 \lccode`\)=`\}%
1749 \lccode`0=\ltx@zero
1750 \lccode`1=\ltx@zero
1751 \lccode`3=\ltx@zero
1752 \lccode`4=\ltx@zero
1753 \lccode`5=\ltx@zero
1754 \lccode`7=\ltx@zero
1755 \lowercase{\endgroup
1756 \def\HyPsd@EscapeTeX#1{%
1757 \HyPsd@Subst!{|045}#1%
1758 \HyPsd@Subst({|173}#1%
1759 \HyPsd@Subst){|175}#1%
1760 }%
1761 }

```

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.

```

1762 \def\HyPsd@doxspace#1{%
1763 \ifx#1\relax\else
1764 \ifx#1.\else
1765 \ifx#1:\else
1766 \ifx#1,\else
1767 \ifx#1;\else
1768 \ifx#1!\else
1769 \ifx#1?\else
1770 \ifx#1/\else
1771 \ifx#1-\else
1772 \ifx#1'\else
1773 \HyPsd@SPACEOPTI
1774 \fi
1775 \fi
1776 \fi
1777 \fi

```

```

1778     \fi
1779     \fi
1780     \fi
1781     \fi
1782     \fi
1783     \fi
1784     #1%
1785 }%

```

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.

```

1786 \begingroup
1787   \catcode`\|=0 %
1788   \catcode`\|=12 %

```

\HyPsd@ConvertToUnicode

```

1789 |gdef|HyPsd@ConvertToUnicode#1{%
1790   |xdef#1{%
1791     |expandafter|HyPsd@DoConvert#1|@empty|@empty|@empty
1792   }%
1793   |ifx#1|@empty
1794   |else
1795     |xdef#1{%
1796       \376\377%
1797       #1%
1798     }%
1799   |fi
1800 }%

```

\HyPsd@DoConvert

```

1801 |gdef|HyPsd@DoConvert#1{%
1802   |ifx#1|@empty
1803   |else
1804     |ltx@ReturnAfterFi{%
1805       |ifx#1\%%
1806       \%%
1807       |expandafter|HyPsd@DoEscape
1808     |else
1809       |HyPsd@Char{#1}%
1810     |expandafter|HyPsd@DoConvert
1811   |fi
1812 }%
1813 |fi
1814 }%

```

\HyPsd@DoEscape

```

1815 |gdef|HyPsd@DoEscape#1{%
1816   |ifx#19%
1817   |expandafter|HyPsd@GetTwoBytes
1818   |else

```

```

1819 |ltx@ReturnAfterFi{%
1820 |ifx#18%
1821 00%
1822 |expandafter|HyPsd@GetTwoBytes
1823 |else
1824 #1%
1825 |expandafter|HyPsd@GetOneByte
1826 |fi
1827 }%
1828 |fi
1829 }%

```

\HyPsd@GetTwoBytes

```

1830 |gdef|HyPsd@GetTwoBytes#1\#2#3#4{%
1831 #1\#2#3#4%
1832 |HyPsd@DoConvert
1833 }%

```

\HyPsd@GetOneByte

```

1834 |gdef|HyPsd@GetOneByte#1#2{%
1835 #1#2%
1836 |HyPsd@DoConvert
1837 }%
1838 |endgroup

```

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

```

1839 \def\HyPsd@GetNextTwoTokens#1#2#3\END#4{%
1840 \xdef#4{#4#1#2}%
1841 \HyPsd@@ConvertToUnicode#3\END#4%
1842 }

```

\HyPsd@Char

```

1843 \begingroup
1844 \catcode0=9 %
1845 \catcode`\^=7 %
1846 \catcode`\^^=12 %
1847 \def\x{~~~~0000}%
1848 \expandafter\endgroup
1849 \ifx\x\@empty
1850 \def\HyPsd@Char#1{%
1851 \ifnum`#1<128 %
1852 \@backslashchar 000#1%
1853 \else
1854 \ifnum`#1<65536 %
1855 \expandafter\HyPsd@CharTwoByte\number`#1!%
1856 \else
1857 \expandafter\expandafter\expandafter\HyPsd@CharSurrogate
1858 \intcalcSub{`#1}-{65536}!%
1859 \fi
1860 \fi
1861 }%
1862 \def\HyPsd@CharTwoByte#1!{%
1863 \expandafter\expandafter\expandafter\HyPsd@CharOctByte

```

```

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

```

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

```

1890 \ifcsname UTFviii@loop\endcsname
1891 \def\HyPsd@expand@utfvii{%
1892 \count@"C2
1893 \@tempcnta"F5
1894 \def\UTFviii@tmp{\expandafter\def\expandafter~\expandafter{~}}%
1895 \UTFviii@loop
1896 }
1897 \else
1898 \def\HyPsd@expand@utfvii{}
1899 \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

```

```

1900 \begingroup
1901 \lccode\~=\^^f4\relax
1902 \lowercase{\endgroup
1903 \def\HyPsd@UTFviii{%
1904   \HyPsd@expand@utfvii
1905   \let\UTFviii@two@octets\HyPsd@UTFviii@two
1906   \let\UTFviii@three@octets\HyPsd@UTFviii@three
1907   \let\UTFviii@four@octets\HyPsd@UTFviii@four
1908   \ifx~\HyPsd@UTFviii@ccxliv@undef
1909     \let~\HyPsd@UTFviii@ccxliv@def
1910   \fi
1911   \let\unichar\HyPsd@unichar
1912 }%
1913 }%
1914 \def\HyPsd@UTFviii@ccxliv@undef{\@inpenc@undefined@{utf8}}%
1915 \edef\HyPsd@UTFviii@ccxliv@def{%
1916   \noexpand\UTFviii@four@octets\string \^^f4%
1917 }%

```

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.

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

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

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

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

$$(5)$$

```

1918 \def\HyPsd@UTFviii@two#1#2{%
1919   \expandafter\HyPsd@UTFviii@@two
1920   \number\dimexpr.25\dimexpr`#1sp\expandafter\relax\expandafter|
1921   \number`#1\expandafter|
1922   \number\dimexpr.125\dimexpr`#2sp\expandafter\relax\expandafter|
1923   \number`#2 \@nil
1924 }%
1925 \def\HyPsd@UTFviii@@two#1|#2|#3|#4\@nil{%
1926   \expandafter\8%
1927   \number\numexpr #1-48\expandafter\relax
1928   \csname\number\numexpr #2-4*#1\relax\expandafter\endcsname
1929   \number\numexpr #3-8*%
1930   \number\dimexpr.125\dimexpr#3sp\relax\relax\expandafter\relax
1931   \number\numexpr #4-8*#3\relax
1932 }%

```

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)

```

1933 \def\HyPsd@UTFviii@three#1#2#3{%
1934 \expandafter\HyPsd@UTFviii@@three
1935 \number\dimexpr.25\dimexpr`#1sp\expandafter\relax\expandafter| %
1936 \number`#1\expandafter| %
1937 \number\ifnum\dimexpr`#2-128\relax <32 0\else 1\fi\expandafter| %
1938 \number\dimexpr.25\dimexpr`#2sp\expandafter\relax\expandafter| %
1939 \number`#2\expandafter| %
1940 \number\dimexpr.125\dimexpr`#3sp\expandafter\relax\expandafter| %
1941 \number`#3 \@nil
1942 }%
1943 \def\HyPsd@UTFviii@@three#1|#2|#3|#4|#5|#6|#7\@nil{%
1944 \expandafter\9%
1945 \number\dimexpr #1-56\expandafter\relax
1946 \number\dimexpr 2*(#2-4*#1)+#3\expandafter\relax
1947 \number\dimexpr #4 - 32 -\ifcase#3 0\else 8\fi\expandafter\relax
1948 \csname\number\dimexpr #5-4*#4\relax\expandafter\endcsname
1949 \number\dimexpr #6-16\expandafter\relax
1950 \number\dimexpr #7-8*#6\relax
1951 }%

```

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

```

```

1952 \def\HyPsd@UTFviii@four#1#2{%
1953 \expandafter\HyPsd@@UTFviii@four\number
1954 \dimexpr-1+(\`#1-240)*4+\dimexpr.0625\dimexpr`#2sp-128sp%
1955 \expandafter|\number
1956 \dimexpr`#2-16*\dimexpr.0625\dimexpr`#2sp| %
1957 }%
1958 \def\HyPsd@@UTFviii@four#1|#2|#3{%
1959 \933\number\dimexpr.25\dimexpr#1sp\relax\relax
1960 \csname\number\dimexpr#1-4*\dimexpr.25\dimexpr#1sp\endcsname
1961 \ifodd#2 %
1962 \number\dimexpr(#2-1)/2\relax
1963 \else
1964 \number\dimexpr#2/2\relax
1965 \fi
1966 \number\dimexpr\ifodd#2 4+\fi
1967 \dimexpr.0625\dimexpr`#3sp-128sp\relax\relax\relax
1968 \933%
1969 \expandafter\HyPsd@@@UTFviii@four\number
1970 \dimexpr`#3-16*\dimexpr.0625\dimexpr`#3sp| %
1971 }%
1972 \def\HyPsd@@@UTFviii@four#1|#2{%
1973 \number\dimexpr4+\dimexpr.25\dimexpr#1sp\relax\relax\relax
1974 \csname\number\dimexpr#1-4*\dimexpr.25\dimexpr#1sp\endcsname
1975 \number\dimexpr.125\dimexpr`#2sp-128sp\relax\relax

```

```

1976 \number\numexpr`#2-8*\dimexpr.125\dimexpr`#2sp\relax\relax\relax
1977 }%

```

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

```

1978 \def\HyPsd@unichar#1{%
1979 \ifHy@unicode
1980 \ifnum#1>"10FFFF %
1981 \HyPsd@UnicodeReplacementCharacter % illegal
1982 \else
1983 \ifnum#1>"FFFF %

```

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

```

1984 \expandafter\HyPsd@unichar\expandafter{%
1985 \number\numexpr 55296+%
1986 \dimexpr.0009765625\dimexpr\number#1sp-\p@
1987 \relax\relax\relax
1988 }%

```

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

```

1989 \expandafter\HyPsd@unichar\expandafter{%
1990 \number\numexpr#1-9216%
1991 -1024*\dimexpr.0009765625\dimexpr\number#1sp-\p@
1992 \relax\relax\relax
1993 }%
1994 \else
1995 \ifnum#1>"7FFF %
1996 \9%
1997 \expandafter\HyPsd@unichar@first@byte\expandafter{%
1998 \number
1999 \dimexpr.00390625\dimexpr\number#1sp\relax\relax
2000 }%
2001 \else
2002 \8%
2003 \number\dimexpr.00390625\dimexpr\number#1sp\relax\relax
2004 \fi
2005 \expandafter\HyPsd@unichar@second@byte\expandafter{%
2006 \number
2007 \numexpr#1-256*\number
2008 \dimexpr.00390625\dimexpr\number#1sp\relax\relax\relax
2009 }%
2010 \fi
2011 \fi
2012 \else
2013 .% unsupported (Unicode -> PDF Doc Encoding)
2014 \fi
2015 }%
2016 \def\HyPsd@UnicodeReplacementCharacter{\9377\375}%
2017 \def\HyPsd@unichar@first@byte#1{%
2018 \number\dimexpr.015625\dimexpr#1sp\relax\relax
2019 \expandafter\HyPsd@unichar@octtwo\expandafter{%
2020 \number
2021 \numexpr#1-64*\number\dimexpr.015625\dimexpr#1sp%
2022 \relax\relax\relax
2023 }%

```



```

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

```

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

```

2038 \def\HyPsd@utf@viii@undeferr#1#2#3#4#5#6{%
2039   \ifx\@gobble#1%
2040   \else
2041     [Please insert \textbackslash PrerenderUnicode%
2042     \textbraceleft#1\textbraceright\space
2043     into preamble]%
2044   \fi
2045 }%

```

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.

```

2046 \def\HyPsd@DieFace#1{%
2047   \ifHy@unicode
2048   \ifnum#1<1 %
2049     \HyPsd@UnicodeReplacementCharacter
2050   \else
2051     \ifnum#1>6 %
2052       \9046\205%
2053       \expandafter\expandafter\expandafter
2054       \HyPsd@DieFaceLarge\intcalcSub{#1}{6}!%
2055     \else
2056       \9046\20\intcalcDec{#1}%
2057     \fi
2058   \fi
2059 \else
2060   .% Die faces are not part of PDFDocEncoding
2061 \fi
2062 }

```

\HyPsd@DieFaceLarge

```
2063 \def\HyPsd@DieFaceLarge#1!{%
2064   \ifnum#1>6 %
2065     \expandafter\ltx@firstoftwo
2066   \else
2067     \expandafter\ltx@secondoftwo
2068   \fi
2069   {%
2070     \9046\205%
2071     \expandafter\expandafter\expandafter
2072     \HyPsd@DieFaceLarge\IntCalcSub#1!6!!%
2073   }{%
2074     \9046\20\IntCalcDec#1!%
2075   }%
2076 }
```

6.6.11 Support for moon phases of package china2e

```
2077 \def\HyPsd@MoonPha#1{%
2078   \ifcase\intcalcNum{#1} %
2079     \HyPsd@UnicodeReplacementCharacter
2080   \or % 1
2081   % U+1F31A NEW MOON WITH FACE; \MoonPha{1} (china2e)
2082   \9330\074\9337\032%
2083   \or % 2
2084   \HyPsd@UnicodeReplacementCharacter
2085   \or % 3
2086   % U+1F31D FULL MOON WITH FACE; \MoonPha{3} (china2e)
2087   \9330\074\9337\035%
2088   \or % 4
2089   % U+1F31C LAST QUARTER MOON WITH FACE; \MoonPha{4} (china2e)
2090   \9330\074\9337\034%
2091   \else
2092     \HyPsd@UnicodeReplacementCharacter
2093   \fi
2094 }
2095 %* \HyPsd@MoonPha -> \MoonPha
```

6.6.12 Support for package pifont

\HyPsd@ding

```
2096 \def\HyPsd@ding#1{%
2097   \ifHy@unicode
2098     \ifnum#1<32 %
2099       \HyPsd@UnicodeReplacementCharacter
2100     \else
2101       \ifnum#1>254 %
2102         \HyPsd@UnicodeReplacementCharacter
2103       \else
2104         \ifnum#1<127 %
2105           \expandafter\expandafter\expandafter
2106           \HyPsd@@@ding\intcalcNum{#1}!%
2107         \else
2108           \ifnum#1>160 %
```

```

2109         \expandafter\expandafter\expandafter
2110         \HyPsd@@ding\intcalcNum{#1}!%
2111     \else
2112         \HyPsd@UnicodeReplacementCharacter
2113     \fi
2114 \fi
2115 \fi
2116 \fi
2117 \else
2118     .% Dingbats are not part of PDFDocEncoding
2119 \fi
2120 }

```

\HyPsd@@ding

```

2121 \def\HyPsd@@ding#1!{%
2122     \ltx@ifundefined{HyPsd@ding@#1}{%
2123         \ifnum#1<127 %
2124             \9047%
2125             \HyPsd@DecimalToOctalSecond{\IntCalcSub#1!32!}%
2126         \else
2127             \ifnum#1<168 %
2128                 \9047\14\IntCalcSub#1!160!%
2129             \else
2130                 \ifnum#1>181 %
2131                     \9047\HyPsd@DecimalToOctalSecond{\IntCalcSub#1!64!}%
2132                 \else
2133                     % 172..181 -> U+2460..U+2469
2134                     \9044\HyPsd@DecimalToOctalSecond{\IntCalcSub#1!76!}%
2135                 \fi
2136             \fi
2137         \fi
2138     }{%
2139         \csname HyPsd@ding@#1\endcsname
2140     }%
2141 }

2142 \@namedef{HyPsd@ding@32}{\space}
2143 % U+260E BLACK TELEPHONE
2144 \@namedef{HyPsd@ding@37}{\9046\016}% U+260E
2145 % U+261B BLACK RIGHT POINTING INDEX
2146 \@namedef{HyPsd@ding@42}{\9046\033}% U+261B
2147 % U+261E WHITE RIGHT POINTING INDEX
2148 \@namedef{HyPsd@ding@43}{\9046\036}% U+261E
2149 % U+2605 BLACK STAR
2150 \@namedef{HyPsd@ding@72}{\9046\005}% U+2605
2151 % U+25CF BLACK CIRCLE
2152 \@namedef{HyPsd@ding@108}{\9045\317}% U+25CF
2153 % U+25A0 BLACK SQUARE
2154 \@namedef{HyPsd@ding@110}{\9045\240}% U+25A0
2155 % U+25B2 BLACK UP-POINTING TRIANGLE
2156 \@namedef{HyPsd@ding@115}{\9045\262}% U+25B2
2157 % U+25BC BLACK DOWN-POINTING TRIANGLE
2158 \@namedef{HyPsd@ding@116}{\9045\274}% U+25BC
2159 % U+25C6 BLACK DIAMOND

```

```

2160 \@namedef{HyPsd@ding@117}{\9045\306}% U+25C6
2161 % U+25D7 RIGHT HALF BLACK CIRCLE
2162 \@namedef{HyPsd@ding@119}{\9045\327}% U+25D7
2163 \@namedef{HyPsd@ding@168}{\textclubsuitblack}%
2164 \@namedef{HyPsd@ding@169}{\textdiamondsuitblack}%
2165 \@namedef{HyPsd@ding@170}{\textheartsuitblack}%
2166 \@namedef{HyPsd@ding@171}{\textspadesuitblack}%
2167 \@namedef{HyPsd@ding@213}{\textrightarrow}%
2168 \@namedef{HyPsd@ding@214}{\textleftarrow}%
2169 \@namedef{HyPsd@ding@215}{\textupdownarrow}%
2170 \@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.

```

2171 \@ifpackageloaded{subfigure}{%
2172   \ltx@ifundefined{sub@label}{%
2173     \Hy@hypertextnamesfalse
2174   }{%
2175     \renewcommand*{\sub@label}[1]{%
2176       \@bsphack
2177       \subfig@oldlabel{#1}%
2178       \if@filesw
2179         \begingroup
2180           \edef\@currentlabstr{%
2181             \expandafter\strip@prefix\meaning\@currentlabelname
2182           }%
2183           \protected@write\@auxout{}{%
2184             \string\newlabel{sub@#1}{%
2185               {\@nameuse{@@thesub\@capttype}}%
2186               {\thepage}%
2187             }%
2188             \expandafter\strip@period\@currentlabstr
2189             \relax.\relax\@@@%
2190           }%
2191           {\@currentHref}%
2192           {}%
2193         }%
2194       }%
2195     \endgroup
2196   \fi
2197   \@esphack
2198 }%
2199 }%
2200 }{}

```

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:

```

2201 \ltx@ifundefined{XR@addURL}{%
2202 }{%

```

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.

```

2203 \def\XR@addURL#1{\XR@@dURL#1{}{}{}\\}%
2204 \def\XR@@dURL#1#2#3#4#5\\{%
2205   {#1}{#2}%
2206   \if!#4!%
2207   \else
2208     {#3}{#4}{\XR@URL}%
2209   \fi
2210 }%
2211 }

2212 \def\Hy@true{true}
2213 \def\Hy@false{false}

```

Providing dummy definitions.

```

2214 \let\literalps@out\@gobble
2215 \newcommand\pdfbookmark[3]{}
2216 \def\Acrobatmenu#1#2{\leavevmode#2}
2217 \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

```

2218 \let\HyperRaiseLinkHook\@empty
2219 \def\HyperRaiseLinkDefault{\baselineskip}

```

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

```

2220 \newcount\Hy@SavedSpaceFactor
2221 \def\Hy@SaveSpaceFactor{%
2222   \global\Hy@SavedSpaceFactor=\ifhmode\spacefactor\else\z@
2223 }
2224 \def\Hy@RestoreSpaceFactor{%
2225   \relax
2226   \ifhmode
2227     \ifnum\Hy@SavedSpaceFactor>\z@
2228       \spacefactor=\Hy@SavedSpaceFactor
2229     \fi
2230   \fi
2231 }

```

```

2232 \def\Hy@SaveSavedSpaceFactor{%
2233 \edef\Hy@RestoreSavedSpaceFactor{%
2234 \global\Hy@SavedSpaceFactor=\the\Hy@SavedSpaceFactor\relax
2235 }%
2236 }
2237 \def\Hy@raisedlink#1{%
2238 \ifvmode
2239 #1%
2240 \else
2241 \Hy@SaveSpaceFactor
2242 \penalty\@M
2243 \smash{%
2244 \begingroup
2245 \let\HyperRaiseLinkLength\@tempdima
2246 \setlength\HyperRaiseLinkLength\HyperRaiseLinkDefault
2247 \HyperRaiseLinkHook
2248 \expandafter\endgroup
2249 \expandafter\raise\the\HyperRaiseLinkLength\hbox{%
2250 \Hy@RestoreSpaceFactor
2251 #1%
2252 \Hy@SaveSpaceFactor
2253 }%
2254 }%
2255 \Hy@RestoreSpaceFactor
2256 \fi
2257 }

```

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

```

\Hy@RestoreLastskip
2258 \def\Hy@SaveLastskip{%
2259 \let\Hy@RestoreLastskip\relax
2260 \ifvmode
2261 \ifdim\lastskip=\z@
2262 \ifnum\lastnodetype=1 %
2263 \let\Hy@RestoreLastskip\relax
2264 \else
2265 \let\Hy@RestoreLastskip\nobreak
2266 \fi
2267 \else
2268 \begingroup
2269 \skip@=-\lastskip
2270 \edef\x{%
2271 \endgroup
2272 \def\noexpand\Hy@RestoreLastskip{%
2273 \noexpand\ifvmode
2274 \noexpand\nobreak
2275 \vskip\the\skip@
2276 \vskip\the\lastskip\relax
2277 \noexpand\fi
2278 }%
2279 }%
2280 \x
2281 \fi
2282 \else
2283 \ifhmode

```

```

2284 \ifdim\lastskip=\z@
2285 \let\Hy@RestoreLastskip\nobreak
2286 \else
2287 \begingroup
2288 \skip@=-\lastskip
2289 \edef\x{%
2290 \endgroup
2291 \def\noexpand\Hy@RestoreLastskip{%
2292 \noexpand\ifhmode
2293 \noexpand\nobreak
2294 \hskip\the\skip@
2295 \hskip\the\lastskip\relax
2296 \noexpand\fi
2297 }%
2298 }%
2299 \x
2300 \fi
2301 \fi
2302 \fi
2303 }%

```

9 Options

```

2304 \SetupKeyvalOptions{%
2305 family=Hyp,%
2306 prefix=HyOpt%
2307 }

```

9.1 Help macros

Package like hyperxmp want to retrieve the value of keys like `pdfauthor`. To avoid that we have two parallel interfaces we provide the interface from the `pdfmanagement/ltdocinit` if it doesn't exist.

```

\AddToDocumentProperties
\GetDocumentProperties
2308 \ExplSyntaxOn
2309 \@ifundefined{AddToDocumentProperties}
2310 {
2311 \prop_new:N \g__hyp_documentproperties_prop
2312 \NewDocumentCommand\AddToDocumentProperties{O{\@currname}mm}
2313 {
2314 \exp_args:NNx
2315 \prop_gput:Nnn \g__hyp_documentproperties_prop
2316 {
2317 \tl_if_blank:eTF {#1}{top-level/}{#1/} #2
2318 }
2319 { #3}
2320 }
2321 \NewExpandableDocumentCommand\GetDocumentProperties{m}
2322 {
2323 \prop_item:Nn \g__hyp_documentproperties_prop {#1}
2324 }
2325 }{}
2326 \ExplSyntaxOff

```

\IfHyperBooleanExists

```
2327 \def\IfHyperBooleanExists#1{%
2328   \ltx@ifundefined{Hy@#1false}\ltx@secondoftwo{%
2329     \ltx@ifundefined{KV@Hyp@#1@default}\ltx@secondoftwo\ltx@firstoftwo
2330   }%
2331 }

2332 \@namedef{KV@Hyp@stoppeearly@default}{}
```

\IfHyperBoolean

```
2333 \def\IfHyperBoolean#1{%
2334   \IfHyperBooleanExists{#1}{%
2335     \csname ifHy@#1\endcsname
2336     \expandafter\ltx@firstoftwo
2337   \else
2338     \expandafter\ltx@secondoftwo
2339   \fi
2340 } \ltx@secondoftwo
2341 }
```

\Hy@boolkey

```
2342 \def\Hy@boolkey#1#2{%
2343   \edef\Hy@tempa{#2}%
2344   \lowercase\expandafter{%
2345     \expandafter\def\expandafter\Hy@tempa\expandafter{\Hy@tempa}%
2346   }%
2347   \ifx\Hy@tempa\@empty
2348     \let\Hy@tempa\Hy@true
2349   \fi
2350   \ifx\Hy@tempa\Hy@true
2351     \else
2352     \ifx\Hy@tempa\Hy@false
2353     \else
2354       \let\Hy@tempa\relax
2355     \fi
2356   \fi
2357   \ifx\Hy@tempa\relax
2358     \Hy@WarnOptionValue{#2}{#1}{`true' or `false'}%
2359   \else
2360     \Hy@Info{Option `#1' set ``\Hy@tempa'}%
2361     \csname Hy@#1\Hy@tempa\endcsname
2362   \fi
2363 }
```

\Hy@WarnOptionValue

```
2364 \def\Hy@WarnOptionValue#1#2#3{%
2365   \Hy@Warning{%
2366     Unexpected value `#1'\MessageBreak
2367     of option `#2' instead of\MessageBreak
2368     #3%
2369   }%
2370 }
```


\Hy@DisableOption

```
2371 \def\Hy@DisableOption#1{%
2372   \ltx@ifundefined{KV@Hyp@#1@default}{%
2373     \define@key{Hyp}{#1}%
2374   }{%
2375     \define@key{Hyp}{#1}[]%
2376   }%
2377   {\Hy@WarnOptionDisabled{#1}}%
2378 }
2379
```

\Hy@WarnOptionDisabled

```
2380 \def\Hy@WarnOptionDisabled#1{%
2381   \Hy@Warning{%
2382     Option `#1' has already been used,\MessageBreak
2383     setting the option has no effect%
2384   }%
2385 }
```

\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.

```
2386 \def\Hy@CheckOptionValue#1#2#3{%
2387   \begingroup
2388   \edef\x{#1}%
2389   \@onelevel@sanitize\x
2390   \let\y=y%
2391   \def\do##1##2{%
2392     \def\z{##1}%
2393     \@onelevel@sanitize\z
2394     \ifx\x\z
2395       \let\y=n%
2396       \let\do\@gobbletwo
2397     \fi
2398   }%
2399   #3%
2400   \ifx\y y%
2401     \def\do##1##2{%
2402       *`##1'%
2403       \ifx\##2\\\else\space(##2)\fi
2404       \MessageBreak
2405     }%
2406     \Hy@Warning{%
2407       Values of option `#2':\MessageBreak
2408       #3%
2409       * An empty value disables the option.\MessageBreak
2410       Unknown value `x'%
2411     }%
2412   \fi
2413 \endgroup
2414 }
```

\Hy@DefNameKey #1: option name

#2: \do list with known values, first argument of \do is value, second argument

is a comment.

```
2415 \def\Hy@DefNameKey#1{%
2416   \expandafter\Hy@@DefNameKey\csname @#1\endcsname{#1}%
2417 }
```

\Hy@@DefNameKey #1: macro for value storage

#2: option name

#3: \do list with known values.

```
2418 \def\Hy@@DefNameKey#1#2#3{%
2419   \define@key{Hyp}{#2}{%
2420     \edef#1{##1}%
2421     \ifx#1\@empty
2422     \else
2423       \Hy@CheckOptionValue{##1}{#2}{#3}%
2424     \fi
2425   }%
2426   \let#1\@empty
2427 }
```

\Hy@UseNameKey

```
2428 \def\Hy@UseNameKey#1#2{%
2429   \ifx#2\@empty
2430   \else
2431     /#1/#2%
2432   \fi
2433 }
```

9.2 Defining the options

```
2434 \define@key{Hyp}{implicit}[true]{%
2435   \Hy@boolkey{implicit}{#1}%
2436 }
2437 \define@key{Hyp}{draft}[true]{%
2438   \Hy@boolkey{draft}{#1}%
2439 }
2440 \define@key{Hyp}{final}[true]{%
2441   \Hy@boolkey{final}{#1}%
2442 }
2443 \let\KV@Hyp@nolinks\KV@Hyp@draft
2444 \def\Hy@ObsoletePaperOption#1{%
2445   \Hy@WarningNoLine{%
2446     Option `#1' is no longer used%
2447   }%
2448   \define@key{Hyp}{#1}[true]{}%
2449 }
2450 \def\Hy@temp#1{%
2451   \define@key{Hyp}{#1}[true]{%
2452     \Hy@ObsoletePaperOption{#1}%
2453   }%
2454 }
2455 \Hy@temp{a4paper}
2456 \Hy@temp{a5paper}
2457 \Hy@temp{b5paper}
```

```

2458 \Hy@temp{letterpaper}
2459 \Hy@temp{legalpaper}
2460 \Hy@temp{executivepaper}

2461 \define@key{Hyp}{setpagesize}[true]{%
2462   \Hy@boolkey{setpagesize}{#1}%
2463 }
2464 \define@key{Hyp}{debug}[true]{%
2465   \Hy@boolkey{debug}{#1}%
2466 }
2467 \define@key{Hyp}{linktopage}[true]{%
2468   \Hy@boolkey{linktopage}{#1}%
2469   \ifHy@linktopage
2470     \let\Hy@linktoc\Hy@linktoc@page
2471   \else
2472     \let\Hy@linktoc\Hy@linktoc@section
2473   \fi
2474 }
2475 \chardef\Hy@linktoc@none=0 %
2476 \chardef\Hy@linktoc@section=1 %
2477 \chardef\Hy@linktoc@page=2 %
2478 \chardef\Hy@linktoc@all=3 %
2479 \ifHy@linktopage
2480   \let\Hy@linktoc\Hy@linktoc@page
2481 \else
2482   \let\Hy@linktoc\Hy@linktoc@section
2483 \fi
2484 \define@key{Hyp}{linktoc}{%
2485   \@ifundefined{Hy@linktoc@#1}{%
2486     \Hy@Warning{%
2487       Unexpected value `#1' of \MessageBreak
2488       option `linktoc' instead of `none', \MessageBreak
2489       `section', `page' or `all'%
2490     }%
2491   }{%
2492     \expandafter\let\expandafter\Hy@linktoc
2493     \csname Hy@linktoc@#1\endcsname
2494   }%
2495 }
2496 \define@key{Hyp}{extension}{\def\XR@ext{#1}}
2497 \let\XR@ext\relax
2498 \define@key{Hyp}{verbose}[true]{%
2499   \Hy@boolkey{verbose}{#1}%
2500 }

```

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.

```

2501 \define@key{Hyp}{raiselinks}[true]{%
2502   \Hy@boolkey{raiselinks}{#1}%
2503 }

```

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

```

2504 \def\Hy@setbreaklinks#1{%
2505   \csname breaklinks#1\endcsname

```

```

2506 }
2507 \def\Hy@breaklinks@unsupported{%
2508   \ifx\Hy@setbreaklinks\@gobble
2509     \ifHy@breaklinks
2510       \Hy@WarningNoLine{%
2511         You have enabled option `breaklinks'.\MessageBreak
2512         But driver ``\Hy@driver.def' does not support this.\MessageBreak
2513         Expect trouble with the link areas of broken links%
2514       }%
2515     \fi
2516   \fi
2517 }

2518 \define@key{Hyp}{breaklinks}[true]{%
2519   \Hy@boolkey{breaklinks}{#1}%
2520   \let\Hy@setbreaklinks\@gobble
2521 }

2522 \define@key{Hyp}{localanchorname}[true]{%
2523   \Hy@WarningNoLine{%
2524     Option `localanchorname' is deprecated%
2525   }%
2526   \Hy@boolkey{localanchorname}{#1}%
2527 }

Determines whether an automatic anchor is put on each page
2528 \define@key{Hyp}{pageanchor}[true]{%
2529   \Hy@boolkey{pageanchor}{#1}%
2530 }

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.
2531 \define@key{Hyp}{plainpages}[true]{%
2532   \Hy@boolkey{plainpages}{#1}%
2533 }

Are the names for anchors made as per the HyperTeX system, or do they simply
use what LATEX provides?
2534 \define@key{Hyp}{naturalnames}[true]{%
2535   \Hy@boolkey{naturalnames}{#1}%
2536 }

Completely ignore the names as per the HyperTeX system, and use unique coun-
ters.
2537 \define@key{Hyp}{hypertexnames}[true]{%
2538   \Hy@boolkey{hypertexnames}{#1}%
2539 }

Currently, dvips doesn't allow anchors nested within targets, so this option tries
to stop that happening. Other processors may be able to cope.
2540 \define@key{Hyp}{nesting}[true]{%
2541   \Hy@boolkey{nesting}{#1}%
2542 }

2543 \define@key{Hyp}{destlabel}[true]{%
2544   \Hy@boolkey{destlabel}{#1}%
2545 }

2546 \define@key{Hyp}{unicode}[true]{%

```

```

2547 \Hy@boolkey{unicode}{#1}%
2548 \ifHy@unicode
2549   \def\HyPsd@pdfencoding{unicode}%
2550   \HyPsd@LoadUnicode
2551 \else
2552   \def\HyPsd@pdfencoding{pdfdoc}%
2553 \fi
2554 }
2555 \Hy@AtBeginDocument{%
2556   \ifx\HyPsd@LoadUnicode\relax
2557   \else
2558     \def\HyPsd@LoadUnicode{%
2559       \Hy@Error{%
2560         Unicode support for bookmarks is not available.\MessageBreak
2561         Activate unicode support by using one of the options\MessageBreak
2562         `unicode', `pdfencoding=unicode', `pdfencoding=auto'\MessageBreak
2563         in the preamble%
2564       } \@ehc
2565       \global\let\HyPsd@LoadUnicode\relax
2566       \global\Hy@unicodedefalse
2567       \global\let\Hy@unicodetrue\Hy@unicodedefalse
2568     }%
2569   \fi
2570 }
2571 \define@key{Hyp}{pdfencoding}{%
2572   \edef\HyPsd@temp{#1}%
2573   \ifx\HyPsd@temp\HyPsd@pdfencoding@pdfdoc
2574     \let\HyPsd@pdfencoding\HyPsd@temp
2575     \Hy@unicodedefalse
2576   \else
2577     \ifcase\ifx\HyPsd@temp\HyPsd@pdfencoding@unicode
2578       \z@
2579     \else
2580       \ifx\HyPsd@temp\HyPsd@pdfencoding@auto
2581         \z@
2582       \else
2583         \@ne
2584       \fi
2585     \fi
2586     \let\HyPsd@pdfencoding\HyPsd@temp
2587     \hypersetup{unicode}%
2588     \ifHy@unicode
2589       \def\HyPsd@pdfencoding{#1}%
2590       \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
2591         \HyPsd@LoadStringEncoding
2592       \fi
2593     \else
2594       \Hy@Warning{Cannot switch to unicode bookmarks}%
2595       \let\HyPsd@pdfencoding\HyPsd@pdfencoding@pdfdoc
2596     \fi
2597   \else
2598     \@onelevel@sanitize\HyPsd@temp
2599     \Hy@Warning{%
2600       Values of option `pdfencoding':\MessageBreak

```

```

2601     `pdfdoc', `unicode', `auto'.\MessageBreak
2602     Ignoring unknown value `\'HyPsd@temp'%
2603     }%
2604     \fi
2605     \fi
2606 }
2607 \def\'HyPsd@pdfencoding@auto{auto}
2608 \def\'HyPsd@pdfencoding@pdfdoc{pdfdoc}
2609 \def\'HyPsd@pdfencoding@unicode{unicode}

```

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

```

2610 \let\'HyPsd@pdfencoding\'HyPsd@pdfencoding@unicode
2611 \HyPsd@LoadUnicode
2612 \def\'HyPsd@LoadStringEnc{%
2613   \RequirePackage{stringenc}[2009/12/15]%
2614   \let\'HyPsd@LoadStringEnc\relax
2615 }
2616 \Hy@AtBeginDocument{%
2617   \@ifpackageloaded{stringenc}{%
2618     \let\'HyPsd@LoadStringEnc\relax
2619   }{%
2620     \def\'HyPsd@LoadStringEnc{%
2621       \Hy@WarningNoLine{%
2622         Missing package `stringenc'. Use `pdfencoding=auto'.\MessageBreak
2623         in the preamble or load the package there%
2624       }%
2625     }%
2626   }%
2627 }
2628 \define@key{Hyp}{psdextra}[true]{%
2629   \Hy@boolkey{psdextra}{#1}%
2630   \HyPsd@LoadExtra
2631 }
2632 \def\'hypersetup{\kvsetkeys{Hyp}}
2633 \newif\ifHy@setpdfversion
2634 \define@key{Hyp}{pdfversion}{%
2635   \@ifundefined{Hy@pdfversion@#1}{%
2636     \PackageWarning{hyperref}{%
2637       Unsupported PDF version `#1'.\MessageBreak
2638       Valid values: 1.2-1.7, 2.0%
2639     }%
2640   }{%
2641     \Hy@setpdfversiontrue
2642     \@nameuse{Hy@pdfversion@#1}%
2643   }%
2644 }

```

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

```

2645 \@namedef{Hy@pdfversion@1.2}{\def\'Hy@pdf@majorversion{1}\def\'Hy@pdf@mi-
    norversion{2}}%
2646 \@namedef{Hy@pdfversion@1.3}{\def\'Hy@pdf@majorversion{1}\def\'Hy@pdf@mi-
    norversion{3}}%

```

```

2647 \@namedef{Hy@pdfversion@1.4}{\def\Hy@pdf@majorversion{1}\def\Hy@pdf@mi-
norversion{4}}%
2648 \@namedef{Hy@pdfversion@1.5}{\def\Hy@pdf@majorversion{1}\def\Hy@pdf@mi-
norversion{5}}%
2649 \@namedef{Hy@pdfversion@1.6}{\def\Hy@pdf@majorversion{1}\def\Hy@pdf@mi-
norversion{6}}%
2650 \@namedef{Hy@pdfversion@1.7}{\def\Hy@pdf@majorversion{1}\def\Hy@pdf@mi-
norversion{7}}%
2651 \@namedef{Hy@pdfversion@2.0}{\def\Hy@pdf@majorversion{2}\def\Hy@pdf@mi-
norversion{0}}%
2652 \def\Hy@pdf@majorversion{1}\def\Hy@pdf@minorversion{5}
Legacy name, earlier releases assumed 1.x
2653 \let\Hy@pdfversion\Hy@pdf@minorversion
2654 \def\Hy@pdf@majorminor@version{\numexpr100*\Hy@pdf@majorversion+\Hy@pdf@mi-
norversion\relax}
2655 \def\Hy@pdfmajorminor@version{\numexpr100*\Hy@pdfmajorversion+\Hy@pdfmi-
norversion\relax}
if pdfminorversion is defined, make sure pdfmajorversion is too.
2656 \@ifundefined{pdfminorversion}{}{%
2657 \@ifundefined{pdfmajorversion}{}{%
2658 \newcount\pdfmajorversion
2659 \pdfmajorversion=1
2660 }{}%
2661 }
2662 \ifx\pdfmajorversion\undefined\else
2663 \def\Hy@pdfmajorversion{\pdfmajorversion}
2664 \fi

```

10 Options for different drivers

```

2665 \newif\ifHy@DviMode
2666 \let\Hy@DviErrMsg\ltx@empty
2667 \ifpdf
2668 \def\Hy@DviErrMsg{pdfTeX or LuaTeX is running in PDF mode}%
2669 \else
2670 \ifxetex
2671 \def\Hy@DviErrMsg{XeTeX is running}%
2672 \else
2673 \ifvtex
2674 \ifnum\OpMode=\z@
2675 \Hy@DviModetrue
2676 \else
2677 \def\Hy@DviErrMsg{VTeX is running, but not in DVI mode}%
2678 \fi
2679 \else
2680 \Hy@DviModetrue
2681 \fi
2682 \fi
2683 \fi
2684 \def\Hy@Opt@CheckDvi#1{%
2685 \ifHy@DviMode
2686 \expandafter\ltx@firstofone
2687 \else
2688 \Hy@Error{%

```

```

2689     Wrong DVI mode driver option `#1',\MessageBreak
2690     because \Hy@DviErrMsg
2691   }\@ehc
2692   \expandafter\ltx@gobble
2693 \fi
2694 }

2695 \DeclareVoidOption{tex4ht}{%
2696   \Hy@texhttrue
2697   \kvsetkeys{Hyp}{colorlinks=true}%
2698   \def\BeforeTeXIVht{\RequirePackage{color}}}%
2699   \def\Hy@driver{htex4ht}%
2700   \def\MaybeStopEarly{%
2701     \Hy@Message{Stopped early}%
2702     \Hy@AtBeginDocument{%
2703       \PDF@FinishDoc
2704       \gdef\PDF@FinishDoc{}%
2705     }%
2706   \endinput
2707 }%
2708 }

2709 \DeclareVoidOption{pdftex}{%
2710   \ifpdf
2711     \def\Hy@driver{hpdftex}%
2712     \PassOptionsToPackage{pdftex}{color}%
2713   \else
2714     \Hy@Error{%
2715       Wrong driver option `pdftex',\MessageBreak
2716       because pdfTeX in PDF mode is not detected%
2717     }\@ehc
2718   \fi
2719 }

2720 \DeclareVoidOption{luatex}{%
2721   \ifpdf
2722     \ifx\pdfextension\@undefined
2723       \def\Hy@driver{hpdftex}%
2724       \PassOptionsToPackage{pdftex}{color}%
2725     \else
2726       \def\Hy@driver{hluatex}%
2727       \PassOptionsToPackage{luatex}{color}%
2728     \fi
2729   \else
2730     \Hy@Error{%
2731       Wrong driver option `luatex',\MessageBreak
2732       because luaTeX in PDF mode is not detected%
2733     }\@ehc
2734   \fi
2735 }

2736 \DeclareVoidOption{nativepdf}{%
2737   \Hy@Opt@CheckDvi{nativepdf}{%
2738     \def\Hy@driver{hdvips}%
2739     \PassOptionsToPackage{dvips}{color}%
2740   }%
2741 }

2742 \DeclareVoidOption{dvipdfm}{%

```



```

2743 \HyOpt@CheckDvi{dvipdfm}{%
2744 \def\Hy@driver{hdvipdfm}%
2745 }%
2746 }
2747 \DeclareVoidOption{dvipdfmx}{%
2748 \HyOpt@CheckDvi{dvipdfmx}{%
2749 \def\Hy@driver{hdvipdfm}%
2750 \PassOptionsToPackage{dvipdfmx}{color}%
2751 }%
2752 }
2753 \define@key{Hyp}{dvipdfmx-outline-open}[true]{%
2754 \expandafter\ifx\csname if#1\expandafter\endcsname
2755 \csname iftrue\endcsname
2756 \chardef\SpecialDvipdfmxOutlineOpen\@ne
2757 \else
2758 \chardef\SpecialDvipdfmxOutlineOpen\z@
2759 \fi
2760 }
2761 \DeclareVoidOption{xetex}{%
2762 \ifxetex
2763 \def\Hy@driver{hxdetex}%
2764 \else
2765 \Hy@Error{%
2766 Wrong driver option `xetex',\MessageBreak
2767 because XeTeX is not detected%
2768 }\@ehc
2769 \fi
2770 }
2771 \DeclareVoidOption{pdfmark}{%
2772 \HyOpt@CheckDvi{pdfmark}{%
2773 \def\Hy@driver{hdvips}%
2774 }%
2775 }
2776 \DeclareVoidOption{dvips}{%
2777 \HyOpt@CheckDvi{dvips}{%
2778 \def\Hy@driver{hdvips}%
2779 \PassOptionsToPackage{dvips}{color}%
2780 }%
2781 }
2782 \DeclareVoidOption{hypertex}{%
2783 \HyOpt@CheckDvi{hypertex}{%
2784 \def\Hy@driver{hypertex}%
2785 }%
2786 }
2787 \let\Hy@MaybeStopNow\relax
2788 \DeclareVoidOption{vtex}{%
2789 \ifvtex
2790 \ifnum 0\ifnum\OpMode<1 1\fi \ifnum\OpMode>3 1\fi =0 %
2791 \def\Hy@driver{hvtex}%
2792 \else
2793 \ifnum\OpMode=10\relax
2794 \def\Hy@driver{hvtexhtm}%
2795 \def\MaybeStopEarly{%
2796 \Hy@Message{Stopped early}%

```

```

2797     \Hy@AtBeginDocument{%
2798         \PDF@FinishDoc
2799         \gdef\PDF@FinishDoc{%}%
2800     }%
2801     \endinput
2802 }%
2803 \else
2804     \Hy@Error{%
2805         Wrong driver option `vtex',\MessageBreak
2806         because of wrong OpMode (\the\OpMode)%
2807     }\@ehc
2808 \fi
2809 \fi
2810 \else
2811     \Hy@Error{%
2812         Wrong driver option `vtex',\MessageBreak
2813         because VTeX is not running%
2814     }\@ehc
2815 \fi
2816 }
2817 \DeclareVoidOption{vtexpdfmark}{%
2818     \ifvtex
2819         \ifnum 0\ifnum\OpMode<1 1\fi \ifnum\OpMode>3 1\fi =0 %
2820         \def\Hy@driver{hvtexmrk}%
2821     \else
2822         \Hy@Error{%
2823             Wrong driver option `vtexpdfmark',\MessageBreak
2824             because of wrong OpMode (\the\OpMode)%
2825         }\@ehc
2826     \fi
2827 \else
2828     \Hy@Error{%
2829         Wrong driver option `vtexpdfmark',\MessageBreak
2830         because VTeX is not running%
2831     }\@ehc
2832 \fi
2833 }
2834 \DeclareVoidOption{dviwindo}{%
2835     \HyOpt@CheckDvi{dviwindo}{%
2836         \def\Hy@driver{hdviwind}%
2837         \kvsetkeys{Hyp}{colorlinks}%
2838         \PassOptionsToPackage{dviwindo}{color}%
2839     }%
2840 }
2841 \DeclareVoidOption{dvipsone}{%
2842     \HyOpt@CheckDvi{dvipsone}{%
2843         \def\Hy@driver{hdvipson}%
2844         \PassOptionsToPackage{dvipsone}{color}%
2845     }%
2846 }
2847 \DeclareVoidOption{textures}{%
2848     \HyOpt@CheckDvi{textures}{%
2849         \def\Hy@driver{httexture}%
2850     }%

```

```

2851 }
2852 \DeclareVoidOption{latex2html}{%
2853   \Hy@Warning{Option `latex2html` is obsolete. \MessageBreak
2854     A current html.sty will do all necessary (re)definitions%
2855 }%
2856 }
2857 \DeclareVoidOption{hitex}{%
2858   \ifhint
2859     \IfFileExists{hhitex.def}
2860       {\def\Hy@driver{hhitex}}{%
2861         {\Hy@Warning{%
2862           Missing driver file `hhitex.def',\MessageBreak
2863             ignoring hitex driver%
2864         }}%
2865       }%
2866     \else
2867       \Hy@Error{%
2868         Wrong driver option `hitex',\MessageBreak
2869           because HiTeX is not detected%
2870       }%
2871     \fi

```

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

```

2872 \DeclareVoidOption{ps2pdf}{%
2873   \HyOpt@CheckDvi{ps2pdf}{%
2874     \def\Hy@driver{hdvips}%
2875     \PassOptionsToPackage{dvips}{color}%
2876   }%
2877 }
2878 \let\HyOpt@DriverFallback\ltx@empty
2879 \define@key{Hyp}{driverfallback}{%
2880   \ifHy@DviMode
2881     \def\HyOpt@DriverFallback{#1}%
2882     \Hy@Match\HyOpt@DriverFallback{}{%
2883       ~(|dvipdfm|dvipdfmx|dvips|dvipsone|dviwindo|hypertex|ps2pdf|
2884         latex2html|tex4ht)$%
2885     }{}{%
2886       \Hy@Warning{%
2887         Invalid driver `#1' for option\MessageBreak
2888           `driverfallback'%
2889       }%
2890       \let\HyOpt@DriverFallback\ltx@empty
2891     }%
2892   \fi
2893 }
2894 \let\HyOpt@CustomDriver\ltx@empty
2895 \define@key{Hyp}{customdriver}{%
2896   \IfFileExists{#1.def}{%
2897     \def\HyOpt@CustomDriver{#1}%
2898   }{%
2899     \Hy@Warning{%
2900       Missing driver file `#1.def',\MessageBreak
2901         ignoring custom driver%
2902     }%

```

```

2903 }%
2904 }

```

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.

```

2905 \define@key{Hyp}{hyperfigures}[true]{%
2906   \Hy@boolkey{hyperfigures}{#1}%
2907 }

```

The automatic footnote linking can be disabled by option hyperfootnotes.

```

2908 \define@key{Hyp}{hyperfootnotes}[true]{%
2909   \Hy@boolkey{hyperfootnotes}{#1}%
2910 }

```

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

```

2911 \def\back@none{none}
2912 \def\back@section{section}
2913 \def\back@page{page}
2914 \def\back@slide{slide}
2915 \define@key{Hyp}{backref}[section]{%
2916   \lowercase{\def\Hy@tempa{#1}}%
2917   \ifx\Hy@tempa\@empty
2918     \let\Hy@tempa\back@section
2919   \fi
2920   \ifx\Hy@tempa\Hy@false
2921     \let\Hy@tempa\back@none
2922   \fi
2923   \ifx\Hy@tempa\back@slide
2924     \let\Hy@tempa\back@section
2925   \fi
2926   \ifx\Hy@tempa\back@page
2927     \PassOptionsToPackage{hyperpageref}{backref}%
2928     \Hy@backreftrue
2929   \else
2930     \ifx\Hy@tempa\back@section
2931       \PassOptionsToPackage{hyperref}{backref}%
2932       \Hy@backreftrue
2933     \else
2934       \ifx\Hy@tempa\back@none
2935         \Hy@backreffalse
2936       \else
2937         \Hy@WarnOptionValue{#1}{backref}{%
2938           `section', `slide', `page', `none',\MessageBreak
2939           or `false'}%
2940       \fi
2941     \fi
2942   \fi
2943 }
2944 \define@key{Hyp}{pagebackref}[true]{%
2945   \edef\Hy@tempa{#1}%
2946   \lowercase\expandafter{%
2947     \expandafter\def\expandafter\Hy@tempa\expandafter{\Hy@tempa}%
2948   }%

```

```

2949 \ifx\Hy@tempa\@empty
2950   \let\Hy@tempa\Hy@true
2951 \fi
2952 \ifx\Hy@tempa\Hy@true
2953   \PassOptionsToPackage{hyperpageref}{backref}%
2954   \Hy@backreftrue
2955 \else
2956   \ifx\Hy@tempa\Hy@false
2957     \Hy@backreffalse
2958   \else
2959     \Hy@WarnOptionValue{#1}{pagebackref}{`true' or `false'}%
2960   \fi
2961 \fi
2962 }

```

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

```

2963 \define@key{Hyp}{hyperindex}[true]{%
2964   \Hy@boolkey{hyperindex}{#1}%
2965 }

```

Configuration of encap char.

```

2966 \define@key{Hyp}{encap}[|]{%
2967   \def\HyInd@EncapChar{#1}%
2968 }

```

12 Language options

The \autoref feature depends on the language.

```

2969 \def\HyLang@afrikaans{%
2970   \def\equationautorefname{Vergelyking}%
2971   \def\footnoteautorefname{Voetnota}%
2972   \def\itemautorefname{Item}%
2973   \def\figureautorefname{Figuur}%
2974   \def\tableautorefname{Tabel}%
2975   \def\partautorefname{Deel}%
2976   \def\appendixautorefname{Bylae}%
2977   \def\chapterautorefname{Hoofstuk}%
2978   \def\sectionautorefname{Afdeling}%
2979   \def\subsectionautorefname{Subafdeling}%
2980   \def\subsubsectionautorefname{Subsubafdeling}%
2981   \def\paragraphautorefname{Paragraaf}%
2982   \def\subparagraphautorefname{Subparagraaf}%
2983   \def\FancyVerbLineautorefname{Lyn}%
2984   \def\theoremautorefname{Teorema}%
2985   \def\pageautorefname{Bladsy}%
2986 }
2987 \def\HyLang@english{%
2988   \def\equationautorefname{Equation}%
2989   \def\footnoteautorefname{footnote}%
2990   \def\itemautorefname{item}%
2991   \def\figureautorefname{Figure}%
2992   \def\tableautorefname{Table}%
2993   \def\partautorefname{Part}%

```

```

2994 \def\appendixautorefname{Appendix}%
2995 \def\chapterautorefname{chapter}%
2996 \def\sectionautorefname{section}%
2997 \def\subsectionautorefname{subsection}%
2998 \def\subsubsectionautorefname{subsubsection}%
2999 \def\paragraphautorefname{paragraph}%
3000 \def\subparagraphautorefname{subparagraph}%
3001 \def\FancyVerbLineautorefname{line}%
3002 \def\theoremautorefname{Theorem}%
3003 \def\pageautorefname{page}%
3004 }
3005 \def\HyLang@french{%
3006 \def\equationautorefname{'equation}%
3007 \def\footnoteautorefname{note}%
3008 \def\itemautorefname{item}%
3009 \def\figureautorefname{figure}%
3010 \def\tableautorefname{tableau}%
3011 \def\partautorefname{partie}%
3012 \def\appendixautorefname{annexe}%
3013 \def\chapterautorefname{chapitre}%
3014 \def\sectionautorefname{section}%
3015 \def\subsectionautorefname{sous-section}%
3016 \def\subsubsectionautorefname{sous-sous-section}%
3017 \def\paragraphautorefname{paragraphe}%
3018 \def\subparagraphautorefname{sous-paragraphe}%
3019 \def\FancyVerbLineautorefname{ligne}%
3020 \def\theoremautorefname{th\'eor\`eme}%
3021 \def\pageautorefname{page}%
3022 }
3023 \def\HyLang@german{%
3024 \def\equationautorefname{Gleichung}%
3025 \def\footnoteautorefname{Fu\ss note}%
3026 \def\itemautorefname{Punkt}%
3027 \def\figureautorefname{Abbildung}%
3028 \def\tableautorefname{Tabelle}%
3029 \def\partautorefname{Teil}%
3030 \def\appendixautorefname{Anhang}%
3031 \def\chapterautorefname{Kapitel}%
3032 \def\sectionautorefname{Abschnitt}%
3033 \def\subsectionautorefname{Unterabschnitt}%
3034 \def\subsubsectionautorefname{Unterunterabschnitt}%
3035 \def\paragraphautorefname{Absatz}%
3036 \def\subparagraphautorefname{Unterabsatz}%
3037 \def\FancyVerbLineautorefname{Zeile}%
3038 \def\theoremautorefname{Theorem}%
3039 \def\pageautorefname{Seite}%
3040 }
3041 \def\HyLang@italian{%
3042 \def\equationautorefname{Equazione}%
3043 \def\footnoteautorefname{nota}%
3044 \def\itemautorefname{punto}%
3045 \def\figureautorefname{Figura}%
3046 \def\tableautorefname{Tabella}%
3047 \def\partautorefname{Parte}%

```

```

3048 \def\appendixautorefname{Appendice}%
3049 \def\chapterautorefname{Capitolo}%
3050 \def\sectionautorefname{sezione}%
3051 \def\subsectionautorefname{sottosezione}%
3052 \def\subsubsectionautorefname{sottosottosezione}%
3053 \def\paragraphautorefname{paragrafo}%
3054 \def\subparagraphautorefname{sottoparagrafo}%
3055 \def\FancyVerbLineautorefname{linea}%
3056 \def\theoremautorefname{Teorema}%
3057 \def\pageautorefname{Pag.\@}%
3058 }
3059 \def\HyLang@magyar{%
3060 \def\equationautorefname{Egyenlet}%
3061 \def\footnoteautorefname{l\'abjegyzet}%
3062 \def\itemautorefname{Elem}%
3063 \def\figureautorefname{'Abra}%
3064 \def\tableautorefname{T\'abl\'azat}%
3065 \def\partautorefname{R\'esz}%
3066 \def\appendixautorefname{F\'uggel\'ek}%
3067 \def\chapterautorefname{fejezet}%
3068 \def\sectionautorefname{szakasz}%
3069 \def\subsectionautorefname{alszakasz}%
3070 \def\subsubsectionautorefname{alalszakasz}%
3071 \def\paragraphautorefname{bekezd\'es}%
3072 \def\subparagraphautorefname{albekezd\'es}%
3073 \def\FancyVerbLineautorefname{sor}%
3074 \def\theoremautorefname{T\'etel}%
3075 \def\pageautorefname{oldal}%
3076 }
3077 \def\HyLang@portuges{%
3078 \def\equationautorefname{Equa\c c\~ao}%
3079 \def\footnoteautorefname{Nota de rodap\'e}%
3080 \def\itemautorefname{Item}%
3081 \def\figureautorefname{Figura}%
3082 \def\tableautorefname{Tabela}%
3083 \def\partautorefname{Parte}%
3084 \def\appendixautorefname{Ap\~endice}%
3085 \def\chapterautorefname{Cap\'itulo}%
3086 \def\sectionautorefname{Se\c c\~ao}%
3087 \def\subsectionautorefname{Subse\c c\~ao}%
3088 \def\subsubsectionautorefname{Subsubse\c c\~ao}%
3089 \def\paragraphautorefname{par\'agrafo}%
3090 \def\subparagraphautorefname{subpar\'agrafo}%
3091 \def\FancyVerbLineautorefname{linha}%
3092 \def\theoremautorefname{Teorema}%
3093 \def\pageautorefname{P\'agina}%
3094 }

```

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`.

```
3095 \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`?

```
3096 \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`.

```
3097 % \def\equationautorefname{%
```

```
3098 % \cyr\cyrv\cyrry\cyrr\cyra\cyrrh\cyre\cyrn\cyri\cyre
```

```
3099 % }%
```

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

```
3100 \def\footnoteautorefname{%
```

```
3101 \cyr\cyrp\cyro\cyrd\cyrs\cyrt\cyrr.\ \cyrp\cyrr\cyri\cyrm.%
```

```
3102 }%
```

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

```
3103 % \def\footnoteautorefname{%
```

```
3104 % \cyr\cyrp\cyro\cyrd\cyrs\cyrt\cyrr\cyro\cyrrh\cyrn\cyro\cyre\ %
```

```
3105 % \cyrp\cyrr\cyri\cyrm\cyre\cyrrh\cyra\cyrn\cyri\cyre
```

```
3106 % }%
```

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

```
3107 % \def\Nomfootnoteautorefname{\cyr\cyrs\cyrn\cyro\cyrs\cyrk\cyra}%
```

```
3108 % \def\Accfootnoteautorefname{\cyr\cyrs\cyrn\cyro\cyrs\cyrk\cyru}%
```

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

```
3109 \def\itemautorefname{\cyr\cyrp.}%
```

```
3110 % \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.

```
3111 \def\figureautorefname{\cyr\cyrr\cyri\cyrs.}%
```

```
3112 \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.

```
3113 \def\partautorefname{\cyr\cyrrh.}%
```

```
3114 \def\chapterautorefname{\cyr\cyrg\cyrl.}%
```

```
3115 \def\sectionautorefname{\cyr\cyrr\cyra\cyrz\cyrd.}%
```

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


```

3116 \def\appendixautorefname{\cyr\cyrr\cyri\cyr1.}%
3117 % \def\appendixautorefname{%
3118 % \cyr\cyrr\cyri\cyr1\cyro\cyrrh\cyre\cyrr\cyri\cyre
3119 % }%

```

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.

```

3120 \def\subsectionautorefname{\cyr\cyrr\cyra\cyrr\cyrd.}%
3121 \def\subsubsectionautorefname{\cyr\cyrr\cyra\cyrr\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.

```

3122 \def\paragraphautorefname{\cyr\cyrr.}%
3123 \def\subparagraphautorefname{\cyr\cyrr.}%

```

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.

```

3124 % \def\paragraphautorefname{\cyr\cyrr\cyru\cyrr\cyrk\cyrt}%
3125 % \def\subparagraphautorefname{\cyr\cyrr\cyru\cyrr\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.

```

3126 \def\FancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr.}%

```

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

```

3127 % \def\NomFancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr\cyro\cyrk\cyra}%
3128 % \def\AccFancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr\cyro\cyrk\cyru}%

```

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

```

3129 % \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 ...

```

3130 \def\theoremautorefname{\cyr\cyrt\cyre\cyro\cyrr.}%

```

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

```

3131 % \def\Nomtheoremautorefname{\cyr\cyrt\cyre\cyro\cyrr\cyre\cyrm\cyra}%
3132 % \def\Acctheoremautorefname{\cyr\cyrt\cyre\cyro\cyrr\cyre\cyrm\cyru}%

```

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

```

3133 \def\pageautorefname{\cyr\cyrs.}%
3134 }

```

```

3135 \def\HyLang@spanish{%
3136 \def\equationautorefname{Ecuaci'on}%
3137 \def\footnoteautorefname{Nota a pie de p'agina}%
3138 \def\itemautorefname{Elemento}%
3139 \def\figureautorefname{Figura}%
3140 \def\tableautorefname{Tabla}%

```

```

3141 \def\partautorefname{Parte}%
3142 \def\appendixautorefname{Ap\`endice}%
3143 \def\chapterautorefname{Cap\`itulo}%
3144 \def\sectionautorefname{Secci\`on}%
3145 \def\subsectionautorefname{Subsecci\`on}%
3146 \def\subsubsectionautorefname{Subsubsecci\`on}%
3147 \def\paragraphautorefname{P\`arrafo}%
3148 \def\subparagraphautorefname{Subp\`arrafo}%
3149 \def\FancyVerbLineautorefname{L\`inea}%
3150 \def\theoremautorefname{Teorema}%
3151 \def\pageautorefname{P\`agina}%
3152 }

3153 \def\HyLang@catalan{%
3154 \def\equationautorefname{Equaci\`o}%
3155 \def\footnoteautorefname{Nota al peu de p\`agina}%
3156 \def\itemautorefname{Element}%
3157 \def\figureautorefname{Figura}%
3158 \def\tableautorefname{Taula}%
3159 \def\partautorefname{Part}%
3160 \def\appendixautorefname{Ap\`endix}%
3161 \def\chapterautorefname{Cap\`itol}%
3162 \def\sectionautorefname{Secci\`o}%
3163 \def\subsectionautorefname{Subsecci\`o}%
3164 \def\subsubsectionautorefname{Subsubsecci\`o}%
3165 \def\paragraphautorefname{Par\`agraf}%
3166 \def\subparagraphautorefname{Subpar\`agraf}%
3167 \def\FancyVerbLineautorefname{L\`inia}%
3168 \def\theoremautorefname{Teorema}%
3169 \def\pageautorefname{P\`agina}%
3170 }

3171 \def\HyLang@vietnamese{%
3172 \def\equationautorefname{Ph\`uhorn{}}\ohorn{}ng tr\`inh}%
3173 \def\footnoteautorefname{Ch\`u th\`ich}%
3174 \def\itemautorefname{m\`d{u}c}%
3175 \def\figureautorefname{H\`inh}%
3176 \def\tableautorefname{B\`h{a}ng}%
3177 \def\partautorefname{Ph\`acircumflex{}n}%
3178 \def\appendixautorefname{Ph\`d{u} l\`d{u}c}%
3179 \def\chapterautorefname{ch\`uhorn{}}\ohorn{}ng}%
3180 \def\sectionautorefname{m\`d{u}c}%
3181 \def\subsectionautorefname{m\`d{u}c}%
3182 \def\subsubsectionautorefname{m\`d{u}c}%
3183 \def\paragraphautorefname{\dj{}o\`d{a}n}%
3184 \def\subparagraphautorefname{\dj{}o\`d{a}n}%
3185 \def\FancyVerbLineautorefname{d\`ong}%
3186 \def\theoremautorefname{\DJ{}d{i}nh l\`y}%
3187 \def\pageautorefname{Trang}%
3188 }

```

Greek, see github issue 52

```

3189 \def\HyLang@greek{%
3190 \def\equationautorefname{\textEpsilon\textxi\acctonos\textiota\textsigma\textomega\textsigma\texteta}%

```

```

3191 \def\footnoteautorefname{\textuppsilon\textpi\textomicron\textsigma\texteta\textmu\textepsilon\acconos\textiota\textomega\textsigma\texteta}%
3192 \def\itemautorefname{\textalpha\textnu\texttau\textiota\textkappa\textepsilon\acconos\textiota\textmu\textepsilon\textnu\textomicron}%
3193 \def\figureautorefname{\textSigma\textchi\acconos\texteta\textmu\textalpha}%
3194 \def\tableautorefname{\textPi\acconos\textiota\textnu\textalpha\textkappa\textalpha}%
3195 \def\partautorefname{\textMu\acconos\textepsilon\textrho\textomicron\textvarsigma}%
3196 \def\appendixautorefname{\textPi\textalpha\textrho\acconos\textalpha\textrho\texttau\texteta\textmu\textalpha}%
3197 \def\chapterautorefname{\textkappa\textepsilon\textphi\acconos\textalpha\textlambda\textalpha\textiota\textomicron}%
3198 \def\sectionautorefname{\textepsilon\textnu\acconos\textomicron\texttau\texteta\texttau\textalpha}%
3199 \def\subsectionautorefname{\textuppsilon\textpi\textomicron\textepsilon\textnu\acconos\textomicron\texttau\texteta\texttau\textalpha}%
3200 \def\subsubsectionautorefname{\textuppsilon\textpi\textomicron\textuppsilon\textpi\textomicron\textuppsilon\textpi\textomicron}%
3201 \def\paragraphautorefname{\textpi\textalpha\textrho\acconos\textalpha\textgamma\textrho\textalpha\textphi\textomicron\textvarsigma}%
3202 \def\subparagraphautorefname{\textuppsilon\textpi\textomicron\textpi\textalpha\textrho\acconos\textalpha\textgamma\textrho\textalpha\textphi\textomicron\textvarsigma}%
3203 \def\FancyVerbLineautorefname{\textgamma\textrho\textalpha\textmu\textmu\acconos\texteta}%
3204 \def\theoremautorefname{\textTheta\textepsilon\acconos\textomega\textrho\texteta\textmu\textalpha}%
3205 \def\pageautorefname{\textsigma\textepsilon\textlambda\acconos\textiota\textdelta\textalpha}%
3206 }

3207 \def\HyLang@dutch{%
3208 \def\equationautorefname{Vergelijking}%
3209 \def\footnoteautorefname{voetnoot}%
3210 \def\itemautorefname{punt}%
3211 \def\figureautorefname{Figuur}%
3212 \def\tableautorefname{Tabel}%
3213 \def\partautorefname{Deel}%
3214 \def\appendixautorefname{Bijlage}%
3215 \def\chapterautorefname{hoofdstuk}%
3216 \def\sectionautorefname{paragraaf}%
3217 \def\subsectionautorefname{deelparagraaf}%
3218 \def\subsubsectionautorefname{deel-deelparagraaf}%
3219 \def\paragraphautorefname{alinea}%
3220 \def\subparagraphautorefname{deelalinea}%
3221 \def\FancyVerbLineautorefname{regel}%
3222 \def\theoremautorefname{Stelling}%
3223 \def\pageautorefname{pagina}%
3224 }

3225 \def\HyLang@norsk{%
3226 \def\equationautorefname{Ligning}%
3227 \def\footnoteautorefname{fotnote}%
3228 \def\itemautorefname{element}%
3229 \def\figureautorefname{Figur}%

```

```

3230 \def\tableautorefname{Tabell}%
3231 \def\partautorefname{Del}%
3232 \def\appendixautorefname{Tillegg}%
3233 \def\chapterautorefname{kapittel}%
3234 \def\sectionautorefname{seksjon}%
3235 \def\subsectionautorefname{underseksjon}%
3236 \def\subsubsectionautorefname{under-underseksjon}%
3237 \def\paragraphautorefname{avsnitt}%
3238 \def\subparagraphautorefname{underavsnitt}%
3239 \def\FancyVerbLineautorefname{Linje}%
3240 \def\theoremautorefname{Teorem}%
3241 \def\pageautorefname{side}%
3242 }
3243 \def\HyLang@danish{%
3244 \def\equationautorefname{Ligning}%
3245 \def\footnoteautorefname{fodnote}%
3246 \def\itemautorefname{element}%
3247 \def\figureautorefname{Figur}%
3248 \def\tableautorefname{Tabel}%
3249 \def\partautorefname{Del}%
3250 \def\appendixautorefname{Bilag}%
3251 \def\chapterautorefname{kapitel}%
3252 \def\sectionautorefname{seksjon}%
3253 \def\subsectionautorefname{under-seksjon}%
3254 \def\subsubsectionautorefname{under-under-seksjon}%
3255 \def\paragraphautorefname{afsnit}%
3256 \def\subparagraphautorefname{underafsnit}%
3257 \def\FancyVerbLineautorefname{linje}%
3258 \def\theoremautorefname{Teorem}%
3259 \def\pageautorefname{side}%
3260 }
3261 \def\HyLang@swedish{%
3262 \def\equationautorefname{Ekvation}%
3263 \def\footnoteautorefname{fotnot}%
3264 \def\itemautorefname{punkt}%
3265 \def\figureautorefname{Figur}%
3266 \def\tableautorefname{Tabell}%
3267 \def\partautorefname{Del}%
3268 \def\appendixautorefname{Bilaga}%
3269 \def\chapterautorefname{kapitel}%
3270 \def\sectionautorefname{avsnitt}%
3271 \def\subsectionautorefname{underavsnitt}%
3272 \def\subsubsectionautorefname{under-underavsnitt}%
3273 \def\paragraphautorefname{paragraf}%
3274 \def\subparagraphautorefname{underparagraf}%
3275 \def\FancyVerbLineautorefname{linje}%
3276 \def\theoremautorefname{Teorem}%
3277 \def\pageautorefname{sida}%
3278 }

```

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

```

3279 \def\HyLang@addto#1#2{%
3280 #2%

```

```

3281 \@temptokena{#2}%
3282 \ifx#1\relax
3283   \let#1\@empty
3284 \fi
3285 \ifx#1\@undefined
3286   \edef#1{\the\@temptokena}%
3287 \else
3288   \toks@\expandafter{#1}%
3289   \edef#1{\the\toks@\the\@temptokena}%
3290 \fi
3291 \@temptokena{}\toks@\@temptokena
3292 }

3293 \def\HyLang@DeclareLang#1#2#3{%
3294   \ifpackagewith{babel}{#1}{%
3295     \expandafter\HyLang@addto
3296       \csname extras#1\expandafter\endcsname
3297       \csname HyLang@#2\endcsname
3298     \begingroup
3299       \edef\x{\endgroup
3300         #3%
3301       }%
3302     \x
3303     \@namedef{HyLang@#1@done}{}%
3304   }{}%
3305   \begingroup
3306     \edef\x##1##2{%
3307       \noexpand\ifx##2\relax
3308         \errmessage{No definitions for language #2' found!}%
3309       \noexpand\fi
3310     \endgroup
3311     \noexpand\define@key{Hyp}{#1}[]{%
3312       \noexpand\@ifundefined{HyLang@#1@done}{%
3313         \noexpand\HyLang@addto{\noexpand##1}{\noexpand##2}%
3314         #3%
3315         \noexpand\@namedef{HyLang@#1@done}{}%
3316       }{}%
3317     }%
3318   }%
3319   \expandafter\x\csname extras#1\expandafter\endcsname
3320     \csname HyLang@#2\endcsname
3321 }

3322 \HyLang@DeclareLang{english}{english}{}
3323 \HyLang@DeclareLang{UKenglish}{english}{}
3324 \HyLang@DeclareLang{british}{english}{}
3325 \HyLang@DeclareLang{USenglish}{english}{}
3326 \HyLang@DeclareLang{american}{english}{}
3327 \HyLang@DeclareLang{german}{german}{}
3328 \HyLang@DeclareLang{austrian}{german}{}
3329 \HyLang@DeclareLang{ngerman}{german}{}
3330 \HyLang@DeclareLang{naustrian}{german}{}
3331 \HyLang@DeclareLang{nswissgerman}{german}{}
3332 \HyLang@DeclareLang{swissgerman}{german}{}
3333 \HyLang@DeclareLang{russian}{russian}{\noexpand\hypersetup{unicode}}
3334 \HyLang@DeclareLang{brazil}{portuges}{}

```

```

3335 \HyLang@DeclareLang{brazilian}{portuges}{}
3336 \HyLang@DeclareLang{portuguese}{portuges}{}
3337 \HyLang@DeclareLang{spanish}{spanish}{}
3338 \HyLang@DeclareLang{catalan}{catalan}{}
3339 \HyLang@DeclareLang{afrikaans}{afrikaans}{}
3340 \HyLang@DeclareLang{french}{french}{}
3341 \HyLang@DeclareLang{frenchb}{french}{}
3342 \HyLang@DeclareLang{français}{french}{}
3343 \HyLang@DeclareLang{acadian}{french}{}
3344 \HyLang@DeclareLang{canadien}{french}{}
3345 \HyLang@DeclareLang{italian}{italian}{}
3346 \HyLang@DeclareLang{magyar}{magyar}{}
3347 \HyLang@DeclareLang{hungarian}{magyar}{}
3348 \HyLang@DeclareLang{greek}{greek}{}
3349 \HyLang@DeclareLang{dutch}{dutch}{}
3350 \HyLang@DeclareLang{norsk}{norsk}{}
3351 \HyLang@DeclareLang{norwegian}{norsk}{}
3352 \HyLang@DeclareLang{danish}{danish}{}
3353 \HyLang@DeclareLang{swedish}{swedish}{}

```

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

```

3354 \DeclareVoidOption{vietnamese}{%
3355   \HyLang@addto\extrasvietnamese\HyLang@vietnamese
3356   \Hy@AtEndOfPackage{%
3357     \ifundefined{T@PU}{}{}%
3358     \input{puvnenc.def}%
3359   }%
3360 }%
3361 }
3362 \DeclareVoidOption{vietnam}{%
3363   \HyLang@addto\extrasvietnam\HyLang@vietnamese
3364   \Hy@AtEndOfPackage{%
3365     \ifundefined{T@PU}{}{}%
3366     \input{puvnenc.def}%
3367   }%
3368 }%
3369 }

```

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

```

3370 \DeclareVoidOption{arabic}{%
3371   \Hy@AtEndOfPackage{%
3372     \ifundefined{T@PU}{}{}%
3373     \input{puarenc.def}%
3374   }%
3375 }%
3376 }

```

13 Options to change appearance of links

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

```

3377 \define@key{Hyp}{colorlinks}[true]{%
3378   \Hy@boolkey{colorlinks}{#1}%
3379 }

```

```

3380 \DeclareVoidOption{hidelinks}{}%
3381 \Hy@colorlinksfalse
3382 \Hy@ocgcolorlinksfalse
3383 \Hy@frenchlinksfalse
3384 \def\Hy@colorlink##1{\begingroup}%
3385 \def\Hy@endcolorlink{\endgroup}%
3386 \def\@pdfborder{0 0 0}%
3387 \let\@pdfborderstyle\ltx@empty
3388 }
3389 \define@key{Hyp}{ocgcolorlinks}[true]{%
3390 \Hy@boolkey{ocgcolorlinks}{#1}%
3391 }
3392 \Hy@AtBeginDocument{%
3393 \begingroup
3394 \ifundefined{OBJ@OCG@view}{%
3395 \ifHy@ocgcolorlinks
3396 \Hy@Warning{%
3397 Driver does not support `ocgcolorlinks',\MessageBreak
3398 using `colorlinks' instead%
3399 }%
3400 \fi
3401 }{}%
3402 \endgroup
3403 }
3404 \define@key{Hyp}{frenchlinks}[true]{%
3405 \Hy@boolkey{frenchlinks}{#1}%
3406 }

```

14 Bookmarking

```

3407 \begingroup\expandafter\expandafter\expandafter\endgroup
3408 \expandafter\ifx\csname chapter\endcsname\relax
3409 \def\toclevel@part{0}%
3410 \else
3411 \def\toclevel@part{-1}%
3412 \fi
3413 \def\toclevel@chapter{0}
3414 \def\toclevel@section{1}
3415 \def\toclevel@subsection{2}
3416 \def\toclevel@subsubsection{3}
3417 \def\toclevel@paragraph{4}
3418 \def\toclevel@subparagraph{5}
3419 \def\toclevel@figure{0}
3420 \def\toclevel@table{0}
3421 \define@key{Hyp}{bookmarks}[true]{%
3422 \Hy@boolkey{bookmarks}{#1}%
3423 }
3424 \define@key{Hyp}{bookmarksopen}[true]{%
3425 \Hy@boolkey{bookmarksopen}{#1}%
3426 }

```

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.

```

3427 \let\Hy@bookmarksdepth\c@tocdepth
3428 \define@key{Hyp}{bookmarksdepth}[]{}%
3429 \begingroup
3430   \edef\x{#1}%
3431   \ifx\x\empty
3432     \global\let\Hy@bookmarksdepth\c@tocdepth
3433   \else
3434     \ifundefined{toclevel@\x}{%
3435       \@onelevel@sanitize\x
3436       \edef\y{\expandafter\@car\x\@nil}%
3437       \ifcase 0\expandafter\ifx\y-1\fi
3438         \expandafter\ifnum\expandafter`\y>47 %
3439           \expandafter\ifnum\expandafter`\y<58 1\fi\fi\relax
3440       \Hy@Warning{Unknown document division name (\x)}%
3441     \else
3442       \setbox\z@=\hbox{%
3443         \count@=\x
3444         \xdef\Hy@bookmarksdepth{the\count@}%
3445       }%
3446     \fi
3447   }{}%
3448   \setbox\z@=\hbox{%
3449     \count@=\csname toclevel@\x\endcsname
3450     \xdef\Hy@bookmarksdepth{the\count@}%
3451   }%
3452 }%
3453 \fi
3454 \endgroup
3455 }

```

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

```

3456 \define@key{Hyp}{bookmarksopenlevel}{}%
3457 \def\@bookmarksopenlevel{#1}%
3458 }
3459 \def\@bookmarksopenlevel{\maxdimen}
3460 % `bookmarkstype' to specify which `toc' file to mimic
3461 \define@key{Hyp}{bookmarkstype}{}%
3462 \def\Hy@bookmarkstype{#1}%
3463 }
3464 \def\Hy@bookmarkstype{toc}

```

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

```

3465 \define@key{Hyp}{bookmarksnumbered}[true]{}%
3466 \Hy@boolkey{bookmarksnumbered}{#1}%
3467 }

```


Option CJKbookmarks enables the patch for CJK bookmarks.

```

3468 \define@key{Hyp}{CJKbookmarks}[true]{%
3469   \Hy@boolkey{CJKbookmarks}{#1}%
3470 }

3471 \def\Hy@temp#1{%
3472   \expandafter\Hy@@temp\csname @#1color\endcsname{#1}%
3473 }
3474 \def\Hy@@temp#1#2#3{%
3475   \define@key{Hyp}{#2color}{%
3476     \HyColor@HyperrefColor{##1}#1%
3477   }%
3478   \def#1{#3}%
3479 }
3480 \Hy@temp{link}{red}
3481 \Hy@temp{anchor}{black}
3482 \Hy@temp{cite}{green}
3483 \Hy@temp{file}{cyan}
3484 \Hy@temp{url}{magenta}
3485 \Hy@temp{menu}{red}
3486 \Hy@temp{run}{\@filecolor}
3487 \define@key{Hyp}{pagecolor}{%
3488   \Hy@WarningPageColor
3489 }
3490 \def\Hy@WarningPageColor{%
3491   \Hy@WarningNoLine{Option `pagecolor' is not available anymore}%
3492   \global\let\Hy@WarningPageColor\relax
3493 }
3494 \define@key{Hyp}{allcolors}{%
3495   \HyColor@HyperrefColor{#1}\@linkcolor
3496   \HyColor@HyperrefColor{#1}\@anchorcolor
3497   \HyColor@HyperrefColor{#1}\@citecolor
3498   \HyColor@HyperrefColor{#1}\@filecolor
3499   \HyColor@HyperrefColor{#1}\@urlcolor
3500   \HyColor@HyperrefColor{#1}\@menucolor
3501   \HyColor@HyperrefColor{#1}\@runcolor
3502 }

3503 \def\hyperbaseurl#1{\def\@baseurl{#1}}
3504 \define@key{Hyp}{baseurl}{\hyperbaseurl{#1}}
3505 \let\@baseurl\empty
3506 \def\hyperlinkfileprefix#1{\def\Hy@linkfileprefix{#1}}
3507 \define@key{Hyp}{linkfileprefix}{\hyperlinkfileprefix{#1}}
3508 \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.

```

3509 \let\@pdfpagetransition\relax
3510 \define@key{Hyp}{pdfpagetransition}{%
3511   \def\@pdfpagetransition{#1}%
3512 }

```

\@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.

```

3513 \let\@pdfpageduration\relax
3514 \define@key{Hyp}{pdfpageduration}{%
3515   \def\@pdfpageduration{#1}%
3516   \Hy@Match\@pdfpageduration}{%
3517     ^([0-9]+\.[0-9]*|[0-9]*\.[0-9]+)$%
3518   }{}{%
3519     \Hy@Warning{%
3520       Invalid value '\@pdfpageduration'\MessageBreak
3521       of option `pdfpageduration'\MessageBreak
3522       is replaced by an empty value%
3523     }%
3524     \let\@pdfpageduration\ltx@empty
3525   }%
3526 }
```

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).

```

3527 \def\Hy@ColorList{cite,file,link,menu,run,url}
3528 \@for\Hy@temp:=\Hy@ColorList\do{%
3529   \edef\Hy@temp{%
3530     \noexpand\define@key{Hyp}{\Hy@temp bordercolor}{%
3531       \noexpand\HyColor@HyperrefBorderColor
3532       {##1}%
3533       \expandafter\noexpand\csname @\Hy@temp bordercolor\endcsname
3534       {hyperref}%
3535       {\Hy@temp bordercolor}%
3536     }%
3537   }%
3538   \Hy@temp
3539 }
3540 \define@key{Hyp}{pagebordercolor}{%
3541   \Hy@WarningPageBorderColor
3542 }
3543 \def\Hy@WarningPageBorderColor{%
3544   \Hy@WarningNoLine{Option `pagebordercolor' is not available anymore}%
3545   \global\let\Hy@WarningPageBorderColor\relax
3546 }
3547 \define@key{Hyp}{allbordercolors}{%
3548   \def\Hy@temp##1##2{%
3549     \HyColor@HyperrefBorderColor{#1}##1{hyperref}{##2bordercolor}%
3550   }%
3551   \Hy@temp\@citebordercolor{cite}%
3552   \Hy@temp\@filebordercolor{file}%
3553   \Hy@temp\@linkbordercolor{link}%

```

```

3554 \Hy@temp\@menubordercolor{menu}%
3555 \Hy@temp\@runbordercolor{run}%
3556 \Hy@temp\@urlbordercolor{url}%
3557 }

3558 \define@key{Hyp}{pdfhighlight}{\def\@pdfhighlight{#1}}
3559 \Hy@DefNameKey{pdfhighlight}{%
3560   \do{/I}{Invert}%
3561   \do{/N}{None}%
3562   \do{/O}{Outline}%
3563   \do{/P}{Push}%
3564 }
3565 \def\Hy@setpdfhighlight{%
3566   \ifx\@pdfhighlight\@empty
3567   \else
3568     /H\@pdfhighlight
3569   \fi
3570 }
3571 \define@key{Hyp}{pdfborder}{%
3572   \let\Hy@temp\@pdfborder
3573   \def\@pdfborder{#1}%
3574   \Hy@Match\@pdfborder{}{%
3575     ^\HyPat@NonNegativeReal/ %
3576     \HyPat@NonNegativeReal/ %
3577     \HyPat@NonNegativeReal/%
3578     ( ?\[\HyPat@NonNegativeReal/( \HyPat@NonNegativeReal/)*])?$$%
3579   }{}{%
3580     \Hy@Warning{%
3581       Invalid value ` \@pdfborder'\MessageBreak
3582       for option `pdfborder'.\MessageBreak
3583       Option setting is ignored%
3584     }%
3585     \let\@pdfborder\Hy@temp
3586   }%
3587 }
3588 \define@key{Hyp}{pdfborderstyle}{%
3589   \let\Hy@temp\@pdfborderstyle
3590   \def\@pdfborderstyle{#1}%
3591   \Hy@Match\@pdfborderstyle{}{%
3592     ^%
3593     ( */Type */Border%
3594       | */W +\HyPat@NonNegativeReal/%
3595       | */S */[SDBIU]%
3596       | */D *[ ( \HyPat@NonNegativeReal/( \HyPat@NonNegativeReal/)? )? ]%
3597     )* *$%
3598   }{}{%
3599     \Hy@Warning{%
3600       Invalid value ` \@pdfborderstyle'\MessageBreak
3601       for option `pdfborderstyle'.\MessageBreak
3602       Option setting is ignored%
3603     }%
3604     \let\@pdfborderstyle\Hy@temp
3605   }%
3606 }
3607 \def\Hy@setpdfborder{%

```

```

3608 \ifx\@pdfborder\@empty
3609 \else
3610 /Border[\@pdfborder]%
3611 \fi
3612 \ifx\@pdfborderstyle\@empty
3613 \else
3614 /BS<<\@pdfborderstyle>>%
3615 \fi
3616 }
3617 \Hy@DefNameKey{pdfpagemode}{%
3618 \do{UseNone}{}%
3619 \do{UseOutlines}{}%
3620 \do{UseThumbs}{}%
3621 \do{FullScreen}{}%
3622 \do{UseOC}{PDF 1.5}%
3623 \do{UseAttachments}{PDF 1.6}%
3624 }
3625 \Hy@DefNameKey{pdfnonfullscreenpagemode}{%
3626 \do{UseNone}{}%
3627 \do{UseOutlines}{}%
3628 \do{UseThumbs}{}%
3629 \do{FullScreen}{}%
3630 \do{UseOC}{PDF 1.5}%
3631 \do{UseAttachments}{PDF 1.6}%
3632 }
3633 \Hy@DefNameKey{pdfdirection}{%
3634 \do{L2R}{Left to right}%
3635 \do{R2L}{Right to left}%
3636 }
3637 \Hy@DefNameKey{pdfviewarea}{%
3638 \do{MediaBox}{}%
3639 \do{CropBox}{}%
3640 \do{BleedBox}{}%
3641 \do{TrimBox}{}%
3642 \do{ArtBox}{}%
3643 }
3644 \Hy@DefNameKey{pdfviewclip}{%
3645 \do{MediaBox}{}%
3646 \do{CropBox}{}%
3647 \do{BleedBox}{}%
3648 \do{TrimBox}{}%
3649 \do{ArtBox}{}%
3650 }
3651 \Hy@DefNameKey{pdfprintarea}{%
3652 \do{MediaBox}{}%
3653 \do{CropBox}{}%
3654 \do{BleedBox}{}%
3655 \do{TrimBox}{}%
3656 \do{ArtBox}{}%
3657 }
3658 \Hy@DefNameKey{pdfprintclip}{%
3659 \do{MediaBox}{}%
3660 \do{CropBox}{}%
3661 \do{BleedBox}{}%

```

```

3662 \do{TrimBox}{}%
3663 \do{ArtBox}{}%
3664 }
3665 \Hy@DefNameKey{pdfprintscaling}{%
3666 \do{AppDefault}{}%
3667 \do{None}{}%
3668 }
3669 \Hy@DefNameKey{pdfduplex}{%
3670 \do{Simplex}{}%
3671 \do{DuplexFlipShortEdge}{}%
3672 \do{DuplexFlipLongEdge}{}%
3673 }
3674 \Hy@DefNameKey{pdfpicktraybypdfsize}{%
3675 \do{true}{}%
3676 \do{false}{}%
3677 }
3678 \define@key{Hyp}{pdfprintpagerange}{%
3679 \def\@pdfprintpagerange{#1}%
3680 }
3681 \Hy@DefNameKey{pdfnumcopies}{%
3682 \do{2}{two copies}%
3683 \do{3}{three copies}%
3684 \do{4}{four copies}%
3685 \do{5}{five copies}%
3686 }
3687 \define@key{Hyp}{pdfusetitle}[true]{%
3688 \Hy@boolkey{pdfusetitle}{#1}%
3689 }
3690 \def\HyXeTeX@CheckUnicode{%
3691 \ifxetex
3692 \ifHy@unicode
3693 \else
3694 \Hy@WarningNoLine{%
3695 XeTeX driver only supports unicode.\MessageBreak
3696 Enabling option `unicode'%
3697 }%
3698 \kvsetkeys{Hyp}{unicode}%
3699 \fi
3700 \else
3701 \let\HyXeTeX@CheckUnicode\relax
3702 \fi
3703 }
3704 \def\HyPsd@PrerenderUnicode#1{%
3705 \begingroup
3706 \expandafter\ifx\csname PrerenderUnicode\endcsname\relax
3707 \else
3708 \sbox0{%
3709 \let\GenericInfo\@gobbletwo
3710 \let\GenericWarning\@gobbletwo
3711 \let\GenericError\@gobblefour
3712 \PrerenderUnicode{#1}%
3713 }%
3714 \fi
3715 \endgroup

```

```

3716 }
3717 \define@key{Hyp}{pdftitle}{%
3718   \AddToDocumentProperties[hyperref]{pdftitle}{#1}%
3719   \HyXeTeX@CheckUnicode
3720   \HyPsd@PrerenderUnicode{#1}%
3721   \pdfstringdef\@pdftitle{#1}%
3722 }
3723 \define@key{Hyp}{pdfauthor}{%
3724   \AddToDocumentProperties[hyperref]{pdfauthor}{#1}%
3725   \HyXeTeX@CheckUnicode
3726   \HyPsd@PrerenderUnicode{#1}%
3727   \pdfstringdef\@pdfauthor{#1}%
3728 }
3729 \define@key{Hyp}{pdfproducer}{%
3730   \AddToDocumentProperties[hyperref]{pdfproducer}{#1}%
3731   \HyXeTeX@CheckUnicode
3732   \HyPsd@PrerenderUnicode{#1}%
3733   \pdfstringdef\@pdfproducer{#1}%
3734 }
3735 \define@key{Hyp}{pdfcreator}{%
3736   \AddToDocumentProperties[hyperref]{pdfcreator}{#1}%
3737   \HyXeTeX@CheckUnicode
3738   \HyPsd@PrerenderUnicode{#1}%
3739   \pdfstringdef\@pdfcreator{#1}%
3740 }
3741 \define@key{Hyp}{addtopdfcreator}{%
3742   \HyXeTeX@CheckUnicode
3743   \HyPsd@PrerenderUnicode{#1}%
3744   \pdfstringdef\@pdfcreator{\@pdfcreator, #1}%
3745 }
3746 \define@key{Hyp}{pdfcreationdate}{%
3747   \begingroup
3748     \Hy@unicodfalse
3749     \pdfstringdef\@pdfcreationdate{#1}%
3750   \endgroup
3751 }
3752 \define@key{Hyp}{pdfmoddate}{%
3753   \begingroup
3754     \Hy@unicodfalse
3755     \pdfstringdef\@pdfmoddate{#1}%
3756   \endgroup
3757 }
3758 \define@key{Hyp}{pdfsubject}{%
3759   \AddToDocumentProperties[hyperref]{pdfsubject}{#1}%
3760   \HyXeTeX@CheckUnicode
3761   \HyPsd@PrerenderUnicode{#1}%
3762   \pdfstringdef\@pdfsubject{#1}%
3763 }
3764 \define@key{Hyp}{pdfkeywords}{%
3765   \AddToDocumentProperties[hyperref]{pdfkeywords}{#1}%
3766   \HyXeTeX@CheckUnicode
3767   \HyPsd@PrerenderUnicode{#1}%
3768   \pdfstringdef\@pdfkeywords{#1}%
3769 }

```

```

3770 \define@key{Hyp}{pdftrapped}{%
3771   \lowercase{\edef\Hy@temp{#1}}%
3772   \ifx\Hy@temp\HyInfo@trapped@true
3773     \def\@pdftrapped{True}%
3774   \else
3775     \ifx\Hy@temp\HyInfo@trapped@false
3776       \def\@pdftrapped{False}%
3777     \else
3778       \ifx\Hy@temp\HyInfo@trapped@unknown
3779         \def\@pdftrapped{Unknown}%
3780       \else
3781         \ifx\Hy@temp\@empty
3782           \else
3783             \Hy@Warning{%
3784               Unsupported value `#1'\MessageBreak
3785               for option `pdftrapped'%
3786             }%
3787           \fi
3788         \def\@pdftrapped{}%
3789       \fi
3790     \fi
3791   \fi
3792 }
3793 \def\HyInfo@trapped@true{true}
3794 \def\HyInfo@trapped@false{false}
3795 \def\HyInfo@trapped@unknown{unknown}
3796 \def\HyInfo@TrappedUnsupported{%
3797   \ifx\@pdftrapped\@empty
3798   \else
3799     \Hy@WarningNoLine{`pdftrapped' is not supported by this driver}%
3800   \gdef\HyInfo@TrappedUnsupported{}%
3801   \fi
3802 }
3803 \define@key{Hyp}{pdfinfo}{%
3804   \kvsetkeys{pdfinfo}{#1}%
3805 }
3806 \def\Hy@temp#1{%
3807   \lowercase{\Hy@temp@A{#1}}{#1}%
3808 }
3809 \def\Hy@temp@A#1#2{%
3810   \define@key{pdfinfo}{#2}{%
3811     \hypersetup{pdf#1={##1}}%
3812   }%
3813 }
3814 \Hy@temp{Title}
3815 \Hy@temp{Author}
3816 \Hy@temp{Keywords}
3817 \Hy@temp{Subject}
3818 \Hy@temp{Creator}
3819 \Hy@temp{Producer}
3820 \Hy@temp{CreationDate}
3821 \Hy@temp{ModDate}
3822 \Hy@temp{Trapped}
3823 \newif\ifHyInfo@AddonUnsupported

```

```

3824 \kv@set@family@handler{pdfinfo}{%
3825 \HyInfo@AddonHandler{#1}{#2}%
3826 }
3827 \let\HyInfo@do\relax
3828 \def\HyInfo@AddonHandler#1#2{%
3829 \ifx\kv@value\relax
3830 \Hy@Warning{%
3831 Option `pdfinfo': ignoring key `\'kv@key' without value%
3832 }%
3833 \else
3834 \EdefEscapeName\HyInfo@KeyEscaped{\'kv@key}%
3835 \EdefUnescapeName\HyInfo@Key{\HyInfo@KeyEscaped}%
3836 \expandafter\ifx\csname KV@pdfinfo@\HyInfo@Key\endcsname\relax
3837 \ifHyInfo@AddonUnsupported
3838 \Hy@Warning{%
3839 This driver does not support additional\MessageBreak
3840 information entries, therefore\MessageBreak
3841 `\'kv@key' is ignored%
3842 }%
3843 \else
3844 \def\HyInfo@tmp###1{%
3845 \kv@define@key{pdfinfo}{###1}{%
3846 \HyXeTeX@CheckUnicode
3847 \HyPsd@PrerenderUnicode{####1}%
3848 \pdfstringdef\HyInfo@Value{####1}%
3849 \global\expandafter
3850 \let\csname HyInfo@Value@##1\endcsname
3851 \HyInfo@Value
3852 }%
3853 }%
3854 \expandafter\HyInfo@tmp\expandafter{\HyInfo@Key}%
3855 \global\expandafter
3856 \let\csname KV@pdfinfo@\HyInfo@Key\expandafter\endcsname
3857 \csname KV@pdfinfo@\HyInfo@Key\endcsname
3858 \xdef\HyInfo@AddonList{%
3859 \HyInfo@AddonList
3860 \HyInfo@do{\HyInfo@Key}%
3861 }%
3862 \expandafter\kv@parse@normalized\expandafter{%
3863 \HyInfo@Key={#2}%
3864 }{%
3865 \kv@processor@default{pdfinfo}%
3866 }%
3867 \fi
3868 \else
3869 \expandafter\kv@parse@normalized\expandafter{%
3870 \HyInfo@Key={#2}%
3871 }{%
3872 \kv@processor@default{pdfinfo}%
3873 }%
3874 \fi
3875 \fi
3876 }
3877 \def\HyInfo@GenerateAddons{%

```



```

3878 \ifHyInfo@AddonUnsupported
3879 \def\HyInfo@Addons{}%
3880 \else
3881 \begingroup
3882 \toks@{}%
3883 \def\HyInfo@do##1{%
3884 \EdefEscapeName\HyInfo@Key{##1}%
3885 \edef\x{%
3886 \toks@{%
3887 \the\toks@
3888 /\HyInfo@Key(\csname HyInfo@Value@##1\endcsname)%
3889 }%
3890 }%
3891 \x
3892 }%
3893 \HyInfo@AddonList
3894 \edef\x{\endgroup
3895 \def\noexpand\HyInfo@Addons{\the\toks@}%
3896 }%
3897 \x
3898 \fi
3899 }
3900 \global\let\HyInfo@AddonList\ltx@empty

3901 \define@key{Hyp}{pdfview}{\calculate@pdfview#1 \\\}
3902 \define@key{Hyp}{pdflinkmargin}{\setpdflinkmargin{#1}}
3903 \let\setpdflinkmargin\@gobble
3904 \def\calculate@pdfview#1 #2\{\%
3905 \def\@pdfview{#1}%
3906 \ifx\#2\%
3907 \def\@pdfviewparams{ -32768}%
3908 \else
3909 \def\@pdfviewparams{ #2}%
3910 \fi
3911 }
3912 \def\Hy@number#1{%
3913 \the\numexpr#1\relax
3914 }%
3915 \define@key{Hyp}{pdfstartpage}{\%
3916 \ifx\#1\%
3917 \let\@pdfstartpage\ltx@empty
3918 \else
3919 \edef\@pdfstartpage{\Hy@number{#1}}%
3920 \fi
3921 }%
3922 \define@key{Hyp}{pdfstartview}{\%
3923 \ifx\#1\%
3924 \let\@pdfstartview\ltx@empty
3925 \else
3926 \def\@pdfstartview{/#1}%
3927 \fi
3928 }
3929 \def\HyPat@NonNegativeReal/{\%
3930 \ *([0-9]+\.[0-9]*|[0-9]*\.[0-9]+) *%
3931 }

```

```

3932 \define@key{Hyp}{pdfremotestartview}{%
3933   \ifx\#1\%
3934     \def\@pdfremotestartview{/Fit}%
3935   \else
3936     \edef\@pdfremotestartview{#1}%
3937     \Hy@Match\@pdfremotestartview{}{%
3938       ^{XYZ(%
3939         ()| %
3940         (null|-?\HyPat@NonNegativeReal/) %
3941         (null|-?\HyPat@NonNegativeReal/) %
3942         (null|\HyPat@NonNegativeReal/)%
3943       )| % end of "XYZ"
3944     Fit(%
3945       ()| %
3946       B| %
3947       (H|V|BH|BV)(%
3948         ()| %
3949         (null|\HyPat@NonNegativeReal/)%
3950       )| %
3951       R %
3952       \HyPat@NonNegativeReal/ %
3953       \HyPat@NonNegativeReal/ %
3954       \HyPat@NonNegativeReal/ %
3955       \HyPat@NonNegativeReal/%
3956     ) % end of "Fit"
3957   )$%
3958 }{}{%
3959   \Hy@Warning{%
3960     Invalid value ` \@pdfremotestartview'\MessageBreak
3961     of `pdfremotestartview'\MessageBreak
3962     is replaced by `Fit'%
3963   }%
3964   \let\@pdfremotestartview\@empty
3965 }%
3966 \ifx\@pdfremotestartview\@empty
3967   \def\@pdfremotestartview{/Fit}%
3968 \else
3969   \edef\@pdfremotestartview{/ \@pdfremotestartview}%
3970 \fi
3971 \fi
3972 }
3973 \define@key{Hyp}{pdfpagescrop}{\edef\@pdfpagescrop{#1}}
3974 \define@key{Hyp}{pdftoolbar}[true]{%
3975   \Hy@boolkey{pdftoolbar}{#1}%
3976 }
3977 \define@key{Hyp}{pdfmenubar}[true]{%
3978   \Hy@boolkey{pdfmenubar}{#1}%
3979 }
3980 \define@key{Hyp}{pdfwindowui}[true]{%
3981   \Hy@boolkey{pdfwindowui}{#1}%
3982 }
3983 \define@key{Hyp}{pdfitwindow}[true]{%
3984   \Hy@boolkey{pdfitwindow}{#1}%
3985 }

```

```

3986 \define@key{Hyp}{pdfcenterwindow}[true]{%
3987   \Hy@boolkey{pdfcenterwindow}{#1}%
3988 }
3989 \define@key{Hyp}{pdfdisplaydoctitle}[true]{%
3990   \Hy@boolkey{pdfdisplaydoctitle}{#1}%
3991 }
3992 \define@key{Hyp}{pdfa}[true]{%
3993   \Hy@boolkey{pdfa}{#1}%
3994 }
3995 \define@key{Hyp}{pdfnewwindow}[true]{%
3996   \def\Hy@temp{#1}%
3997   \ifx\Hy@temp\@empty
3998     \Hy@pdfnewwindowsetfalse
3999   \else
4000     \Hy@pdfnewwindowsettrue
4001     \Hy@boolkey{pdfnewwindow}{#1}%
4002   \fi
4003 }
4004 \def\Hy@SetNewWindow{%
4005   \ifHy@pdfnewwindowset
4006     /NewWindow %
4007   \ifHy@pdfnewwindow true\else false\fi
4008 }
4009 }
4010 \Hy@DefNameKey{pdfpagelayout}{%
4011   \do{SinglePage}{}%
4012   \do{OneColumn}{}%
4013   \do{TwoColumnLeft}{}%
4014   \do{TwoColumnRight}{}%
4015   \do{TwoPageLeft}{PDF 1.5}%
4016   \do{TwoPageRight}{PDF 1.5}%
4017 }
4018 \define@key{Hyp}{pdflang}{%
4019   \edef\@pdflang{#1}%
4020   \def\Hy@temp{\relax}%
4021   \ifx\@pdflang\Hy@temp
4022     \let\@pdflang\relax
4023   \fi
4024   \ifx\@pdflang\relax
4025   \else
4026     \ifx\@pdflang\ltx@empty
4027     \else

```

Test according to ABNF of RFC 3066.

```

4028   \Hy@Match\@pdflang{icase}{%
4029     ~%
4030     [a-z]{1,8}%
4031     (-[a-z0-9]{1,8})*%
4032     $%
4033   }{%

```

Test according to ABNF of RFC 5646.

```

4034   \Hy@Match\@pdflang{icase}{%
4035     ~%
4036     (%

```

```

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

```

Test for unique extensions.

```

4064 \Hy@Match{-\@pdflang}{icase}{-[a-wyz0-9]-}{%
4065 \Hy@Match\@pdflang{icase}{~x-}{}%
4066 % remove privateuse
4067 \edef\Hy@temp{-\@pdflang}%
4068 \Hy@Match\Hy@temp{icase}{}%
4069 ~%
4070 (%
4071 (-[a-wyz0-9]|-[a-z0-9]{2,8})?%
4072 )%
4073 -x-%
4074 }{%
4075 \edef\Hy@temp{%
4076 \expandafter\strip@prefix\pdfastmatch1%
4077 }%
4078 }{%
4079 \Hy@Match\Hy@temp{icase}{}%
4080 (-[a-wyz0-9]-).*\ltx@backslashchar1%
4081 }{%
4082 \Hy@Warning{%
4083 Invalid language identifier `#1'\MessageBreak
4084 for option `pdfang', because it violates\MessageBreak
4085 well-formedness defined in RFC 4646\MessageBreak
4086 by duplicate singleton subtags%
4087 }%
4088 \let\@pdfang\relax
4089 }{%

```

```

4090     }%
4091   }{}%

```

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

```

4092   \ifx\@pdflang\relax
4093   \else
4094     \Hy@Match\@pdflang{icase}{%
4095       ~%
4096       [a-zA-Z]{2}-%
4097       (%
4098         aa|AA|%
4099         [qQ][m-zA-Z]|%
4100         [xX][a-zA-Z]|%
4101         zz|ZZ%
4102       )%
4103       (-|$)%
4104     }{%
4105       \Hy@Warning{%
4106         Invalid language identifier `#1'\MessageBreak
4107         for option `pdflang' because of invalid country code%
4108       \MessageBreak
4109         in second subtag (RFC 3066)%
4110     }%
4111     \let\@pdflang\relax
4112   }{}%
4113   \fi
4114 }{%
4115   \Hy@Warning{%
4116     Invalid language identifier `#1'\MessageBreak
4117     for option `pdflang', because it violates\MessageBreak
4118     well-formedness defined in RFC 5646%
4119   }%
4120   \let\@pdflang\relax
4121 }%
4122 }{%
4123   \Hy@Warning{%
4124     Invalid language identifier `#1'\MessageBreak
4125     for option `pdflang' (RFC 3066)%
4126   }%
4127   \let\@pdflang\relax
4128 }%
4129 \fi
4130 \fi
4131 }
4132 \define@key{Hyp}{pdfpagelabels}[true]{%
4133   \Hy@boolkey{pdfpagelabels}{#1}%
4134 }
4135 \define@key{Hyp}{pdfescapeform}[true]{%
4136   \Hy@boolkey{pdfescapeform}{#1}%
4137 }

```

Default values:

```

4138 \def\@linkbordercolor{1 0 0}
4139 \def\@urlbordercolor{0 1 1}
4140 \def\@menubordercolor{1 0 0}

```

```

4141 \def\@filebordercolor{0 .5 .5}
4142 \def\@runbordercolor{0 .7 .7}
4143 \def\@citebordercolor{0 1 0}
4144 \def\@pdfhighlight{/I}
4145 \let\@pdftitle\ltx@empty
4146 \let\@pdfauthor\ltx@empty
4147 \let\@pdfproducer\relax
4148 \def\@pdfcreator{LaTeX with hyperref}
4149 \let\@pdfcreationdate\ltx@empty
4150 \let\@pdfmoddate\ltx@empty
4151 \let\@pdfsubject\ltx@empty
4152 \let\@pdfkeywords\ltx@empty
4153 \let\@pdftrapped\ltx@empty
4154 \let\@pdfpagescrop\ltx@empty
4155 \def\@pdfstartview{/Fit}
4156 \def\@pdfremotestartview{/Fit}
4157 \def\@pdfstartpage{1}
4158 \let\@pdfprintpagerange\ltx@empty
4159 \let\@pdflang\relax
4160 \let\PDF@SetupDoc\@empty
4161 \let\PDF@FinishDoc\@empty
4162 \let\phantomsection\@empty
4163 \let\special@paper\@empty
4164 \def\HyperDestNameFilter#1{#1}
4165 \Hy@AtBeginDocument{%
4166   \begingroup
4167     \edef\x{\ifdim\stockheight>\z@ \stockheight\else\paperheight\fi}%
4168     \dimen@=\x\relax
4169     \ifdim\dimen@>\z@
4170       \else
4171         \dimen@=11in\relax
4172         \Hy@WarningNoLine{%
4173           Height of page (\expandafter\string\x) %
4174           is invalid (\the\x),\MessageBreak
4175           using 11in%
4176         }%
4177       \fi
4178       \dimen@=0.99626401\dimen@
4179       \xdef\Hy@pageheight{\strip@pt\dimen@}%
4180     \endgroup
4181 }
4182 \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.

```

4183 \let\hyper@normalise\ExecuteOptions
4184 \let\ExecuteOptions\hypersetup
4185 \Hy@RestoreCatcodes
4186 \InputIfFileExists{hyperref.cfg}{\|}{\|}
4187 \Hy@SetCatcodes
4188 \let\ExecuteOptions\hyper@normalise
4189 \ifx\Hy@MaybeStopNow\relax
4190 \else

```

```

4191 \Hy@stoppeearlytrue
4192 \expandafter\Hy@MaybeStopNow
4193 \fi
4194 \Hy@stoppeearlyfalse

```

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.

```

4195 \SetupKeyvalOptions{family=Hyp}
4196 \DeclareLocalOptions{%
4197   a4paper,a5paper,b5paper,letterpaper,legalpaper,executivepaper%
4198 }

```

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

```

4199 \@ifpackagewith{hyperref}{tex4ht}{%
4200 }{%
4201   \@ifpackageloaded{tex4ht}{%
4202     \PassOptionsToPackage{tex4ht}{hyperref}%
4203   }{%
4204     \ltx@ifundefined{HCode}{%
4205     }{%
4206       \begingroup
4207       \def\Hy@pkg{tex4ht}%
4208       \def\Hy@temp@A#1\RequirePackage[#2]#3#4\Hy@NIL{%
4209         \def\Hy@param{#2#3}%
4210         \ifx\Hy@param\ltx@empty
4211           \expandafter\ltx@gobble
4212         \else
4213           \def\Hy@param{#3}%
4214           \ifx\Hy@param\Hy@pkg
4215             \PassOptionsToPackage{#2}{tex4ht}%
4216             \expandafter\expandafter\expandafter\@gobble
4217           \else
4218             \expandafter\expandafter\expandafter\ltx@firstofone
4219           \fi
4220         \fi
4221         {\Hy@temp@A#4\Hy@NIL}%
4222       }%
4223       \expandafter
4224       \Hy@temp@A\@documentclasshook\RequirePackage[]{}\Hy@NIL
4225     \endgroup
4226     \PassOptionsToPackage{tex4ht}{hyperref}%
4227   }%
4228 }%
4229 }

```

```

4230 \let\ReadBookmarks\relax
4231 \ProcessKeyvalOptions{Hyp}

```

After processing options.

15.1 Package `xspace` support

```

4232 \def\Hy@xspace@end{}
4233 \ltx@ifundefined{xspaceaddexceptions}{%
4234   \Hy@AtBeginDocument{%

```

```

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

```

15.2 Option draft

```

4251 \Hy@AtBeginDocument{%
4252 \ifHy@draft
4253 \let\hyper@@anchor\@gobble
4254 \gdef\hyper@link#1#2#3{#3\Hy@xspace@end}%
4255 \def\hyper@anchorstart#1#2{#2\Hy@xspace@end}%
4256 \def\hyper@anchorend{\Hy@xspace@end}%
4257 \let\hyper@linkstart\@gobbletwo
4258 \def\hyper@linkend{\Hy@xspace@end}%
4259 \def\hyper@linkurl#1#2{#1\Hy@xspace@end}%
4260 \def\hyper@linkfile#1#2#3{#1\Hy@xspace@end}%
4261 \def\hyper@link@{#1}#2#3#4{#4\Hy@xspace@end}%
4262 \def\Acrobatmenu#1#2{\leavevmode#2\Hy@xspace@end}%
4263 \let\PDF@SetupDoc\@empty
4264 \let\PDF@FinishDoc\@empty
4265 \let\ReadBookmarks\relax
4266 \let\WriteBookmarks\relax
4267 \Hy@WarningNoLine{Draft mode on}%
4268 \fi
4269 \Hy@DisableOption{draft}%
4270 \Hy@DisableOption{nolinks}%
4271 \Hy@DisableOption{final}%
4272 }

```

15.3 PDF/A

```

4273 \Hy@DisableOption{pdfa}
4274 \ifHy@pdfa
4275 \ifnum \Hy@pdf@majorminor@version < 104
4276 \kvsetkeys{Hyp}{pdfversion=1.4}%
4277 \fi
4278 \Hy@DisableOption{pdfversion}%
4279 \def\Hy@Acrobatmenu#1#2{%
4280 \leavevmode
4281 \begingroup
4282 \edef\x{#1}%
4283 \@onelevel@sanitize\x

```



```

4284 \ifx\x\Hy@NextPage
4285 \let\y=Y%
4286 \else
4287 \ifx\x\Hy@PrevPage
4288 \let\y=Y%
4289 \else
4290 \ifx\x\Hy@FirstPage
4291 \let\y=Y%
4292 \else
4293 \ifx\x\Hy@LastPage
4294 \let\y=Y%
4295 \else
4296 \let\y=N%
4297 \fi
4298 \fi
4299 \fi
4300 \fi
4301 \expandafter\endgroup
4302 \ifx\y Y%
4303 \else
4304 \Hy@Error{%
4305 PDF/A: Named action `#1' is not permitted%
4306 }\@ehc
4307 {#2}%
4308 \expandafter\@gobble
4309 \fi
4310 }%
4311 \def\Hy@temp#1{%
4312 \expandafter\def\csname Hy@#1\endcsname{#1}%
4313 \expandafter\@onelevel@sanitize\csname Hy@#1\endcsname
4314 }%
4315 \Hy@temp{NextPage}%
4316 \Hy@temp{PrevPage}%
4317 \Hy@temp{FirstPage}%
4318 \Hy@temp{LastPage}%
4319 \else
4320 \def\Hy@Acrobatmenu#1#2{\leavevmode}%
4321 \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.

```

4322 \def\Hy@wrapper@babel#1#2{%
4323 \begingroup
4324 \Hy@safe@activestrue
4325 \set@display@protect
4326 \edef\x{#2}%
4327 \@onelevel@sanitize\x
4328 \toks@{#1}%
4329 \edef\x{\endgroup\the\toks@{\x}}%

```

```

4330 \x
4331 }
4332 \def\Hy@WrapperDef#1{%
4333 \begingroup
4334 \escapechar=\m@ne
4335 \xdef\Hy@gtemp{%
4336 \expandafter\noexpand\csname HyWrap@\string#1\endcsname
4337 }%
4338 \endgroup
4339 \edef#1{%
4340 \noexpand\Hy@wrapper@babel
4341 \expandafter\noexpand\Hy@gtemp
4342 }%
4343 \expandafter\def\Hy@gtemp
4344 }

4345 \ifHy@hyperfigures
4346 \Hy@Info{Hyper figures ON}%
4347 \else
4348 \Hy@Info{Hyper figures OFF}%
4349 \fi
4350 \ifHy@nesting
4351 \Hy@Info{Link nesting ON}%
4352 \else
4353 \Hy@Info{Link nesting OFF}%
4354 \fi
4355 \ifHy@hyperindex
4356 \Hy@Info{Hyper index ON}%
4357 \else
4358 \Hy@Info{Hyper index OFF}%
4359 \fi
4360 \ifHy@plainpages
4361 \Hy@Info{Plain pages ON}%
4362 \else
4363 \Hy@Info{Plain pages OFF}%
4364 \fi
4365 \ifHy@backref
4366 \Hy@Info{Backreferencing ON}%
4367 \else
4368 \Hy@Info{Backreferencing OFF}%
4369 \fi
4370 \ifHy@implicit
4371 \Hy@InfoNoLine{Implicit mode ON; LaTeX internals redefined}%
4372 \else
4373 \Hy@InfoNoLine{Implicit mode OFF; no redefinition of LaTeX internals}%
4374 \def\MaybeStopEarly{%
4375 \Hy@Message{Stopped early}%
4376 \Hy@AtBeginDocument{%
4377 \PDF@FinishDoc
4378 \gdef\PDF@FinishDoc{}}%
4379 }%
4380 \endinput
4381 }%
4382 \Hy@AtBeginDocument{%
4383 \let\autoref\ref

```

```

4384 \let\autopageref\pageref
4385 \ifx\@pdfpagemode\@empty
4386 \gdef\@pdfpagemode{UseNone}%
4387 \fi
4388 \global\Hy@backreffalse
4389 }%
4390 \Hy@AtEndOfPackage{%
4391 \global\let\ReadBookmarks\relax
4392 \global\let\WriteBookmarks\relax
4393 }%
4394 \fi
4395 \Hy@DisableOption{implicit}

```

15.4.1 Driver loading

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

```

4396 \@ifundefined{stockwidth}{\newdimen\stockwidth}{}
4397 \@ifundefined{stockheight}{\newdimen\stockheight}{}

4398 \Hy@AtEndOfPackage{%
4399 \@ifpackageloaded{tex4ht}{%
4400 \def\Hy@driver{htex4ht}%
4401 \Hy@texhttrue
4402 }{}%

```

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.

```

4403 \ifx\Hy@driver\@empty
4404 \else
4405 \ifx\pdfextension\@undefined
4406 \def\Hy@temp{hpdfTeX}%
4407 \else
4408 \def\Hy@temp{hluatex}%
4409 \fi
4410 \ifpdf
4411 \ifx\Hy@driver\Hy@temp
4412 \else
4413 \Hy@WarningNoLine{%
4414 Wrong driver `\'Hy@driver.def';\MessageBreak
4415 pdfTeX is running in PDF mode.\MessageBreak
4416 Forcing driver `\'Hy@temp.def'%
4417 }%
4418 \let\Hy@driver\Hy@temp
4419 \fi
4420 \else
4421 \ifx\Hy@driver\Hy@temp
4422 \Hy@WarningNoLine{%
4423 Wrong driver `\'Hy@driver.def';\MessageBreak
4424 pdfTeX is not running in PDF mode.\MessageBreak
4425 Using default driver%
4426 }%
4427 \let\Hy@driver\@empty
4428 \fi
4429 \fi
4430 \fi

```

```

4431 \ifHy@texht
4432 \else
4433   \ifx\Hy@driver\@empty
4434   \else
4435     \def\Hy@temp{hxtex}%
4436     \ifxetex
4437       \ifx\Hy@driver\Hy@temp
4438       \else
4439         \Hy@WarningNoLine{%
4440           Wrong driver `\'Hy@driver.def';\MessageBreak
4441           XeTeX is running.\MessageBreak
4442           Forcing driver `\'Hy@temp.def' for XeTeX%
4443         }%
4444         \let\Hy@driver\Hy@temp
4445       \fi
4446     \fi
4447   \fi
4448 \fi
4449 \ifx\Hy@driver\@empty
4450 \else
4451   \def\Hy@temp{hhitex}%
4452   \ifhint
4453     \ifx\Hy@driver\Hy@temp
4454     \else
4455       \Hy@WarningNoLine{%
4456         Wrong driver `\'Hy@driver.def';\MessageBreak
4457         hitex is running.\MessageBreak
4458         Forcing driver `\'Hy@temp.def'%
4459       }%
4460       \let\Hy@driver\Hy@temp
4461     \fi
4462   \fi
4463 \fi
4464 \ifx\Hy@driver\@empty
4465 \else
4466   \def\Hy@temp{hvtexhtm}%
4467   \ifnum\ifvtex\OpMode\else\m@ne\fi=10 %
4468     \ifx\Hy@driver\Hy@temp
4469     \else
4470       \Hy@WarningNoLine{%
4471         Wrong driver `\'Hy@driver.def';\MessageBreak
4472         VTeX is running in HTML mode.\MessageBreak
4473         Forcing driver `\'Hy@temp.def'%
4474       }%
4475       \let\Hy@driver\Hy@temp
4476     \fi
4477   \else
4478     \ifx\Hy@driver\Hy@temp
4479     \Hy@WarningNoLine{%
4480       Wrong driver `\'Hy@driver.def';\MessageBreak
4481       VTeX is not running in HTML mode.\MessageBreak
4482       Using default driver%
4483     }%
4484     \let\Hy@driver\@empty

```

```

4485 \fi
4486 \fi
4487 \fi

```

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

```

4488 \let\HyOpt@DriverType\ltx@empty
4489 \ifx\HyOpt@CustomDriver\ltx@empty
4490 \ifx\Hy@driver\@empty
4491 \def\HyOpt@DriverType{ (autodetected)}%
4492 \providecommand*{\Hy@defaultdriver}{hdvips}%
4493 \ifpdf
4494 \ifx\pdfextension\@undefined
4495 \def\Hy@driver{hpdfTeX}%
4496 \else
4497 \def\Hy@driver{hluatex}%
4498 \fi
4499 \else
4500 \ifxetex
4501 \def\Hy@driver{hxetex}%
4502 \else
4503 \ifnum\ifvtex\OpMode\else\m@ne\fi=10 %
4504 \def\Hy@driver{hvtexhtm}%
4505 \def\MaybeStopEarly{%
4506 \Hy@Message{Stopped early}}%
4507 \Hy@AtBeginDocument{%
4508 \PDF@FinishDoc
4509 \gdef\PDF@FinishDoc{}}%
4510 }%
4511 \endinput
4512 }%
4513 \else
4514 \ifhint
4515 \def\Hy@driver{hhitex}
4516 \else
4517 \ifnum\ifvtex\OpMode\else\m@ne\fi=\@ne
4518 \def\Hy@driver{hvtex}%
4519 \else
4520 \ifnum\ifvtex\OpMode\else\m@ne\fi=\tw@
4521 \def\Hy@driver{hvtex}%
4522 \else
4523 \ifx\HyOpt@DriverFallback\ltx@empty
4524 \let\Hy@driver\Hy@defaultdriver
4525 \def\HyOpt@DriverType{ (default)}%
4526 \else
4527 \begingroup
4528 \toks@{\expandafter{\HyOpt@DriverFallback}}%
4529 \edef\x{\endgroup
4530 \noexpand\kvsetkeys{Hyp}{\the\toks@}}%
4531 }%
4532 \x
4533 \ifx\Hy@driver\ltx@empty
4534 \let\Hy@driver\Hy@defaultdriver
4535 \def\HyOpt@DriverType{ (default)}%
4536 \else
4537 \def\HyOpt@DriverType{ (fallback)}%

```

```

4538         \fi
4539     \fi
4540 \fi
4541 \fi
4542 \fi
4543 \fi
4544 \fi
4545 \fi
4546 \ifx\Hy@driver\Hy@defaultdriver
4547 \def\Hy@temp{hdvwind}%
4548 \ifx\Hy@temp\Hy@driver
4549 \kvsetkeys{Hyp}{colorlinks}%
4550 \PassOptionsToPackage{dviwindo}{color}%
4551 \fi
4552 \fi
4553 \fi
4554 \else
4555 \def\HyOpt@DriverType{ (custom)}%
4556 \let\Hy@driver\HyOpt@CustomDriver
4557 \fi
4558 \Hy@InfoNoLine{Driver\HyOpt@DriverType: \Hy@driver}%
4559 \chardef\Hy@VersionChecked=0 %
4560 \input{\Hy@driver.def}%
4561 \ifcase\Hy@VersionChecked
4562 \Hy@VersionCheck{\Hy@driver.def}%
4563 \fi
4564 \let\@unprocessedoptions\relax
4565 \Hy@RestoreCatcodes
4566 \Hy@DisableOption{tex4ht}%
4567 \Hy@DisableOption{pdftex}%
4568 \Hy@DisableOption{nativepdf}%
4569 \Hy@DisableOption{dvipdfm}%
4570 \Hy@DisableOption{dvipdfmx}%
4571 \Hy@DisableOption{dvipdfmx-outline-open}%
4572 \Hy@DisableOption{pdfmark}%
4573 \Hy@DisableOption{dvips}%
4574 \Hy@DisableOption{hypertex}%
4575 \Hy@DisableOption{vtex}%
4576 \Hy@DisableOption{vtxpdfmark}%
4577 \Hy@DisableOption{dviwindo}%
4578 \Hy@DisableOption{dvipsone}%
4579 \Hy@DisableOption{textures}%
4580 \Hy@DisableOption{latex2html}%
4581 \Hy@DisableOption{ps2pdf}%
4582 \Hy@DisableOption{xetex}%
4583 \Hy@DisableOption{driverfallback}%
4584 \Hy@DisableOption{customdriver}%
4585 \Hy@DisableOption{pdfversion}%
4586 }

```

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.

```

4587 \newif\ifHy@DvipdfmxOutlineOpen

```

```

4588 \ifxetex
4589 \ifdim\number\XeTeXversion\XeTeXrevision in<0.9995in %
4590 \else
4591 \chardef\SpecialDvipdfmxOutlineOpen\@ne
4592 \Hy@DvipdfmxOutlineOpentruue
4593 \fi
4594 \fi
4595 \begingroup\expandafter\expandafter\expandafter\endgroup
4596 \expandafter\ifx\csname SpecialDvipdfmxOutlineOpen\endcsname\relax
4597 \else
4598 \ifnum\SpecialDvipdfmxOutlineOpen>\z@
4599 \Hy@DvipdfmxOutlineOpentruue
4600 \fi
4601 \fi

```

15.4.2 Bookmarks

```

4602 \def\WriteBookmarks{0}
4603 \def\@bookmarkopenstatus#1{%
4604 \ifHy@bookmarksopen

```

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

```

4605 \ifnum#1<\expandafter\@firstofone\expandafter
4606 \{\number\@bookmarksopenlevel} % explicit space
4607 \else
4608 -%
4609 \fi
4610 \else
4611 -%
4612 \fi
4613 }
4614 \ifHy@bookmarks
4615 \Hy@Info{Bookmarks ON}%
4616 \ifx\@pdfpagemode\@empty
4617 \def\@pdfpagemode{UseOutlines}%
4618 \fi
4619 \else
4620 \let\@bookmarkopenstatus\ltx@gobble
4621 \Hy@Info{Bookmarks OFF}%
4622 \Hy@AtEndOfPackage{%
4623 \global\let\ReadBookmarks\relax
4624 \global\let\WriteBookmarks\relax
4625 }%
4626 \ifx\@pdfpagemode\@empty
4627 \def\@pdfpagemode{UseNone}%
4628 \fi
4629 \fi
4630 \Hy@DisableOption{bookmarks}

```

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

```

4631 \def\Hy@CatcodeWrapper#1{%
4632 \let\Hy@endWrap\ltx@empty
4633 \def\TMP@EnsureCode##1##2{%
4634 \edef\Hy@endWrap{%

```

```

4635 \Hy@EndWrap
4636 \catcode##1 \the\catcode##1\relax
4637 }%
4638 \catcode##1 ##2\relax
4639 }%
4640 \TMP@EnsureCode{10}{12}% ^^J
4641 \TMP@EnsureCode{33}{12}% !
4642 \TMP@EnsureCode{34}{12}% "
4643 \TMP@EnsureCode{36}{3}% $ (math)
4644 \TMP@EnsureCode{38}{4}% & (alignment)
4645 \TMP@EnsureCode{39}{12}% '
4646 \TMP@EnsureCode{40}{12}% (
4647 \TMP@EnsureCode{41}{12}% )
4648 \TMP@EnsureCode{42}{12}% *
4649 \TMP@EnsureCode{43}{12}% +
4650 \TMP@EnsureCode{44}{12}% ,
4651 \TMP@EnsureCode{45}{12}% -
4652 \TMP@EnsureCode{46}{12}% .
4653 \TMP@EnsureCode{47}{12}% /
4654 \TMP@EnsureCode{58}{12}% :
4655 \TMP@EnsureCode{59}{12}% ;
4656 \TMP@EnsureCode{60}{12}% <
4657 \TMP@EnsureCode{61}{12}% =
4658 \TMP@EnsureCode{62}{12}% >
4659 \TMP@EnsureCode{63}{12}% ?
4660 \TMP@EnsureCode{91}{12}% [
4661 \TMP@EnsureCode{93}{12}% ]
4662 \TMP@EnsureCode{94}{7}% ^ (superscript)
4663 \TMP@EnsureCode{95}{8}% _ (subscript)
4664 \TMP@EnsureCode{96}{12}% `
4665 \TMP@EnsureCode{124}{12}% |
4666 \TMP@EnsureCode{126}{13}% ~ (active)
4667 ##1\relax
4668 \Hy@EndWrap
4669 }

```

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

```

4670 \Hy@AtBeginDocument{%
4671 \ifHy@ocgcolorlinks
4672 \kvsetkeys{Hyp}{colorlinks}%
4673 \ifHy@pdfa
4674 \Hy@Warning{%
4675 PDF/A: Optional Content Groups are prohibited,\MessageBreak
4676 using `colorlinks' instead of `ocgcolorlinks'%
4677 }%
4678 \Hy@ocgcolorlinksfalse
4679 \fi
4680 \fi
4681 \ifHy@ocgcolorlinks
4682 \else
4683 \Hy@DisableOption{ocgcolorlinks}%
4684 \fi
4685 \ifHy@colorlinks
4686 \def\@pdfborder{0 0 0}%

```



```

4687 \let\@pdfborderstyle\@empty
4688 \Hy@CatcodeWrapper{%
4689   \RequirePackage{color}%
4690 }%
4691 \def\Hy@colorlink#1{%
4692   \begingroup
4693   \HyColor@UseColor#1%
4694 }%
4695 \def\Hy@endcolorlink{\endgroup}%
4696 \Hy@Info{Link coloring ON}%
4697 \else
4698 \ifHy@frenchlinks
4699   \def\Hy@colorlink#1{\begingroup\fontshape{\scdefault}\selectfont}%
4700   \def\Hy@endcolorlink{\endgroup}%
4701   \Hy@Info{French linking ON}%
4702 \else

```

for grouping consistency:

```

4703   \def\Hy@colorlink#1{\begingroup}%
4704   \def\Hy@endcolorlink{\endgroup}%
4705   \Hy@Info{Link coloring OFF}%
4706 \fi
4707 \fi
4708 \Hy@DisableOption{colorlinks}%
4709 \Hy@DisableOption{frenchlinks}%
4710 \ifHy@texht
4711 \else

```

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

```

4712 \ifHy@implicit
4713   \let \T@Ref\HyRef@Ref
4714   \def\@refstar#1{%
4715     \NR@ref@showkeys{#1}%
4716     \HyRef@StarSetRef{#1}\@firstoffive
4717   }
4718   \def\@pagerefstar#1{%
4719     \NR@ref@showkeys{#1}%
4720     \HyRef@StarSetRef{#1}\@secondoffive
4721   }
4722   \def\@namerefstar#1{%
4723     \NR@ref@showkeys{#1}%
4724     \HyRef@StarSetRef{#1}\@thirdoffive
4725   }
4726   \def\@Refstar#1{%
4727     \NR@ref@showkeys{#1}%
4728     \HyRef@StarSetRef{#1}\HyRef@MakeUppercaseFirstOfFive
4729   }%
4730 \else
4731 \fi
4732 \fi
4733 }
4734 \Hy@AtBeginDocument{%
4735   \ifx\ReadBookmarks\relax
4736   \else

```

```

4737 \Hy@CatcodeWrapper\ReadBookmarks
4738 \fi
4739 }
4740 \ifHy@backref
4741 \RequirePackage{backref}%
4742 \else
4743 \let\Hy@backout\@gobble
4744 \fi
4745 \Hy@DisableOption{backref}
4746 \Hy@DisableOption{pagebackref}
4747 \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`.

```

4748 \begingroup
4749 \endlinechar=-1 %
4750 \catcode\^^A=14 %
4751 \catcode\^^M\active
4752 \catcode\%\active
4753 \catcode\#\active
4754 \catcode\_ \active
4755 \catcode\$ \active
4756 \catcode\& \active
4757 \gdef\hyper@normalise{^^A
4758 \begingroup
4759 \catcode\^^M\active
4760 \def^^M{ }^^A
4761 \catcode\%\active
4762 \let%\@percentchar
4763 \let\%\@percentchar
4764 \catcode\#\active
4765 \def#{\hyper@hash}^^A
4766 \def\#{\hyper@hash}^^A
4767 \@makeother\&^^A
4768 \edef&{\string&}^^A
4769 \edef\&{\string&}^^A
4770 \edef\textunderscore{\string_}^^A
4771 \let\_ \textunderscore
4772 \catcode\_ \active
4773 \let\_ \textunderscore
4774 \let~\hyper@tilde
4775 \let~\hyper@tilde
4776 \let\textasciitilde\hyper@tilde
4777 \let\\ \@backslashchar
4778 \edef$\{ \string$ }^^A
4779 \Hy@safe@activetrue

```

```

4780 \hyper@n@rmalise
4781 }^^A
4782 \catcode\#=6 ^^A
4783 \gdef\Hy@ActiveCarriageReturn{^^M}^^A
4784 \gdef\hyper@n@rmalise#1#2{^^A
4785 \def\Hy@tempa{#2}^^A
4786 \ifx\Hy@tempa\Hy@ActiveCarriageReturn
4787 \ltx@ReturnAfterElseFi{^^A
4788 \hyper@@normalise{#1}^^A
4789 }^^A
4790 \else
4791 \ltx@ReturnAfterFi{^^A
4792 \hyper@@normalise{#1}{#2}^^A
4793 }^^A
4794 \fi
4795 }^^A
4796 \gdef\hyper@@normalise#1#2{^^A
4797 \edef\Hy@tempa{^^A
4798 \endgroup
4799 \noexpand#1{\Hy@RemovePercentCr#2%^^M\@nil}^^A
4800 }^^A
4801 \Hy@tempa
4802 }^^A
4803 \gdef\Hy@RemovePercentCr#1%^^M#2\@nil{^^A
4804 #1^^A
4805 \ifx\limits#2\limits
4806 \else
4807 \ltx@ReturnAfterFi{^^A
4808 \Hy@RemovePercentCr #2\@nil
4809 }^^A
4810 \fi
4811 }^^A
4812 \endgroup
4813 \providecommand*\hyper@chars{%
4814 \let\#\hyper@hash
4815 \let\%\@percentchar
4816 \Hy@safe@activetrue
4817 }

4818 \def\hyperlink#1#2{%
4819 \hyper@@link{}{#1}{#2}%
4820 }

4821 \def\Hy@VerboseLinkStart#1#2{%
4822 \ifHy@verbose
4823 \begingroup
4824 \Hy@safe@activetrue
4825 \xdef\Hy@VerboseGlobalTemp{(#1) `#2}%
4826 \Hy@Info{Reference \Hy@VerboseGlobalTemp}%
4827 \xdef\Hy@VerboseGlobalTemp{%
4828 \Hy@VerboseGlobalTemp, %
4829 line \the\inputlineno
4830 }%
4831 \endgroup
4832 \let\Hy@VerboseLinkInfo\Hy@VerboseGlobalTemp

```

```

4833 \@onelevel@sanitize\Hy@VerboseLinkInfo
4834 \fi
4835 }

4836 \def\Hy@VerboseLinkInfo{<VerboseLinkInfo>}
4837 \def\Hy@VerboseLinkStop{%
4838 \ifHy@verbose
4839 \begingroup
4840 \edef\x{\endgroup
4841 \write\m@ne{%
4842 Package `hyperref' Info: %
4843 End of reference \Hy@VerboseLinkInfo.%
4844 }%
4845 }%
4846 \x
4847 \fi
4848 }

4849 \def\Hy@VerboseAnchor#1{%
4850 \ifHy@verbose
4851 \begingroup
4852 \Hy@safe@activestrue
4853 \Hy@Info{Anchor `\'HyperDestNameFilter{#1}'}%
4854 \endgroup
4855 \fi
4856 }

4857 \def\Hy@AllowHyphens{%
4858 \relax
4859 \ifhmode
4860 \penalty\@M
4861 \hskip\z@skip
4862 \fi
4863 }

4864 \DeclareRobustCommand*{\href}[1][]{%
4865 \begingroup
4866 \setkeys{href}{#1}%
4867 \@ifnextchar\bgroup\Hy@href{\hyper@normalise\href@}%
4868 }
4869 \def\Hy@href#1{%
4870 \hyper@normalise\href@
4871 }
4872 \begingroup
4873 \catcode`\$=6 %
4874 \catcode`\#=12 %
4875 \gdef\href@\$1{\expandafter\href@split$1##\}%
4876 \gdef\href@split$1##$2##$3\\$4{%
4877 \hyper@@link{$1}{$2}{$3}{$4}%
4878 \endgroup
4879 }%
4880 \endgroup

Option 'page'.
4881 \define@key{href}{page}{%
4882 \def\Hy@href@page{#1}%
4883 }

```

```

4884 \let\Hy@href@page\@empty
4885 \newcount\c@Hy@tempcnt
4886 \def\theHy@tempcnt{\the\c@Hy@tempcnt}
4887 \def\Hy@MakeRemoteAction{%
4888   \ifx\Hy@href@page\@empty
4889     \def\Hy@href@page{0}%
4890   \else
4891     \setcounter{Hy@tempcnt}{\Hy@href@page}%
4892     \ifnum\c@Hy@tempcnt<\@ne
4893       \Hy@Warning{%
4894         Invalid page number (\theHy@tempcnt)\MessageBreak
4895         for remote PDF file.\MessageBreak
4896         Using page 1%
4897       }%
4898     \def\Hy@href@page{0}%
4899   \else
4900     \global\advance\c@Hy@tempcnt\m@ne
4901     \edef\Hy@href@page{\theHy@tempcnt}%
4902   \fi
4903 \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.

```

4904 \ifx\Hy@href@nextactionraw\@empty
4905 \else
4906   \Hy@pdfnewwindowsettrue
4907   \Hy@pdfnewwindowtrue
4908 \fi
4909 }

```

Option ‘pdfremotestartview’.

```

4910 \define@key{href}{pdfremotestartview}{%
4911   \setkeys{Hyp}{pdfremotestartview={#1}}%
4912 }

```

Option ‘pdfnewwindow’.

```

4913 \let\KV@href@pdfnewwindow\KV@Hyp@pdfnewwindow
4914 \let\KV@href@pdfnewwindow@default\KV@Hyp@pdfnewwindow@default

```

Option ‘ismap’.

```

4915 \newif\ifHy@href@ismap
4916 \define@key{href}{ismap}[true]{%
4917   \ltx@ifundefined{Hy@href@ismap#1}{%
4918     \Hy@Error{%
4919       Invalid value (#1) for key `ismap'.\MessageBreak
4920       Permitted values are `true' or `false'.\MessageBreak
4921       Ignoring `ismap'%
4922     }\@ehc
4923   }{%
4924     \csname Hy@href@ismap#1\endcsname
4925   }%
4926 }

```

Option ‘nextactionraw’.

```

4927 \let\Hy@href@nextactionraw\@empty
4928 \define@key{href}{nextactionraw}{%

```

```

4929 \edef\Hy@href@nextactionraw{#1}%
4930 \ifx\Hy@href@nextactionraw\@empty
4931 \else
4932 \Hy@Match\Hy@href@nextactionraw{%
4933 ~(\HyPat@ObjRef/|<<.*[/S[/.+>>|%
4934 \[( ?\HyPat@ObjRef/|<<.*[/S[/.+>>)+ ?])$%
4935 }%}%
4936 \Hy@Warning{Invalid value for `nextactionraw':\MessageBreak
4937 \Hy@href@nextactionraw\MessageBreak
4938 The action is discarded%
4939 }%
4940 }%
4941 \ifx\Hy@href@nextactionraw\@empty
4942 \else
4943 \edef\Hy@href@nextactionraw{/Next \Hy@href@nextactionraw}%
4944 \fi
4945 \fi
4946 }
4947 \def\HyPat@ObjRef/{.+}

```

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

```

4948 \RequirePackage{url}
4949 \let\HyOrg@url\url
4950 \def\Hurl{\begingroup \Url}
4951 \DeclareRobustCommand*{\nolinkurl}{\hyper@normalise\nolinkurl@}
4952 \def\nolinkurl@#1{\Hurl{#1}}
4953 \DeclareRobustCommand*{\url}{\hyper@normalise\url@}
4954 \def\url@#1{\hyper@linkurl{\Hurl{#1}}{#1}}
4955 \DeclareRobustCommand*{\hyperimage}{\hyper@normalise\hyper@image}
4956 \providecommand\hyper@image[2]{#2}
4957 \def\hypertarget#1#2{%
4958 \ifHy@nesting
4959 \hyper@@anchor{#1}{#2}%
4960 \else
4961 \hyper@@anchor{#1}{\relax}#2%
4962 \fi
4963 }

```

`\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.

```

4964 \DeclareRobustCommand*{\hyperref}{%
4965 \@ifnextchar{\Hy@babelnormalise\label@hyperref}\@hyperref
4966 }
4967 \def\Hy@babelnormalise#1[#2]{%
4968 \begingroup
4969 \Hy@safe@activetrue
4970 \let\protect\@unexpandable@protect
4971 \edef\Hy@tempa{%

```

```

4972 \endgroup
4973 \noexpand#1[{\#2}]%
4974 }%
4975 \Hy@tempa
4976 }
4977 \def\@hyperref{\hyper@normalise\@hyperref}
4978 \def\@hyperref#1#2#3{%
4979 \edef\ref@one{\ifx\#2\else#2.\fi#3}%
4980 \expandafter\tryhyper@link\ref@one\{#1}%
4981 }
4982 \def\tryhyper@link#1\#2{%
4983 \hyper@@link{#2}{#1}%
4984 }

4985 \def\hyperdef{\@ifnextchar[\label@hyperdef]{\@hyperdef}}
4986 \def\@hyperdef#1#2#3{%, category, name, text
4987 \ifx\#1\%
4988 \def\Hy@AnchorName{#2}%
4989 \else
4990 \def\Hy@AnchorName{#1.#2}%
4991 \fi
4992 \ifHy@nesting
4993 \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{#3}%
4994 \else
4995 \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{\relax}{#3}%
4996 \fi
4997 }

```

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.

```

4998 \let\hyperrefundefinedlink\@firstofone
4999 \def\label@hyperref[#1]{%
5000 \expandafter\label@@hyperref\csname r@#1\endcsname{#1}%
5001 }%
5002 \def\label@@hyperref#1#2#3{%
5003 \ifx#1\relax
5004 \protect\G@refundefinedtrue
5005 \@latex@warning{%
5006 Hyper reference `#2' on page \thepage \space undefined%
5007 }%
5008 \begingroup
5009 \hyperrefundefinedlink{#3}%
5010 \endgroup
5011 \else
5012 \hyper@@link{\expandafter\@fifthoffive#1}%
5013 {\expandafter\@fourthoffive#1\@empty\@empty}{#3}%
5014 \fi
5015 }
5016 \def\label@hyperdef[#1]#2#3#4{% label name, category, name,
5017 % anchor text
5018 \@bsphack
5019 \ifx\#2\%
5020 \def\Hy@AnchorName{#3}%
5021 \else

```

```

5022 \def\Hy@AnchorName{#2.#3}%
5023 \fi
5024 \if@filesw
5025 \protected@write\@auxout{}\{}%
5026 \string\newlabel{#1}{\{}{\}\Hy@AnchorName}{\}}%
5027 }%
5028 \fi
5029 \@esphack
5030 \ifHy@nesting
5031 \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{#4}%
5032 \else
5033 \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{\relax}#4%
5034 \fi
5035 }

```

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

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

To make this easier, we define `\hyperget`

```

5036 \ExplSyntaxOn
5037 \cs_new:Npn \hyperget #1 #2
5038 {
5039 \use:c { __hyp_get_#1:n } { #2}
5040 }
5041
5042 \cs_new:Npn \__hyp_get_anchor:n #1
5043 {
5044 \HyperDestNameFilter
5045 {
5046 \cs_if_exist:cTF {r@#1}
5047 {
5048 \tl_item:cn {r@#1}{4}
5049 }
5050 {
5051 Doc-Start
5052 }
5053 }
5054 }
5055 \cs_new:Npn \__hyp_get_pageanchor:n #1
5056 {
5057 \HyperDestNameFilter
5058 {
5059 \cs_if_exist:cTF {r@#1}
5060 {
5061 page. \tl_item:cn {r@#1}{2}
5062 }
5063 {
5064 Doc-Start
5065 }
5066 }
5067 }

```



```

5068 \cs_new:Npn \__hyp_get_currentanchor:n #1
5069 {
5070   \HyperDestNameFilter { \@currentHref }
5071 }
5072 \ExplSyntaxOff

```

16.1 Link box support for XeTeX

```

5073 \newdimen\XeTeXLinkMargin
5074 \setlength{\XeTeXLinkMargin}{2pt}
5075 \ifxetex
5076   \font\XeTeXLink@font=pzdr at 1sp\relax
5077   \newcommand*{\XeTeXLink@space}{%
5078     \begingroup
5079       \XeTeXLink@font
5080       \@xxxii
5081     \endgroup
5082   }%
5083   \newcommand{\XeTeXLinkBox}[1]{%
5084     \begingroup
5085       \leavevmode
5086       \sbox\z@{#1}%
5087       \begingroup
5088         \dimen@=\dp\z@
5089         \advance\dimen@\XeTeXLinkMargin
5090         \setbox\tw@=\llap{%
5091           \hb@xt@\XeTeXLinkMargin{%
5092             \lower\dimen@\hbox{\XeTeXLink@space}%
5093             \hss
5094           }%
5095         }%
5096         \dp\tw@=\dp\z@
5097         \ht\tw@=\ht\z@
5098         \copy\tw@
5099       \endgroup
5100       \copy\z@
5101       \dimen@=\ht\z@
5102       \advance\dimen@\XeTeXLinkMargin
5103       \setbox\tw@=\rlap{%
5104         \hb@xt@\XeTeXLinkMargin{%
5105           \hss
5106           \raise\dimen@\hbox{\XeTeXLink@space}%
5107         }%
5108       }%
5109       \dp\tw@=\dp\z@
5110       \ht\tw@=\ht\z@
5111       \copy\tw@
5112     \endgroup
5113   }%
5114   \else
5115     \newcommand*{\XeTeXLinkBox}[1]{%
5116       \begingroup
5117         \leavevmode
5118         \sbox\z@{#1}%

```

```

5119 \copy\z@
5120 \endgroup
5121 }%
5122 \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.

```

5123 \def\hyper@@link{\let\Hy@reserved@a\relax
5124 \ifnextchar{\hyper@link@}{\hyper@link@[link]}%
5125 }
5126 % #1: type
5127 % #2: URL
5128 % #3: destination name
5129 % #4: text
5130 \def\hyper@link@[#1]#2#3#4{%
5131 \ifempty{#4}{% link text
5132 \Hy@Warning{Suppressing empty link}%
5133 }{%
5134 \begingroup
5135 \protected@edef\Hy@tempa{#2}%
5136 \edef\Hy@tempb{#3}%
5137 \ifx\Hy@tempa\tx@empty
5138 \ifx\Hy@tempb\tx@empty
5139 \Hy@Warning{Suppressing link with empty target}%
5140 \toks@{%
5141 \endgroup
5142 \tx@secondoftwo
5143 }%
5144 \else
5145 \toks@{%
5146 \endgroup
5147 \hyper@link{#1}%
5148 }%
5149 \fi
5150 \else
5151 \toks@{%
5152 \endgroup
5153 \expandafter\hyper@readexternallink#2\{\{#1}%
5154 }%
5155 \fi
5156 \Hy@safe@activesfalse
5157 \toks@\expandafter{%
5158 \the\expandafter\toks@
5159 \expandafter{\Hy@tempb}{#4}%
5160 }%
5161 \the\toks@
5162 }%
5163 }

```

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.

```

5164 \def\hyper@readexternallink#1\|#2#3#4{%
5165   \begingroup
5166     \let\\\relax
5167   \expandafter\endgroup
5168   \expandafter\@hyper@@readexternallink#1\#{#2}{#3}{#4}%
5169 }
5170 \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.

```

5171 \@hyper@readexternallink{#2}{#3}{#4}#1::\#{#1}%
5172 }

```

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

```

5173 \def\@pdftempwordfile{file}%
5174 \def\@pdftempwordrun{run}%
5175 \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:

```

5176 \ifx\|#6\|
5177   \@hyper@linkfile file:#7\#{#3}{#2}{#7}%
5178 \else
5179   \ifx\|#4\|
5180     \@hyper@linkfile file:#7\#{#3}{#2}{#7}%
5181   \else

```

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

```

5182   \def\@pdftempa{#4}%
5183   \ifx\@pdftempa\@pdftempwordfile
5184     \@hyper@linkfile#7\#{#3}{#2}{#7}%
5185   \else

```

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

```

5186     \ifx\@pdftempa\@pdftempwordrun
5187       \ifHy@pdfa
5188         \Hy@Error{%
5189           PDF/A: Launch action is prohibited%

```

```

5190      }\@ehc
5191      \begingroup
5192      \leavevmode
5193      #2%
5194      \endgroup
5195      \else
5196      \@hyper@launch#7\{\#3\}\#2}%
5197      \fi
5198      \else

```

otherwise its a URL

```

5199      \hyper@linkurl{\#3\}\#7\ifx\#2\else\hyper@hash#2\fi}%
5200      \fi
5201      \fi
5202      \fi
5203      \fi
5204      }

```

By default, turn run: into file:

```

5205 \def\@hyper@launch run:#1\#2#3{% filename, anchor text, linkname
5206 \hyper@linkurl{\#2\}%
5207 \Hy@linkfileprefix
5208 #1%
5209 \ifx\#3\%
5210 \else
5211 \hyper@hash
5212 #3%
5213 \fi
5214 }%
5215 }

```

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

```

5216 \def\@hyper@linkfile file:#1\#2#3#4{%
5217 %file url,link string, name, original uri
5218 \filename@parse{\#1}%
5219 \ifx\filename@ext\relax
5220 \edef\filename@ext{\XR@ext}%
5221 \fi
5222 \def\use@file{\filename@area\filename@base.\filename@ext}%
5223 \Hy@ifStringEndsWith\filename@ext\XR@ext{%
5224 \hyper@linkfile{\#2\}\use@file\#3}%
5225 }{%
5226 \ifx\@baseurl\@empty
5227 \hyper@linkurl{\#2\}%
5228 #4\ifx\#3\else\hyper@hash#3\fi
5229 }%
5230 \else
5231 \hyper@linkurl{\#2\}\use@file\ifx\#3\else\hyper@hash#3\fi}%
5232 \fi
5233 }%
5234 }

5235 \def\Hy@ifStringEndsWith#1#2{%
5236 \begingroup
5237 \edef\x{\#1}%

```

```

5238 \@onelevel@sanitize\x
5239 \edef\x{.\x$}%
5240 \edef\y{#2}%
5241 \@onelevel@sanitize\y
5242 \edef\y{.\y$}%
5243 \expandafter\def\expandafter\z\expandafter##\expandafter1\y##2\@nil{%
5244 \endgroup
5245 \ifx\relax##2\relax
5246 \expandafter\ltx@secondoftwo
5247 \else
5248 \expandafter\ltx@firstoftwo
5249 \fi
5250 }%
5251 \expandafter\expandafter\expandafter\z\expandafter\x\y\@nil
5252 }

5253 \def\Hy@StringLocalhost{localhost}
5254 \@onelevel@sanitize\Hy@StringLocalhost
5255 \def\Hy@CleanupFile#1{%
5256 \edef#1{#1}%
5257 \expandafter\Hy@@CleanupFile#1\hbox{//\hbox\@nil{#1}%
5258 }
5259 \def\Hy@@CleanupFile#1//#2/#3\hbox#4\@nil#5{%
5260 \begingroup
5261 \toks@{\endgroup}%
5262 \def\x{#1}%
5263 \ifx\x\@empty
5264 \def\x{#2}%
5265 \ifx\x\@empty
5266 \toks@{\endgroup\def#5{/#3}}%
5267 \else
5268 \@onelevel@sanitize\x
5269 \ifx\x\Hy@StringLocalhost
5270 \toks@{\endgroup\def#5{/#3}}%
5271 \fi
5272 \fi
5273 \fi
5274 \the\toks@
5275 }

```

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.

```

5276 \long\def\hyper@@anchor#1#2{\@hyper@@anchor#1\relax#2\relax}
5277 \long\def\@hyper@@anchor#1\relax#2#3\relax{%
5278 \ifx\#1\%
5279 #2\Hy@Warning{Ignoring empty anchor}%
5280 \else
5281 \def\anchor@spot{#2#3}%
5282 \let\put@me@back\@empty
5283 \ifx\relax#2\relax

```

```

5284 \else
5285 \ifHy@nesting
5286 \else
5287 \ifcat a\noexpand#2\relax
5288 \else
5289 \ifcat 0\noexpand#2 \relax
5290 \else
5291 % \typeout{Anchor start is not alphanumeric %
5292 % on input line\the\inputlineno%
5293 % }%
5294 \let\anchor@spot\@empty
5295 \def\put@me@back{#2#3}%
5296 \fi
5297 \fi
5298 \fi
5299 \fi
5300 \ifHy@activeanchor
5301 \anchor@spot
5302 \else
5303 \hyper@anchor{#1}%
5304 \fi
5305 \expandafter\put@me@back
5306 \fi
5307 \let\anchor@spot\@empty
5308 }
5309 \let\anchor@spot\ltx@empty

```

18 Option ‘destlabel’

```

5310 \ifHy@destlabel

\hyper@newdestlabel

5311 \def\hyper@newdestlabel#1#2{%
5312 \begingroup
5313 \Hy@safe@activetrue
5314 \edef\x{\endgroup
5315 \noexpand\@newl@bel{HyDL}{#1}{#2}%
5316 }%
5317 \x
5318 }%

\hyper@destlabel@hook

5319 \providecommand*\hyper@destlabel@hook{}%

\Hy@DestRename

5320 \newcommand*\Hy@DestRename[2]{%
5321 \ltx@ifundefined{HyDL!#1}{%
5322 \begingroup
5323 \Hy@safe@activetrue
5324 \edef\dest@name{#1}%
5325 \edef\label@name{#2}%
5326 \hyper@destlabel@hook
5327 \Hy@IsNotEmpty{dest@name}{%

```

```

5328     \Hy@IsNotEmpty{label@name}{%
5329     \global\expandafter
5330     \let\csname HyDL!#1\endcsname\ltx@empty
5331     \if@filesw
5332     \protected@write\@auxout{}{%
5333     \string\hyper@newdestlabel
5334     {#1}%
5335     {\label@name}%
5336     }%
5337     \fi
5338     }%
5339     }%
5340     \endgroup
5341     }{}%
5342     }%

```

\HyperDestRename

```

5343 \newcommand*{\HyperDestRename}[2]{%
5344 \AtBeginDocument{%
5345   \Hy@DestRename{#1}{#2}%
5346 }%
5347 }%
5348 \AtBeginDocument{%
5349   \let\HyperDestRename\Hy@DestRename
5350 }%

```

\Hy@IsNotEmpty

```

5351 \def\Hy@IsNotEmpty#1{%
5352   \ltx@ifundefined{#1}\ltx@gobble{%
5353     \expandafter\ifx\csname#1\endcsname\ltx@empty
5354     \expandafter\ltx@gobble
5355   \else
5356     \expandafter\ltx@firstofone
5357   \fi
5358   }%
5359   }%

5360 \ltx@GlobalAppendToMacro\label@hook{%
5361   \HyperDestRename\@currentHref\label@name
5362   }%

```

\HyperDestLabelReplace

```

5363 \def\HyperDestLabelReplace#1{%
5364   \ltx@ifundefined{HyDL@#1}{%
5365     #1%
5366   }{%
5367     \csname HyDL@#1\endcsname
5368   }%
5369   }%

```

\HyperDestNameFilter

```

5370 \let\HyperDestNameFilter\HyperDestLabelReplace

5371 \else

```

```

\hyper@newdestlabel
5372 \let\hyper@newdestlabel\ltx@gobbletwo

\HyperDestLabelReplace
5373 \let\HyperDestLabelReplace\ltx@firstofone

\HyperDestRename
5374 \let\HyperDestRename\ltx@gobbletwo

5375 \fi
5376 \Hy@DisableOption{destlabel}

Provide a dummy default definition of \hyper@newdestlabel inside the .aux
files.
5377 \AddToHook{include/before}
5378 {\immediate\write\@partaux{\string\providecommand\string\hyper@newdest-
label[2]{}}}
5379 \AddToHook{begindocument}
5380 {\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.

```
5381 \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
5382 \def\HyField@NewFlag#1#2{%
5383 \lowercase{\HyField@NewOption{#2}}%
5384 \lowercase{\HyField@NewBitsetFlag{#2}}{#2}{#1}%
5385 }

\HyField@NewFlagOnly
5386 \def\HyField@NewFlagOnly#1#2{%
5387 \lowercase{\HyField@NewBitsetFlag{#2}}{#2}{#1}%
5388 }

```


\HyField@NewOption #1: option name

```
5389 \def\HyField@NewOption#1{%
5390   \expandafter\newif\csname ifFld@#1\endcsname
5391   \define@key{Field}{#1}[true]{%
5392     \lowercase{\Field@boolkey{##1}}{#1}%
5393   }%
5394 }
```

\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

```
5395 \def\HyField@NewBitsetFlag#1#2#3#4{%
5396   \begingroup
5397     \count@=#4\relax
5398     \advance\count@\m@ne
5399     \def\x##1{%
5400       \endgroup
5401       \expandafter\def\csname HyField@#3@#1\endcsname{##1}%
5402       \expandafter\ifx\csname HyField@#3@#1\endcsname\relax
5403         \expandafter\edef\csname HyField@#3@#1\endcsname{%
5404           (\number#4) #2%
5405         }%
5406       \else
5407         \expandafter\edef\csname HyField@#3@#1\endcsname{%
5408           \csname HyField@#3@#1\endcsname
5409           /#2%
5410         }%
5411       \fi
5412     }%
5413   \expandafter\x\expandafter{\the\count@}%
5414 }
```

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

```
5415 \def\HyField@UseFlag#1#2{%
5416   \lowercase{\HyField@@UseFlag{#2}}{#1}%
5417 }
```

\HyField@@UseFlag

```
5418 \def\HyField@@UseFlag#1#2{%
5419   \bitsetSetValue{HyField@#2}{%
5420     \csname HyField@#2@#1\endcsname
5421   }{%
5422     \csname ifFld@#1\endcsname 1\else 0\fi
5423   }%
5424 }
```

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

```
5425 \def\HyField@SetFlag#1#2{%
5426   \lowercase{\HyField@@SetFlag{#2}}{#1}%
5427 }
```

\HyField@@SetFlag

```
5428 \def\HyField@@SetFlag#1#2{%
5429   \bitsetSetValue{HyField@#2}{%
5430     \csname HyField@#2@#1\endcsname
5431   }{1}%
5432 }
```

\HyField@PrintFlags

```
5433 \def\HyField@PrintFlags#1#2{%
5434   \ifHy@verbose
5435     \begingroup
5436       \let\Hy@temp\@empty
5437       \let\MessageBreak\relax
5438       \expandafter\@for\expandafter\x\expandafter:\expandafter=%
5439       \bitsetGetSetBitList{HyField@#1}\do{%
5440         \edef\Hy@temp{%
5441           \Hy@temp
5442           \csname HyField@#1@\x\endcsname\MessageBreak
5443         }%
5444       }%
5445     \edef\x{\endgroup
5446       \noexpand\Hy@Info{%
5447         Field flags: %
5448         \expandafter\ifx\@car#1\@nil S\else/\fi
5449         #1 %
5450         \bitsetGetDec{HyField@#1} %
5451         (0x\bitsetGetHex{HyField@#1}{32})\MessageBreak
5452         \Hy@temp
5453         for #2%
5454       }%
5455     }\x
5456   \fi
5457 }
```

19.1.1 Declarations of field flags

“Table 8.70 Field flags common to all field types”

```
5458 \HyField@NewFlag{Ff}{ReadOnly}{1}
5459 \HyField@NewFlag{Ff}{Required}{2}
5460 \HyField@NewFlag{Ff}{NoExport}{3}
```

“Table 8.75 Field flags specific to button fields”

```
5461 \HyField@NewFlag{Ff}{NoToggleToOff}{15}
5462 \HyField@NewFlag{Ff}{Radio}{16}
5463 \HyField@NewFlag{Ff}{Pushbutton}{17}
5464 \HyField@NewFlag{Ff}{RadiosInUnison}{26}
```

“Table 8.77 Field flags specific to text fields”

```
5465 \HyField@NewFlag{Ff}{Multiline}{13}
5466 \HyField@NewFlag{Ff}{Password}{14}
5467 \HyField@NewFlag{Ff}{FileSelect}{21}% PDF 1.4
5468 \HyField@NewFlag{Ff}{DoNotSpellCheck}{23}% PDF 1.4
5469 \HyField@NewFlag{Ff}{DoNotScroll}{24}% PDF 1.4
5470 \HyField@NewFlag{Ff}{Comb}{25}% PDF 1.4
5471 \HyField@NewFlag{Ff}{RichText}{26}% PDF 1.5
```

“Table 8.79 field flags specific to choice fields”

```
5472 \HyField@NewFlag{Ff}{Combo}{18}
5473 \HyField@NewFlag{Ff}{Edit}{19}
5474 \HyField@NewFlag{Ff}{Sort}{20}
5475 \HyField@NewFlag{Ff}{MultiSelect}{22}% PDF 1.4
5476 % \HyField@NewFlag{Ff}{DoNotSpellCheck}{23}% PDF 1.4
5477 \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.

```
5478 \newif\ifFld@popdown
5479 \define@key{Field}{popdown}[true]{%
5480   \lowercase{\Field@boolkey{#1}}{popdown}%
5481 }
```

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.

```
5482 \HyField@NewFlag{F}{Invisible}{1}
5483 \HyField@NewFlag{F}{Hidden}{2}% PDF 1.2
5484 \HyField@NewFlag{F}{Print}{3}% PDF 1.2
5485 \HyField@NewFlag{F}{NoZoom}{4}% PDF 1.2
5486 \HyField@NewFlag{F}{NoRotate}{5}% PDF 1.3
5487 \HyField@NewFlag{F}{NoView}{6}% PDF 1.3
5488 \HyField@NewFlag{F}{Locked}{8}% PDF 1.4
5489 \HyField@NewFlag{F}{ToggleNoView}{9}% PDF 1.5
5490 \HyField@NewFlag{F}{LockedContents}{10}% PDF 1.7

5491 \ifHy@pdfa
5492   \def\HyField@PDFAFFlagWarning#1#2{%
5493     \Hy@Warning{%
5494       PDF/A: Annotation flag `#1' must\MessageBreak
5495       be set to `#2'%
5496     }%
5497   }%
5498   \Fld@invisiblefalse
5499   \def\Fld@invisibletrue{%
5500     \HyField@PDFAFFlagWarning{invisible}{false}%
5501   }%
5502   \Fld@hiddenfalse
5503   \def\Fld@hiddenttrue{%
5504     \HyField@PDFAFFlagWarning{hidden}{false}%
5505   }%
5506   \Fld@printtrue
5507   \def\Fld@printfalse{%
5508     \HyField@PDFAFFlagWarning{print}{true}%
5509   }%
5510   \Fld@nozoomtrue
5511   \def\Fld@nozoomfalse{%
5512     \HyField@PDFAFFlagWarning{nozoom}{true}%
5513   }%
5514   \Fld@norotatetrue
```

```

5515 \def\Fld@norotatefalse{%
5516   \HyField@PDFAFldWarning{norotate}{true}%
5517 }%
5518 \Fld@noviewfalse
5519 \def\Fld@noviewtrue{%
5520   \HyField@PDFAFldWarning{noview}{false}%
5521 }%
5522 \fi

```

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

```

5523 \HyField@NewFlag{Submit}{IncludeNoValueFields}{2}
5524 \HyField@NewFlagOnly{Submit}{ExportFormat}{3}
5525 \HyField@NewFlag{Submit}{GetMethod}{4}
5526 \HyField@NewFlag{Submit}{SubmitCoordinates}{5}
5527 \HyField@NewFlagOnly{Submit}{XFDF}{6}
5528 \HyField@NewFlag{Submit}{IncludeAppendSaves}{7}
5529 \HyField@NewFlag{Submit}{IncludeAnnotations}{8}
5530 \HyField@NewFlagOnly{Submit}{SubmitPDF}{9}
5531 \HyField@NewFlag{Submit}{CanonicalFormat}{10}
5532 \HyField@NewFlag{Submit}{ExclNonUserAnnots}{11}
5533 \HyField@NewFlag{Submit}{ExclFKey}{12}
5534 \HyField@NewFlag{Submit}{EmbedForm}{14}

5535 \define@key{Field}{export}{%
5536   \lowercase{\def\Hy@temp{#1}}%
5537   \@ifundefined{Fld@export@\Hy@temp}{%
5538     \@onelevel@sanitize\Hy@temp
5539     \Hy@Error{%
5540       Unknown export format `'\Hy@temp'.\MessageBreak
5541       Known formats are `FDF', `HTML', `XFDF', and `PDF'%
5542     }\@ehc
5543   }{%
5544     \let\Fld@export\Hy@temp
5545   }%
5546 }
5547 \def\Fld@export{fdf}
5548 \@namedef{Fld@export@fdf}{0}%
5549 \@namedef{Fld@export@html}{1}%
5550 \@namedef{Fld@export@xfdf}{2}%
5551 \@namedef{Fld@export@pdf}{3}%

```

19.1.2 Set submit flags

\HyField@FlagsSubmit

```

5552 \def\HyField@FlagsSubmit{%
5553   \bitsetReset{HyField@Submit}%
5554   \ifcase\@nameuse{Fld@export@\Fld@export} %
5555     % FDF
5556     \HyField@UseFlag{Submit}{IncludeNoValueFields}%
5557     \HyField@UseFlag{Submit}{SubmitCoordinates}%
5558     \HyField@UseFlag{Submit}{IncludeAppendSaves}%
5559     \HyField@UseFlag{Submit}{IncludeAnnotations}%
5560     \HyField@UseFlag{Submit}{CanonicalFormat}%
5561     \HyField@UseFlag{Submit}{ExclNonUserAnnots}%

```

```

5562 \HyField@UseFlag{Submit}{ExclFKey}%
5563 \HyField@UseFlag{Submit}{EmbedForm}%
5564 \or % HTML
5565 \HyField@SetFlag{Submit}{ExportFormat}%
5566 \HyField@UseFlag{Submit}{IncludeNoValueFields}%
5567 \HyField@UseFlag{Submit}{GetMethod}%
5568 \HyField@UseFlag{Submit}{SubmitCoordinates}%
5569 \HyField@UseFlag{Submit}{CanonicalFormat}%
5570 \or % XFDF
5571 \HyField@SetFlag{Submit}{XFDF}%
5572 \HyField@UseFlag{Submit}{IncludeNoValueFields}%
5573 \HyField@UseFlag{Submit}{SubmitCoordinates}%
5574 \HyField@UseFlag{Submit}{CanonicalFormat}%
5575 \or % PDF
5576 \HyField@SetFlag{Submit}{SubmitPDF}%
5577 \HyField@UseFlag{Submit}{GetMethod}%
5578 \fi
5579 \HyField@PrintFlags{Submit}{submit button field}%
5580 \bitsetIsEmpty{HyField@Submit}{%
5581 \let\Fld@submitflags\ltx@empty
5582 }{%
5583 \edef\Fld@submitflags{/Flags \bitsetGetDec{HyField@Submit}}%
5584 }%
5585 }

```

19.1.3 Set annot flags in fields

\HyField@FlagsAnnot

```

5586 \def\HyField@FlagsAnnot#1{%
5587 \bitsetReset{HyField@F}%
5588 \HyField@UseFlag{F}{Invisible}%
5589 \HyField@UseFlag{F}{Hidden}%
5590 \HyField@UseFlag{F}{Print}%
5591 \HyField@UseFlag{F}{NoZoom}%
5592 \HyField@UseFlag{F}{NoRotate}%
5593 \HyField@UseFlag{F}{NoView}%
5594 \HyField@UseFlag{F}{Locked}%
5595 \HyField@UseFlag{F}{ToggleNoView}%
5596 \HyField@UseFlag{F}{LockedContents}%
5597 \HyField@PrintFlags{F}{#1}%
5598 \bitsetIsEmpty{HyField@F}{%
5599 \let\Fld@annotflags\ltx@empty
5600 }{%
5601 \edef\Fld@annotflags{/F \bitsetGetDec{HyField@F}}%
5602 }%
5603 }

```

19.1.4 Pushbutton field

\HyField@FlagsPushButton

```

5604 \def\HyField@FlagsPushButton{%
5605 \HyField@FlagsAnnot{push button field}%
5606 \bitsetReset{HyField@Ff}%

```

```

5607 \HyField@UseFlag{Ff}{ReadOnly}%
5608 \HyField@UseFlag{Ff}{Required}%
5609 \HyField@UseFlag{Ff}{NoExport}%
5610 \HyField@SetFlag{Ff}{Pushbutton}%
5611 \HyField@PrintFlags{Ff}{push button field}%
5612 \bitsetIsEmpty{HyField@Ff}{%
5613   \let\Fld@flags\ltx@empty
5614 }{%
5615   \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
5616 }%
5617 }

```

19.1.5 Check box field

\HyField@FlagsCheckBox

```

5618 \def\HyField@FlagsCheckBox{%
5619   \HyField@FlagsAnnot{check box field}%
5620   \bitsetReset{HyField@Ff}%
5621   \HyField@UseFlag{Ff}{ReadOnly}%
5622   \HyField@UseFlag{Ff}{Required}%
5623   \HyField@UseFlag{Ff}{NoExport}%
5624   \HyField@PrintFlags{Ff}{check box field}%
5625   \bitsetIsEmpty{HyField@Ff}{%
5626     \let\Fld@flags\ltx@empty
5627   }{%
5628     \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
5629   }%
5630 }

```

19.1.6 Radio button field

\HyField@FlagsRadioButton

```

5631 \def\HyField@FlagsRadioButton{%
5632   \HyField@FlagsAnnot{radio button field}%
5633   \bitsetReset{HyField@Ff}%
5634   \HyField@UseFlag{Ff}{ReadOnly}%
5635   \HyField@UseFlag{Ff}{Required}%
5636   \HyField@UseFlag{Ff}{NoExport}%
5637   \HyField@UseFlag{Ff}{NoToggleToOff}%
5638   \HyField@SetFlag{Ff}{Radio}%
5639   \HyField@UseFlag{Ff}{RadiosInUnison}%
5640   \HyField@PrintFlags{Ff}{radio button field}%
5641   \bitsetIsEmpty{HyField@Ff}{%
5642     \let\Fld@flags\ltx@empty
5643   }{%
5644     \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
5645   }%
5646 }

```

19.1.7 Text fields

\HyField@FlagsText

```

5647 \def\HyField@FlagsText{%

```

```

5648 \HyField@FlagsAnnot{text field}%
5649 \bitsetReset{HyField@Ff}%
5650 \HyField@UseFlag{Ff}{ReadOnly}%
5651 \HyField@UseFlag{Ff}{Required}%
5652 \HyField@UseFlag{Ff}{NoExport}%
5653 \HyField@UseFlag{Ff}{Multiline}%
5654 \HyField@UseFlag{Ff}{Password}%
5655 \HyField@UseFlag{Ff}{FileSelect}%
5656 \HyField@UseFlag{Ff}{DoNotSpellCheck}%
5657 \HyField@UseFlag{Ff}{DoNotScroll}%
5658 \ifFld@comb
5659 \ifcase0\ifFld@multiline
5660 \else\ifFld@password
5661 \else\ifFld@fileselect
5662 \else 1\fi\fi\fi\relax
5663 \Hy@Error{%
5664   Field option `comb' cannot used together with\MessageBreak
5665   `multiline', `password', or `fileselect'%
5666 } \@ehc
5667 \else
5668 \HyField@UseFlag{Ff}{Comb}%
5669 \fi
5670 \fi
5671 \HyField@UseFlag{Ff}{RichText}%
5672 \HyField@PrintFlags{Ff}{text field}%
5673 \bitsetIsEmpty{HyField@Ff}{%
5674 \let\Fld@flags\ltx@empty
5675 }{%
5676 \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
5677 }%
5678 }

```

19.1.8 Choice fields

\HyField@FlagsChoice

```

5679 \def\HyField@FlagsChoice{%
5680 \HyField@FlagsAnnot{choice field}%
5681 \bitsetReset{HyField@Ff}%
5682 \HyField@UseFlag{Ff}{ReadOnly}%
5683 \HyField@UseFlag{Ff}{Required}%
5684 \HyField@UseFlag{Ff}{NoExport}%
5685 \HyField@UseFlag{Ff}{Combo}%
5686 \ifFld@combo
5687 \HyField@UseFlag{Ff}{Edit}%
5688 \fi
5689 \HyField@UseFlag{Ff}{Sort}%
5690 \HyField@UseFlag{Ff}{MultiSelect}%
5691 \ifFld@combo
5692 \ifFld@edit
5693 \HyField@UseFlag{Ff}{DoNotSpellCheck}%
5694 \fi
5695 \fi
5696 \HyField@UseFlag{Ff}{CommitOnSelChange}%
5697 \HyField@PrintFlags{Ff}{choice field}%

```

```

5698 \bitsetIsEmpty{HyField@Ff}{%
5699 \let\Fld@flags\ltx@empty
5700 }{%
5701 \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
5702 }%
5703 }

```

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`.

```

5704 \def\HyField@PDFChoices#1{%
5705 \begingroup
5706 \global\let\Fld@choices\ltx@empty
5707 \let\HyTmp@optlist\ltx@empty
5708 \let\HyTmp@optitem\relax
5709 \count@=0 %
5710 \kv@parse{#1}{%
5711 \Hy@pdfstringdef\kv@key\kv@key
5712 \ifx\kv@value\relax
5713 \ifnum\Hy@pdf@majorminor@version<103 % implementation note 122, PDF spec 1.7
5714 \xdef\Fld@choices{\Fld@choices[(\kv@key)(\kv@key)]}%
5715 \else
5716 \xdef\Fld@choices{\Fld@choices(\kv@key)}%
5717 \fi
5718 \else
5719 \Hy@pdfstringdef\kv@value\kv@value
5720 \xdef\Fld@choices{\Fld@choices[(\kv@value)(\kv@key)]}%
5721 \fi
5722 \edef\HyTmp@optlist{%
5723 \HyTmp@optlist
5724 \HyTmp@optitem{\the\count@}{\kv@key}0%
5725 }%
5726 \advance\count@ by 1 %
5727 \@gobbletwo
5728 }%
5729 \xdef\Fld@choices{/Opt[\Fld@choices]}%
5730 \ifFld@multiselect
5731 \HyField@@@PDFChoices{DV}\Fld@default
5732 \HyField@@@PDFChoices{V}\Fld@value
5733 \else
5734 \ifx\Fld@default\relax
5735 \else
5736 \pdfstringdef\Hy@gtemp\Fld@default
5737 \xdef\Fld@choices{\Fld@choices/DV(\Hy@gtemp)}%
5738 \fi
5739 \ifx\Fld@value\relax
5740 \else
5741 \pdfstringdef\Hy@gtemp\Fld@value
5742 \xdef\Fld@choices{\Fld@choices/V(\Hy@gtemp)}%
5743 \fi

```



```

5744 \fi
5745 \endgroup
5746 }

```

\HyField@@PDFChoices

```

5747 \def\HyField@@PDFChoices#1#2{%
5748 \ifx#2\relax
5749 \else
5750 \count@=0 %
5751 \def\HyTmp@optitem##1##2##3{%
5752 \def\HyTmp@key{##2}%
5753 \ifx\HyTmp@key\Hy@gtemp
5754 \expandafter\def\expandafter\HyTmp@optlist\expandafter{%
5755 \HyTmp@optlist
5756 \HyTmp@optitem{##1}{##2}1%
5757 }%
5758 \let\HyTmp@found=Y%
5759 \else
5760 \expandafter\def\expandafter\HyTmp@optlist\expandafter{%
5761 \HyTmp@optlist
5762 \HyTmp@optitem{##1}{##2}##3%
5763 }%
5764 \fi
5765 }%
5766 \expandafter\comma@parse\expandafter{#2}{%
5767 \pdfstringdef\Hy@gtemp\comma@entry
5768 \let\HyTmp@found=N %
5769 \expandafter\let\expandafter\HyTmp@optlist\expandafter\@empty
5770 \HyTmp@optlist
5771 \ifx\HyTmp@found Y%
5772 \advance\count@ by 1 %
5773 \else
5774 \@onelevel@sanitize\comma@entry
5775 \PackageWarning{hyperref}{%
5776 \string\ChoiceBox: Ignoring value `\'comma@entry',%
5777 \MessageBreak
5778 it cannot be found in the choices%
5779 }%
5780 \fi
5781 \@gobble
5782 }%
5783 \def\HyTmp@optitem##1##2##3{%
5784 \ifnum##3=1 %
5785 (##2)%
5786 \fi
5787 }%
5788 \ifcase\count@
5789 \or
5790 \xdef\Fld@choices{\Fld@choices/#1\HyTmp@optlist}%
5791 \else
5792 \xdef\Fld@choices{\Fld@choices/#1[\HyTmp@optlist]}%
5793 \ifx#1V%
5794 \def\HyTmp@optitem##1##2##3{%
5795 \ifnum##3=1 %

```

```

5796         \@firstofone{ ##1}%
5797         \fi
5798     }%
5799     \edef\HyTmp@Optlist{\HyTmp@Optlist}%
5800     \xdef\Fld@choices{%
5801         \Fld@choices
5802         /I\expandafter\@firstofone\HyTmp@Optlist}%
5803     }%
5804     \fi
5805     \fi
5806     \fi
5807 }

```

19.3 Forms

\HyField@SetKeys

```

5808 \def\HyField@SetKeys{%
5809     \kvsetkeys{Field}%
5810 }

5811 \newif\ifFld@checked
5812 \newif\ifFld@disabled
5813 \Fld@checkedfalse
5814 \Fld@disabledfalse
5815 \newcount\Fld@menulength
5816 \newdimen\Field@Width
5817 \newdimen\Fld@charsize
5818 \Fld@charsize=10\p@
5819 \def\Fld@maxlen{0}
5820 \def\Fld@align{0}
5821 \def\Fld@color{0 0 0 rg}
5822 \def\Fld@bcolor{1 1 1}
5823 \def\Fld@bordercolor{1 0 0}
5824 \def\Fld@bordersep{1\p@}
5825 \def\Fld@borderwidth{1}
5826 \def\Fld@borderstyle{S}
5827 \def\Fld@cbsymbol{4}
5828 \def\Fld@radiosymbol{H}
5829 \def\Fld@rotation{0}
5830 \def\Form{\@ifnextchar{\@Form}{\@Form[]}}
5831 \def\endForm{\@endForm}
5832 \newif\ifForm@html
5833 \Form@htmlfalse
5834 \def\Fld@boolkey#1#2{%
5835     \csname Form@#2\ifx\relax#1\relax true\else#1\fi\endcsname
5836 }
5837 \define@key{Form}{action}{%
5838     \hyper@normalise\Hy@DefFormAction{#1}%
5839 }
5840 \def\Hy@DefFormAction{\def\Form@action}
5841 \def\enc@html{html}
5842 \define@key{Form}{encoding}{%
5843     \def\Hy@tempa{#1}%
5844     \ifx\Hy@tempa\enc@html

```

```

5845 \Form@htmltrue
5846 \def\Fld@export{html}%
5847 \else
5848 \Hy@Warning{%
5849   Form `encoding' key with \MessageBreak
5850   unknown value `#1'%
5851 }%
5852 \Form@htmlfalse
5853 \fi
5854 }
5855 \define@key{Form}{method}{%
5856 \lowercase{\def\Hy@temp{#1}}%
5857 \@ifundefined{Form@method@\Hy@temp}{%
5858 \@onelevel@sanitize\Hy@temp
5859 \Hy@Error{%
5860   Unknown method ``\Hy@temp'.\MessageBreak
5861   Known values are `post' and `get'%
5862 } \@ehc
5863 }{%
5864 \let\Form@method\Hy@temp
5865 \ifcase\@nameuse{Form@method@\Hy@temp} %
5866 \Fld@getmethodfalse
5867 \else
5868 \Fld@getmethodtrue
5869 \fi
5870 }%
5871 }
5872 \def\Form@method{
5873 \@namedef{Form@method@post}{0}
5874 \@namedef{Form@method@get}{1}

5875 \newif\ifHyField@NeedAppearances
5876 \def\HyField@NeedAppearancesfalse{%
5877 \global\let\ifHyField@NeedAppearances\iffalse
5878 }
5879 \def\HyField@NeedAppearancetrue{%
5880 \global\let\ifHyField@NeedAppearances\iftrue
5881 }
5882 \HyField@NeedAppearancetrue
5883 \define@key{Form}{NeedAppearances}[true]{%
5884 \edef\Hy@tempa{#1}%
5885 \ifx\Hy@tempa\Hy@true
5886 \HyField@NeedAppearancetrue
5887 \else
5888 \ifx\Hy@tempa\Hy@false
5889 \HyField@NeedAppearancesfalse
5890 \else
5891 \Hy@Error{%
5892   Unexpected value ``\Hy@tempa'.\MessageBreak
5893   of option `NeedAppearances' instead of\MessageBreak
5894   `true' or `false'%
5895 } \@ehc
5896 \fi
5897 \fi
5898 }

```

```

5899 \def\Field@boolkey#1#2{%
5900   \csname Fld@#2\ifx\relax#1\relax true\else#1\fi\endcsname
5901 }
5902 \ifHy@texht
5903   \newtoks\Field@toks
5904   \Field@toks={ }%
5905   \def\Field@addtoks#1#2{%
5906     \edef\@processme{\Field@toks{\the\Field@toks\space #1="#2"}}%
5907     \@processme
5908   }%
5909 \else
5910   \def\Hy@WarnHTMLFieldOption#1{%
5911     \Hy@Warning{%
5912       HTML field option `#1'\MessageBreak
5913       is ignored%
5914     }%
5915   }%
5916 \fi
5917 \def\Fld@checkequals#1=#2=#3\\{%
5918   \def\@currDisplay{#1}%
5919   \ifx\\#2\\%
5920     \def\@currValue{#1}%
5921   \else
5922     \def\@currValue{#2}%
5923   \fi
5924   \expandafter\Hy@pdfstringdef\expandafter\@currValue\expandafter{\@currValue}%
5925 }
5926 \define@key{Field}{loc}{%
5927   \def\Fld@loc{#1}%
5928 }
5929 \define@key{Field}{checked}[true]{%
5930   \lowercase{\Field@boolkey{#1}}{checked}%
5931 }
5932 \define@key{Field}{disabled}[true]{%
5933   \lowercase{\Field@boolkey{#1}}{disabled}%
5934 }
5935 \ifHy@texht
5936   \define@key{Field}{accesskey}{%
5937     \Field@addtoks{accesskey}{#1}%
5938   }%
5939   \define@key{Field}{tabkey}{%
5940     \Field@addtoks{tabkey}{#1}%
5941   }%
5942 \else
5943   \define@key{Field}{accesskey}{%
5944     \Hy@WarnHTMLFieldOption{accesskey}%
5945   }%
5946   \define@key{Field}{tabkey}{%
5947     \Hy@WarnHTMLFieldOption{tabkey}%
5948   }%
5949 \fi
5950 \define@key{Field}{name}{%
5951   \def\Fld@name{#1}%
5952 }

```

```

5953 \let\Fld@altname\relax
5954 \define@key{Field}{altname}{%
5955   \def\Fld@altname{#1}%
5956 }
5957 \let\Fld@mappingname\relax
5958 \define@key{Field}{mappingname}{%
5959   \def\Fld@mappingname{#1}%
5960 }
5961 \define@key{Field}{width}{%
5962   \def\Fld@width{#1}%
5963   \Field@Width#1\setbox0=\hbox{m}%
5964 }
5965 \define@key{Field}{maxlen}{%
5966   \def\Fld@maxlen{#1}%
5967 }
5968 \define@key{Field}{menulength}{%
5969   \Fld@menulength=#1\relax
5970 }
5971 \define@key{Field}{height}{%
5972   \def\Fld@height{#1}%
5973 }
5974 \define@key{Field}{charsize}{%
5975   \setlength{\Fld@charsize}{#1}%
5976 }
5977 \define@key{Field}{borderwidth}{%
5978   \Hy@defaultbp\Fld@borderwidth{#1}%
5979 }
5980 \def\Hy@defaultbp#1#2{%
5981   \begingroup
5982   \afterassignment\Hy@defaultbpAux
5983   \dimen@=#2bp\relax{#1}{#2}%
5984 }
5985 \def\Hy@defaultbpAux#1\relax#2#3{%
5986   \ifx!#1!%
5987     \endgroup
5988     \def#2{#3}%
5989   \else
5990     \edef\x{\endgroup
5991       \def\noexpand#2{%
5992         \strip@pt\dimexpr\dimen@*800/803\relax
5993       }%
5994     }\x
5995   \fi
5996 }%
5997 \define@key{Field}{borderstyle}{%
5998   \let\Hy@temp\Fld@borderstyle
5999   \def\Fld@borderstyle{#1}%
6000   \Hy@Match\Fld@borderstyle}{%
6001     ~[SDBIU]$%
6002   }{%
6003     \Hy@Warning{%
6004       Invalid value `~\pdfborderstyle'\MessageBreak
6005       for option `pdfborderstyle'. Valid values:\MessageBreak
6006       \space\space S (Solid), D (Dashed), B (Beveled),\MessageBreak

```

```

6007 \space\space I (Inset), U (Underline)\MessageBreak
6008 Option setting is ignored%
6009 }%
6010 \let\Fld@borderstyle\Hy@temp
6011 }%
6012 }
6013 \define@key{Field}{bordersep}{%
6014 \def\Fld@bordersep{#1}%
6015 }
6016 \define@key{Field}{default}{%
6017 \Hy@pdfstringdef\Fld@default{#1}%
6018 }
6019 \define@key{Field}{align}{%
6020 \def\Fld@align{#1}%
6021 }
6022 \define@key{Field}{value}{%
6023 \Hy@pdfstringdef\Fld@value{#1}%
6024 }
6025 \define@key{Field}{checkboxsymbol}{%
6026 \Fld@DingDef\Fld@cbsymbol{#1}%
6027 }
6028 \define@key{Field}{radiosymbol}{%
6029 \Fld@DingDef\Fld@radiosymbol{#1}%
6030 }
6031 \def\Fld@DingDef#1#2{%
6032 \let\Fld@temp\ltx@empty
6033 \Fld@@DingDef#2\ding{}\@nil
6034 \let#1\Fld@temp
6035 }
6036 \def\Fld@@DingDef#1\ding#2#3\@nil{%
6037 \expandafter\def\expandafter\Fld@temp\expandafter{%
6038 \Fld@temp
6039 #1%
6040 }%
6041 \ifx\#3\%
6042 \expandafter\@gobble
6043 \else
6044 \begingroup
6045 \lccode`0=#2\relax
6046 \lowercase{\endgroup
6047 \expandafter\def\expandafter\Fld@temp\expandafter{%
6048 \Fld@temp
6049 0%
6050 }%
6051 }%
6052 \expandafter\@firstofone
6053 \fi
6054 {%
6055 \Fld@@DingDef#3\@nil
6056 }%
6057 }
6058 \define@key{Field}{rotation}{%
6059 \def\Fld@rotation{#1}%
6060 }

```

```

6061 \define@key{Field}{backgroundcolor}{%
6062   \HyColor@FieldBColor{#1}\Fld@bcolor{hyperref}{backgroundcolor}%
6063 }
6064 \define@key{Field}{bordercolor}{%
6065   \HyColor@FieldBColor{#1}\Fld@bordercolor{hyperref}{bordercolor}%
6066 }
6067 \define@key{Field}{color}{%
6068   \HyColor@FieldColor{#1}\Fld@color{hyperref}{color}%
6069 }

6070 \let\Fld@onclick@code\ltx@empty
6071 \let\Fld@format@code\ltx@empty
6072 \let\Fld@validate@code\ltx@empty
6073 \let\Fld@calculate@code\ltx@empty
6074 \let\Fld@keystroke@code\ltx@empty
6075 \let\Fld@onfocus@code\ltx@empty
6076 \let\Fld@onblur@code\ltx@empty
6077 \let\Fld@onmousedown@code\ltx@empty
6078 \let\Fld@onmouseup@code\ltx@empty
6079 \let\Fld@onenter@code\ltx@empty
6080 \let\Fld@onexit@code\ltx@empty
6081 \def\Hy@temp#1{%
6082   \expandafter\Hy@@temp\csname Fld@#1@code\endcsname{#1}%
6083 }
6084 \def\Hy@@temp#1#2{%
6085   \ifHy@pdfa
6086     \define@key{Field}{#2}{%
6087       \Hy@Error{%
6088         PDF/A: Additional action `#2' is prohibited%
6089       }\@ehc
6090     }%
6091   \else
6092     \define@key{Field}{#2}{%
6093       \def#1{##1}%
6094     }%
6095   \fi
6096 }
6097 \Hy@temp{keystroke}
6098 \Hy@temp{format}
6099 \Hy@temp{validate}
6100 \Hy@temp{calculate}
6101 \Hy@temp{onfocus}
6102 \Hy@temp{onblur}
6103 \Hy@temp{onenter}
6104 \Hy@temp{onexit}

6105 \let\Fld@calculate@sortkey\ltx@empty
6106 \define@key{Field}{calculatesortkey}[1]{%
6107   \def\Fld@calculate@sortkey{#1}%
6108 }

6109 \ifHy@texht
6110   \def\Hy@temp#1{%
6111     \define@key{Field}{#1}{%
6112       \Field@addtoks{#1}{##1}%
6113     }%

```

```

6114 }%
6115 \else
6116 \def\Hy@temp#1{%
6117   \define@key{Field}{#1}{%
6118     \Hy@WarnHTMLFieldOption{#1}%
6119   }%
6120 }%
6121 \fi
6122 \Hy@temp{ondblclick}
6123 \Hy@temp{onmousedown}
6124 \Hy@temp{onmouseup}
6125 \Hy@temp{onmouseover}
6126 \Hy@temp{onmousemove}
6127 \Hy@temp{onmouseout}
6128 \Hy@temp{onkeydown}
6129 \Hy@temp{onkeyup}
6130 \Hy@temp{onselect}
6131 \Hy@temp{onchange}
6132 \Hy@temp{onkeypress}
6133 \ifHy@texht
6134   \define@key{Field}{onclick}{%
6135     \Field@addtoks{onclick}{#1}%
6136   }%
6137 \else
6138   \ifHy@pdfa
6139     \define@key{Field}{onclick}{%
6140       \Hy@Error{%
6141         PDF/A: Action `onclick' is prohibited%
6142       }\@ehc
6143     }%
6144   \else
6145     \define@key{Field}{onclick}{%
6146       \def\Fld@onclick@code{#1}%
6147     }%
6148   \fi
6149 \fi

6150 \DeclareRobustCommand\TextField{%
6151   \@ifnextchar[{\@TextField}{\@TextField[]}%
6152 }
6153 \DeclareRobustCommand\ChoiceMenu{%
6154   \@ifnextchar[{\@ChoiceMenu}{\@ChoiceMenu[]}%
6155 }
6156 \DeclareRobustCommand\CheckBox{%
6157   \@ifnextchar[{\@CheckBox}{\@CheckBox[]}%
6158 }
6159 \DeclareRobustCommand\PushButton{%
6160   \@ifnextchar[{\@PushButton}{\@PushButton[]}%
6161 }
6162 \DeclareRobustCommand\Gauge{%
6163   \@ifnextchar[{\@Gauge}{\@Gauge[]}%
6164 }
6165 \DeclareRobustCommand\Submit{%
6166   \@ifnextchar[{\@Submit}{\@Submit[]}%
6167 }

```



```

6168 \DeclareRobustCommand\Reset{%
6169   \@ifnextchar[{\@Reset}{\@Reset[]}%
6170 }
6171 \def\LayoutTextField#1#2{% label, field
6172   \def\Hy@temp{#1}%
6173   \ifx\Hy@temp\@empty
6174     #2%
6175   \else
6176     #1 #2%
6177   \fi
6178 }
6179 \def\LayoutChoiceField#1#2{% label, field
6180   \def\Hy@temp{#1}%
6181   \ifx\Hy@temp\@empty
6182     #2%
6183   \else
6184     #1 #2%
6185   \fi
6186 }
6187 \def\LayoutCheckField#1#2{% label, field
6188   \def\Hy@temp{#1}%
6189   \ifx\Hy@temp\@empty
6190     #2%
6191   \else
6192     #1 #2%
6193   \fi
6194 }
6195 \def\LayoutPushButtonField#1{% button
6196   #1%
6197 }
6198 \def\MakeRadioField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
6199 \def\MakeCheckField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
6200 \def\MakeTextField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
6201 \def\MakeChoiceField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
6202 \def\MakeButtonField#1{%
6203   \sbox0{%
6204     \hskip\Fld@borderwidth bp#1\hskip\Fld@borderwidth bp%
6205   }%
6206   \@tempdima\ht0 %
6207   \advance\@tempdima by \Fld@borderwidth bp %
6208   \advance\@tempdima by \Fld@borderwidth bp %
6209   \ht0\@tempdima
6210   \@tempdima\dp0 %
6211   \advance\@tempdima by \Fld@borderwidth bp %
6212   \advance\@tempdima by \Fld@borderwidth bp %
6213   \dp0\@tempdima
6214   \box0\relax
6215 }
6216 \def\DefaultHeightofSubmit{14pt}
6217 \def\DefaultWidthofSubmit{2cm}
6218 \def\DefaultHeightofReset{14pt}
6219 \def\DefaultWidthofReset{2cm}
6220 \def\DefaultHeightofCheckBox{\normalbaselineskip}
6221 \def\DefaultWidthofCheckBox{\normalbaselineskip}

```

```

6222 \def\DefaultHeightofChoiceMenu{\normalbaselineskip}
6223 \def\DefaultWidthofChoiceMenu{\normalbaselineskip}
6224 \def\DefaultHeightofText{\normalbaselineskip}
6225 \def\DefaultHeightofTextMultiline{4\normalbaselineskip}
6226 \def\DefaultWidthofText{3cm}
6227 \def\DefaultOptionsofSubmit{print,name=Submit,noexport}
6228 \def\DefaultOptionsofReset{print,name=Reset,noexport}
6229 \def\DefaultOptionsofPushButton{print}
6230 \def\DefaultOptionsofCheckBox{print}
6231 \def\DefaultOptionsofText{print}

```

Default options for the types of \ChoiceMenu.

```

6232 \def\DefaultOptionsofListBox{print}
6233 \def\DefaultOptionsofComboBox{print,edit,sort}
6234 \def\DefaultOptionsofPopdownBox{print}
6235 \def\DefaultOptionsofRadio{print,notoggetooff}

```

20 Setup

```

6236 \ifHy@hyperfigures
6237 \Hy@Info{Hyper figures ON}%
6238 \else
6239 \Hy@Info{Hyper figures OFF}%
6240 \fi
6241 \ifHy@nesting
6242 \Hy@Info{Link nesting ON}%
6243 \else
6244 \Hy@Info{Link nesting OFF}%
6245 \fi
6246 \ifHy@hyperindex
6247 \Hy@Info{Hyper index ON}%
6248 \else
6249 \Hy@Info{Hyper index OFF}%
6250 \fi
6251 \ifHy@backref
6252 \Hy@Info{backreferencing ON}%
6253 \else
6254 \Hy@Info{backreferencing OFF}%
6255 \fi
6256 \ifHy@colorlinks
6257 \Hy@Info{Link coloring ON}%
6258 \else
6259 \Hy@Info{Link coloring OFF}%
6260 \fi
6261 \ifHy@ocgcolorlinks
6262 \Hy@Info{Link coloring with OCG ON}%
6263 \else
6264 \Hy@Info{Link coloring with OCG OFF}%
6265 \fi
6266 \ifHy@pdfa
6267 \Hy@Info{PDF/A mode ON}%
6268 \else
6269 \Hy@Info{PDF/A mode OFF}%

```

6270 \fi

21 Low-level utility macros

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

```
6271 \edef\hyper@hash{\string#}  
6272 \edef\hyper@tilde{\string~}  
6273 \edef\hyper@quote{\string"}
```

Support \label before \begin{document}.

```
6274 \def\@currentHref{Doc-Start}  
6275 \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.

```
6276 \Hy@AtBeginDocument{%  
6277   \Hy@pdfstringtrue  
6278   \PDF@SetupDoc  
6279   \let\PDF@SetupDoc\@empty  
6280   \Hy@DisableOption{pdfpagescrop}%  
6281   \Hy@DisableOption{pdfpagemode}%  
6282   \Hy@DisableOption{pdfnonfullscreenpagemode}%  
6283   \Hy@DisableOption{pdfdirection}%  
6284   \Hy@DisableOption{pdfviewarea}%  
6285   \Hy@DisableOption{pdfviewclip}%  
6286   \Hy@DisableOption{pdfprintarea}%  
6287   \Hy@DisableOption{pdfprintclip}%  
6288   \Hy@DisableOption{pdfprintscaling}%  
6289   \Hy@DisableOption{pdfduplex}%  
6290   \Hy@DisableOption{pdfpicktraybypdfsize}%  
6291   \Hy@DisableOption{pdfprintpagerange}%  
6292   \Hy@DisableOption{pdfnumcopies}%  
6293   \Hy@DisableOption{pdfstartview}%  
6294   \Hy@DisableOption{pdfstartpage}%  
6295   \Hy@DisableOption{pdftoolbar}%  
6296   \Hy@DisableOption{pdfmenubar}%  
6297   \Hy@DisableOption{pdfwindowui}%  
6298   \Hy@DisableOption{pdfitwindow}%  
6299   \Hy@DisableOption{pdfcenterwindow}%  
6300   \Hy@DisableOption{pdfdisplaydoctitle}%  
6301   \Hy@DisableOption{pdfpagelayout}%  
6302   \Hy@DisableOption{pdflang}%  
6303   \Hy@DisableOption{baseurl}%  
6304   \ifHy@texht\else\hyper@anchorstart{Doc-Start}\hyper@anchorend\fi  
6305   \Hy@pdfstringfalse  
6306 }
```

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

```
6307 \@ifundefined{@kernel@ref}  
6308   {\LetLtxMacro\NoHy@OrgRef\ref  
6309   \DeclareRobustCommand*{\ref}{%  
6310     \@ifstar\NoHy@OrgRef\NoHy@OrgRef  
6311   }  
}
```

```

6312 \LetLtxMacro\NoHy@OrgPageRef\pageref
6313 \DeclareRobustCommand*\pageref}{%
6314 \@ifstar\NoHy@OrgPageRef\NoHy@OrgPageRef
6315 }{}

```

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.

```

6316 \def\NoHyper{%
6317 \def\hyper@link@[##1]##2##3##4{##4\Hy@xspace@end}%
6318 \def\hyper@@anchor##1##2{##2\Hy@xspace@end}%
6319 \global\let\hyper@livelink\hyper@link
6320 \gdef\hyper@link##1##2##3{##3\Hy@xspace@end}%
6321 \let\hyper@anchor\ltx@gobble
6322 \let\hyper@anchorstart\ltx@gobble
6323 \def\hyper@anchorend{\Hy@xspace@end}%
6324 \let\hyper@linkstart\ltx@gobbletwo
6325 \def\hyper@linkend{\Hy@xspace@end}%
6326 \def\hyper@linkurl##1##2{##1\Hy@xspace@end}%
6327 \def\hyper@linkfile##1##2##3{##1\Hy@xspace@end}%
6328 \let\Hy@backout\@gobble
6329 }
6330 \def\stop@hyper{%
6331 \def\hyper@link@[##1]##2##3##4{##4\Hy@xspace@end}%
6332 \let\Hy@backout\@gobble
6333 \let\hyper@@anchor\ltx@gobble
6334 \def\hyper@link##1##2##3{##3\Hy@xspace@end}%
6335 \let\hyper@anchor\ltx@gobble
6336 \let\hyper@anchorstart\ltx@gobble
6337 \def\hyper@anchorend{\Hy@xspace@end}%
6338 \let\hyper@linkstart\ltx@gobbletwo
6339 \def\hyper@linkend{\Hy@xspace@end}%
6340 \def\hyper@linkurl##1##2{##1\Hy@xspace@end}%
6341 \def\hyper@linkfile##1##2##3{##1\Hy@xspace@end}%
6342 }
6343 \def\endNoHyper{%
6344 \global\let\hyper@link\hyper@livelink
6345 }
6346 \</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:

```

6347 \nohyperref
6348 \RequirePackage{letltxmacro}[2008/06/13]
6349 \let\hyper@@anchor\@gobble
6350 \def\hyper@link#1#2#3{#3}%
6351 \let\hyper@anchorstart\@gobble
6352 \let\hyper@anchorend\@empty
6353 \let\hyper@linkstart\@gobbletwo
6354 \let\hyper@linkend\@empty
6355 \def\hyper@linkurl#1#2{#1}%
6356 \def\hyper@linkfile#1#2#3{#1}%
6357 \def\hyper@link@[#1]#2#3{#1}%
6358 \let\PDF@SetupDoc\@empty
6359 \let\PDF@FinishDoc\@empty
6360 \def\nohyperpage#1{#1}

```

Some top-level commands:

```

6361 \def\Acrobatmenu#1#2{\leavevmode#2}
6362 \let\pdfstringdefDisableCommands\@gobbletwo
6363 \let\texorpdfstring\@firstoftwo
6364 \let\pdfbookmark\@undefined
6365 \newcommand\pdfbookmark[3]{}{}
6366 \let\phantomsection\@empty
6367 \let\hypersetup\@gobble
6368 \let\hyperbaseurl\@gobble
6369 \newcommand*{\href}[3]{}{#3}
6370 \let\hyperdef\@gobbletwo
6371 \let\hyperlink\@gobble
6372 \let\hypertarget\@gobble
6373 \def\hyperref{%
6374   \ifnextchar[\@gobbleopt{\expandafter\@gobbletwo\@gobble}%
6375 }
6376 \long\def\@gobbleopt[#1]{}
6377 \let\hyperpage\@empty

```

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

```

6378 \@if@t@r\fmtversion{2022-06-01}
6379 {}%
6380 {%
6381   \LetLtxMacro\NoHy@OrgRef\ref
6382   \DeclareRobustCommand*\ref{%
6383     \ifstar\NoHy@OrgRef\NoHy@OrgRef
6384   }
6385   \LetLtxMacro\NoHy@OrgPageRef\pageref
6386   \DeclareRobustCommand*\pageref{%
6387     \ifstar\NoHy@OrgPageRef\NoHy@OrgPageRef
6388   }%
6389 }
6390 \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}`

```

6391 \*package\
6392 \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.

```

6393 \if@files\
6394 \immediate\write\@auxout{%
6395 \string\providecommand\string\HyperFirstAtBeginDocument{%
6396 \string\AtBeginDocument}^^J%
6397 \string\HyperFirstAtBeginDocument{%
6398 \string\ifx\string\hyper@anchor\string\@undefined^^J%
6399 \string\global\string\let\string\oldnewlabel\string\newlabel^^J%
6400 \string\gdef\string\newlabel\string#1\string#2{%
6401 \string\newlabelxx{\string#1}\string#2}^^J%
6402 \string\gdef\string\newlabelxx%
6403 \string#1\string#2\string#3\string#4\string#5\string#6{%
6404 \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.

```

6405 \string\AtEndDocument{%
6406 \string\ifx\string\hyper@anchor\string\@undefined^^J%
6407 \string\let\string\newlabel\string\oldnewlabel^^J%
6408 \string\fi%
6409 }^^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.

```

6410 \string\fi%
6411 }^^J%
6412 \string\global\string\let\string\hyper@last\relax^^J%
6413 \string\gdef\string\HyperFirstAtBeginDocument\string#1{\string#1}%
6414 }%
6415 \fi
6416 \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.

```

6417 \ifx\hyper@last\@undefined
6418 \def\newlabel#1#2{\@newl@bel r{#1}{#2}{\}\}\}\}%
6419 \fi
6420 }

```

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`.

```

6421 \ifHy@pdfusetitle

```

```

6422 \let\HyOrg@title\title
6423 \let\HyOrg@author\author
6424 \def\title{\@ifnextchar[{\Hy@scanopttitle}{\Hy@scantitle}}%
6425 \def\Hy@scanopttitle[#1]{%
6426   \gdef\Hy@title{#1}%
6427   \HyOrg@title[{#1}]%
6428 }%
6429 \def\Hy@scantitle#1{%
6430   \gdef\Hy@title{#1}%
6431   \HyOrg@title{#1}%
6432 }%
6433 \def\author{\@ifnextchar[{\Hy@scanoptauthor}{\Hy@scanauthor}}%
6434 \def\Hy@scanoptauthor[#1]{%
6435   \gdef\Hy@author{#1}%
6436   \HyOrg@author[{#1}]%
6437 }%
6438 \def\Hy@scanauthor#1{%
6439   \gdef\Hy@author{#1}%
6440   \HyOrg@author{#1}%
6441 }%

```

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.

```

6442 \begingroup
6443   \def\process@me#1\@nil#2{%
6444     \expandafter\let\expandafter\x\csname @#2\endcsname
6445     \edef\y{\expandafter\strip@prefix\meaning\x}%
6446     \def\c##1#1##2\@nil{%
6447       \ifx\\##1\\%
6448         \else
6449           \expandafter\gdef\csname Hy@#2\expandafter\endcsname
6450             \expandafter{x}%
6451         \fi
6452       }%
6453     \expandafter\c\y\relax#1\@nil
6454   }%
6455   \expandafter\process@me\string\@latex@\@nil{title}%
6456   \expandafter\process@me\string\@latex@\@nil{author}%
6457 \endgroup
6458 \fi
6459 \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.

```

6460 \def\Hy@UseMaketitleString#1{%

```

```

6461 \ltx@ifundefined{Hy@#1}{-}{%
6462   \begingroup
6463   \let\Hy@saved@hook\pdfstringdefPreHook
6464   \pdfstringdefDisableCommands{%
6465     \expandafter\let\expandafter\\\csname Hy@newline@#1\endcsname
6466     \let\newline\\%
6467     \def\and{; }%
6468     \let\thanks\@gobble%
6469   }%
6470   \expandafter\ifx\csname @pdf#1\endcsname\@empty
6471     \expandafter\pdfstringdef\csname @pdf#1\endcsname{%
6472       \csname Hy@#1\endcsname\@empty
6473     }%
6474   \fi
6475   \global\let\pdfstringdefPreHook\Hy@saved@hook
6476 \endgroup
6477 }%
6478 }
6479 \def\Hy@newline@title#1{ #1}
6480 \def\Hy@newline@author#1{, #1}
6481 \def\Hy@UseMaketitleInfos{%
6482   \Hy@UseMaketitleString{title}%
6483   \Hy@UseMaketitleString{author}%
6484 }

```

26 Page numbers

This stuff is done by Heiko Oberdiek.

27 Every page

```

6485 \RequirePackage{atbegshi}[2007/09/09]
6486 \let\Hy@EveryPageHook\ltx@empty
6487 \let\Hy@EveryPageBoxHook\ltx@empty
6488 \let\Hy@FirstPageHook\ltx@empty
6489 \AtBeginShipout{%
6490   \Hy@EveryPageHook
6491   \ifx\Hy@EveryPageBoxHook\ltx@empty
6492   \else
6493     \setbox\AtBeginShipoutBox=\vbox{%
6494       \offinterlineskip
6495       \Hy@EveryPageBoxHook
6496       \box\AtBeginShipoutBox
6497     }%
6498   \fi
6499 }
6500 \ltx@iffileloaded{hpdfetex.def}{%
6501   \AtBeginShipout{%
6502     \Hy@FirstPageHook
6503     \global\let\Hy@FirstPageHook\ltx@empty
6504   }%
6505 }%

```



```

6506 \AtBeginShipoutFirst{%
6507   \Hy@FirstPageHook
6508 }%
6509 }
6510 \g@addto@macro\Hy@FirstPageHook{%
6511   \PDF@FinishDoc
6512   \global\let\PDF@FinishDoc\ltx@empty
6513 }

```

27.1 PDF /PageLabels

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

```

6514 \ifHy@pdfpagelabels
6515   \begingroup\expandafter\expandafter\expandafter\endgroup
6516   \expandafter\ifx\csname thepage\endcsname\relax
6517     \Hy@pdfpagelabelsfalse
6518     \Hy@WarningNoLine{%
6519       Option 'pdfpagelabels' is turned off\MessageBreak
6520       because \string\thepage\space is undefined%
6521     }%
6522     \csname fi\endcsname
6523     \csname iffalse\expandafter\endcsname
6524     \fi

```

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

```

6525 \def\thispdfpagelabel#1{%
6526   \gdef\HyPL@thisLabel{#1}%
6527 }%
6528 \global\let\HyPL@thisLabel\relax

```

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

```

6529 \let\HyPL@Labels\ltx@empty

```

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

```

6530 \newcount\Hy@abspage
6531 \Hy@abspage=0 %

```

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

```

6532 \def\HyPL@LastType{init}%
6533 \def\HyPL@LastNumber{0}%
6534 \let\HyPL@LastPrefix\ltx@empty

```

Definitions for the PDF names of the \LaTeX pendants.

```

6535 \def\HyPL@arabic{D}%
6536 \def\HyPL@Roman{R}%
6537 \def\HyPL@roman{r}%
6538 \def\HyPL@Alph{A}%
6539 \def\HyPL@alph{a}%
6540 \let\HyPL@SlidesSetPage\ltx@empty
6541 \ltx@ifclassloaded{slides}{%
6542   \def\HyPL@SlidesSetPage{%

```

```

6543 \advance\c@page\ltx@one
6544 \ifnum\value{page}>\ltx@one
6545 \protected@edef\HyPL@SlidesOptionalPage{%
6546 \Hy@SlidesFormatOptionalPage{\thepage}%
6547 }%
6548 \else
6549 \let\HyPL@SlidesOptionalPage\ltx@empty
6550 \fi
6551 \advance\c@page-\ltx@one
6552 \def\HyPL@page{%
6553 \csname the\Hy@SlidesPage\endcsname
6554 \HyPL@SlidesOptionalPage
6555 }%
6556 }%
6557 }{}%

```

\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.

```

6558 \def\HyPL@EveryPage{%
6559 \begingroup
6560 \ifx\HyPL@thisLabel\relax
6561 \let\HyPL@page\thepage
6562 \HyPL@SlidesSetPage
6563 \else
6564 \let\HyPL@page\HyPL@thisLabel
6565 \global\let\HyPL@thisLabel\relax
6566 \fi
6567 \let\HyPL@Type\relax
6568 \ifnum\c@page>0 %
6569 \ifx\HyPL@SlidesSetPage\ltx@empty
6570 \expandafter\HyPL@CheckThePage\HyPL@page\@nil
6571 \fi
6572 \fi
6573 \let\Hy@temp Y%
6574 \ifx\HyPL@Type\HyPL@LastType
6575 \else
6576 \let\Hy@temp N%
6577 \fi
6578 \ifx\HyPL@Type\relax
6579 \pdfstringdef\HyPL@Prefix{\HyPL@page}%
6580 \else
6581 \pdfstringdef\HyPL@Prefix\HyPL@Prefix
6582 \fi
6583 \ifx\HyPL@Prefix\HyPL@LastPrefix
6584 \else
6585 \let\Hy@temp N%
6586 \fi
6587 \if Y\Hy@temp
6588 \advance\c@page by -1 %
6589 \ifnum\HyPL@LastNumber=\the\c@page\relax
6590 \else
6591 \let\Hy@temp N%
6592 \fi
6593 \Hy@StepCount\c@page

```

```

6594 \fi
6595 \if N\Hy@temp
6596 \ifx\HyPL@Type\relax
6597 \HyPL@StorePageLabel{/P(\HyPL@Prefix)}%
6598 \else
6599 \HyPL@StorePageLabel{%
6600 \ifx\HyPL@Prefix\@empty
6601 \else
6602 /P(\HyPL@Prefix)%
6603 \fi
6604 /S/\csname HyPL\HyPL@Type\endcsname
6605 \ifnum\the\c@page=1 %
6606 \else
6607 \space/St \the\c@page
6608 \fi
6609 }%
6610 \fi
6611 \fi
6612 \xdef\HyPL@LastNumber{\the\c@page}%
6613 \global\let\HyPL@LastType\HyPL@Type
6614 \global\let\HyPL@LastPrefix\HyPL@Prefix
6615 \endgroup
6616 \Hy@GlobalStepCount\Hy@abspage
6617 }%

```

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

```

6618 \def\HyPL@CheckThePage#1\@nil{%
6619 \HyPL@@CheckThePage{#1}#1\csname\endcsname\c@page\@nil
6620 }%

```

`\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`.

```

6621 \def\HyPL@@CheckThePage#1#2\csname#3\endcsname\c@page#4\@nil{%
6622 \def\Hy@tempa{#4}%
6623 \def\Hy@tempb{\csname\endcsname\c@page}%
6624 \ifx\Hy@tempa\Hy@tempb
6625 \expandafter\ifx\csname HyPL#3\endcsname\relax
6626 \else
6627 \def\HyPL@Type{#3}%
6628 \def\HyPL@Prefix{#2}%
6629 \fi
6630 \else
6631 \begingroup
6632 \let\Hy@next\endgroup
6633 \let\HyPL@found\@undefined
6634 \def\arabic{\HyPL@Format{arabic}}%
6635 \def\Roman{\HyPL@Format{Roman}}%
6636 \def\roman{\HyPL@Format{roman}}%
6637 \def\Alph{\HyPL@Format{Alph}}%
6638 \def\alph{\HyPL@Format{alph}}%
6639 \protected@edef\Hy@temp{#1}%

```

```

6640 \ifx\HyPL@found\relax
6641 \toks@{\expandafter{\Hy@temp}}%
6642 \edef\Hy@next{\endgroup
6643 \noexpand\HyPL@@@CheckThePage\the\toks@
6644 \noexpand\HyPL@found\relax\noexpand\@nil
6645 }%
6646 \fi
6647 \Hy@next
6648 \fi
6649 }%

```

\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`.

```

6650 \def\HyPL@Format#1#2{%
6651 \ifx\HyPL@found\@undefined
6652 \expandafter\ifx\csname c@#2\endcsname\c@page
6653 \expandafter\noexpand\csname HyPL@found\endcsname{#1}%
6654 \else
6655 \expandafter\noexpand\csname#1\endcsname{#2}%
6656 \fi
6657 \else
6658 \expandafter\noexpand\csname#1\endcsname{#2}%
6659 \fi
6660 }%

```

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

```

6661 \def\HyPL@@@CheckThePage#1\HyPL@found#2#3\@nil{%
6662 \def\Hy@tempa{#3}%
6663 \def\Hy@tempb{\HyPL@found\relax}%
6664 \ifx\Hy@tempa\Hy@tempb
6665 \def\HyPL@Type{#2}%
6666 \def\HyPL@Prefix{#1}%
6667 \fi
6668 }%

```

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

```

6669 \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`.

```

6670 \def\HyPL@Useless{0<</S/D>>}%
6671 \@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.

```

6672 \def\HyPL@SetPageLabels{%
6673 \@onelevel@sanitize\HyPL@Labels
6674 \ifx\HyPL@Labels\@empty
6675 \else
6676 \ifx\HyPL@Labels\HyPL@Useless

```

```

6677     \else
6678         \Hy@PutCatalog{/PageLabels<</Nums[\HyPL@Labels]>>>}%
6679     \fi
6680 \fi
6681 }%

6682 \g@addto@macro\Hy@EveryPageHook{\HyPL@EveryPage}%
6683 \fi

Option ‘pdfpagelabels’ has been used and is now disabled.
6684 \Hy@DisableOption{pdfpagelabels}
6685 \end{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
6686 (*pdfTeX)
6687 \pdf@ifdraftmode{%
6688     \let\Hy@PutCatalog\ltx@gobble
6689 }{%
6690     \let\Hy@PutCatalog\pdfcatalog
6691 }
6692 \end{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.

```

6693 (*vTeX)
6694 \providecommand*\XR@ext}{pdf}
6695 \edef\Hy@VTeXversion{%
6696     \ifx\VTeXversion\@undefined
6697         \z@
6698     \else
6699         \ifx\VTeXversion\relax
6700             \z@
6701         \else
6702             \VTeXversion
6703         \fi
6704     \fi
6705 }
6706 \begingroup
6707     \ifnum\Hy@VTeXversion<660 %
6708         \gdef\Hy@PutCatalog#1{%
6709             \Hy@WarningNoLine{%
6710                 VTeX 6.59g or above required for pdfpagelabels%
6711             }%
6712         }%
6713     \else
6714         \gdef\Hy@PutCatalog#1{%

```

```

6715 \Hy@vt@PutCatalog#1/PageLabels<<>>\@nil
6716 }%
6717 \gdef\Hy@vt@PutCatalog#1/PageLabels<<#2>>#3\@nil{%
6718 \ifx\#2\%
6719 \else
6720 \immediate\special{!pdfpagelabels #2}%
6721 \fi
6722 }%
6723 \fi
6724 \endgroup
6725 \</vtex>

6726 \*pdfTeX | vtex>

```

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

```

6727 \ifHy@pdfpagelabels
6728 \def\HyPL@StorePageLabel#1{%
6729 \toks@{\expandafter{\HyPL@Labels}}%
6730 \xdef\HyPL@Labels{%
6731 \the\toks@
6732 \the\Hy@abspage<<#1>>%
6733 }%
6734 }%

```

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.

```

6735 \RequirePackage{atveryend}[2009/12/07]%
6736 \AtVeryEndDocument{%
6737 \HyPL@SetPageLabels
6738 }%

6739 \fi
6740 \</pdfTeX | vtex>

```

27.1.2 xetex

```

6741 \*xetex>
6742 \HyPsd@LoadUnicode
6743 \Hy@unicodetrue
6744 \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@unicode
6745 \else
6746 \let\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
6747 \fi
6748 \HyPsd@LoadStringEncoding
6749 \define@key{Hyp}{unicode}[true]{%
6750 \Hy@boolkey{unicode}{#1}%
6751 \ifHy@unicode
6752 \else
6753 \Hy@Warning{%
6754 XeTeX driver only supports `unicode=true'. Ignoring\MessageBreak
6755 option setting `unicode=false'%
6756 }%
6757 \Hy@unicodetrue
6758 \fi

```

```

6759 }
6760 \define@key{Hyp}{pdfencoding}{%
6761   \edef\HyPsd@temp{#1}%
6762   \ifx\HyPsd@temp\HyPsd@pdfencoding@unicode
6763     \let\HyPsd@pdfencoding\HyPsd@temp
6764   \else
6765     \ifx\HyPsd@temp\HyPsd@pdfencoding@auto
6766       \let\HyPsd@pdfencoding\HyPsd@temp
6767     \else
6768       \Hy@Warning{%
6769         XeTeX driver only supports\MessageBreak
6770         `pdfencoding=unicode|auto'. Ignoring option\MessageBreak
6771         setting `pdfencoding=\HyPsd@temp'%
6772       }%
6773     \fi
6774   \fi
6775 }
6776 \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:

```

6777 \def\setpdfinkmargin#1{%
6778   \begingroup
6779   \setlength{\dimen@}{#1}%
6780   \special{dvipdfmx:config g \strip@pt\dimen@}%
6781   \endgroup}
6782 \xetex

```

set the pdf version

```

6783 (*dvipdfm | xetex)
6784 \special{pdf:majorversion \Hy@pdf@majorversion}
6785 \special{pdf:minorversion \Hy@pdf@minorversion}
6786 \dvipdfm | xetex

```

27.1.3 pdfmarkbase, dvipdfm, xetex

```

6787 (*pdfmarkbase)
6788 \begingroup
6789 \@ifundefined{headerps@out}{-}{%
6790   \toks@\expandafter{\Hy@FirstPageHook}%
6791   \xdef\Hy@FirstPageHook{%
6792     \noexpand\headerps@out{%
6793       systemdict /pdfmark known%
6794       {%
6795         userdict /?pdfmark systemdict /exec get put%
6796       }{%
6797         userdict /?pdfmark systemdict /pop get put %
6798         userdict /pdfmark systemdict /cleartomark get put%
6799       }%
6800       ifelse%
6801     }%
6802     \the\toks@
6803   }%
6804 }%
6805 \endgroup
6806 \pdfmarkbase

```

\Hy@PutCatalog

```

6807 <dvipdfm | xetex>\def\Hy@PutCatalog#1{\@pdfmark{docview <<#1>>}}
6808 <*pdfmarkbase>
6809 \def\Hy@PutCatalog#1{%
6810   \pdfmark{pdfmark=/PUT,Raw={\string{Catalog\string} <<#1>>}}%
6811 }
6812 </pdfmarkbase>

6813 <*pdfmarkbase | dvipdfm | xetex>
6814 \ifHy@pdfpagelabels

```

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

```

6815 \def\HyPL@StorePageLabel#1{%
6816   \if@filesw
6817     \begingroup
6818     \edef\Hy@tempa{\the\Hy@abspage<<#1>>}%
6819     \immediate\write\@mainaux{%
6820       \string\HyPL@Entry{\Hy@tempa}%
6821     }%
6822   \endgroup
6823 \fi
6824 }%

```

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.

```

6825 \Hy@AtBeginDocument{%
6826   \if@filesw
6827     \immediate\write\@mainaux{%
6828       \string\providecommand\string*\string\HyPL@Entry[1]{}%
6829     }%
6830   \fi
6831   \ifx\HyPL@Labels\@empty
6832     \Hy@WarningNoLine{Rerun to get /PageLabels entry}%
6833   \else
6834     \HyPL@SetPageLabels
6835   \fi
6836   \let\HyPL@Entry\@gobble
6837 }%

```

\HyPL@Entry

```

6838 \def\HyPL@Entry#1{%
6839   \expandafter\gdef\expandafter\HyPL@Labels\expandafter{%
6840     \HyPL@Labels
6841     #1%
6842   }%
6843 }%

6844 \fi
6845 </pdfmarkbase | dvipdfm | xetex>
6846 <*packageEnd>
6847 \ifx\MaybeStopEarly\relax
6848 \else

```



```

6849 \Hy@stoppedearlytrue
6850 \expandafter\MaybeStopEarly
6851 \fi
6852 \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

```

6853 \def\Hy@CounterExists#1{%
6854   \begingroup\expandafter\expandafter\expandafter\endgroup
6855   \expandafter\ifx\csname c@#1\endcsname\relax
6856     \expandafter\@gobble
6857   \else
6858     \begingroup\expandafter\expandafter\expandafter\endgroup
6859     \expandafter\ifx\csname the#1\endcsname\relax
6860       \expandafter\expandafter\expandafter\@gobble
6861     \else
6862       \expandafter\expandafter\expandafter\@firstofone
6863     \fi
6864   \fi
6865 }
6866 \Hy@CounterExists{section}{%
6867   \providecommand\theHequation{\theHsection.\arabic{equation}}}%
6868 }
6869 \providecommand\theHequation{\arabic{equation}}}%
6870 \Hy@CounterExists{part}{%
6871   \providecommand\theHpart{\arabic{part}}}%
6872 }
6873 \ltx@ifundefined{thechapter}{%
6874   \providecommand\theHsection   {\arabic{section}}}%
6875   \providecommand\theHfigure    {\arabic{figure}}}%
6876   \providecommand\theHtable     {\arabic{table}}}%
6877 }{%
6878   \providecommand\theHchapter   {\arabic{chapter}}}%

```

```

6879 \providecommand\theHfigure    {\theHchapter.\arabic{figure}}%
6880 \providecommand\theHtable     {\theHchapter.\arabic{table}}%
6881 \providecommand\theHsection    {\theHchapter.\arabic{section}}%
6882 }
6883 \providecommand\theHsubsection {\theHsection.\arabic{subsection}}
6884 \providecommand\theHsubsubsection{\theHsubsection.\arabic{subsubsection}}
6885 \providecommand\theHparagraph  {\theHsubsubsection.\arabic{paragraph}}
6886 \providecommand\theHsubparagraph {\theHparagraph.\arabic{subparagraph}}
6887 \providecommand\theHtheorem    {\theHsection.\arabic{theorem}}
6888 \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.

```

6889 \let\H@item\item
6890 \newcounter{Item}
6891 \def\theHItem{\arabic{Item}}
6892 \def\item{%
6893   \@hyper@itemfalse
6894   \if@nmbrrlist\@hyper@itemtrue\fi
6895   \H@item
6896 }
6897 \providecommand\theHenumi      {\theHItem}
6898 \providecommand\theHenumii     {\theHItem}
6899 \providecommand\theHenumiii    {\theHItem}
6900 \providecommand\theHenumiv     {\theHItem}
6901 \providecommand\theHHfootnote  {\arabic{Hfootnote}}
6902 \providecommand\theHmpfootnote{\arabic{mpfootnote}}
6903 \@ifundefined{theHHmpfootnote}{%
6904   \let\theHHmpfootnote\theHHfootnote
6905 }{}

```

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.

```

6906 \let\H@refstepcounter\refstepcounter
6907 \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`

```

6908 \newif\if@hyper@item
6909 \newif\if@skiphyperref
6910 \@hyper@itemfalse
6911 \@skiphyperreffalse
6912 \ExplSyntaxOn
6913 \def\refstepcounter#1{%
6914   \legacy_if:nF {Hy@pdfstring}
6915   {
6916     \H@refstepcounter{#1}%
6917     \bool_lazy_and:nnT
6918       { \l__hyp_target_create_bool }

```

```

6919 { ! \legacy_if_p:n{@skiphyperref} }
6920 {
6921   \legacy_if:nTF {@hyper@item}
6922   {
6923     \stepcounter{Item}%
6924     \hyper@refstepcounter{Item}%
6925     \@hyper@itemfalse
6926   }
6927   {
6928     \hyper@refstepcounter{#1}%
6929   }
6930 }
6931 }
6932 }
6933 \ExplSyntaxOff
6934 \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.

```

6935 \@ifpackageloaded{amsmath}{\newif\ifmeasuring@\measuring@false}

```

`\hyper@refstepcounter`

```

6936 \def\hyper@refstepcounter#1{%
6937   \HyCnt@ProvideTheHCounter{#1}%
6938   \hyper@makecurrent{#1}%
6939   \ifmeasuring@
6940   \else
6941     \Hy@raisedlink{%
6942       \hyper@anchorstart{\@currentHref}\hyper@anchorend
6943     }%
6944   \fi
6945 }

```

`\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.

```

6946 \def\HyCnt@ProvideTheHCounter#1{%
6947   \@ifundefined{theH#1}{%
6948     \expandafter\def\csname theH#1\endcsname{}%
6949     \def\Hy@temp{\@elt{#1}}%
6950     \ltx@onelevel@sanitize\Hy@temp
6951     \let\HyOrg@elt\@elt
6952     \edef\@elt{%
6953       \noexpand\HyCnt@LookForParentCounter
6954       \expandafter\noexpand\csname theH#1\endcsname
6955     }%
6956     \cl@ckpt
6957     \let\@elt\HyOrg@elt

```

```

6958 \expandafter
6959 \ltx@LocalAppendToMacro\csname theH#1\expandafter\endcsname
6960 \expandafter{%
6961 \expandafter\@arabic\csname c@#1\endcsname
6962 }%
6963 }{}%
6964 }

```

\Hy@LookForParentCounter

```

6965 \def\HyCnt@LookForParentCounter#1#2{%
6966 \expandafter\let\expandafter\Hy@temp@A\csname cl@#2\endcsname
6967 \ltx@ifundefined{cl@#2}{%
6968 }{%
6969 \ltx@onelevel@sanitize\Hy@temp@A
6970 \edef\Hy@temp@A{%
6971 \noexpand\in@{\Hy@temp}{\Hy@temp@A}%
6972 }\Hy@temp@A
6973 \ifn@
6974 \ltx@ifundefined{theH#2}{%
6975 \expandafter\ltx@LocalAppendToMacro\expandafter#1%
6976 \expandafter{%
6977 \expandafter\@arabic\csname c@#2\endcsname.%
6978 }%
6979 }{%
6980 \expandafter\ltx@LocalAppendToMacro\expandafter#1%
6981 \expandafter{%
6982 \csname theH#2\endcsname.%
6983 }%
6984 }%
6985 \fi
6986 }%
6987 }

```

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.

```

6988 \begingroup\expandafter\expandafter\expandafter\endgroup
6989 \expandafter\ifx\csname chapter\endcsname\relax
6990 \def\Hy@chapterstring{section}%
6991 \else
6992 \def\Hy@chapterstring{chapter}%
6993 \fi
6994 \def\Hy@appendixstring{appendix}
6995 \def\Hy@chapapp{\Hy@chapterstring}
6996 \ltx@ifundefined{appendix}{%
6997 }{%
6998 \let\HyOrg@appendix\appendix
6999 \def\Hy@AlphNoErr#1{%
7000 \ifnum\value{#1}>26 %
7001 Alph\number\value{#1}%
7002 \else

```

```

7003 \ifnum\value{#1}<1 %
7004   Alph\number\value{#1}%
7005 \else
7006   \Alph{#1}%
7007 \fi
7008 \fi
7009 }%
7010 \def\appendix{%
7011   \ltx@ifundefined{chapter}{%
7012     \gdef\theHsection{\Hy@AlphNoErr{section}}%
7013   }{%
7014     \gdef\theHchapter{\Hy@AlphNoErr{chapter}}%
7015   }%
7016   \xdef\Hy@chapapp{\Hy@appendixstring}%
7017   \HyOrg@appendix
7018 }%
7019 }

```

\Hy@Test@Alph

```

7020 \def\Hy@Test@Alph#1{%
7021   \ifcase#1\or
7022     a\or b\or c\or d\or e\or f\or g\or h\or i\or j\or
7023     k\or l\or m\or n\or o\or p\or q\or r\or s\or t\or
7024     u\or v\or w\or x\or y\or z%
7025   \else
7026     \@ctrerr
7027   \fi
7028 }

```

\Hy@Test@Alph

```

7029 \def\Hy@Test@Alph#1{%
7030   \ifcase#1\or
7031     A\or B\or C\or D\or E\or F\or G\or H\or I\or J\or
7032     K\or L\or M\or N\or O\or P\or Q\or R\or S\or T\or
7033     U\or V\or W\or X\or Y\or Z%
7034   \else
7035     \@ctrerr
7036   \fi
7037 }

```

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

```

7038 \NewHook{__hyp/target/setname }
7039 \define@key{Hyp}{next-anchor}{%
7040   \AddToHookNext{__hyp/target/setname}%
7041   {\Hy@MakeCurrentHref{#1}}%
7042 }

```

\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.

```

7043 \def\hyper@makecurrent#1{%
7044   \begingroup
7045   \Hy@safe@activestru

```

```

7046 \edef\Hy@param{#1}%
7047 \ifx\Hy@param\Hy@chapterstring
7048 \let\Hy@param\Hy@chapapp
7049 \fi
7050 \ifHy@hypertextnames
7051 \let\@number\@firstofone
7052 \def\@fnsymbol##1{\fnsymbol\number##1}%
7053 \def\@arabic##1{\number##1}%
7054 \ifx\@alph\Hy@Test@alph
7055 \else
7056 \def\@alph{alph\number}%
7057 \fi
7058 \ifx\@Alph\Hy@Test@Alph
7059 \else
7060 \def\@Alph{Alph\number}%
7061 \fi
7062 \ifHy@naturalnames
7063 \let\textlatin\@firstofone
7064 \xdef\HyperGlobalCurrentHref{\csname the#1\endcsname}%
7065 \else
7066 \xdef\HyperGlobalCurrentHref{%
7067 \csname
7068 the%
7069 \expandafter\ifx\csname theH#1\endcsname\relax\else H\fi
7070 #1%
7071 \endcsname
7072 }%
7073 \fi
7074 \xdef\HyperGlobalCurrentHref{%
7075 \Hy@param.\expandafter\strip@prefix\meaning\HyperGlobalCurrentHref
7076 }%
7077 \else
7078 \Hy@GlobalStepCount\Hy@linkcounter
7079 \xdef\HyperGlobalCurrentHref{\Hy@param.the\Hy@linkcounter}%
7080 \fi
7081 \endgroup
7082 \let\HyperLocalCurrentHref\HyperGlobalCurrentHref
7083 \ifHy@localanchorname
7084 \let\@currentHref\HyperLocalCurrentHref
7085 \else
7086 \global\let\@currentHref\HyperGlobalCurrentHref
7087 \fi
7088 \UseHook{__hyp/target/setname}%
7089 }

```

\Hy@MakeCurrentHref

```

7090 \def\Hy@MakeCurrentHref#1{%
7091 \edef\HyperLocalCurrentHref{#1}%
7092 \@onelevel@sanitize\HyperLocalCurrentHref
7093 \global\let\HyperGlobalCurrentHref\HyperLocalCurrentHref
7094 \let\HyperLocalCurrentHref\HyperGlobalCurrentHref
7095 \ifHy@localanchorname
7096 \let\@currentHref\HyperLocalCurrentHref
7097 \else

```

```

7098 \global\let\@currentHref\HyperGlobalCurrentHref
7099 \fi
7100 }

```

`\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.

```

7101 \def\Hy@MakeCurrentHrefAuto#1{%
7102 \Hy@GlobalStepCount\Hy@linkcounter
7103 \Hy@MakeCurrentHref{#1.\the\Hy@linkcounter}%
7104 \UseHook{__hyp/target/setname}}

```

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

```

7105 \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.

```

7106 \def\hypergetref#1{\getrefbykeydefault{#1}{}}{??}}
7107 \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:

```

7108 \@ifpackageloaded{titlesec}{%
7109 \def\ttl@Hy@steplink#1{%
7110 \Hy@MakeCurrentHrefAuto{#1*}%
7111 \edef\ttl@Hy@saveanchor{%
7112 \noexpand\Hy@raisedlink{%
7113 \noexpand\hyper@anchorstart{\@currentHref}%
7114 \noexpand\hyper@anchorend
7115 \def\noexpand\ttl@Hy@SavedCurrentHref{\@currentHref}%
7116 \noexpand\ttl@Hy@PatchSaveWrite
7117 }%
7118 }%
7119 }%
7120 \def\ttl@Hy@PatchSaveWrite{%
7121 \begingroup
7122 \toks@\expandafter{\ttl@savewrite}%
7123 \edef\x{\endgroup
7124 \def\noexpand\ttl@savewrite{%
7125 \let\noexpand\@currentHref
7126 \noexpand\ttl@Hy@SavedCurrentHref
7127 \the\toks@
7128 }%
7129 }%
7130 \x
7131 }%

```

```

7132 \def\ttl@Hy@refstepcounter#1{%
7133   \let\ttl@b\Hy@raisedlink
7134   \def\Hy@raisedlink##1{%
7135     \def\ttl@Hy@saveanchor{\Hy@raisedlink{##1}}%
7136   }%
7137   \refstepcounter{#1}%
7138   \let\Hy@raisedlink\ttl@b
7139 }%
7140 }{}

```

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.

```

7141 \@if@t@r\fmtversion{2021-11-15}
7142 {}%
7143 {
7144   \AtBeginDocument{%
7145     \def\Hy@varioref@undefined{???}{??}{-}{-}}
7146   \@ifpackageloaded{varioref}{%
7147     \def\vref@pagenum#1#2{%
7148       \@ifundefined{r@#2}{%
7149         \expandafter\let\csname r@#2\endcsname\Hy@varioref@undefined
7150       }{}%
7151       \edef#1{\getpagerefnumber{#2}}%
7152     }%
7153   }{}
7154 }
7155 }

```

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

```

7156 \@ifpackageloaded{longtable}{%
7157   \@ifundefined{hyper@nopatch@longtable}{%
7158     \begingroup
7159     \def\y{\LT@array}%
7160     \@ifundefined{scr@LT@array}{%
7161       \@ifundefined{adl@LT@array}{-}{\def\y{adl@LT@array}}%
7162     }{\def\y{scr@LT@array}}%
7163     \long\def\x\refstepcounter#1#2\@sharp#3#4\@nil{%
7164       \expandafter\endgroup
7165       \expandafter\def\y[##1]##2{%
7166         \H@refstepcounter{#1}%
7167         \hyper@makecurrent{table}%
7168         \let\Hy@LT@currentHref\@currentHref

```



```

7169      #2\@sharp####4%
7170    }%
7171  }%
7172  \expandafter\expandafter\expandafter\x\y[{#1}]{#2}\@nil
Patch of \LT@start: add anchor before first line after \vskip\LTpre
7173  \begingroup
7174  \def\x#1\ifvoid\LT@foot#2\fi#3\@nil{%
7175    \endgroup
7176    \def\LT@start{%
7177      #1%
7178      \ifvoid\LT@foot#2\fi
7179      \let\@currentHref\Hy@LT@currentHref
7180      \Hy@raisedlink{%
7181        \hyper@anchorstart{\@currentHref}\hyper@anchorend
7182      }%
7183      #3%
7184    }%
7185  }%
7186  \expandafter\x\LT@start\@nil
7187 }{}
7188 }{}

```

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

```

7189 \let\new@refstepcounter\refstepcounter
7190 \let\H@equation\equation
7191 \let\H@endequation\endequation
7192 \@ifundefined{hyper@nopatch@mathenv}{%
7193   \@ifpackageloaded{amsmath}{%
7194     \long\def\Hy@temp{%
7195       \incr@eqnum
7196       \mathdisplay@push
7197       \st@rredfalse \global\@eqnswtrue
7198       \mathdisplay{equation}%
7199     }%
7200     \ifx\Hy@temp\equation
7201       \expandafter\ifx\csname if@fleqn\expandafter\endcsname
7202         \csname iftrue\endcsname
7203     \else
7204       \long\def\equation{%
7205         \mathdisplay@push
7206         \st@rredfalse \global\@eqnswtrue
7207         \mathdisplay{equation}%
7208         \incr@eqnum

```

```

7209     }%
7210     \fi
7211     \fi
7212 }{%
7213   \def\equation{%
7214     \let\refstepcounter\H@refstepcounter
7215     \H@equation
7216     \hyper@makecurrent{equation}%

```

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

```

7217     \mathopen{%
7218       \Hy@raisedlink{\hyper@anchorstart{\@currentHref}}}%
7219     }%
7220     \let\refstepcounter\new@refstepcounter
7221   }%
7222   \def\endequation{%
7223     \ifx\Hy@raisedlink\ltx@empty
7224       \hyper@anchorend
7225     \else
7226       \mathclose{\Hy@raisedlink{\hyper@anchorend}}}%
7227     \fi
7228     \H@endequation
7229   }%
7230 }
7231 }{}

```

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.

```

7232 \newif\if@eqnstar
7233 \@eqnstarfalse
7234 \let\H@eqnarray\eqnarray
7235 \let\H@endeqnarray\endeqnarray
7236 \@ifundefined{hyper@nopatch@mathenv}{%
7237   \def\eqnarray{%
7238     \let\Hy@reserved@a\relax
7239     \def\@currentHref{}%
7240     \H@eqnarray
7241     \if@eqnstar
7242     \else
7243       \ifx\\\@currentHref\%
7244       \else
7245         \hyper@makecurrent{equation}%
7246         \mathopen{%
7247           \Hy@raisedlink{%
7248             \hyper@anchorstart{\@currentHref}\hyper@anchorend
7249           }%
7250         }%
7251       \fi
7252     \fi
7253   }
7254   \def\endeqnarray{%

```

```

7255 \H@endeqnarray
7256 }
7257 }{}

```

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.

```

7258 \@namedef{eqnarray*}{%
7259 \protected\def\@eqnacr{\nonumber\@seqnacr}\@eqnstartrue\eqnarray
7260 }
7261 \@namedef{endeqnarray*}{%
7262 \nonumber\endeqnarray\@eqnstarfalse
7263 }

```

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

```

7264 \ltx@ifundefined{subeqnarray}{}{}%
7265 \let\H@subeqnarray\subeqnarray
7266 \let\H@endsubeqnarray\endsubeqnarray
7267 \def\subeqnarray{%
7268 \let\Hy@reserved@a\relax
7269 \H@subeqnarray
7270 \hyper@makecurrent{equation}%
7271 \hyper@anchorstart{\@currentHref}{ }\hyper@anchorend
7272 }%
7273 \def\endsubeqnarray{%
7274 \H@endsubeqnarray
7275 }%
7276 \providecommand\theHsubequation{\theHequation\alph{subequation}}%
7277 }

```

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

```

7278 \def\make@stripped@name#1{%
7279 \begingroup
7280 \escapechar\m@ne
7281 \global\let\newname\@empty
7282 \protected@edef\Hy@tempa{#1}%
7283 \edef\@tempb{%
7284 \noexpand\@tfor\noexpand\Hy@tempa:=%
7285 \expandafter\strip@prefix\meaning\Hy@tempa
7286 }%
7287 \@tempb\do{%
7288 \if\Hy@tempa\else
7289 \if\Hy@tempa\else
7290 \xdef\newname{\newname\Hy@tempa}%
7291 \fi
7292 \fi
7293 }%
7294 \endgroup
7295 }

```

Support for amsmath's subequations:

```

7296 \ifcsname subequations\endcsname
7297 \let\HyOrg@subequations\subequations

```

```

7298 \def\subequations{%
7299   \stepcounter{equation}%
7300   \protected@edef\theHparentequation{\theHequation}%
7301   \addtocounter{equation}{-1}%
7302   \HyOrg@subequations
7303   \def\theHequation{\theHparentequation\alph{equation}}%
7304   \ignorespaces
7305 }%
7306 \fi

```

Support for theorems. We move the target into the para hook to avoid spacing problem. The patch will not apply to `cleveref` but hopefully it does the right thing anyway. `\@currentHref` is updated directly for labels set before the actual start of the paragraph. The target can be behind a target created from a following list, so we restore `\@currentHref` just in case

```

7307 \newcommand\Hy@theorem@refstepcounter[1]
7308 {%
7309   \H@refstepcounter{#1}%
7310   \hyper@makecurrent{#1}%
7311   \global\let\Hy@dth@currentHref\@currentHref
7312   \AddToHookNext{para/begin}
7313     {\let\Hy@tempa\@currentHref
7314      \MakeLinkTarget*\Hy@dth@currentHref}%
7315   \global\let\@currentHref\Hy@tempa
7316 }%
7317 }
7318 \AtBeginDocument{%
7319 \ifpatchable\@thm{\refstepcounter}
7320 {\patchcmd\@thm{\refstepcounter}{\Hy@theorem@refstepcounter}{}{}}
7321 {}

```

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

```

7322 \@ifundefined{hyper@nopatch@footnote}{%
7323 \ifHy@hyperfootnotes
7324   \newcounter{Hfootnote}%
7325   \let\H@@@footnotetext\@footnotetext
7326   \let\H@@@footnotemark\@footnotemark
7327   \def\@xfootnotenext[#1]{%
7328     \begingroup
7329     \csname c@\@mpfn\endcsname #1\relax
7330     \unrestored@protected@xdef\@thefnmark{\thempfn}%
7331     \endgroup
7332     \ifx\@footnotetext\@mpfootnotetext
7333       \expandafter\H@@@mpfootnotetext
7334     \else

```

```

7335 \expandafter\H@@footnotetext
7336 \fi
7337 }%
7338 \def\@xfootnotemark[#1]{%
7339 \begingroup
7340 \c@footnote #1\relax
7341 \unrestored@protected@xdef\@thefnmark{\thefootnote}%
7342 \endgroup
7343 \H@@@footnotemark
7344 }%
7345 \let\H@@mpfootnotetext\@mpfootnotetext
7346 \long\def\@mpfootnotetext#1{%
7347 \H@@mpfootnotetext{%
7348 \ifHy@nesting
7349 \expandafter\ltx@firstoftwo
7350 \else
7351 \expandafter\ltx@secondoftwo
7352 \fi
7353 {%
7354 \expandafter\hyper@@anchor\expandafter{%
7355 \Hy@footnote@currentHref
7356 }{\ignorespaces #1}%
7357 }{%
7358 \Hy@raisedlink{%
7359 \expandafter\hyper@@anchor\expandafter{%
7360 \Hy@footnote@currentHref
7361 }{\relax}%
7362 }\ignorespaces #1%
7363 }%
7364 }%
7365 }%
7366 \long\def\@footnotetext#1{%
7367 \H@@@footnotetext{%
7368 \ifHy@nesting
7369 \expandafter\ltx@firstoftwo
7370 \else
7371 \expandafter\ltx@secondoftwo
7372 \fi
7373 {%
7374 \expandafter\hyper@@anchor\expandafter{%
7375 \Hy@footnote@currentHref
7376 }{\ignorespaces #1}%
7377 }{%
7378 \Hy@raisedlink{%
7379 \expandafter\hyper@@anchor\expandafter{%
7380 \Hy@footnote@currentHref
7381 }{\relax}%
7382 }%
7383 \let\@currentHref\Hy@footnote@currentHref
7384 \let\@currentlabelname\@empty
7385 \ignorespaces #1%
7386 }%
7387 }%
7388 }%

```

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.

```

7389 \def\@footnotemark{%
7390   \leavevmode
7391   \ifhmode\edef\@x@sf{\the\spacefactor}\nobreak\fi
7392   \stepcounter{Hfootnote}%
7393   \global\let\Hy@saved@currentHref\@currentHref
7394   \hyper@makecurrent{Hfootnote}%
7395   \global\let\Hy@footnote@currentHref\@currentHref
7396   \global\let\@currentHref\Hy@saved@currentHref
7397   \hyper@linkstart{link}{\Hy@footnote@currentHref}%
7398   \@makefnmark
7399   \hyper@linkend
7400   \ifhmode\spacefactor\@x@sf\fi
7401   \relax
7402 }%
```

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

```

7403 \@ifpackageloaded{tabularx}{%
7404   \let\HyOrg@TX@endtabularx\TX@endtabularx
7405   \def\Hy@tabularx@hook{%
7406     \let\@footnotetext\H@@footnotetext
7407     \let\@footnotemark\H@@footnotemark
7408     \let\@mpfootnotetext\H@@mpfootnotetext
7409   }%
7410   \begingroup
7411     \toks@\expandafter{\TX@endtabularx}%
7412     \xdef\Hy@gtemp{%
7413       \noexpand\Hy@tabularx@hook
7414       \the\toks@
7415     }%
7416   \endgroup
7417   \let\TX@endtabularx\Hy@gtemp
7418 }{}}%
```

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

```

7419 \@ifpackageloaded{longtable}{%
7420   \CheckCommand{\LT@p@ftntext}[1]{%
7421     \edef\@tempa{%
7422       \the\LT@p@ftn
7423       \noexpand\footnotetext[\the\c@footnote]%
7424     }%
7425     \global\LT@p@ftn\expandafter{\@tempa{#1}}%
7426   }%
7427   \long\def\LT@p@ftntext#1{%
7428     \edef\@tempa{%
7429       \the\LT@p@ftn
```

```

7430 \begingroup
7431 \noexpand\c@footnote=\the\c@footnote\relax
7432 \noexpand\protected@xdef\noexpand\@thefnmark{%
7433 \noexpand\thempfn
7434 }%
7435 \noexpand\Hy@LT@footnotetext{%
7436 \Hy@footnote@currentHref
7437 }%
7438 }%
7439 \global\LT@p@ftn\expandafter{%
7440 \@tempa{#1}%
7441 \endgroup
7442 }%
7443 }%
7444 \long\def\Hy@LT@footnotetext#1#2{%
7445 \H@@@footnotetext{%
7446 \ifHy@nesting
7447 \hyper@@anchor{#1}{#2}%
7448 \else
7449 \Hy@raisedlink{%
7450 \hyper@@anchor{#1}{\relax}%
7451 }%
7452 \def\@currentHref{#1}%
7453 \let\@currentlabelname\@empty
7454 #2%
7455 \fi
7456 }%
7457 }%
7458 }{}%

```

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

```

7459 \@ifpackageloaded{fancyvrb}{%
7460 \def\V@@@footnotetext{%
7461 \insert\footins\bgroup
7462 \csname reset@font\endcsname
7463 \footnotesize
7464 \interlinepenalty\interfootnotelinepenalty
7465 \splittopskip\footnotesep
7466 \splitmaxdepth\dp\strutbox
7467 \floatingpenalty \@MM
7468 \hsize\columnwidth
7469 \@parboxrestore
7470 \def\@currentcounter{footnote}%
7471 \protected@edef\@currentlabel{\csname p@footnote\endcsname\@thefn-
mark}%
7472 \@makefntext{}%
7473 \rule{\z@}{\footnotesep}%
7474 \bgroup
7475 \aftergroup\V@@@footnotetext
7476 \Hy@raisedlink{%
7477 \expandafter\hyper@@anchor\expandafter{%
7478 \Hy@footnote@currentHref
7479 }{\relax}%
7480 }%
7481 \let\@currentHref\Hy@footnote@currentHref

```

```

7482 \let\@currentlabelname\@empty
7483 \ignorespaces
7484 }%
7485 }{}%

```

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

```

7486 \def\Hy@temp#1{%
7487 \begingroup
7488 \unrestored@protected@xdef\@thefnmark{\ref{#1}}%
7489 \endgroup
7490 \@footnotemark
7491 }%
7492 \ifx\Hy@temp\footref
7493 \def\footref#1{%
7494 \begingroup
7495 \unrestored@protected@xdef\@thefnmark{\ref{#1}}%
7496 \endgroup
7497 \H@@@footnotemark
7498 }%
7499 \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.

```

7500 \let\HyOrg@maketitle\maketitle
7501 \def\maketitle{%
7502 \let\Hy@saved@footnotemark\@footnotemark
7503 \let\Hy@saved@footnotetext\@footnotetext
7504 \let\@footnotemark\H@@@footnotemark
7505 \let\@footnotetext\H@@@footnotetext
7506 \@ifnextchar[\Hy@maketitle@optarg{%
7507 \HyOrg@maketitle
7508 \Hy@maketitle@end
7509 }%
7510 }%
7511 \def\Hy@maketitle@optarg[#1]{%
7512 \HyOrg@maketitle[{#1}]%
7513 \Hy@maketitle@end
7514 }%
7515 \def\Hy@maketitle@end{%
7516 \ifx\@footnotemark\H@@@footnotemark
7517 \let\@footnotemark\Hy@saved@footnotemark
7518 \fi
7519 \ifx\@footnotetext\H@@@footnotetext
7520 \let\@footnotetext\Hy@saved@footnotetext
7521 \fi
7522 }%

```

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

```

7523 \def\realfootnote{%
7524 \@ifnextchar[\@xfootnote%
7525 {\stepcounter{\@mpfn}%
7526 \protected@xdef\@thefnmark{\thempfn}%
7527 \H@@@footnotemark\H@@@footnotetext

```



```

7528 }%
7529 }%

7530 \fi
7531 }{}
7532 \Hy@DisableOption{hyperfootnotes}

7533 \</packageEnd>
7534 \<*check>
7535 \checklatex
7536 \checkcommand\def\@xfootnotenext[#1]{%
7537   \begingroup
7538     \csname c@\@mpfn\endcsname #1\relax
7539     \unrestored@protected@xdef\@thefnmark{\thempfn}%
7540   \endgroup
7541   \@footnotetext
7542 }
7543 \checkcommand\def\@xfootnotemark[#1]{%
7544   \begingroup
7545     \c@footnote #1\relax
7546     \unrestored@protected@xdef\@thefnmark{\thefootnote}%
7547   \endgroup
7548   \@footnotemark
7549 }
7550 \checkcommand\def\@footnotemark{%
7551   \leavevmode
7552   \ifhmode\edef\@x@sf{\the\spacefactor}\nobreak\fi
7553   \@makefnmark
7554   \ifhmode\spacefactor\@x@sf\fi
7555   \relax
7556 }
7557 \</check>
7558 \<*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.

```

7559 \@ifundefined{hyper@nopath@caption}{%
7560 \def\caption{%
7561   \ifx\@capttype\@undefined
7562     \@latex@error{\noexpand\caption outside float}\@ehd
7563     \expandafter\@gobble
7564   \else
7565     \H@refstepcounter\@capttype
7566     \let\Hy@tempa\@caption
7567     \@ifundefined{float@caption}{%
7568     }{%
7569       \expandafter\ifx\csname @float@c@\@capttype\endcsname
7570         \float@caption
7571       \let\Hy@tempa\Hy@float@caption
7572     }
7573   }%
7574   \expandafter\@firstofone

```

```

7575 \fi
7576 {\@dblarg{\Hy@tempa\@captype}}%
7577 }
7578 \long\def\@caption#1[#2]#3{%
7579 \expandafter\ifx\csname if@capstart\expandafter\endcsname
7580 \csname iftrue\endcsname
7581 \global\let\@currentHref\hc@currentHref
7582 \else
7583 \hyper@makecurrent{\@captype}%
7584 \fi
7585 \@ifundefined{NR@getttitle}{%
7586 \def\@currentlabelname{#2}%
7587 }{%
7588 \NR@getttitle{#2}%
7589 }%
7590 \par\addcontentsline{\csname ext@#1\endcsname}{#1}{%
7591 \protect\numberline{\csname the#1\endcsname}{\ignorespaces #2}%
7592 }%
7593 \begingroup
7594 \@parboxrestore
7595 \if@minipage
7596 \@setminipage
7597 \fi
7598 \normalsize
7599 \expandafter\ifx\csname if@capstart\expandafter\endcsname
7600 \csname iftrue\endcsname
7601 \global\@capstartfalse
7602 \@makecaption{\csname fnum@#1\endcsname}{\ignorespaces#3}%
7603 \else
7604 \@makecaption{\csname fnum@#1\endcsname}{%
7605 \ignorespaces

```

If we cannot have nesting, the anchor is empty.

```

7606 \ifHy@nesting
7607 \expandafter\hyper@@@anchor\expandafter{\@currentHref}{#3}%
7608 \else
7609 \Hy@raisedlink{%
7610 \expandafter\hyper@@@anchor\expandafter{%
7611 \@currentHref
7612 }{\relax}%
7613 }%
7614 #3%
7615 \fi
7616 }%
7617 \fi
7618 \par
7619 \endgroup
7620 }}{\}%end no patch

```

Compatibility with float.sty: anchor setting at the top of the float, if the float is controlled by float.sty. Several `\caption` commands inside one float are not supported.

`\HyNew@float@makebox` is introduced as feature request of Axel Sommerfeldt to make the life easier for his package ‘caption’.

```

7621 \let\Hy@float@caption\@caption

```

```

7622 \newcommand{\HyNew@float@makebox}[1]{%
7623   \HyOrg@float@makebox{%
7624     #1\relax
7625     \ifx\Hy@float@currentHref\@undefined
7626     \else
7627       \expandafter\hyper@@anchor\expandafter{%
7628         \Hy@float@currentHref
7629       }\relax}%
7630     \global\let\Hy@float@currentHref\@undefined
7631   \fi
7632 }%
7633 }%
7634 \@ifpackageloaded{float}{%
7635   \def\Hy@float@caption{%
7636     \ifx\Hy@float@currentHref\@undefined
7637       \hyper@makecurrent{\@capttype}%
7638       \global\let\Hy@float@currentHref\@currentHref
7639     \else
7640       \let\@currentHref\Hy@float@currentHref
7641     \fi
7642     \float@caption
7643   }%
7644   \let\HyOrg@float@makebox\float@makebox
7645   \let\float@makebox\HyNew@float@makebox
7646 }{}

7647 \</packageEnd>
7648 \<check>
7649 \checklatex[1999/06/01 - 2000/06/01]
7650 \checkcommand\def\caption{%
7651   \ifx\@capttype\@undefined
7652     \@latex@error{\noexpand\caption outside float}\@ehd
7653     \expandafter\@gobble
7654   \else
7655     \refstepcounter\@capttype
7656     \expandafter\@firstofone
7657   \fi
7658   {\@dblarg{\@caption\@capttype}}%
7659 }
7660 \checkcommand\long\def\@caption#1[#2]#3{%
7661   \par
7662   \addcontentsline{\csname ext@#1\endcsname}{#1}{%
7663     \protect\numberline{\csname the#1\endcsname}{\ignorespaces #2}%
7664   }%
7665   \begingroup
7666     \@parboxrestore
7667     \if@minipage
7668       \@setminipage
7669     \fi
7670     \normalsize
7671     \@makecaption{\csname fnum@#1\endcsname}{\ignorespaces #3}\par
7672   \endgroup
7673 }
7674 \</check>
7675 \<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, lets make an attempt to get *natbib* right, because that's a powerful, important package. Patrick Daly (daly@linmpi.mpg.de) has provided hooks for us, so all we need to do is activate them.

```

7676 \def\hyper@natlinkstart#1{%
7677   \Hy@backout{#1}%
7678   \hyper@linkstart{cite}{cite.#1}%
7679   \def\hyper@nat@current{#1}%
7680 }
7681 \def\hyper@natlinkend{%
7682   \hyper@linkend
7683 }
7684 \def\hyper@natlinkbreak#1#2{%
7685   \hyper@linkend#1\hyper@linkstart{cite}{cite.#2}%
7686 }
7687 \def\hyper@natanchorstart#1{%
7688   \Hy@raisedlink{\hyper@anchorstart{cite.#1}}%
7689 }
7690 \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.

```

7691 \ltx@ifundefined{NAT@parse}{%
7692   \providecommand*\@extra@binfo{}%
7693   \providecommand*\@extra@b@citeb{}%
7694   \def\bibcite#1#2{%
7695     \@newl@bel{b}{#1\@extra@binfo}{%
7696       \hyper@link{cite}{cite.#1\@extra@b@citeb}{#2}%
7697     }%
7698   }%
7699   \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.”.

```

7700 \let\Hy@bibcite\bibcite
7701 \begingroup
7702   \@ifundefined{bbl@cite@choice}{}{%
7703     \g@addto@macro\bbl@cite@choice{%
7704       \let\bibcite\Hy@bibcite
7705     }%
7706   }%
7707 \endgroup

```

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

```

7708 \providecommand*\@BIBLABEL{\@biblabel}%
7709 \def\@bibitem[#1]#2{%

```

```

7710 \skiphyperreftrue
7711 \H@item[%
7712 \ifx\Hy@raisedlink\@empty
7713 \hyper@anchorstart{cite.#2\@extra@b@citeb}%
7714 \@BIBLABEL{#1}%
7715 \hyper@anchorend
7716 \else
7717 \Hy@raisedlink{%
7718 \hyper@anchorstart{cite.#2\@extra@b@citeb}\hyper@anchorend
7719 }%
7720 \@BIBLABEL{#1}%
7721 \fi
7722 \hfill
7723 ]%
7724 \skiphyperreffalse
7725 \if@filesw
7726 \begingroup
7727 \let\protect\noexpand
7728 \immediate\write\@auxout{%
7729 \string\bibcite{#2}{#1}%
7730 }%
7731 \endgroup
7732 \fi
7733 \ignorespaces
7734 }%

```

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

```

7735 \def\@bibitem#1{%
7736 \skiphyperreftrue\H@item\skiphyperreffalse
7737 \Hy@raisedlink{%
7738 \hyper@anchorstart{cite.#1\@extra@b@citeb}\relax\hyper@anchorend
7739 }%
7740 \if@filesw
7741 \begingroup
7742 \let\protect\noexpand
7743 \immediate\write\@auxout{%
7744 \string\bibcite{#1}{\the\value{\@listctr}}}%
7745 }%
7746 \endgroup
7747 \fi
7748 \ignorespaces
7749 }%
7750 }{}

7751 \</packageEnd>
7752 \< *check>
7753 \checklatex
7754 \checkcommand\def\@lbibitem[#1]#2{%
7755 \item[\@biblabel{#1}\hfill]%
7756 \if@filesw
7757 {%
7758 \let\protect\noexpand
7759 \immediate\write\@auxout{%
7760 \string\bibcite{#2}{#1}%

```

```

7761 }%
7762 }%
7763 \fi
7764 \ignorespaces
7765 }
7766 \checkcommand\def\@bibitem#1{%
7767 \item
7768 \if@filesw
7769 \immediate\write\@auxout{%
7770 \string\bibcite{#1}{\the\value{\@listctr}}%
7771 }%
7772 \fi
7773 \ignorespaces
7774 }
7775 \</check>
7776 \<*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.

```

7777 \<@ifpackageloaded{harvard}{%
7778 \Hy@AtBeginDocument{%
7779 \Hy@Info{*** compatibility with harvard **** }%
7780 \Hy@raiselinksfalse
7781 \def\harvardcite#1#2#3#4{%
7782 \global\@namedef{HAR@fn@#1}{\hyper@link[cite]{}{cite.#1}{#2}}%
7783 \global\@namedef{HAR@an@#1}{\hyper@link[cite]{}{cite.#1}{#3}}%
7784 \global\@namedef{HAR@yr@#1}{\hyper@link[cite]{}{cite.#1}{#4}}%
7785 \global\@namedef{HAR@df@#1}{\csname HAR@fn@#1\endcsname}%
7786 }%
7787 \def\HAR@citetoaux#1{%
7788 \if@filesw\immediate\write\@auxout{\string\citation{#1}}\fi%
7789 \ifHy@backref
7790 \ifx\@empty\@currentlabel
7791 \else
7792 \<@bsphack
7793 \if@filesw
7794 \protected@write\@auxout{}{%
7795 \string\@writefile{brf}{%
7796 \string\backcite{#1}{%
7797 {\thepage}{\@currentlabel}{\@currentHref}%
7798 }%
7799 }%
7800 }%
7801 \fi
7802 \<@esphack
7803 \fi

```

```

7804 \fi
7805 }%
7806 \def\harvarditem{%
7807 \ifnextchar{\@harvarditem}{\@harvarditem[\null]}%
7808 }%
7809 \def\@harvarditem[#1]#2#3#4#5\par{%
7810 \item[]%
7811 \hyper@anchorstart{cite.#4}\relax\hyper@anchorend
7812 \if@filesw
7813 \begingroup
7814 \def\protect##1{\string ##1\space}%
7815 \ifthenelse{\equal{#1}{\null}}%
7816 {\def\next{{#4}{#2}{#2}{#3}}}%
7817 {\def\next{{#4}{#2}{#1}{#3}}}%
7818 \immediate\write\@auxout{\string\harvardcite\codeof\next}%
7819 \endgroup
7820 \fi
7821 \protect\hspace*{-\labelwidth}%
7822 \protect\hspace*{-\labelsep}%
7823 \ignorespaces
7824 #5%
7825 \ifHy@backref
7826 \newblock
7827 \backref{\csname br@#4\endcsname}%
7828 \fi
7829 \par
7830 }%

```

\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:

```

7831 \long\def\HAR@checkcitations#1#2#3#4{%
7832 \def\HAR@tempa{\hyper@@link[cite]{}{cite.#1}{#2}}%
7833 \expandafter\ifx\csname HAR@fn@#1\endcsname\HAR@tempa
7834 \def\HAR@tempa{\hyper@@link[cite]{}{cite.#1}{#3}}%
7835 \expandafter\ifx\csname HAR@an@#1\endcsname\HAR@tempa
7836 \def\HAR@tempa{\hyper@@link[cite]{}{cite.#1}{#4}}%
7837 \expandafter\ifx\csname HAR@yr@#1\endcsname\HAR@tempa
7838 \else
7839 \@tempswattrue
7840 \fi
7841 \else
7842 \@tempswattrue
7843 \fi
7844 \else
7845 \@tempswattrue
7846 \fi
7847 }%
7848 }%
7849 }{}

```

36.2 Package chicago

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

```

7850 \@ifpackageloaded{chicago}{%

\citeN
7851 \def\citeN{%
7852   \def\@citesep{-1000}%
7853   \def\@cite##1##2{##1}%
7854   \def\citeauthoryear##1##2##3{##1 (##3\@cite@opt)}}%
7855   \@citedata@opt
7856 }%

\shortciteN
7857 \def\shortciteN{%
7858   \def\@citesep{-1000}%
7859   \def\@cite##1##2{##1}%
7860   \def\citeauthoryear##1##2##3{##2 (##3\@cite@opt)}}%
7861   \@citedata@opt
7862 }%

\@citedata@opt
7863 \def\@citedata@opt{%
7864   \let\@cite@opt\@empty
7865   \@ifnextchar [{%
7866     \@tempwatrue
7867     \@citedatax@opt
7868   }{%
7869     \@tempwafalse
7870     \@citedatax[]%
7871   }%
7872 }%

\@citedatax@opt
7873 \def\@citedatax@opt[#1]{%
7874   \def\@cite@opt{, #1}%
7875   \@citedatax[{#1}]%
7876 }%

7877 }{}

```

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.

```

7878 \ltx@ifclassloaded{slides}{%
7879 \def\Hy@SlidesFormatOptionalPage#1{(#1)}%
7880 \def\Hy@PageAnchorSlidesPlain{%

```



```

7881 \advance\c@page\ltx@one
7882 \edef\Hy@TempPageAnchor{%
7883 \noexpand\hyper@@anchor{%
7884 page.\the\c@slide.\the\c@overlay.\the\c@note%
7885 \ifnum\c@page=\ltx@one
7886 \else
7887 .\the\c@page
7888 \fi
7889 }%
7890 }%
7891 \advance\c@page-\ltx@one
7892 }%
7893 \def\Hy@PageAnchorSlide{%
7894 \advance\c@page\ltx@one
7895 \ifnum\c@page>\ltx@one
7896 \ltx@ifundefined{theHpage}{%
7897 \protected@edef\Hy@TheSlideOptionalPage{%
7898 \Hy@SlidesFormatOptionalPage{theHpage}%
7899 }%
7900 }{%
7901 \protected@edef\Hy@TheSlideOptionalPage{%
7902 \Hy@SlidesFormatOptionalPage{theHpage}%
7903 }%
7904 }%
7905 \else
7906 \def\Hy@TheSlideOptionalPage{}%
7907 \fi
7908 \advance\c@page-\ltx@one
7909 \pdfstringdef\@theH@page{%
7910 \csname
7911 the%
7912 \ltx@ifundefined{theH\Hy@SlidesPage}{H}%
7913 \Hy@SlidesPage
7914 \endcsname
7915 \Hy@TheSlideOptionalPage
7916 }%
7917 \ltx@gobblethree
7918 }%
7919 \def\Hy@SlidesPage{slide}%
7920 \g@addto@macro\slide{%
7921 \def\Hy@SlidesPage{slide}%
7922 }%
7923 \g@addto@macro\overlay{%
7924 \def\Hy@SlidesPage{overlay}%
7925 }%
7926 \g@addto@macro\note{%
7927 \def\Hy@SlidesPage{note}%
7928 }%
7929 }{%
7930 \def\Hy@PageAnchorSlidesPlain{}%
7931 \def\Hy@PageAnchorSlide{}%
7932 }
7933 \def\Hy@EveryPageAnchor{%
7934 \Hy@DistillerDestFix

```

```

7935 \ifHy@pageanchor
7936 \ifHy@hypertextnames
7937 \ifHy@plainpages
7938   \def\Hy@TempPageAnchor{\hyper@@anchor{page.\the\c@page}}%
7939   \Hy@PageAnchorSlidesPlain
7940 \else
7941   \begingroup
7942   \let\@number\@firstofone
7943   \Hy@unicodedefalse
7944   \Hy@PageAnchorSlide
7945   \pdfstringdef\@the@H@page{\thepage}%
7946   \endgroup
7947   \EdefUnescapeString\@the@H@page{\@the@H@page}%
7948   \def\Hy@TempPageAnchor{\hyper@@anchor{page.\@the@H@page}}%
7949   \fi
7950 \else
7951   \Hy@GlobalStepCount\Hy@pagecounter
7952   \def\Hy@TempPageAnchor{%
7953     \hyper@@anchor{page.\the\Hy@pagecounter}%
7954   }%
7955   \fi
7956   \vbox to 0pt{%
7957     \kern\voffset
7958     \kern\topmargin
7959     \kern-1bp\relax
7960     \hbox to 0pt{%
7961       \kern\hoffset
7962       \kern\ifodd\value{page}%
7963         \oddsidemargin
7964       \else
7965         \evensidemargin
7966       \fi
7967       \kern-1bp\relax
7968       \Hy@TempPageAnchor\relax
7969       \hss
7970     }%
7971     \vss
7972   }%
7973 \fi
7974 }
7975 \g@addto@macro\Hy@EveryPageBoxHook{%
7976   \Hy@EveryPageAnchor
7977 }

```

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 \LaTeX releases this is defined to put a % at the end of the line in the tocfile.

```

7978 \providecommand\protected@file@percent{}

```

```

7979 \@ifundefined{hyper@nopatch@toc}{%
7980   \def\addcontentsline#1#2#3{% toc extension, type, tag
7981     \begingroup
7982       \let\label\@gobble
7983       \ifx\@currentHref\@empty
7984         \Hy@Warning{%
7985           No destination for bookmark of \string\addcontentsline,%
7986           \MessageBreak destination is added%
7987         }%
7988       \phantomsection
7989     \fi
7990   \expandafter\ifx\csname toplevel@#2\endcsname\relax
7991     \begingroup
7992       \def\Hy@tempa{#1}%
7993       \ifx\Hy@tempa\Hy@bookmarkstype
7994         \Hy@WarningNoLine{%
7995           bookmark level for unknown #2 defaults to 0%
7996         }%
7997       \else
7998         \Hy@Info{bookmark level for unknown #2 defaults to 0}%
7999       \fi
8000     \endgroup
8001     \expandafter\gdef\csname toplevel@#2\endcsname{0}%
8002   \fi
8003   \edef\Hy@toclevel{\csname toplevel@#2\endcsname}%
8004   \Hy@writebookmark{\csname the#2\endcsname}%
8005     {#3}%
8006     {\@currentHref}%
8007     {\Hy@toclevel}%
8008     {#1}%
8009   \ifHy@verbose
8010     \begingroup
8011       \def\Hy@tempa{#3}%
8012       \@onelevel@sanitize\Hy@tempa
8013       \let\temp@online\on@line
8014       \let\on@line\@empty
8015       \Hy@Info{%
8016         bookmark\temp@online:\MessageBreak
8017         thecounter {\csname the#2\endcsname}\MessageBreak
8018         text {\Hy@tempa}\MessageBreak
8019         reference {\@currentHref}\MessageBreak
8020         toplevel {\Hy@toclevel}\MessageBreak
8021         type {#1}%
8022       }%
8023     \endgroup
8024   \fi
8025   \addtocontents{#1}{%
8026     \protect\contentsline{#2}{#3}{\thepage}{\@currentHref}\protected@file@per-
cent
8027   }%
8028 \endgroup
8029 }
8030 }{}

```

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

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

```

8031 \protected\def\Hy@toclinkstart{\hyper@linkstart{link}{\Hy@tocdestname}}
8032 \protected\def\Hy@toclinkend{\hyper@linkend}
8033
8034 \@ifundefined{hyper@nopatch@toc}{%
8035   \def\contentsline#1#2#3#4{%
8036     \begingroup
8037       \Hy@safe@activertrue
8038       \edef\x{\endgroup
8039         \def\noexpand\Hy@tocdestname{#4}%
8040       }\x
8041       \ifx\Hy@tocdestname\ltx@empty
8042         \csname l@#1\endcsname{#2}{#3}%
8043       \else
8044         \ifcase\Hy@linktoc % none
8045           \csname l@#1\endcsname{#2}{#3}%
8046         \or % section
8047           \csname l@#1\endcsname{%
8048             \Hy@toclinkstart{#2}\Hy@toclinkend
8049           }{#3}%
8050         \or % page
8051           \def\Hy@temp{#3}%
8052           \ifx\Hy@temp\ltx@empty
8053             \csname l@#1\endcsname{#2}{#3}%
8054           \else
8055             \csname l@#1\endcsname{{#2}}{#3}%
8056             \Hy@toclinkstart{#3}\Hy@toclinkend
8057           }%
8058         \fi
8059       \else % all
8060         \def\Hy@temp{#3}%
8061         \ifx\Hy@temp\ltx@empty
8062           \csname l@#1\endcsname{%
8063             \Hy@toclinkstart{#2}\Hy@toclinkend
8064           }{#3}%
8065         \else
8066           \csname l@#1\endcsname{%
8067             \Hy@toclinkstart{#2}\Hy@toclinkend
8068           }{%
8069             \Hy@toclinkstart{#3}\Hy@toclinkend
8070           }%
8071         \fi
8072       \fi
8073     \fi
8074   }
8075 }{}

8076 \endpackage
8077 \ifcheck
8078 \checklatex
8079 \checkcommand\def\addcontentsline#1#2#3{%

```

```

8080 \addtocontents{#1}{\protect\contentsline{#2}{#3}{\thepage}}%
8081 }
8082 \checkcommand\def\contentsline#1{\csname l@#1\endcsname}
8083 \</check>
8084 \*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.

```

8085 \@ifundefined{hyper@nopatch@counter}
8086 {
8087   \let\H@definecounter\definecounter
8088   \def\@definecounter#1{%
8089     \H@definecounter{#1}%
8090     \expandafter\gdef\csname theH#1\endcsname{\arabic{#1}}%
8091   }
8092 }{}

```

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.

```

8093 \@ifundefined{hyper@nopatch@counter}
8094 {
8095   \let\H@newctr\newctr
8096   \def\@newctr#1[#2]{%
8097     \H@newctr#1[#2]%
8098     \expandafter\gdef\csname theH#1\endcsname{%
8099       \csname the\@ifundefined{theH#2}{H}{H}#2\endcsname.\arabic{#1}%
8100     }%
8101   }
8102 }{}

```

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.

If `\hyper@nopatch@amsmath@tag` is defined we don't patch but assume that kernel code adds anchors to equations.

```

8103 \@ifundefined{hyper@nopatch@amsmath@tag}
8104 {%
8105   \ifpackageloaded{amsmath}{%
8106     \def\Hy@make@anchor{%
8107       \Hy@MakeCurrentHrefAuto{AMS}%
8108       \Hy@raisedlink{\hyper@anchorstart{\@currentHref}\hyper@anchorend}%
8109     }%
8110     \def\Hy@make@df@tag@#1{%
8111       \gdef\df@tag{%

```

```

8112      \maketag@@@{\Hy@make@anchor#1}%
8113      \def\@currentlabel{#1}%
8114      }%
8115      }%
8116      \def\Hy@make@df@tag@@@#1{%
8117      \gdef\df@tag{%
8118      \tagform@{\Hy@make@anchor#1}%
8119      \toks@\@xp{\p@equation{#1}}%
8120      \edef\@currentlabel{\the\toks@}%
8121      }%
8122      }%
8123      \let\HyOrg@make@df@tag@@\make@df@tag@@
8124      \let\HyOrg@make@df@tag@@@\make@df@tag@@@
8125      \let\make@df@tag@@\Hy@make@df@tag@@
8126      \let\make@df@tag@@@\Hy@make@df@tag@@@
8127      }{}
8128      }{}

```

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.

```

8129 \@ifundefined{hyper@nopatch@counter}
8130 {
8131   \let\HyOrg@addtoreset\@addtoreset
8132   \def\@addtoreset#1#2{%
8133     \HyOrg@addtoreset{#1}{#2}%
8134     \expandafter\xdef\csname theH#1\endcsname{%
8135       \expandafter\noexpand
8136       \csname the\@ifundefined{theH#2}{H#2\endcsname
8137       .\noexpand\the\noexpand\value{#1}%
8138     }%
8139   }
8140   }{}

```

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

```

8141 \</packageEnd>
8142 \< *check>
8143 \checkpackage{amsmath}[1999/12/14 - 2000/06/06]
8144 \checkcommand\newcommand{\numberwithin}[3][\arabic]{%
8145   \@ifundefined{c@#2}{\@nocounterr{#2}}{%

```

```

8146 \ifundefined{c@#3}{\@nocnterr{#3}}{%
8147 \addtoreset{#2}{#3}%
8148 \@xp\xdef\csname the#2\endcsname{%
8149 \xp\@nx\csname the#3\endcsname .\@nx#1{#2}%
8150 }%
8151 }%
8152 }%
8153 }%
8154 \</check>
8155 \*packageEnd>
8156 \ifundefined{hyper@nopatch@counter}
8157 {
8158 \ifpackageloaded{amsmath}{%
8159 \renewcommand*\numberwithin{3}[\arabic]{%
8160 \ifundefined{c@#2}{\@nocnterr{#2}}{%
8161 \ifundefined{c@#3}{\@nocnterr{#3}}{%
8162 \HyOrg@addtoreset{#2}{#3}%
8163 \@xp\xdef\csname the#2\endcsname{%
8164 \@xp\@nx\csname the#3\endcsname .\@nx#1{#2}%
8165 }%
8166 \@xp\xdef\csname theH#2\endcsname{%
8167 \@xp\@nx
8168 \csname the\ifundefined{theH#3}{H#3\endcsname
8169 .\@nx#1{#2}%
8170 }%
8171 }%
8172 }%
8173 }%
8174 }{}
8175 }{}

```

41 Included figures

Simply intercept the low level graphics package macro.

```

8176 \ifHy@hyperfigures
8177 \let\Hy@Gin@setfile\Gin@setfile
8178 \def\Gin@setfile#1#2#3{%
8179 \hyperimage{#3}{\Hy@Gin@setfile{#1}{#2}{#3}}%
8180 }%
8181 \fi
8182 \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.

```

8183 \ifHy@hyperindex
8184   \def\HyInd@ParenLeft{({}%
8185   \def\HyInd@ParenRight{)}}%
8186   \def\hyperindexformat#1#2{%
8187     \let\HyOrg@hyperpage\hyperpage
8188     \let\hyperpage\@firstofone
8189     #1{\HyOrg@hyperpage{#2}}%
8190     \let\hyperpage\HyOrg@hyperpage
8191   }%
8192   \Hy@nextfalse
8193   \@ifpackageloaded{multind}{\Hy@nexttrue}{}%
8194   \@ifpackageloaded{index}{\Hy@nexttrue}{}%
8195   \@ifpackageloaded{amsmidx}{\Hy@nexttrue}{}%
8196   \begingroup
8197     \lccode`|= \expandafter`\HyInd@EncapChar\relax
8198     \lccode`\/= `\\ \relax
8199   \lowercase{\endgroup
8200   \ifHy@next
8201     \let\HyInd@org@wrindex\@wrindex
8202     \def\@wrindex#1#2{\HyInd@@wrindex{#1}#2|\\}%
8203     \def\HyInd@@wrindex#1#2|#3|#4\\{%
8204       \ifx\\#3\\%
8205         \HyInd@org@wrindex{#1}{#2|hyperpage}%
8206       \else
8207         \HyInd@@@wrindex{#1}{#2}#3\\%
8208       \fi
8209     }%
8210     \def\HyInd@@@wrindex#1#2#3#4\\{%
8211       \def\Hy@temp@A{#3}%
8212       \ifcase0\ifx\Hy@temp@A\HyInd@ParenLeft 1\fi
8213         \ifx\Hy@temp@A\HyInd@ParenRight 1\fi
8214         \relax
8215       \HyInd@org@wrindex{#1}{%
8216         #2|hyperindexformat{/#3#4}%
8217       }%
8218     \else
8219       \ifx\\#4\\%
8220         \ifx\Hy@temp@A\HyInd@ParenRight
8221           \HyInd@org@wrindex{#1}{#2|#3}%
8222         \else
8223           \HyInd@org@wrindex{#1}{#2|#3hyperpage}%
8224         \fi
8225       \else
8226         \HyInd@org@wrindex{#1}{%
8227           #2|#3hyperindexformat{/#4}%
8228         }%
8229       \fi
8230     \fi
8231   }%
8232 \else
8233   \def\@wrindex#1{\@wrindex#1|\\}%
8234   \def\@@wrindex#1|#2|#3\\{%

```



```

8235 \if@filesw
8236 \ifx\|#2\|%
8237 \protected@write\@indexfile{}\{%
8238 \string\indexentry{#1|hyperpage}\{thepage}%
8239 }%
8240 \else
8241 \HyInd@@@wrindex{#1}#2\|%
8242 \fi
8243 \fi
8244 \endgroup
8245 \@esphack
8246 }%
8247 \def\HyInd@@@wrindex#1#2#3\{%
8248 \def\Hy@temp@A{#2}%
8249 \ifcase0\ifx\Hy@temp@A\HyInd@ParenLeft 1\fi
8250 \ifx\Hy@temp@A\HyInd@ParenRight 1\fi
8251 \relax
8252 \protected@write\@indexfile{}\{%
8253 \string\indexentry{%
8254 #1|hyperindexformat{/#2#3}%
8255 }\{thepage}%
8256 }%
8257 \else
8258 \ifx\|#3\|%
8259 \ifx\Hy@temp@A\HyInd@ParenRight
8260 \HyInd@DefKey{#1}%
8261 \ltx@ifundefined{HyInd@(\HyInd@key)}{%
8262 \let\Hy@temp\ltx@empty
8263 }{%
8264 \expandafter\let\expandafter\Hy@temp
8265 \csname HyInd@(\HyInd@key)\endcsname
8266 }%
8267 \protected@write\@indexfile{}\{%
8268 \string\indexentry{#1|#2\Hy@temp}\{thepage}%
8269 }%
8270 \else
8271 \protected@write\@indexfile{}\{%
8272 \string\indexentry{#1|#2hyperpage}\{thepage}%
8273 }%
8274 \HyInd@DefKey{#1}%
8275 \expandafter
8276 \gdef\csname HyInd@(\HyInd@key)\endcsname{%
8277 hyperpage%
8278 }%
8279 \fi
8280 \else
8281 \protected@write\@indexfile{}\{%
8282 \string\indexentry{%
8283 #1|#2hyperindexformat{/#3}%
8284 }\{thepage}%
8285 }%
8286 \ifx\Hy@temp@A\HyInd@ParenLeft
8287 \HyInd@DefKey{#1}%
8288 \expandafter

```

```

8289         \gdef\csname HyInd@(\HyInd@key)\endcsname{%
8290             hyperindexformat{/#3}%
8291         }%
8292     \fi
8293 \fi
8294 \fi
8295 }%
8296 \def\HyInd@DefKey#1{%
8297     \begingroup
8298     \let\protect\@unexpandable@protect
8299     \edef\Hy@temp{#1}%
8300     \ltx@onelevel@sanitize\Hy@temp
8301     \global\let\HyInd@key\Hy@temp
8302     \endgroup
8303 }%
8304 \fi
8305 }%
8306 \fi
8307 \Hy@DisableOption{hyperindex}
8308 \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.

```

8309 \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.

```

8310 \def\hyperpage#1{%
8311     \HyInd@hyperpage#1\nohyperpage{}\@nil
8312 }
8313 \def\HyInd@hyperpage#1\nohyperpage#2#3\@nil{%
8314     \HyInd@@hyperpage{#1}%
8315     #2%
8316     \def\Hy@temp{#3}%
8317     \ifx\Hy@temp\@empty
8318     \else
8319         \ltx@ReturnAfterFi{%
8320             \HyInd@hyperpage#3\@nil
8321         }%
8322     \fi
8323 }
8324 \def\HyInd@@hyperpage#1{\@hyperpage#1----\}
8325 \def\@hyperpage#1--#2--#3\{\{%
8326     \ifx\#2\%
8327         \@commahyperpage{#1}%
8328     \else
8329         \HyInd@pagelink{#1}--\HyInd@pagelink{#2}%
8330     \fi
8331 }
8332 \def\@commahyperpage#1{\@commahyperpage#1, \}
8333 \def\@commahyperpage#1, #2, #3\{\{%
8334     \ifx\#2\%
8335         \HyInd@pagelink{#1}%
8336     \else

```

```

8337 \HyInd@pagelink{#1}, \HyInd@pagelink{#2}%
8338 \fi
8339 }

```

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

```

8340 \def\HyInd@pagelink#1{%
8341 \begingroup
8342 \toks@={}%
8343 \HyInd@removespaces#1 \@nil
8344 \endgroup
8345 }
8346 \def\HyInd@removespaces#1 #2\@nil{%
8347 \toks@=\expandafter{\the\toks@#1}%
8348 \ifx\#2\%
8349 \edef\x{\the\toks@}%
8350 \ifx\x\@empty
8351 \else
8352 \hyperlink{page.\the\toks@}{\the\toks@}%
8353 \fi
8354 \else
8355 \ltx@ReturnAfterFi{%
8356 \HyInd@removespaces#2\@nil
8357 }%
8358 \fi
8359 }

```

This breaks TeX4ht, so leave it to last. Emend `\@setref` to put out a hypertext link as well as its normal text (which is used as an anchor). (`\endinput` have to be on the same line like `\fi`, or you have to use `\expandafter` before.)

change 2022-11-13: added an `\@empty` for issue#261.

```

8360 \ifHy@texht
8361 \expandafter\endinput
8362 \fi
8363 \let\real@setref\@setref
8364 \def\@setref#1#2#3{% csname, extract group, refname
8365 \ifx#1\relax
8366 \protect\G@refundefinedtrue
8367 \nfss@text{\reset@font\bfseries ??}%
8368 \@latex@warning{%
8369 Reference `#3' on page \thepage \space undefined%
8370 }%
8371 \else
8372 \expandafter\Hy@setref@link#1\@empty\@empty\@empty\@nil{#2}%
8373 \fi
8374 }

```

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

```

8375 \def\Hy@setref@link#1#2#3#4#5#6\@nil#7{%
8376 \begingroup
8377 \toks0={\hyper@@link{#5}{#4}}%
8378 \toks1=\expandafter{#7{#1}{#2}{#3}{#4}{#5}}%
8379 \edef\x{\endgroup
8380 \the\toks0 {\the\toks1 }%

```

```

8381 }%
8382 \x
8383 }
8384 \def\@pagesetref#1#2#3{% csname, extract macro, ref
8385 \ifx#1\relax
8386 \protect\G@refundefinedtrue
8387 \nfss@text{\reset@font\bfseries ??}%
8388 \@latex@warning{%
8389 Reference `#3' on page \thepage \space undefined%
8390 }%
8391 \else
8392 \protect\hyper@@link
8393 {\expandafter\@fifthoffive#1}%
8394 {page.\expandafter\@secondoffive#1}%
8395 {\expandafter\@secondoffive#1}%
8396 \fi
8397 }

8398 \end{packageEnd}
8399 \check
8400 \checklatex
8401 \checkcommand\def\@setref#1#2#3{%
8402 \ifx#1\relax
8403 \protect\G@refundefinedtrue
8404 \nfss@text{\reset@font\bfseries ??}%
8405 \@latex@warning{%
8406 Reference `#3' on page \thepage \space undefined%
8407 }%
8408 \else
8409 \expandafter#2#1\null
8410 \fi
8411 }
8412 \end{check}
8413 \end{packageEnd}

```

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

```

8414 \def\HyRef@StarSetRef#1{%
8415 \begingroup
8416 \Hy@safe@activestru
8417 \let\protect\@unexpandable@protect
8418 \edef\x{#1}%
8419 \@onelevel@sanitize\x
8420 \edef\x{\endgroup
8421 \noexpand\HyRef@@StarSetRef
8422 \expandafter\noexpand\csname r@\x\endcsname{\x}%
8423 }%
8424 \x
8425 }
8426 \def\HyRef@@StarSetRef#1#2#3{%
8427 \ifx#1\@undefined
8428 \let#1\relax
8429 \fi
8430 \real@setref#1#3{#2}%
8431 }

```

```

8432 \def\@refstar#1{%
8433   \HyRef@StarSetRef{#1}\@firstoffive
8434 }
8435 \def\@pagerefstar#1{%
8436   \HyRef@StarSetRef{#1}\@secondoffive
8437 }
8438 \def\@namerefstar#1{%
8439   \HyRef@StarSetRef{#1}\@thirdoffive
8440 }
8441 \def\@Refstar#1{%
8442   \HyRef@StarSetRef{#1}\HyRef@MakeUppercaseFirstOfFive
8443 }%
8444 \def\HyRef@MakeUppercaseFirstOfFive#1#2#3#4#5{%
8445   \MakeUppercase#1%
8446 }%
8447 \def\HyRef@Ref#1{%
8448   \hyperref[{#1}]{\Ref*{#1}}%
8449 }%
8450 \Hy@AtBeginDocument{%
8451   \@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.

```

8452   \@ifundefined{hyper@nopatch@varioref}
8453   {
8454     \renewcommand\Vref@star[2][]{%
8455       \begingroup
8456       \let\T@pageref\@pagerefstar
8457       \Ref*{#2}
8458       \vpageref[#1]{#2}%
8459       \endgroup
8460     }%
8461     \renewcommand\Vr@f[2][]{%
8462       \begingroup
8463       \let\T@pageref\@pagerefstar
8464       \hyperref[{#2}]{%
8465         \Ref*{#2}
8466         \vpageref[#1]{#2}%
8467       }%
8468       \endgroup
8469     }%
8470     \renewcommand\vr@f[2][]{%
8471       \begingroup
8472       \let\T@pageref\@pagerefstar
8473       \hyperref[{#2}]{%
8474         \ref*{#2}
8475         \vpageref[#1]{#2}%
8476       }%
8477       \endgroup
8478     }%
8479     \renewcommand\vref@star[2][]{%
8480       \begingroup
8481       \let\T@pageref\@pagerefstar

```

```

8482     \ref*{#2}
8483     \vpageref[#1]{#2}%
8484     \endgroup
8485 }%
8486 }{}%
8487 }{}%
8488 }

8489 \DeclareRobustCommand*\autopageref{%
8490   \@ifstar{%
8491     \HyRef@autopagerefname\pageref*%
8492   }\HyRef@autopageref
8493 }
8494 \def\HyRef@autopageref#1{%
8495   \hyperref[{#1}]{\HyRef@autopagerefname\pageref*{#1}}%
8496 }
8497 \def\HyRef@autopagerefname{%
8498   \ltx@ifundefined{pageautorefname}{%
8499     \ltx@ifundefined{pagename}{%
8500       \Hy@Warning{No autoref name for `page'}%
8501     }{%
8502       \pagename\nobreakspace
8503     }%
8504   }{}%
8505   \pageautorefname\nobreakspace
8506 }%
8507 }

```

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

```

8508 \NewDocumentCommand\autoref{s}
8509   {\leavevmode
8510     \IfBooleanTF{#1}{\HyRef@autoref\@gobbletwo}{\HyRef@autoref\hyper@@link}}
8511 \def\HyRef@autoref#1#2{%
8512   \begingroup
8513     \Hy@safe@activestrue
8514     \expandafter\HyRef@autosetref\csname r@#2\endcsname{#2}{#1}%
8515   \endgroup
8516 }
8517 \def\HyRef@autosetref#1#2#3{% link command, csname, refname
8518   \HyRef@ShowKeysRef{#2}%
8519   \ifcase 0\ifx#1\relax 1\fi\ifx#1\Hy@varioref\undefined 1\fi\relax
8520     \edef\HyRef@thisref{%
8521       \expandafter\@fourthoffive#1\@empty\@empty\@empty
8522     }%
8523     \expandafter\HyRef@testreftype\HyRef@thisref.\.%
8524     \Hy@safe@activesfalse
8525     #3{%
8526       \expandafter\@fifthoffive#1\@empty\@empty\@empty
8527     }{}%
8528     \expandafter\@fourthoffive#1\@empty\@empty\@empty
8529   }{}%
8530   \HyRef@currentHtag
8531   \expandafter\@firstoffive#1\@empty\@empty\@empty
8532   \null

```

```

8533 }%
8534 \else
8535 \protect\G@refundefinedtrue
8536 \nfss@text{\reset@font\bfseries ??}%
8537 \@latex@warning{%
8538   Reference `#2' on page \thepage\space undefined%
8539 }%
8540 \fi
8541 }
8542 \def\HyRef@testreftype#1.#2\{\%
8543 \ltx@ifundefined{#1autorefname}\{%
8544 \ltx@ifundefined{#1name}\{%
8545 \HyRef@StripStar#1\*\@nil{#1}%
8546 \ltx@ifundefined{\HyRef@name autorefname}\{%
8547 \ltx@ifundefined{\HyRef@name name}\{%
8548 \def\HyRef@currentHtag{%
8549 \Hy@Warning{No autoref name for `#1'}%
8550 }{%
8551 \edef\HyRef@currentHtag{%
8552 \expandafter\noexpand\csname\HyRef@name name\endcsname
8553 \noexpand~%
8554 }%
8555 }%
8556 }{%
8557 \edef\HyRef@currentHtag{%
8558 \expandafter\noexpand
8559 \csname\HyRef@name autorefname\endcsname
8560 \noexpand~%
8561 }%
8562 }%
8563 }{%
8564 \edef\HyRef@currentHtag{%
8565 \expandafter\noexpand\csname#1name\endcsname
8566 \noexpand~%
8567 }%
8568 }%
8569 }{%
8570 \edef\HyRef@currentHtag{%
8571 \expandafter\noexpand\csname#1autorefname\endcsname
8572 \noexpand~%
8573 }%
8574 }%
8575 }
8576 \def\HyRef@StripStar#1*\@nil#3{%
8577 \def\HyRef@name{#2}%
8578 \ifx\HyRef@name\HyRef@CaseStar
8579 \def\HyRef@name{#1}%
8580 \else
8581 \def\HyRef@name{#3}%
8582 \fi
8583 }
8584 \def\HyRef@CaseStar{*\\}
8585 \def\HyRef@currentHtag{}

```

Support for package showkeys.

`\HyRef@ShowKeysRef`

```

8586 \let\HyRef@ShowKeysRef\@gobble
8587 \def\HyRef@ShowKeysInit{%
8588   \ifcsname SK@@label\endcsname
8589   \ifx\SK@ref\@empty
8590   \else
8591     \def\HyRef@ShowKeysRef{%
8592       \SK@\SK@@ref
8593     }%
8594   \fi
8595 \fi
8596 }
8597 \AddToHook{package/showkeys/after}{\HyRef@ShowKeysInit}

```

Defaults for the names that `\autoref` uses.

```

8598 \providecommand*\AMSautorefname{\equationautorefname}
8599 \providecommand*\Hfootnoteautorefname{\footnoteautorefname}
8600 \providecommand*\Itemautorefname{\itemautorefname}
8601 \providecommand*\itemautorefname{item}
8602 \providecommand*\equationautorefname{Equation}
8603 \providecommand*\footnoteautorefname{footnote}
8604 \providecommand*\itemautorefname{item}
8605 \providecommand*\figureautorefname{Figure}
8606 \providecommand*\tableautorefname{Table}
8607 \providecommand*\partautorefname{Part}
8608 \providecommand*\appendixautorefname{Appendix}
8609 \providecommand*\chapterautorefname{chapter}
8610 \providecommand*\sectionautorefname{section}
8611 \providecommand*\subsectionautorefname{subsection}
8612 \providecommand*\subsubsectionautorefname{subsubsection}
8613 \providecommand*\paragraphautorefname{paragraph}
8614 \providecommand*\subparagraphautorefname{subparagraph}
8615 \providecommand*\FancyVerbLineautorefname{line}
8616 \providecommand*\theoremautorefname{Theorem}
8617 \providecommand*\pageautorefname{page}
8618 \</packageEnd>

```

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`.

```

8619 (*pdfTEX | dvipdfm | xetex | vtex | pdfmarkbase | dviwindo)
8620 \begingroup\expandafter\expandafter\expandafter\endgroup
8621 \expandafter\ifx\csname pdf@escapestring\endcsname\relax
8622 \begingroup

```



```

8623 \catcode`\|=0 %
8624 \@makeother\|%
8625 |@firstofone{|endgroup
8626 |def|Hy@pstringdef#1#2{%
8627 |begingroup
8628 |edef~{|string~}%
8629 |xdef|Hy@gtemp{#2}%
8630 |endgroup
8631 |let#1|Hy@gtemp
8632 |@onelevel@sanitize#1%
8633 |edef#1{|expandafter|Hy@ExchangeBackslash#1|@nil}%
8634 |edef#1{|expandafter|Hy@ExchangeLeftParenthesis#1(|@nil}%
8635 |edef#1{|expandafter|Hy@ExchangeRightParenthesis#1)|@nil}%
8636 }%
8637 |def|Hy@ExchangeBackslash#1\#2|@nil{%
8638 #1%
8639 |ifx|\#2|\%%
8640 |else
8641 \\\%
8642 |ltx@ReturnAfterFi{%
8643 |Hy@ExchangeBackslash#2|@nil
8644 }%
8645 |fi
8646 }%
8647 }%
8648 \def\Hy@ExchangeLeftParenthesis#1(#2\@nil{%
8649 #1%
8650 \ifx\#2\%%
8651 \else
8652 \@backslashchar(%
8653 \ltx@ReturnAfterFi{%
8654 \Hy@ExchangeLeftParenthesis#2\@nil
8655 }%
8656 \fi
8657 }%
8658 \def\Hy@ExchangeRightParenthesis#1)#2\@nil{%
8659 #1%
8660 \ifx\#2\%%
8661 \else
8662 \@backslashchar)%
8663 \ltx@ReturnAfterFi{%
8664 \Hy@ExchangeRightParenthesis#2\@nil
8665 }%
8666 \fi
8667 }%
8668 \else
8669 \def\Hy@pstringdef#1#2{%
8670 \begingroup
8671 \edef~{|string~}%
8672 \xdef\Hy@gtemp{\pdf@escapestring{#2}}%
8673 \endgroup
8674 \let#1\Hy@gtemp
8675 }%
8676 \fi

```

8677 </pdfTeX | dvipdfm | xetex | vtex | pdfmarkbase | dviwindo>

43.2 pdfTeX

```
8678 <*pdfTeX>
8679 \providecommand*{\XR@ext}{pdf}
8680 \Hy@setbreaklinks{true}
8681 \def\HyPat@ObjRef{%
8682   [0-9]*[1-9][0-9]* 0 R%
8683 }
```

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

```
8684 \def\Hy@pdfminorversion{\pdfoptionpdfminorversion}%
8685 \def\Hy@pdfminorversion{\pdfminorversion}%
8686 \ifHy@ocgcolorlinks
8687   \ifnum\Hy@pdfmajorminor@version<105 %
8688     \kvsetkeys{Hyp}{pdfversion=1.5}%
8689   \fi
8690 \fi
8691 \ifHy@setpdfversion
8692   \ifnum\Hy@pdf@majorminor@version<105 %
8693     \ltx@ifundefined{pdfobjcompresslevel}{%
8694       {%
8695         \ifHy@verbose
8696           \Hy@InfoNoLine{%
8697             PDF object streams are disabled, because they are%
8698             \MessageBreak
8699             not supported in requested PDF version %
8700             \Hy@pdf@majorversion.\Hy@pdf@minorversion
8701           }%
8702         \fi
8703         \pdfobjcompresslevel=\ltx@zero
8704       }%
8705     \fi
8706     \ifnum\Hy@pdfmajorminor@version=\Hy@pdf@majorminor@version\relax
8707     \else
8708       \let\Hy@temp\ltx@empty
8709       \def\Hy@temp@A#1#2{%
8710         \ifnum#1>\ltx@zero
8711           \edef\Hy@temp{%
8712             \Hy@temp
8713             \space\space
8714             \the#1\space #2%
8715             \ifnum#1=\ltx@one\else s\fi
8716             \MessageBreak
8717           }%
8718         \fi
8719       }%
```

```

8720 \Hy@temp@A\pdflastobj{PDF object}%
8721 \Hy@temp@A\pdflastxform{form XObject}%
8722 \Hy@temp@A\pdflastximage{image XObject}%
8723 \Hy@temp@A\pdflastannot{annotation}%
8724 \ltx@ifundefined{pdflastlink}{%
8725 }{%
8726 \Hy@temp@A\pdflastlink{link}%
8727 }%
8728 \ifx\Hy@temp\ltx@empty
8729 \Hy@pdfmajorversion=\Hy@pdf@majorversion\relax
8730 \Hy@pdfminorversion=\Hy@pdf@minorversion\relax
8731 \else
8732 \let\Hy@temp@A\ltx@empty
8733 \ifnum\Hy@pdf@majorminor@version=104 %
8734 \IfFileExists{pdf14.sty}{%
8735 \def\Hy@temp@A{%
8736 \MessageBreak
8737 Or \string\RequirePackage{pdf14} can be used%
8738 \MessageBreak
8739 before \string\documentclass\space as shortcut%
8740 }%
8741 }}%
8742 \fi
8743 \Hy@WarningNoLine{%
8744 The PDF version number could not be set,\MessageBreak
8745 because some PDF objects are already written:%
8746 \MessageBreak
8747 \Hy@temp
8748 The version should be set as early as possible:%
8749 \MessageBreak
8750 \space\space
8751 \expandafter\string\Hy@pdfmajorversion=\Hy@pdf@majorversion, %
8752 \expandafter\string\Hy@pdfminorversion=\Hy@pdf@minorversion
8753 \string\relax
8754 \ifnum\Hy@pdf@majorminor@version<105 %
8755 \ltx@ifundefined{pdfobjcompresslevel}{%
8756 }{%
8757 \MessageBreak
8758 \space\space
8759 \string\pdfobjcompresslevel=0\string\relax
8760 }%
8761 \fi
8762 \Hy@temp@A
8763 }%
8764 \fi
8765 \fi
8766 \PackageInfo{hyperref}{%
8767 \expandafter\string\Hy@pdfmajorversion.%
8768 \expandafter\string\Hy@pdfminorversion
8769 :=\number\Hy@pdf@majorversion.\number\Hy@pdf@minorversion\space
8770 }%
8771 \fi
8772 \edef\Hy@pdf@majorversion{\number\Hy@pdfmajorversion}%
8773 \edef\Hy@pdf@minorversion{\number\Hy@pdfminorversion}%

```

```

8774 \Hy@DisableOption{pdfversion}%
8775 \ifHy@ocgcolorlinks
8776 \pdf@ifdraftmode{}{%
8777 \immediate\pdfobj{%
8778 <<%
8779 /Type/OCG%
8780 /Name(View)%
8781 /Usage<<%
8782 /Print<<%
8783 /PrintState/OFF%
8784 >>%
8785 /View<<%
8786 /ViewState/ON%
8787 >>%
8788 >>%
8789 >>%
8790 }%
8791 \edef\OBJ@OCG@view{\the\pdfflastobj\space 0 R}%
8792 \immediate\pdfobj{%
8793 <<%
8794 /Type/OCG%
8795 /Name(Print)%
8796 /Usage<<%
8797 /Print<<%
8798 /PrintState/ON%
8799 >>%
8800 /View<<%
8801 /ViewState/OFF%
8802 >>%
8803 >>%
8804 >>%
8805 }%
8806 \edef\OBJ@OCG@print{\the\pdfflastobj\space 0 R}%
8807 \immediate\pdfobj{%
8808 [%
8809 \OBJ@OCG@view\space\OBJ@OCG@print
8810 ]%
8811 }%
8812 \edef\OBJ@OCGs{\the\pdfflastobj\space 0 R}%
8813 \pdfcatalog{%
8814 /OCProperties<<%
8815 /OCGs \OBJ@OCGs
8816 /D<<%
8817 /OFF[\OBJ@OCG@print]%
8818 /AS[%
8819 <<%
8820 /Event/View%
8821 /OCGs \OBJ@OCGs
8822 /Category[/View]%
8823 >>%
8824 <<%
8825 /Event/Print%
8826 /OCGs \OBJ@OCGs
8827 /Category[/Print]%

```

```

8828         >>%
8829         <<%
8830         /Event/Export%
8831         /OCGs \OBJ@OCGs
8832         /Category[/Print]%
8833         >>%
8834     ]%
8835     >>%
8836     >>%
8837 }%
8838 \begingroup
8839 \edef\x{\endgroup
8840 \pdfpageresources{%
8841 \the\pdfpageresources
8842 /Properties<<%
8843 /OCView \OBJ@OCG@view
8844 /OCPrint \OBJ@OCG@print
8845 >>%
8846 }%
8847 }%
8848 \x
8849 }%
8850 \Hy@AtBeginDocument{%
8851 \def\Hy@colorlink#1{%
8852 \begingroup
8853 \ifHy@ocgcolorlinks
8854 \def\Hy@ocgcolor{#1}%
8855 \setbox0=\hbox\bgroup\color@begingroup
8856 \else
8857 \HyColor@UseColor#1%
8858 \fi
8859 }%
8860 \def\Hy@endcolorlink{%
8861 \ifHy@ocgcolorlinks
8862 \color@endgroup\egroup
8863 \mbox{%
8864 \pdfliteral page{/OC/OCPrint BDC}%
8865 \rlap{\copy0}%
8866 \pdfliteral page{EMC/OC/OCView BDC}%
8867 \begingroup
8868 \expandafter\HyColor@UseColor\Hy@ocgcolor
8869 \box0 %
8870 \endgroup
8871 \pdfliteral page{EMC}%
8872 }%
8873 \fi
8874 \endgroup
8875 }%
8876 }%
8877 \else
8878 \Hy@DisableOption{ocgcolorlinks}%
8879 \fi

```

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

```

8880 \def\setpdfinkmargin#1{%
8881   \begingroup
8882     \setlength{\dimen@}{#1}%
8883   \expandafter\endgroup
8884   \expandafter\pdfinkmargin\the\dimen@\relax
8885 }
8886 \pdfinkmargin1pt %

```

First set up the default linking

```
8887 \providecommand*\@pdfview{XYZ}
```

First define the anchors:

```

8888 \Hy@WrapperDef\new@pdfink#1{%
8889   \ifhmode
8890     \@savsf\spacefactor
8891   \fi
8892   \Hy@SaveLastskip
8893   \Hy@VerboseAnchor{#1}%
8894   \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
8895   \Hy@DestName\Hy@pstringDest\@pdfview
8896   \Hy@RestoreLastskip
8897   \ifhmode
8898     \spacefactor\@savsf
8899   \fi
8900 }
8901 \let\pdf@endanchor\@empty

```

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

```

8902 \def\Hy@DestName#1#2{%
8903   \pdfdest name{#1}#2\relax
8904 }

```

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.

```

8905 \providecommand*\@pdfborder{0 0 1}
8906 \providecommand*\@pdfborderstyle{}
8907 \def\Hy@undefinedname{UNDEFINED}
8908 \def\find@pdfink#1#2{%
8909   \leavevmode
8910   \protected@edef\Hy@testname{#2}%
8911   \ifx\Hy@testname\@empty
8912     \Hy@Warning{%
8913       Empty destination name,\MessageBreak
8914       using ``\Hy@undefinedname'%
8915     }%
8916     \let\Hy@testname\Hy@undefinedname
8917   \else
8918     \Hy@pstringdef\Hy@testname{%
8919       \expandafter\HyperDestNameFilter\expandafter{\Hy@testname}%
8920     }%
8921   \fi

```

```

8922 \Hy@StartlinkName{%
8923   \ifHy@pdfa /F 4\fi
8924   \Hy@setpdfborder
8925   \Hy@setpdfhighlight
8926   \ifx\CurrentBorderColor\relax
8927   \else
8928     /C[\CurrentBorderColor]%
8929   \fi
8930 } \Hy@testname
8931 \expandafter\Hy@colorlink\csname @#1color\endcsname
8932 }
8933 \def\Hy@StartlinkName#1#2{%
8934   \pdfstartlink attr{#1}goto name{#2}\relax
8935 }
8936 \def\close@pdfink{%
8937   \Hy@endcolorlink
8938   \Hy@VerboseLinkStop
8939   \pdfendlink
8940 }
8941 \def\hyper@anchor#1{%
8942   \new@pdfink{#1}\anchor@spot\pdf@endanchor
8943 }
8944 \def\hyper@anchorstart#1{%
8945   \new@pdfink{#1}%
8946   \Hy@activeanchortrue
8947 }
8948 \def\hyper@anchorend{%
8949   \pdf@endanchor
8950   \Hy@activeanchorfalse
8951 }
8952 \def\hyper@linkstart#1#2{%
8953   \Hy@VerboseLinkStart{#1}{#2}%
8954   \ltx@ifundefined{@#1bordercolor}{%
8955     \let\CurrentBorderColor\relax
8956   }{%
8957     \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
8958   }%
8959   \find@pdfink{#1}{#2}%
8960 }
8961 \def\hyper@linkend{\close@pdfink}
8962 \def\hyper@link#1#2#3{%
8963   \Hy@VerboseLinkStart{#1}{#2}%
8964   \ltx@ifundefined{@#1bordercolor}{%
8965     \let\CurrentBorderColor\relax
8966   }{%
8967     \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
8968   }%
8969   \find@pdfink{#1}{#2}#3\Hy@xspace@end
8970   \close@pdfink
8971 }
8972 \let\CurrentBorderColor\@linkbordercolor
8973 \def\hyper@linkurl#1#2{%
8974   \begingroup
8975     \Hy@pstringdef\Hy@pstringURI{#2}%

```

```

8976 \hyper@chars
8977 \leavevmode
8978 \pdfstartlink
8979 attr{%
8980   \Hy@setpdfborder
8981   \Hy@setpdfhighlight
8982   \ifx\@urlbordercolor\relax
8983   \else
8984     /C[\@urlbordercolor]%
8985   \fi
8986 }%
8987 user{%
8988   /Subtype/Link%
8989   \ifHy@pdfa /F 4\fi
8990   /A<<%
8991     /Type/Action%
8992     /S/URI%
8993     /URI(\Hy@pstringURI)%
8994     \ifHy@href@ismap
8995       /IsMap true%
8996     \fi
8997     \Hy@href@nextactionraw
8998   >>%
8999 }%
9000 \relax
9001 \Hy@colorlink\@urlcolor#1\Hy@xspace@end
9002 \close@pdflink
9003 \endgroup
9004 }
9005 \def\hyper@linkfile#1#2#3{% anchor text, filename, linkname
9006 \begingroup
9007   \def\Hy@pstringF{#2}%
9008   \Hy@CleanupFile\Hy@pstringF
9009   \Hy@pstringdef\Hy@pstringF\Hy@pstringF
9010   \Hy@pstringdef\Hy@pstringD{#3}%
9011   \Hy@MakeRemoteAction
9012   \leavevmode
9013   \pdfstartlink
9014   attr{%
9015     \Hy@setpdfborder
9016     \Hy@setpdfhighlight
9017     \ifx\@filebordercolor\relax
9018     \else
9019       /C[\@filebordercolor]%
9020     \fi
9021   }%
9022   user {%
9023     /Subtype/Link%
9024     \ifHy@pdfa /F 4\fi
9025     /A<<%
9026       /F(\Hy@pstringF)%
9027       /S/GoToR%
9028     \Hy@SetNewWindow

```

If #3 is empty, page 0; if its a number, Page number, otherwise a named destina-

tion.

```
\afterassignment\xxx\count@=0\foo!%
```

```
\def\xxx#1!{%  
  \ifx\xxx#1\xxx  
    foo was an integer  
  \else  
    it wasnt  
  \fi}
```

```
9029      \ifx\#3\%  
9030      /D[\Hy@href@page\@pdfremotestartview]%  
9031      \else  
9032      /D(\Hy@pstringD)%  
9033      \fi  
9034      \Hy@href@nextactionraw  
9035      >>%  
9036    }%  
9037    \relax  
9038    \Hy@colorlink\@filecolor#1\Hy@xspace@end  
9039    \close@pdflink  
9040  \endgroup  
9041 }  
9042 \def\@hyper@launch run:#1\#2#3{% filename, anchor text linkname  
9043  \begingroup  
9044    \Hy@pstringdef\Hy@pstringF{#1}%  
9045    \Hy@pstringdef\Hy@pstringP{#3}%  
9046    \leavevmode  
9047    \pdfstartlink  
9048    attr{%  
9049      \Hy@setpdfborder  
9050      \Hy@setpdfhighlight  
9051      \ifx\@runbordercolor\relax  
9052      \else  
9053      /C[\@runbordercolor]%  
9054      \fi  
9055    }%  
9056    user {%  
9057      /Subtype/Link%  
9058      \ifHy@pdfa /F 4\fi  
9059      /A<<%  
9060      /F(\Hy@pstringF)%  
9061      /S/Launch%  
9062      \Hy@SetNewWindow  
9063      \ifx\#3\%  
9064      \else  
9065      /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%  
9066      \fi  
9067      \Hy@href@nextactionraw  
9068      >>%  
9069    }%  
9070    \relax  
9071    \Hy@colorlink\@runcolor#2\Hy@xspace@end
```

```

9072 \close@pdfink
9073 \endgroup
9074 }

```

\PDF@SetupDox

```

9075 \def\PDF@SetupDoc{%
9076 \ifx\@pdfpagescrop\@empty
9077 \else
9078 \edef\process@me{%
9079 \pdfpagesattr={%
9080 /CropBox[\@pdfpagescrop]%
9081 \expandafter\ifx\expandafter\\\the\pdfpagesattr\\%
9082 \else
9083 ^^J\the\pdfpagesattr
9084 \fi
9085 }%
9086 }%
9087 \process@me
9088 \fi
9089 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
9090 \pdfcatalog{%
9091 /PageMode/\@pdfpagemode
9092 \ifx\@baseurl\@empty
9093 \else
9094 /URI<</Base(\Hy@pstringB)>>%
9095 \fi
9096 }%
9097 \ifx\@pdfstartpage\@empty
9098 \else
9099 \ifx\@pdfstartview\@empty
9100 \else
9101 openaction goto page\@pdfstartpage{\@pdfstartview}%
9102 \fi
9103 \fi
9104 \edef\Hy@temp{%
9105 \ifHy@pdftoolbar\else /HideToolbar true\fi
9106 \ifHy@pdfmenubar\else /HideMenubar true\fi
9107 \ifHy@pdfwindowui\else /HideWindowUI true\fi
9108 \ifHy@pdfwindow /FitWindow true\fi
9109 \ifHy@pdfcenterwindow /CenterWindow true\fi
9110 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
9111 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
9112 \Hy@UseNameKey{Direction}\@pdfdirection
9113 \Hy@UseNameKey{ViewArea}\@pdfviewarea
9114 \Hy@UseNameKey{ViewClip}\@pdfviewclip
9115 \Hy@UseNameKey{PrintArea}\@pdfprintarea
9116 \Hy@UseNameKey{PrintClip}\@pdfprintclip
9117 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
9118 \Hy@UseNameKey{Duplex}\@pdfduplex
9119 \ifx\@pdfpicktraybypdfsize\@empty
9120 \else
9121 /PickTrayByPDFSize \@pdfpicktraybypdfsize
9122 \fi
9123 \ifx\@pdfprintpagerange\@empty

```

```

9124 \else
9125 /PrintPageRange[\@pdfprintpagerange]%
9126 \fi
9127 \ifx\@pdfnumcopies\@empty
9128 \else
9129 /NumCopies \@pdfnumcopies
9130 \fi
9131 }%
9132 \pdfcatalog{%
9133 \ifx\Hy@temp\@empty
9134 \else
9135 /ViewerPreferences<<\Hy@temp>>%
9136 \fi
9137 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
9138 \ifx\@pdflang\relax
9139 \else
9140 /Lang(\@pdflang)%
9141 \fi
9142 }%
9143 }

```

\PDF@FinishDoc

```

9144 \def\PDF@FinishDoc{%
9145 \pdf@ifdraftmode{}{%
9146 \Hy@UseMaketitleInfos
9147 \HyInfo@GenerateAddons
9148 \pdfinfo{%
9149 /Author(\@pdfauthor)%
9150 /Title(\@pdftitle)%
9151 /Subject(\@pdfsubject)%
9152 /Creator(\@pdfcreator)%
9153 \ifx\@pdfcreationdate\@empty
9154 \else
9155 /CreationDate(\@pdfcreationdate)%
9156 \fi
9157 \ifx\@pdfmoddate\@empty
9158 \else
9159 /ModDate(\@pdfmoddate)%
9160 \fi
9161 \ifx\@pdfproducer\relax
9162 \else
9163 /Producer(\@pdfproducer)%
9164 \fi
9165 /Keywords(\@pdfkeywords)%
9166 \ifx\@pdftrapped\@empty
9167 \else
9168 /Trapped/\@pdftrapped
9169 \fi
9170 \HyInfo@Addons
9171 }%
9172 }%
9173 \Hy@DisableOption{pdfauthor}%
9174 \Hy@DisableOption{pdftitle}%
9175 \Hy@DisableOption{pdfsubject}%

```

```

9176 \Hy@DisableOption{pdfcreator}%
9177 \Hy@DisableOption{addtopdfcreator}%
9178 \Hy@DisableOption{pdfcreationdate}%
9179 \Hy@DisableOption{pdfmoddate}%
9180 \Hy@DisableOption{pdfproducer}%
9181 \Hy@DisableOption{pdfkeywords}%
9182 \Hy@DisableOption{pdftrapped}%
9183 \Hy@DisableOption{pdfinfo}%
9184 }

```

`\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`.

```

9185 \def\hyper@pagetransition{%
9186   \ifx\@pdfpagetransition\relax
9187   \else
9188     \expandafter\Hy@RemoveTransPageAttr
9189     \the\pdfpageattr^^J/Trans{}>>\END
9190     \ifx\@pdfpagetransition\@empty
9191     \else
9192       \edef\@processme{%
9193         \global\pdfpageattr{%
9194           \the\pdfpageattr
9195             ^^J/Trans << /S /\@pdfpagetransition\space >>%
9196         }%
9197       }%
9198       \@processme
9199     \fi
9200   \fi
9201 }

```

`\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.

```

9202 \gdef\Hy@RemoveTransPageAttr#1^^J/Trans#2#3>>#4\END{%
9203   \ifx\#2\%
9204     \global\pdfpageattr{#1}%
9205   \else
9206     \Hy@RemoveTransPageAttr#1#4\END
9207   \fi
9208 }

```

`\hyper@pageduration` `\@pdfpageduration` is initialized with `\relax`. So it indicates, if option `pdfpageduration` is used. First previous `/Dur` entries are removed. If a new `/Dur` key exists, it is appended to `\pdfpageattr`.

```

9209 \def\hyper@pageduration{%
9210   \ifx\@pdfpageduration\relax
9211   \else
9212     \expandafter
9213     \Hy@RemoveDurPageAttr\the\pdfpageattr^^J/Dur{} \END
9214     \ifx\@pdfpageduration\@empty

```

```

9215 \else
9216 \edef\@processme{%
9217 \global\pdfpageattr{%
9218 \the\pdfpageattr
9219 ^^J/Dur \@pdfpageduration\space
9220 }%
9221 }%
9222 \@processme
9223 \fi
9224 \fi
9225 }

```

`\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.

```

9226 \gdef\Hy@RemoveDurPageAttr#1^^J/Dur#2#3 #4\END{%
9227 \ifx\#2\%
9228 \global\pdfpageattr{#1}%
9229 \else
9230 \Hy@RemoveDurPageAttr#1#4\END
9231 \fi
9232 }

9233 \pdf@ifdraftmode{}{%
9234 \g@addto@macro\Hy@EveryPageHook{%
9235 \hyper@pagetransition
9236 \hyper@pageduration
9237 }%
9238 }

```

Also XeTeX support `\pdfpagewidth` and `\pdfpageheight`, but it does not provide `\pdfhorigin` and `\pdfvorigin`.

```

9239 </pdfTeX>
9240 <{*pdfTeX | xetex>
9241 \Hy@AtBeginDocument{%
9242 \ifHy@setpagesize
9243 \expandafter\@firstofone
9244 \else
9245 \expandafter\@gobble
9246 \fi
9247 {%
9248 \@ifclassloaded{seminar}{%
9249 <{*pdfTeX>
9250 \setlength{\pdfhorigin}{1truein}%
9251 \setlength{\pdfvorigin}{1truein}%
9252 </pdfTeX>
9253 \ifportrait
9254 \ifdim\paperwidth=\z@
9255 \else
9256 \setlength{\pdfpagewidth}{\strip@pt\paperwidth truept}%
9257 \fi
9258 \ifdim\paperheight=\z@
9259 \else

```

```

9260     \setlength{\pdfpageheight}{\strip@pt\paperheight truept}%
9261     \fi
9262   \else
9263     \ifdim\paperheight=\z@
9264     \else
9265       \setlength{\pdfpagewidth}{\strip@pt\paperheight truept}%
9266       \fi
9267     \ifdim\paperwidth=\z@
9268     \else
9269       \setlength{\pdfpageheight}{\strip@pt\paperwidth truept}%
9270       \fi
9271     \fi
9272   }{%
9273     \ifnum\mag=\@m
9274     \ifdim\stockwidth>\z@
9275     \ifdim\stockheight>\z@
9276       \setlength{\pdfpagewidth}{\stockwidth}%
9277       \setlength{\pdfpageheight}{\stockheight}%
9278     \else
9279       \ifdim\paperwidth>\z@
9280       \ifdim\paperheight>\z@
9281         \setlength{\pdfpagewidth}{\paperwidth}%
9282         \setlength{\pdfpageheight}{\paperheight}%
9283       \fi
9284     \fi
9285   \fi
9286   \else
9287     \ifdim\stockwidth=\z@
9288     \ifdim\paperwidth>\z@
9289     \ifdim\paperheight>\z@
9290       \setlength{\pdfpagewidth}{\paperwidth}%
9291       \setlength{\pdfpageheight}{\paperheight}%
9292     \fi
9293   \fi
9294   \fi
9295   \fi
9296   \fi
9297   }%
9298 }%
9299 \Hy@DisableOption{setpagesize}%
9300 }
9301 </pdfTeX | xetex>
9302 < *pdfTeX>
9303 \def\Acrobatmenu#1#2{%
9304   \Hy@Acrobatmenu{#1}{#2}{%
9305     \leavevmode
9306     \EdefEscapeName\Hy@temp@menu{#1}%
9307     \pdfstartlink
9308     attr{%
9309       \Hy@setpdfborder
9310       \Hy@setpdfhighlight
9311       \ifx\@menubordercolor\relax
9312       \else
9313         /C[\@menubordercolor]%

```

```

9314     \fi
9315   }%
9316   user{%
9317     /Subtype/Link%
9318     \ifHy@pdfa /F 4\fi
9319     /A<<%
9320     /S/Named%
9321     /N/\Hy@temp@menu
9322     \Hy@href@nextactionraw
9323     >>%
9324   }%
9325   \relax
9326   \Hy@colorlink\@menucolor#2%
9327   \close@pdflink
9328 }%
9329 }

```

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.

```

9330 </pdfTeX>

```

43.3 hypertex

The HyperTeX specification (this is borrowed from an article by Arthur Smith) says that conformant viewers/translators must recognize the following set of `\special` commands:

href: `html:`

name: `html:`

end: `html:`

image: `html:`

base_name: `html:<base href = "href_string">`

The *href*, *name* and *end* commands are used to do the basic hypertext operations of establishing links between sections of documents. The *image* command is intended (as with current html viewers) to place an image of arbitrary graphical format on the page in the current location. The *base_name* command is be used to communicate to the *dvi* viewer the full (URL) location of the current document so that files specified by relative URL's may be retrieved correctly.

The *href* and *name* commands must be paired with an *end* command later in the T_EX file — the T_EX 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.

```

9331 \*hypertext
9332 \providecommand*\XR@ext}{dvi}
9333 \let\PDF@FinishDoc\ltx@empty
9334 \def\PDF@SetupDoc{%
9335   \ifx\@baseurl\@empty
9336   \else
9337     \special{html:<base href="\@baseurl">}%
9338   \fi
9339 }
9340 \Hy@WrapperDef\hyper@anchor#1{%
9341   \Hy@SaveLastskip
9342   \Hy@VerboseAnchor{#1}%
9343   \begingroup
9344     \let\protect=\string
9345     \hyper@chars
9346     \special{html:<a name=%
9347       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
9348   \endgroup
9349   \Hy@activeanchortrue
9350   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
9351   \special{html:</a>}%
9352   \Hy@activeanchorfalse
9353   \Hy@RestoreLastskip
9354 }
9355 \Hy@WrapperDef\hyper@anchorstart#1{%
9356   \Hy@SaveLastskip
9357   \Hy@VerboseAnchor{#1}%
9358   \begingroup
9359     \hyper@chars
9360     \special{html:<a name=%
9361       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
9362   \endgroup
9363   \Hy@activeanchortrue
9364 }
9365 \def\hyper@anchorend{%
9366   \special{html:</a>}%
9367   \Hy@activeanchorfalse
9368   \Hy@RestoreLastskip
9369 }
9370 \def\@urltype{url}
9371 \def\hyper@linkstart#1#2{%

```



```

9372 \Hy@VerboseLinkStart{#1}{#2}%
9373 \expandafter\Hy@colorlink\csname @#1color\endcsname
9374 \def\Hy@tempa{#1}%
9375 \ifx\Hy@tempa\@urlltype
9376   \special{html:<a href=\hyper@quote#2\hyper@quote>}%
9377 \else
9378   \begingroup
9379   \hyper@chars
9380   \special{html:<a href=%
9381     \hyper@quote\#\Hy@DestNameFilter{#2}\hyper@quote>}%
9382   \endgroup
9383 \fi
9384 }
9385 \def\hyper@linkend{%
9386   \special{html:</a>}%
9387   \Hy@endcolorlink
9388 }
9389 \def\hyper@linkfile#1#2#3{%
9390   \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\\else\##3\fi}%
9391 }
9392 \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.

```

9393 \leavevmode
9394 \ifHy@raiselinks
9395   \Hy@SaveSpaceFactor
9396   \Hy@SaveSavedSpaceFactor
9397   \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
9398   \Hy@RestoreSavedSpaceFactor
9399   \@linkdim\dp\@tempboxa
9400   \lower\@linkdim\hbox{%
9401     \hyper@chars
9402     \special{html:<a href=\hyper@quote#2\hyper@quote>}%
9403   }%
9404   \Hy@colorlink\@urlcolor
9405   \Hy@RestoreSpaceFactor
9406   #1%
9407   \Hy@SaveSpaceFactor
9408   \@linkdim\ht\@tempboxa

```

Because of the interaction with the `dvilhs` processor, we have to subtract a little from the height. This is not clean, or checked. Check with Mark Doyle about what gives here. It may not be needed with the new `dvips` (Jan 1997).

```

9409   \advance\@linkdim by -6.5\p@
9410   \raise\@linkdim\hbox{\special{html:</a>}}%
9411   \Hy@endcolorlink
9412   \Hy@RestoreSpaceFactor
9413 \else
9414   \begingroup
9415   \hyper@chars
9416   \special{html:<a href=\hyper@quote#2\hyper@quote>}%
9417   \Hy@colorlink\@urlcolor#1\Hy@xspace@end

```

```

9418 \special{html:</a>}%
9419 \Hy@endcolorlink
9420 \endgroup
9421 \fi
9422 }

Very poor implementation of \hyper@link without considering #1.
9423 \def\hyper@link#1#2#3{%
9424 \Hy@VerboseLinkStart{#1}{#2}%
9425 \hyper@linkurl{#3}{\#\HyperDestNameFilter{#2}}%
9426 }

9427 \def\hyper@image#1#2{%
9428 \begingroup
9429 \hyper@chars
9430 \special{html:<img src=\hyper@quote#1\hyper@quote>}%
9431 \endgroup
9432 }
9433 </hypertex>
9434 <*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.

```

9435 \providecommand*\XR@ext}{dvi}
9436 \providecommand*\wwwbrowser{c:\string\netscape\string\netscape}
9437 \Hy@WrapperDef\hyper@anchor#1{%
9438 \Hy@SaveLastskip
9439 \Hy@VerboseAnchor{#1}%
9440 \begingroup
9441 \let\protect=\string
9442 \special{mark: #1}%
9443 \endgroup
9444 \Hy@activeanchortrue
9445 \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
9446 \Hy@activeanchorfalse
9447 \Hy@RestoreLastskip
9448 }
9449 \Hy@WrapperDef\hyper@anchorstart#1{%
9450 \Hy@SaveLastskip
9451 \Hy@VerboseAnchor{#1}%
9452 \special{mark: #1}%
9453 \Hy@activeanchortrue
9454 }

```

```

9455 \def\hyper@anchorend{%
9456   \Hy@activeanchorfalse
9457   \Hy@RestoreLastskip
9458 }
9459 \def\hyper@linkstart#1#2{%
9460   \Hy@VerboseLinkStart{#1}{#2}%
9461   \expandafter\Hy@colorlink\csname @#1color\endcsname
9462   \special{button: %
9463     10000000 %
9464     \number\baselineskip\space
9465     #2%
9466   }%
9467 }
9468 \def\hyper@linkend{%
9469   \Hy@endcolorlink
9470 }
9471 \def\hyper@link#1#2#3{%
9472   \Hy@VerboseLinkStart{#1}{#2}%
9473   \leavevmode
9474   \ifHy@raiselinks
9475     \Hy@SaveSpaceFactor
9476     \Hy@SaveSavedSpaceFactor
9477     \sbox\@tempboxa{\Hy@RestoreSpaceFactor#3}%
9478     \Hy@RestoreSavedSpaceFactor
9479     \@linkdim\dp\@tempboxa
9480     \lower\@linkdim\hbox{%
9481       \special{button: %
9482         \number\wd\@tempboxa\space
9483         \number\ht\@tempboxa\space
9484         #2%
9485       }%
9486       \expandafter\Hy@colorlink\csname @#1color\endcsname
9487       \Hy@RestoreSpaceFactor
9488       #3\Hy@xspace@end
9489       \Hy@SaveSpaceFactor
9490       \Hy@endcolorlink
9491     }%
9492     \@linkdim\ht\@tempboxa
9493     \advance\@linkdim by -6.5\p@
9494     \raise\@linkdim\hbox{}%
9495     \Hy@RestoreSpaceFactor
9496   \else
9497     \special{button: %
9498       \number\wd\@tempboxa\space
9499       \number\ht\@tempboxa\space
9500       #2%
9501     }%
9502     \expandafter\Hy@colorlink\csname @#1color\endcsname
9503     #3\Hy@xspace@end
9504     \Hy@endcolorlink
9505   \fi
9506 }
9507 \def\hyper@linkurl#1#2{%
9508   \begingroup

```

```

9509 \hyper@chars
9510 \leavevmode
9511 \ifHy@raiselinks
9512 \Hy@SaveSpaceFactor
9513 \Hy@SaveSavedSpaceFactor
9514 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
9515 \Hy@RestoreSavedSpaceFactor
9516 \@linkdim\dp\@tempboxa
9517 \lower\@linkdim\hbox{%
9518 \special{button: %
9519 \number\wd\@tempboxa\space
9520 \number\ht\@tempboxa\space
9521 launch: \wwwbrowser\space
9522 #2%
9523 }%
9524 \Hy@colorlink\@urlcolor
9525 \Hy@RestoreSpaceFactor
9526 #1\Hy@xspace@end
9527 \Hy@SaveSpaceFactor
9528 \Hy@endcolorlink
9529 }%
9530 \@linkdim\ht\@tempboxa
9531 \advance\@linkdim by -6.5\p@
9532 \raise\@linkdim\hbox{}}%
9533 \Hy@RestoreSpaceFactor
9534 \else
9535 \special{button: %
9536 \number\wd\@tempboxa\space
9537 \number\ht\@tempboxa\space
9538 launch: \wwwbrowser\space
9539 #2%
9540 }%
9541 \Hy@colorlink\@urlcolor
9542 #1\Hy@xspace@end
9543 \Hy@endcolorlink
9544 \fi
9545 \endgroup
9546 }
9547 \def\hyper@linkfile#1#2#3{%
9548 \begingroup
9549 \hyper@chars
9550 \leavevmode
9551 \ifHy@raiselinks
9552 \Hy@SaveSpaceFactor
9553 \Hy@SaveSavedSpaceFactor
9554 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
9555 \Hy@RestoreSavedSpaceFactor
9556 \@linkdim\dp\@tempboxa
9557 \lower\@linkdim\hbox{%
9558 \special{button: %
9559 \number\wd\@tempboxa\space
9560 \number\ht\@tempboxa\space
9561 #3,%
9562 file: #2%

```

```

9563     }%
9564     \Hy@colorlink\@filecolor
9565     \Hy@RestoreSpaceFactor
9566     #1\Hy@xspace@end
9567     \Hy@SaveSpaceFactor
9568     \Hy@endcolorlink
9569     }%
9570     \@linkdim\ht\@tempboxa
9571     \advance\@linkdim by -6.5\p@
9572     \raise\@linkdim\hbox{}%
9573     \Hy@RestoreSpaceFactor
9574     \else
9575     \special{button: %
9576     \number\wd\@tempboxa\space
9577     \number\ht\@tempboxa\space
9578     #3,%
9579     file: #2%
9580     }%
9581     \Hy@colorlink\@filecolor
9582     #1\Hy@xspace@end
9583     \Hy@endcolorlink
9584     \fi
9585     \endgroup
9586 }
9587 \HyInfo@AddonUnsupportedtrue
9588 \def\PDF@FinishDoc{%
9589 \Hy@UseMaketitleInfos
9590 \HyInfo@TrappedUnsupported
9591 \special{PDF: Keywords \@pdfkeywords}%
9592 \special{PDF: Title \@pdftitle}%
9593 \special{PDF: Creator \@pdfcreator}%
9594 \ifx\@pdfcreationdate\@empty
9595 \else
9596 \special{PDF: CreationDate \@pdfcreationdate}%
9597 \fi
9598 \ifx\@pdfmoddate\@empty
9599 \else
9600 \special{PDF: ModDate \@pdfmoddate}%
9601 \fi
9602 \special{PDF: Author \@pdfauthor}%
9603 \ifx\@pdfproducer\relax
9604 \else
9605 \special{PDF: Producer \@pdfproducer}%
9606 \fi
9607 \special{PDF: Subject \@pdfsubject}%
9608 \Hy@DisableOption{pdfauthor}%
9609 \Hy@DisableOption{pdftitle}%
9610 \Hy@DisableOption{pdfsubject}%
9611 \Hy@DisableOption{pdfcreator}%
9612 \Hy@DisableOption{addtopdfcreator}%
9613 \Hy@DisableOption{pdfcreationdate}%
9614 \Hy@DisableOption{pdfcreationdate}%
9615 \Hy@DisableOption{pdfmoddate}%
9616 \Hy@DisableOption{pdfproducer}%

```

```

9617 \Hy@DisableOption{pdfkeywords}%
9618 \Hy@DisableOption{pdftrapped}%
9619 \Hy@DisableOption{pdfinfo}%
9620 }
9621 \def\PDF@SetupDoc{%
9622 \ifx\@baseurl\@empty
9623 \else
9624 \special{PDF: Base \@baseurl}%
9625 \fi
9626 \ifx\@pdfpagescrop\@empty\else
9627 \special{PDF: BBox \@pdfpagescrop}%
9628 \fi
9629 \def\Hy@temp{}%
9630 \ifx\@pdfstartpage\@empty
9631 \else
9632 \ifx\@pdfstartview\@empty
9633 \else
9634 \edef\Hy@temp{%
9635 ,Page=\@pdfstartpage
9636 ,View=\@pdfstartview
9637 }%
9638 \fi
9639 \fi
9640 \edef\Hy@temp{%
9641 \noexpand\pdfmark{%
9642 pdfmark=/DOCVIEW,%
9643 PageMode=/\@pdfpagemode
9644 \Hy@temp
9645 }%
9646 }%
9647 \Hy@temp
9648 \ifx\@pdfpagescrop\@empty
9649 \else
9650 \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
9651 \fi
9652 \edef\Hy@temp{%
9653 \ifHy@pdftoolbar\else /HideToolbar true\fi
9654 \ifHy@pdfmenubar\else /HideMenubar true\fi
9655 \ifHy@pdfwindowui\else /HideWindowUI true\fi
9656 \ifHy@pdffitwindow /FitWindow true\fi
9657 \ifHy@pdfcenterwindow /CenterWindow true\fi
9658 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
9659 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
9660 \Hy@UseNameKey{Direction}\@pdfdirection
9661 \Hy@UseNameKey{ViewArea}\@pdfviewarea
9662 \Hy@UseNameKey{ViewClip}\@pdfviewclip
9663 \Hy@UseNameKey{PrintArea}\@pdfprintarea
9664 \Hy@UseNameKey{PrintClip}\@pdfprintclip
9665 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
9666 \Hy@UseNameKey{Duplex}\@pdfduplex
9667 \ifx\@pdfpicktraybypdfsize\@empty
9668 \else
9669 /PickTrayByPDFSize \@pdfpicktraybypdfsize
9670 \fi

```

```

9671 \ifx\@pdfprintpagerange\@empty
9672 \else
9673 /PrintPageRange[\@pdfprintpagerange]%
9674 \fi
9675 \ifx\@pdfnumcopies\@empty
9676 \else
9677 /NumCopies \@pdfnumcopies
9678 \fi
9679 }%
9680 \pdfmark{pdfmark=/PUT,%
9681 Raw={%
9682 \string{Catalog\string}<<%
9683 \ifx\Hy@temp\@empty
9684 \else
9685 /ViewerPreferences<<\Hy@temp>>%
9686 \fi
9687 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
9688 \ifx\@pdflang\relax
9689 \else
9690 /Lang(\@pdflang)%
9691 \fi
9692 >>%
9693 }%
9694 }%
9695 }
9696 </dviwindo>
9697 <*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.

```

9698 \special{dvipdfmx:config C 0x0010}
9699 \providecommand*\XR@ext}{pdf}
9700 \Hy@setbreaklinks{true}
9701 \def\HyPat@ObjRef{%
9702 @[\ ]+}%
9703 }
9704 \newsavebox{\pdfm@box}
9705 \def\@pdfm@mark#1{\special{pdf:#1}}
9706 \Hy@WrapperDef\@pdfm@dest#1{%
9707 \Hy@SaveLastskip
9708 \Hy@VerboseAnchor{#1}%
9709 \begingroup
9710 \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
9711 \def\x{XYZ}%
9712 \ifx\x\@pdfview
9713 \def\x{XYZ @xpos @ypos null}%
9714 \else
9715 \def\x{FitH}%
9716 \ifx\x\@pdfview

```

```

9717     \def\x{FitH @ypos}%
9718 \else
9719     \def\x{FitBH}%
9720 \ifx\x\@pdfview
9721     \def\x{FitBH @ypos}%
9722 \else
9723     \def\x{FitV}%
9724 \ifx\x\@pdfview
9725     \def\x{FitV @xpos}%
9726 \else
9727     \def\x{FitBV}%
9728 \ifx\x\@pdfview
9729     \def\x{FitBV @xpos}%
9730 \else
9731     \def\x{Fit}%
9732 \ifx\x\@pdfview
9733     \let\x\@pdfview
9734 \else
9735     \def\x{FitB}%
9736 \ifx\x\@pdfview
9737     \let\x\@pdfview
9738 \else
9739     \def\x{FitR}%
9740 \ifx\x\@pdfview
9741     \Hy@Warning{'pdfview=FitR' is not supported}%
9742     \def\x{XYZ @xpos @ypos null}%
9743 \else
9744     \@onelevel@sanitize\@pdfview
9745     \Hy@Warning{%
9746         Unknown value '\@pdfview' for pdfview%
9747     }%
9748     \def\x{XYZ @xpos @ypos null}%
9749 \fi
9750 \fi
9751 \fi
9752 \fi
9753 \fi
9754 \fi
9755 \fi
9756 \fi
9757 \@pdfm@mark{dest (\Hy@pstringDest) [@thispage /\x]}%
9758 \endgroup
9759 \Hy@RestoreLastskip
9760 }
9761 \providecommand*\@pdfview{XYZ}
9762 \providecommand*\@pdfborder{0 0 1}
9763 \providecommand*\@pdfborderstyle{}
9764 \def\hyper@anchor#1{%
9765     \@pdfm@dest{#1}%
9766 }
9767 \def\hyper@anchorstart#1{%
9768     \Hy@activeanchortrue
9769     \@pdfm@dest{#1}%
9770 }

```



```

9771 \def\hyper@anchorend{%
9772 \Hy@activeanchorfalse
9773 }

9774 \newcounter{Hy@AnnotLevel}

9775 \ifHy@ocgcolorlinks
9776 \def\OBJ@OCG@view{@OCG@view}%
9777 \@pdfm@mark{%
9778   obj \OBJ@OCG@view <<%
9779     /Type/OCG%
9780     /Name(View)%
9781     /Usage<<%
9782     /Print<<%
9783     /PrintState/OFF%
9784     >>%
9785     /View<<%
9786     /ViewState/ON%
9787     >>%
9788     >>%
9789     >>%
9790   }%
9791 \@pdfm@mark{close \OBJ@OCG@view}%
9792 \def\OBJ@OCG@print{@OCG@print}%
9793 \@pdfm@mark{%
9794   obj \OBJ@OCG@print <<%
9795     /Type/OCG%
9796     /Name(Print)%
9797     /Usage<<%
9798     /Print<<%
9799     /PrintState/ON%
9800     >>%
9801     /View<<%
9802     /ViewState/OFF%
9803     >>%
9804     >>%
9805     >>%
9806   }%
9807 \@pdfm@mark{close \OBJ@OCG@print}%
9808 \def\OBJ@OCGs{@OCGs}%
9809 \@pdfm@mark{%
9810   obj \OBJ@OCGs [%
9811     \OBJ@OCG@view\space\OBJ@OCG@print
9812   ]%
9813 }%
9814 \@pdfm@mark{close \OBJ@OCGs}%
9815 \@pdfm@mark{%
9816   put @catalog <<%
9817     /OCProperties<<%
9818     /OCGs \OBJ@OCGs
9819     /D<<%
9820     /OFF[\OBJ@OCG@print]%
9821     /AS[%
9822       <<%
9823       /Event/View%

```

```

9824      /OCGs \OBJ@OCGs
9825      /Category[/View]%
9826      >>%
9827      <<%
9828      /Event/Print%
9829      /OCGs \OBJ@OCGs
9830      /Category[/Print]%
9831      >>%
9832      <<%
9833      /Event/Export%
9834      /OCGs \OBJ@OCGs
9835      /Category[/Print]%
9836      >>%
9837      ]%
9838      >>%
9839      >>%
9840      >>%
9841      }%
9842      \AtBeginShipout{%
9843      \setbox\AtBeginShipoutBox=\hbox{%
9844      \copy\AtBeginShipoutBox
9845      \@pdfm@mark{%
9846      put @resources <<%
9847      /Properties<<%
9848      /OCView \OBJ@OCG@view
9849      /OCPrint \OBJ@OCG@print
9850      >>%
9851      >>%
9852      }%
9853      }%
9854      }%
9855      \Hy@AtBeginDocument{%
9856      \def\Hy@colorlink#1{%
9857      \begingroup
9858      \ifHy@ocgcolorlinks
9859      \def\Hy@ocgcolor{#1}%
9860      \setbox0=\hbox\bgroup\color@begingroup
9861      \else
9862      \HyColor@UseColor#1%
9863      \fi
9864      }%
9865      \def\Hy@endcolorlink{%
9866      \ifHy@ocgcolorlinks
9867      \color@endgroup\egroup
9868      \mbox{%
9869      \@pdfm@mark{content /OC/OCPrint BDC}%
9870      \rlap{\copy0}%
9871      \@pdfm@mark{content EMC/OC/OCView BDC}%
9872      \begingroup
9873      \expandafter\HyColor@UseColor\Hy@ocgcolor
9874      \box0 %
9875      \endgroup
9876      \@pdfm@mark{content EMC}%
9877      }%

```

```

9878     \fi
9879     \endgroup
9880   }%
9881 }%
9882 \else
9883   \Hy@DisableOption{ocgcolorlinks}%
9884 \fi

```

Use primitive counter arithmetic here to avoid amsmath redefining `\stepcounter` (github issue/13)

```

9885 \def\Hy@BeginAnnot#1{%
9886   \global\advance\c@Hy@AnnotLevel\@ne
9887   \ifnum\c@Hy@AnnotLevel=\@ne
9888     #1%
9889   \fi
9890 }
9891 \def\Hy@endAnnot{%
9892   \ifnum\value{Hy@AnnotLevel}=\@ne
9893     \Hy@endcolorlink
9894     \@pdfm@mark{eann}%
9895   \fi
9896   \global\advance\c@Hy@AnnotLevel\m@ne
9897 }

9898 \def\Hy@undefinedname{UNDEFINED}
9899 \def\hyper@linkstart#1#2{%
9900   \Hy@VerboseLinkStart{#1}{#2}%
9901   \leavevmode
9902   \Hy@BeginAnnot{%
9903     \protected@edef\Hy@testname{#2}%
9904     \ifx\Hy@testname\@empty
9905       \Hy@Warning{%
9906         Empty destination name,\MessageBreak
9907         using ``\Hy@undefinedname'%
9908       }%
9909     \let\Hy@testname\Hy@undefinedname
9910   \else
9911     \Hy@pstringdef\Hy@testname{%
9912       \expandafter\HyperDestNameFilter\expandafter{%
9913         \Hy@testname
9914       }%
9915     }%
9916   \fi
9917   \@pdfm@mark{%
9918     bann<<%
9919     /Type/Annot%
9920     /Subtype/Link%
9921     \ifHy@pdfa /F 4\fi
9922     \Hy@setpdfborder
9923     \Hy@setpdfhighlight
9924     \expandafter\ifx\c@name @#1bordercolor\endcsname\relax
9925   \else
9926     /C[\c@name @#1bordercolor\endcsname]%
9927   \fi
9928   /A<<%

```

```

9929      /S/GoTo%
9930      /D(\Hy@testname)%
9931      \Hy@href@nextactionraw
9932      >>%
9933      >>%
9934      }%
9935      \expandafter\Hy@colorlink\csname @#1color\endcsname
9936      }%
9937      }
9938      \def\hyper@linkend{\Hy@EndAnnot}%
9939      \def\hyper@link#1#2#3{%
9940      \hyper@linkstart{#1}{#2}#3\Hy@xspace@end\hyper@linkend
9941      }
9942      \def\hyper@linkfile#1#2#3{%
9943      \leavevmode
9944      \Hy@BeginAnnot{%
9945      \def\Hy@pstringF{#2}%
9946      \Hy@CleanupFile\Hy@pstringF
9947      \Hy@pstringdef\Hy@pstringF\Hy@pstringF
9948      \Hy@pstringdef\Hy@pstringD{#3}%
9949      \Hy@MakeRemoteAction
9950      \@pdfm@mark{%
9951      bann<<%
9952      /Type/Annot%
9953      /Subtype/Link%
9954      \ifHy@pdfa /F 4\fi
9955      \Hy@setpdfborder
9956      \Hy@setpdfhighlight
9957      \ifx\@filebordercolor\relax
9958      \else
9959      /C[\@filebordercolor]%
9960      \fi
9961      /A<<%
9962      /S/GoToR%
9963      /F(\Hy@pstringF)%
9964      /D%
9965      \ifx\#3\%
9966      [\Hy@href@page\@pdfremotestartview]%
9967      \else
9968      (\Hy@pstringD)%
9969      \fi
9970      \Hy@SetNewWindow
9971      \Hy@href@nextactionraw
9972      >>%
9973      >>%
9974      }%
9975      \Hy@colorlink\@filecolor
9976      }%
9977      #1\Hy@xspace@end
9978      \Hy@EndAnnot
9979      }
9980      \def\@hyper@launch run:#1\#2#3{% filename, anchor text linkname
9981      \leavevmode
9982      \Hy@BeginAnnot{%

```

```

9983 \Hy@pstringdef\Hy@pstringF{#1}%
9984 \Hy@pstringdef\Hy@pstringP{#3}%
9985 \@pdfm@mark{%
9986   bann<<%
9987     /Type/Annot%
9988     /Subtype/Link%
9989     \ifHy@pdfa /F 4\fi
9990     \Hy@setpdfborder
9991     \Hy@setpdfhighlight
9992     \ifx\@runbordercolor\relax
9993     \else
9994       /C[\@runbordercolor]%
9995     \fi
9996     /A<<%
9997     /F(\Hy@pstringF)%
9998     /S/Launch%
9999     \Hy@SetNewWindow
10000     \ifx\#3\%
10001     \else
10002       /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
10003     \fi
10004     \Hy@href@nextactionraw
10005   >>%
10006 >>%
10007 }%
10008 \Hy@colorlink\@runcolor
10009 }%
10010 #2\Hy@xspace@end
10011 \Hy@EndAnnot
10012 }
10013 \def\hyper@linkurl#1#2{%
10014 \leavevmode
10015 \Hy@BeginAnnot{%
10016 \Hy@pstringdef\Hy@pstringURI{#2}%
10017 \@pdfm@mark{%
10018   bann<<%
10019     /Type/Annot%
10020     /Subtype/Link%
10021     \ifHy@pdfa /F 4\fi
10022     \Hy@setpdfborder
10023     \Hy@setpdfhighlight
10024     \ifx\@urlbordercolor\relax
10025     \else
10026       /C[\@urlbordercolor]%
10027     \fi
10028     /A<<%
10029     /S/URI%
10030     /URI(\Hy@pstringURI)%
10031     \ifHy@href@ismap
10032     /IsMap true%
10033     \fi
10034     \Hy@href@nextactionraw
10035   >>%
10036 >>%

```

```

10037 }%
10038 \Hy@colorlink\@urlcolor
10039 }%
10040 #1\Hy@xspace@end
10041 \Hy@EndAnnot
10042 }
10043 \def\Acrobatmenu#1#2{%
10044 \Hy@Acrobatmenu{#1}{#2}{%
10045 \Hy@BeginAnnot{%
10046 \EdefEscapeName\Hy@temp@menu{#1}%
10047 \@pdfm@mark{%
10048 bann<<%
10049 /Type/Annot%
10050 /Subtype/Link%
10051 \ifHy@pdfa /F 4\fi
10052 \Hy@setpdfborder
10053 \Hy@setpdfhighlight
10054 \ifx\@menubordercolor\relax
10055 \else
10056 /C[\@menubordercolor]%
10057 \fi
10058 /A<<%
10059 /S/Named%
10060 /N/\Hy@temp@menu
10061 \Hy@href@nextactionraw
10062 >>%
10063 >>%
10064 }%
10065 \Hy@colorlink\@menucolor
10066 }%
10067 #2\Hy@xspace@end
10068 \Hy@EndAnnot
10069 }%
10070 }
10071
10072 \def\PDF@FinishDoc{%
10073 \Hy@UseMaketitleInfos
10074 \HyInfo@GenerateAddons
10075 \@pdfm@mark{%
10076 docinfo<<%
10077 /Title(\@pdftitle)%
10078 /Subject(\@pdfsubject)%
10079 /Creator(\@pdfcreator)%
10080 \ifx\@pdfcreationdate\@empty
10081 \else
10082 /CreationDate(\@pdfcreationdate)%
10083 \fi
10084 \ifx\@pdfmoddate\@empty
10085 \else
10086 /ModDate(\@pdfmoddate)%
10087 \fi
10088 /Author(\@pdfauthor)%
10089 \ifx\@pdfproducer\relax
10090 \else

```

```

10091      /Producer(\@pdfproducer)%
10092    \fi
10093    /Keywords(\@pdfkeywords)%
10094    \ifx\@pdftrapped\@empty
10095    \else
10096      /Trapped/\@pdftrapped
10097    \fi
10098    \HyInfo@Addons
10099  >>%
10100 }%
10101 \Hy@DisableOption{pdfauthor}%
10102 \Hy@DisableOption{pdftitle}%
10103 \Hy@DisableOption{pdfsubject}%
10104 \Hy@DisableOption{pdfcreator}%
10105 \Hy@DisableOption{addtopdfcreator}%
10106 \Hy@DisableOption{pdfcreationdate}%
10107 \Hy@DisableOption{pdfcreationdate}%
10108 \Hy@DisableOption{pdfmoddate}%
10109 \Hy@DisableOption{pdfproducer}%
10110 \Hy@DisableOption{pdfkeywords}%
10111 \Hy@DisableOption{pdftrapped}%
10112 \Hy@DisableOption{pdfinfo}%
10113 }
10114 \def\PDF@SetupDoc{%
10115   \edef\Hy@temp{%
10116     \ifHy@pdftoolbar\else /HideToolbar true\fi
10117     \ifHy@pdfmenubar\else /HideMenubar true\fi
10118     \ifHy@pdfwindowui\else /HideWindowUI true\fi
10119     \ifHy@pdffitwindow /FitWindow true\fi
10120     \ifHy@pdfcenterwindow /CenterWindow true\fi
10121     \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
10122     \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
10123     \Hy@UseNameKey{Direction}\@pdfdirection
10124     \Hy@UseNameKey{ViewArea}\@pdfviewarea
10125     \Hy@UseNameKey{ViewClip}\@pdfviewclip
10126     \Hy@UseNameKey{PrintArea}\@pdfprintarea
10127     \Hy@UseNameKey{PrintClip}\@pdfprintclip
10128     \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
10129     \Hy@UseNameKey{Duplex}\@pdfduplex
10130     \ifx\@pdfpicktraybypdfsize\@empty
10131     \else
10132       /PickTrayByPDFSize \@pdfpicktraybypdfsize
10133     \fi
10134     \ifx\@pdfprintpagerange\@empty
10135     \else
10136       /PrintPageRange[\@pdfprintpagerange]%
10137     \fi
10138     \ifx\@pdfnumcopies\@empty
10139     \else
10140       /NumCopies \@pdfnumcopies
10141     \fi
10142   }%
10143   \Hy@pstringdef\Hy@pstringB{\@baseurl}%
10144   \@pdfm@mark{%

```

```

10145 docview<<%
10146   \ifx\@pdfstartpage\@empty
10147   \else
10148     \ifx\@pdfstartview\@empty
10149     \else
10150       /OpenAction[@page\@pdfstartpage\@pdfstartview]%
10151     \fi
10152   \fi
10153   \ifx\@baseurl\@empty
10154   \else
10155     /URI<</Base(\Hy@pstringB)>>%
10156   \fi
10157   /PageMode/\@pdfpagemode
10158   \ifx\Hy@temp\@empty
10159   \else
10160     /ViewerPreferences<<\Hy@temp>>%
10161   \fi
10162   \Hy@UseNameKey{PageLayout}\@pdfpagelayout
10163   \ifx\@pdflang\relax
10164   \else
10165     /Lang(\@pdflang)%
10166   \fi
10167 >>%
10168 }%
10169 \ifx\@pdfpagescrop\@empty
10170 \else
10171   \@pdfm@mark{put @pages <</CropBox[\@pdfpagescrop]>>}%
10172 \fi
10173 }
10174 </dvipdfm | xetex>
10175 < *dvipdfm | xetex>

```

\hyper@pagetransition

```

10176 \def\hyper@pagetransition{%
10177   \ifx\@pdfpagetransition\relax
10178   \else
10179     \ifx\@pdfpagetransition\@empty
10180     \else
10181       \special{pdf:put @thispage %
10182         <</Trans<</S/\@pdfpagetransition>>>>%
10183       }%
10184     \fi
10185   \fi
10186 }

```

\hyper@pageduration

```

10187 \def\hyper@pageduration{%
10188   \ifx\@pdfpageduration\relax
10189   \else
10190     \ifx\@pdfpageduration\@empty
10191     \else
10192       \special{pdf:put @thispage %
10193         <</Dur \@pdfpageduration>>%
10194     }%

```



```

10195 \fi
10196 \fi
10197 }

10198 \g@addto@macro\Hy@EveryPageBoxHook{%
10199 \hyper@pagetransition
10200 \hyper@pageduration
10201 }

10202 </dvipdfm | xetex>

```

XeTeX uses pdfTeX's method `\pdfpagewidth` and `\pdfpageheight` for setting the paper size.

```

10203 <*dvipdfm>
10204 \AtBeginShipoutFirst{%
10205 \ifHy@setpagesize
10206 \begingroup
10207 \ifnum\mag=\@m
10208 \ifdim\stockwidth>\z@
10209 \ifdim\stockheight>\z@
10210 \special{papersize=\the\stockwidth,\the\stockheight}%
10211 \else
10212 \ifdim\paperwidth>\z@
10213 \ifdim\paperheight>\z@
10214 \special{papersize=\the\paperwidth,\the\paperheight}%
10215 \fi
10216 \fi
10217 \fi
10218 \else
10219 \ifdim\stockwidth=\z@
10220 \ifdim\paperwidth>\z@
10221 \ifdim\paperheight>\z@
10222 \special{papersize=\the\paperwidth,\the\paperheight}%
10223 \fi
10224 \fi
10225 \fi
10226 \fi
10227 \fi
10228 \endgroup
10229 \fi
10230 \Hy@DisableOption{setpagesize}%
10231 }

10232 </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.

```

10233 <*vtexhtml>
10234 \providecommand*\XR@ext}{htm}
10235 \RequirePackage{vtexhtml}
10236 \newif\if@Localurl
10237 \let\PDF@FinishDoc\tx@empty
10238 \def\PDF@SetupDoc{%
10239 \ifx\@baseurl\@empty

```

```

10240 \else
10241 \special{!direct <base href="@baseurl">}%
10242 \fi
10243 }
10244 \def\@urltype{url}
10245 \def\hyper@link#1#2#3{%
10246 \Hy@VerboseLinkStart{#1}{#2}%
10247 \leavevmode
10248 \special{!direct <a href=%
10249 \hyper@quote\hyper@hash\HyperDestNameFilter{#2}\hyper@quote>}%
10250 #3\Hy@xspace@end
10251 \special{!direct </a>}%
10252 }
10253 \def\hyper@linkurl#1#2{%
10254 \begingroup
10255 \hyper@chars
10256 \leavevmode
10257 \MathBSuppress=1\relax
10258 \special{!direct <a href=%
10259 \hyper@quote\HyperDestNameFilter{#2}\hyper@quote>}%
10260 #1\Hy@xspace@end
10261 \MathBSuppress=0\relax
10262 \special{!direct </a>}%
10263 \endgroup
10264 }
10265 \def\hyper@linkfile#1#2#3{%
10266 \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\\else\##3\fi}%
10267 }
10268 \def\hyper@linkstart#1#2{%
10269 \Hy@VerboseLinkStart{#1}{#2}%
10270 \def\Hy@tempa{#1}\ifx\Hy@tempa\@urltype
10271 \@Localurltrue
10272 \special{!direct <a href=\hyper@quote#2\hyper@quote>}%
10273 \else
10274 \@Localurlfalse
10275 \begingroup
10276 \hyper@chars
10277 \special{!aref \HyperDestNameFilter{#2}}%
10278 \endgroup
10279 \fi
10280 }
10281 \def\hyper@linkend{%
10282 \if@Localurl
10283 \special{!endaref}%
10284 \else
10285 \special{!direct </a>}%
10286 \fi
10287 }
10288 \Hy@WrapperDef\hyper@anchorstart#1{%
10289 \Hy@SaveLastskip
10290 \Hy@VerboseAnchor{#1}%
10291 \begingroup
10292 \hyper@chars
10293 \special{!aname #1}%

```

```

10294 \special{!direct <a name=%
10295 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
10296 \endgroup
10297 \Hy@activeanchortrue
10298 }
10299 \def\hyper@anchorend{%
10300 \special{!direct </a>}%
10301 \Hy@activeanchorfalse
10302 \Hy@RestoreLastskip
10303 }
10304 \Hy@WrapperDef\hyper@anchor#1{%
10305 \Hy@SaveLastskip
10306 \Hy@VerboseAnchor{#1}%
10307 \begingroup
10308 \let\protect=\string
10309 \hyper@chars
10310 \leavevmode
10311 \special{!aname #1}%
10312 \special{!direct <a name=%
10313 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
10314 \endgroup
10315 \Hy@activeanchortrue
10316 \bgroup\anchor@spot\egroup
10317 \special{!direct </a>}%
10318 \Hy@activeanchorfalse
10319 \Hy@RestoreLastskip
10320 }
10321 \def\@Form[#1]{%
10322 \Hy@Message{Sorry, TeXpider does not yet support FORMs}%
10323 }
10324 \let\@endForm\ltx@empty
10325 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
10326 \Hy@Message{Sorry, TeXpider does not yet support FORM gauges}%
10327 }
10328 \def\@TextField[#1]#2{% parameters, label
10329 \Hy@Message{Sorry, TeXpider does not yet support FORM text fields}%
10330 }
10331 \def\@CheckBox[#1]#2{% parameters, label
10332 \Hy@Message{Sorry, TeXpider does not yet support FORM checkboxes}%
10333 }
10334 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
10335 \Hy@Message{Sorry, TeXpider does not yet support FORM choice menus}%
10336 }
10337 \def\@PushButton[#1]#2{% parameters, label
10338 \Hy@Message{Sorry, TeXpider does not yet support FORM pushbuttons}%
10339 }
10340 \def\@Reset[#1]#2{%
10341 \Hy@Message{Sorry, TeXpider does not yet support FORMs}%
10342 }
10343 \def\@Submit[#1]#2{%
10344 \Hy@Message{Sorry, TeXpider does not yet support FORMs}%
10345 }
10346 \</vtexhtml>
10347 \<vtex>

```

VT_EX 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.

```

10348 \ifcsname mediaheight\endcsname
10349 \ifHy@setpagesize
10350   \providecommand*\VTEXInitMediaSize}{%
10351     \ifnum\mag=\@m
10352       \ifdim\stockwidth>\z@
10353         \ifdim\stockheight>\z@
10354           \setlength\mediaheight\stockheight
10355           \setlength\mediawidth\stockwidth
10356         \else
10357           \ifdim\paperwidth>\z@
10358             \ifdim\paperheight>\z@
10359               \setlength\mediaheight\paperheight
10360               \setlength\mediawidth\paperwidth
10361             \fi
10362           \fi
10363         \fi
10364       \else
10365         \ifdim\stockwidth=\z@
10366           \ifdim\paperwidth>\z@
10367             \ifdim\paperheight>\z@
10368               \setlength\mediaheight\paperheight
10369               \setlength\mediawidth\paperwidth
10370             \fi
10371           \fi
10372         \fi
10373       \fi
10374     \fi
10375   }%
10376 \Hy@AtBeginDocument{\VTEXInitMediaSize}%
10377 \fi
10378 \Hy@DisableOption{setpagesize}%
10379 \fi

```

Older versions of VT_EX require `xyz` in lower case.

```

10380 \providecommand*\@pdfview{xyz}
10381 \providecommand*\@pdfborder{0 0 1}
10382 \providecommand*\@pdfborderstyle{}
10383 \let\CurrentBorderColor\@linkbordercolor
10384 \Hy@WrapperDef\hyper@anchor#1{%
10385   \Hy@SaveLastskip
10386   \Hy@VerboseAnchor{#1}%
10387   \begingroup
10388     \let\protect=\string
10389     \hyper@chars
10390     \special{!aname \HyperDestNameFilter{#1};\@pdfview}%
10391   \endgroup
10392   \Hy@activeanchortrue
10393   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
10394   \Hy@activeanchorfalse
10395   \Hy@RestoreLastskip
10396 }

```

```

10397 \Hy@WrapperDef\hyper@anchorstart#1{%
10398 \Hy@SaveLastskip
10399 \Hy@VerboseAnchor{#1}%
10400 \begingroup
10401 \hyper@chars
10402 \special{!aname \HyperDestNameFilter{#1};\@pdfview}%
10403 \endgroup
10404 \Hy@activeanchortrue
10405 }
10406 \def\hyper@anchorend{%
10407 \Hy@activeanchorfalse
10408 \Hy@RestoreLastskip
10409 }
10410 \def\@urltype{url}
10411 \def\Hy@undefinedname{UNDEFINED}
10412 \def\hyper@linkstart#1#2{%
10413 \Hy@VerboseLinkStart{#1}{#2}%
10414 \Hy@pstringdef\Hy@pstringURI{#2}%
10415 \expandafter\Hy@colorlink\csname @#1color\endcsname
10416 \ltx@ifundefined{@#1bordercolor}{%
10417 \let\CurrentBorderColor\relax
10418 }{%
10419 \edef\CurrentBorderColor{%
10420 \csname @#1bordercolor\endcsname
10421 }%
10422 }%
10423 \def\Hy@tempa{#1}%
10424 \ifx\Hy@tempa\@urltype
10425 \special{!%
10426 aref <u=/Type/Action/S/URI/URI(\Hy@pstringURI)%
10427 \ifHy@href@ismap
10428 /IsMap true%
10429 \fi
10430 \Hy@href@nextactionraw
10431 >,%
10432 a=<%
10433 \ifHy@pdfa /F 4\fi
10434 \Hy@setpdfborder
10435 \ifx\CurrentBorderColor\relax
10436 \else
10437 /C [\CurrentBorderColor]%
10438 \fi
10439 >%
10440 }%
10441 \else
10442 \protected@edef\Hy@testname{#2}%
10443 \ifx\Hy@testname\@empty
10444 \Hy@Warning{%
10445 Empty destination name,\MessageBreak
10446 using ``\Hy@undefinedname'%
10447 }%
10448 \let\Hy@testname\Hy@undefinedname
10449 \fi
10450 \special{!%

```

```

10451     aref \expandafter\HyperDestNameFilter
10452         \expandafter{\Hy@testname};%
10453     a=<%
10454         \ifHy@pdfa /F 4\fi
10455         \Hy@setpdfborder
10456         \ifx\CurrentBorderColor\relax
10457             \else
10458                 /C [\CurrentBorderColor]%
10459             \fi
10460     >%
10461 }%
10462 \fi
10463 }
10464 \def\hyper@linkend{%
10465     \special{!endaref}%
10466     \Hy@endcolorlink
10467 }
10468 \def\hyper@linkfile#1#2#3{%
10469     \leavevmode
10470     \def\Hy@pstringF{#2}%
10471     \Hy@CleanupFile\Hy@pstringF
10472     \special{!%
10473         aref <%
10474             \ifnum\Hy@VTeXversion>753 \ifHy@pdfnewwindow n\fi\fi
10475             f=\Hy@pstringF>#3;%
10476         a=<%
10477             \ifHy@pdfa /F 4\fi
10478             \Hy@setpdfborder
10479             \ifx\@filebordercolor\relax
10480                 \else
10481                     /C [\@filebordercolor]%
10482                 \fi
10483             >%
10484         }%
10485         \Hy@colorlink\@filecolor
10486         #1\Hy@xspace@end
10487         \Hy@endcolorlink
10488     \special{!endaref}%
10489 }
10490 \def\hyper@linkurl#1#2{%
10491     \begingroup
10492     \Hy@pstringdef\Hy@pstringURI{#2}%
10493     \hyper@chars
10494     \leavevmode
10495     \special{!%
10496         aref <u=/Type/Action/S/URI/URI(\Hy@pstringURI)%
10497             \ifHy@href@ismap
10498                 /IsMap true%
10499             \fi
10500             \Hy@href@nextactionraw
10501             >;%
10502         a=<%
10503             \ifHy@pdfa /F 4\fi
10504             \Hy@setpdfborder

```

```

10505     \ifx\@urlbordercolor\relax
10506     \else
10507         /C [\@urlbordercolor]%
10508     \fi
10509     >%
10510 }%
10511 \Hy@colorlink\@urlcolor
10512 #1\Hy@xspace@end
10513 \Hy@endcolorlink
10514 \special{!endaref}%
10515 \endgroup
10516 }
10517 \def\hyper@link#1#2#3{%
10518 \Hy@VerboseLinkStart{#1}{#2}%
10519 \ltx@ifundefined{@#1bordercolor}{%
10520 \let\CurrentBorderColor\relax
10521 }{%
10522 \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
10523 }%
10524 \leavevmode
10525 \protected@edef\Hy@testname{#2}%
10526 \ifx\Hy@testname\@empty
10527 \Hy@Warning{%
10528     Empty destination name,\MessageBreak
10529     using ``\Hy@undefinedname'%
10530 }%
10531 \let\Hy@testname\Hy@undefinedname
10532 \fi
10533 \special{!%
10534     aref \expandafter\HyperDestNameFilter
10535         \expandafter{\Hy@testname};%
10536 a=<%
10537     \ifHy@pdfa /F 4\fi
10538     \Hy@setpdfborder
10539     \ifx\CurrentBorderColor\relax
10540     \else
10541         /C [\CurrentBorderColor]%
10542     \fi
10543     >%
10544 }%
10545 \expandafter
10546 \Hy@colorlink\csname @#1color\endcsname
10547 #3\Hy@xspace@end
10548 \Hy@endcolorlink
10549 \special{!endaref}%
10550 }
10551 \def\hyper@image#1#2{%
10552 \hyper@linkurl{#2}{#1}%
10553 }
10554 \def\@hyper@launch run:#1\#2#3{%
10555 \Hy@pstringdef\Hy@pstringF{#1}%
10556 \Hy@pstringdef\Hy@pstringP{#3}%
10557 \leavevmode
10558 \special{!aref %

```

```

10559 <u=%
10560 /Type/Action%
10561 /S/Launch%
10562 /F(\Hy@pstringF)%
10563 \Hy@SetNewWindow
10564 \ifx\#3\%
10565 \else
10566 /Win<</F(\Hy@pstringF)/P(\Hy@pstringP)>>%
10567 \fi
10568 \Hy@href@nextactionraw
10569 >;%
10570 a=<%
10571 \ifHy@pdfa /F 4\fi
10572 \Hy@setpdfborder
10573 \ifx\@runbordercolor\relax
10574 \else
10575 /C[\@runbordercolor]%
10576 \fi
10577 >%
10578 }%
10579 \Hy@colorlink\@runcolor
10580 #2\Hy@xspace@end
10581 \Hy@endcolorlink
10582 \special{!endaref}%
10583 }
10584 \def\Acrobatmenu#1#2{%
10585 \EdefEscapeName\Hy@temp@menu{#1}%
10586 \Hy@Acrobatmenu{#1}{#2}{%
10587 \special{!%
10588 aref <u=/S /Named /N /\Hy@temp@menu>;%
10589 a=<%
10590 \ifHy@pdfa /F 4\fi
10591 \Hy@setpdfborder
10592 \ifx\@menubordercolor\relax
10593 \else
10594 /C[\@menubordercolor]%
10595 \fi
10596 >%
10597 }%
10598 \Hy@colorlink\@menucolor
10599 #2\Hy@xspace@end
10600 \Hy@endcolorlink
10601 \special{!endaref}%
10602 }%
10603 }

```

The following code (transition effects) is made by Alex Kostin.

The code below makes sense for VTeX 7.02 or later.

Please never use \@ifundefined{VTeXversion}{..}{..} *globally*.

```

10604 \ifnum\Hy@VTeXversion<702 %
10605 \else
10606 \def\hyper@pagetransition{%
10607 \ifx\@pdfpagetransition\relax
10608 \else

```



```
10609 \ifx\@pdfpagetransition\@empty
```

Standard incantation.

1. Does an old entry have to be deleted? 2. If 1=yes, how to delete?

```
10610 \else
```

```
10611 \hvtex@parse@trans\@pdfpagetransition
```

```
10612 \fi
```

```
10613 \fi
```

```
10614 }%
```

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:

```
10615 \def\hvtex@trans@effect@Blinds{\def\hvtex@trans@code{B}}%
```

```
10616 \def\hvtex@trans@effect@Box{\def\hvtex@trans@code{X}}%
```

```
10617 \def\hvtex@trans@effect@Dissolve{\def\hvtex@trans@code{D}}%
```

```
10618 \def\hvtex@trans@effect@Glitter{\def\hvtex@trans@code{G}}%
```

```
10619 \def\hvtex@trans@effect@Split{\def\hvtex@trans@code{S}}%
```

```
10620 \def\hvtex@trans@effect@Wipe{\def\hvtex@trans@code{W}}%
```

```
10621 \def\hvtex@trans@effect@R{\def\hvtex@trans@code{R}}%
```

Optional parameters:

```
10622 \def\hvtex@par@dimension{/Dm}%
```

```
10623 \def\hvtex@par@direction{/Di}%
```

```
10624 \def\hvtex@par@duration{/D}%
```

```
10625 \def\hvtex@par@motion{/M}%
```

Tokenizer:

```
10626 \def\hvtex@gettoken{%
```

```
10627 \expandafter\hvtex@gettoken@\hvtex@buffer\@nil
```

```
10628 }%
```

Notice that tokens in the input buffer must be space delimited.

```
10629 \def\hvtex@gettoken@#1 #2\@nil{%
```

```
10630 \edef\hvtex@token{#1}%
```

```
10631 \edef\hvtex@buffer{#2}%
```

```
10632 }%
```

```
10633 \def\hvtex@parse@trans#1{%
```

Initializing code:

```

10634 \let\hvtex@trans@code\@empty
10635 \let\hvtex@param@dimension\@empty
10636 \let\hvtex@param@direction\@empty
10637 \let\hvtex@param@duration\@empty
10638 \let\hvtex@param@motion\@empty
10639 \edef\hvtex@buffer{#1\space}%

```

First token is the PDF transition name without escape.

```

10640 \hvtex@gettoken
10641 \ifx\hvtex@token\@empty

```

Leading space(s)?

```

10642 \ifx\hvtex@buffer\@empty

```

The buffer is empty, nothing to do.

```

10643 \else
10644 \hvtex@gettoken
10645 \fi
10646 \fi
10647 \csname hvtex@trans@effect@\hvtex@token\endcsname

```

Now is time to parse optional parameters.

```

10648 \hvtex@trans@params
10649 }%

```

Reentrant macro to parse optional parameters.

```

10650 \def\hvtex@trans@params{%
10651 \ifx\hvtex@buffer\@empty
10652 \else
10653 \hvtex@gettoken
10654 \let\hvtex@trans@par\hvtex@token
10655 \ifx\hvtex@buffer\@empty
10656 \else
10657 \hvtex@gettoken
10658 \ifx\hvtex@trans@par\hvtex@par@duration

```

/D is the effect duration in seconds. V_T_EX special takes it in milliseconds.

```

10659 \let\hvtex@param@duration\hvtex@token
10660 \else \ifx\hvtex@trans@par\hvtex@par@motion

```

/M can be either /I or /O

```

10661 \expandafter\edef\expandafter\hvtex@param@motion
10662 \expandafter{\expandafter\@gobble\hvtex@token}%
10663 \else \ifx\hvtex@trans@par\hvtex@par@dimension

```

/Dm can be either /H or /V

```

10664 \expandafter\edef\expandafter\hvtex@param@dimension
10665 \expandafter{\expandafter\@gobble\hvtex@token}%
10666 \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).

```

10667 \let\hvtex@param@direction\hvtex@token
10668 \fi\fi\fi\fi
10669 \fi
10670 \fi

```

```

10671 \ifx\hvtex@buffer\@empty
10672 \let\next\hvtex@produce@trans
10673 \else
10674 \let\next\hvtex@trans@params
10675 \fi
10676 \next
10677 }%

```

Merge <transition_effect> and issue the special when possible. Too lazy to validate optional parameters.

```

10678 \def\hvtex@produce@trans{%
10679 \let\vtex@trans@special\@empty
10680 \if S\hvtex@trans@code
10681 \edef\vtex@trans@special{\hvtex@trans@code
10682 \hvtex@param@dimension\hvtex@param@motion}%
10683 \else\if B\hvtex@trans@code
10684 \edef\vtex@trans@special{%
10685 \hvtex@trans@code\hvtex@param@dimension
10686 }%
10687 \else\if X\hvtex@trans@code
10688 \edef\vtex@trans@special{%
10689 \hvtex@trans@code\hvtex@param@motion
10690 }%
10691 \else\if W\hvtex@trans@code
10692 \edef\vtex@trans@special{%
10693 \hvtex@trans@code\hvtex@param@direction
10694 }%
10695 \else\if D\hvtex@trans@code
10696 \let\vtex@trans@special\hvtex@trans@code
10697 \else\if R\hvtex@trans@code
10698 \let\vtex@trans@special\hvtex@trans@code
10699 \else\if G\hvtex@trans@code
10700 \edef\vtex@trans@special{%
10701 \hvtex@trans@code\hvtex@param@direction
10702 }%
10703 \fi\fi\fi\fi\fi\fi
10704 \ifx\vtex@trans@special\@empty
10705 \else
10706 \ifx\hvtex@param@duration\@empty
10707 \else
10708 \setlength{\dimen@}{\hvtex@param@duration\p@}%

```

I'm not guilty of possible overflow.

```

10709 \multiply\dimen@\@m
10710 \edef\vtex@trans@special{%
10711 \vtex@trans@special,\strip@pt\dimen@
10712 }%
10713 \fi

```

And all the mess is just for this.

```

10714 \special{!trans \vtex@trans@special}%
10715 \fi
10716 }%
10717 \def\hyper@pageduration{%
10718 \ifx\@pdfpageduration\relax

```

```

10719 \else
10720 \ifx\@pdfpageduration\@empty
10721 \special{!duration-}%
10722 \else
10723 \special{!duration \@pdfpageduration}%
10724 \fi
10725 \fi
10726 }%
10727 \g@addto@macro\Hy@EveryPageBoxHook{%
10728 \hyper@pagetransition
10729 \hyper@pageduration
10730 }%
10731 \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
10732 \ifx\@pdfproducer\relax
10733 \def\@pdfproducer{VTeX}%
10734 \ifnum\Hy@VTeXversion>\z@
10735 \count@\VTeXversion
10736 \divide\count@ 100 %
10737 \edef\@pdfproducer{\@pdfproducer\space v\the\count@}%
10738 \multiply\count@ -100 %
10739 \advance\count@\VTeXversion
10740 \edef\@pdfproducer{%
10741 \@pdfproducer
10742 .\ifnum\count@<10 0\fi\the\count@
10743 \ifx\VTeXOS\@undefined\else
10744 \ifnum\VTeXOS>0 %
10745 \ifnum\VTeXOS<6 %
10746 \space(%
10747 \ifcase\VTeXOS
10748 \or Windows\or Linux\or OS/2\or MacOS\or MacOS/X%
10749 \fi
10750 )%
10751 \fi
10752 \fi
10753 \fi
10754 ,\space
10755 \ifnum\OpMode=\@one PDF\else PS\fi
10756 \space backend%
10757 \ifx\gexmode\@undefined\else
10758 \ifnum\gexmode>\z@\space with GeX\fi
10759 \fi
10760 }%
10761 \fi

```

10762 \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).

```

10763 \def\PDF@SetupDoc{%
10764   \ifx\@pdfpagescrop\@empty
10765   \else
10766     \special{!pdfinfo b=<\@pdfpagescrop>}%
10767   \fi
10768   \ifx\@pdfstartpage\@empty
10769   \else
10770     \ifx\@pdfstartview\@empty
10771     \else
10772       \special{!onopen Page\@pdfstartpage}%
10773     \fi
10774   \fi
10775   \special{!pdfinfo p=</\@pdfpagemode>}%
10776   \ifx\@baseurl\@empty
10777   \else
10778     \special{!pdfinfo u=<<</Base (\@baseurl)>>>}%
10779   \fi
10780   \special{!pdfinfo v=<<<%
10781     \ifHy@pdftoolbar\else /HideToolbar true\fi
10782     \ifHy@pdfmenubar\else /HideMenubar true\fi
10783     \ifHy@pdfwindowui\else /HideWindowUI true\fi
10784     \ifHy@pdfwindow /FitWindow true\fi
10785     \ifHy@pdfcenterwindow /CenterWindow true\fi
10786     \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
10787     \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
10788     \Hy@UseNameKey{Direction}\@pdfdirection
10789     \Hy@UseNameKey{ViewArea}\@pdfviewarea
10790     \Hy@UseNameKey{ViewClip}\@pdfviewclip
10791     \Hy@UseNameKey{PrintArea}\@pdfprintarea
10792     \Hy@UseNameKey{PrintClip}\@pdfprintclip
10793     \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
10794     \Hy@UseNameKey{Duplex}\@pdfduplex
10795     \ifx\@pdfpicktraybypdfsize\@empty
10796     \else
10797       /PickTrayByPDFSize \@pdfpicktraybypdfsize
10798     \fi
10799     \ifx\@pdfprintpagerange\@empty

```

```

10800 \else
10801 /PrintPageRange[\@pdfprintpagerange]%
10802 \fi
10803 \ifx\@pdfnumcopies\@empty
10804 \else
10805 /NumCopies \@pdfnumcopies
10806 \fi
10807 >>>}%
10808 \ifx\@pdfpagelayout\@empty
10809 \else
10810 \special{!pdfinfo l=</\@pdfpagelayout\space>}%
10811 \fi
10812 }%
10813 \HyInfo@AddonUnsupportedtrue
10814 \define@key{Hyp}{pdfcreationdate}{%
10815 \Hy@Warning{%
10816 VTeX does not support pdfcreationdate.\MessageBreak
10817 Therefore its setting is ignored%
10818 }%
10819 }
10820 \define@key{Hyp}{pdfmoddate}{%
10821 \Hy@Warning{%
10822 VTeX does not support pdfmoddate.\MessageBreak
10823 Therefore its setting is ignored%
10824 }%
10825 }
10826 \def\PDF@FinishDoc{%
10827 \Hy@UseMaketitleInfos
10828 \HyInfo@TrappedUnsupported
10829 \special{!pdfinfo a=<\@pdfauthor>}%
10830 \special{!pdfinfo t=<\@pdftitle>}%
10831 \special{!pdfinfo s=<\@pdfsubject>}%
10832 \special{!pdfinfo c=<\@pdfcreator>}%
10833 \ifx\@pdfproducer\relax
10834 \else
10835 \special{!pdfinfo r=<\@pdfproducer>}%
10836 \fi
10837 \special{!pdfinfo k=<\@pdfkeywords>}%
10838 \Hy@DisableOption{pdfauthor}%
10839 \Hy@DisableOption{pdftitle}%
10840 \Hy@DisableOption{pdfsubject}%
10841 \Hy@DisableOption{pdfcreator}%
10842 \Hy@DisableOption{addtopdfcreator}%
10843 \Hy@DisableOption{pdfcreationdate}%
10844 \Hy@DisableOption{pdfcreationdate}%
10845 \Hy@DisableOption{pdfmoddate}%
10846 \Hy@DisableOption{pdfproducer}%
10847 \Hy@DisableOption{pdfkeywords}%
10848 \Hy@DisableOption{pdftrapped}%
10849 \Hy@DisableOption{pdfinfo}%
10850 }
10851 </vtex>

```

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.

```
10852 <dviwindo>\def\literalps@out#1{\special{ps:#1}}%  
10853 <packageEnd>\providecommand*\Hy@DistillerDestFix{}  
10854 <*pdfmark | dviwindo>  
10855 \def\Hy@DistillerDestFix{%  
10856   \begingroup  
10857     \let\x\literalps@out
```

The fix has to be passed unchanged through GeX, if VTeX in PostScript mode with GeX is used.

```
10858   \ifnum \@ifundefined{OpMode}{0}{%  
10859     \@ifundefined{gexmode}{0}{%  
10860       \ifnum\gexmode>0 \OpMode\else 0\fi  
10861     }>1 %  
10862     \def\x##1{%  
10863       \immediate\special{!=##1}%  
10864     }%  
10865     \fi  
10866     \x{%  
10867       /product where{%  
10868         pop %  
10869         product(Distiller)search{%  
10870           pop pop pop %  
10871           version(.)search{%  
10872             exch pop exch pop%  
10873             (3011)eq{%  
10874               gsave %  
10875               newpath 0 0 moveto closepath clip%  
10876               /Courier findfont 10 scalefont setfont %  
10877               72 72 moveto(.)show %  
10878               grestore%  
10879             }if%  
10880             }{pop}ifelse%  
10881             }{pop}ifelse%  
10882           }if%  
10883         }%  
10884       \endgroup  
10885     }  
10886 </pdfmark | dviwindo>
```

43.8 Direct pdfmark support

Drivers that load pdfmark.def have to provide the correct macro definitions of

<code>\@pdfproducer</code>	for document information
<code>\literalps@out</code>	PostScript output
<code>\headerps@out</code>	PostScript output that goes in the header area

and the correct definitions of the following PostScript procedures:

<code>H.S</code>	start of anchor, link or rect
<code>#1 H.A</code>	end of anchor, argument=baselineskip in pt
<code>#1 H.L</code>	end of link, argument=baselineskip in pt
<code>H.R</code>	end of rect
<code>H.B</code>	raw rect code

```

10887 (*pdfmark)
10888 \Hy@breaklinks@unsupported
10889 \def\HyPat@ObjRef{%
10890   \[~{}]+\}%
10891 }
10892 \Hy@WrapperDef\hyper@anchor#1{%
10893   \Hy@SaveLastskip
10894   \Hy@VerboseAnchor{#1}%
10895   \begingroup
10896     \pdfmark[\anchor@spot]{%
10897       pdfmark=/DEST,%
10898       linktype=anchor,%
10899       View=/\@pdfview \@pdfviewparams,%
10900       DestAnchor={#1}%
10901     }%
10902   \endgroup
10903   \Hy@RestoreLastskip
10904 }
10905 \ltx@ifundefined{hyper@anchorstart}{\endinput}
10906 \Hy@WrapperDef\hyper@anchorstart#1{%
10907   \Hy@SaveLastskip
10908   \Hy@VerboseAnchor{#1}%
10909   \literalps@out{H.S}%
10910   \Hy@AllowHyphens
10911   \xdef\hyper@currentanchor{#1}%
10912   \Hy@activeanchortrue
10913 }
10914 \def\hyper@anchorend{%
10915   \literalps@out{\strip@pt@and@otherjunk\baselineskip\space H.A}%
10916   \pdfmark{%
10917     pdfmark=/DEST,%
10918     linktype=anchor,%
10919     View=/\@pdfview \@pdfviewparams,%
10920     DestAnchor=\hyper@currentanchor,%
10921   }%
10922   \Hy@activeanchorfalse
10923   \Hy@RestoreLastskip
10924 }
10925 \def\hyper@linkstart#1#2{%
10926   \Hy@VerboseLinkStart{#1}{#2}%
10927   \ifHy@breaklinks
10928     \else
10929     \leavevmode

```



```

10930 \ifmmode
10931   \def\Hy@LinkMath{$}%
10932 \else
10933   \let\Hy@LinkMath\ltx@empty
10934 \fi
10935 \Hy@SaveSpaceFactor
10936 \hbox\bgroup
10937 \Hy@RestoreSpaceFactor
10938 \Hy@LinkMath
10939 \fi
10940 \expandafter\Hy@colorlink\csname @#1color\endcsname
10941 \literalps@out{H.S}%
10942 \Hy@AllowHyphens
10943 \xdef\hyper@currentanchor{#2}%
10944 \gdef\hyper@currentlinktype{#1}%
10945 }
10946 \def\hyper@linkend{%
10947   \literalps@out{\strip@pt@and@otherjunk\baselineskip\space H.L}%
10948   \ltx@ifundefined{@\hyper@currentlinktype bordercolor}{%
10949     \let\Hy@tempcolor\relax
10950   }{%
10951     \edef\Hy@tempcolor{%
10952       \csname @\hyper@currentlinktype bordercolor\endcsname
10953     }%
10954   }%
10955   \pdfmark{%
10956     pdfmark=/ANN,%
10957     linktype=link,%
10958     Subtype=/Link,%
10959     PDFAFlags=4,%
10960     Dest=\hyper@currentanchor,%
10961     AcroHighlight=\@pdfhighlight,%
10962     Border=\@pdfborder,%
10963     BorderStyle=\@pdfborderstyle,%
10964     Color=\Hy@tempcolor,%
10965     Raw=H.B%
10966   }%
10967   \Hy@endcolorlink
10968   \ifHy@breaklinks
10969 \else
10970   \Hy@LinkMath
10971   \Hy@SaveSpaceFactor
10972   \egroup
10973   \Hy@RestoreSpaceFactor
10974 \fi
10975 }

```

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.

```

10976 \begingroup
10977 \catcode`P=12 %
10978 \catcode`T=12 %
10979 \lowercase{\endgroup

```

```

10980 \gdef\rem@ptetc#1.#2PT#3!{#1\ifnum#2>\z@.#2\fi}%
10981 }
10982 \def\strip@pt@and@otherjunk#1{\expandafter\rem@ptetc\the#1!}

```

\hyper@pagetransition

```

10983 \def\hyper@pagetransition{%
10984 \ifx\@pdfpagetransition\relax
10985 \else
10986 \ifx\@pdfpagetransition\@empty
10987 % 1. Does an old entry have to be deleted?
10988 % 2. If 1=yes, how to delete?
10989 \else
10990 \pdfmark{%
10991 pdfmark=/PUT,%
10992 Raw={%
10993 \string{ThisPage\string}%
10994 <</Trans << /S /\@pdfpagetransition\space >> >>%
10995 }%
10996 }%
10997 \fi
10998 \fi
10999 }

```

\hyper@pageduration

```

11000 \def\hyper@pageduration{%
11001 \ifx\@pdfpageduration\relax
11002 \else
11003 \ifx\@pdfpageduration\@empty
11004 % 1. Does an old entry have to be deleted?
11005 % 2. If 1=yes, how to delete?
11006 \else
11007 \pdfmark{%
11008 pdfmark=/PUT,%
11009 Raw={%
11010 \string{ThisPage\string}%
11011 <</Dur \@pdfpageduration>>%
11012 }%
11013 }%
11014 \fi
11015 \fi
11016 }

11017 \g@addto@macro\Hy@EveryPageBoxHook{%
11018 \hyper@pagetransition
11019 \hyper@pageduration
11020 }

11021 \def\hyper@image#1#2{%
11022 \hyper@linkurl{#2}{#1}%
11023 }
11024 \def\Hy@undefinedname{UNDEFINED}
11025 \def\hyper@link#1#2#3{%
11026 \Hy@VerboseLinkStart{#1}{#2}%
11027 \ltx@ifundefined{@#1bordercolor}{%
11028 \let\Hy@tempcolor\relax

```

```

11029 }{%
11030 \edef\Hy@tempcolor{\csname @#1bordercolor\endcsname}%
11031 }%
11032 \begingroup
11033 \protected@edef\Hy@testname{#2}%
11034 \ifx\Hy@testname\@empty
11035 \Hy@Warning{%
11036 Empty destination name,\MessageBreak
11037 using ``\Hy@undefinedname'%
11038 }%
11039 \let\Hy@testname\Hy@undefinedname
11040 \fi
11041 \pdfmark[{#3}]{%
11042 Color=\Hy@tempcolor,%
11043 linktype={#1},%
11044 AcroHighlight=\@pdfhighlight,%
11045 Border=\@pdfborder,%
11046 BorderStyle=\@pdfborderstyle,%
11047 pdfmark=/ANN,%
11048 Subtype=/Link,%
11049 PDFAFlags=4,%
11050 Dest=\Hy@testname
11051 }%
11052 \endgroup
11053 }
11054 \newtoks\pdf@docset
11055 \def\PDF@FinishDoc{%
11056 \Hy@UseMaketitleInfos
11057 \Hy@Info@GenerateAddons
11058 \let\Hy@temp\@empty
11059 \ifx\@pdfcreationdate\@empty
11060 \else
11061 \def\Hy@temp{CreationDate=\@pdfcreationdate,}%
11062 \fi
11063 \ifx\@pdfmoddate\@empty
11064 \else
11065 \expandafter\def\expandafter\Hy@temp\expandafter{%
11066 \Hy@temp
11067 ModDate=\@pdfmoddate,%
11068 }%
11069 \fi
11070 \ifx\@pdfproducer\relax
11071 \else
11072 \expandafter\def\expandafter\Hy@temp\expandafter{%
11073 \Hy@temp
11074 Producer=\@pdfproducer,%
11075 }%
11076 \fi
11077 \expandafter
11078 \pdfmark\expandafter{%
11079 \Hy@temp
11080 pdfmark=/DOCINFO,%
11081 Title=\@pdftitle,%
11082 Subject=\@pdfsubject,%

```

```

11083   Creator=\@pdfcreator,%
11084   Author=\@pdfauthor,%
11085   Keywords=\@pdfkeywords,%
11086   Trapped=\@pdftrapped
11087 }%
11088 \ifx\HyInfo@Addons\@empty
11089 \else
11090   \pdfmark{%
11091     pdfmark=/DOCINFO,%
11092     Raw={\HyInfo@Addons}%
11093   }%
11094 \fi
11095 \Hy@DisableOption{pdfauthor}%
11096 \Hy@DisableOption{pdftitle}%
11097 \Hy@DisableOption{pdfsubject}%
11098 \Hy@DisableOption{pdfcreator}%
11099 \Hy@DisableOption{addtopdfcreator}%
11100 \Hy@DisableOption{pdfcreationdate}%
11101 \Hy@DisableOption{pdfcreationdate}%
11102 \Hy@DisableOption{pdfmoddate}%
11103 \Hy@DisableOption{pdfproducer}%
11104 \Hy@DisableOption{pdfkeywords}%
11105 \Hy@DisableOption{pdftrapped}%
11106 \Hy@DisableOption{pdfinfo}%
11107 }
11108 \def\PDF@SetupDoc{%
11109   \def\Hy@temp{}%
11110   \ifx\@pdfstartpage\@empty
11111   \else
11112     \ifx\@pdfstartview\@empty
11113     \else
11114       \edef\Hy@temp{%
11115         ,Page=\@pdfstartpage
11116         ,View=\@pdfstartview
11117       }%
11118     \fi
11119   \fi
11120   \edef\Hy@temp{%
11121     \noexpand\pdfmark{%
11122       pdfmark=/DOCVIEW,%
11123       PageMode=/\@pdfpagemode
11124       \Hy@temp
11125     }%
11126   }%
11127   \Hy@temp
11128   \ifx\@pdfpagescrop\@empty
11129   \else
11130     \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
11131   \fi
11132   \edef\Hy@temp{%
11133     \ifHy@pdftoolbar\else /HideToolbar true\fi
11134     \ifHy@pdfmenubar\else /HideMenubar true\fi
11135     \ifHy@pdfwindowui\else /HideWindowUI true\fi
11136     \ifHy@pdfwindow /FitWindow true\fi

```

```

11137 \ifHy@pdfcenterwindow /CenterWindow true\fi
11138 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
11139 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
11140 \Hy@UseNameKey{Direction}\@pdfdirection
11141 \Hy@UseNameKey{ViewArea}\@pdfviewarea
11142 \Hy@UseNameKey{ViewClip}\@pdfviewclip
11143 \Hy@UseNameKey{PrintArea}\@pdfprintarea
11144 \Hy@UseNameKey{PrintClip}\@pdfprintclip
11145 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
11146 \Hy@UseNameKey{Duplex}\@pdfduplex
11147 \ifx\@pdfpicktraybypdfsize\@empty
11148 \else
11149 /PickTrayByPDFSize \@pdfpicktraybypdfsize
11150 \fi
11151 \ifx\@pdfprintpagerange\@empty
11152 \else
11153 /PrintPageRange[\@pdfprintpagerange]%
11154 \fi
11155 \ifx\@pdfnumcopies\@empty
11156 \else
11157 /NumCopies \@pdfnumcopies
11158 \fi
11159 }%
11160 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
11161 \pdfmark{%
11162 pdfmark=/PUT,%
11163 Raw={%
11164 \string{Catalog\string}<<%
11165 \ifx\Hy@temp\@empty
11166 \else
11167 /ViewerPreferences<<\Hy@temp>>%
11168 \fi
11169 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
11170 \ifx\@pdflang\relax
11171 \else
11172 /Lang(\@pdflang)%
11173 \fi
11174 \ifx\@baseurl\@empty
11175 \else
11176 /URI<</Base(\Hy@pstringB)>>%
11177 \fi
11178 >>%
11179 }%
11180 }%
11181 }
11182 </pdfmark>
11183 <*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.

```

11184 \newif\ifHy@pdfmarkerror
11185 \def\pdfmark{\@ifnextchar[{\pdfmark@}{\pdfmark@[]}}
11186 \def\pdfmark@[#1]#2{%
11187   \Hy@pdfmarkerrorfalse
11188   \edef\@processme{\noexpand\pdf@toks={\the\pdf@defaulttoks}}%
11189   \@processme
11190   \let\pdf@type\relax
11191   \let\pdf@objdef\ltx@empty
11192   \kvsetkeys{PDF}{#2}%
11193   \ifHy@pdfmarkerror
11194   \else
11195     \ifx\pdf@type\relax
11196       \Hy@WarningNoLine{no pdfmark type specified in #2!!}%
11197       \ifx\#1\%
11198       \else
11199         \pdf@rect{#1}%
11200       \fi
11201     \else
11202       \ifx\#1\%
11203       \literalps@out{%
11204         [%
11205         \ifx\pdf@objdef\ltx@empty
11206         \else
11207           /_objdef\string{\pdf@objdef\string}%
11208         \fi
11209         \the\pdf@toks\space\pdf@type\space pdfmark%
11210       }%
11211     \else
11212       \ltx@ifundefined{@\pdf@linktype color}{%
11213         \Hy@colorlink\@linkcolor
11214       }{%
11215         \expandafter\Hy@colorlink
11216         \csname @\pdf@linktype color\endcsname
11217       }%
11218       \pdf@rect{#1}%
11219       \literalps@out{%
11220         [%
11221         \ifx\pdf@objdef\ltx@empty
11222         \else
11223           /_objdef\string{\pdf@objdef\string}%
11224         \fi
11225         \the\pdf@toks\space\pdf@type\space pdfmark%
11226       }%
11227       \Hy@endcolorlink
11228     \fi
11229   \fi
11230 \fi
11231 }

```

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}
```

```
11232 \newsavebox{\pdf@box}
11233 \providecommand*{\Hy@setouterhbox}{\sbox}
11234 \providecommand*{\Hy@breaklinksunhbox}{\unhbox}
11235 \def\Hy@DEST{/DEST}
11236 \def\pdf@rect#1{%
11237   \begingroup
11238   \chardef\x=1 %
11239   \def\Hy@temp{#1}%
11240   \ifx\Hy@temp\ltx@empty
11241     \chardef\x=0 %
11242   \else
11243     \def\y{\anchor@spot}%
11244     \ifx\Hy@temp\y
11245       \def\y{\relax}%
11246       \ifx\anchor@spot\y
11247         \chardef\x=0 %
11248       \fi
11249     \fi
11250   \fi
11251   \expandafter\endgroup
11252   \ifcase\x
11253     \literalps@out{H.S}%
11254     \literalps@out{H.R}%
11255   \else
11256     \leavevmode
11257     \Hy@SaveSpaceFactor
11258     \ifmmode
11259       \def\Hy@LinkMath{$}%
11260     \else
11261       \let\Hy@LinkMath\ltx@empty
11262     \fi
11263     \ifHy@breaklinks
11264       \Hy@setouterhbox\pdf@box{%
11265         \Hy@RestoreSpaceFactor
11266         \Hy@LinkMath
11267         \Hy@AllowHyphens#1\Hy@xspace@end
11268         \Hy@LinkMath
11269         \Hy@SaveSpaceFactor
11270       }%
11271     \else
11272       \sbox\pdf@box{%
11273         \Hy@RestoreSpaceFactor
11274         \Hy@LinkMath
11275         #1\Hy@xspace@end
11276         \Hy@LinkMath
11277         \Hy@SaveSpaceFactor
```

```

11278 }%
11279 \fi
11280 \dimen@ht\pdf@box
11281 \ifdim\dp\pdf@box=\z@
11282 \literalps@out{H.S}%
11283 \else
11284 \lower\dp\pdf@box\hbox{\literalps@out{H.S}}%
11285 \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...).

```

11286 \ifHy@breaklinks
11287 \ifhmode
11288 \Hy@breaklinksunhbox\pdf@box
11289 \else
11290 \box\pdf@box
11291 \fi
11292 \else
11293 \expandafter\box\pdf@box
11294 \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

11295 \ifdim\dimen@=\z@
11296 \literalps@out{H.R}%
11297 \else
11298 \raise\dimen@\hbox{\literalps@out{H.R}}%
11299 \fi
11300 \Hy@RestoreSpaceFactor
11301 \fi
11302 \ifx\pdf@type\Hy@DEST
11303 \else
11304 \pdf@addtoksx{H.B}%
11305 \fi
11306 }

```

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.

```

11307 \newtoks\pdf@toks
11308 \newtoks\pdf@defaulttoks
11309 \pdf@defaulttoks={}%
11310 \def\pdf@addtoks#1#2{%
11311 \edef\@processme{\pdf@toks{\the\pdf@toks/#2 #1}}%
11312 \@processme
11313 }
11314 \def\pdf@addtoksx#1{%
11315 \edef\@processme{\pdf@toks{\the\pdf@toks\space #1}}%
11316 \@processme
11317 }
11318 \def\PDFdefaults#1{%

```



```

11319 \pdf@defaulttoks={#1}%
11320 }

```

This is the list of allowed keys. See the Acrobat manual for an explanation.

```

11321 % what is the type of pdfmark?
11322 \define@key{PDF}{pdfmark}{\def\pdf@type{#1}}
11323 % what is the link type?
11324 \define@key{PDF}{linktype}{\def\pdf@linktype{#1}}
11325 \def\pdf@linktype{link}
11326 % named object?
11327 \define@key{PDF}{objdef}{\edef\pdf@objdef{#1}}
11328 \let\pdf@objdef\ltx@empty
11329 % parameter is a stream of PDF
11330 \define@key{PDF}{Raw}{\pdf@addtoksx{#1}}
11331 % parameter is a name
11332 \define@key{PDF}{Action}{\pdf@addtoks{#1}{Action}}
11333 % parameter is a array
11334 \define@key{PDF}{Border}{%
11335   \edef\Hy@temp{#1}%
11336   \ifx\Hy@temp\@empty
11337     \else
11338       \pdf@addtoks{[#1]\Hy@BorderArrayPatch}{Border}% hash-ok
11339     \fi
11340 }
11341 \let\Hy@BorderArrayPatch\@empty
11342 % parameter is a dictionary
11343 \define@key{PDF}{BorderStyle}{%
11344   \edef\Hy@temp{#1}%
11345   \ifx\Hy@temp\@empty
11346     \else
11347       \pdf@addtoks{<<#1>>}{BS}%
11348     \fi
11349 }
11350 % parameter is a array
11351 \define@key{PDF}{Color}{%
11352   \ifx\relax#1\relax
11353     \else
11354       \pdf@addtoks{[#1]}{Color}% hash-ok
11355     \fi
11356 }
11357 % parameter is a string
11358 \define@key{PDF}{Contents}{\pdf@addtoks{(#1)}{Contents}}
11359 % parameter is a integer
11360 \define@key{PDF}{Count}{\pdf@addtoks{#1}{Count}}
11361 % parameter is a array
11362 \define@key{PDF}{CropBox}{\pdf@addtoks{[#1]}{CropBox}}% hash-ok
11363 % parameter is a string
11364 \define@key{PDF}{DOSFile}{\pdf@addtoks{(#1)}{DOSFile}}
11365 % parameter is a string or file
11366 \define@key{PDF}{DataSource}{\pdf@addtoks{(#1)}{DataSource}}
11367 % parameter is a destination
11368 \define@key{PDF}{Dest}{%
11369   \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
11370   \ifx\Hy@pstringDest\@empty
11371     \Hy@pdfmarkerrortrue

```

```

11372 \Hy@Warning{Destination with empty name ignored}%
11373 \else
11374 \pdf@addtoks{(\Hy@pstringDest) cvn}{Dest}%
11375 \fi
11376 }
11377 \define@key{PDF}{DestAnchor}{%
11378 \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
11379 \ifx\Hy@pstringDest\@empty
11380 \Hy@pdfmarkerrortrue
11381 \Hy@Warning{Destination with empty name ignored}%
11382 \else
11383 \pdf@addtoks{(\Hy@pstringDest) cvn}{Dest}%
11384 \fi
11385 }
11386 % parameter is a string
11387 \define@key{PDF}{Dir}{\pdf@addtoks{(#1)}{Dir}}
11388 % parameter is a string
11389 \define@key{PDF}{File}{\pdf@addtoks{(#1)}{File}}
11390 % parameter is a int
11391 \define@key{PDF}{Flags}{\pdf@addtoks{#1}{Flags}}
11392 \define@key{PDF}{PDFAFlags}{%
11393 \ifHy@pdfa
11394 \pdf@addtoks{#1}{F}%
11395 \fi
11396 }
11397 % parameter is a name
11398 \define@key{PDF}{AcroHighlight}{%
11399 \begingroup
11400 \edef\x{#1}%
11401 \expandafter\endgroup\ifx\x\@empty
11402 \else
11403 \pdf@addtoks{#1}{H}%
11404 \fi
11405 }
11406 % parameter is a string
11407 \define@key{PDF}{ID}{\pdf@addtoks{[#1]}{ID}}% hash-ok
11408 % parameter is a string
11409 \define@key{PDF}{MacFile}{\pdf@addtoks{(#1)}{MacFile}}
11410 % parameter is a string
11411 \define@key{PDF}{ModDate}{\pdf@addtoks{(#1)}{ModDate}}
11412 % parameter is a string
11413 \define@key{PDF}{Op}{\pdf@addtoks{(#1)}{Op}}
11414 % parameter is a Boolean
11415 \define@key{PDF}{Open}{\pdf@addtoks{#1}{Open}}
11416 % parameter is a integer or name
11417 \define@key{PDF}{Page}{\pdf@addtoks{#1}{Page}}
11418 % parameter is a name
11419 \define@key{PDF}{PageMode}{\pdf@addtoks{#1}{PageMode}}
11420 % parameter is a string
11421 \define@key{PDF}{Params}{\pdf@addtoks{(#1)}{Params}}
11422 % parameter is a array
11423 \define@key{PDF}{Rect}{\pdf@addtoks{[#1]}{Rect}}% hash-ok
11424 % parameter is a integer
11425 \define@key{PDF}{SrcPg}{\pdf@addtoks{#1}{SrcPg}}

```

```

11426 % parameter is a name
11427 \define@key{PDF}{Subtype}{\pdf@addtoks{(#1)}{Subtype}}
11428 % parameter is a string
11429 \define@key{PDF}{Title}{\pdf@addtoks{(#1)}{Title}}
11430 % parameter is a string
11431 \define@key{PDF}{Unix}{\pdf@addtoks{(#1)}{Unix}}
11432 % parameter is a string
11433 \define@key{PDF}{UnixFile}{\pdf@addtoks{(#1)}{UnixFile}}
11434 % parameter is an array
11435 \define@key{PDF}{View}{\pdf@addtoks{[#1]}{View}}% hash-ok
11436 % parameter is a string
11437 \define@key{PDF}{WinFile}{\pdf@addtoks{(#1)}{WinFile}}

```

These are the keys used in the DOCINFO section.

```

11438 \define@key{PDF}{Author}{\pdf@addtoks{(#1)}{Author}}
11439 \define@key{PDF}{Creator}{\pdf@addtoks{(#1)}{Creator}}
11440 \define@key{PDF}{CreationDate}{\pdf@addtoks{(#1)}{CreationDate}}
11441 \define@key{PDF}{ModDate}{\pdf@addtoks{(#1)}{ModDate}}
11442 \define@key{PDF}{Producer}{\pdf@addtoks{(#1)}{Producer}}
11443 \define@key{PDF}{Subject}{\pdf@addtoks{(#1)}{Subject}}
11444 \define@key{PDF}{Keywords}{\pdf@addtoks{(#1)}{Keywords}}
11445 \define@key{PDF}{ModDate}{\pdf@addtoks{(#1)}{ModDate}}
11446 \define@key{PDF}{Base}{\pdf@addtoks{(#1)}{Base}}
11447 \define@key{PDF}{URI}{\pdf@addtoks{(#1)}{URI}}
11448 \define@key{PDF}{Trapped}{%
11449   \edef\Hy@temp{#1}%
11450   \ifx\Hy@temp\@empty
11451     \else
11452       \pdf@addtoks{/#1}{Trapped}%
11453     \fi
11454 }
11455
11456 </pdfmarkbase>
11457 <*pdfmark>
11458 \def\Acrobatmenu#1#2{%
11459   \EdefEscapeName\Hy@temp@menu{#1}%
11460   \Hy@Acrobatmenu{#1}{#2}{%
11461     \pdfmark[{#2}]{%
11462       linktype=menu,%
11463       pdfmark=/ANN,%
11464       AcroHighlight=\@pdfhighlight,%
11465       Border=\@pdfborder,%
11466       BorderStyle=\@pdfborderstyle,%
11467       Color=\@menubordercolor,%
11468       Action={<</Subtype/Named/N/\Hy@temp@menu>>},%
11469       Subtype=/Link,%
11470       PDFAFlags=4%
11471     }%
11472   }%
11473 }

```

And now for some useful examples:

```

11474 \def\PDFNextPage{\@ifnextchar{\PDFNextPage@}{\PDFNextPage@[]}}
11475 \def\PDFNextPage@[#1]#2{%
11476   \pdfmark[{#2}]{%

```

```

11477   #1,%
11478   Border=\@pdfborder,%
11479   BorderStyle=\@pdfborderstyle,%
11480   Color=.2 .1 .5,%
11481   pdfmark=/ANN,%
11482   Subtype=/Link,%
11483   PDFAFlags=4,%
11484   Page=/Next%
11485 }%
11486 }
11487 \def\PDFPreviousPage{%
11488   \@ifnextchar[{\PDFPreviousPage@}{\PDFPreviousPage@[]}%
11489 }
11490 \def\PDFPreviousPage@[#1]#2{%
11491   \pdfmark[#{#2}]{%
11492     #1,%
11493     Border=\@pdfborder,%
11494     BorderStyle=\@pdfborderstyle,%
11495     Color=.4 .4 .1,%
11496     pdfmark=/ANN,%
11497     Subtype=/Link,%
11498     PDFAFlags=4,%
11499     Page=/Prev%
11500   }%
11501 }
11502 \def\PDFOpen#1{%
11503   \pdfmark{#1,pdfmark=/DOCVIEW}%
11504 }

```

This will only work if you use Distiller 2.1 or higher.

```

11505 \def\hyper@linkurl#1#2{%
11506   \begingroup
11507     \Hy@pstringdef\Hy@pstringURI{#2}%
11508     \hyper@chars
11509     \leavevmode
11510     \pdfmark[#{#1}]{%
11511       pdfmark=/ANN,%
11512       linktype=url,%
11513       AcroHighlight=\@pdfhighlight,%
11514       Border=\@pdfborder,%
11515       BorderStyle=\@pdfborderstyle,%
11516       Color=\@urlbordercolor,%
11517       Action={<<%
11518         /Subtype/URI%
11519         /URI(\Hy@pstringURI)%
11520         \ifHy@href@ismap
11521           /IsMap true%
11522         \fi
11523       >>},%
11524       Subtype=/Link,%
11525       PDFAFlags=4%
11526     }%
11527   \endgroup
11528 }
11529 \def\hyper@linkfile#1#2#3{%

```

```

11530 \begingroup
11531 \def\Hy@pstringF{#2}%
11532 \Hy@CleanupFile\Hy@pstringF
11533 \Hy@pstringdef\Hy@pstringF\Hy@pstringF
11534 \Hy@pstringdef\Hy@pstringD{#3}%
11535 \Hy@MakeRemoteAction
11536 \leavevmode
11537 \pdfmark[{#1}]{%
11538   pdfmark=/ANN,%
11539   Subtype=/Link,%
11540   PDFAFlags=4,%
11541   AcroHighlight=\@pdfhighlight,%
11542   Border=\@pdfborder,%
11543   BorderStyle=\@pdfborderstyle,%
11544   linktype=file,%
11545   Color=\@filebordercolor,%
11546   Action={%
11547     <<%
11548     /S/GoToR%
11549     \Hy@SetNewWindow
11550     /F(\Hy@pstringF)%
11551     /D%
11552     \ifx\#3\%
11553       [\Hy@href@page\@pdfremotestartview]%
11554     \else
11555       (\Hy@pstringD)cvn%
11556     \fi
11557     \Hy@href@nextactionraw
11558     >>%
11559   }%
11560 }%
11561 \endgroup
11562 }
11563 \def\@hyper@launch run:#1\#2#3{%
11564 \begingroup
11565 \Hy@pstringdef\Hy@pstringF{#1}%
11566 \Hy@pstringdef\Hy@pstringP{#3}%
11567 \leavevmode
11568 \pdfmark[{#2}]{%
11569   pdfmark=/ANN,%
11570   Subtype=/Link,%
11571   PDFAFlags=4,%
11572   AcroHighlight=\@pdfhighlight,%
11573   Border=\@pdfborder,%
11574   BorderStyle=\@pdfborderstyle,%
11575   linktype=run,%
11576   Color=\@runbordercolor,%
11577   Action={%
11578     <<%
11579     /S/Launch%
11580     \Hy@SetNewWindow
11581     /F(\Hy@pstringF)%
11582     \ifx\#3\%
11583     \else

```

```

11584      /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
11585      \fi
11586      \Hy@href@nextactionraw
11587      >>%
11588      }%
11589      }%
11590 \endgroup
11591 }
11592 </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.

```

11593 <*dvips>
11594 \providecommand*\XR@ext\pdf
11595 \let\Hy@raisedlink\ltx@empty
11596 \def\literals@out#1{\special{ps:SDict begin #1 end}}%
11597 \def\headerps@out#1{\special{! #1}}%
11598 \input{pdfmark.def}%
11599 \ifx\@pdfproducer\relax
11600 \def\@pdfproducer{dvips + Distiller}%
11601 \fi
11602 \providecommand*\@pdfborder{0 0 1}
11603 \providecommand*\@pdfborderstyle{}
11604 \providecommand*\@pdfview{XYZ}
11605 \providecommand*\@pdfviewparams{ H.V}
11606 \def\Hy@BorderArrayPatch{BorderArrayPatch}

11607 \g@addto@macro\Hy@FirstPageHook{%
11608 \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.

```

11609 /DvipsToPDF{72.27 mul Resolution div} def%
11610 /PDFToDvips{72.27 div Resolution mul} def%
11611 /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.

```

11612   product (Ghostscript) search {pop pop pop revision 927 gt}%
11613   {pop false} ifelse%
11614   {%
11615     /BorderArrayPatch{} def%
11616   }%
11617   {%
11618     /BorderArrayPatch{%
11619       [exch{%
11620         dup dup type/integertype eq exch type/realtype eq or%
11621         {BPToDvips}if%
11622       }forall]%
11623     }def%
11624   } 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.

```

11625   /HyperBorder {1 PDFToDvips} def%
11626   /H.V {pdf@hoff pdf@voff null} def%
11627   /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

```

11628   /H.S {%
11629     currentpoint %
11630     HyperBorder add /pdf@lly exch def %
11631     dup DvipsToPDF 72 add /pdf@hoff exch def %
11632     HyperBorder sub /pdf@llx exch def%
11633   } def%

```

The calculation of upper left y is done without raising the point in \TeX , by simply adding on the current `\baselineskip` to the current y . This is usually too much, so we remove a notional 2 points.

We have to see what the current baselineskip is, and convert it to the dvips coordinate system.

Argument: baselineskip in pt. The x and y coordinates of the current point, minus the baselineskip

```

11634   /H.L {%
11635     2 sub dup%
11636     /HyperBasePt exch def %
11637     PDFToDvips /HyperBaseDvips exch def %
11638     currentpoint %
11639     HyperBaseDvips sub /pdf@ury exch def%
11640     /pdf@urx exch def%
11641   } def%
11642   /H.A {%
11643     H.L %
11644     % |pdf@voff| = the distance from the top of the page to a point

```

```

11645 % |\baselineskip| above the current point in PDF coordinates
11646     currentpoint exch pop %
11647     vsize 72 sub exch DvipsToPDF %
11648     HyperBasePt sub % baseline skip
11649     sub /pdf@voff exch def%
11650 } def%
11651 /H.R {%
11652     currentpoint %
11653     HyperBorder sub /pdf@ury exch def %
11654     HyperBorder add /pdf@urx exch def %
11655 % |/pdf@voff| = the distance from the top of the page to the current point, in
11656 % PDF coordinates
11657     currentpoint exch pop vsize 72 sub %
11658     exch DvipsToPDF sub /pdf@voff exch def%
11659 } def%
11660 }%
11661 }
11662 \AtBeginShipoutFirst{%
11663     \ifHy@setpagesize
11664         \begingroup
11665         \ifnum\mag=\@m
11666             \ifdim\stockwidth>\z@
11667                 \ifdim\stockheight>\z@
11668                     \special{papersize=\the\stockwidth,\the\stockheight}%
11669                 \else
11670                     \ifdim\paperwidth>\z@
11671                         \ifdim\paperheight>\z@
11672                             \special{papersize=\the\paperwidth,\the\paperheight}%
11673                         \fi
11674                     \fi
11675                 \fi
11676             \else
11677                 \ifdim\stockwidth=\z@
11678                     \ifdim\paperwidth>\z@
11679                         \ifdim\paperheight>\z@
11680                             \special{papersize=\the\paperwidth,\the\paperheight}%
11681                         \fi
11682                     \fi
11683                 \fi
11684             \fi
11685         \fi
11686     \endgroup
11687 \fi
11688 \Hy@DisableOption{setpagesize}%
11689 }
11690 \def\setpdfinkmargin#1{%
11691     \begingroup
11692     \setlength{\dimen@}{#1}%
11693     \literalps@out{%
11694         /HyperBorder{\strip@pt\dimen@\space PDFToDvips}def%
11695     }%
11696 \endgroup
11697 }

```


11698 \langle /dvips \rangle

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.

```

11699  $\langle$ *vtexpdfmark $\rangle$ 
11700 \providecommand*\XR@ext}{pdf}
11701 \let\Hy@raisedlink\ltx@empty
11702 \def\literalps@out#1{\special{pS:#1}}%
11703 \def\headerps@out#1{\immediate\special{pS:#1}}%
11704 \input{pdfmark.def}%
11705 \ifx\@pdfproducer\relax
11706   \ifnum\OpMode=\@ne
11707     \def\@pdfproducer{VTeX}%
11708   \else
11709     \def\@pdfproducer{VTeX + Distiller}%
11710   \fi
11711 \fi
11712 \providecommand*\@pdfborder{0 0 1}
11713 \providecommand*\@pdfborderstyle{}
11714 \providecommand*\@pdfview{XYZ}
11715 \providecommand*\@pdfviewparams{ H.V}

11716 \g@addto@macro\Hy@FirstPageHook{%
11717   \headerps@out{%
11718     /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.

```

11719   /HyperBorder {1} def%
11720   /H.V {pdf@hoff pdf@voff null} def%
11721   /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 = $X_c - \text{HyperBorder}$

```

11722   /H.S {%
11723     currentpoint %
11724     HyperBorder sub%
11725     /pdf@lly exch def %
11726     dup 72 add /pdf@hoff exch def %
11727     HyperBorder sub%
11728     /pdf@llx exch def%
11729   } def%

```

The x and y coordinates of the current point, minus the \baselineskip: pdf@ury = $Y_c + \text{HyperBasePt} + \text{HyperBorder}$, pdf@urx = $X_c + \text{HyperBorder}$

```

11730   /H.L {%
11731     2 sub%
11732     /HyperBasePt exch def %
11733     currentpoint %

```

```

11734   HyperBasePt add HyperBorder add%
11735   /pdf@ury exch def %
11736   HyperBorder add%
11737   /pdf@urx exch def%
11738   } def%
11739   /H.A {%
11740   H.L %
11741   currentpoint exch pop %
11742   vsize 72 sub exch %
11743   HyperBasePt add add%
11744   /pdf@voff exch def%
11745   } def%
pdf@ury =  $Y_c$  + HyperBorder, pdf@urx =  $X_c$  + HyperBorder
11746   /H.R {%
11747   currentpoint %
11748   HyperBorder add%
11749   /pdf@ury exch def %
11750   HyperBorder add%
11751   /pdf@urx exch def %
11752   currentpoint exch pop vsize 72 sub add%
11753   /pdf@voff exch def%
11754   } def%
11755   }%
11756   }
11757   \def\setpdflinkmargin#1{%
11758   \begingroup
11759   \setlength{\dimen@}{#1}%
11760   \literalps@out{%
11761   /HyperBorder{\strip@pt\dimen@}def%
11762   }%
11763   \endgroup
11764   }
11765   \</vtxpdfmark>

```

43.11 Textures

```

11766   \<textures>
11767   \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.

```

11768   \begingroup
11769   \obeylines %
11770   \gdef\Hy@ps@CR{\noexpand
11771   }%
11772   \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`.

```
11773 \def\literalps@out#1{%
11774   \special{postscript 0 0 transform}%
11775   \special{rawpostscript itransform moveto\Hy@ps@CR #1}%
11776 }%
11777 %
```

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.

```
11778 \def\headerps@out#1{%
11779   \special{%
11780     prepostscript TeXdict begin\Hy@ps@CR
11781       #1\Hy@ps@CR
11782     end%
11783   }%
11784 }%
11785 %
```

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.

```
11786 \g@addto@macro\Hy@FirstPageHook{%
11787   \headerps@out{%
11788     /betterpdfmark {%
11789       systemdict begin %
11790         dup /BP eq%
11791         {cleartomark gsave nulldevice []}%
11792         {dup /EP eq%
11793           {cleartomark cleartomark grestore}%
11794           {cleartomark}%
11795           ifelse%
11796         }ifelse %
11797       end%
11798     }def\Hy@ps@CR
11799     ___pdfmark___ not{/pdfmark /betterpdfmark load def}if%
11800   }% end of \headerps@out
11801 }% end of \AtBeginShipoutFirst
11802 %
11803 \input{pdfmark.def}%
11804 %
11805 \ifx\@pdfproducer\relax
11806   \def\@pdfproducer{Textures + Distiller}%
11807 \fi
```

```

11808 \providecommand*\@pdfborder{0 0 1}
11809 \providecommand*\@pdfborderstyle{}
11810 \providecommand*\@pdfview{XYZ}
11811 \providecommand*\@pdfviewparams{ H.V}
11812 %

```

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 .

```

11813 \Hy@AtBeginDocument{%
11814   \headerps@out{%

```

`Textures` lives in normal points, I think. So conversion from one coordinate system to another involves doing nothing.

```

11815   /vsize {\Hy@pageheight} def%
11816   /DvipsToPDF {} def%
11817   /PDFToDvips {} def%
11818   /BPToDvips {} def%
11819   /HyperBorder { 1 PDFToDvips } def\Hy@ps@CR
11820   /H.V {pdf@hoff pdf@voff null} def\Hy@ps@CR
11821   /H.B {/Rect[pdf@llx pdf@lly pdf@urx pdf@ury]} def\Hy@ps@CR
11822   /H.S {%
11823     currentpoint %
11824     HyperBorder add /pdf@lly exch def %
11825     dup DvipsToPDF 72 add /pdf@hoff exch def %
11826     HyperBorder sub /pdf@llx exch def%
11827   } def\Hy@ps@CR
11828   /H.L {%
11829     2 sub %
11830     PDFToDvips /HyperBase exch def %
11831     currentpoint %
11832     HyperBase sub /pdf@ury exch def%
11833     /pdf@urx exch def%
11834   } def\Hy@ps@CR
11835   /H.A {%
11836     H.L %
11837     currentpoint exch pop %
11838     vsize 72 sub exch DvipsToPDF %
11839     HyperBase sub % baseline skip
11840     sub /pdf@voff exch def%
11841   } def\Hy@ps@CR
11842   /H.R {%
11843     currentpoint %
11844     HyperBorder sub /pdf@ury exch def %
11845     HyperBorder add /pdf@urx exch def %
11846     currentpoint exch pop vsize 72 sub %
11847     exch DvipsToPDF sub /pdf@voff exch def%
11848   } def\Hy@ps@CR
11849 }%
11850 }

11851 \def\setpdfinkmargin#1{%
11852   \begingroup

```

```

11853 \setlength{\dimen@}{#1}%
11854 \literalps@out{%
11855   /HyperBorder{\strip@pt\dimen@\space PDFToDvips}def%
11856 }%
11857 \endgroup
11858 }

11859 \Hy@AtBeginDocument{%
11860 \ifHy@colorlinks
11861   \headerps@out{/PDFBorder{/Border [0 0 0]}def}%
11862 \fi
11863 }

```

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.

```

11864 \expandafter\let\expandafter\keepPDF@SetupDoc
11865 \csname PDF@SetupDoc\endcsname
11866 \def\PDF@SetupDoc{%
11867   \ifx\@baseurl\@empty
11868   \else
11869     \special{html:<base href="\@baseurl">}%
11870   \fi
11871   \keepPDF@SetupDoc
11872 }

11873 \Hy@WrapperDef\hyper@anchor#1{%
11874   \Hy@SaveLastskip
11875   \Hy@VerboseAnchor{#1}%
11876   \begingroup
11877     \let\protect=\string
11878     \special{html:<a name=%
11879       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
11880   \endgroup
11881   \Hy@activeanchortrue
11882   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
11883   \special{html:</a>}%
11884   \Hy@activeanchorfalse
11885   \Hy@RestoreLastskip
11886 }

11887 \Hy@WrapperDef\hyper@anchorstart#1{%
11888   \Hy@SaveLastskip
11889   \Hy@VerboseAnchor{#1}%
11890   \begingroup
11891     \hyper@chars
11892     \special{html:<a name=%
11893       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
11894   \endgroup
11895   \Hy@activeanchortrue
11896 }

11897 \def\hyper@anchorend{%
11898   \special{html:</a>}%
11899   \Hy@activeanchorfalse
11900   \Hy@RestoreLastskip
11901 }

11902 \def\@urltype{url}

```

```

11903 \def\hyper@linkstart#1#2{%
11904   \Hy@VerboseLinkStart{#1}{#2}%
11905   \expandafter\Hy@colorlink\csname @#1color\endcsname
11906   \def\Hy@tempa{#1}%
11907   \ifx\Hy@tempa \@urltype
11908     \special{html:<a href=\hyper@quote#2\hyper@quote>}%
11909   \else
11910     \begingroup
11911       \hyper@chars
11912       \special{%
11913         html:<a href=%
11914         \hyper@quote\#\Hy@DestNameFilter{#2}\hyper@quote>%
11915       }%
11916     \endgroup
11917   \fi
11918 }
11919 \def\hyper@linkend{%
11920   \special{html:</a>}%
11921   \Hy@endcolorlink
11922 }
11923 \def\hyper@linkfile#1#2#3{%
11924   \hyper@linkurl{#1}{%
11925     \Hy@linkfileprefix#2\ifx\#3\\ \else\#3\fi
11926   }%
11927 }
11928 \def\hyper@linkurl#1#2{%
11929   \leavevmode
11930   \ifHy@raiselinks
11931     \Hy@SaveSpaceFactor
11932     \Hy@SaveSavedSpaceFactor
11933     \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
11934     \Hy@RestoreSavedSpaceFactor
11935     \@linkdim\dp\@tempboxa
11936     \lower\@linkdim\hbox{%
11937       \hyper@chars
11938       \special{html:<a href=\hyper@quote#2\hyper@quote>}%
11939     }%
11940     \Hy@colorlink\@urlcolor
11941     \Hy@RestoreSpaceFactor
11942     #1\Hy@xspace@end
11943     \Hy@SaveSpaceFactor
11944     \@linkdim\ht\@tempboxa
11945     \advance\@linkdim by -6.5\p@
11946     \raise\@linkdim\hbox{\special{html:</a>}}%
11947     \Hy@endcolorlink
11948     \Hy@RestoreSpaceFactor
11949   \else
11950     \begingroup
11951       \hyper@chars
11952       \special{html:<a href=\hyper@quote#2\hyper@quote>}%
11953       \Hy@colorlink\@urlcolor#1\Hy@xspace@end
11954       \special{html:</a>}%
11955       \Hy@endcolorlink
11956     \endgroup

```

```

11957 \fi
11958 }
Very poor implementation of \hyper@link without considering #1.
11959 \def\hyper@link#1#2#3{%
11960 \Hy@VerboseLinkStart{#1}{#2}%
11961 \hyper@linkurl{#3}{\# \HyperDestNameFilter{#2}}}%
11962 }
11963 \def\hyper@image#1#2{%
11964 \begingroup
11965 \hyper@chars
11966 \special{html:<img src=\hyper@quote#1\hyper@quote>}%
11967 \endgroup
11968 }
11969 </textures>

```

43.12 dvipsone

```

11970 % \subsection{dvipsone driver}
11971 % Over-ride the default setup macro in pdfmark driver to use Y\&Y
11972 % |\special| commands.
11973 (*dvipsone)
11974 \providecommand*\XR@ext}{pdf}
11975 \let\Hy@raisedlink\ltx@empty
11976 \providecommand*\@pdfborder{0 0 1}
11977 \providecommand*\@pdfborderstyle{}
11978 \def\literalps@out#1{\special{ps:#1}}%
11979 \def\headerps@out#1{\special{headertext=#1}}%
11980 \input{pdfmark.def}%
11981 \HyInfo@AddonUnsupportedtrue
11982 \def\PDF@FinishDoc{%
11983 \Hy@UseMaketitleInfos
11984 \HyInfo@TrappedUnsupported
11985 \special{PDF: Keywords \@pdfkeywords}%
11986 \special{PDF: Title \@pdftitle}%
11987 \special{PDF: Creator \@pdfcreator}%
11988 \ifx\@pdfcreationdate\@empty
11989 \else
11990 \special{PDF: CreationDate \@pdfcreationdate}%
11991 \fi
11992 \ifx\@pdfmoddate\@empty
11993 \else
11994 \special{PDF: ModDate \@pdfmoddate}%
11995 \fi
11996 \special{PDF: Author \@pdfauthor}%
11997 \ifx\@pdfproducer\relax
11998 \else
11999 \special{PDF: Producer \@pdfproducer}%
12000 \fi
12001 \special{PDF: Subject \@pdfsubject}%
12002 \Hy@DisableOption{pdfauthor}%
12003 \Hy@DisableOption{pdftitle}%
12004 \Hy@DisableOption{pdfsubject}%
12005 \Hy@DisableOption{pdfcreator}%

```

```

12006 \Hy@DisableOption{addtopdfcreator}%
12007 \Hy@DisableOption{pdfcreationdate}%
12008 \Hy@DisableOption{pdfcreationdate}%
12009 \Hy@DisableOption{pdfmoddate}%
12010 \Hy@DisableOption{pdfproducer}%
12011 \Hy@DisableOption{pdfkeywords}%
12012 \Hy@DisableOption{pdftrapped}%
12013 \Hy@DisableOption{pdfinfo}%
12014 }
12015 \def\PDF@SetupDoc{%
12016 \def\Hy@temp{}%
12017 \ifx\@pdfstartpage\@empty
12018 \else
12019 \ifx\@pdfstartview\@empty
12020 \else
12021 \edef\Hy@temp{%
12022 ,Page=\@pdfstartpage
12023 ,View=\@pdfstartview
12024 }%
12025 \fi
12026 \fi
12027 \edef\Hy@temp{%
12028 \noexpand\pdfmark{%
12029 pdfmark=/DOCVIEW,%
12030 PageMode=/\@pdfpagemode
12031 \Hy@temp
12032 }%
12033 }%
12034 \Hy@temp
12035 \ifx\@pdfpagescrop\@empty
12036 \else
12037 \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
12038 \fi
12039 \edef\Hy@temp{%
12040 \ifHy@pdftoolbar\else /HideToolbar true\fi
12041 \ifHy@pdfmenubar\else /HideMenubar true\fi
12042 \ifHy@pdfwindowui\else /HideWindowUI true\fi
12043 \ifHy@pdfwindow /FitWindow true\fi
12044 \ifHy@pdfcenterwindow /CenterWindow true\fi
12045 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
12046 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
12047 \Hy@UseNameKey{Direction}\@pdfdirection
12048 \Hy@UseNameKey{ViewArea}\@pdfviewarea
12049 \Hy@UseNameKey{ViewClip}\@pdfviewclip
12050 \Hy@UseNameKey{PrintArea}\@pdfprintarea
12051 \Hy@UseNameKey{PrintClip}\@pdfprintclip
12052 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
12053 \Hy@UseNameKey{Duplex}\@pdfduplex
12054 \ifx\@pdfpicktraybypdfsize\@empty
12055 \else
12056 /PickTrayByPDFSize \@pdfpicktraybypdfsize
12057 \fi
12058 \ifx\@pdfprintpagerange\@empty
12059 \else

```



```

12060      /PrintPageRange[\@pdfprintpagerange]%
12061      \fi
12062      \ifx\@pdfnumcopies\@empty
12063      \else
12064      /NumCopies \@pdfnumcopies
12065      \fi
12066    }%
12067    \Hy@pstringdef\Hy@pstringB{\@baseurl}%
12068    \pdfmark{%
12069      pdfmark=/PUT,%
12070      Raw={%
12071        \string{Catalog\string}<<%
12072        \ifx\Hy@temp\@empty
12073        \else
12074        /ViewerPreferences<<\Hy@temp>>%
12075        \fi
12076        \Hy@UseNameKey{PageLayout}\@pdfpagelayout
12077        \ifx\@pdflang\relax
12078        \else
12079        /Lang(\@pdflang)%
12080        \fi
12081        \ifx\@baseurl\@empty
12082        \else
12083        /URI<</Base(\Hy@pstringB)>>%
12084        \fi
12085        >>%
12086      }%
12087    }%
12088  }
12089  \providecommand*\@pdfview{XYZ}
12090  \providecommand*\@pdfviewparams{ %
12091    gsave revscl currentpoint grestore %
12092    72 add exch pop null exch null%
12093  }
12094  \def\Hy@BorderArrayPatch{BorderArrayPatch}

```

These are called at the start and end of unboxed links; their job is to leave available PS variables called `pdf@llx` `pdf@lly` `pdf@urx` `pdf@ury`, which are the coordinates of the bounding rectangle of the link, and `pdf@hoff` `pdf@voff` which are the PDF page offsets. These latter are currently not used in the dvipsone setup. The `Rect` pair are called at the LL and UR corners of a box known to \TeX .

```

12095  \g@addto@macro\Hy@FirstPageHook{%
12096    \headerps@out{%

```

dvipsone lives in scaled points; does this mean 65536 or 65781?

```

12097    /DvipsToPDF { 65781 div } def%
12098    /PDFToDvips { 65781 mul } def%
12099    /BPTToDvips{65781 mul}def%
12100    /HyperBorder { 1 PDFToDvips } def%
12101    /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.

```

12102    /BorderArrayPatch{%

```

```

12103 [exch{%
12104     dup dup type/integertype eq exch type/realttype eq or%
12105     {BPToDvips}if%
12106     }forall]%
12107 }def%
12108 /H.S {%
12109     currentpoint %
12110     HyperBorder add /pdf@lly exch def %
12111     dup DvipsToPDF 72 add /pdf@hoff exch def %
12112     HyperBorder sub /pdf@llx exch def%
12113 } def%
12114 /H.L {%
12115     2 sub %
12116     PDFToDvips /HyperBase exch def %
12117     currentpoint %
12118     HyperBase sub /pdf@ury exch def%
12119     /pdf@urx exch def%
12120 } def%
12121 /H.A {%
12122     H.L %
12123     currentpoint exch pop %
12124     HyperBase sub % baseline skip
12125     DvipsToPDF /pdf@voff exch def%
12126 } def%
12127 /H.R {%
12128     currentpoint %
12129     HyperBorder sub /pdf@ury exch def %
12130     HyperBorder add /pdf@urx exch def %
12131     currentpoint exch pop DvipsToPDF /pdf@voff exch def%
12132 } def%
12133 }%
12134 }
12135 \def\setpdfinkmargin#1{%
12136     \begingroup
12137     \setlength{\dimen@}{#1}%
12138     \literalps@out{%
12139         /HyperBorder{\strip@pt\dimen@\space PDFToDvips}def%
12140     }%
12141     \endgroup
12142 }
12143 </dvipsone>

```

43.13 TeX4ht

```

12144 <*tex4ht>
12145 \providecommand*\XR@ext{\html}
12146 \let\Hy@raisedlink\ltx@empty
12147 \@ifpackageloaded{tex4ht}{%
12148     \Hy@InfoNoLine{tex4ht is already loaded}%
12149 }{%
12150     \RequirePackage[hTeX4ht]{tex4ht}%
12151 }
12152 \hyperlinkfileprefix{}
12153 \let\PDF@FinishDoc\ltx@empty

```

```

12154 \def\PDF@SetupDoc{%
12155   \ifx\@baseurl\@empty
12156   \else
12157     \special{t4ht=<base href="\@baseurl">}%
12158   \fi
12159 }
12160 \Hy@WrapperDef\hyper@anchor#1{%
12161   \Hy@SaveLastskip
12162   \Hy@VerboseAnchor{#1}%
12163   \begingroup
12164     \let\protect=\string
12165     \special{t4ht=<a name=%
12166       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
12167   \endgroup
12168   \Hy@Activeanchortrue
12169   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
12170   \special{t4ht=</a>}%
12171   \Hy@Activeanchorfalse
12172   \Hy@RestoreLastskip
12173 }
12174 \Hy@WrapperDef\hyper@anchorstart#1{%
12175   \Hy@SaveLastskip
12176   \Hy@VerboseAnchor{#1}%
12177   \begingroup
12178     \hyper@chars\special{t4ht=<a name=%
12179       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
12180   \endgroup
12181   \Hy@Activeanchortrue
12182 }
12183 \def\hyper@anchorend{%
12184   \special{t4ht=</a>}%
12185   \Hy@Activeanchorfalse
12186   \Hy@RestoreLastskip
12187 }
12188 \def\@urltype{url}
12189 \def\hyper@linkstart#1#2{%
12190   \Hy@VerboseLinkStart{#1}{#2}%
12191   \expandafter\Hy@colorlink\csname @#1color\endcsname
12192   \def\Hy@tempa{#1}%
12193   \ifx\Hy@tempa\@urltype
12194     \special{t4ht=<a href=\hyper@quote#2\hyper@quote>}%
12195   \else
12196     \begingroup
12197       \hyper@chars
12198       \special{t4ht=<a href=%
12199         \hyper@quote\#\HyperDestNameFilter{#2}\hyper@quote>}%
12200     \endgroup
12201   \fi
12202 }
12203 \def\hyper@linkend{%
12204   \special{t4ht=</a>}%
12205   \Hy@endcolorlink
12206 }
12207 \def\hyper@linkfile#1#2#3{%

```

```

12208 \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\\else\##3\fi}%
12209 }
12210 \def\hyper@linkurl#1#2{%
12211 \leavevmode
12212 \ifHy@raiselinks
12213 \Hy@SaveSpaceFactor
12214 \Hy@SaveSavedSpaceFactor
12215 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
12216 \Hy@RestoreSavedSpaceFactor
12217 \@linkdim\dp\@tempboxa
12218 \lower\@linkdim\hbox{%
12219 \begingroup
12220 \hyper@chars
12221 \special{%
12222 t4ht=<a href=\hyper@quote#2\hyper@quote>%
12223 }%
12224 \endgroup
12225 }%
12226 \Hy@colorlink\@urlcolor
12227 \Hy@RestoreSpaceFactor
12228 #1\Hy@xspace@end
12229 \Hy@SaveSpaceFactor
12230 \Hy@endcolorlink
12231 \@linkdim\ht\@tempboxa
12232 \advance\@linkdim by -6.5\p@
12233 \raise\@linkdim\hbox{\special{t4ht=</a>}}%
12234 \Hy@RestoreSpaceFactor
12235 \else
12236 \begingroup
12237 \hyper@chars
12238 \special{t4ht=<a href=\hyper@quote#2\hyper@quote>}%
12239 \Hy@colorlink\@urlcolor
12240 #1\Hy@xspace@end
12241 \Hy@endcolorlink
12242 \special{t4ht=</a>}%
12243 \endgroup
12244 \fi
12245 }

```

Poor implementation of \hyper@link without considering #1.

```

12246 \def\hyper@link#1#2#3{%
12247 \Hy@VerboseLinkStart{#1}{#2}%
12248 \hyper@linkurl{#3}{\#\HyperDestNameFilter{#2}}%
12249 }
12250 \def\hyper@image#1#2{%
12251 \begingroup
12252 \hyper@chars
12253 \special{t4ht=<img src=\hyper@quote#1\hyper@quote>}%
12254 \endgroup
12255 }
12256 \let\autoref\ref
12257 \ifx \rEfLiNK \UnDef
12258 \def\rEfLiNK #1#2{#2}%
12259 \fi
12260 \let\backref\ltx@gobble

```

Fix for tex4ht.

```
12261 \AtBeginDocument{%
12262   \expandafter
12263   \let\expandafter\Hy@OrgMakeLabel\csname Make:Label\endcsname
12264   \expandafter\def\csname Make:Label\endcsname#1#2{%
12265     \ifhmode
12266       \Hy@SaveSpaceFactor
12267     \else
12268       \global\Hy@SavedSpaceFactor=1000 %
12269     \fi
12270     \Hy@OrgMakeLabel{#1}{%
12271       \Hy@RestoreSpaceFactor
12272       #2\Hy@xspace@end%
12273       \Hy@SaveSpaceFactor
12274     }%
12275     \Hy@RestoreSpaceFactor
12276   }%
12277 }
12278 </tex4ht>
12279 <*tex4htcfg>
12280 \IfFileExists{\jobname.cfg}{\endinput}{}
12281 \Preamble{html}
12282   \begin{document}%
12283 \EndPreamble
12284 \def\TeX{\TeX}
12285 \def\OMEGA{\Omega}
12286 \def\LaTeX{\LaTeX}
12287 \def\LaTeXe{\LaTeX2e}
12288 \def\eTeX{e-TeX}
12289 \def\MF{Metafont}
12290 \def\MP{MetaPost}
12291 </tex4htcfg>
```

44 Driver-specific form support

44.1 pdfmarks

change 2020-06-20: added /Euro to encoding

```
12292 <*pdfmark>
12293 \long\def\@Form[#1]{%
12294 \g@addto@macro\Hy@FirstPageHook{%
12295   \headerps@out{%
12296     [%
12297     /__objdef{pdfDocEncoding}%
12298     /type/dict%
12299     /OBJ pdfmark%
12300     [%
12301     {pdfDocEncoding}%
12302     <<%
12303     /Type/Encoding%
12304     /Differences[%
12305       24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek/ring%
12306       /tilde %
12307       39/quotesingle %
```

12308 96/grave %
12309 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
12310 /fraction/guilsinglleft/guilsinglright/minus/perthousand%
12311 /quotedblbase/quotedblleft/quotedblright/quoteleft%
12312 /quoteright/quotesinglbase/trademark/fi/fl/Lslash/OE/Scaron%
12313 /Ydieresis/Zcaron/dotlessi/lslash/oe/scaron/zcaron %
12314 160/Euro %
12315 164/currency %
12316 166/brokenbar %
12317 168/dieresis/copyright/ordfeminine %
12318 172/logicalnot/.notdef/registered/macron/degree/plusminus%
12319 /twosuperior/threesuperior/acute/mu %
12320 183/periodcentered/cedilla/onesuperior/ordmasculine %
12321 188/onequarter/onehalf/threequarters %
12322 192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
12323 /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave%
12324 /Iacute/Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute%
12325 /Ocircumflex/Otilde/Odieresis/multiply/Oslash/Ugrave%
12326 /Uacute/Ucircumflex/Udieresis/Yacute/Thorn/germandbls%
12327 /agrave/aacute/acircumflex/atilde/adieresis/aring/ae%
12328 /ccedilla/egrave/eacute/ecircumflex/edieresis/igrave%
12329 /iacute/icircumflex/idieresis/eth/ntilde/ograde/oacute%
12330 /ocircumflex/otilde/odieresis/divide/oslash/ugrave/uacute%
12331 /ucircumflex/udieresis/yacute/thorn/ydieresis%
12332]%
12333 >>%
12334 /PUT pdfmark%
12335 [%
12336 /_objdef{ZaDb}%
12337 /type/dict%
12338 /OBJ pdfmark%
12339 [%
12340 {ZaDb}%
12341 <<%
12342 /Type/Font%
12343 /Subtype/Type1%
12344 /Name/ZaDb%
12345 /BaseFont/ZapfDingbats%
12346 >>%
12347 /PUT pdfmark%
12348 [%
12349 /_objdef{Helv}%
12350 /type/dict%
12351 /OBJ pdfmark%
12352 [%
12353 {Helv}%
12354 <<%
12355 /Type/Font%
12356 /Subtype/Type1%
12357 /Name/Helv%
12358 /BaseFont/Helvetica%
12359 /Encoding{pdfDocEncoding}%
12360 >>%
12361 /PUT pdfmark%

```

12362 [%
12363   /_objdef{aform}%
12364   /type/dict%
12365 /OBJ pdfmark%
12366 [%
12367   /_objdef{afields}%
12368   /type/array%
12369 /OBJ pdfmark%
12370 [%
12371   /_objdef{corder}%
12372   /type/array%
12373 /OBJ pdfmark%
12374 {%
12375   [%
12376     /BBox[0 0 100 100]%
12377     /_objdef{Check}%
12378   /BP pdfmark %
12379   1 0 0 setrgbcolor%
12380   /ZapfDingbats 80 selectfont %
12381   20 20 moveto%
12382   (4)show%
12383   [/EP pdfmark%
12384   [%
12385     /BBox[0 0 100 100]%
12386     /_objdef{Cross}%
12387   /BP pdfmark %
12388   1 0 0 setrgbcolor%
12389   /ZapfDingbats 80 selectfont %
12390   20 20 moveto%
12391   (8)show%
12392   [/EP pdfmark%
12393   [%
12394     /BBox[0 0 250 100]%
12395     /_objdef{Submit}%
12396   /BP pdfmark %
12397   0.6 setgray %
12398   0 0 250 100 rectfill %
12399   1 setgray %
12400   2 2 moveto %
12401   2 98 lineto %
12402   248 98 lineto %
12403   246 96 lineto %
12404   4 96 lineto %
12405   4 4 lineto %
12406   fill %
12407   0.34 setgray %
12408   248 98 moveto %
12409   248 2 lineto %
12410   2 2 lineto %
12411   4 4 lineto %
12412   246 4 lineto %
12413   246 96 lineto %
12414   fill%
12415   /Helvetica 76 selectfont %

```

```

12416 0 setgray %
12417 8 22.5 moveto%
12418 (Submit)show%
12419 [/EP pdfmark%
12420 [%
12421 /BBox[0 0 250 100]%
12422 /_objdef{SubmitP}%
12423 /BP pdfmark %
12424 0.6 setgray %
12425 0 0 250 100 rectfill %
12426 0.34 setgray %
12427 2 2 moveto %
12428 2 98 lineto %
12429 248 98 lineto %
12430 246 96 lineto %
12431 4 96 lineto %
12432 4 4 lineto %
12433 fill %
12434 1 setgray %
12435 248 98 moveto %
12436 248 2 lineto %
12437 2 2 lineto %
12438 4 4 lineto %
12439 246 4 lineto %
12440 246 96 lineto %
12441 fill%
12442 /Helvetica 76 selectfont %
12443 0 setgray %
12444 10 20.5 moveto%
12445 (Submit)show%
12446 [/EP pdfmark%
12447 } ?pdfmark%
12448 [%
12449 {aform}%
12450 <<%
12451 /Fields{afields}%
12452 /DR<<%
12453 /Font<<%
12454 /ZaDb{ZaDb}%
12455 /Helv{Helv}%
12456 >>%
12457 >>%
12458 /DA(/Helv 10 Tf 0 g)%
12459 /CO{corder}%
12460 \ifHy@pdfa
12461 \else
12462 \ifHyField@NeedAppearances
12463 /NeedAppearances true%
12464 \fi
12465 \fi
12466 >>%
12467 /PUT pdfmark%
12468 [%
12469 {Catalog}%

```



```

12470 <<%
12471 /AcroForm{aform}%
12472 >>%
12473 /PUT pdfmark%
12474 }}%
12475 \kvsetkeys{Form}{#1}%
12476 }
12477 \let\@endForm\ltx@empty
12478 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
12479 \Hy@Message{Sorry, pdfmark drivers do not support FORM gauges}%
12480 }

12481 \newcount\HyField@AnnotCount
12482 \HyField@AnnotCount=\z@
12483 \def\HyField@AdvanceAnnotCount{%
12484 \global\advance\HyField@AnnotCount\@ne
12485 }
12486 \def\HyField@TheAnnotCount{%
12487 \the\HyField@AnnotCount
12488 }

12489 \edef\Fld@pageobjref{/P\string{ThisPage\string}}
12490 \def\HyField@AddToFields#1{%
12491 \pdfmark{%
12492 pdfmark=/APPEND,%
12493 Raw={%
12494 \string{afields\string}%
12495 \string{#1\HyField@TheAnnotCount\string}%
12496 }%
12497 }%
12498 \ifx\Fld@calculate@code\ltx@empty
12499 \else
12500 \pdfmark{%
12501 pdfmark=/APPEND,%
12502 Raw={%
12503 \string{corder\string}%
12504 \string{#1\HyField@TheAnnotCount\string}%
12505 }%
12506 }%
12507 \fi
12508 }

12509 \def\@TextField[#1]#2{% parameters, label
12510 \def\Fld@name{#2}%
12511 \let\Fld@default\ltx@empty
12512 \let\Fld@value\@empty
12513 \def\Fld@width{\DefaultWidthofText}%
12514 \def\Fld@height{%
12515 \ifFld@multiline
12516 \DefaultHeightofTextMultiline
12517 \else
12518 \DefaultHeightofText
12519 \fi
12520 }%
12521 \begingroup
12522 \expandafter\HyField@SetKeys\expandafter{%

```

```

12523 \DefaultOptionsofText,#1%
12524 }%
12525 \HyField@FlagsText
12526 \ifFld@hidden\def\Fld@width{1sp}\fi
12527 \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
12528 \HyField@AdvanceAnnotCount
12529 \LayoutTextField{#2}{%
12530 \leavevmode
12531 \Hy@escapeform\PDFForm@Text
12532 \pdfmark{\MakeTextField{\Fld@width}{\Fld@height}}{%
12533 pdfmark=/ANN,%
12534 objdef=text\HyField@TheAnnotCount,%
12535 Raw={\PDFForm@Text}%
12536 }%
12537 }%
12538 \HyField@AddToFields{text}%
12539 \endgroup
12540 }
12541 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
12542 \def\Fld@name{#2}%
12543 \let\Fld@default\relax
12544 \let\Fld@value\relax
12545 \def\Fld@width{\DefaultWidthofChoiceMenu}%
12546 \def\Fld@height{\DefaultHeightofChoiceMenu}%
12547 \begingroup
12548 \Fld@menulength=0 %
12549 \@tempdima\z@
12550 \@for\@curropt:=#3\do{%
12551 \expandafter\Fld@checkequals\@curropt==\%
12552 \Hy@StepCount\Fld@menulength
12553 \settowidth{\@tempdimb}{\@currDisplay}%
12554 \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
12555 }%
12556 \advance\@tempdima by 15\p@
12557 \begingroup
12558 \HyField@SetKeys{#1}%
12559 \edef\x{\endgroup
12560 \noexpand\expandafter
12561 \noexpand\HyField@SetKeys
12562 \noexpand\expandafter{%
12563 \expandafter\noexpand\cname DefaultOptionsof%
12564 \ifFld@radio
12565 Radio%
12566 \else
12567 \ifFld@combo
12568 \ifFld@popdown
12569 PopdownBox%
12570 \else
12571 ComboBox%
12572 \fi
12573 \else
12574 ListBox%
12575 \fi
12576 \fi

```

```

12577     \endcsname
12578   }%
12579 } \x
12580 \HyField@SetKeys{#1}%
12581 \ifFld@hidden\def\Fld@width{1sp}\fi
12582 \ifx\Fld@value\relax
12583   \let\Fld@value\Fld@default
12584 \fi
12585 \LayoutChoiceField{#2}{%
12586   \ifFld@radio
12587     \HyField@FlagsRadioButton
12588     \@@Radio{#3}%
12589   \else
12590     \begingroup
12591     \HyField@FlagsChoice
12592     \ifdim\Fld@width<\@tempdima
12593       \ifdim\@tempdima<1cm\@tempdima1cm\fi
12594       \edef\Fld@width{\the\@tempdima}%
12595     \fi
12596     \ifFld@combo
12597     \else
12598       \@tempdima=\the\Fld@menulength\Fld@charsize
12599       \advance\@tempdima by \Fld@borderwidth bp %
12600       \advance\@tempdima by \Fld@borderwidth bp %
12601       \edef\Fld@height{\the\@tempdima}%
12602     \fi
12603     \@@ListBox{#3}%
12604   \endgroup
12605 \fi
12606 }%
12607 \endgroup
12608 }
12609 \def\@@Radio#1{%
12610   \Fld@listcount=0 %
12611   \EdefEscapeName\Fld@default{\Fld@default}%
12612   \@for\@curropt:=#1\do{%
12613     \expandafter\Fld@checkequals\@curropt==\%
12614     \EdefEscapeName\@currValue{\@currValue}%
12615     \Hy@StepCount\Fld@listcount
12616     \@currDisplay\space
12617     \Hy@escapeform\PDFForm@Radio
12618     \ifnum\Fld@listcount=1 %
12619       \HyField@AdvanceAnnotCount
12620     \fi
12621     \pdfmark[\MakeRadioField{\Fld@width}{\Fld@height}]{%
12622       pdfmark=/ANN,%
12623       objdef=\ifnum\Fld@listcount=1 radio\HyField@TheAnnotCount\fi,%
12624       Raw={%
12625         \PDFForm@Radio /AP <</N <</\@currValue\space {Check}>> >>%
12626       }%
12627   } % deliberate space between radio buttons
12628   \ifnum\Fld@listcount=1 %
12629     \HyField@AddToFields{radio}%
12630   \fi

```

```

12631 }%
12632 }
12633 \newcount\Fld@listcount
12634 \def\@@ListBox#1{%
12635   \HyField@PDFChoices{#1}%
12636   \Hy@escapeform\PDFForm@List
12637   \HyField@AdvanceAnnotCount
12638   \pdfmark[\MakeChoiceField{\Fld@width}{\Fld@height}]{%
12639     pdfmark=/ANN,%
12640     objdef=list\HyField@TheAnnotCount,%
12641     Raw={\PDFForm@List}%
12642   }%
12643   \HyField@AddToFields{list}%
12644 }
12645 \def\@PushButton[#1]#2{% parameters, label
12646   \def\Fld@name{#2}%
12647   \begingroup
12648     \expandafter\HyField@SetKeys\expandafter{%
12649       \DefaultOptionsofPushButton,#1%
12650     }%
12651     \ifHy@pdfa
12652       \Hy@Error{%
12653         PDF/A: Push button with JavaScript is prohibited%
12654       } \@ehc
12655       \LayoutPushButtonField{%
12656         \leavevmode
12657         \MakeButtonField{#2}%
12658       }%
12659     \else
12660       \HyField@FlagsPushButton
12661       \iffld@hidden\def\Fld@width{1sp}\fi
12662       \HyField@AdvanceAnnotCount
12663       \LayoutPushButtonField{%
12664         \leavevmode
12665         \Hy@escapeform\PDFForm@Push
12666         \pdfmark[\MakeButtonField{#2}]{%
12667           pdfmark=/ANN,%
12668           objdef=push\HyField@TheAnnotCount,%
12669           Raw={\PDFForm@Push}%
12670         }%
12671       }%
12672       \HyField@AddToFields{push}%
12673     \fi
12674   \endgroup
12675 }
12676 \def\@Submit[#1]#2{%
12677   \def\Fld@width{\DefaultWidthofSubmit}%
12678   \def\Fld@height{\DefaultHeightofSubmit}%
12679   \begingroup
12680     \expandafter\HyField@SetKeys\expandafter{%
12681       \DefaultOptionsofSubmit,#1%
12682     }%
12683     \HyField@FlagsPushButton
12684     \HyField@FlagsSubmit

```

```

12685 \ifFld@hidden\def\Fld@width{1sp}\fi
12686 \Hy@escapeform\PDFForm@Submit
12687 \HyField@AdvanceAnnotCount
12688 \pdfmark[\MakeButtonField{#2}]{%
12689 pdfmark=/ANN,%
12690 objdef=submit\HyField@TheAnnotCount,%
12691 Raw={\PDFForm@Submit /AP<</N{Submit}/D{SubmitP}>>}}%
12692 }%
12693 \HyField@AddToFields{submit}%
12694 \endgroup
12695 }
12696 \def\@Reset[#1]#2{%
12697 \def\Fld@width{\DefaultWidthofReset}%
12698 \def\Fld@height{\DefaultHeightofReset}%
12699 \begingroup
12700 \expandafter\HyField@SetKeys\expandafter{%
12701 \DefaultOptionsofReset,#1%
12702 }%
12703 \leavevmode
12704 \ifHy@pdfa
12705 \Hy@Error{%
12706 PDF/A: Reset action is prohibited%
12707 }\@ehc
12708 \MakeButtonField{#2}%
12709 \else
12710 \HyField@FlagsPushButton
12711 \ifFld@hidden\def\Fld@width{1sp}\fi
12712 \Hy@escapeform\PDFForm@Reset
12713 \HyField@AdvanceAnnotCount
12714 \pdfmark[\MakeButtonField{#2}]{%
12715 pdfmark=/ANN,%
12716 objdef=reset\HyField@TheAnnotCount,%
12717 Raw={\PDFForm@Reset}%
12718 }%
12719 \HyField@AddToFields{reset}%
12720 \fi
12721 \endgroup
12722 }%
12723 \def\@CheckBox[#1]#2{% parameters, label
12724 \def\Fld@name{#2}%
12725 \def\Fld@default{0}%
12726 \begingroup
12727 \def\Fld@width{\DefaultWidthofCheckBox}%
12728 \def\Fld@height{\DefaultHeightofCheckBox}%
12729 \expandafter\HyField@SetKeys\expandafter{%
12730 \DefaultOptionsofCheckBox,#1%
12731 }%
12732 \HyField@FlagsCheckBox
12733 \ifFld@hidden\def\Fld@width{1sp}\fi
12734 \HyField@AdvanceAnnotCount
12735 \LayoutCheckField{#2}{%
12736 \leavevmode
12737 \Hy@escapeform\PDFForm@Check
12738 \pdfmark[\MakeCheckField{\Fld@width}{\Fld@height}]{%

```

```

12739 pdfmark=/ANN,%
12740 objdef=check\HyField@TheAnnotCount,%
12741 Raw={\PDFForm@Check}%
12742 }%
12743 }%
12744 \HyField@AddToFields{check}%
12745 \endgroup
12746 }
12747 </pdfmark>

```

44.2 HyperTeX

```

12748 <*hypertex>
12749 \def\@Form[#1]{%
12750 \Hy@Message{Sorry, HyperTeX does not support FORMs}%
12751 }
12752 \let\@endForm\ltx@empty
12753 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
12754 \Hy@Message{Sorry, HyperTeX does not support FORM gauges}%
12755 }
12756 \def\@TextField[#1]#2{% parameters, label
12757 \Hy@Message{Sorry, HyperTeX does not support FORM text fields}%
12758 }
12759 \def\@CheckBox[#1]#2{% parameters, label
12760 \Hy@Message{Sorry, HyperTeX does not support FORM checkboxes}%
12761 }
12762 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
12763 \Hy@Message{Sorry, HyperTeX does not support FORM choice menus}%
12764 }
12765 \def\@PushButton[#1]#2{% parameters, label
12766 \Hy@Message{Sorry, HyperTeX does not support FORM pushbuttons}%
12767 }
12768 \def\@Reset[#1]#2{%
12769 \Hy@Message{Sorry, HyperTeX does not support FORMs}%
12770 }
12771 \def\@Submit[#1]#2{%
12772 \Hy@Message{Sorry, HyperTeX does not support FORMs}%
12773 }
12774 </hypertex>

```

44.3 TeX4ht

```

12775 <*tex4ht>
12776 \def\@Form[#1]{%
12777 \kvsetkeys{Form}{#1}%
12778 \HCode{<form action="\Form@action" method="\Form@method">}%
12779 }
12780 \def\@endForm{\HCode{</form>}}
12781 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
12782 \Hy@Message{Sorry, TeX4ht does not support gauges}%
12783 }
12784 \def\@TextField[#1]#2{% parameters, label
12785 \let\Hy@reserved@a\@empty
12786 \def\Fld@name{#2}%
12787 \let\Fld@default\ltx@empty

```

```

12788 \bgroup
12789 \Field@toks={ }%
12790 \kvsetkeys{Field}{#1}%
12791 \HCode{<label for="\Fld@name">#2</label>}%
12792 \ifFld@password
12793 \@@PasswordField
12794 \else
12795 \@@TextField
12796 \fi
12797 \egroup
12798 }
12799 \def\@@PasswordField{%
12800 \HCode{%
12801 <input type="password" %
12802 id="\Fld@name" %
12803 name="\Fld@name" %
12804 \ifFld@hidden type="hidden" \fi
12805 value="\Fld@default" %
12806 \the\Field@toks
12807 >%
12808 }%
12809 }
12810 \def\@@TextField{%
12811 \ifFld@multiline
12812 \HCode{<textarea %
12813 \ifFld@readonly readonly \fi
12814 id="\Fld@name" %
12815 name="\Fld@name" %
12816 \ifFld@hidden type="hidden" \fi
12817 \the\Field@toks>%
12818 }%
12819 \Fld@default
12820 \HCode{</textarea>}%
12821 \else
12822 \HCode{<input type="textbox" %
12823 \ifFld@readonly readonly \fi
12824 id="\Fld@name" %
12825 name="\Fld@name" %
12826 \ifFld@hidden type="hidden" \fi
12827 value="\Fld@default" %
12828 \the\Field@toks>%
12829 }%
12830 \fi
12831 }
12832 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
12833 \def\Fld@name{#2}%
12834 \let\Fld@default\ltx@empty
12835 \let\Hy@reserved@a\relax
12836 \begingroup
12837 \expandafter\Fld@findlength#3\\%
12838 \Field@toks={ }%
12839 \kvsetkeys{Field}{#1}%
12840 #2%
12841 \ifFld@radio

```

```

12842     \expandafter\@@Radio#3\\%
12843     \else
12844         \expandafter\@@Menu#3\\%
12845     \fi
12846 \endgroup
12847 }
12848 \def\Fld@findlength#1\\{%
12849     \Fld@menulength=0 %
12850     \@for\@curropt:=#1\do{\Hy@StepCount\Fld@menulength}%
12851 }
12852 \def\@@Menu#1\\{%
12853     \HCode{<select size="\the\Fld@menulength" %
12854         name="\Fld@name" %
12855         \the\Field@toks>%
12856     }%
12857     \@for\@curropt:=#1\do{%
12858         \expandafter\Fld@checkequals\@curropt==\\%
12859         \HCode{<option %
12860             \ifx\@curropt\Fld@default selected \fi
12861             value="\@currValue">\@currDisplay</option>%
12862         }%
12863     }%
12864     \HCode{</select>}%
12865 }
12866 \def\@@Radio#1\\{%
12867     \@for\@curropt:=#1\do{%
12868         \expandafter\Fld@checkequals\@curropt==\\%
12869         \HCode{<input type="radio" %
12870             \ifx\@curropt\Fld@default checked \fi
12871             name="\Fld@name" %
12872             value="\@currValue" %
12873             \the\Field@toks>%
12874         }%
12875         \@currDisplay
12876     }%
12877 }
12878 \def\@PushButton[#1]#2{% parameters, label
12879     \def\Fld@name{#2}%
12880     \bgroup
12881         \Field@toks={ }%
12882         \kvsetkeys{Field}{#1}%
12883         \HCode{<input type="button" %
12884             name="\Fld@name" %
12885             value="#2" %
12886             \the\Field@toks>%
12887         }%
12888         \HCode{</button>}%
12889     \egroup
12890 }
12891 \def\@Submit[#1]#2{%
12892     \HCode{<button type="submit">#2</button>}%
12893 }
12894 \def\@Reset[#1]#2{%
12895     \HCode{<button type="reset">#2</button>}%

```



```

12896 }
12897 \def\@CheckBox[#1]#2{% parameters, label
12898   \let\Hy@reserved@a\@empty
12899   \def\Fld@name{#2}%
12900   \def\Fld@default{0}%
12901   \bgroup
12902     \Field@toks={ }%
12903     \kvsetkeys{Field}{#1}%
12904     \HCode{<input type="checkbox" %
12905       \ifFld@checked checked \fi
12906       \ifFld@disabled disabled \fi
12907       \ifFld@readonly readonly \fi
12908       name="\Fld@name" %
12909       \ifFld@hidden type="hidden" \fi
12910       value="\Fld@default" %
12911       \the\Field@toks>%
12912     #2%
12913   }%
12914 \egroup
12915 }
12916 </tex4ht>

```

44.4 pdfTeX

```

12917 <*pdfTeX>
12918 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
12919   \Hy@Message{Sorry, pdfTeX does not support FORM gauges}%
12920 }
12921 \def\MakeFieldObject#1#2{\sbox0{#1}%
12922   \immediate\pdfxform0 %
12923   \expandafter\edef\csname #2Object\endcsname{%
12924     \the\pdffastxform\space 0 R%
12925   }%
12926 % \hbox to 0pt{\hskip-\maxdimen{\pdfrefxform \the\pdffastxform}}}%
12927 }%
12928 \let\HyField@afields\ltx@empty
12929 \let\HyField@cofields\ltx@empty
12930 \@ifundefined{pdffastlink}
12931 {%
12932   \let\HyField@AddToFields\relax
12933   \PackageInfo{hyperref}{%
12934     You need pdfTeX 1.40.0 for setting the /Fields entry.%
12935     \MessageBreak
12936     Adobe Reader/Acrobat accepts an empty /Field array,%
12937     \MessageBreak
12938     but other PDF viewers might complain%
12939   }}%
12940 {%
12941   \let\HyField@AuxAddToFields\ltx@gobble
12942   \let\HyField@AuxAddToCoFields\ltx@gobbletwo
12943   \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.

```

12944 \def\HyField@ABD@AuxAddToCoFields#1#2{%

```

```

12945 \begingroup
12946 \Hy@safe@activetrue
12947 \let\ltx@secondoftwo\relax
12948 \ifx\HyField@cofields\ltx@empty
12949 \xdef\HyField@cofields{%
12950 \ltx@secondoftwo{#1}{ #2 0 R}%
12951 }%
12952 \else
12953 \let\ltx@secondoftwo\relax
12954 \def\HyField@AddCoField##1##2###3{%
12955 \ifx##1\ltx@empty
12956 \ltx@secondoftwo{#1}{ #2 0 R}%
12957 \expandafter\ltx@gobble
12958 \else
12959 \ifnum\pdfstrcmp{##2}{#1}>\ltx@zero
12960 \ltx@secondoftwo{#1}{ #2 0 R}%
12961 \ltx@secondoftwo{##2}{##3}%
12962 \expandafter\expandafter\expandafter\ltx@gobble
12963 \else
12964 \ltx@secondoftwo{##2}{##3}%
12965 \fi
12966 \fi
12967 \HyField@AddCoField
12968 }%
12969 \xdef\HyField@cofields{%
12970 \expandafter\HyField@AddCoField
12971 \HyField@cofields\ltx@empty\ltx@empty\ltx@empty
12972 }%
12973 \fi
12974 \endgroup
12975 }%
12976 \Hy@AtBeginDocument{%
12977 \if@filesw
12978 \immediate\write\@mainaux{%
12979 \string\providecommand\string\HyField@AuxAddToFields[1]{}%
12980 }%
12981 \immediate\write\@mainaux{%
12982 \string\providecommand\string\HyField@AuxAddToCoFields[2]{}%
12983 }%
12984 \fi
12985 \let\HyField@AfterAuxOpen\@firstofone
12986 \def\HyField@AuxAddToFields#1{%
12987 \xdef\HyField@afields{%
12988 \ifx\HyField@afields\@empty
12989 \else
12990 \HyField@afields
12991 \space
12992 \fi
12993 #1 0 R%
12994 }%
12995 }%
12996 \let\HyField@AuxAddToCoFields\HyField@ABD@AuxAddToCoFields
12997 }%
12998 \def\HyField@AddToFields{%

```

```

12999 \expandafter\HyField@@AddToFields\expandafter{%
13000 \the\pdfastlink
13001 }%
13002 \ifx\Fld@calculate@code\ltx@empty
13003 \else
13004 \begingroup
13005 \Hy@safe@activetrue
13006 \edef\Hy@temp{%
13007 \endgroup
13008 \if@filesw
13009 \write\@mainaux{%
13010 \string\HyField@AuxAddToCoFields{%
13011 \Fld@calculate@sortkey
13012 }{%
13013 \the\pdfastlink
13014 }%
13015 }%
13016 \fi
13017 }%
13018 \Hy@temp
13019 \fi
13020 }%
13021 \def\HyField@@AddToFields#1{%
13022 \HyField@AfterAuxOpen{%
13023 \if@filesw
13024 \write\@mainaux{%
13025 \string\HyField@AuxAddToFields{#1}%
13026 }%
13027 \fi
13028 }%
13029 }%
13030 }
13031 \def\@Form[#1]{%
13032 \@ifundefined{textcolor}{\let\textcolor\@gobble}{}%
13033 \kvsetkeys{Form}{#1}%
13034 \pdf@ifdraftmode{}{%
13035 \Hy@FormObjects
13036 \ifnum\pdfTeXversion>13 %
13037 \pdfrefobj\OBJ@pdfdocencoding
13038 \pdfrefobj\OBJ@ZaDb
13039 \pdfrefobj\OBJ@Helv
13040 \fi
13041 \AtVeryEndDocument{%
13042 \immediate\pdfobj{%
13043 <<%
13044 /Fields[\HyField@afields]%
13045 \ifx\HyField@cofields\ltx@empty
13046 \else
13047 /CO[\romannumeral-`\Q\HyField@cofields]%
13048 \fi
13049 /DR<<%
13050 /Font<<%
13051 /ZaDb \OBJ@ZaDb\space 0 R%
13052 /Helv \OBJ@Helv\space 0 R%

```

```

13053     >>%
13054     >>%
13055     /DA(/Helv 10 Tf 0 g)%
13056     \ifHy@pdfa
13057     \else
13058     \ifHyField@NeedAppearances
13059     /NeedAppearances true%
13060     \fi
13061     \fi
13062     >>%
13063     }%
13064     \edef\OBJ@acroform{\the\pdflastobj}%
13065     \pdfcatalog{/AcroForm \OBJ@acroform\space 0 R}%
13066     }%
13067     }%
13068     \MakeFieldObject{%
Same as \ding{123} of package pifont.
13069     \begingroup
13070     \fontfamily{pzd}%
13071     \fontencoding{U}%
13072     \fontseries{m}%
13073     \fontshape{n}%
13074     \selectfont
13075     \char123 %
13076     \endgroup
13077     }{Ding}%
13078     \MakeFieldObject{%
13079     \fbox{\textcolor{yellow}{\textsf{Submit}}}%
13080     }{Submit}%
13081     \MakeFieldObject{%
13082     \fbox{\textcolor{yellow}{\textsf{SubmitP}}}%
13083     }{SubmitP}%
13084     }
13085     \let\@endForm\ltx@empty
13086     \let\HyAnn@AbsPageLabel\ltx@empty
13087     \let\Fld@pageobjref\ltx@empty
13088     \ltx@ifundefined{pdfpageref}{%
13089     }{%
13090     \ltx@ifpackageloaded{zref-abspage}{%
13091     \newcount\HyAnn@Count
13092     \HyAnn@Count=\ltx@zero
13093     \def\HyAnn@AbsPageLabel{%
13094     \global\advance\HyAnn@Count by\ltx@one
13095     \zref@labelbyprops{HyAnn@\the\HyAnn@Count}{abspage}%
13096     \zref@refused{HyAnn@\the\HyAnn@Count}%
13097     }%
13098     \def\Fld@pageobjref{%
13099     \zref@ifrefundefined{HyAnn@\the\HyAnn@Count}{%
13100     }{%
13101     \zref@ifrefcontainsprop{HyAnn@\the\HyAnn@Count}{abspage}{%
13102     /P \pdfpageref
13103     \zref@extractdefault{HyAnn@\the\HyAnn@Count}{abspage}{1} %
13104     \space 0 R%
13105     }{%

```

```

13106     }%
13107     }%
13108     }%
13109   }{%
13110   }%
13111 }

13112 \def\@TextField[#1]#2{% parameters, label
13113   \def\Fld@name{#2}%
13114   \let\Fld@default\ltx@empty
13115   \let\Fld@value\@empty
13116   \def\Fld@width{\DefaultWidthofText}%
13117   \def\Fld@height{%
13118     \ifFld@multiline
13119       \DefaultHeightofTextMultiline
13120     \else
13121       \DefaultHeightofText
13122     \fi
13123   }%
13124   \begingroup
13125     \expandafter\HyField@SetKeys\expandafter{%
13126       \DefaultOptionsofText,#1%
13127     }%
13128     \PDFForm@Name
13129     \HyField@FlagsText
13130     \ifFld@hidden\def\Fld@width{1sp}\fi
13131     \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
13132     \LayoutTextField{#2}{%
13133       \leavevmode
13134       \HyAnn@AbsPageLabel
13135       \Hy@escapeform\PDFForm@Text
13136       \pdfstartlink user {\PDFForm@Text}\relax
13137       \MakeTextField{\Fld@width}{\Fld@height}\pdfendlink
13138       \HyField@AddToFields
13139     }%
13140   \endgroup
13141 }

13142 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
13143   \def\Fld@name{#2}%
13144   \let\Fld@default\relax
13145   \let\Fld@value\relax
13146   \def\Fld@width{\DefaultWidthofChoiceMenu}%
13147   \def\Fld@height{\DefaultHeightofChoiceMenu}%
13148   \begingroup
13149     \Fld@menulength=0 %
13150     \@tempdima\z@
13151     \@for\@curropt:=#3\do{%
13152       \expandafter\Fld@checkequals\@curropt==\%
13153       \Hy@StepCount\Fld@menulength
13154       \settowidth{\@tempdimb}{\@currDisplay}%
13155       \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
13156     }%
13157     \advance\@tempdima by 15\p@
13158     \begingroup
13159       \HyField@SetKeys{#1}%

```

```

13160 \edef\x{\endgroup
13161 \noexpand\expandafter
13162 \noexpand\HyField@SetKeys
13163 \noexpand\expandafter{%
13164 \expandafter\noexpand\csname DefaultOptionsof%
13165 \ifFld@radio
13166 Radio%
13167 \else
13168 \ifFld@combo
13169 \ifFld@popdown
13170 PopdownBox%
13171 \else
13172 ComboBox%
13173 \fi
13174 \else
13175 ListBox%
13176 \fi
13177 \fi
13178 \endcsname
13179 }%
13180 }\x
13181 \HyField@SetKeys{#1}%
13182 \PDFForm@Name
13183 \ifFld@hidden\def\Fld@width{1sp}\fi
13184 \ifx\Fld@value\relax
13185 \let\Fld@value\Fld@default
13186 \fi
13187 \LayoutChoiceField{#2}{%
13188 \ifFld@radio
13189 \HyField@FlagsRadioButton
13190 \@@Radio{#3}%
13191 \else
13192 \begingroup
13193 \HyField@FlagsChoice
13194 \ifdim\Fld@width<\@tempdima
13195 \ifdim\@tempdima<1cm\@tempdima1cm\fi
13196 \edef\Fld@width{\the\@tempdima}%
13197 \fi
13198 \ifFld@combo
13199 \else
13200 \@tempdima=\the\Fld@menulength\Fld@charsize
13201 \advance\@tempdima by \Fld@borderwidth bp %
13202 \advance\@tempdima by \Fld@borderwidth bp %
13203 \edef\Fld@height{\the\@tempdima}%
13204 \fi
13205 \@@ListBox{#3}%
13206 \endgroup
13207 \fi
13208 }%
13209 \endgroup
13210 }
13211 \def\@@Radio#1{%
13212 \Fld@listcount=0 %
13213 \EdefEscapeName\Fld@default{\Fld@default}%

```

```

13214 \@for\@curropt:=#1\do{%
13215   \expandafter\Fld@checkequals\@curropt==\\%
13216   \EdefEscapeName\@currValue{\@currValue}%
13217   \Hy@StepCount\Fld@listcount
13218   \@currDisplay\space
13219   \leavevmode
13220   \HyAnn@AbsPageLabel
13221   \Hy@escapeform\PDFForm@Radio
13222   \pdfstartlink user {%
13223     \PDFForm@Radio
13224     /AP<<%
13225     /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.

```

13226     /\@currValue\space \DingObject
13227     >>%
13228     >>%
13229   }%
13230   \relax
13231   \MakeRadioField{\Fld@width}{\Fld@height}\pdfendlink
13232   \ifnum\Fld@listcount=1 %
13233     \HyField@AddToFields
13234   \fi
13235   \space % deliberate space between radio buttons
13236 }%
13237 }
13238 \newcount\Fld@listcount
13239 \def\@@Listbox#1{%
13240   \HyField@PDFChoices{#1}%
13241   \leavevmode
13242   \HyAnn@AbsPageLabel
13243   \Hy@escapeform\PDFForm@List
13244   \pdfstartlink user {\PDFForm@List}\relax
13245   \MakeChoiceField{\Fld@width}{\Fld@height}%
13246   \pdfendlink
13247   \HyField@AddToFields
13248 }
13249 \def\@PushButton[#1]#2{% parameters, label
13250   \def\Fld@name{#2}%
13251   \begingroup
13252     \expandafter\HyField@SetKeys\expandafter{%
13253       \DefaultOptionsofPushButton,#1%
13254     }%
13255     \PDFForm@Name
13256     \ifHy@pdfa
13257       \Hy@Error{%
13258         PDF/A: Push button with JavaScript is prohibited%
13259       }\@ehc
13260     \LayoutPushButtonField{%
13261       \leavevmode
13262       \MakeButtonField{#2}%
13263     }%

```

```

13264 \else
13265 \HyField@FlagsPushButton
13266 \ifFld@hidden\def\Fld@width{1sp}\fi
13267 \LayoutPushButtonField{%
13268 \leavevmode
13269 \HyAnn@AbsPageLabel
13270 \Hy@escapeform\PDFForm@Push
13271 \pdfstartlink user {\PDFForm@Push}\relax
13272 \MakeButtonField{#2}%
13273 \pdfendlink
13274 \HyField@AddToFields
13275 }%
13276 \fi
13277 \endgroup
13278 }
13279 \def\@Submit[#1]#2{%
13280 \def\Fld@width{\DefaultWidthofSubmit}%
13281 \def\Fld@height{\DefaultHeightofSubmit}%
13282 \begingroup
13283 \expandafter\HyField@SetKeys\expandafter{%
13284 \DefaultOptionsofSubmit,#1%
13285 }%
13286 \HyField@FlagsPushButton
13287 \HyField@FlagsSubmit
13288 \ifFld@hidden\def\Fld@width{1sp}\fi
13289 \leavevmode
13290 \HyAnn@AbsPageLabel
13291 \Hy@escapeform\PDFForm@Submit
13292 \pdfstartlink user {%
13293 \PDFForm@Submit
13294 /AP<</N \SubmitObject/D \SubmitPObject>>%
13295 }%
13296 \relax
13297 \MakeButtonField{#2}%
13298 \pdfendlink
13299 \HyField@AddToFields
13300 \endgroup
13301 }
13302 \def\@Reset[#1]#2{%
13303 \def\Fld@width{\DefaultWidthofReset}%
13304 \def\Fld@height{\DefaultHeightofReset}%
13305 \begingroup
13306 \expandafter\HyField@SetKeys\expandafter{%
13307 \DefaultOptionsofReset,#1%
13308 }%
13309 \leavevmode
13310 \ifHy@pdfa
13311 \Hy@Error{%
13312 PDF/A: Reset action is prohibited%
13313 }\@ehc
13314 \MakeButtonField{#2}%
13315 \else
13316 \HyField@FlagsPushButton
13317 \ifFld@hidden\def\Fld@width{1sp}\fi

```



```

13318 \HyAnn@AbsPageLabel
13319 \Hy@escapeform\PDFForm@Reset
13320 \pdfstartlink user {\PDFForm@Reset}\relax
13321 \MakeButtonField{#2}%
13322 \pdfendlink
13323 \HyField@AddToFields
13324 \fi
13325 \endgroup
13326 }
13327 \def\@CheckBox[#1]#2{% parameters, label
13328 \def\Fld@name{#2}%
13329 \def\Fld@default{0}%
13330 \begingroup
13331 \def\Fld@width{\DefaultWidthofCheckBox}%
13332 \def\Fld@height{\DefaultHeightofCheckBox}%
13333 \expandafter\HyField@SetKeys\expandafter{%
13334 \DefaultOptionsofCheckBox,#1%
13335 }%
13336 \PDFForm@Name
13337 \HyField@FlagsCheckBox
13338 \ifFld@hidden\def\Fld@width{1sp}\fi
13339 \LayoutCheckField{#2}{%
13340 \leavevmode
13341 \HyAnn@AbsPageLabel
13342 \Hy@escapeform\PDFForm@Check
13343 \pdfstartlink user {\PDFForm@Check}\relax
13344 \MakeCheckField{\Fld@width}{\Fld@height}%
13345 \pdfendlink
13346 \HyField@AddToFields
13347 }%
13348 \endgroup
13349 }
13350 \def\Hy@FormObjects{%
13351 \pdfobj {%
13352 <<%
13353 /Type/Encoding%
13354 /Differences[%
13355 24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek%
13356 /ring/tilde %
13357 39/quotesingle %
13358 96/grave %
13359 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
13360 /fraction/guilsinglleft/guilsinglright/minus/perthousand%
13361 /quotedblbase/quotedblleft/quotedblright/quoteleft%
13362 /quoteright/quotesinglbase/trademark/fi/fl/Lslash/OE%
13363 /Scaron/Ydieresis/Zcaron/dotlessi/lslash/oe/scaron/zcaron %
13364 160/Euro %
13365 164/currency %
13366 166/brokenbar %
13367 168/dieresis/copyright/ordfeminine %
13368 172/logicalnot/.notdef/registered/macron/degree/plusminus%
13369 /twosuperior/threesuperior/acute/mu %
13370 183/periodcentered/cedilla/onesuperior/ordmasculine %
13371 188/onequarter/onehalf/threequarters %

```

```

13372      192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
13373      /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave%
13374      /Iacute/Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute%
13375      /Ocircumflex/Otilde/Odieresis/multiply/Oslash/Ugrave%
13376      /Uacute/Ucircumflex/Udieresis/Yacute/Thorn/germandbls%
13377      /agrave/aacute/acircumflex/atilde/adieresis/aring/ae%
13378      /ccedilla/egrave/eacute/ecircumflex/edieresis/igrave%
13379      /iacute/icircumflex/idieresis/eth/ntilde/ograde/oacute%
13380      /ocircumflex/otilde/odieresis/divide/oslash/ugrave%
13381      /uacute/ucircumflex/udieresis/yacute/thorn/ydieresis%
13382      ]%
13383      >>%
13384      }%
13385      \xdef\OBJ@pdfdocencoding{\the\pdfastobj}%
13386      \pdfobj{%
13387      <<%
13388      /Type/Font%
13389      /Subtype/Type1%
13390      /Name/ZaDb%
13391      /BaseFont/ZapfDingbats%
13392      >>%
13393      }%
13394      \xdef\OBJ@ZaDb{\the\pdfastobj}%
13395      \pdfobj{%
13396      <<%
13397      /Type/Font%
13398      /Subtype/Type1%
13399      /Name/Helv%
13400      /BaseFont/Helvetica%
13401      /Encoding \OBJ@pdfdocencoding\space 0 R%
13402      >>%
13403      }%
13404      \xdef\OBJ@Helv{\the\pdfastobj}%
13405      \global\let\Hy@FormObjects\relax
13406      }
13407      </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.

```
13408 <*dvipdfm | xetex>
```

\@Gauge

```

13409 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
13410   \Hy@Message{Sorry, dvipdfm/XeTeX does not support FORM gauges}%
13411 }

```

\@Form

```

13412 \def\@Form[#1]{%
13413   \@ifundefined{textcolor}{\let\textcolor\@gobble}{}%
13414   \kvsetkeys{Form}{#1}%
13415   \Hy@FormObjects
13416   \@pdfm@mark{obj @afields []}%

```

```

13417 \@pdfm@mark{obj @corder []}%
13418 \@pdfm@mark{%
13419   obj @aform <<%
13420   /Fields @afields%
13421   /DR<<%
13422   /Font<<%
13423   /ZaDb @OBJZaDb%
13424   /Helv @OBJHelv%
13425   >>%
13426   >>%
13427   /DA(/Helv 10 Tf 0 g)%
13428   /CO @corder%
13429   \ifHy@pdfa
13430   \else
13431     \ifHyField@NeedAppearances
13432       /NeedAppearances true%
13433     \fi
13434   \fi
13435   >>%
13436 }%
13437 \@pdfm@mark{put @catalog <</AcroForm @aform>>}%
13438 }

\@endForm

13439 \let\@endForm\ltx@empty

\dvipdfm@setdim \dvipdfm@setdim sets dimensions for ann using \pdfm@box.
13440 \def\dvipdfm@setdim{%
13441   height \the\ht\pdfm@box\space
13442   width \the\wd\pdfm@box\space
13443   depth \the\dp\pdfm@box\space
13444 }

\HyField@AnnotCount
13445 \newcount\HyField@AnnotCount
13446 \HyField@AnnotCount=\z@

\HyField@AdvanceAnnotCount
13447 \def\HyField@AdvanceAnnotCount{%
13448   \global\advance\HyField@AnnotCount\@ne
13449 }

\HyField@TheAnnotCount
13450 \def\HyField@TheAnnotCount{%
13451   \the\HyField@AnnotCount
13452 }

\Fld@pageobjref
13453 \def\Fld@pageobjref{/P @thispage}%

\HyField@AddToFields
13454 \def\HyField@AddToFields#1{%
13455   \@pdfm@mark{put @afields @#1\HyField@TheAnnotCount}%

```

```

13456 \ifx\Fld@calculate@code\ltx@empty
13457 \else
13458 \@pdfm@mark{put @corder @#1\HyField@TheAnnotCount}%
13459 \fi
13460 }

```

\@TextField

```

13461 \def\@TextField[#1]#2{% parameters, label
13462 \def\Fld@name{#2}%
13463 \let\Fld@default\ltx@empty
13464 \let\Fld@value\@empty
13465 \def\Fld@width{\DefaultWidthofText}%
13466 \def\Fld@height{%
13467 \ifFld@multiline
13468 \DefaultHeightofTextMultiline
13469 \else
13470 \DefaultHeightofText
13471 \fi
13472 }%
13473 \begingroup
13474 \expandafter\HyField@SetKeys\expandafter{%
13475 \DefaultOptionsofText,#1%
13476 }%
13477 \PDFForm@Name
13478 \HyField@FlagsText
13479 \ifFld@hidden\def\Fld@width{1sp}\fi
13480 \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
13481 \setbox\pdfm@box=\hbox{%
13482 \MakeTextField{\Fld@width}{\Fld@height}%
13483 }%
13484 \HyField@AdvanceAnnotCount
13485 \LayoutTextField{#2}{%
13486 \leavevmode
13487 \Hy@escapeform\PDFForm@Text
13488 \@pdfm@mark{%
13489 ann @text\HyField@TheAnnotCount\space
13490 \dvi pdfm@setdim << \PDFForm@Text >>%
13491 }%
13492 }%
13493 \unhbox\pdfm@box
13494 \HyField@AddToFields{text}%
13495 % record in @afields array
13496 \endgroup
13497 }

```

\@ChoiceMenu

```

13498 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
13499 \def\Fld@name{#2}%
13500 \let\Fld@default\relax
13501 \let\Fld@value\relax
13502 \def\Fld@width{\DefaultWidthofChoiceMenu}%
13503 \def\Fld@height{\DefaultHeightofChoiceMenu}%
13504 \begingroup
13505 \Fld@menulength=0 %

```

```

13506 \@tempdima\z@
13507 \@for\@curropt:=#3\do{%
13508   \expandafter\Fld@checkequals\@curropt==\\%
13509   \Hy@StepCount\Fld@menulength
13510   \settowidth{\@tempdimb}{\@currDisplay}%
13511   \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
13512 }%
13513 \advance\@tempdima by 15\p@
13514 \begingroup
13515   \HyField@SetKeys{#1}%
13516 \edef\x{\endgroup
13517   \noexpand\expandafter
13518   \noexpand\HyField@SetKeys
13519   \noexpand\expandafter{%
13520     \expandafter\noexpand\csname DefaultOptionsof%
13521       \ifFld@radio
13522         Radio%
13523       \else
13524         \ifFld@combo
13525         \ifFld@popdown
13526         PopdownBox%
13527       \else
13528         ComboBox%
13529       \fi
13530     \else
13531     ListBox%
13532     \fi
13533   \fi
13534   \endcsname
13535 }%
13536 }\x
13537 \HyField@SetKeys{#1}%
13538 \PDFForm@Name
13539 \ifFld@hidden\def\Fld@width{1sp}\fi
13540 \ifx\Fld@value\relax
13541   \let\Fld@value\Fld@default
13542 \fi
13543 \LayoutChoiceField{#2}{%
13544   \ifFld@radio
13545     \HyField@FlagsRadioButton
13546     \@@Radio{#3}%
13547   \else
13548     \begingroup
13549     \HyField@FlagsChoice
13550     \ifdim\Fld@width<\@tempdima
13551       \ifdim\@tempdima<1cm\@tempdima1cm\fi
13552       \edef\Fld@width{\the\@tempdima}%
13553     \fi
13554     \ifFld@combo
13555     \else
13556       \@tempdima=\the\Fld@menulength\Fld@charsize
13557       \advance\@tempdima by \Fld@borderwidth bp %
13558       \advance\@tempdima by \Fld@borderwidth bp %
13559       \edef\Fld@height{\the\@tempdima}%

```

```

13560         \fi
13561         \@@Listbox{#3}%
13562     \endgroup
13563 \fi
13564 }%
13565 \endgroup
13566 }

\@@Radio
13567 \def\@@Radio#1{%
13568     \Fld@listcount=0 %
13569     \EdefEscapeName\Fld@default{\Fld@default}%
13570     \setbox\pdfm@box=\hbox{%
13571         \MakeRadioField{\Fld@width}{\Fld@height}%
13572     }%
13573     \@for\@curropt:=#1\do{%
13574         \expandafter\Fld@checkequals\@curropt==\%
13575         \EdefEscapeName\@currValue{\@currValue}%
13576         \Hy@StepCount\Fld@listcount
13577         \@currDisplay\space
13578         \leavevmode
13579         \Hy@escapeform\PDFForm@Radio
13580         \ifnum\Fld@listcount=1 %
13581             \HyField@AdvanceAnnotCount
13582         \fi
13583         \@pdfm@mark{%
13584             ann %
13585             \ifnum\Fld@listcount=1 %
13586                 @radio\HyField@TheAnnotCount%
13587             \space
13588         \fi
13589         \dvipdfm@setdim
13590         <<%
13591         \PDFForm@Radio
13592         /AP<</N<</\@currValue /null>>>>%
13593         >>%
13594     }%
13595     \unhcopy\pdfm@box\space% deliberate space between radio buttons
13596     \ifnum\Fld@listcount=1 %
13597         \HyField@AddToFields{radio}%
13598     \fi
13599 }%
13600 }

\Fld@listcount
13601 \newcount\Fld@listcount

\@@Listbox
13602 \def\@@Listbox#1{%
13603     \HyField@PDFChoices{#1}%
13604     \setbox\pdfm@box=\hbox{%
13605         \MakeChoiceField{\Fld@width}{\Fld@height}%
13606     }%
13607     \leavevmode

```

```

13608 \Hy@escapeform\PDFForm@List
13609 \HyField@AdvanceAnnotCount
13610 \@pdfm@mark{%
13611     ann @list\HyField@TheAnnotCount\space
13612     \dvipdfm@setdim
13613     <<\PDFForm@List>>%
13614 }%
13615 \unhbox\pdfm@box
13616 \HyField@AddToFields{list}%
13617 }

```

\@PushButton

```

13618 \def\@PushButton[#1]#2{% parameters, label
13619     \def\Fld@name{#2}%
13620     \begingroup
13621     \expandafter\HyField@SetKeys\expandafter{%
13622         \DefaultOptionsofPushButton,#1%
13623     }%
13624     \PDFForm@Name
13625     \ifHy@pdfa
13626         \Hy@Error{%
13627             PDF/A: Push button with JavaScript is prohibited%
13628         }\@ehc
13629         \LayoutPushButtonField{%
13630             \leavevmode
13631             \MakeButtonField{#2}%
13632         }%
13633     \else
13634         \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
13635         \HyField@FlagsPushButton
13636         \ifFld@hidden\def\Fld@width{1sp}\fi
13637         \HyField@AdvanceAnnotCount
13638         \LayoutPushButtonField{%
13639             \leavevmode
13640             \Hy@escapeform\PDFForm@Push
13641             \@pdfm@mark{%
13642                 ann @push\HyField@TheAnnotCount\space
13643                 \dvipdfm@setdim
13644                 <<\PDFForm@Push>>%
13645             }%
13646         }%
13647         \unhbox\pdfm@box
13648         \HyField@AddToFields{push}%
13649     \fi
13650 \endgroup
13651 }

```

\@Submit

```

13652 \def\@Submit[#1]#2{%
13653     \def\Fld@width{\DefaultWidthofSubmit}%
13654     \def\Fld@height{\DefaultHeightofSubmit}%
13655     \begingroup
13656     \expandafter\HyField@SetKeys\expandafter{%
13657         \DefaultOptionsofSubmit,#1%

```

```

13658 }%
13659 \HyField@FlagsPushButton
13660 \HyField@FlagsSubmit
13661 \ifFld@hidden\def\Fld@width{1sp}\fi
13662 \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
13663 \leavevmode
13664 \Hy@escapeform\PDFForm@Submit
13665 \HyField@AdvanceAnnotCount
13666 \@pdfm@mark{%
13667   ann @submit\HyField@TheAnnotCount\space
13668   \dvi pdfm@setdim
13669   <<\PDFForm@Submit>>%
13670 }%
13671 \unhbox\pdfm@box%
13672 \HyField@AddToFields{submit}%
13673 \endgroup
13674 }

```

\@Reset

```

13675 \def\@Reset[#1]#2{%
13676   \def\Fld@width{\DefaultWidthofReset}%
13677   \def\Fld@height{\DefaultHeightofReset}%
13678   \begingroup
13679     \expandafter\HyField@SetKeys\expandafter{%
13680       \DefaultOptionsofReset,#1%
13681     }%
13682     \leavevmode
13683     \ifHy@pdfa
13684       \Hy@Error{%
13685         PDF/A: Reset action is prohibited%
13686       }\@ehc
13687       \MakeButtonField{#2}%
13688     \else
13689       \HyField@FlagsPushButton
13690       \ifFld@hidden\def\Fld@width{1sp}\fi
13691       \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
13692       \Hy@escapeform\PDFForm@Reset
13693       \HyField@AdvanceAnnotCount
13694       \@pdfm@mark{%
13695         ann @reset\HyField@TheAnnotCount\space
13696         \dvi pdfm@setdim
13697         <<\PDFForm@Reset>>%
13698       }%
13699       \unhbox\pdfm@box
13700       \HyField@AddToFields{reset}%
13701     \fi
13702   \endgroup
13703 }

```

\@CheckBox

```

13704 \def\@CheckBox[#1]#2{% parameters, label
13705   \def\Fld@name{#2}%
13706   \def\Fld@default{0}%
13707   \begingroup

```



```

13708 \def\Fld@width{\DefaultWidthofCheckBox}%
13709 \def\Fld@height{\DefaultHeightofCheckBox}%
13710 \expandafter\HyField@SetKeys\expandafter{%
13711 \DefaultOptionsofCheckBox,#1%
13712 }%
13713 \PDFForm@Name
13714 \HyField@FlagsCheckBox
13715 \ifFld@hidden\def\Fld@width{1sp}\fi
13716 \setbox\pdfm@box=\hbox{%
13717 \MakeCheckField{\Fld@width}{\Fld@height}%
13718 }%
13719 \HyField@AdvanceAnnotCount
13720 \LayoutCheckField{#2}{%
13721 \leavevmode
13722 \Hy@escapeform\PDFForm@Check
13723 \@pdfm@mark{%
13724 ann @check\HyField@TheAnnotCount\space
13725 \dvi pdfm@setdim
13726 <<\PDFForm@Check>>%
13727 }%
13728 \unhbox\pdfm@box
13729 \HyField@AddToFields{check}%
13730 }%
13731 \endgroup
13732 }

13733 \def\Hy@FormObjects{%
13734 \@pdfm@mark{obj @OBJpdfdocencoding%
13735 <<%
13736 /Type/Encoding%
13737 /Differences[%
13738 24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek/ring/tilde %
13739 39/quotesingle %
13740 96/grave %
13741 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
13742 /fraction/guilsinglleft/guilsinglright/minus/perthousand%
13743 /quotedblbase/quotedblleft/quotedblright/quoteleft/quoteright%
13744 /quotesinglbase/trademark/fi/fl/Lslash/OE/Scaron/Ydieresis%
13745 /Zcaron/dotlessi/lslash/oe/scaron/zcaron %
13746 160/Euro %
13747 164/currency %
13748 166/brokenbar %
13749 168/dieresis/copyright/ordfeminine %
13750 172/logicalnot/.notdef/registered/macron/degree/plusminus%
13751 /twosuperior/threesuperior/acute/mu %
13752 183/periodcentered/cedilla/onesuperior/ordmasculine %
13753 188/onequarter/onehalf/threequarters %
13754 192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
13755 /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave/Iacute%
13756 /Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute/Ocircumflex%
13757 /Otilde/Odieresis/multiply/Oslash/Ugrave/Uacute/Ucircumflex%
13758 /Udieresis/Yacute/Thorn/germandbls/agrave/aacute/acircumflex%
13759 /atilde/adieresis/aring/ae/ccedilla/egrave/eacute%
13760 /ecircumflex/edieresis/igrave/iacute/icircumflex/idieresis%

```

```

13761      /eth/ntilde/ograve/oacute/ocircumflex/otilde/odieresis%
13762      /divide/oslash/ugrave/uacute/ucircumflex/udieresis/yacute%
13763      /thorn/ydieresis%
13764      ]%
13765      >>%
13766      }%
13767      \@pdfm@mark{obj @OBJZaDb%
13768      <<%
13769      /Type/Font%
13770      /Subtype/Type1%
13771      /Name/ZaDb%
13772      /BaseFont/ZapfDingbats%
13773      >>%
13774      }%
13775      \@pdfm@mark{obj @OBJHelv%
13776      <<%
13777      /Type/Font%
13778      /Subtype/Type1%
13779      /Name/Helv%
13780      /BaseFont/Helvetica%
13781      /Encoding @OBJpdfdocencoding%
13782      >>%
13783      }%
13784      \global\let\Hy@FormObjects\relax
13785      }
13786      </dvipdfm | xetex>

```

44.6 Common forms part

```

13787 (*pdfform)

\Fld@pageobjref

13788 \providecommand*{\Fld@pageobjref}{%

\Hy@escapestring

13789 \@ifundefined{pdf@escapestring}
13790 {%
13791   \let\Hy@escapestring\@firstofone
13792   \def\Hy@escapeform#1{%
13793     \ifHy@pdfescapeform
13794       \def\Hy@escapestring##1{%
13795         \noexpand\Hy@escapestring{\noexpand##1}%
13796       }%
13797       \edef\Hy@temp{#1}%
13798       \expandafter\Hy@@@escapeform\Hy@temp\Hy@escapestring{}\@nil
13799       \def\Hy@escapestring##1{%
13800         \@ifundefined{Hy@esc@\string##1}{%
13801           ##1%
13802           \ThisShouldNotHappen
13803         }{%
13804           \csname Hy@esc@\string##1\endcsname
13805         }%
13806       }%
13807     \else

```

```

13808     \let\Hy@escapestring\@firstofone
13809     \fi
13810 }%
13811 \def\Hy@@escapeform#1\Hy@escapestring#2#3\@nil{%
13812     \ifx\|#3\|
13813     \else
13814     \expandafter
13815     \Hy@pstringdef\csname Hy@esc@\string#2\endcsname{#2}%
13816     \ltx@ReturnAfterFi{%
13817         \Hy@@escapeform#3\@nil
13818     }%
13819     \fi
13820 }%
13821 }{%
13822     \def\Hy@escapeform#1{%
13823         \ifHy@pdfescapeform
13824             \let\Hy@escapestring\pdfescapestring
13825         \else
13826             \let\Hy@escapestring\@firstofone
13827         \fi
13828     }%
13829     \Hy@escapeform}%
13830 }

```

\PDFForm@Name

```

13831 \def\PDFForm@Name{%
13832     \PDFForm@@Name\Fld@name
13833     \ifx\Fld@altname\relax
13834     \else
13835         \PDFForm@@Name\Fld@altname
13836     \fi
13837     \ifx\Fld@mappingname\relax
13838     \else
13839         \PDFForm@@Name\Fld@mappingname
13840     \fi
13841 }

```

\PDFForm@@Name

```

13842 \def\PDFForm@@Name#1{%
13843     \begingroup
13844     \ifnum\Hy@pdf@major@minor@version<105 % implementation note 117, PDF spec 1.7
13845         \ifHy@unicode
13846             \Hy@unicodetfalse
13847         \fi
13848     \fi
13849     \pdfstringdef\Hy@gtemp#1%
13850 \endgroup
13851 \let#1\Hy@gtemp
13852 }

```

\Fld@additionalactions

```

13853 \def\Fld@@additionalactions{%
    K input (keystroke) format

```

```

13854 \ifx\Fld@keystroke@code\@empty
13855 \else
13856 /K<</S/JavaScript/JS(\Hy@escapestring{\Fld@keystroke@code})>>%
13857 \fi

F display format
13858 \ifx\Fld@format@code\@empty
13859 \else
13860 /F<</S/JavaScript/JS(\Hy@escapestring{\Fld@format@code})>>%
13861 \fi

V validation
13862 \ifx\Fld@validate@code\@empty
13863 \else
13864 /V<</S/JavaScript/JS(\Hy@escapestring{\Fld@validate@code})>>%
13865 \fi

C calculation
13866 \ifx\Fld@calculate@code\@empty
13867 \else
13868 /C<</S/JavaScript/JS(\Hy@escapestring{\Fld@calculate@code})>>%
13869 \fi

Fo receiving the input focus
13870 \ifx\Fld@onfocus@code\@empty
13871 \else
13872 /Fo<</S/JavaScript/JS(\Hy@escapestring{\Fld@onfocus@code})>>%
13873 \fi

Bl loosing the input focus (blurred)
13874 \ifx\Fld@onblur@code\@empty
13875 \else
13876 /Bl<</S/JavaScript/JS(\Hy@escapestring{\Fld@onblur@code})>>%
13877 \fi

D pressing the mouse button (down)
13878 \ifx\Fld@onmousedown@code\@empty
13879 \else
13880 /D<</S/JavaScript/JS(\Hy@escapestring{\Fld@onmousedown@code})>>%
13881 \fi

U releasing the mouse button (up)
13882 \ifx\Fld@onmouseup@code\@empty
13883 \else
13884 /U<</S/JavaScript/JS(\Hy@escapestring{\Fld@onmouseup@code})>>%
13885 \fi

E cursor enters the annotation's active area.
13886 \ifx\Fld@onenter@code\@empty
13887 \else
13888 /E<</S/JavaScript/JS(\Hy@escapestring{\Fld@onenter@code})>>%
13889 \fi

X cursor exits the annotation's active area.
13890 \ifx\Fld@onexit@code\@empty
13891 \else
13892 /X<</S/JavaScript/JS(\Hy@escapestring{\Fld@onexit@code})>>%
13893 \fi

```

```

13894 }
13895 \def\Fld@additionalactions{%
13896 \if-\Fld@@additionalactions-%
13897 \else
13898 \ifHy@pdfa
13899 \else
13900 /AA<<\Fld@@additionalactions>>%
13901 \fi
13902 \fi
13903 }

```

\Fld@annotnames

```

13904 \def\Fld@annotnames{%
13905 /T(\Fld@name)%
13906 \ifx\Fld@altname\relax
13907 \else
13908 /TU(\Fld@altname)%
13909 \fi
13910 \ifx\Fld@mappingname\relax
13911 \else
13912 /TM(\Fld@mappingname)%
13913 \fi
13914 }

```

\PDFForm@Check

```

13915 \def\PDFForm@Check{%
13916 /Subtype/Widget%
13917 \Fld@annotflags
13918 \Fld@pageobjref
13919 \Fld@annotnames
13920 /FT/Btn%
13921 \Fld@flags
13922 /Q \Fld@align
13923 /BS<</W \Fld@borderwidth /S/\Fld@borderstyle>>%
13924 /AP<< /N <</Yes<<>>>> >> %new string /Yes is from below
13925 /MK<<%
13926 \ifnum\Fld@rotation=\z@
13927 \else
13928 /R \Fld@rotation
13929 \fi
13930 \ifx\Fld@bordercolor\relax
13931 \else
13932 /BC[\Fld@bordercolor]%
13933 \fi
13934 \ifx\Fld@bcolor\relax
13935 \else
13936 /BG[\Fld@bcolor]%
13937 \fi
13938 /CA(\Hy@escapestring{\Fld@cbsymbol})%
13939 >>%
13940 /DA(/ZaDb \strip@pt\Fld@charsize\space Tf%
13941 \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
13942 /H/P%
13943 \ifFld@checked /V/Yes/AS/Yes\else /V/Off/AS/Off\fi

```

```

13944 \Fld@additionalactions
13945 }

```

\PDFForm@Push

```

13946 \ifHy@pdfa
13947 \else
13948 \def\PDFForm@Push{%
13949 /Subtype/Widget%
13950 \Fld@annotflags
13951 \Fld@pageobjref
13952 \Fld@annotnames
13953 /FT/Btn%
13954 \Fld@flags
13955 /H/P%
13956 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
13957 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
13958 \ifx\Fld@bordercolor\relax\else 1\fi
13959 \space
13960 \else
13961 /MK<<%
13962 \ifnum\Fld@rotation=\z@
13963 \else
13964 /R \Fld@rotation
13965 \fi
13966 \ifx\Fld@bordercolor\relax
13967 \else
13968 /BC[\Fld@bordercolor]%
13969 \fi
13970 >>%
13971 \fi
13972 /A<</S/JavaScript/JS(\Hy@escapestring{\Fld@onclick@code})>>%
13973 \Fld@additionalactions
13974 }%
13975 \fi

```

\PDFForm@List

```

13976 \def\PDFForm@List{%
13977 /Subtype/Widget%
13978 \Fld@annotflags
13979 \Fld@pageobjref
13980 \Fld@annotnames
13981 /FT/Ch%
13982 \Fld@flags
13983 /Q \Fld@align
13984 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
13985 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
13986 \ifx\Fld@bordercolor\relax\else 1\fi
13987 \ifx\Fld@bcolor\relax \else 1\fi
13988 \space
13989 \else
13990 /MK<<%
13991 \ifnum\Fld@rotation=\z@
13992 \else
13993 /R \Fld@rotation

```

```

13994     \fi
13995     \ifx\Fld@bordercolor\relax
13996     \else
13997         /BC[\Fld@bordercolor]%
13998     \fi
13999     \ifx\Fld@bcolor\relax
14000     \else
14001         /BG[\Fld@bcolor]%
14002     \fi
14003     >>%
14004 \fi
14005 /DA(/Helv \strip@pt\Fld@charsize\space Tf%
14006     \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
14007 \Fld@choices
14008 \Fld@additionalactions
14009 }

```

\PDFForm@Radio

```

14010 \def\PDFForm@Radio{%
14011     /Subtype/Widget%
14012     \Fld@annotflags
14013     \Fld@pageobjref
14014     \Fld@annotnames
14015     /FT/Btn%
14016     \Fld@flags
14017     /H/P%
14018     /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
14019     /MK<<%
14020     \ifnum\Fld@rotation=\z@
14021     \else
14022         /R \Fld@rotation
14023     \fi
14024     \ifx\Fld@bordercolor\relax
14025     \else
14026         /BC[\Fld@bordercolor]%
14027     \fi
14028     \ifx\Fld@bcolor\relax
14029     \else
14030         /BG[\Fld@bcolor]%
14031     \fi
14032     /CA(\Hy@escapestring{\Fld@radiosymbol})%
14033     >>%
14034     /DA(/ZaDb \strip@pt\Fld@charsize\space Tf%
14035         \ifx\Fld@color\@empty\else\space\Fld@color\fi)%

```

New code, the default value is used for all buttons

```

14036     \ifx\Fld@default\@empty
14037         /V/Off%
14038         /DV/Off%
14039     \else
14040         /V/\Fld@default
14041         /DV/\Fld@default
14042     \fi
14043     \Fld@additionalactions
14044 }

```

\PDFForm@Text

```
14045 \def\PDFForm@Text{%
14046 /Subtype/Widget%
14047 \Fld@annotflags
14048 \Fld@pageobjref
14049 \Fld@annotnames
14050 /FT/Tx%
14051 \Fld@flags
14052 /Q \Fld@align
14053 /BS<</W \Fld@borderwidth\space /S /\Fld@borderstyle>>%
14054 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
14055     \ifx\Fld@bordercolor\relax\else 1\fi
14056     \ifx\Fld@bcolor\relax \else 1\fi
14057     \space
14058 \else
14059 /MK<<%
14060     \ifnum\Fld@rotation=\z@
14061     \else
14062     /R \Fld@rotation
14063     \fi
14064     \ifx\Fld@bordercolor\relax
14065     \else
14066     /BC[\Fld@bordercolor]%
14067     \fi
14068     \ifx\Fld@bcolor\relax
14069     \else
14070     /BG[\Fld@bcolor]%
14071     \fi
14072 >>%
14073 \fi
14074 /DA(/Helv \strip@pt\Fld@charsize\space Tf%
14075     \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
14076 /DV(\Hy@escapestring{\Fld@default})%
14077 /V(\Hy@escapestring{\Fld@value})%
14078 \Fld@additionalactions
14079 \ifnum\Fld@maxlen>\z@/MaxLen \Fld@maxlen \fi
14080 }
```

\PDFForm@Submit

```
14081 \def\PDFForm@Submit{%
14082 /Subtype/Widget%
14083 \Fld@annotflags
14084 \Fld@pageobjref
14085 \Fld@annotnames
14086 /FT/Btn%
14087 \Fld@flags
14088 /H/P%
14089 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
14090 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
14091     \ifx\Fld@bordercolor\relax\else 1\fi
14092     \space
14093 \else
14094 /MK<<%
14095     \ifnum\Fld@rotation=\z@
```



```

14096     \else
14097         /R \Fld@rotation
14098     \fi
14099     \ifx\Fld@bordercolor\relax
14100     \else
14101         /BC[\Fld@bordercolor]%
14102     \fi
14103     >>%
14104 \fi
14105 /A<<%
14106 /S/SubmitForm%
14107 /F<<%
14108 /FS/URL%
14109 /F(\Hy@escapestring{\Form@action})%
14110 >>%
14111 \Fld@submitflags
14112 >>%
14113 \Fld@additionalactions
14114 }

```

\PDFForm@Reset

```

14115 \ifHy@pdfa
14116 \else
14117 \def\PDFForm@Reset{%
14118 /Subtype/Widget%
14119 \Fld@annotflags
14120 \Fld@pageobjref
14121 \Fld@annotnames
14122 /FT/Btn%
14123 \Fld@flags
14124 /H/P%
14125 /DA(/Helv \strip@pt\Fld@charsize\space Tf 0 0 1 rg)%
14126 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
14127     \ifx\Fld@bordercolor\relax\else 1\fi
14128     \space
14129 \else
14130 /MK<<%
14131     \ifnum\Fld@rotation=\z@
14132     \else
14133         /R \Fld@rotation
14134     \fi
14135     \ifx\Fld@bordercolor\relax
14136     \else
14137         /BC[\Fld@bordercolor]%
14138     \fi
14139 % /CA (Clear)
14140 % /AC (Done)
14141 >>%
14142 \fi
14143 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
14144 /A<</S/ResetForm>>%
14145 \Fld@additionalactions
14146 }%
14147 \fi

```

```

14148 </pdfform>
14149 <*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`

```

14150 \def\phantomsection{%
14151   \Hy@MakeCurrentHrefAuto{section*}%
14152   \Hy@raisedlink{\hyper@anchorstart{\@currentHref}\hyper@anchorend}%
14153 }
14154 </packageEnd>

```

45.1 Bookmarks

```

14155 <*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 $\varepsilon\text{-}\text{\TeX}$, the order of the `\BOOKMARK` commands written to the `\@outlinefile` could appear wrong, because of mis-feature of $\varepsilon\text{-}\text{\TeX}$'s implementation (that it processes the shipped out lines left-to-right, instead of the order in which they appear in the document). The wrong order will appear when the file contains two bookmarks on the same line typeset right-to-left.

To work around this problem, the `bookmark@seq@number` counter is used to write the bookmark's sequential number into a comment in the `\@outlinefile`, which could be used to post-process it to achieve the proper ordering of `\BOOKMARK` commands in that file.

```

14156 \def\Hy@writebookmark#1#2#3#4#5{%
14157   % section number, text, label, level, file
14158   \ifx\WriteBookmarks\relax%
14159     \else
14160       \ifnum#4>\Hy@bookmarksdepth\relax
14161         \else
14162           \@@writetorep{#1}{#2}{#3}{#4}{#5}%
14163         \fi
14164       \fi
14165     }
14166 \def\Hy@currentbookmarklevel{0}
14167 \def\Hy@numberline#1{#1 }

```

```

14168 \def\@@writetorep#1#2#3#4#5{%
14169 \begingroup
14170 \edef\Hy@tempa{#5}%
14171 \ifx\Hy@tempa\Hy@bookmarkstype
14172 \edef\Hy@level{#4}%
14173 \ifx\Hy@levelcheck Y%
14174 \@tempcnta\Hy@level\relax
14175 \advance\@tempcnta by -1 %
14176 \ifnum\Hy@currentbookmarklevel<\@tempcnta
14177 \advance\@tempcnta by -\Hy@currentbookmarklevel\relax
14178 \advance\@tempcnta by 1 %
14179 \Hy@Warning{%
14180 Difference (\the\@tempcnta) between bookmark levels is %
14181 greater \MessageBreak than one, level fixed%
14182 }%
14183 \@tempcnta\Hy@currentbookmarklevel
14184 \advance\@tempcnta by 1 %
14185 \edef\Hy@level{\the\@tempcnta}%
14186 \fi
14187 \else
14188 \global\let\Hy@levelcheck Y%
14189 \fi
14190 \global\let\Hy@currentbookmarklevel\Hy@level
14191 \@tempcnta\Hy@level\relax
14192 \expandafter\xdef\csname Parent\Hy@level\endcsname{#3}%
14193 \advance\@tempcnta by -1 %
14194 \edef\Hy@tempa{#3}%
14195 \edef\Hy@tempb{\csname Parent\the\@tempcnta\endcsname}%
14196 \ifx\Hy@tempa\Hy@tempb
14197 \Hy@Warning{%
14198 The anchor of a bookmark and its parent's must not%
14199 \MessageBreak be the same. Added a new anchor%
14200 }%
14201 \phantomsection
14202 \fi
14203 \ifHy@bookmarksnumbered
14204 \let\numberline\Hy@numberline
14205 \let\booknumberline\Hy@numberline
14206 \let\partnumberline\Hy@numberline
14207 \let\chapternumberline\Hy@numberline
14208 \else
14209 \let\numberline\@gobble
14210 \let\booknumberline\@gobble
14211 \let\partnumberline\@gobble
14212 \let\chapternumberline\@gobble
14213 \fi
14214 \pdfstringdef\Hy@tempa{#2}%
14215 \HyPsd@SanitizeForOutFile\Hy@tempa
14216 \if@filesw
14217 \stepcounter{bookmark@seq@number}%
14218 \@ifundefined{@outlinefile}{%
14219 }{%
14220 \protected@write\@outlinefile{}{%
14221 \protect\BOOKMARK

```

```

14222      [\Hy@level][\@bookmarkopenstatus{\Hy@level}]{#3}%
14223      {\Hy@tempa}{\Hy@tempb}%
14224      \@percentchar\space\thebookmark@seq@number
14225      }%
14226      }%
14227      \fi
14228      \fi
14229      \endgroup
14230  }
14231  \newcounter{bookmark@seq@number}

14232  \begingroup
14233  \lccode`(`=`{%
14234  \lccode`)`=`}%
14235  \lccode`1`=\z@
14236  \lccode`2`=\z@
14237  \lccode`3`=\z@
14238  \lccode`5`=\z@
14239  \lccode`7`=\z@
14240  \lccode`\#`=\z@
14241  \lccode`\` `=\z@
14242  \lccode`\{`=\z@
14243  \lccode`\}`=\z@
14244  \lowercase{%
14245  \endgroup
14246  \def\HyPsd@SanitizeForOutFile#1{%
14247    \@onelevel@sanitize\Hy@tempa
14248    \escapechar`\\%
14249    \edef\Hy@tempa{%
14250      \expandafter\HyPsd@SanitizeOut@BraceLeft\Hy@tempa(\@nil
14251      }%
14252      \edef\Hy@tempa{%
14253        \expandafter\HyPsd@SanitizeOut@BraceRight\Hy@tempa)\@nil
14254      }%
14255    }%
14256    \def\HyPsd@SanitizeOut@BraceLeft#1(#2\@nil{%
14257      #1%
14258      \ifx\\#2\\%
14259        \expandafter\ltx@gobble
14260      \else
14261        \expandafter\ltx@firstofone
14262      \fi
14263      {%
14264        \string\173%
14265        \HyPsd@SanitizeOut@BraceLeft#2\@nil
14266      }%
14267    }%
14268    \def\HyPsd@SanitizeOut@BraceRight#1)#2\@nil{%
14269      #1%
14270      \ifx\\#2\\%
14271        \expandafter\ltx@gobble
14272      \else
14273        \expandafter\ltx@firstofone
14274      \fi
14275      {%

```

```

14276 \string\175%
14277 \HyPsd@SanitizeOut@BraceRight#2\@nil
14278 }%
14279 }%
14280 }

```

In the call of `\BOOKMARK` the braces around `#4` are omitted, because it is not likely, that the level number contains `]`.

```

14281 \newcommand{\currentpdfbookmark}{%
14282 \pdfbookmark[\Hy@currentbookmarklevel]%
14283 }
14284 \newcommand{\subpdfbookmark}{%
14285 \@tempcnta\Hy@currentbookmarklevel
14286 \Hy@StepCount\@tempcnta
14287 \expandafter\pdfbookmark\expandafter[\the\@tempcnta]%
14288 }
14289 \newcommand{\belowpdfbookmark}[2]{%
14290 \@tempcnta\Hy@currentbookmarklevel
14291 \Hy@StepCount\@tempcnta
14292 \expandafter\pdfbookmark\expandafter[\the\@tempcnta]{#1}{#2}%
14293 \advance\@tempcnta by -1 %
14294 \xdef\Hy@currentbookmarklevel{\the\@tempcnta}%
14295 }

```

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.

```

14296 \renewcommand\pdfbookmark[3][0]{%
14297 \Hy@writebookmark{}{#2}{#3.#1}{#1}{toc}%
14298 \hyper@anchorstart{#3.#1}\hyper@anchorend
14299 }
14300 \def\BOOKMARK{%
14301 \@ifnextchar{\@BOOKMARK}{\@@BOOKMARK[1][-]}%
14302 }
14303 \def\@BOOKMARK[#1]{%
14304 \@ifnextchar{\@@BOOKMARK[{#1}]}{\@@BOOKMARK[{#1}][-]}%
14305 }

```

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`

```

14306 \RequirePackage{rerunfilecheck}[2009/12/10]
14307 \def\Hy@OutlineRerunCheck{%
14308 \RerunFileCheck{\jobname.out}{%
14309 \immediate\closeout\@outlinefile
14310 }{%
14311 Rerun to get outlines right\MessageBreak
14312 or use package `bookmark'%
14313 }%
14314 }

```

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 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.

14315 `*vtx`

14316 `\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.

14317 `\begingroup`

14318 `\catcode\'=12 %`

14319 `\ifnum\Hy@VTeXversion<650 %`

14320 `\catcode\`=12 %`

14321 `\gdef\hv@pdf@char#1#2#3{%`

14322 `\char`

14323 `\ifcase'#1#2#3 %`

14324 `"00\or"01\or"02\or"03\or"04\or"05\or"06\or"07%`

14325 `\or"08\or"09\or"0A\or"0B\or"0C\or"0D\or"0E\or"0F%`

14326 `\or"10\or"11\or"12\or"13\or"14\or"15\or"16\or"17%`

14327 `\or"18\or"19\or"1A\or"1B\or"1C\or"1D\or"1E\or"1F%`

14328 `\or"20\or"21\or"22\or"23\or"24\or"25\or"26\or"27%`

14329 `\or"28\or"29\or"2A\or"2B\or"2C\or"2D\or"2E\or"2F%`

14330 `\or"30\or"31\or"32\or"33\or"34\or"35\or"36\or"37%`

14331 `\or"38\or"39\or"3A\or"3B\or"3C\or"3D\or"3E\or"3F%`

14332 `\or"40\or"41\or"42\or"43\or"44\or"45\or"46\or"47%`

14333 `\or"48\or"49\or"4A\or"4B\or"4C\or"4D\or"4E\or"4F%`

14334 `\or"50\or"51\or"52\or"53\or"54\or"55\or"56\or"57%`

14335 `\or"58\or"59\or"5A\or"5B\or"5C\or"5D\or"5E\or"5F%`

14336 `\or"60\or"61\or"62\or"63\or"64\or"65\or"66\or"67%`

14337 `\or"68\or"69\or"6A\or"6B\or"6C\or"6D\or"6E\or"6F%`

14338 `\or"70\or"71\or"72\or"73\or"74\or"75\or"76\or"77%`

14339 `\or"78\or"79\or"7A\or"7B\or"7C\or"7D\or"7E\or"7F%`

14340 `\or"80\or"81\or"82\or"83\or"84\or"85\or"86\or"87%`

14341 `\or"88\or"89\or"8A\or"8B\or"8C\or"8D\or"8E\or"8F%`

14342 `\or"90\or"91\or"92\or"93\or"94\or"95\or"96\or"97%`

14343 `\or"98\or"99\or"9A\or"9B\or"9C\or"9D\or"9E\or"9F%`

14344 `\or"A0\or"A1\or"A2\or"A3\or"A4\or"A5\or"A6\or"A7%`

14345 `\or"A8\or"A9\or"AA\or"AB\or"AC\or"AD\or"AE\or"AF%`

14346 `\or"B0\or"B1\or"B2\or"B3\or"B4\or"B5\or"B6\or"B7%`

14347 `\or"B8\or"B9\or"BA\or"BB\or"BC\or"BD\or"BE\or"BF%`

14348 `\or"C0\or"C1\or"C2\or"C3\or"C4\or"C5\or"C6\or"C7%`

14349 `\or"C8\or"C9\or"CA\or"CB\or"CC\or"CD\or"CE\or"CF%`

14350 `\or"D0\or"D1\or"D2\or"D3\or"D4\or"D5\or"D6\or"D7%`

14351 `\or"D8\or"D9\or"DA\or"DB\or"DC\or"DD\or"DE\or"DF%`

14352 `\or"E0\or"E1\or"E2\or"E3\or"E4\or"E5\or"E6\or"E7%`

14353 `\or"E8\or"E9\or"EA\or"EB\or"EC\or"ED\or"EE\or"EF%`

14354 `\or"F0\or"F1\or"F2\or"F3\or"F4\or"F5\or"F6\or"F7%`

14355 `\or"F8\or"F9\or"FA\or"FB\or"FC\or"FD\or"FE\or"FF%`

14356 `\fi`

14357 `}%`

```

14358 \else
14359 \gdef\hv@pdf@char{\char'}%
14360 \fi
14361 \endgroup

```

\@@BOOKMARK

```

14362 \def\@@BOOKMARK[#1][#2]#3#4#5{%
14363 \expandafter\edef\csname @count@#3\endcsname{%
14364 \the\@serial@counter
14365 }%
14366 \edef\@mycount{\the\@serial@counter}%
14367 \Hy@StepCount\@serial@counter
14368 \edef\@parcount{%
14369 \expandafter\ifx\csname @count@#5\endcsname\relax
14370 0%
14371 \else
14372 \csname @count@#5\endcsname
14373 \fi
14374 }%
14375 \immediate\special{%
14376 !outline \HyperDestNameFilter{#3};p=\@parcount,i=\@mycount,%
14377 s=\ifx#2-c\else o\fi,t=#4%
14378 }%
14379 }%

```

\ReadBookmarks

```

14380 \def\ReadBookmarks{%
14381 \begingroup
14382 \def\0{\hv@pdf@char 0}%
14383 \def\1{\hv@pdf@char 1}%
14384 \def\2{\hv@pdf@char 2}%
14385 \def\3{\hv@pdf@char 3}%
14386 \def\({}%
14387 \def\)}%
14388 \def\do##1{%
14389 \ifnum\catcode`##1=\active
14390 \@makeother##1%
14391 \else
14392 \ifnum\catcode`##1=6 %
14393 \@makeother##1%
14394 \fi
14395 \fi
14396 }%
14397 \dospecials
14398 \Hy@safe@activetrue
14399 \InputIfFileExists{jobname.out}{\}{}%
14400 \endgroup
14401 \ifx\WriteBookmarks\relax
14402 \else
14403 \if@filesw
14404 \newwrite\@outlinefile
14405 \Hy@OutlineRerunCheck
14406 \immediate\openout\@outlinefile=jobname.out\relax
14407 \fi

```

```

14408 \fi
14409 }

14410 </vtex>
14411 <*\vtex>
14412 \def\ReadBookmarks{%
14413 \pdf@ifdraftmode{}{%
14414 \begingroup
14415 \def\do##1{%
14416 \ifnum\catcode`##1=\active
14417 \@makeother##1%
14418 \else
14419 \ifnum\catcode`##1=6 %
14420 \@makeother##1%
14421 \fi
14422 \fi
14423 }%
14424 \dospecials
14425 \Hy@safe@activetrue
14426 \escapechar=`\%
14427 \def\@@BOOKMARK[##1][##2]##3##4##5{%
14428 \calc@bm@number{##5}%
14429 }%
14430 \InputIfFileExists{jobname.out}{\relax}{\relax}%
14431 \ifx\WriteBookmarks\relax
14432 \global\let\WriteBookmarks\relax
14433 \fi
14434 \def\@@BOOKMARK[##1][##2]##3##4##5{%
14435 \def\Hy@temp{##4}%
14436 (*pdfTeX)
14437 \Hy@pstringdef\Hy@pstringName{\HyperDestNameFilter{##3}}%
14438 \Hy@OutlineName{}\Hy@pstringName{%
14439 ##2\check@bm@number{##3}}%
14440 }{%
14441 \expandafter\strip@prefix\meaning\Hy@temp
14442 }%
14443 </pdfTeX>
14444 (*pdfmark)
14445 \pdfmark{%
14446 pdfmark=/OUT,%
14447 Count={##2\check@bm@number{##3}},%
14448 Dest={##3},%
14449 Title=\expandafter\strip@prefix\meaning\Hy@temp
14450 }%
14451 </pdfmark>
14452 (*dvipdfm|xetex)
14453 \Hy@pstringdef\Hy@pstringName{\HyperDestNameFilter{##3}}%
14454 \@pdfm@mark{%
14455 outline \ifHy@DvipdfmxOutlineOpen
14456 [%
14457 \ifnum##21>\z@
14458 \else
14459 -%
14460 \fi

```



```

14461         | %
14462         \fi
14463         ##1<<%
14464         /Title(\expandafter\strip@prefix\meaning\Hy@temp)%
14465         /A<<%
14466         /S/GoTo%
14467         /D(\Hy@pstringName)%
14468         >>%
14469         >>%
14470     }%
14471 </dvipdfm | xetex>
14472 }%
14473 \begingroup
14474 \def\WriteBookmarks{0}%
14475 \InputIfFileExists{jobname.out}{-}{-}%
14476 \endgroup
14477 %{\escapechar\m@ne\InputIfFileExists{jobname.out}{-}{-}}%
14478 \endgroup
14479 }%
14480 \ifx\WriteBookmarks\relax
14481 \else
14482 \if@files
14483 \newwrite\@outlinefile
14484 \Hy@OutlineRerunCheck
14485 \immediate\openout\@outlinefile=jobname.out\relax
14486 \fi
14487 \fi
14488 }
14489 <*pdfTeX>
14490 \def\Hy@OutlineName#1#2#3#4{%
14491 \pdfoutline goto name{#2}count#3{#4}%
14492 }
14493 </pdfTeX>
14494 \def\check@bm@number#1{%
14495 \expandafter\ifx\csname B_#1\endcsname\relax
14496 0%
14497 \else
14498 \csname B_#1\endcsname
14499 \fi
14500 }
14501 \def\calc@bm@number#1{%
14502 \@tempcnta=\check@bm@number{#1}\relax
14503 \advance\@tempcnta by 1 %
14504 \expandafter\xdef\csname B_#1\endcsname{\the\@tempcnta}%
14505 }
14506 </!vTeX>
14507 \ifHy@implicit
14508 \else
14509 \expandafter\endinput
14510 \fi
14511 </outlines>
14512 <*outlines | hypertex>
14513 \newlength\Hy@SectionHShift

```

```

14514 \def\Hy@SectionAnchorHref#1{%
14515   \ifx\protect\@typeset@protect
14516     \Hy@@@SectionAnchor{#1}%
14517   \fi
14518 }
14519 \DeclareRobustCommand*{\Hy@@@SectionAnchor}[1]{%
14520   \leavevmode
14521   \hbox to 0pt{%
14522     \kern-\Hy@SectionHShift
14523     \Hy@raisedlink{%
14524       \hyper@anchorstart{#1}\hyper@anchorend
14525     }%
14526     \hss
14527   }%
14528 }
14529 \@ifundefined{hyper@nopatch@sectioning}
14530 {
14531   \let\H@old@ssect\@ssect
14532   \def\@ssect#1#2#3#4#5{%
14533     \Hy@MakeCurrentHrefAuto{section*}%
14534     \setlength{\Hy@SectionHShift}{#1}%
14535     \begingroup
14536       \toks@{\H@old@ssect{#1}{#2}{#3}{#4}}%
14537       \toks\tw@\expandafter{%
14538         \expandafter\Hy@SectionAnchorHref\expandafter{\@currentHref}%
14539         #5%
14540       }%
14541       \edef\x{\endgroup
14542         \the\toks@\the\toks\tw@}%
14543     }\x
14544 }
14545 \let\H@old@schapter\@schapter
14546 \def\@schapter#1{%
14547   \begingroup
14548     \let\@mkboth\@gobbletwo
14549     \Hy@MakeCurrentHrefAuto{\Hy@chapapp*}%
14550     \Hy@raisedlink{%
14551       \hyper@anchorstart{\@currentHref}\hyper@anchorend
14552     }%
14553   \endgroup
14554   \H@old@schapter{#1}%
14555 }

```

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:

```

14556 \ltx@ifundefined{chapter}{}{%
14557   \let\Hy@org@chapter\@chapter
14558   \def\@chapter{%
14559     \def\Hy@next{%
14560       \Hy@MakeCurrentHrefAuto{\Hy@chapapp*}%
14561       \Hy@raisedlink{%
14562         \hyper@anchorstart{\@currentHref}\hyper@anchorend
14563       }%

```

```

14564 }%
14565 \ifnum\c@secnumdepth>\m@ne
14566 \ltx@ifundefined{if@mainmatter}%
14567 \iftrue{\csname if@mainmatter\endcsname}%
14568 \let\Hy@next\relax
14569 \fi
14570 \fi
14571 \Hy@next
14572 \Hy@org@chapter
14573 }%
14574 }

14575 \let\H@old@part\@part
14576 \@ifundefined{chapter}
14577 {\let\Hy@secnum@part\z@}
14578 {\let\Hy@secnum@part\m@ne}
14579 \def\@part{%
14580 \ifnum\Hy@secnum@part>\c@secnumdepth
14581 \phantomsection
14582 \fi
14583 \H@old@part
14584 }

14585 \let\H@old@spart\@spart
14586 \def\@spart#1{%
14587 \Hy@MakeCurrentHrefAuto{part*}%
14588 \Hy@raisedlink{%
14589 \hyper@anchorstart{\@currentHref}\hyper@anchorend
14590 }%
14591 \H@old@spart{#1}%
14592 }

14593 \let\H@old@sect\@sect
14594 \def\@sect#1#2#3#4#5#6[#7]#8{%
14595 \ifnum #2>\c@secnumdepth
14596 \expandafter\@firstoftwo
14597 \else
14598 \expandafter\@secondoftwo
14599 \fi
14600 {%
14601 \Hy@MakeCurrentHrefAuto{section*}%
14602 \setlength{\Hy@SectionHShift}{#3}%
14603 \begingroup
14604 \toks@{\H@old@sect{#1}{#2}{#3}{#4}{#5}{#6}{#7}}%
14605 \toks\tw@\expandafter{%
14606 \expandafter\Hy@SectionAnchorHref\expandafter{\@currentHref}%
14607 #8%
14608 }%
14609 \edef\x{\endgroup
14610 \the\toks@\the\toks\tw@}%
14611 }\x
14612 }{%
14613 \H@old@sect{#1}{#2}{#3}{#4}{#5}{#6}{#7}{#8}%
14614 }%
14615 }
14616 }{}

```

```

14617 </outlines | hypertext>
14618 <*outlines>

14619 \expandafter\def\csname Parent-4\endcsname{}
14620 \expandafter\def\csname Parent-3\endcsname{}
14621 \expandafter\def\csname Parent-2\endcsname{}
14622 \expandafter\def\csname Parent-1\endcsname{}
14623 \expandafter\def\csname Parent0\endcsname{}
14624 \expandafter\def\csname Parent1\endcsname{}
14625 \expandafter\def\csname Parent2\endcsname{}
14626 \expandafter\def\csname Parent3\endcsname{}
14627 \expandafter\def\csname Parent4\endcsname{}

14628 </outlines>

```

46 Encoding definition files for encodings of PDF strings

This was contributed by Heiko Oberdiek.

46.1 PD1 encoding

```

14629 <*pd1enc>
14630 \DeclareFontEncoding{PD1}{\}{\}

Accents
14631 \DeclareTextAccent{\`}{PD1}{\textasciigrave}
14632 \DeclareTextAccent{\'}{PD1}{\textacute}
14633 \DeclareTextAccent{\`}{PD1}{\textasciicircum}
14634 \DeclareTextAccent{\~}{PD1}{\texttilde}
14635 \DeclareTextAccent{\"}{PD1}{\textasciidieresis}
14636 \DeclareTextAccent{\r}{PD1}{\textring}
14637 \DeclareTextAccent{\v}{PD1}{\textasciicaron}
14638 \DeclareTextAccent{\.}{PD1}{\textdotaccent}
14639 \DeclareTextAccent{\c}{PD1}{\textcedilla}
14640 \DeclareTextAccent{\=}{PD1}{\textasciimacron}
14641 \DeclareTextAccent{\b}{PD1}{\textmacronbelow}
14642 \DeclareTextAccent{\d}{PD1}{\textdotbelow}
14643 \DeclareTextCompositeCommand{\`}{PD1}{\@empty}{\textasciigrave}
14644 \DeclareTextCompositeCommand{\'}{PD1}{\@empty}{\textacute}
14645 \DeclareTextCompositeCommand{\`}{PD1}{\@empty}{\textasciicircum}
14646 \DeclareTextCompositeCommand{\~}{PD1}{\@empty}{\texttilde}
14647 \DeclareTextCompositeCommand{\"}{PD1}{\@empty}{\textasciidieresis}
14648 \DeclareTextCompositeCommand{\r}{PD1}{\@empty}{\textring}
14649 \DeclareTextCompositeCommand{\v}{PD1}{\@empty}{\textasciicaron}
14650 \DeclareTextCompositeCommand{\.}{PD1}{\@empty}{\textdotaccent}
14651 \DeclareTextCompositeCommand{\c}{PD1}{\@empty}{\textcedilla}
14652 \DeclareTextCompositeCommand{\=}{PD1}{\@empty}{\textasciimacron}
14653 \DeclareTextCompositeCommand{\b}{PD1}{\@empty}{\textmacronbelow}
14654 \DeclareTextCompositeCommand{\d}{PD1}{\@empty}{\textdotbelow}
14655 \DeclareTextCompositeCommand{\`}{PD1}{\ }{\textasciigrave}
14656 \DeclareTextCompositeCommand{\'}{PD1}{\ }{\textacute}
14657 \DeclareTextCompositeCommand{\`}{PD1}{\ }{\textasciicircum}
14658 \DeclareTextCompositeCommand{\~}{PD1}{\ }{\texttilde}

```

```

14659 \DeclareTextCompositeCommand{"}{PD1}{\ }{\textasciidieresis}
14660 \DeclareTextCompositeCommand{r}{PD1}{\ }{\textstring}
14661 \DeclareTextCompositeCommand{v}{PD1}{\ }{\textasciicaron}
14662 \DeclareTextCompositeCommand{.}{PD1}{\ }{\textdotaccent}
14663 \DeclareTextCompositeCommand{c}{PD1}{\ }{\textcedilla}
14664 \DeclareTextCompositeCommand{=}{PD1}{\ }{\textasciimacron}
14665 \DeclareTextCompositeCommand{b}{PD1}{\ }{\textmacronbelow}
14666 \DeclareTextCompositeCommand{d}{PD1}{\ }{\textdotbelow}
14667 \DeclareTextCommand{\k}{PD1}[1]{\TextSymbolUnavailable{\k{#1}}#1}
14668 \DeclareTextCommand{\t}{PD1}[1]{\TextSymbolUnavailable{\t{#1}}#1}
14669 \DeclareTextCommand{\newtie}{PD1}[1]{%
14670   \TextSymbolUnavailable{\newtie{#1}}#1%
14671 }

```

Special white space escape characters not for use in bookmarks but for other PDF strings.

```

14672 % U+0009 (CHARACTER TABULATION)
14673 \DeclareTextCommand{\textHT}{PD1}{\011}% U+0009
14674 % U+000A (LINE FEED)
14675 \DeclareTextCommand{\textLF}{PD1}{\012}% U+000A
14676 % U+000D (CARRIAGE RETURN)
14677 \DeclareTextCommand{\textCR}{PD1}{\015}% U+000D

```

Accent glyph names

```

14678 % U+02D8 BREVE; breve
14679 \DeclareTextCommand{\textasciibreve}{PD1}{\030}% U+02D8
14680 % U+02C7 CARON; caron
14681 \DeclareTextCommand{\textasciicaron}{PD1}{\031}% U+02C7
14682 % U+02C6 MODIFIER LETTER CIRCUMFLEX ACCENT; circumflex
14683 \DeclareTextCommand{\textcircumflex}{PD1}{\032}% U+02C6
14684 % U+02D9 DOT ABOVE; dotaccent
14685 \DeclareTextCommand{\textdotaccent}{PD1}{\033}% U+02D9
14686 % U+02DD DOUBLE ACUTE ACCENT; hungarumlaut
14687 \DeclareTextCommand{\texthungarumlaut}{PD1}{\034}% U+02DD
14688 % U+02DB OGONEK; ogonek
14689 \DeclareTextCommand{\textogonek}{PD1}{\035}% U+02DB
14690 % U+02DA RING ABOVE; ring
14691 \DeclareTextCommand{\textring}{PD1}{\036}% U+02DA
14692 % U+02DC SMALL TILDE; ilde, *tilde
14693 \DeclareTextCommand{\texttilde}{PD1}{\037}% U+02DC

```

\040: U+0020 SPACE; *space, spacehackarabic

\041: U+0021 EXCLAMATION MARK; exclam

```

14694 % U+0022 QUOTATION MARK; quotedbl
14695 \DeclareTextCommand{\textquotedbl}{PD1}{"}% \042 U+0022
14696 % U+0023 NUMBER SIGN; numbersign
14697 \DeclareTextCommand{\textnumbersign}{PD1}{\043}% U+0023
14698 % U+0024 DOLLAR SIGN; dollar
14699 \DeclareTextCommand{\textdollar}{PD1}{\$}% \044 U+0024
14700 % U+0025 PERCENT SIGN; percent
14701 \DeclareTextCommand{\textpercent}{PD1}{\045}% U+0025
14702 % U+0026 AMPERSAND; ampersand
14703 \DeclareTextCommand{\textampersand}{PD1}{\046}% U+0026

```

\047: U+0027 APOSTROPHE; quotesingle

14704 % U+0028 LEFT PARENTHESIS; parenleft
 14705 \DeclareTextCommand{\textparenleft}{PD1}{\string\{}% \050 U+0028
 14706 % U+0029 RIGHT PARENTHESIS; parenright
 14707 \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
 14708 % U+002E FULL STOP; period
 14709 \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
 14710 % U+003C LESS-THAN SIGN; less
 14711 \DeclareTextCommand{\textless}{PD1}{<}% \074 U+003C
 \075: U+003D EQUALS SIGN; equal
 14712 % U+003E GREATER-THAN SIGN; greater
 14713 \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
 14714 % U+005C REVERSE SOLIDUS; backslash
 14715 \DeclareTextCommand{\textbackslash}{PD1}{\134}% U+005C
 14716 % "U+2216 SET MINUS" simulated by "U+005C REVERSE SOLIDUS"
 14717 \DeclareTextCommand{\textsetminus}{PD1}{\textbackslash}
 \135: U+005D RIGHT SQUARE BRACKET; bracketright
 14718 % U+005E CIRCUMFLEX ACCENT; asciicircum
 14719 \DeclareTextCommand{\textasciicircum}{PD1}{\136}% U+005E
 14720 % U+005F LOW LINE; underscore
 14721 \DeclareTextCommand{\textunderscore}{PD1}{\137}% U+005F
 14722 \DeclareTextCommand{\textmacronbelow}{PD1}{\137}% U+005F
 14723 % U+0060 GRAVE ACCENT; grave
 14724 \DeclareTextCommand{\textasciigrave}{PD1}{\140}% U+0060
 \141: U+0061 LATIN SMALL LETTER A; a
 ...
 \150: U+0068 LATIN SMALL LETTER H; h
 14725 % U+0069 LATIN SMALL LETTER I; i
 14726 \DeclareTextCompositeCommand{.}{PD1}{i}{i}% \151 U+0069
 \152: U+006A LATIN SMALL LETTER J; j
 ...
 \172: U+007A LATIN SMALL LETTER Z; z
 14727 % U+007B LEFT CURLY BRACKET; braceleft
 14728 \DeclareTextCommand{\textbraceleft}{PD1}{\173}% U+007B

14729 % U+007C VERTICAL LINE; *bar, verticalbar
 14730 \DeclareTextCommand{\textbar}{PD1}{|}% U+007C
 14731 % U+007D RIGHT CURLY BRACKET; braceright
 14732 \DeclareTextCommand{\textbraceright}{PD1}{\175}% U+007D
 14733 % U+007E TILDE; asciitilde
 14734 \DeclareTextCommand{\textasciitilde}{PD1}{\176}% U+007E
 Slot \177 (0x7F) is undefined in PDFDocEncoding.
 14735 % U+2022 BULLET; bullet
 14736 \DeclareTextCommand{\textbullet}{PD1}{\200}% U+2022
 14737 % U+2020 DAGGER; dagger
 14738 \DeclareTextCommand{\textdagger}{PD1}{\201}% U+2020
 14739 % U+2021 DOUBLE DAGGER; daggerdbl; \ddagger (LaTeX)
 14740 \DeclareTextCommand{\textdaggerdbl}{PD1}{\202}% U+2021
 14741 \DeclareTextCommand{\textddagger}{PD1}{\textddagger}
 14742 % U+2026 HORIZONTAL ELLIPSIS; ellipsis
 14743 \DeclareTextCommand{\textellipsis}{PD1}{\203}% U+2026
 14744 % U+2014 EM DASH; emdash
 14745 \DeclareTextCommand{\textemdash}{PD1}{\204}% U+2014
 14746 % U+2013 EN DASH; endash
 14747 \DeclareTextCommand{\textendash}{PD1}{\205}% U+2013
 14748 % U+0192 LATIN SMALL LETTER F WITH HOOK; florin
 14749 \DeclareTextCommand{\textflorin}{PD1}{\206}% U+0192
 14750 % U+2044 FRACTION SLASH; fraction
 14751 \DeclareTextCommand{\textfractionsolidus}{PD1}{\207}% U+2044
 14752 % U+2039 SINGLE LEFT-POINTING ANGLE QUOTATION MARK; guil-
 ingleft
 14753 \DeclareTextCommand{\guilsingleft}{PD1}{\210}% U+2039
 14754 % U+203A SINGLE RIGHT-POINTING ANGLE QUOTATION MARK; guil-
 singright
 14755 \DeclareTextCommand{\guilsingright}{PD1}{\211}% U+203A
 14756 % U+2212 MINUS SIGN; minus
 14757 \DeclareTextCommand{\textminus}{PD1}{\212}% U+2212
 14758 % U+2030 PER MILLE SIGN; perthousand
 14759 \DeclareTextCommand{\textperthousand}{PD1}{\213}% U+2030
 14760 % U+201E DOUBLE LOW-9 QUOTATION MARK; quotedblbase
 14761 \DeclareTextCommand{\quotedblbase}{PD1}{\214}% U+201E
 14762 % U+201C LEFT DOUBLE QUOTATION MARK; quotedblleft
 14763 \DeclareTextCommand{\textquotedblleft}{PD1}{\215}% U+201C
 14764 % U+201D RIGHT DOUBLE QUOTATION MARK; quotedblright
 14765 \DeclareTextCommand{\textquotedblright}{PD1}{\216}% U+201D
 14766 % U+2018 LEFT SINGLE QUOTATION MARK; quoteleft
 14767 \DeclareTextCommand{\textquoteleft}{PD1}{\217}% U+2018
 14768 % U+2019 RIGHT SINGLE QUOTATION MARK; quoteright
 14769 \DeclareTextCommand{\textquoteright}{PD1}{\220}% U+2019
 14770 % U+201A SINGLE LOW-9 QUOTATION MARK; quotesinglbase
 14771 \DeclareTextCommand{\quotesinglbase}{PD1}{\221}% U+201A
 14772 % U+2122 TRADE MARK SIGN; trademark
 14773 \DeclareTextCommand{\texttrademark}{PD1}{\222}% U+2122
 14774 % U+FB01 LATIN SMALL LIGATURE FI; fi
 14775 \DeclareTextCommand{\textfi}{PD1}{\223}% U+FB01
 14776 % U+FB02 LATIN SMALL LIGATURE FL; fl
 14777 \DeclareTextCommand{\textfl}{PD1}{\224}% U+FB02
 14778 % U+0141 LATIN CAPITAL LETTER L WITH STROKE; Lslash
 14779 \DeclareTextCommand{\L}{PD1}{\225}% U+0141

14780 % U+0152 LATIN CAPITAL LIGATURE OE; OE
 14781 \DeclareTextCommand{\OE}{PD1}{\226}% U+0152
 14782 % U+0160 LATIN CAPITAL LETTER S WITH CARON; Scaron
 14783 \DeclareTextCompositeCommand{\v}{PD1}{S}{\227}% U+0160
 14784 % U+0178 LATIN CAPITAL LETTER Y WITH DIAERESIS; Ydieresis
 14785 \DeclareTextCompositeCommand{"}{PD1}{Y}{\230}% U+0178
 14786 \DeclareTextCommand{\IJ}{PD1}{IJ}% ligature U+0049 U+004A
 14787 % U+017D LATIN CAPITAL LETTER Z WITH CARON; Zcaron
 14788 \DeclareTextCompositeCommand{\v}{PD1}{Z}{\231}% U+017D
 14789 % U+0131 LATIN SMALL LETTER DOTLESS I; dotlessi
 14790 \DeclareTextCommand{\i}{PD1}{\232}% U+0131
 14791 % U+0142 LATIN SMALL LETTER L WITH STROKE; lslash
 14792 \DeclareTextCommand{\l}{PD1}{\233}% U+0142
 14793 % U+0153 LATIN SMALL LIGATURE OE; oe
 14794 \DeclareTextCommand{\oe}{PD1}{\234}% U+0153
 14795 % U+0161 LATIN SMALL LETTER S WITH CARON; scaron
 14796 \DeclareTextCompositeCommand{\v}{PD1}{s}{\235}% U+0161
 14797 % U+017E LATIN SMALL LETTER Z WITH CARON; zcaron
 14798 \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.
 14799 % U+20AC EURO SIGN; *Euro, euro
 14800 \DeclareTextCommand{\texteuro}{PD1}{\240}% U+20AC
 14801 % U+00A1 INVERTED EXCLAMATION MARK; exclamdown
 14802 \DeclareTextCommand{\textexclamdown}{PD1}{\241}% U+00A1
 14803 % U+00A2 CENT SIGN; cent
 14804 \DeclareTextCommand{\textcent}{PD1}{\242}% U+00A2
 14805 % U+00A3 POUND SIGN; sterling
 14806 \DeclareTextCommand{\textsterling}{PD1}{\243}% U+00A3
 14807 % U+00A4 CURRENCY SIGN; currency
 14808 \DeclareTextCommand{\textcurrency}{PD1}{\244}% U+00A4
 14809 % U+00A5 YEN SIGN; yen
 14810 \DeclareTextCommand{\textyen}{PD1}{\245}% U+00A5
 14811 % U+00A6 BROKEN BAR; brokenbar
 14812 \DeclareTextCommand{\textbrokenbar}{PD1}{\246}% U+00A6
 14813 % U+00A7 SECTION SIGN; section
 14814 \DeclareTextCommand{\textsection}{PD1}{\247}% U+00A7
 14815 % U+00A8 DIAERESIS; dieresis
 14816 \DeclareTextCommand{\textasciidieresis}{PD1}{\250}% U+00A8
 14817 % U+00A9 COPYRIGHT SIGN; copyright
 14818 \DeclareTextCommand{\textcopyright}{PD1}{\251}% U+00A9
 14819 % U+00AA FEMININE ORDINAL INDICATOR; ordfeminine
 14820 \DeclareTextCommand{\textordfeminine}{PD1}{\252}% U+00AA
 14821 % U+00AB LEFT-POINTING DOUBLE ANGLE QUOTATION MARK; guillemetleft
 14822 \DeclareTextCommand{\guillemotleft}{PD1}{\253}% U+00AB
 14823 \DeclareTextCommand{\guillemetleft}{PD1}{\253}% U+00AB
 14824 % U+00AC NOT SIGN; logicalnot
 14825 \DeclareTextCommand{\textlogicalnot}{PD1}{\254}% U+00AC
 14826 \DeclareTextCommand{\textlnot}{PD1}{\254}% logical not
 No glyph \255 in PDFDocEncoding.
 14827 % U+00AE REGISTERED SIGN; registered
 14828 \DeclareTextCommand{\textregistered}{PD1}{\256}% U+00AE
 14829 % U+00AF MACRON; *macron, overscore

14830 \DeclareTextCommand{\textasciimacron}{PD1}{\257}% U+00AF
14831 % U+00B0 DEGREE SIGN; degree
14832 \DeclareTextCommand{\textdegree}{PD1}{\260}% U+00B0
14833 % U+00B1 PLUS-MINUS SIGN; plusminus
14834 \DeclareTextCommand{\textplusminus}{PD1}{\261}% U+00B1
14835 % U+00B2 SUPERSCRIPT TWO; twosuperior
14836 \DeclareTextCommand{\texttwosuperior}{PD1}{\262}%* U+00B2
14837 % U+00B3 SUPERSCRIPT THREE; threesuperior
14838 \DeclareTextCommand{\textthreesuperior}{PD1}{\263}%* U+00B3
14839 % U+00B4 ACUTE ACCENT; acute
14840 \DeclareTextCommand{\textacute}{PD1}{\264}% U+00B4
14841 % U+00B5 MICRO SIGN; mu, mul
14842 \DeclareTextCommand{\textmu}{PD1}{\265}% U+00B5
14843 % U+00B6 PILCROW SIGN; paragraph
14844 \DeclareTextCommand{\textparagraph}{PD1}{\266}% U+00B6
14845 % U+00B7 MIDDLE DOT; middot, *periodcentered
14846 \DeclareTextCommand{\textperiodcentered}{PD1}{\267}% U+00B7
14847 % U+00B8 CEDILLA; cedilla
14848 \DeclareTextCommand{\textcedilla}{PD1}{\270}% U+00B8
14849 % U+00B9 SUPERSCRIPT ONE; onesuperior
14850 \DeclareTextCommand{\textonesuperior}{PD1}{\271}%* U+00B9
14851 % U+00BA MASCULINE ORDINAL INDICATOR; ordmasculine
14852 \DeclareTextCommand{\textordmasculine}{PD1}{\272}% U+00BA
14853 % U+00BB RIGHT-POINTING DOUBLE ANGLE QUOTATION MARK; guillemetright
14854 \DeclareTextCommand{\guillemotright}{PD1}{\273}% U+00BB
14855 \DeclareTextCommand{\guillemetright}{PD1}{\273}% U+00BB
14856 % U+00BC VULGAR FRACTION ONE QUARTER; onequarter
14857 \DeclareTextCommand{\textonequarter}{PD1}{\274}% U+00BC
14858 % U+00BD VULGAR FRACTION ONE HALF; onehalf
14859 \DeclareTextCommand{\textonehalf}{PD1}{\275}% U+00BD
14860 % U+00BE VULGAR FRACTION THREE QUARTERS; threequarters
14861 \DeclareTextCommand{\textthreequarters}{PD1}{\276}% U+00BE
14862 % U+00BF INVERTED QUESTION MARK; questiondown
14863 \DeclareTextCommand{\textquestiondown}{PD1}{\277}% U+00BF
14864 % U+00C0 LATIN CAPITAL LETTER A WITH GRAVE; Agrave
14865 \DeclareTextCompositeCommand{\`}{PD1}{A}{\300}% U+00C0
14866 % U+00C1 LATIN CAPITAL LETTER A WITH ACUTE; Aacute
14867 \DeclareTextCompositeCommand{\'}{PD1}{A}{\301}% U+00C1
14868 % U+00C2 LATIN CAPITAL LETTER A WITH CIRCUMFLEX; Acircumflex
14869 \DeclareTextCompositeCommand{\^}{PD1}{A}{\302}% U+00C2
14870 % U+00C3 LATIN CAPITAL LETTER A WITH TILDE; Atilde
14871 \DeclareTextCompositeCommand{\~}{PD1}{A}{\303}% U+00C3
14872 % U+00C4 LATIN CAPITAL LETTER A WITH DIAERESIS; Adieresis
14873 \DeclareTextCompositeCommand{\\"}{PD1}{A}{\304}% U+00C4
14874 % U+00C5 LATIN CAPITAL LETTER A WITH RING ABOVE; Aring
14875 \DeclareTextCompositeCommand{\r}{PD1}{A}{\305}% U+00C5
14876 % U+00C6 LATIN CAPITAL LETTER AE; AE
14877 \DeclareTextCommand{\AE}{PD1}{\306}% U+00C6
14878 % U+00C7 LATIN CAPITAL LETTER C WITH CEDILLA; Ccedilla
14879 \DeclareTextCompositeCommand{\c}{PD1}{C}{\307}% U+00C7
14880 % U+00C8 LATIN CAPITAL LETTER E WITH GRAVE; Egrave
14881 \DeclareTextCompositeCommand{\`}{PD1}{E}{\310}% U+00C8
14882 % U+00C9 LATIN CAPITAL LETTER E WITH ACUTE; Eacute
14883 \DeclareTextCompositeCommand{\'}{PD1}{E}{\311}% U+00C9

14884 % U+00CA LATIN CAPITAL LETTER E WITH CIRCUMFLEX; Ecircumflex
14885 \DeclareTextCompositeCommand{\^}{PD1}{E}{\312}% U+00CA
14886 % U+00CB LATIN CAPITAL LETTER E WITH DIAERESIS; Edieresis
14887 \DeclareTextCompositeCommand{\"}{PD1}{E}{\313}% U+00CB
14888 % U+00CC LATIN CAPITAL LETTER I WITH GRAVE; Igrave
14889 \DeclareTextCompositeCommand{\`}{PD1}{I}{\314}% U+00CC
14890 % U+00CD LATIN CAPITAL LETTER I WITH ACUTE; Iacute
14891 \DeclareTextCompositeCommand{\'}{PD1}{I}{\315}% U+00CD
14892 % U+00CE LATIN CAPITAL LETTER I WITH CIRCUMFLEX; Icircumflex
14893 \DeclareTextCompositeCommand{\^}{PD1}{I}{\316}% U+00CE
14894 % U+00CF LATIN CAPITAL LETTER I WITH DIAERESIS; Idieresis
14895 \DeclareTextCompositeCommand{\"}{PD1}{I}{\317}% U+00CF
14896 % U+00D0 LATIN CAPITAL LETTER ETH; Eth
14897 \DeclareTextCommand{\DH}{PD1}{\320}% U+00D0
14898 \DeclareTextCommand{\DJ}{PD1}{\320}% U+00D0
14899 % U+00D1 LATIN CAPITAL LETTER N WITH TILDE; Ntilde
14900 \DeclareTextCompositeCommand{\~}{PD1}{N}{\321}% U+00D1
14901 % U+00D2 LATIN CAPITAL LETTER O WITH GRAVE; Ograve
14902 \DeclareTextCompositeCommand{\`}{PD1}{O}{\322}% U+00D2
14903 % U+00D3 LATIN CAPITAL LETTER O WITH ACUTE; Oacute
14904 \DeclareTextCompositeCommand{\'}{PD1}{O}{\323}% U+00D3
14905 % U+00D4 LATIN CAPITAL LETTER O WITH CIRCUMFLEX; Ocircumflex
14906 \DeclareTextCompositeCommand{\^}{PD1}{O}{\324}% U+00D4
14907 % U+00D5 LATIN CAPITAL LETTER O WITH TILDE; Otilde
14908 \DeclareTextCompositeCommand{\~}{PD1}{O}{\325}% U+00D5
14909 % U+00D6 LATIN CAPITAL LETTER O WITH DIAERESIS; Odieresis
14910 \DeclareTextCompositeCommand{\"}{PD1}{O}{\326}% U+00D6
14911 % U+00D7 MULTIPLICATION SIGN; multiply
14912 \DeclareTextCommand{\textmultiply}{PD1}{\327}% U+00D7
14913 % U+00D8 LATIN CAPITAL LETTER O WITH STROKE; Oslash
14914 \DeclareTextCommand{\O}{PD1}{\330}% U+00D8
14915 % U+00D9 LATIN CAPITAL LETTER U WITH GRAVE; Ugrave
14916 \DeclareTextCompositeCommand{\`}{PD1}{U}{\331}% U+00D9
14917 % U+00DA LATIN CAPITAL LETTER U WITH ACUTE; Uacute
14918 \DeclareTextCompositeCommand{\'}{PD1}{U}{\332}% U+00DA
14919 % U+00DB LATIN CAPITAL LETTER U WITH CIRCUMFLEX; Ucircumflex
14920 \DeclareTextCompositeCommand{\^}{PD1}{U}{\333}% U+00DB
14921 % U+00DC LATIN CAPITAL LETTER U WITH DIAERESIS; Udieresis
14922 \DeclareTextCompositeCommand{\"}{PD1}{U}{\334}% U+00DC
14923 % U+00DD LATIN CAPITAL LETTER Y WITH ACUTE; Yacute
14924 \DeclareTextCompositeCommand{\'}{PD1}{Y}{\335}% U+00DD
14925 % U+00DE LATIN CAPITAL LETTER THORN; Thorn; \TH, \Thorn (wasysym)
14926 \DeclareTextCommand{\TH}{PD1}{\336}% U+00DE
14927 \DeclareTextCommand{\textThorn}{PD1}{\336}%* U+00DE
14928 % U+00DF LATIN SMALL LETTER SHARP S; germandbls
14929 \DeclareTextCommand{\ss}{PD1}{\337}% U+00DF
14930 % U+00E0 LATIN SMALL LETTER A WITH GRAVE; agrave
14931 \DeclareTextCompositeCommand{\`}{PD1}{a}{\340}% U+00E0
14932 % U+00E1 LATIN SMALL LETTER A WITH ACUTE; aacute
14933 \DeclareTextCompositeCommand{\'}{PD1}{a}{\341}% U+00E1
14934 % U+00E2 LATIN SMALL LETTER A WITH CIRCUMFLEX; acircumflex
14935 \DeclareTextCompositeCommand{\^}{PD1}{a}{\342}% U+00E2
14936 % U+00E3 LATIN SMALL LETTER A WITH TILDE; atilde
14937 \DeclareTextCompositeCommand{\~}{PD1}{a}{\343}% U+00E3

14938 % U+00E4 LATIN SMALL LETTER A WITH DIAERESIS; adieresis
14939 \DeclareTextCompositeCommand{"}{PD1}{a}{\344}% U+00E4
14940 % U+00E5 LATIN SMALL LETTER A WITH RING ABOVE; aring
14941 \DeclareTextCompositeCommand{r}{PD1}{a}{\345}% U+00E5
14942 % U+00E6 LATIN SMALL LETTER AE; ae
14943 \DeclareTextCommand{ae}{PD1}{\346}% U+00E6
14944 % U+00E7 LATIN SMALL LETTER C WITH CEDILLA; ccedilla
14945 \DeclareTextCompositeCommand{c}{PD1}{c}{\347}% U+00E7
14946 % U+00E8 LATIN SMALL LETTER E WITH GRAVE; egrave
14947 \DeclareTextCompositeCommand{`}{PD1}{e}{\350}% U+00E8
14948 % U+00E9 LATIN SMALL LETTER E WITH ACUTE; eacute
14949 \DeclareTextCompositeCommand{'}{PD1}{e}{\351}% U+00E9
14950 % U+00EA LATIN SMALL LETTER E WITH CIRCUMFLEX; ecircumflex
14951 \DeclareTextCompositeCommand{^}{PD1}{e}{\352}% U+00EA
14952 % U+00EB LATIN SMALL LETTER E WITH DIAERESIS; edieresis
14953 \DeclareTextCompositeCommand{"}{PD1}{e}{\353}% U+00EB
14954 % U+00EC LATIN SMALL LETTER I WITH GRAVE; igrave
14955 \DeclareTextCompositeCommand{`}{PD1}{i}{\354}% U+00EC
14956 \DeclareTextCompositeCommand{`}{PD1}{i}{\354}% U+00EC
14957 % U+00ED LATIN SMALL LETTER I WITH ACUTE; iacute
14958 \DeclareTextCompositeCommand{'}{PD1}{i}{\355}% U+00ED
14959 \DeclareTextCompositeCommand{'}{PD1}{i}{\355}% U+00ED
14960 % U+00EE LATIN SMALL LETTER I WITH CIRCUMFLEX; icircumflex
14961 \DeclareTextCompositeCommand{^}{PD1}{i}{\356}% U+00EE
14962 \DeclareTextCompositeCommand{^}{PD1}{i}{\356}% U+00EE
14963 % U+00EF LATIN SMALL LETTER I WITH DIAERESIS; idieresis
14964 \DeclareTextCompositeCommand{"}{PD1}{i}{\357}% U+00EF
14965 \DeclareTextCompositeCommand{"}{PD1}{i}{\357}% U+00EF
14966 % U+00F0 LATIN SMALL LETTER ETH; eth
14967 \DeclareTextCommand{dh}{PD1}{\360}% U+00F0
14968 % U+00F1 LATIN SMALL LETTER N WITH TILDE; ntilde
14969 \DeclareTextCompositeCommand{~}{PD1}{n}{\361}% U+00F1
14970 % U+00F2 LATIN SMALL LETTER O WITH GRAVE; ograve
14971 \DeclareTextCompositeCommand{`}{PD1}{o}{\362}% U+00F2
14972 % U+00F3 LATIN SMALL LETTER O WITH ACUTE; oacute
14973 \DeclareTextCompositeCommand{'}{PD1}{o}{\363}% U+00F3
14974 % U+00F4 LATIN SMALL LETTER O WITH CIRCUMFLEX; ocircumflex
14975 \DeclareTextCompositeCommand{^}{PD1}{o}{\364}% U+00F4
14976 % U+00F5 LATIN SMALL LETTER O WITH TILDE; otild
14977 \DeclareTextCompositeCommand{~}{PD1}{o}{\365}% U+00F5
14978 % U+00F6 LATIN SMALL LETTER O WITH DIAERESIS; odieresis
14979 \DeclareTextCompositeCommand{"}{PD1}{o}{\366}% U+00F6
14980 % U+00F7 DIVISION SIGN; divide
14981 \DeclareTextCommand{textdivide}{PD1}{\367}% U+00F7
14982 % U+00F8 LATIN SMALL LETTER O WITH STROKE; oslash
14983 \DeclareTextCommand{o}{PD1}{\370}% U+00F8
14984 % U+00F9 LATIN SMALL LETTER U WITH GRAVE; ugrave
14985 \DeclareTextCompositeCommand{`}{PD1}{u}{\371}% U+00F9
14986 % U+00FA LATIN SMALL LETTER U WITH ACUTE; uacute
14987 \DeclareTextCompositeCommand{'}{PD1}{u}{\372}% U+00FA
14988 % U+00FB LATIN SMALL LETTER U WITH CIRCUMFLEX; ucircumflex
14989 \DeclareTextCompositeCommand{^}{PD1}{u}{\373}% U+00FB
14990 % U+00FC LATIN SMALL LETTER U WITH DIAERESIS; udieresis
14991 \DeclareTextCompositeCommand{"}{PD1}{u}{\374}% U+00FC

```

14992 % U+00FD LATIN SMALL LETTER Y WITH ACUTE; yacute
14993 \DeclareTextCompositeCommand{\'}{PD1}{y}{\375}% U+00FD
14994 % U+00FE LATIN SMALL LETTER THORN; thorn; \th, \thorn (wasysym)
14995 \DeclareTextCommand{\th}{PD1}{\376}% U+00FE
14996 \DeclareTextCommand{\textthorn}{PD1}{\376}%* U+00FE
14997 % U+00FF LATIN SMALL LETTER Y WITH DIAERESIS; ydieresis
14998 \DeclareTextCompositeCommand{"}{PD1}{y}{\377}% U+00FF
14999 \DeclareTextCommand{\ij}{PD1}{ij}% ligature U+0069 U+006A

```

Glyphs that consist of several characters.

```

15000 \DeclareTextCommand{\SS}{PD1}{SS}%
15001 \DeclareTextCommand{\textcelsius}{PD1}{\textdegree C}%

```

Aliases (german.sty)

```

15002 \DeclareTextCommand{\textglqq}{PD1}{\quotedblbase}%
15003 \DeclareTextCommand{\textgrqq}{PD1}{\textquotedblleft}%
15004 \DeclareTextCommand{\textglq}{PD1}{\quotesinglbase}%
15005 \DeclareTextCommand{\textgrq}{PD1}{\textquoteleft}%
15006 \DeclareTextCommand{\textflqq}{PD1}{\guillemetleft}%
15007 \DeclareTextCommand{\textfrqq}{PD1}{\guillemetright}%
15008 \DeclareTextCommand{\textflq}{PD1}{\guilsinglleft}%
15009 \DeclareTextCommand{\textfrq}{PD1}{\guilsinglright}%

```

Aliases (math names)

```

15010 \DeclareTextCommand{\textneg}{PD1}{\textlogicalnot}%
15011 \DeclareTextCommand{\texttimes}{PD1}{\textmultiply}%
15012 \DeclareTextCommand{\textdiv}{PD1}{\textdivide}%
15013 \DeclareTextCommand{\textpm}{PD1}{\textplusminus}%
15014 \DeclareTextCommand{\textcdot}{PD1}{\textperiodcentered}%
15015 \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).

```

15016 \DeclareTextCompositeCommand{\k}{PD1}{a}{a}% aogonek
15017 \DeclareTextCompositeCommand{'}{PD1}{c}{c}% cacute
15018 \DeclareTextCompositeCommand{\k}{PD1}{e}{e}% eogonek
15019 \DeclareTextCompositeCommand{'}{PD1}{n}{n}% nacute
15020 \DeclareTextCompositeCommand{'}{PD1}{s}{s}% sacute
15021 \DeclareTextCompositeCommand{'}{PD1}{z}{z}% zacute
15022 \DeclareTextCompositeCommand{\.}{PD1}{z}{z}% zdot
15023 \DeclareTextCompositeCommand{\k}{PD1}{A}{A}% Aogonek
15024 \DeclareTextCompositeCommand{'}{PD1}{C}{C}% Cacute
15025 \DeclareTextCompositeCommand{\k}{PD1}{E}{E}% Eogonek
15026 \DeclareTextCompositeCommand{'}{PD1}{N}{N}% Nacute
15027 \DeclareTextCompositeCommand{'}{PD1}{S}{S}% Sacute
15028 \DeclareTextCompositeCommand{'}{PD1}{Z}{Z}% Zacute
15029 \DeclareTextCompositeCommand{\.}{PD1}{Z}{Z}% Zdot

```

```

15030 </pd1enc>

```

46.2 PU encoding

```

15031 <*puenc>
15032 \DeclareFontEncoding{PU}{}{}

```

46.2.1 NFSS2 accents

15033 % U+0300 COMBINING GRAVE ACCENT; gravecmb, *gravecomb
15034 \DeclareTextCommand{\`}{PU}[1]{#1\83\000}% U+0300
15035 % U+0301 COMBINING ACUTE ACCENT; acutecmb, *acutecomb
15036 \DeclareTextCommand{\'}{PU}[1]{#1\83\001}% U+0301
15037 % U+0302 COMBINING CIRCUMFLEX ACCENT; circumflexcmb
15038 \DeclareTextCommand{\^}{PU}[1]{#1\83\002}% U+0302
15039 % U+0303 COMBINING TILDE; tildecmb, *tildecmb
15040 \DeclareTextCommand{\~}{PU}[1]{#1\83\003}% U+0303
15041 % U+0304 COMBINING MACRON; macroncmb
15042 \DeclareTextCommand{\=}{PU}[1]{#1\83\004}% U+0304
15043 % U+0306 COMBINING BREVE; brevecmb
15044 \DeclareTextCommand{\u}{PU}[1]{#1\83\006}% U+0306
15045 \ifx\CYRDZE\@undefined \else
15046 \DeclareTextCommand{\U}{PU}[1]{#1\83\006}% U+0306
15047 \fi
15048 % U+0307 COMBINING DOT ABOVE; dotaccentcmb
15049 \DeclareTextCommand{\.}{PU}[1]{#1\83\007}% U+0307
15050 % U+0308 COMBINING DIAERESIS; dieresiscmb
15051 \DeclareTextCommand{\"}{PU}[1]{#1\83\010}% U+0308
15052 % U+030A COMBINING RING ABOVE; ringcmb
15053 \DeclareTextCommand{\r}{PU}[1]{#1\83\012}% U+030A
15054 % U+030B COMBINING DOUBLE ACUTE ACCENT; hungarumlautcmb
15055 \DeclareTextCommand{\H}{PU}[1]{#1\83\013}% U+030B
15056 % U+030C COMBINING CARON; caroncmb
15057 \DeclareTextCommand{\v}{PU}[1]{#1\83\014}% U+030C
15058 \puenc
15059 % U+030F COMBINING DOUBLE GRAVE ACCENT; dblgravecmb
15060 \puextra\DeclareTextCommand{\G}{PU}[1]{#1\83\017}% U+030F
15061 \puenc
15062 \ifx\CYRDZE\@undefined \else
15063 \DeclareTextCommand{\C}{PU}[1]{#1\83\017}% U+030F
15064 \fi
15065 % U+0311 COMBINING INVERTED BREVE; breveinvertedcmb
15066 \DeclareTextCommand{\textinvbreve}{PU}[1]{#1\83\021}% U+0311
15067 \DeclareTextCommand{\newtie}{PU}[1]{#1\83\021}% U+0311
15068 % U+0323 COMBINING DOT BELOW; dotbelowcmb, *dotbelowcomb
15069 \DeclareTextCommand{\d}{PU}[1]{#1\83\043}% U+0323
15070 % U+0324 COMBINING DIAERESIS BELOW; dieresisbelowcmb; \textsubum-
laut (tipa)
15071 \DeclareTextCommand{\textsubumlaut}{PU}[1]{#1\83\044}% U+0324
15072 % U+0325 COMBINING RING BELOW; ringbelowcmb; \textsubring (tipa)
15073 \DeclareTextCommand{\textsubring}{PU}[1]{#1\83\045}% U+0325
15074 % U+0327 COMBINING CEDILLA; cedillacmb
15075 \DeclareTextCommand{\c}{PU}[1]{#1\83\047}% U+0327
15076 % U+0328 COMBINING OGONEK; ogonekcmb
15077 \DeclareTextCommand{\k}{PU}[1]{#1\83\050}% U+0328
15078 % U+032D COMBINING CIRCUMFLEX ACCENT BELOW;
15079 % \textsubcircum (tipa)
15080 \DeclareTextCommand{\textsubcircum}{PU}[1]{#1\83\055}% U+032D
15081 % U+032E COMBINING BREVE BELOW; brevebelowcmb
15082 \DeclareTextCommand{\textsubbreve}{PU}[1]{#1\83\056}% U+032E
15083 % U+0330 COMBINING TILDE BELOW; tildebelowcmb; \textsubtilde (tipa)
15084 \DeclareTextCommand{\textsubtilde}{PU}[1]{#1\83\060}% U+0330
15085 % U+0331 COMBINING MACRON BELOW; macronbelowcmb

```

15086 \DeclareTextCommand{\b}{PU}[1]{#1\83\061}% U+0331
15087 % U+0361 COMBINING DOUBLE INVERTED BREVE; breveinverteddou-
      blecmb
15088 \DeclareTextCommand{\t}{PU}[1]{#1\83\141}% U+0361
15089 % U+20DD COMBINING ENCLOSING CIRCLE
15090 \DeclareTextCommand{\textcircled}{PU}[1]{#1\9040\335}% U+20DD

```

Double accents.

```

15091 \DeclareTextCommand{\textacutemacron}{PU}[1]{#1\83\001\83\004}% U+0301 U+0304
15092 \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.

```

15093 \DeclareTextCompositeCommand{\`}{PU}{\@empty}{\textasciigrave}%
15094 \DeclareTextCompositeCommand{\'}{PU}{\@empty}{\textacute}%
15095 \DeclareTextCompositeCommand{\~}{PU}{\@empty}{\textasciicircum}%
15096 \DeclareTextCompositeCommand{\~}{PU}{\@empty}{\texttilde}%
15097 \DeclareTextCompositeCommand{\"}{PU}{\@empty}{\textasciidieresis}%
15098 \DeclareTextCompositeCommand{\r}{PU}{\@empty}{\textring}%
15099 \DeclareTextCompositeCommand{\v}{PU}{\@empty}{\textasciicaron}%
15100 \DeclareTextCompositeCommand{\.}{PU}{\@empty}{\textdotaccent}%
15101 \DeclareTextCompositeCommand{\c}{PU}{\@empty}{\textcedilla}%
15102 \DeclareTextCompositeCommand{\u}{PU}{\@empty}{\textasciibreve}%
15103 \puenc)
15104 \puextra)\DeclareTextCompositeCommand{\G}{PU}{\@empty}{\textdoublegrave}%
15105 \*puenc)
15106 \DeclareTextCompositeCommand{\=}{PU}{\@empty}{\textasciimacron}%
15107 \DeclareTextCompositeCommand{\H}{PU}{\@empty}{\texthungarumlaut}%
15108 \DeclareTextCompositeCommand{\k}{PU}{\@empty}{\textogonek}%
15109 \DeclareTextCompositeCommand{\textinvbreve}{PU}{\@empty}{\83\021}% U+0311
15110 \DeclareTextCompositeCommand{\textsubumlaut}{PU}{\@empty}{\83\044}% U+0324
15111 \DeclareTextCompositeCommand{\textsubring}{PU}{\@empty}{\textringlow}%
15112 \DeclareTextCompositeCommand{\textsubcircum}{PU}{\@empty}{\textcircum-
      low}%
15113 \DeclareTextCompositeCommand{\textsubbreve}{PU}{\@empty}{\83\056}% U+032E
15114 \DeclareTextCompositeCommand{\textsubtilde}{PU}{\@empty}{\texttildebelow}%
15115 \DeclareTextCompositeCommand{\b}{PU}{\@empty}{\textmacronbelow}%
15116 \DeclareTextCompositeCommand{\d}{PU}{\@empty}{\textdotbelow}%
15117 \DeclareTextCompositeCommand{\t}{PU}{\@empty}{\texttie}%
15118 \DeclareTextCompositeCommand{\newtie}{PU}{\@empty}{\textnewtie}%
15119 \DeclareTextCompositeCommand{\textcircled}{PU}{\@empty}{\textbigcircle}%
15120 \DeclareTextCompositeCommand{\textacutemacron}{PU}{\@empty}{\83\001\83\004}% U+0301 U
15121 \DeclareTextCompositeCommand{\textgravemacron}{PU}{\@empty}{\83\000\83\004}% U+0300 U
15122 \DeclareTextCompositeCommand{\`}{PU}{\ }{\textasciigrave}%
15123 \DeclareTextCompositeCommand{\'}{PU}{\ }{\textacute}%
15124 \DeclareTextCompositeCommand{\~}{PU}{\ }{\textasciicircum}%
15125 \DeclareTextCompositeCommand{\~}{PU}{\ }{\texttilde}%
15126 \DeclareTextCompositeCommand{\"}{PU}{\ }{\textasciidieresis}%
15127 \DeclareTextCompositeCommand{\r}{PU}{\ }{\textring}%
15128 \DeclareTextCompositeCommand{\v}{PU}{\ }{\textasciicaron}%
15129 \DeclareTextCompositeCommand{\.}{PU}{\ }{\textdotaccent}%
15130 \DeclareTextCompositeCommand{\c}{PU}{\ }{\textcedilla}%
15131 \DeclareTextCompositeCommand{\u}{PU}{\ }{\textasciibreve}%
15132 \puenc)
15133 \puextra)\DeclareTextCompositeCommand{\G}{PU}{\ }{\textdoublegrave}%

```

15134 (*puenc)
 15135 \DeclareTextCompositeCommand{\=}{PU}{\ }{\textasciimacron}%
 15136 \DeclareTextCompositeCommand{\H}{PU}{\ }{\texthungarumlaut}%
 15137 \DeclareTextCompositeCommand{\k}{PU}{\ }{\textogonek}%
 15138 \DeclareTextCompositeCommand{\textinvbreve}{PU}{\ }{\ \83\021}}% U+0311
 15139 \DeclareTextCompositeCommand{\textsubumlaut}{PU}{\ }{\ \83\044}}% U+0324
 15140 \DeclareTextCompositeCommand{\textsubring}{PU}{\ }{\textringlow}%
 15141 \DeclareTextCompositeCommand{\textsubcircum}{PU}{\ }{\textcircumlow}%
 15142 \DeclareTextCompositeCommand{\textsubbreve}{PU}{\ }{\ \83\056}}% U+032E
 15143 \DeclareTextCompositeCommand{\textsubtilde}{PU}{\ }{\texttildelow}%
 15144 \DeclareTextCompositeCommand{\b}{PU}{\ }{\textmacronbelow}%
 15145 \DeclareTextCompositeCommand{\d}{PU}{\ }{\textdotbelow}%
 15146 \DeclareTextCompositeCommand{\t}{PU}{\ }{\texttie}%
 15147 \DeclareTextCompositeCommand{\newtie}{PU}{\ }{\textnewtie}%
 15148 \DeclareTextCompositeCommand{\textcircled}{PU}{\ }{\textbigcircle}%
 15149 \DeclareTextCompositeCommand{\textacutemacron}{PU}{\ }{\ \83\001\83\004}}% U+0301 U+0304
 15150 \DeclareTextCompositeCommand{\textgravemacron}{PU}{\ }{\ \83\000\83\004}}% U+0300 U+0304

Accents for capitals (see encoding TS1)

15151 \DeclareTextCommand{\capitalcedilla}{PU}[1]{\c{#1}}%
 15152 \DeclareTextCommand{\capitalogonek}{PU}[1]{\k{#1}}%
 15153 \DeclareTextCommand{\capitalgrave}{PU}[1]{\`{#1}}%
 15154 \DeclareTextCommand{\capitalacute}{PU}[1]{\'{#1}}%
 15155 \DeclareTextCommand{\capitalcircumflex}{PU}[1]{\^{#1}}%
 15156 \DeclareTextCommand{\capitaltilde}{PU}[1]{\~{#1}}%
 15157 \DeclareTextCommand{\capitaldieresis}{PU}[1]{\"{#1}}%
 15158 \DeclareTextCommand{\capitalhungarumlaut}{PU}[1]{\H{#1}}%
 15159 \DeclareTextCommand{\capitalring}{PU}[1]{\r{#1}}%
 15160 \DeclareTextCommand{\capitalcaron}{PU}[1]{\v{#1}}%
 15161 \DeclareTextCommand{\capitalbreve}{PU}[1]{\u{#1}}%
 15162 \DeclareTextCommand{\capitalmacron}{PU}[1]{\={#1}}%
 15163 \DeclareTextCommand{\capitaldotaccent}{PU}[1]{\.\{#1}}%
 15164 \DeclareTextCommand{\capitaltie}{PU}[1]{\t{#1}}%
 15165 \DeclareTextCommand{\capitalnewtie}{PU}[1]{\newtie{#1}}%

46.2.2 Basic Latin: U+0000 to U+007F

Special white space escape characters.

15166 % U+0009 (CHARACTER TABULATION)
 15167 \DeclareTextCommand{\textHT}{PU}{\80\011}% U+0009
 15168 % U+000A (LINE FEED)
 15169 \DeclareTextCommand{\textLF}{PU}{\80\012}% U+000A
 15170 % U+000D (CARRIAGE RETURN)
 15171 \DeclareTextCommand{\textCR}{PU}{\80\015}% U+000D
 \80\040: U+0020 SPACE; space, spacehackarabic
 \80\041: U+0021 EXCLAMATION MARK; exclam
 15172 % U+0022 QUOTATION MARK; quotedbl
 15173 \DeclareTextCommand{\textquotedbl}{PU}{\"}% \80\042 U+0022
 15174 % U+0023 NUMBER SIGN; numbersign
 15175 \DeclareTextCommand{\textnumbersign}{PU}{\80\043}% U+0023
 15176 % U+0024 DOLLAR SIGN; dollar
 15177 \DeclareTextCommand{\textdollar}{PU}{\80\044}% U+0024
 15178 %* \textdollar -> \mathdollar
 15179 %* \textdollar -> \EyesDollar (marvosym)
 15180 % U+0025 PERCENT SIGN; percent

15181 \DeclareTextCommand{\textpercent}{PU}{\80\045}% U+0025
15182 % U+0026 AMPERSAND; ampersand
15183 \DeclareTextCommand{\textampersand}{PU}{\80\046}% U+0026
15184 %* \textampersand -> \binampersand (stmaryrd)
15185 %* \textampersand -> \with (cml)
15186 % U+0027 APOSTROPHE; quotesingle
15187 \DeclareTextCommand{\textquotesingle}{PU}{\80\047}% U+0027
15188 % U+0028 LEFT PARENTHESIS; parenleft
15189 \DeclareTextCommand{\textparenleft}{PU}{\80\050}% U+0028
15190 % U+0029 RIGHT PARENTHESIS; parenright
15191 \DeclareTextCommand{\textparenright}{PU}{\80\051}% U+0029
15192 % U+002A ASTERISK; asterisk; (?)
15193 \DeclareTextCommand{\textasteriskcentered}{PU}{\80\052}% U+002A
15194 % U+002B PLUS SIGN; plus; \MVPlus (marvosym)
15195 \DeclareTextCommand{\textMVPlus}{PU}{\80\053}%* U+002B
15196 % U+002C COMMA; comma; \MVComma (marvosym)
15197 \DeclareTextCommand{\textMVComma}{PU}{\80\054}%* U+002C
15198 % U+002D HYPHEN-MINUS; hyphen; \MVMinus (marvosym)
15199 \DeclareTextCommand{\textMVMinus}{PU}{\80\055}%* U+002D
15200 % U+002E FULL STOP; period; \MVPeriod (marvosym)
15201 \DeclareTextCommand{\textMVPeriod}{PU}{\80\056}%* U+002E
15202 % U+002F SOLIDUS; slash; \MVDivision (marvosym)
15203 \DeclareTextCommand{\textMVDivision}{PU}{\80\057}%* U+002F
15204 % U+0030 DIGIT ZERO; zero; \MVZero (marvosym)
15205 \DeclareTextCommand{\textMVZero}{PU}{\80\060}%* U+0030
15206 % U+0031 DIGIT ONE; one; \MVOne (marvosym)
15207 \DeclareTextCommand{\textMVOne}{PU}{\80\061}%* U+0031
15208 % U+0032 DIGIT TWO; two; \MVTwo (marvosym)
15209 \DeclareTextCommand{\textMVTwo}{PU}{\80\062}%* U+0032
15210 % U+0033 DIGIT THREE; three; \MVThree (marvosym)
15211 \DeclareTextCommand{\textMVThree}{PU}{\80\063}%* U+0033
15212 % U+0034 DIGIT FOUR; four; \MVFour (marvosym)
15213 \DeclareTextCommand{\textMVFour}{PU}{\80\064}%* U+0034
15214 % U+0035 DIGIT FIVE; five; \MVFive (marvosym)
15215 \DeclareTextCommand{\textMVFive}{PU}{\80\065}%* U+0035
15216 % U+0036 DIGIT SIX; six; \MVSix (marvosym)
15217 \DeclareTextCommand{\textMVSix}{PU}{\80\066}%* U+0036
15218 % U+0037 DIGIT SEVEN; seven; \MVSeven (marvosym)
15219 \DeclareTextCommand{\textMVSeven}{PU}{\80\067}%* U+0037
15220 % U+0038 DIGIT EIGHT; eight; \MVEight (marvosym)
15221 \DeclareTextCommand{\textMVEight}{PU}{\80\070}%* U+0038
15222 % U+0039 DIGIT NINE; nine; \MVNine (marvosym)
15223 \DeclareTextCommand{\textMVNine}{PU}{\80\071}%* U+0039

\80\072: U+003A COLON; colon
\80\073: U+003B SEMICOLON; semicolon

15224 % U+003C LESS-THAN SIGN; less
15225 \DeclareTextCommand{\textless}{PU}{<}% \80\074 U+003C

\80\075: U+003D EQUALS SIGN; equal

15226 % U+003E GREATER-THAN SIGN; greater
15227 \DeclareTextCommand{\textgreater}{PU}{>}% \80\076 U+003E

\80\077: U+003F QUESTION MARK; question

15228 % U+0040 COMMERCIAL AT; at; \MVAt (marvosym)


```

15229 \DeclareTextCommand{\textMVAt}{PU}{\80\100}%* U+0040
\80\101: U+0041 LATIN CAPITAL LETTER A; A
...
\80\132: U+005A LATIN CAPITAL LETTER Z; Z
\80\133: U+005B LEFT SQUARE BRACKET; bracketleft
15230 % U+005C REVERSE SOLIDUS; backslash
15231 \DeclareTextCommand{\textbackslash}{PU}{\80\134}% U+005C
\80\135: U+005D RIGHT SQUARE BRACKET; bracketright
15232 % U+005E CIRCUMFLEX ACCENT; asciicircum
15233 \DeclareTextCommand{\textasciicircum}{PU}{\80\136}% U+005E
15234 % U+005F LOW LINE; underscore
15235 \DeclareTextCommand{\textunderscore}{PU}{\80\137}% U+005F
15236 %* \textunderscore -> \mathunderscore (LaTeX)
15237 % U+0060 GRAVE ACCENT; grave
15238 \DeclareTextCommand{\textasciigrave}{PU}{\80\140}% U+0060
\80\141: U+0061 LATIN SMALL LETTER A; a
...
\80\150: U+0068 LATIN SMALL LETTER H; h
15239 % U+0069 LATIN SMALL LETTER I; i
15240 \DeclareTextCompositeCommand{.}{PU}{i}{i}% \80\151 U+0069
15241 \DeclareTextCompositeCommand{.}{PU}{i}{i}% \80\151 U+0069
\80\152: U+006A LATIN SMALL LETTER J; j
...
\80\172: U+007A LATIN SMALL LETTER Z; z
15242 % U+007B LEFT CURLY BRACKET; braceleft
15243 \DeclareTextCommand{\textbraceleft}{PU}{\80\173}% U+007B
15244 % U+007C VERTICAL LINE; *bar, verticalbar
15245 \DeclareTextCommand{\textbar}{PU}{|}% \80\174 U+007C
15246 %* \textbar -> \textvtrline (tipa)
15247 % U+007D RIGHT CURLY BRACKET; braceright
15248 \DeclareTextCommand{\textbraceright}{PU}{\80\175}% U+007D
15249 % U+007E TILDE; asciitilde
15250 \DeclareTextCommand{\textasciitilde}{PU}{\80\176}% U+007E

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46.2.3 Latin-1 Supplement: U+0080 to U+00FF

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\80\240: U+00A0 NO-BREAK SPACE; nbspace, nonbreakingspace
15251 % U+00A1 INVERTED EXCLAMATION MARK; exclamdown
15252 \DeclareTextCommand{\textexclamdown}{PU}{\80\241}% U+00A1
15253 % U+00A2 CENT SIGN; cent
15254 \DeclareTextCommand{\textcent}{PU}{\80\242}% U+00A2
15255 % U+00A3 POUND SIGN; sterling
15256 \DeclareTextCommand{\textsterling}{PU}{\80\243}% U+00A3
15257 %* \textsterling -> \mathsterling (LaTeX)
15258 %* \textsterling -> \pounds (LaTeX)
15259 % U+00A4 CURRENCY SIGN; currency
15260 \DeclareTextCommand{\textcurrency}{PU}{\80\244}% U+00A4
15261 % U+00A5 YEN SIGN; yen
15262 \DeclareTextCommand{\textyen}{PU}{\80\245}% U+00A5
15263 % U+00A6 BROKEN BAR; brokenbar
15264 \DeclareTextCommand{\textbrokenbar}{PU}{\80\246}% U+00A6

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15265 %* \textbrokenbar -> \brokenvert (wasysym)
 15266 % U+00A7 SECTION SIGN; section
 15267 \DeclareTextCommand{\textsection}{PU}{\80\247}% U+00A7
 15268 %* \textsection -> \mathsection (LaTeX)
 15269 %* \textsection -> \S (LaTeX)
 15270 % U+00A8 DIAERESIS; dieresis
 15271 \DeclareTextCommand{\textasciidieresis}{PU}{\80\250}% U+00A8
 15272 % U+00A9 COPYRIGHT SIGN; copyright
 15273 \DeclareTextCommand{\textcopyright}{PU}{\80\251}%* U+00A9
 15274 % U+00AA FEMININE ORDINAL INDICATOR; ordfeminine
 15275 \DeclareTextCommand{\textordfeminine}{PU}{\80\252}% U+00AA
 15276 % U+00AB LEFT-POINTING DOUBLE ANGLE QUOTATION MARK; guillemetleft
 15277 \DeclareTextCommand{\guillemotleft}{PU}{\80\253}% U+00AB
 15278 \DeclareTextCommand{\guillemetleft}{PU}{\80\253}% U+00AB
 15279 % U+00AC NOT SIGN; logicalnot
 15280 \DeclareTextCommand{\textlogicalnot}{PU}{\80\254}% U+00AC
 15281 \DeclareTextCommand{\textlnot}{PU}{\80\254}% U+00AC
 \80\255: U+00AD SOFT HYPHEN; sfthyphen, softthyphen
 15282 % U+00AE REGISTERED SIGN; registered
 15283 \DeclareTextCommand{\textregistered}{PU}{\80\256}% U+00AE
 15284 % U+00AF MACRON; *macron, overscore
 15285 \DeclareTextCommand{\textasciimacron}{PU}{\80\257}% U+00AF
 15286 % U+00B0 DEGREE SIGN; degree
 15287 \DeclareTextCommand{\textdegree}{PU}{\80\260}% U+00B0
 15288 % U+00B1 PLUS-MINUS SIGN; plusminus
 15289 \DeclareTextCommand{\textplusminus}{PU}{\80\261}% U+00B1
 15290 % U+00B2 SUPERSCRIPT TWO; twosuperior
 15291 \DeclareTextCommand{\texttwosuperior}{PU}{\80\262}%* U+00B2
 15292 % U+00B3 SUPERSCRIPT THREE; threesuperior
 15293 \DeclareTextCommand{\textthreesuperior}{PU}{\80\263}%* U+00B3
 15294 % U+00B4 ACUTE ACCENT; acute
 15295 \DeclareTextCommand{\textacute}{PU}{\80\264}% U+00B4
 15296 \DeclareTextCommand{\textasciiacute}{PU}{\80\264}% U+00B4
 15297 % U+00B5 MICRO SIGN; mu, mu1
 15298 \DeclareTextCommand{\textmu}{PU}{\80\265}% U+00B5
 15299 % U+00B6 PILCROW SIGN; paragraph
 15300 \DeclareTextCommand{\textparagraph}{PU}{\80\266}% U+00B6
 15301 %* \textparagraph -> \mathparagraph (LaTeX)
 15302 % U+00B7 MIDDLE DOT; middot, *periodcentered
 15303 \DeclareTextCommand{\textperiodcentered}{PU}{\80\267}% U+00B7
 15304 %* \textperiodcentered -> \MultiplicationDot (marvosym)
 15305 %* \textperiodcentered -> \Squaredot (marvosym)
 15306 % U+00B8 CEDILLA; cedilla
 15307 \DeclareTextCommand{\textcedilla}{PU}{\80\270}% U+00B8
 15308 % U+00B9 SUPERSCRIPT ONE; onesuperior
 15309 \DeclareTextCommand{\textonesuperior}{PU}{\80\271}%* U+00B9
 15310 % U+00BA MASCULINE ORDINAL INDICATOR; ordmasculine
 15311 \DeclareTextCommand{\textordmasculine}{PU}{\80\272}% U+00BA
 15312 % U+00BB RIGHT-POINTING DOUBLE ANGLE QUOTATION MARK; guillemetright
 15313 \DeclareTextCommand{\guillemotright}{PU}{\80\273}% U+00BB
 15314 \DeclareTextCommand{\guillemetright}{PU}{\80\273}% U+00BB
 15315 % U+00BC VULGAR FRACTION ONE QUARTER; onequarter
 15316 \DeclareTextCommand{\textonequarter}{PU}{\80\274}% U+00BC
 15317 % U+00BD VULGAR FRACTION ONE HALF; onehalf

15318 \DeclareTextCommand{\textonehalf}{PU}{\80\275}% U+00BD
15319 % U+00BE VULGAR FRACTION THREE QUARTERS; threequarters
15320 \DeclareTextCommand{\textthreequarters}{PU}{\80\276}% U+00BE
15321 % U+00BF INVERTED QUESTION MARK; questiondown
15322 \DeclareTextCommand{\textquestiondown}{PU}{\80\277}% U+00BF
15323 % U+00C0 LATIN CAPITAL LETTER A WITH GRAVE; Agrave
15324 \DeclareTextCompositeCommand{\`}{PU}{A}{\80\300}% U+00C0
15325 % U+00C1 LATIN CAPITAL LETTER A WITH ACUTE; Aacute
15326 \DeclareTextCompositeCommand{\'}{PU}{A}{\80\301}% U+00C1
15327 % U+00C2 LATIN CAPITAL LETTER A WITH CIRCUMFLEX; Acircumflex
15328 \DeclareTextCompositeCommand{\^}{PU}{A}{\80\302}% U+00C2
15329 % U+00C3 LATIN CAPITAL LETTER A WITH TILDE; Atilde
15330 \DeclareTextCompositeCommand{\~}{PU}{A}{\80\303}% U+00C3
15331 % U+00C4 LATIN CAPITAL LETTER A WITH DIAERESIS; Adieresis
15332 \DeclareTextCompositeCommand{\"}{PU}{A}{\80\304}% U+00C4
15333 % U+00C5 LATIN CAPITAL LETTER A WITH RING ABOVE; Aring
15334 \DeclareTextCompositeCommand{\r}{PU}{A}{\80\305}% U+00C5
15335 % U+00C6 LATIN CAPITAL LETTER AE; AE
15336 \DeclareTextCommand{\AE}{PU}{\80\306}% U+00C6
15337 % U+00C7 LATIN CAPITAL LETTER C WITH CEDILLA; Ccedilla
15338 \DeclareTextCompositeCommand{\c}{PU}{C}{\80\307}% U+00C7
15339 % U+00C8 LATIN CAPITAL LETTER E WITH GRAVE; Egrave
15340 \DeclareTextCompositeCommand{\`}{PU}{E}{\80\310}% U+00C8
15341 % U+00C9 LATIN CAPITAL LETTER E WITH ACUTE; Eacute
15342 \DeclareTextCompositeCommand{\'}{PU}{E}{\80\311}% U+00C9
15343 % U+00CA LATIN CAPITAL LETTER E WITH CIRCUMFLEX; Ecircumflex
15344 \DeclareTextCompositeCommand{\^}{PU}{E}{\80\312}% U+00CA
15345 % U+00CB LATIN CAPITAL LETTER E WITH DIAERESIS; Edieresis
15346 \DeclareTextCompositeCommand{\"}{PU}{E}{\80\313}% U+00CB
15347 % U+00CC LATIN CAPITAL LETTER I WITH GRAVE; Igrave
15348 \DeclareTextCompositeCommand{\`}{PU}{I}{\80\314}% U+00CC
15349 % U+00CD LATIN CAPITAL LETTER I WITH ACUTE; Iacute
15350 \DeclareTextCompositeCommand{\'}{PU}{I}{\80\315}% U+00CD
15351 % U+00CE LATIN CAPITAL LETTER I WITH CIRCUMFLEX; Icircumflex
15352 \DeclareTextCompositeCommand{\^}{PU}{I}{\80\316}% U+00CE
15353 % U+00CF LATIN CAPITAL LETTER I WITH DIAERESIS; Idieresis
15354 \DeclareTextCompositeCommand{\"}{PU}{I}{\80\317}% U+00CF
15355 % U+00D0 LATIN CAPITAL LETTER ETH; Eth
15356 \DeclareTextCommand{\DH}{PU}{\80\320}% U+00D0
15357 % U+00D1 LATIN CAPITAL LETTER N WITH TILDE; Ntilde
15358 \DeclareTextCompositeCommand{\~}{PU}{N}{\80\321}% U+00D1
15359 % U+00D2 LATIN CAPITAL LETTER O WITH GRAVE; Ograve
15360 \DeclareTextCompositeCommand{\`}{PU}{O}{\80\322}% U+00D2
15361 % U+00D3 LATIN CAPITAL LETTER O WITH ACUTE; Oacute
15362 \DeclareTextCompositeCommand{\'}{PU}{O}{\80\323}% U+00D3
15363 % U+00D4 LATIN CAPITAL LETTER O WITH CIRCUMFLEX; Ocircumflex
15364 \DeclareTextCompositeCommand{\^}{PU}{O}{\80\324}% U+00D4
15365 % U+00D5 LATIN CAPITAL LETTER O WITH TILDE; Otilde
15366 \DeclareTextCompositeCommand{\~}{PU}{O}{\80\325}% U+00D5
15367 % U+00D6 LATIN CAPITAL LETTER O WITH DIAERESIS; Odieresis
15368 \DeclareTextCompositeCommand{\"}{PU}{O}{\80\326}% U+00D6
15369 % U+00D7 MULTIPLICATION SIGN; multiply
15370 \DeclareTextCommand{\textmultiply}{PU}{\80\327}% U+00D7
15371 %* \textmultiply -> \vartimes (stmaryrd)

15372 %* \textmultiply -> \MVMultiplication (marvosym)
15373 % U+00D8 LATIN CAPITAL LETTER O WITH STROKE; Oslash
15374 \DeclareTextCommand{\O}{PU}{\80\330}% U+00D8
15375 % U+00D9 LATIN CAPITAL LETTER U WITH GRAVE; Ugrave
15376 \DeclareTextCompositeCommand{\`}{PU}{U}{\80\331}% U+00D9
15377 % U+00DA LATIN CAPITAL LETTER U WITH ACUTE; Uacute
15378 \DeclareTextCompositeCommand{\'}{PU}{U}{\80\332}% U+00DA
15379 % U+00DB LATIN CAPITAL LETTER U WITH CIRCUMFLEX; Ucircumflex
15380 \DeclareTextCompositeCommand{\^}{PU}{U}{\80\333}% U+00DB
15381 % U+00DC LATIN CAPITAL LETTER U WITH DIAERESIS; Udieresis
15382 \DeclareTextCompositeCommand{\"}{PU}{U}{\80\334}% U+00DC
15383 % U+00DD LATIN CAPITAL LETTER Y WITH ACUTE; Yacute
15384 \DeclareTextCompositeCommand{\'}{PU}{Y}{\80\335}% U+00DD
15385 % U+00DE LATIN CAPITAL LETTER THORN; Thorn; \TH, \Thorn (wasysym)
15386 \DeclareTextCommand{\TH}{PU}{\80\336}% U+00DE
15387 \DeclareTextCommand{\textThorn}{PU}{\80\336}%* U+00DE
15388 % U+00DF LATIN SMALL LETTER SHARP S; germandbls
15389 \DeclareTextCommand{\ss}{PU}{\80\337}% U+00DF
15390 % U+00E0 LATIN SMALL LETTER A WITH GRAVE; agrave
15391 \DeclareTextCompositeCommand{\`}{PU}{a}{\80\340}% U+00E0
15392 % U+00E1 LATIN SMALL LETTER A WITH ACUTE; aacute
15393 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\341}% U+00E1
15394 % U+00E2 LATIN SMALL LETTER A WITH CIRCUMFLEX; acircumflex
15395 \DeclareTextCompositeCommand{\^}{PU}{a}{\80\342}% U+00E2
15396 % U+00E3 LATIN SMALL LETTER A WITH TILDE; atilde
15397 \DeclareTextCompositeCommand{\~}{PU}{a}{\80\343}% U+00E3
15398 % U+00E4 LATIN SMALL LETTER A WITH DIAERESIS; adieresis
15399 \DeclareTextCompositeCommand{\"}{PU}{a}{\80\344}% U+00E4
15400 % U+00E5 LATIN SMALL LETTER A WITH RING ABOVE; aring
15401 \DeclareTextCompositeCommand{\r}{PU}{a}{\80\345}% U+00E5
15402 % U+00E6 LATIN SMALL LETTER AE; ae
15403 \DeclareTextCommand{\ae}{PU}{\80\346}% U+00E6
15404 % U+00E7 LATIN SMALL LETTER C WITH CEDILLA; ccedilla
15405 \DeclareTextCompositeCommand{\c}{PU}{c}{\80\347}% U+00E7
15406 % U+00E8 LATIN SMALL LETTER E WITH GRAVE; egrave
15407 \DeclareTextCompositeCommand{\`}{PU}{e}{\80\350}% U+00E8
15408 % U+00E9 LATIN SMALL LETTER E WITH ACUTE; eacute
15409 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\351}% U+00E9
15410 % U+00EA LATIN SMALL LETTER E WITH CIRCUMFLEX; ecircumflex
15411 \DeclareTextCompositeCommand{\^}{PU}{e}{\80\352}% U+00EA
15412 % U+00EB LATIN SMALL LETTER E WITH DIAERESIS; edieresis
15413 \DeclareTextCompositeCommand{\"}{PU}{e}{\80\353}% U+00EB
15414 % U+00EC LATIN SMALL LETTER I WITH GRAVE; igrave
15415 \DeclareTextCompositeCommand{\`}{PU}{i}{\80\354}% U+00EC
15416 \DeclareTextCompositeCommand{\~}{PU}{i}{\80\354}% U+00EC
15417 % U+00ED LATIN SMALL LETTER I WITH ACUTE; iacute
15418 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}% U+00ED
15419 \DeclareTextCompositeCommand{\^}{PU}{i}{\80\355}% U+00ED
15420 % U+00EE LATIN SMALL LETTER I WITH CIRCUMFLEX; icircumflex
15421 \DeclareTextCompositeCommand{\^}{PU}{i}{\80\356}% U+00EE
15422 \DeclareTextCompositeCommand{\~}{PU}{i}{\80\356}% U+00EE
15423 % U+00EF LATIN SMALL LETTER I WITH DIAERESIS; idieresis
15424 \DeclareTextCompositeCommand{\"}{PU}{i}{\80\357}% U+00EF
15425 \DeclareTextCompositeCommand{\`}{PU}{i}{\80\357}% U+00EF

15426 % U+00F0 LATIN SMALL LETTER ETH; eth
 15427 \DeclareTextCommand{\dh}{PU}{\80\360}% U+00F0
 15428 %* \dh -> \eth (wsuipa, phonetic)
 15429 % U+00F1 LATIN SMALL LETTER N WITH TILDE; ntild
 15430 \DeclareTextCompositeCommand{\~}{PU}{n}{\80\361}% U+00F1
 15431 % U+00F2 LATIN SMALL LETTER O WITH GRAVE; ograve
 15432 \DeclareTextCompositeCommand{\`}{PU}{o}{\80\362}% U+00F2
 15433 % U+00F3 LATIN SMALL LETTER O WITH ACUTE; oacute
 15434 \DeclareTextCompositeCommand{\'}{PU}{o}{\80\363}% U+00F3
 15435 % U+00F4 LATIN SMALL LETTER O WITH CIRCUMFLEX; ocircumflex
 15436 \DeclareTextCompositeCommand{\^}{PU}{o}{\80\364}% U+00F4
 15437 % U+00F5 LATIN SMALL LETTER O WITH TILDE; otild
 15438 \DeclareTextCompositeCommand{\~}{PU}{o}{\80\365}% U+00F5
 15439 % U+00F6 LATIN SMALL LETTER O WITH DIAERESIS; odieresis
 15440 \DeclareTextCompositeCommand{\"}{PU}{o}{\80\366}% U+00F6
 15441 % U+00F7 DIVISION SIGN; divide
 15442 \DeclareTextCommand{\textdivide}{PU}{\80\367}% U+00F7
 15443 % U+00F8 LATIN SMALL LETTER O WITH STROKE; oslash
 15444 \DeclareTextCommand{\o}{PU}{\80\370}% U+00F8
 15445 % U+00F9 LATIN SMALL LETTER U WITH GRAVE; ugrave
 15446 \DeclareTextCompositeCommand{\`}{PU}{u}{\80\371}% U+00F9
 15447 % U+00FA LATIN SMALL LETTER U WITH ACUTE; uacute
 15448 \DeclareTextCompositeCommand{\'}{PU}{u}{\80\372}% U+00FA
 15449 % U+00FB LATIN SMALL LETTER U WITH CIRCUMFLEX; ucircumflex
 15450 \DeclareTextCompositeCommand{\^}{PU}{u}{\80\373}% U+00FB
 15451 % U+00FC LATIN SMALL LETTER U WITH DIAERESIS; udieresis
 15452 \DeclareTextCompositeCommand{\"}{PU}{u}{\80\374}% U+00FC
 15453 % U+00FD LATIN SMALL LETTER Y WITH ACUTE; yacute
 15454 \DeclareTextCompositeCommand{\'}{PU}{y}{\80\375}% U+00FD
 15455 % U+00FE LATIN SMALL LETTER THORN; thorn;
 15456 % \th, \thorn (wasysym), \textthorn (tipa)
 15457 \DeclareTextCommand{\th}{PU}{\80\376}% U+00FE
 15458 \DeclareTextCommand{\textthorn}{PU}{\80\376}%* U+00FE
 15459 % U+00FF LATIN SMALL LETTER Y WITH DIAERESIS; ydieresis
 15460 \DeclareTextCompositeCommand{\"}{PU}{y}{\80\377}% U+00FF

46.2.4 Latin Extended-A: U+0080 to U+017F

15461 % U+0100 LATIN CAPITAL LETTER A WITH MACRON; Amacron
 15462 \DeclareTextCompositeCommand{=} {PU}{A}{\81\000}% U+0100
 15463 % U+0101 LATIN SMALL LETTER A WITH MACRON; amacron
 15464 \DeclareTextCompositeCommand{=} {PU}{a}{\81\001}% U+0101
 15465 % U+0102 LATIN CAPITAL LETTER A WITH BREVE; Abreve
 15466 \DeclareTextCompositeCommand{\u}{PU}{A}{\81\002}% U+0102
 15467 % U+0103 LATIN SMALL LETTER A WITH BREVE; abreve
 15468 \DeclareTextCompositeCommand{\u}{PU}{a}{\81\003}% U+0103
 15469 % U+0104 LATIN CAPITAL LETTER A WITH OGONEK; Aogonek
 15470 \DeclareTextCompositeCommand{\k}{PU}{A}{\81\004}% U+0104
 15471 % U+0105 LATIN SMALL LETTER A WITH OGONEK; aogonek
 15472 \DeclareTextCompositeCommand{\k}{PU}{a}{\81\005}% U+0105
 15473 % U+0106 LATIN CAPITAL LETTER C WITH ACUTE; Cacute
 15474 \DeclareTextCompositeCommand{\'}{PU}{C}{\81\006}% U+0106
 15475 % U+0107 LATIN SMALL LETTER C WITH ACUTE; cacute
 15476 \DeclareTextCompositeCommand{\'}{PU}{c}{\81\007}% U+0107

15477 % U+0108 LATIN CAPITAL LETTER C WITH CIRCUMFLEX; Ccircumflex
15478 \DeclareTextCompositeCommand{\^}{PU}{C}{\81\010}% U+0108
15479 % U+0109 LATIN SMALL LETTER C WITH CIRCUMFLEX; ccircumflex
15480 \DeclareTextCompositeCommand{\^}{PU}{c}{\81\011}% U+0109
15481 % U+010A LATIN CAPITAL LETTER C WITH DOT ABOVE; Cdot, Cdotaccent
15482 \DeclareTextCompositeCommand{\.}{PU}{C}{\81\012}% U+010A
15483 % U+010B LATIN SMALL LETTER C WITH DOT ABOVE; cdot, cdotaccent
15484 \DeclareTextCompositeCommand{\.}{PU}{c}{\81\013}% U+010B
15485 % U+010C LATIN CAPITAL LETTER C WITH CARON; Ccaron
15486 \DeclareTextCompositeCommand{\v}{PU}{C}{\81\014}% U+010C
15487 % U+010D LATIN SMALL LETTER C WITH CARON; ccaron
15488 \DeclareTextCompositeCommand{\v}{PU}{c}{\81\015}% U+010D
15489 % U+010E LATIN CAPITAL LETTER D WITH CARON; Dcaron
15490 \DeclareTextCompositeCommand{\v}{PU}{D}{\81\016}% U+010E
15491 % U+010F LATIN SMALL LETTER D WITH CARON; dcaron
15492 \DeclareTextCompositeCommand{\v}{PU}{d}{\81\017}% U+010F
15493 % U+0110 LATIN CAPITAL LETTER D WITH STROKE; Dcroat, Dslash
15494 \DeclareTextCommand{\DJ}{PU}{\81\020}% U+0110
15495 % U+0111 LATIN SMALL LETTER D WITH STROKE; dcroat, dmacron;
15496 % \textcrd (tipa)
15497 \DeclareTextCommand{\dj}{PU}{\81\021}% U+0111
15498 \DeclareTextCommand{\textcrd}{PU}{\81\021}% U+0111
15499 %* \textcrd -> \crossd (wsuipa)
15500 % An alternate glyph with the stroke through the bowl:
15501 %* \textcrd -> \textbard (tipa)
15502 %* \textcrd -> \bard (wsuipa)
15503 % U+0112 LATIN CAPITAL LETTER E WITH MACRON; Emacron
15504 \DeclareTextCompositeCommand{=}{PU}{E}{\81\022}% U+0112
15505 % U+0113 LATIN SMALL LETTER E WITH MACRON; emacron
15506 \DeclareTextCompositeCommand{=}{PU}{e}{\81\023}% U+0113
15507 % U+0114 LATIN CAPITAL LETTER E WITH BREVE; Ebreve
15508 \DeclareTextCompositeCommand{\u}{PU}{E}{\81\024}% U+0114
15509 % U+0115 LATIN SMALL LETTER E WITH BREVE; ebreve
15510 \DeclareTextCompositeCommand{\u}{PU}{e}{\81\025}% U+0115
15511 % U+0116 LATIN CAPITAL LETTER E WITH DOT ABOVE; Edot, Edotaccent
15512 \DeclareTextCompositeCommand{\.}{PU}{E}{\81\026}% U+0116
15513 % U+0117 LATIN SMALL LETTER E WITH DOT ABOVE; edot, edotaccent
15514 \DeclareTextCompositeCommand{\.}{PU}{e}{\81\027}% U+0117
15515 % U+0118 LATIN CAPITAL LETTER E WITH OGONEK; Eogonek
15516 \DeclareTextCompositeCommand{\k}{PU}{E}{\81\030}% U+0118
15517 % U+0119 LATIN SMALL LETTER E WITH OGONEK; eogonek
15518 \DeclareTextCompositeCommand{\k}{PU}{e}{\81\031}% U+0119
15519 % U+011A LATIN CAPITAL LETTER E WITH CARON; Ecaron
15520 \DeclareTextCompositeCommand{\v}{PU}{E}{\81\032}% U+011A
15521 % U+011B LATIN SMALL LETTER E WITH CARON; ecaron
15522 \DeclareTextCompositeCommand{\v}{PU}{e}{\81\033}% U+011B
15523 % U+011C LATIN CAPITAL LETTER G WITH CIRCUMFLEX; Gcircumflex
15524 \DeclareTextCompositeCommand{\^}{PU}{G}{\81\034}% U+011C
15525 % U+011D LATIN SMALL LETTER G WITH CIRCUMFLEX; gcircumflex
15526 \DeclareTextCompositeCommand{\^}{PU}{g}{\81\035}% U+011D
15527 % U+011E LATIN CAPITAL LETTER G WITH BREVE; Gbreve
15528 \DeclareTextCompositeCommand{\u}{PU}{G}{\81\036}% U+011E
15529 % U+011F LATIN SMALL LETTER G WITH BREVE; gbreve

15530 \DeclareTextCompositeCommand{\u}{PU}{g}{\81\037}% U+011F
15531 % U+0120 LATIN CAPITAL LETTER G WITH DOT ABOVE; Gdot, Gdotac-
cent
15532 \DeclareTextCompositeCommand{\.}{PU}{G}{\81\040}% U+0120
15533 % U+0121 LATIN SMALL LETTER G WITH DOT ABOVE; gdot, gdotaccent
15534 \DeclareTextCompositeCommand{\.}{PU}{g}{\81\041}% U+0121
15535 % U+0122 LATIN CAPITAL LETTER G WITH CEDILLA; Gcedilla, Gcommaaccent
15536 \DeclareTextCompositeCommand{\c}{PU}{G}{\81\042}% U+0122
15537 % U+0123 LATIN SMALL LETTER G WITH CEDILLA; gcedilla, gcommaaccent
15538 \DeclareTextCompositeCommand{\c}{PU}{g}{\81\043}% U+0123
15539 % U+0124 LATIN CAPITAL LETTER H WITH CIRCUMFLEX; Hcircumflex
15540 \DeclareTextCompositeCommand{\^}{PU}{H}{\81\044}% U+0124
15541 % U+0125 LATIN SMALL LETTER H WITH CIRCUMFLEX; hcircumflex
15542 \DeclareTextCompositeCommand{\^}{PU}{h}{\81\045}% U+0125
15543 % U+0126 LATIN CAPITAL LETTER H WITH STROKE; Hbar
15544 \DeclareTextCommand{\textHslash}{PU}{\81\046}% U+0126
15545 % U+0127 LATIN SMALL LETTER H WITH STROKE; hbar; \hbar (Ams)
15546 \DeclareTextCommand{\texthbar}{PU}{\81\047}%* U+0127
15547 %* \texthbar -> \textcrh (tipa)
15548 %* \texthbar -> \crossh (wsuipa)
15549 %* \texthbar -> \planck (phonetic)
15550 % U+0128 LATIN CAPITAL LETTER I WITH TILDE; Itilde
15551 \DeclareTextCompositeCommand{\~}{PU}{I}{\81\050}% U+0128
15552 % U+0129 LATIN SMALL LETTER I WITH TILDE; itilde
15553 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}% U+0129
15554 \DeclareTextCompositeCommand{\~}{PU}{\i}{\81\051}% U+0129
15555 % U+012A LATIN CAPITAL LETTER I WITH MACRON; Imacron
15556 \DeclareTextCompositeCommand{\=}{PU}{I}{\81\052}% U+012A
15557 % U+012B LATIN SMALL LETTER I WITH MACRON; imacron
15558 \DeclareTextCompositeCommand{\=}{PU}{i}{\81\053}% U+012B
15559 \DeclareTextCompositeCommand{\=}{PU}{\i}{\81\053}% U+012B
15560 % U+012C LATIN CAPITAL LETTER I WITH BREVE; Ibreve
15561 \DeclareTextCompositeCommand{\u}{PU}{I}{\81\054}% U+012C
15562 % U+012D LATIN SMALL LETTER I WITH BREVE; ibreve
15563 \DeclareTextCompositeCommand{\u}{PU}{i}{\81\055}% U+012D
15564 \DeclareTextCompositeCommand{\u}{PU}{\i}{\81\055}% U+012D
15565 % U+012E LATIN CAPITAL LETTER I WITH OGONEK; Iogonek
15566 \DeclareTextCompositeCommand{\k}{PU}{I}{\81\056}% U+012E
15567 % U+012F LATIN SMALL LETTER I WITH OGONEK; iogonek
15568 \DeclareTextCompositeCommand{\k}{PU}{i}{\81\057}% U+012F
15569 \DeclareTextCompositeCommand{\k}{PU}{\i}{\81\057}% U+012F
15570 % U+0130 LATIN CAPITAL LETTER I WITH DOT ABOVE; Idot, Idotaccent
15571 \DeclareTextCompositeCommand{\.}{PU}{I}{\81\060}% U+0130
15572 % U+0131 LATIN SMALL LETTER DOTLESS I; dotlessi
15573 \DeclareTextCommand{\i}{PU}{\81\061}% U+0131
15574 % U+0132 LATIN CAPITAL LIGATURE IJ; IJ
15575 \DeclareTextCommand{\IJ}{PU}{\81\062}% U+0132
15576 % U+0133 LATIN SMALL LIGATURE IJ; ij
15577 \DeclareTextCommand{\ij}{PU}{\81\063}% U+0133
15578 % U+0134 LATIN CAPITAL LETTER J WITH CIRCUMFLEX; Jcircumflex
15579 \DeclareTextCompositeCommand{\^}{PU}{J}{\81\064}% U+0134
15580 % U+0135 LATIN SMALL LETTER J WITH CIRCUMFLEX; jcircumflex
15581 \DeclareTextCompositeCommand{\^}{PU}{j}{\81\065}% U+0135

15582 \DeclareTextCompositeCommand{\~}{PU}{j}{\81\065}% U+0135
 15583 % U+0136 LATIN CAPITAL LETTER K WITH CEDILLA; Kcedilla, Kcommaaccent
 15584 \DeclareTextCompositeCommand{\c}{PU}{K}{\81\066}% U+0136
 15585 % U+0137 LATIN SMALL LETTER K WITH CEDILLA; kcedilla, kcommaaccent
 15586 \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`.

15587 % U+0138 LATIN SMALL LETTER KRA; kgreenlandic
 15588 \DeclareTextCommand{\textkra}{PU}{\81\070}% U+0138
 15589 % U+0139 LATIN CAPITAL LETTER L WITH ACUTE; Lacute
 15590 \DeclareTextCompositeCommand{\'}{PU}{L}{\81\071}% U+0139
 15591 % U+013A LATIN SMALL LETTER L WITH ACUTE; lacute
 15592 \DeclareTextCompositeCommand{\'}{PU}{l}{\81\072}% U+013A
 15593 % U+013B LATIN CAPITAL LETTER L WITH CEDILLA; Lcedilla, Lcommaaccent
 15594 \DeclareTextCompositeCommand{\c}{PU}{L}{\81\073}% U+013B
 15595 % U+013C LATIN SMALL LETTER L WITH CEDILLA; lcedilla, lcommaaccent
 15596 \DeclareTextCompositeCommand{\c}{PU}{l}{\81\074}% U+013C
 15597 % U+013D LATIN CAPITAL LETTER L WITH CARON; Lcaron
 15598 \DeclareTextCompositeCommand{\v}{PU}{L}{\81\075}% U+013D
 15599 % U+013E LATIN SMALL LETTER L WITH CARON; lcaron
 15600 \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`.

15601 % U+013F LATIN CAPITAL LETTER L WITH MIDDLE DOT; Ldot, Ldotaccent
 15602 \DeclareTextCompositeCommand{\.}{PU}{L}{\81\077}% U+013F
 15603 % U+0140 LATIN SMALL LETTER L WITH MIDDLE DOT; ldot, ldotaccent
 15604 \DeclareTextCompositeCommand{\.}{PU}{l}{\81\100}% U+0140
 15605 % U+0141 LATIN CAPITAL LETTER L WITH STROKE; Lslash
 15606 \DeclareTextCommand{\L}{PU}{\81\101}% U+0141
 15607 % U+0142 LATIN SMALL LETTER L WITH STROKE; lslash
 15608 \DeclareTextCommand{\l}{PU}{\81\102}% U+0142
 15609 % U+0143 LATIN CAPITAL LETTER N WITH ACUTE; Nacute
 15610 \DeclareTextCompositeCommand{\'}{PU}{N}{\81\103}% U+0143
 15611 % U+0144 LATIN SMALL LETTER N WITH ACUTE; nacute
 15612 \DeclareTextCompositeCommand{\'}{PU}{n}{\81\104}% U+0144
 15613 % U+0145 LATIN CAPITAL LETTER N WITH CEDILLA; Ncedilla, Ncommaaccent
 15614 \DeclareTextCompositeCommand{\c}{PU}{N}{\81\105}% U+0145
 15615 % U+0146 LATIN SMALL LETTER N WITH CEDILLA; ncedilla, ncommaaccent
 15616 \DeclareTextCompositeCommand{\c}{PU}{n}{\81\106}% U+0146
 15617 % U+0147 LATIN CAPITAL LETTER N WITH CARON; Ncaron
 15618 \DeclareTextCompositeCommand{\v}{PU}{N}{\81\107}% U+0147
 15619 % U+0148 LATIN SMALL LETTER N WITH CARON; ncaron
 15620 \DeclareTextCompositeCommand{\v}{PU}{n}{\81\110}% U+0148
 15621 % U+0149 LATIN SMALL LETTER N PRECEDED BY APOSTROPHE; napostrophe, quoterightn
 15622 \DeclareTextCommand{\textnapostrophe}{PU}{\81\111}% U+0149
 15623 % U+014A LATIN CAPITAL LETTER ENG; Eng

15624 \DeclareTextCommand{\NG}{PU}{\81\112}% U+014A
15625 % U+014B LATIN SMALL LETTER ENG; eng
15626 \DeclareTextCommand{\ng}{PU}{\81\113}% U+014B
15627 %* \ng -> \eng (wsuipa)
15628 %* \ng -> \engma (phonetic)
15629 % U+014C LATIN CAPITAL LETTER O WITH MACRON; Omacron
15630 \DeclareTextCompositeCommand{=} {PU}{O}{\81\114}% U+014C
15631 % U+014D LATIN SMALL LETTER O WITH MACRON; omacron
15632 \DeclareTextCompositeCommand{=} {PU}{o}{\81\115}% U+014D
15633 % U+014E LATIN CAPITAL LETTER O WITH BREVE; Obreve
15634 \DeclareTextCompositeCommand{\u} {PU}{O}{\81\116}% U+014E
15635 % U+014F LATIN SMALL LETTER O WITH BREVE; obreve
15636 \DeclareTextCompositeCommand{\u} {PU}{o}{\81\117}% U+014F
15637 % U+0150 LATIN CAPITAL LETTER O WITH DOUBLE ACUTE; Odblacute, Ohungarumlaut
15638 \DeclareTextCompositeCommand{\H} {PU}{O}{\81\120}% U+0150
15639 % U+0151 LATIN SMALL LETTER O WITH DOUBLE ACUTE; odblacute, ohungarumlaut
15640 \DeclareTextCompositeCommand{\H} {PU}{o}{\81\121}% U+0151
15641 % U+0152 LATIN CAPITAL LIGATURE OE; OE
15642 \DeclareTextCommand{\OE} {PU}{\81\122}% U+0152
15643 % U+0153 LATIN SMALL LIGATURE OE; oe
15644 \DeclareTextCommand{\oe} {PU}{\81\123}% U+0153
15645 % U+0154 LATIN CAPITAL LETTER R WITH ACUTE; Racute
15646 \DeclareTextCompositeCommand{' } {PU}{R}{\81\124}% U+0154
15647 % U+0155 LATIN SMALL LETTER R WITH ACUTE; racute
15648 \DeclareTextCompositeCommand{' } {PU}{r}{\81\125}% U+0155
15649 % U+0156 LATIN CAPITAL LETTER R WITH CEDILLA; Rcedilla, Rcommaaccent
15650 \DeclareTextCompositeCommand{\c} {PU}{R}{\81\126}% U+0156
15651 % U+0157 LATIN SMALL LETTER R WITH CEDILLA; rcedilla, rcommaaccent
15652 \DeclareTextCompositeCommand{\c} {PU}{r}{\81\127}% U+0157
15653 % U+0158 LATIN CAPITAL LETTER R WITH CARON; Rcaron
15654 \DeclareTextCompositeCommand{\v} {PU}{R}{\81\130}% U+0158
15655 % U+0159 LATIN SMALL LETTER R WITH CARON; rcaron
15656 \DeclareTextCompositeCommand{\v} {PU}{r}{\81\131}% U+0159
15657 % U+015A LATIN CAPITAL LETTER S WITH ACUTE; Sacute
15658 \DeclareTextCompositeCommand{' } {PU}{S}{\81\132}% U+015A
15659 % U+015B LATIN SMALL LETTER S WITH ACUTE; sacute
15660 \DeclareTextCompositeCommand{' } {PU}{s}{\81\133}% U+015B
15661 % U+015C LATIN CAPITAL LETTER S WITH CIRCUMFLEX; Scircumflex
15662 \DeclareTextCompositeCommand{\^} {PU}{S}{\81\134}% U+015C
15663 % U+015D LATIN SMALL LETTER S WITH CIRCUMFLEX; scircumflex
15664 \DeclareTextCompositeCommand{\^} {PU}{s}{\81\135}% U+015D
15665 % U+015E LATIN CAPITAL LETTER S WITH CEDILLA; Scedilla
15666 \DeclareTextCompositeCommand{\c} {PU}{S}{\81\136}% U+015E
15667 % U+015F LATIN SMALL LETTER S WITH CEDILLA; scedilla
15668 \DeclareTextCompositeCommand{\c} {PU}{s}{\81\137}% U+015F
15669 % U+0160 LATIN CAPITAL LETTER S WITH CARON; Scaron
15670 \DeclareTextCompositeCommand{\v} {PU}{S}{\81\140}% U+0160
15671 % U+0161 LATIN SMALL LETTER S WITH CARON; scaron
15672 \DeclareTextCompositeCommand{\v} {PU}{s}{\81\141}% U+0161
15673 % U+0162 LATIN CAPITAL LETTER T WITH CEDILLA; Tcedilla, Tcommaaccent

15674 \DeclareTextCompositeCommand{\c}{PU}{T}{\81\142}% U+0162
15675 % U+0163 LATIN SMALL LETTER T WITH CEDILLA; tcedilla, tcommaaccent
15676 \DeclareTextCompositeCommand{\c}{PU}{t}{\81\143}% U+0163
15677 % U+0164 LATIN CAPITAL LETTER T WITH CARON; Tcaron
15678 \DeclareTextCompositeCommand{\v}{PU}{T}{\81\144}% U+0164
15679 % U+0165 LATIN SMALL LETTER T WITH CARON; tcaron
15680 \DeclareTextCompositeCommand{\v}{PU}{t}{\81\145}% U+0165
15681 % U+0166 LATIN CAPITAL LETTER T WITH STROKE; Tbar
15682 \DeclareTextCommand{\textTslash}{PU}{\81\146}% U+0166
15683 % U+0167 LATIN SMALL LETTER T WITH STROKE; tbar
15684 \DeclareTextCommand{\texttslash}{PU}{\81\147}% U+0167
15685 % U+0168 LATIN CAPITAL LETTER U WITH TILDE; Utilde
15686 \DeclareTextCompositeCommand{\~}{PU}{U}{\81\150}% U+0168
15687 % U+0169 LATIN SMALL LETTER U WITH TILDE; utilde
15688 \DeclareTextCompositeCommand{\~}{PU}{u}{\81\151}% U+0169
15689 % U+016A LATIN CAPITAL LETTER U WITH MACRON; Umacron
15690 \DeclareTextCompositeCommand{\=}{PU}{U}{\81\152}% U+016A
15691 % U+016B LATIN SMALL LETTER U WITH MACRON; umacron
15692 \DeclareTextCompositeCommand{\=}{PU}{u}{\81\153}% U+016B
15693 % U+016C LATIN CAPITAL LETTER U WITH BREVE; Ubreve
15694 \DeclareTextCompositeCommand{\u}{PU}{U}{\81\154}% U+016C
15695 % U+016D LATIN SMALL LETTER U WITH BREVE; ubreve
15696 \DeclareTextCompositeCommand{\u}{PU}{u}{\81\155}% U+016D
15697 % U+016E LATIN CAPITAL LETTER U WITH RING ABOVE; Uring
15698 \DeclareTextCompositeCommand{\r}{PU}{U}{\81\156}% U+016E
15699 % U+016F LATIN SMALL LETTER U WITH RING ABOVE; uring
15700 \DeclareTextCompositeCommand{\r}{PU}{u}{\81\157}% U+016F
15701 % U+0170 LATIN CAPITAL LETTER U WITH DOUBLE ACUTE; Udblacute, Uhungarumlaut
15702 \DeclareTextCompositeCommand{\H}{PU}{U}{\81\160}% U+0170
15703 % U+0171 LATIN SMALL LETTER U WITH DOUBLE ACUTE; udblacute, uhungarumlaut
15704 \DeclareTextCompositeCommand{\H}{PU}{u}{\81\161}% U+0171
15705 % U+0172 LATIN CAPITAL LETTER U WITH OGONEK; Uogonek
15706 \DeclareTextCompositeCommand{\k}{PU}{U}{\81\162}% U+0172
15707 % U+0173 LATIN SMALL LETTER U WITH OGONEK; uogonek
15708 \DeclareTextCompositeCommand{\k}{PU}{u}{\81\163}% U+0173
15709 % U+0174 LATIN CAPITAL LETTER W WITH CIRCUMFLEX; Wcircumflex
15710 \DeclareTextCompositeCommand{\^}{PU}{W}{\81\164}% U+0174
15711 % U+0175 LATIN SMALL LETTER W WITH CIRCUMFLEX; wcircumflex
15712 \DeclareTextCompositeCommand{\^}{PU}{w}{\81\165}% U+0175
15713 % U+0176 LATIN CAPITAL LETTER Y WITH CIRCUMFLEX; Ycircumflex
15714 \DeclareTextCompositeCommand{\^}{PU}{Y}{\81\166}% U+0176
15715 % U+0177 LATIN SMALL LETTER Y WITH CIRCUMFLEX; ycircumflex
15716 \DeclareTextCompositeCommand{\^}{PU}{y}{\81\167}% U+0177
15717 % U+0178 LATIN CAPITAL LETTER Y WITH DIAERESIS; Ydieresis
15718 \DeclareTextCompositeCommand{\"}{PU}{Y}{\81\170}% U+0178
15719 % U+0179 LATIN CAPITAL LETTER Z WITH ACUTE; Zacute
15720 \DeclareTextCompositeCommand{\'}{PU}{Z}{\81\171}% U+0179
15721 % U+017A LATIN SMALL LETTER Z WITH ACUTE; zacute
15722 \DeclareTextCompositeCommand{\'}{PU}{z}{\81\172}% U+017A
15723 % U+017B LATIN CAPITAL LETTER Z WITH DOT ABOVE; Zdot, Zdotaccent
15724 \DeclareTextCompositeCommand{\.}{PU}{Z}{\81\173}% U+017B
15725 % U+017C LATIN SMALL LETTER Z WITH DOT ABOVE; zdot, zdotaccent

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15726 \DeclareTextCompositeCommand{\.}{PU}{z}{\81\174}% U+017C
15727 % U+017D LATIN CAPITAL LETTER Z WITH CARON; Zcaron
15728 \DeclareTextCompositeCommand{\v}{PU}{Z}{\81\175}% U+017D
15729 % U+017E LATIN SMALL LETTER Z WITH CARON; zcaron
15730 \DeclareTextCompositeCommand{\v}{PU}{z}{\81\176}% U+017E
15731 % U+017F LATIN SMALL LETTER LONG S; longs, slong
15732 \DeclareTextCommand{\textlongS}{PU}{\81\177}% U+017F

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46.2.5 Latin Extended-B: U+0180 to U+024F

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15733 % U+0180 LATIN SMALL LETTER B WITH STROKE; bstroke; \textcrb (tipa)
15734 \DeclareTextCommand{\textcrb}{PU}{\81\200}% U+0180
15735 %* \textcrb -> \crossb (wsuipa)
15736 % An alternate glyph with the stroke through the bowl:
15737 %* \textcrb -> \textbarb (tipa)
15738 %* \textcrb -> \barb (wsuipa)
15739 % U+0181 LATIN CAPITAL LETTER B WITH HOOK; Bhook; \hausab (pho-
      netic)
15740 \DeclareTextCommand{\texthausab}{PU}{\81\201}%* U+0181
15741 % U+0188 LATIN SMALL LETTER C WITH HOOK; chook; \texthtc (tipa)
15742 \DeclareTextCommand{\texthtc}{PU}{\81\210}% U+0188
15743 % U+018A LATIN CAPITAL LETTER D WITH HOOK; Dhook; \hausad (pho-
      netic)
15744 \DeclareTextCommand{\texthausad}{PU}{\81\212}%* U+018A
15745 % U+018E LATIN CAPITAL LETTER REVERSED E; Eversed
15746 \DeclareTextCommand{\textEversed}{PU}{\81\216}% U+018E
15747 \DeclareTextCommand{\textrevE}{PU}{\81\216}% U+018E
15748 % U+0192 LATIN SMALL LETTER F WITH HOOK; florin
15749 \DeclareTextCommand{\textflorin}{PU}{\81\222}% U+0192
15750 %* \textflorin -> \Florin (marvosym)
15751 % U+0195 LATIN SMALL LETTER HV; hv; \texthvlig (tipa)
15752 \DeclareTextCommand{\texthvlig}{PU}{\81\225}% U+0195
15753 %* \texthvlig -> \hv (wsuipa)
15754 % U+0198 LATIN CAPITAL LETTER K WITH HOOK; Khook; \hausak (pho-
      netic)
15755 \DeclareTextCommand{\texthausak}{PU}{\81\230}%* U+0198
15756 % U+0199 LATIN SMALL LETTER K WITH HOOK; khook; \texthtk (tipa)
15757 \DeclareTextCommand{\texthtk}{PU}{\81\231}% U+0199
15758 %* \texthtk -> \hausak (phonetic)
15759 % U+019A LATIN SMALL LETTER L WITH BAR; lbar;
15760 % \textbarl (tipa), \barl (wsuipa)
15761 \DeclareTextCommand{\textbarl}{PU}{\81\232}%* U+019A
15762 % U+019B LATIN SMALL LETTER LAMBDA WITH STROKE/
15763 % LATIN SMALL LETTER BARRED LAMBDA; lambdastroke;
15764 % \textcrlambda (tipa)
15765 \DeclareTextCommand{\textcrlambda}{PU}{\81\233}% U+019B
15766 %* \textcrlambda -> \crossnilambda (wsuipa)
15767 %* \textcrlambda -> \barlambda (phonetic)
15768 %* \textcrlambda -> \lambdabar (txfonts/pxfonts)
15769 %* \textcrlambda -> \lambdash (txfonts/pxfonts)
15770 % U+019E LATIN SMALL LETTER N WITH LONG RIGHT LEG; nlegright-
      long;
15771 % \textnrleg (tipx)
15772 \DeclareTextCommand{\textPUnrleg}{PU}{\81\236}% U+019E
15773 %* \textPUnrleg -> \textnrleg (tipx)

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15774 % U+01A5 LATIN SMALL LETTER P WITH HOOK; phook; \texthtp (tipa)
15775 \DeclareTextCommand{\texthtp}{PU}{\81\245}% U+01A5
15776 % U+01AB LATIN SMALL LETTER T WITH PALATAL HOOK; tpalatalhook;
15777 % \textlhookt (tipa)
15778 \DeclareTextCommand{\textlhookt}{PU}{\81\253}% U+01AB
15779 % U+01AD LATIN SMALL LETTER T WITH HOOK; thook; \texthtt (tipa)
15780 \DeclareTextCommand{\texthtt}{PU}{\81\255}% U+01AD
15781 % U+01B9 LATIN SMALL LETTER EZH REVERSED/
15782 % LATIN SMALL LETTER REVERSED YOGH; \textrevyogh (tipa)
15783 \DeclareTextCommand{\textrevyogh}{PU}{\81\271}% U+01B9
15784 % U+01BB LATIN LETTER TWO WITH STROKE; twostroke; \textcrtwo (tipa)
15785 \DeclareTextCommand{\textcrtwo}{PU}{\81\273}% U+01BB
15786 % U+01BE LATIN LETTER INVERTED GLOTTAL STOP WITH STROKE;
15787 % glottalinvertedstroke; \textcrinvglotstop (tipa)
15788 \DeclareTextCommand{\textcrinvglotstop}{PU}{\81\276}% U+01BE
15789 % U+01BF LATIN LETTER WYNN; wynn; \textwynn (tipa)
15790 \DeclareTextCommand{\textwynn}{PU}{\81\277}% U+01BF
15791 % U+01C0 LATIN LETTER DENTAL CLICK/LATIN LETTER PIPE; clickden-
tal;
15792 % \textpipe (tipa)
15793 \DeclareTextCommand{\textpipe}{PU}{\81\300}% U+01C0
15794 %* \textpipe -> \textpipevar (tipx)
15795 % U+01C1 LATIN LETTER LATERAL CLICK/LATIN LETTER
15796 % DOUBLE PIPE; clicklateral; \textdoublepipe (tipa)
15797 \DeclareTextCommand{\textdoublepipe}{PU}{\81\301}% U+01C1
15798 %* \textdoublepipe -> \textdoublepipevar (tipx)
15799 % U+01C2 LATIN LETTER ALVEOLAR CLICK/LATIN LETTER PIPE DOU-
BLE BAR;
15800 % clickalveolar; \textdoublebarpipe (tipa)
15801 \DeclareTextCommand{\textdoublebarpipe}{PU}{\81\302}% U+01C2
15802 %* \textdoublebarpipe -> \textdoublebarpipevar (tipx)
15803 % U+01CD LATIN CAPITAL LETTER A WITH CARON; Acaron
15804 \DeclareTextCompositeCommand{\v}{PU}{A}{\81\315}% U+01CD
15805 % U+01CE LATIN SMALL LETTER A WITH CARON; acaron
15806 \DeclareTextCompositeCommand{\v}{PU}{a}{\81\316}% U+01CE
15807 % U+01CF LATIN CAPITAL LETTER I WITH CARON; Icaron
15808 \DeclareTextCompositeCommand{\v}{PU}{I}{\81\317}% U+01CF
15809 % U+01D0 LATIN SMALL LETTER I WITH CARON; icaron
15810 \DeclareTextCompositeCommand{\v}{PU}{i}{\81\320}% U+01D0
15811 \DeclareTextCompositeCommand{\v}{PU}{i}{\81\320}% U+01D0
15812 % U+01D1 LATIN CAPITAL LETTER O WITH CARON; Ocaron
15813 \DeclareTextCompositeCommand{\v}{PU}{O}{\81\321}% U+01D1
15814 % U+01D2 LATIN SMALL LETTER O WITH CARON; ocaron
15815 \DeclareTextCompositeCommand{\v}{PU}{o}{\81\322}% U+01D2
15816 % U+01D3 LATIN CAPITAL LETTER U WITH CARON; Ucaron
15817 \DeclareTextCompositeCommand{\v}{PU}{U}{\81\323}% U+01D3
15818 % U+01D4 LATIN SMALL LETTER U WITH CARON; ucaron
15819 \DeclareTextCompositeCommand{\v}{PU}{u}{\81\324}% U+01D4
15820 % U+01DD LATIN SMALL LETTER TURNED E; eturned; \inve (wasysym)
15821 \DeclareTextCommand{\textinve}{PU}{\81\335}%* U+01DD
15822 % U+01E4 LATIN CAPITAL LETTER G WITH STROKE; Gstroke
15823 \DeclareTextCommand{\textGslash}{PU}{\81\344}% U+01E4
15824 % U+01E5 LATIN SMALL LETTER G WITH STROKE; gstroke
15825 \DeclareTextCommand{\textgslash}{PU}{\81\345}% U+01E5

15826 %* \textgslash -> \textcrg (tipa)
 15827 % U+01E6 LATIN CAPITAL LETTER G WITH CARON; Gcaron
 15828 \DeclareTextCompositeCommand{\v}{PU}{G}{\81\346}% U+01E6
 15829 % U+01E7 LATIN SMALL LETTER G WITH CARON; gcaron
 15830 \DeclareTextCompositeCommand{\v}{PU}{g}{\81\347}% U+01E7
 15831 % U+01E8 LATIN CAPITAL LETTER K WITH CARON; Kcaron
 15832 \DeclareTextCompositeCommand{\v}{PU}{K}{\81\350}% U+01E8
 15833 % U+01E9 LATIN SMALL LETTER K WITH CARON; kcaron
 15834 \DeclareTextCompositeCommand{\v}{PU}{k}{\81\351}% U+01E9
 15835 % U+01EA LATIN CAPITAL LETTER O WITH OGONEK; Oogonek
 15836 \DeclareTextCompositeCommand{\k}{PU}{O}{\81\352}% U+01EA
 15837 % U+01EB LATIN SMALL LETTER O WITH OGONEK; oogonek
 15838 \DeclareTextCompositeCommand{\k}{PU}{o}{\81\353}% U+01EB
 15839 % U+01F0 LATIN SMALL LETTER J WITH CARON; jcaron
 15840 \DeclareTextCompositeCommand{\v}{PU}{j}{\81\360}% U+01F0
 15841 \DeclareTextCompositeCommand{\v}{PU}{j}{\81\360}% U+01F0
 15842 % U+01F4 LATIN CAPITAL LETTER G WITH ACUTE; Gacute
 15843 \DeclareTextCompositeCommand{\'}{PU}{G}{\81\364}% U+01F4
 15844 % U+01F5 LATIN SMALL LETTER G WITH ACUTE; gacute
 15845 \DeclareTextCompositeCommand{\'}{PU}{g}{\81\365}% U+01F5
 15846 % U+01F8 LATIN CAPITAL LETTER N WITH GRAVE
 15847 \DeclareTextCompositeCommand{\`}{PU}{N}{\81\370}% U+01F8
 15848 % U+01F9 LATIN SMALL LETTER N WITH GRAVE
 15849 \DeclareTextCompositeCommand{\`}{PU}{n}{\81\371}% U+01F9
 15850 % U+01FC LATIN CAPITAL LETTER AE WITH ACUTE; AEacute
 15851 \DeclareTextCompositeCommand{\'}{PU}{\AE}{\81\374}% U+01FC
 15852 % U+01FD LATIN SMALL LETTER AE WITH ACUTE; aeacute
 15853 \DeclareTextCompositeCommand{\'}{PU}{\ae}{\81\375}% U+01FD
 15854 % U+01FE LATIN CAPITAL LETTER O WITH STROKE AND ACUTE;
 15855 % *Oslashacute, Ostrokeacut
 15856 \DeclareTextCompositeCommand{\'}{PU}{\O}{\81\376}% U+01FE
 15857 % U+01FF LATIN SMALL LETTER O WITH STROKE AND ACUTE;
 15858 % *oslashacute, ostrokeacute
 15859 \DeclareTextCompositeCommand{\'}{PU}{\o}{\81\377}% U+01FF
 15860 </puenc>
 15861 <*puextra>
 15862 % U+0200 LATIN CAPITAL LETTER A WITH DOUBLE GRAVE; Adblgrave
 15863 \DeclareTextCompositeCommand{\G}{PU}{A}{\82\000}% U+0200
 15864 % U+0201 LATIN SMALL LETTER A WITH DOUBLE GRAVE; adblgrave
 15865 \DeclareTextCompositeCommand{\G}{PU}{a}{\82\001}% U+0201
 15866 % U+0204 LATIN CAPITAL LETTER E WITH DOUBLE GRAVE; Edblgrave
 15867 \DeclareTextCompositeCommand{\G}{PU}{E}{\82\004}% U+0204
 15868 % U+0205 LATIN SMALL LETTER E WITH DOUBLE GRAVE; edblgrave
 15869 \DeclareTextCompositeCommand{\G}{PU}{e}{\82\005}% U+0205
 15870 </puextra>
 15871 <*puenc>
 15872 % U+0206 LATIN CAPITAL LETTER E WITH INVERTED BREVE; Einvert-
 edbreve
 15873 \DeclareTextCompositeCommand{\textinvbreve}{PU}{E}{\82\006}% U+0206
 15874 % U+0207 LATIN SMALL LETTER E WITH INVERTED BREVE; einvert-
 breve
 15875 \DeclareTextCompositeCommand{\textinvbreve}{PU}{e}{\82\007}% U+0207
 15876 </puenc>
 15877 <*puextra>

15878 % U+0208 LATIN CAPITAL LETTER I WITH DOUBLE GRAVE; Idblgrave
15879 \DeclareTextCompositeCommand{\G}{PU}{I}{\82\010}% U+0208
15880 % U+0209 LATIN SMALL LETTER I WITH DOUBLE GRAVE; idblgrave
15881 \DeclareTextCompositeCommand{\G}{PU}{i}{\82\011}% U+0209
15882 \DeclareTextCompositeCommand{\G}{PU}{i}{\82\011}% U+0209
15883 </puextra>
15884 <*puenc>
15885 % U+020A LATIN CAPITAL LETTER I WITH INVERTED BREVE; Iinverted-
breve
15886 \DeclareTextCompositeCommand{\textinvbreve}{PU}{I}{\82\012}% U+020A
15887 % U+020B LATIN SMALL LETTER I WITH INVERTED BREVE; iinverted-
breve
15888 \DeclareTextCompositeCommand{\textinvbreve}{PU}{i}{\82\013}% U+020B
15889 \DeclareTextCompositeCommand{\textinvbreve}{PU}{i}{\82\013}% U+020B
15890 </puenc>
15891 <*puextra>
15892 % U+020C LATIN CAPITAL LETTER O WITH DOUBLE GRAVE; Odblgrave
15893 \DeclareTextCompositeCommand{\G}{PU}{O}{\82\014}% U+020C
15894 % U+020D LATIN SMALL LETTER O WITH DOUBLE GRAVE; odblgrave
15895 \DeclareTextCompositeCommand{\G}{PU}{o}{\82\015}% U+020D
15896 </puextra>
15897 <*puenc>
15898 % U+020E LATIN CAPITAL LETTER O WITH INVERTED BREVE; Oinvert-
edbreve
15899 \DeclareTextCompositeCommand{\textinvbreve}{PU}{O}{\82\016}% U+020E
15900 % U+020F LATIN SMALL LETTER O WITH INVERTED BREVE; oinverted-
breve
15901 \DeclareTextCompositeCommand{\textinvbreve}{PU}{o}{\82\017}% U+020F
15902 </puenc>
15903 <*puextra>
15904 % U+0210 LATIN CAPITAL LETTER R WITH DOUBLE GRAVE; Rdblgrave
15905 \DeclareTextCompositeCommand{\G}{PU}{R}{\82\020}% U+0210
15906 % U+0211 LATIN SMALL LETTER R WITH DOUBLE GRAVE; rdblgrave
15907 \DeclareTextCompositeCommand{\G}{PU}{r}{\82\021}% U+0211
15908 % U+0214 LATIN CAPITAL LETTER U WITH DOUBLE GRAVE; Udblgrave
15909 \DeclareTextCompositeCommand{\G}{PU}{U}{\82\024}% U+0214
15910 % U+0215 LATIN SMALL LETTER U WITH DOUBLE GRAVE; udblgrave
15911 \DeclareTextCompositeCommand{\G}{PU}{u}{\82\025}% U+0215
15912 </puextra>
15913 <*puenc>
15914 % U+0216 LATIN CAPITAL LETTER U WITH INVERTED BREVE; Uinvert-
edbreve
15915 \DeclareTextCompositeCommand{\textinvbreve}{PU}{U}{\82\026}% U+0216
15916 % U+0217 LATIN SMALL LETTER U WITH INVERTED BREVE; uinverted-
breve
15917 \DeclareTextCompositeCommand{\textinvbreve}{PU}{u}{\82\027}% U+0217
15918 % U+021E LATIN CAPITAL LETTER H WITH CARON
15919 \DeclareTextCompositeCommand{\v}{PU}{H}{\82\036}% U+021E
15920 % U+021F LATIN SMALL LETTER H WITH CARON
15921 \DeclareTextCompositeCommand{\v}{PU}{h}{\82\037}% U+021F
15922 % U+0221 LATIN SMALL LETTER D WITH CURL; \textctd (tipa)
15923 \DeclareTextCommand{\textctd}{PU}{\82\041}% U+0221
15924 % U+0225 LATIN SMALL LETTER Z WITH HOOK; \textcommatailz (tipa)
15925 \DeclareTextCommand{\textcommatailz}{PU}{\82\045}% U+0225

15926 % U+0226 LATIN CAPITAL LETTER A WITH DOT ABOVE
 15927 \DeclareTextCompositeCommand{\.}{PU}{A}{\82\046}% U+0226
 15928 % U+0227 LATIN SMALL LETTER A WITH DOT ABOVE
 15929 \DeclareTextCompositeCommand{\.}{PU}{a}{\82\047}% U+0227
 15930 % U+0228 LATIN CAPITAL LETTER E WITH CEDILLA
 15931 \DeclareTextCompositeCommand{\c}{PU}{E}{\82\050}% U+0228
 15932 % U+0229 LATIN SMALL LETTER E WITH CEDILLA
 15933 \DeclareTextCompositeCommand{\c}{PU}{e}{\82\051}% U+0229
 15934 % U+022E LATIN CAPITAL LETTER O WITH DOT ABOVE
 15935 \DeclareTextCompositeCommand{\.}{PU}{O}{\82\056}% U+022E
 15936 % U+022F LATIN SMALL LETTER O WITH DOT ABOVE
 15937 \DeclareTextCompositeCommand{\.}{PU}{o}{\82\057}% U+022F
 15938 % U+0232 LATIN CAPITAL LETTER Y WITH MACRON
 15939 \DeclareTextCompositeCommand{\=}{PU}{Y}{\82\062}% U+0232
 15940 % U+0233 LATIN SMALL LETTER Y WITH MACRON
 15941 \DeclareTextCompositeCommand{\=}{PU}{y}{\82\063}% U+0233
 15942 % U+0235 LATIN SMALL LETTER N WITH CURL; \textctn (tipa)
 15943 \DeclareTextCommand{\textctn}{PU}{\82\065}% U+0235
 15944 % U+0236 LATIN SMALL LETTER T WITH CURL; \textctt (tipa)
 15945 \DeclareTextCommand{\textctt}{PU}{\82\066}% U+0236
 15946 % U+0237 LATIN SMALL LETTER DOTLESS J
 15947 \DeclareTextCommand{\j}{PU}{\82\067}% U+0237
 15948 % U+0238 LATIN SMALL LETTER DB DIGRAPH; \textdblig (tipx)
 15949 \DeclareTextCommand{\textPUdblig}{PU}{\82\070}% U+0238
 15950 %* \textPUdblig -> \textdblig (tipx)
 15951 % U+0239 LATIN SMALL LETTER QP DIGRAPH; \textqplig (tipx)
 15952 \DeclareTextCommand{\textPUqplig}{PU}{\82\071}% U+0239
 15953 %* \textPUqplig -> \textqplig (tipx)
 15954 % U+023C LATIN SMALL LETTER C WITH STROKE; \slashc (wsuipa)
 15955 \DeclareTextCommand{\textslashc}{PU}{\82\074}%* U+023C
 15956 %* \textslashc -> \textcentoldstyle (textcomp)
 15957 % With bar instead of stroke:
 15958 %* \textslashc -> \textbarc (tipa)

46.2.6 IPA Extensions: U+0250 to U+02AF

15959 % U+0250 LATIN SMALL LETTER TURNED A; aturned; \textturna (tipa)
 15960 \DeclareTextCommand{\textturna}{PU}{\82\120}% U+0250
 15961 %* \textturna -> \inva (wasysym)
 15962 % U+0251 LATIN SMALL LETTER ALPHA/LATIN SMALL LETTER
 15963 % SCRIPT A; ascript; \textscripta (tipa), \scripta (wsuipa)
 15964 \DeclareTextCommand{\textscripta}{PU}{\82\121}%* U+0251
 15965 %* \textscripta -> \vara (phonetic)
 15966 % U+0252 LATIN SMALL LETTER TURNED ALPHA; ascriptturned;
 15967 % \textturnscripta (tipa)
 15968 \DeclareTextCommand{\textturnscripta}{PU}{\82\122}% U+0252
 15969 %* \textturnscripta -> \invscripta (wsuipa)
 15970 %* \textturnscripta -> \rotvara (phonetic)
 15971 % U+0253 LATIN CAPITAL LETTER B WITH HOOK; bhook; \texthtb (tipa)
 15972 \DeclareTextCommand{\texthtb}{PU}{\82\123}% U+0253
 15973 %* \texthtb -> \hookb (wsuipa)
 15974 %* \texthtb -> \hausab (phonetic)
 15975 % U+0254 LATIN SMALL LETTER OPEN O; oopen;
 15976 % \textopeno (tipa), \openo (wasysym)
 15977 \DeclareTextCommand{\textopeno}{PU}{\82\124}%* U+0254

15978 %* \textopeno -> \varopeno (phonetic)
 15979 % U+0255 LATIN SMALL LETTER C WITH CURL; ccurl; \textctc (tipa)
 15980 \DeclareTextCommand{\textctc}{PU}{\82\125}% U+0255
 15981 %* \textctc -> \curlyc (wsuipa)
 15982 % U+0256 LATIN SMALL LETTER D WITH TAIL; dtail; \textrtaild (tipa)
 15983 \DeclareTextCommand{\textrtaild}{PU}{\82\126}% U+0256
 15984 %* \textrtaild -> \taild (wsuipa)
 15985 % U+0257 LATIN SMALL LETTER D WITH HOOK; dhook; \texthtd (tipa)
 15986 \DeclareTextCommand{\texthtd}{PU}{\82\127}% U+0257
 15987 %* \texthtd -> \hookd (wsuipa)
 15988 %* \texthtd -> \hausad (phonetic)
 15989 % U+0258 LATIN SMALL LETTER REVERSED E; ereversed;
 15990 % \textreve (tipa), \reve (wsuipa)
 15991 \DeclareTextCommand{\textreve}{PU}{\82\130}% U+0258
 15992 % U+0259 LATIN SMALL LETTER SCHWA; schwa;
 15993 % \textschwa (tipa), \schwa (wsuipa, phonetic)
 15994 \DeclareTextCommand{\textschwa}{PU}{\82\131}% U+0259
 15995 % U+025A LATIN SMALL LETTER SCHWA WITH HOOK; schwahook;
 15996 % \textrhookschwa (tipa)
 15997 \DeclareTextCommand{\textrhookschwa}{PU}{\82\132}% U+025A
 15998 %* \textrhookschwa -> \er (wsuipa)
 15999 % U+025B LATIN SMALL LETTER OPEN E/LATIN SMALL LETTER EP-
 SILON; eopen;
 16000 % \niepsilon (wsuipa)
 16001 \DeclareTextCommand{\textniepsilon}{PU}{\82\133}% U+025B
 16002 %* \textniepsilon -> \epsi (phonetic)
 16003 % U+025C LATIN SMALL LETTER REVERSED OPEN E; eopenreversed;
 16004 % \textrevepsilon (tipa), \revepsilon (wsuipa)
 16005 \DeclareTextCommand{\textrevepsilon}{PU}{\82\134}% U+025C
 16006 % U+025D LATIN SMALL LETTER REVERSED OPEN E WITH HOOK; eopen-
 reversedhook;
 16007 % \textrhookrevepsilon (tipa)
 16008 \DeclareTextCommand{\textrhookrevepsilon}{PU}{\82\135}% U+025D
 16009 %* \textrhookrevepsilon -> \hookrevepsilon (wsuipa)
 16010 % U+025E LATIN SMALL LETTER CLOSED REVERSED OPEN E; eopenre-
 versedclosed;
 16011 % \textcloserevepsilon (tipa)
 16012 \DeclareTextCommand{\textcloserevepsilon}{PU}{\82\136}% U+025E
 16013 %* \textcloserevepsilon -> \closedrevepsilon (wsuipa)
 16014 % U+025F LATIN SMALL LETTER DOTLESS J WITH STROKE; jdot-
 lessstroke;
 16015 % \textbardotlessj (tipa)
 16016 \DeclareTextCommand{\textbardotlessj}{PU}{\82\137}% U+025F
 16017 %* \textbardotlessj -> \barj (phonetic)
 16018 % U+0260 LATIN SMALL LETTER G WITH HOOK; ghook; \texthtg (tipa)
 16019 \DeclareTextCommand{\texthtg}{PU}{\82\140}% U+0260
 16020 %* \texthtg -> \hookg (wsuipa)
 16021 % U+0261 LATIN SMALL LETTER SCRIPT G; gscript;
 16022 % \textscriptg (tipa), \scriptg (wsuipa)
 16023 \DeclareTextCommand{\textscriptg}{PU}{\82\141}% U+0261
 16024 %* \textscriptg -> \varg (phonetic)
 16025 % U+0262 LATIN LETTER SMALL CAPITAL G; \textscg (tipa), \scg (wsuipa)
 16026 \DeclareTextCommand{\textscg}{PU}{\82\142}% U+0262
 16027 % U+0263 LATIN SMALL LETTER GAMMA; gammalatinsmall;

16028 % \ipagamma (wsuipa), \vod (phonetic)
16029 \DeclareTextCommand{\textipagamma}{PU}{\82\143}%* U+0263
16030 %* \textipagamma -> \vod (pnonetic)
16031 % U+0264 LATIN SMALL LETTER RAMS HORN; ramshorn;
16032 % \babygamma (wsuipa)
16033 \DeclareTextCommand{\textbabygamma}{PU}{\82\144}%* U+0264
16034 % U+0265 LATIN SMALL LETTER TURNED H; hturned; \textturnh (tipa)
16035 \DeclareTextCommand{\textturnh}{PU}{\82\145}% U+0265
16036 %* \textturnh -> \invh (wsuipa)
16037 %* \textturnh -> \udesc (phonetic)
16038 % U+0266 LATIN SMALL LETTER H WITH HOOK; hhook; \texthth (tipa)
16039 \DeclareTextCommand{\texthth}{PU}{\82\146}% U+0266
16040 %* \texthth -> \hookh (wsuipa)
16041 %* \texthth -> \voicedh (phonetic)
16042 % U+0267 LATIN SMALL LETTER HENG WITH HOOK; henghook; \tex-
ththeng (tipa)
16043 \DeclareTextCommand{\texththeng}{PU}{\82\147}% U+0267
16044 %* \texththeng -> \hookheng (wsuipa)
16045 % U+0268 LATIN SMALL LETTER I WITH STROKE;
16046 % \textbari (tipa), \bari (wsuipa)
16047 \DeclareTextCommand{\textbari}{PU}{\82\150}%* U+0268
16048 %* \textbari -> \ibar (phonetic)
16049 % U+0269 LATIN SMALL LETTER IOTA; iotalatin; \niiota (wsuipa)
16050 \DeclareTextCommand{\textniiota}{PU}{\82\151}%* U+0269
16051 %* \textniiota -> \vari (phonetic)
16052 % U+026A LATIN LETTER SMALL CAPITAL I; \textsci (tipa), \sci (wsuipa)
16053 \DeclareTextCommand{\textsci}{PU}{\82\152}%* U+026A
16054 % U+026B LATIN SMALL LETTER L WITH MIDDLE TILDE; lmiddletilde;
16055 % \textltilde (tipa)
16056 \DeclareTextCommand{\textltilde}{PU}{\82\153}% U+026B
16057 %* \textltilde -> \tildel (wsuipa)
16058 % U+026C LATIN SMALL LETTER L WITH BELT; lbelt; \textbeltl (tipa)
16059 \DeclareTextCommand{\textbeltl}{PU}{\82\154}% U+026C
16060 %* \textbeltl -> \latfric (wsuipa)
16061 % U+026D LATIN SMALL LETTER L WITH RETROFLEX HOOK;
16062 % lhookretroflex; \textrtail (tipa)
16063 \DeclareTextCommand{\textrtail}{PU}{\82\155}% U+026D
16064 %* \textrtail -> \tail (wsuipa)
16065 % U+026E LATIN SMALL LETTER LEZH; lezh; \textlyoghlig (tipa)
16066 \DeclareTextCommand{\textlyoghlig}{PU}{\82\156}% U+026E
16067 %* \textlyoghlig -> \lz (wsuipa)
16068 % U+026F LATIN SMALL LETTER TURNED M; mturned; \textturnm (tipa)
16069 \DeclareTextCommand{\textturnm}{PU}{\82\157}% U+026F
16070 %* \textturnm -> \invm (wsuipa)
16071 %* \textturnm -> \rotm (phonetic)
16072 % U+0270 LATIN SMALL LETTER TURNED M WITH LONG LEG; mlongleg-
turned;
16073 % \textturnmrleg (tipa)
16074 \DeclareTextCommand{\textturnmrleg}{PU}{\82\160}% U+0270
16075 %* \textturnmrleg -> \legm (wsuipa)
16076 % U+0271 LATIN SMALL LETTER M WITH HOOK; mhook; \textltailm (tipa)
16077 \DeclareTextCommand{\textltailm}{PU}{\82\161}% U+0271
16078 %* \textltailm -> \labdentalnas (wsuipa)
16079 %* \textltailm -> \emgma (phonetic)

16080 % U+0272 LATIN SMALL LETTER N WITH LEFT HOOK; nhookleft; \textl-
 tailn (tipa)
 16081 \DeclareTextCommand{\textltailn}{PU}{\82\162}% U+0272
 16082 %* \textltailn -> \nj (wsuipa)
 16083 %* \textltailn -> \enya (phonetic)
 16084 % U+0273 LATIN SMALL LETTER N WITH RETROFLEX HOOK;
 16085 % nhookretroflex; \textrtailn (tipa)
 16086 \DeclareTextCommand{\textrtailn}{PU}{\82\163}% U+0273
 16087 %* \textrtailn -> \tailn (wsuipa)
 16088 % U+0274 LATIN LETTER SMALL CAPITAL N; \textscn (tipa), \scn (wsuipa)
 16089 \DeclareTextCommand{\textscn}{PU}{\82\164}%* U+0274
 16090 % U+0275 LATIN CAPITAL LETTER O WITH MIDDLE TILDE/
 16091 % LATIN CAPITAL LETTER BARRED O; obarred;
 16092 % \textbaro (tipa), \baro (wsuipa)
 16093 % But \baro from stmaryrd is different!
 16094 \DeclareTextCommand{\textbaro}{PU}{\82\165}% U+0275
 16095 % U+0276 LATIN LETTER SMALL CAPITAL OE; \textscelig (tipa)
 16096 \DeclareTextCommand{\textscelig}{PU}{\82\166}% U+0276
 16097 % U+0277 LATIN SMALL LETTER CLOSED OMEGA; omegalatinclosed;
 16098 % \textcloseomega (tipa)
 16099 \DeclareTextCommand{\textcloseomega}{PU}{\82\167}% U+0277
 16100 %* \textcloseomega -> \closedniomega (wsuipa)
 16101 %* \textcloseomega -> \varomega (phonetic)
 16102 % U+0278 LATIN SMALL LETTER PHI; philatin; \nphi (wsuipa)
 16103 \DeclareTextCommand{\textnphi}{PU}{\82\170}%* U+0278
 16104 % U+0279 LATIN SMALL LETTER TURNED R; rturned; \textturnr (tipa)
 16105 \DeclareTextCommand{\textturnr}{PU}{\82\171}% U+0279
 16106 %* \textturnr -> \invr (wsuipa)
 16107 %* \textturnr -> \rotr (phonetic)
 16108 % U+027A LATIN SMALL LETTER TURNED R WITH LONG LEG;
 16109 % rlonglegturned; \textturnlongleg (tipa)
 16110 \DeclareTextCommand{\textturnlongleg}{PU}{\82\172}% U+027A
 16111 %* \textturnlongleg -> \invleg (wsuipa)
 16112 % U+027B LATIN SMALL LETTER TURNED R WITH HOOK; rhookturned;
 16113 % \textturnrrtail (tipa)
 16114 \DeclareTextCommand{\textturnrrtail}{PU}{\82\173}% U+027B
 16115 %* \textturnrrtail -> \tailinvr (wsuipa)
 16116 % U+027C LATIN SMALL LETTER R WITH LONG LEG; rlongleg; \textlon-
 glegr (tipa)
 16117 \DeclareTextCommand{\textlongleg}{PU}{\82\174}%* U+027C
 16118 %* \textlongleg -> \leg (wsuipa)
 16119 % U+027D LATIN SMALL LETTER R WITH TAIL; rhook; \textrtailr (tipa)
 16120 \DeclareTextCommand{\textrtailr}{PU}{\82\175}% U+027D
 16121 %* \textrtailr -> \tailr (wsuipa)
 16122 % U+027E LATIN SMALL LETTER R WITH FISHHOOK; rfishhook;
 16123 % \textfishhookr (tipa)
 16124 \DeclareTextCommand{\textfishhookr}{PU}{\82\176}% U+027E
 16125 %* \textfishhookr -> \flapr (wsuipa)
 16126 %* \textfishhookr -> \flap (phonetic)
 16127 % U+027F LATIN SMALL LETTER REVERSED R WITH FISHHOOK; rfish-
 hookreversed;
 16128 % \textlhtlongi (tipa)
 16129 \DeclareTextCommand{\textlhtlongi}{PU}{\82\177}% U+027F
 16130 % U+0280 LATIN LETTER SMALL CAPITAL R; \textscr (tipa), \scr (wsuipa)

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16131 \DeclareTextCommand{\textscr}{PU}{\82\200}%* U+0280
16132 % U+0281 LATIN LETTER SMALL CAPITAL INVERTED R; Rsmallinverted;
16133 % \textinvscr (tipa), \invscr (wsuipa)
16134 \DeclareTextCommand{\textinvscr}{PU}{\82\201}%* U+0281
16135 % U+0282 LATIN SMALL LETTER S WITH HOOK; shook; \textrtails (tipa)
16136 \DeclareTextCommand{\textrtails}{PU}{\82\202}% U+0282
16137 %* \textrtails -> \tails (wsuipa)
16138 % U+0283 LATIN SMALL LETTER ESH; esh; \textesh (tipa), \esh (wsuipa)
16139 \DeclareTextCommand{\textesh}{PU}{\82\203}%* U+0283
16140 % U+0284 LATIN SMALL LETTER DOTLESS J WITH STROKE AND HOOK;
16141 % dotlessjstrokehook; \texthtbardotlessj (tipa)
16142 \DeclareTextCommand{\texthtbardotlessj}{PU}{\82\204}% U+0284
16143 % U+0285 LATIN SMALL LETTER SQUAT REVERSED ESH; eshsquatre-
    versed;
16144 % \textvibyi (tipa)
16145 \DeclareTextCommand{\textvibyi}{PU}{\82\205}% U+0285
16146 % U+0286 LATIN SMALL LETTER ESH WITH CURL; eshcurl; \textctesh (tipa)
16147 \DeclareTextCommand{\textctesh}{PU}{\82\206}% U+0286
16148 %* \textctesh -> \curlyesh (wsuipa)
16149 % U+0287 LATIN SMALL LETTER TURNED T; tturned; \textturnt (tipa)
16150 \DeclareTextCommand{\textturnt}{PU}{\82\207}% U+0287
16151 %* \textturnt -> \clickt (wsuipa)
16152 % U+0288 LATIN SMALL LETTER T WITH RETROFLEX HOOK; retroflex-
    hook;
16153 % \textrtailt (tipa)
16154 \DeclareTextCommand{\textrtailt}{PU}{\82\210}% U+0288
16155 %* \textrtailt -> \tailt (wsuipa)
16156 % U+0289 LATIN SMALL LETTER U BAR; ubar;
16157 % \textbaru (tipa), \baru (wsuipa)
16158 \DeclareTextCommand{\textbaru}{PU}{\82\211}%* U+0289
16159 %* \textbaru -> \ubar (phonetic)
16160 % U+028A LATIN SMALL LETTER UPSILON; \niupsilon (wsuipa)
16161 \DeclareTextCommand{\textniupsilon}{PU}{\82\212}%* U+028A
16162 %* \textniupsilon -> \rotOmega (phonetic)
16163 % U+028B LATIN SMALL LETTER V WITH HOOK/LATIN SMALL LET-
    TER SCRIPT V;
16164 % vhook; \textscriptv (tipa), \scriptv (wsuipa)
16165 \DeclareTextCommand{\textscriptv}{PU}{\82\213}%* U+028B
16166 % U+028C LATIN SMALL LETTER TURNED V; vturned; \textturnv (tipa)
16167 \DeclareTextCommand{\textturnv}{PU}{\82\214}%* U+028C
16168 %* \textturnv -> \invv (wsuipa)
16169 %* \textturnv -> \pwedge (phonetic)
16170 % U+028D LATIN SMALL LETTER TURNED W; wturned; \textturnw (tipa)
16171 \DeclareTextCommand{\textturnw}{PU}{\82\215}%* U+028D
16172 %* \textturnw -> \invw (wsuipa)
16173 %* \textturnw -> \rotw (phonetic)
16174 % U+028E LATIN SMALL LETTER TURNED Y; yturned; \textturny (tipa)
16175 \DeclareTextCommand{\textturny}{PU}{\82\216}%* U+028E
16176 %* \textturny -> \invy (wsuipa)
16177 %* \textturny -> \roty (phonetic)
16178 % U+028F LATIN LETTER SMALL CAPITAL Y; \textscy (tipa), \scy (wsuipa)
16179 \DeclareTextCommand{\textscy}{PU}{\82\217}%* U+028F
16180 % U+0290 LATIN SMALL LETTER Z WITH RETROFLEX HOOK; zretroflex-
    hook;

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16181 % \texttrtailz (tipa)
16182 \DeclareTextCommand{\texttrtailz}{PU}{\82\220}% U+0290
16183 %* \texttrtailz -> \tailz (wsuipa)
16184 % U+0291 LATIN SMALL LETTER Z WITH CURL; zcurl; \textctz (tipa)
16185 \DeclareTextCommand{\textctz}{PU}{\82\221}% U+0291
16186 %* \textctz -> \curlyz (wsuipa)
16187 % U+0292 LATIN SMALL LETTER EZH/LATIN SMALL LETTER YOGH; ezh;
16188 % \textyogh (tipa), \yogh (wsuipa)
16189 \DeclareTextCommand{\textyogh}{PU}{\82\222}%* U+0292
16190 % U+0293 LATIN SMALL LETTER EZH WITH CURL/LATIN SMALL LETTER YOGH CURL;
16191 % ezhcurl; \textctyogh (tipa)
16192 \DeclareTextCommand{\textctyogh}{PU}{\82\223}% U+0293
16193 %* \textctyogh -> \curlyyogh (wsuipa)
16194 % U+0294 LATIN LETTER GLOTTAL STOP; glottalstop;
16195 % \textglotstop (tipa), \glotstop (wsuipa)
16196 \DeclareTextCommand{\textglotstop}{PU}{\82\224}%* U+0294
16197 %* \textglotstop -> \ejective (wsuipa)
16198 %* \textglotstop -> \glottal (phonetic)
16199 % U+0295 LATIN LETTER PHARYNGEAL VOICED FRICATIVE/
16200 % LATIN LETTER REVERSED GLOTTAL STOP; glottalstopreversed;
16201 % \textrevglotstop (tipa), \revglotstop (wsuipa)
16202 \DeclareTextCommand{\textrevglotstop}{PU}{\82\225}%* U+0295
16203 %* \textrevglotstop -> \reveject (wsuipa)
16204 % U+0296 LATIN LETTER INVERTED GLOTTAL STOP; glottalstopinverted;
16205 % \textinvglotstop (tipa), \invglotstop (wsuipa)
16206 \DeclareTextCommand{\textinvglotstop}{PU}{\82\226}%* U+0296
16207 % U+0297 LATIN LETTER STRETCHED C; cstretched; \textstretchc (tipa)
16208 \DeclareTextCommand{\textstretchc}{PU}{\82\227}% U+0297
16209 %* \textstretchc -> \clickc (wsuipa)
16210 %* \textstretchc -> \textstretchcvar (tipx)
16211 % U+0298 LATIN LETTER BILABIAL CLICK; bilabialclick;
16212 % \textbullseye (tipa)
16213 \DeclareTextCommand{\textbullseye}{PU}{\82\230}% U+0298
16214 %* \textbullseye -> \clickb (wsuipa)
16215 %* \textbullseye -> \textObullseye (tipx)
16216 % U+0299 LATIN LETTER SMALL CAPITAL B; \textscb (tipa)
16217 \DeclareTextCommand{\textscb}{PU}{\82\231}% U+0299
16218 % U+029A LATIN SMALL LETTER CLOSED OPEN E; eopenclosed;
16219 % \textcloseepsilon (tipa)
16220 \DeclareTextCommand{\textcloseepsilon}{PU}{\82\232}% U+029A
16221 % U+029B LATIN LETTER SMALL CAPITAL G WITH HOOK; Gsmallhook;
16222 % \texthtscg (tipa)
16223 \DeclareTextCommand{\texthtscg}{PU}{\82\233}% U+029B
16224 % U+029C LATIN LETTER SMALL CAPITAL H; \textsch (tipa)
16225 \DeclareTextCommand{\textsch}{PU}{\82\234}% U+029C
16226 % U+029D LATIN SMALL LETTER J WITH CROSSED-TAIL; jcrossetail;
16227 \DeclareTextCommand{\textctj}{PU}{\82\235}% U+029D
16228 %* \textctj -> \textctjvar (tipx)
16229 % U+029E LATIN SMALL LETTER TURNED K; kturned; \textturnk (tipa)
16230 \DeclareTextCommand{\textturnk}{PU}{\82\236}% U+029E
16231 %* \textturnk -> \textturnksck (tipx)
16232 % U+029F LATIN LETTER SMALL CAPITAL L; \textscL (tipa)

16233 \DeclareTextCommand{\textscsl}{PU}{\82\237}% U+029F
 16234 % U+02A0 LATIN SMALL LETTER Q WITH HOOK; qhook; \texthtq (tipa)
 16235 \DeclareTextCommand{\texthtq}{PU}{\82\240}% U+02A0
 16236 % U+02A1 LATIN LETTER GLOTTAL STOP WITH STROKE; glottalstop-
 stroke;
 16237 % \textbarglotstop (tipa)
 16238 \DeclareTextCommand{\textbarglotstop}{PU}{\82\241}% U+02A1
 16239 % U+02A2 LATIN LETTER REVERSED GLOTTAL STOP WITH STROKE/
 16240 % LATIN LETTER REVERSED GLOTTAL STOP BAR; glottalstopstrokere-
 versed;
 16241 % \textbarrevglotstop (tipa)
 16242 \DeclareTextCommand{\textbarrevglotstop}{PU}{\82\242}% U+02A2
 16243 % U+02A3 LATIN SMALL LETTER DZ DIGRAPH; dzaltone; \textdzlig (tipa)
 16244 \DeclareTextCommand{\textdzlig}{PU}{\82\243}% U+02A3
 16245 %* \textdzlig -> \dz (wsupipa)
 16246 % U+02A4 LATIN SMALL LETTER DEZH DIGRAPH; dezh; \textdyogh-
 lig (tipa)
 16247 \DeclareTextCommand{\textdyoghlig}{PU}{\82\244}% U+02A4
 16248 % U+02A5 LATIN SMALL LETTER DZ DIGRAPH WITH CURL; dzcurl;
 16249 % \textdctzlig (tipa)
 16250 \DeclareTextCommand{\textdctzlig}{PU}{\82\245}% U+02A5
 16251 % U+02A6 LATIN SMALL LETTER TS DIGRAPH; ts; \texttslig (tipa)
 16252 \DeclareTextCommand{\texttslig}{PU}{\82\246}% U+02A6
 16253 % U+02A7 LATIN SMALL LETTER TESH DIGRAPH; tesh; \texttshlig (tipa)
 16254 \DeclareTextCommand{\texttshlig}{PU}{\82\247}% U+02A7
 16255 %* \texttshlig -> \tesh (wsuipa)
 16256 % U+02A8 LATIN SMALL LETTER TC DIGRAPH WITH CURL; tccurl;
 16257 % \texttctclig (tipa)
 16258 \DeclareTextCommand{\texttctclig}{PU}{\82\250}% U+02A8
 16259 % U+02AE LATIN SMALL LETTER TURNED H WITH FISHHOOK;
 16260 % \textlhtlongy (tipa)
 16261 \DeclareTextCommand{\textlhtlongy}{PU}{\82\256}% U+02AE
 16262 % U+02AF LATIN SMALL LETTER TURNED H WITH FISHHOOK AND TAIL;
 16263 % \textvibyy (tipa)
 16264 \DeclareTextCommand{\textvibyy}{PU}{\82\257}% U+02AF

46.2.7 Spacing Modifier Letters: U+02B0 to U+02FF

16265 % U+02BD MODIFIER LETTER REVERSED COMMA;
 16266 % commareversedmod, afii64937; \textrevapostrophe (tipa)
 16267 \DeclareTextCommand{\textrevapostrophe}{PU}{\82\275}% U+02BD
 16268 % U+02C0 MODIFIER LETTER GLOTTAL STOP; glottalstopmod;
 16269 % \textraiseglotstop (tipa)
 16270 \DeclareTextCommand{\textraiseglotstop}{PU}{\82\300}% U+02C0
 16271 % U+02C2 MODIFIER LETTER LEFT ARROWHEAD; arrowheadleftmod;
 16272 % \textlptr (tipa)
 16273 \DeclareTextCommand{\textlptr}{PU}{\82\302}% U+02C2
 16274 % U+02C3 MODIFIER LETTER RIGHT ARROWHEAD; arrowheadrightmod;
 16275 % \textrptr (tipa)
 16276 \DeclareTextCommand{\textrptr}{PU}{\82\303}% U+02C3
 16277 % U+02C7 CARON; caron
 16278 \DeclareTextCommand{\textasciicaron}{PU}{\82\307}% U+02C7
 16279 % U+02C8 MODIFIER LETTER VERTICAL LINE; verticallinemod;
 16280 % \textprimstress (tipa)
 16281 \DeclareTextCommand{\textprimstress}{PU}{\82\310}% U+02C8

```

16282 % U+02CC MODIFIER LETTER LOW VERTICAL LINE; verticallinelowmod;
16283 % \textsecstress (tipa)
16284 \DeclareTextCommand{\textsecstress}{PU}{\82\314}% U+02CC
16285 % U+02D0 MODIFIER LETTER TRIANGULAR COLON; colontriangularmod;
16286 % \textlengthmark (tipa)
16287 \DeclareTextCommand{\textlengthmark}{PU}{\82\320}% U+02D0
16288 % U+02D1 MODIFIER LETTER HALF TRIANGULAR COLON; colontriangularhalfmod;
16289 % \texthalflength (tipa)
16290 \DeclareTextCommand{\texthalflength}{PU}{\82\321}% U+02D1
16291 % U+02D8 BREVE; breve
16292 \DeclareTextCommand{\textasciibreve}{PU}{\82\330}% U+02D8
16293 % U+02D9 DOT ABOVE; dotaccent
16294 \DeclareTextCommand{\textdotaccent}{PU}{\82\331}% U+02D9
16295 % U+02DA RING ABOVE; ring
16296 \DeclareTextCommand{\textring}{PU}{\82\332}% U+02DA
16297 % U+02DB OGONEK; ogonek
16298 \DeclareTextCommand{\textogonek}{PU}{\82\333}% U+02DB
16299 % U+02DC SMALL TILDE; ilde, *tilde
16300 \DeclareTextCommand{\texttilde}{PU}{\82\334}% U+02DC
16301 % U+02DD DOUBLE ACUTE ACCENT; hungarumlaut
16302 \DeclareTextCommand{\texthungarumlaut}{PU}{\82\335}% U+02DD
16303 \DeclareTextCommand{\textacutedbl}{PU}{\82\335}% U+02DD
16304 % U+02F3 MODIFIER LETTER LOW RING
16305 \DeclareTextCommand{\textringlow}{PU}{\82\363}% U+02F3
16306 % U+02F5 MODIFIER LETTER MIDDLE DOUBLE GRAVE ACCENT
16307 \DeclareTextCommand{\textgravedbl}{PU}{\82\365}% U+02F5
16308 % U+02F7 MODIFIER LETTER LOW TILDE
16309 \DeclareTextCommand{\texttildelow}{PU}{\82\367}% U+02F7
16310 % U+02F9 MODIFIER LETTER BEGIN HIGH TONE; \textopencorner (tipa)
16311 \DeclareTextCommand{\textopencorner}{PU}{\82\371}% U+02F9
16312 % U+02FA MODIFIER LETTER END HIGH TONE; \textcorner (tipa)
16313 \DeclareTextCommand{\textcorner}{PU}{\82\372}% U+02FA

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46.2.8 Combining Diacritical Marks: U+0300 to U+036F

```

16314 % U+030F COMBINING DOUBLE GRAVE ACCENT; dblgravecmb
16315 \DeclareTextCommand{\textdoublegrave}{PU}{\83\017}% U+030F
16316 % U+0311 COMBINING INVERTED BREVE; breveinvertedcmb
16317 \DeclareTextCommand{\textnewtie}{PU}{\83\021}% U+0311
16318 % U+0323 COMBINING DOT BELOW; dotbelowcmb, *dotbelowcomb
16319 \DeclareTextCommand{\textdotbelow}{PU}{\83\043}% U+0323
16320 % U+0331 COMBINING MACRON BELOW; macronbelowcmb
16321 \DeclareTextCommand{\textmacronbelow}{PU}{\83\061}% U+0331
16322 % U+0361 COMBINING DOUBLE INVERTED BREVE; breveinverteddoublecmb
16323 \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.

```

16324 \ifx\textBeta\@undefined \else
16325 \input{puenc-greekbasic.def}
16326 \fi
16327 \</puenc>
16328 \< *pugreek>

```

16329 % U+0374 GREEK NUMERAL SIGN; numeralsigngreek
 16330 \DeclareTextCommand{\textnumeralsigngreek}{PU}{\83\164}% U+0374
 16331 \DeclareTextCommand{\textdexiakeraia}{PU}{\83\164}% U+0374
 16332 % U+0375 GREEK LOWER NUMERAL SIGN; numeralsignlowergreek
 16333 \DeclareTextCommand{\textnumeralsignlowergreek}{PU}{\83\165}% U+0375
 16334 \DeclareTextCommand{\textaristerikeraia}{PU}{\83\165}% U+0375
 16335 % U+0386 GREEK CAPITAL LETTER ALPHA WITH TONOS; Alphanos
 16336 \DeclareTextCompositeCommand{\'}{PU}{\textAlpha}{\83\206}% U+0386
 16337 % U+0388 GREEK CAPITAL LETTER EPSILON WITH TONOS; Epsilontonos
 16338 \DeclareTextCompositeCommand{\'}{PU}{\textEpsilon}{\83\210}% U+0388
 16339 % U+0389 GREEK CAPITAL LETTER ETA WITH TONOS; Etatonos
 16340 \DeclareTextCompositeCommand{\'}{PU}{\textEta}{\83\211}% U+0389
 16341 % U+038A GREEK CAPITAL LETTER IOTA WITH TONOS; Iotatonos
 16342 \DeclareTextCompositeCommand{\'}{PU}{\textIota}{\83\212}% U+038A
 16343 % U+038C GREEK CAPITAL LETTER OMICRON WITH TONOS; Omicrontonos
 16344 \DeclareTextCompositeCommand{\'}{PU}{\textOmicron}{\83\214}% U+038C
 16345 % U+038E GREEK CAPITAL LETTER UPSILON WITH TONOS; Upsilononos
 16346 \DeclareTextCompositeCommand{\'}{PU}{\textUpsilon}{\83\216}% U+038E
 16347 % U+038F GREEK CAPITAL LETTER OMEGA WITH TONOS; Omegatonos
 16348 \DeclareTextCompositeCommand{\'}{PU}{\textOmega}{\83\217}% U+038F
 16349 % U+0390 GREEK SMALL LETTER IOTA WITH DIALYTIKA AND TONOS;
 16350 % iotadieresis
 16351 \DeclareTextCompositeCommand{\'}{PU}{\textIotadieresis}{\83\220}% U+0390
 16352 % U+0391 GREEK CAPITAL LETTER ALPHA; Alpha
 16353 \DeclareTextCommand{\textAlpha}{PU}{\83\221}% U+0391
 16354 % U+0392 GREEK CAPITAL LETTER BETA; Beta
 16355 \DeclareTextCommand{\textBeta}{PU}{\83\222}% U+0392
 16356 % U+0393 GREEK CAPITAL LETTER GAMMA; Gamma; \Gamma (LaTeX)
 16357 \DeclareTextCommand{\textGamma}{PU}{\83\223}%* U+0393
 16358 % U+0394 GREEK CAPITAL LETTER DELTA; Deltagreek, *Delta; \Delta (LaTeX)
 16359 \DeclareTextCommand{\textDelta}{PU}{\83\224}%* U+0394
 16360 % U+0395 GREEK CAPITAL LETTER EPSILON; Epsilon
 16361 \DeclareTextCommand{\textEpsilon}{PU}{\83\225}% U+0395
 16362 % U+0396 GREEK CAPITAL LETTER ZETA; Zeta
 16363 \DeclareTextCommand{\textZeta}{PU}{\83\226}% U+0396
 16364 % U+0397 GREEK CAPITAL LETTER ETA; Eta
 16365 \DeclareTextCommand{\textEta}{PU}{\83\227}% U+0397
 16366 % U+0398 GREEK CAPITAL LETTER THETA; Theta; \Theta (LaTeX)
 16367 \DeclareTextCommand{\textTheta}{PU}{\83\230}%* U+0398
 16368 % U+0399 GREEK CAPITAL LETTER IOTA; Iota
 16369 \DeclareTextCommand{\textIota}{PU}{\83\231}% U+0399
 16370 % U+039A GREEK CAPITAL LETTER KAPPA; Kappa
 16371 \DeclareTextCommand{\textKappa}{PU}{\83\232}% U+039A
 16372 % U+039B GREEK CAPITAL LETTER LAMDA; Lambda; \Lambda (LaTeX)
 16373 \DeclareTextCommand{\textLambda}{PU}{\83\233}%* U+039B
 16374 % U+039C GREEK CAPITAL LETTER MU; Mu
 16375 \DeclareTextCommand{\textMu}{PU}{\83\234}% U+039C
 16376 % U+039D GREEK CAPITAL LETTER NU; Nu
 16377 \DeclareTextCommand{\textNu}{PU}{\83\235}% U+039D
 16378 % U+039E GREEK CAPITAL LETTER XI; Xi; \Xi (LaTeX)
 16379 \DeclareTextCommand{\textXi}{PU}{\83\236}%* U+039E
 16380 % U+039F GREEK CAPITAL LETTER OMICRON; Omicron

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16381 \DeclareTextCommand{\textOmicron}{PU}{\83\237}% U+039F
16382 % U+03A0 GREEK CAPITAL LETTER PI; Pi
16383 \DeclareTextCommand{\textPi}{PU}{\83\240}%* U+03A0
16384 % U+03A1 GREEK CAPITAL LETTER RHO; Rho
16385 \DeclareTextCommand{\textRho}{PU}{\83\241}% U+03A1
16386 % U+03A3 GREEK CAPITAL LETTER SIGMA; Sigma; \Sigma (LaTeX)
16387 \DeclareTextCommand{\textSigma}{PU}{\83\243}%* U+03A3
16388 % U+03A4 GREEK CAPITAL LETTER TAU; Tau
16389 \DeclareTextCommand{\textTau}{PU}{\83\244}% U+03A4
16390 % U+03A5 GREEK CAPITAL LETTER UPSILON; Upsilon; \Upsilon (LaTeX)
16391 \DeclareTextCommand{\textUpsilon}{PU}{\83\245}%* U+03A5
16392 % U+03A6 GREEK CAPITAL LETTER PHI; Phi; \Phi (LaTeX)
16393 \DeclareTextCommand{\textPhi}{PU}{\83\246}%* U+03A6
16394 % U+03A7 GREEK CAPITAL LETTER CHI; Chi
16395 \DeclareTextCommand{\textChi}{PU}{\83\247}% U+03A7
16396 % U+03A8 GREEK CAPITAL LETTER PSI; Psi; \Psi (LaTeX)
16397 \DeclareTextCommand{\textPsi}{PU}{\83\250}%* U+03A8
16398 % U+03A9 GREEK CAPITAL LETTER OMEGA; Omegagreek, *Omega;
16399 % \Omega (LaTeX)
16400 \DeclareTextCommand{\textOmega}{PU}{\83\251}%* U+03A9
16401 % U+03AA GREEK CAPITAL LETTER IOTA WITH DIALYTIKA; Iotadieresis
16402 \DeclareTextCommand{\textIotadieresis}{PU}{\83\252}% U+03AA
16403 \DeclareTextCompositeCommand{"}{PU}{\textIota}{\83\252}% U+03AA
16404 % U+03AB GREEK CAPITAL LETTER UPSILON WITH DIALYTIKA; Up-
    silondieresis
16405 \DeclareTextCompositeCommand{"}{PU}{\textUpsilon}{\83\253}% U+03AB
16406 % U+03AC GREEK SMALL LETTER ALPHA WITH TONOS; alphanos
16407 \DeclareTextCompositeCommand{'}{PU}{\textalpha}{\83\254}%* U+03AC
16408 % U+03AD GREEK SMALL LETTER EPSILON WITH TONOS; epsilonos
16409 \DeclareTextCompositeCommand{'}{PU}{\textepsilon}{\83\255}% U+03AD
16410 % U+03AE GREEK SMALL LETTER ETA WITH TONOS; etanos
16411 \DeclareTextCompositeCommand{'}{PU}{\texteta}{\83\256}% U+03AE
16412 % U+03AF GREEK SMALL LETTER IOTA WITH TONOS; iotanos
16413 \DeclareTextCompositeCommand{'}{PU}{\textiota}{\83\257}% U+03AF
16414 % U+03B0 GREEK SMALL LETTER UPSILON WITH DIALYTIKA
16415 % AND TONOS; upsilondieresis
16416 \DeclareTextCompositeCommand{"}{PU}{\textupsilon}{\83\260}% U+03B0
16417 % U+03B1 GREEK SMALL LETTER ALPHA; alpha; \alpha (LaTeX)
16418 \DeclareTextCommand{\textalpha}{PU}{\83\261}%* U+03B1
16419 % U+03B2 GREEK SMALL LETTER BETA; beta; \beta (LaTeX)
16420 \DeclareTextCommand{\textbeta}{PU}{\83\262}%* U+03B2
16421 % U+03B3 GREEK SMALL LETTER GAMMA; gamma; \gamma (LaTeX)
16422 \DeclareTextCommand{\textgamma}{PU}{\83\263}%* U+03B3
16423 % U+03B4 GREEK SMALL LETTER DELTA; delta; \delta (LaTeX)
16424 \DeclareTextCommand{\textdelta}{PU}{\83\264}%* U+03B4
16425 % U+03B5 GREEK SMALL LETTER EPSILON; epsilon; \epsilon (LaTeX)
16426 \DeclareTextCommand{\textepsilon}{PU}{\83\265}%* U+03B5
16427 % U+03B6 GREEK SMALL LETTER ZETA; zeta; \zeta (LaTeX)
16428 \DeclareTextCommand{\textzeta}{PU}{\83\266}%* U+03B6
16429 % U+03B7 GREEK SMALL LETTER ETA; eta; \eta (LaTeX)
16430 \DeclareTextCommand{\texteta}{PU}{\83\267}%* U+03B7
16431 % U+03B8 GREEK SMALL LETTER THETA; theta; \theta (LaTeX)
16432 \DeclareTextCommand{\texttheta}{PU}{\83\270}%* U+03B8
16433 % U+03B9 GREEK SMALL LETTER IOTA; iota; \iota (LaTeX)

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16434 \DeclareTextCommand{\textiota}{PU}{\83\271}%* U+03B9
16435 % U+03BA GREEK SMALL LETTER KAPPA; kappa; \kappa (LaTeX)
16436 \DeclareTextCommand{\textkappa}{PU}{\83\272}%* U+03BA
16437 % U+03BB GREEK SMALL LETTER LAMDA; lambda; \lambda (LaTeX)
16438 \DeclareTextCommand{\textlambda}{PU}{\83\273}%* U+03BB
16439 % U+03BC GREEK SMALL LETTER MU; mugreek, *mu; \mu (LaTeX)
16440 \DeclareTextCommand{\textmugreek}{PU}{\83\274}%* U+03BC
16441 % U+03BD GREEK SMALL LETTER NU; nu; \nu (LaTeX)
16442 \DeclareTextCommand{\textnu}{PU}{\83\275}%* U+03BD
16443 % U+03BE GREEK SMALL LETTER XI; xi; \xi (LaTeX)
16444 \DeclareTextCommand{\textxi}{PU}{\83\276}%* U+03BE
16445 % U+03BF GREEK SMALL LETTER OMICRON; omicron
16446 \DeclareTextCommand{\textomicron}{PU}{\83\277}% U+03BF
16447 % U+03C0 GREEK SMALL LETTER PI; pi; \pi (LaTeX)
16448 \DeclareTextCommand{\textpi}{PU}{\83\300}%* U+03C0
16449 % U+03C1 GREEK SMALL LETTER RHO; rho; \rho (LaTeX)
16450 \DeclareTextCommand{\textrho}{PU}{\83\301}%* U+03C1
16451 % U+03C2 GREEK SMALL LETTER FINAL SIGMA; *sigma1, sigmafinal
16452 \DeclareTextCommand{\textvarsigma}{PU}{\83\302}%* U+03C2
16453 % U+03C3 GREEK SMALL LETTER SIGMA; sigma; \sigma (LaTeX)
16454 \DeclareTextCommand{\textsigma}{PU}{\83\303}%* U+03C3
16455 % U+03C4 GREEK SMALL LETTER TAU; tau; \tau (LaTeX)
16456 \DeclareTextCommand{\texttau}{PU}{\83\304}%* U+03C4
16457 % U+03C5 GREEK SMALL LETTER UPSILON; upsilon; \upsilon (LaTeX)
16458 \DeclareTextCommand{\textupsilon}{PU}{\83\305}%* U+03C5
16459 % U+03C6 GREEK SMALL LETTER PHI; phi; \phi (LaTeX)
16460 \DeclareTextCommand{\textphi}{PU}{\83\306}%* U+03C6
16461 % U+03C7 GREEK SMALL LETTER CHI; chi; \chi (LaTeX)
16462 \DeclareTextCommand{\textchi}{PU}{\83\307}%* U+03C7
16463 % U+03C8 GREEK SMALL LETTER PSI; psi; \psi (LaTeX)
16464 \DeclareTextCommand{\textpsi}{PU}{\83\310}%* U+03C8
16465 % U+03C9 GREEK SMALL LETTER OMEGA; omega; \omega (LaTeX)
16466 \DeclareTextCommand{\textomega}{PU}{\83\311}%* U+03C9
16467 % U+03CA GREEK SMALL LETTER IOTA WITH DIALYTIKA; iotadieresis
16468 \DeclareTextCompositeCommand{"}{PU}{\textiota}{\83\312}% U+03CA
16469 % U+03CB GREEK SMALL LETTER UPSILON WITH DIALYTIKA; up-
silondieresis
16470 \DeclareTextCompositeCommand{"}{PU}{\textupsilon}{\83\313}% U+03CB
16471 % U+03CC GREEK SMALL LETTER OMICRON WITH TONOS; omicrontonos
16472 \DeclareTextCompositeCommand{'}{PU}{\textomicron}{\83\314}% U+03CC
16473 % U+03CD GREEK SMALL LETTER UPSILON WITH TONOS; upsilontonos
16474 \DeclareTextCommand{\textupsilonacute}{PU}{\83\315}% U+03CD
16475 \DeclareTextCompositeCommand{'}{PU}{\textupsilon}{\83\315}% U+03CD
16476 % U+03CE GREEK SMALL LETTER OMEGA WITH TONOS; omegatonos
16477 \DeclareTextCompositeCommand{'}{PU}{\textomega}{\83\316}% U+03CE
16478 % U+03D8 GREEK LETTER ARCHAIC KOPPA;
16479 \DeclareTextCommand{\textQoppa}{PU}{\83\330}% U+03D8
16480 % U+03D9 GREEK SMALL LETTER ARCHAIC KOPPA;
16481 \DeclareTextCommand{\textqoppa}{PU}{\83\331}% U+03D9
16482 % U+03DA GREEK LETTER STIGMA; Stigmagreek
16483 \DeclareTextCommand{\textStigmagreek}{PU}{\83\332}% U+03DA
16484 \DeclareTextCommand{\textStigma}{PU}{\83\332}% U+03DA
16485 % U+03DB GREEK SMALL LETTER STIGMA
16486 \DeclareTextCommand{\textstigmagreek}{PU}{\83\333}% U+03DB

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16487 \DeclareTextCommand{\textstigma}{PU}{\83\333}% U+03DB
16488 % U+03DC GREEK LETTER DIGAMMA; Digammagreek
16489 \DeclareTextCommand{\textDigammagreek}{PU}{\83\334}% U+03DC
16490 \DeclareTextCommand{\textDigamma}{PU}{\83\334}% U+03DC
16491 % U+03DD GREEK SMALL LETTER DIGAMMA
16492 \DeclareTextCommand{\textdigammagreek}{PU}{\83\335}% U+03DD
16493 \DeclareTextCommand{\textdigamma}{PU}{\83\335}% U+03DD
16494 %* \textdigammagreek -> \digamma (AmS)
16495 % U+03DE GREEK LETTER KOPPA; Koppagreek
16496 \DeclareTextCommand{\textKoppa}{PU}{\83\336}% U+03DE
16497 \DeclareTextCommand{\textKoppagreek}{PU}{\83\336}% U+03DE
16498 % U+03DF GREEK SMALL LETTER KOPPA
16499 \DeclareTextCommand{\textkoppa}{PU}{\83\337}% U+03DF
16500 \DeclareTextCommand{\textkoppagreek}{PU}{\83\337}% U+03DF
16501 % U+03E0 GREEK LETTER SAMPI; Sampigreek
16502 \DeclareTextCommand{\textSampigreek}{PU}{\83\340}% U+03E0
16503 \DeclareTextCommand{\textSampi}{PU}{\83\340}% U+03E0
16504 % U+03E1 GREEK SMALL LETTER SAMPI
16505 \DeclareTextCommand{\textsampigreek}{PU}{\83\341}% U+03E1
16506 \DeclareTextCommand{\textsampi}{PU}{\83\341}% U+03E1
16507 % U+03F6 GREEK REVERSED LUNATE EPSILON SYMBOL;
16508 % \backepsilon (AmS)
16509 \DeclareTextCommand{\textbackepsilon}{PU}{\83\366}% U+03F6
16510 \pugreek)

```

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.

```

16511 (*puenc)
16512 \ifx\CYRDZE\@undefined \else
16513 % U+0400 CYRILLIC CAPITAL LETTER IE WITH GRAVE
16514 \DeclareTextCompositeCommand{\`}{PU}{\CYRE}{\84\000}% U+0400
16515 % U+0401 CYRILLIC CAPITAL LETTER IO; Iocyrrilic, *afii10023
16516 \DeclareTextCommand{\CYRYO}{PU}{\84\001}% U+0401
16517 \DeclareTextCompositeCommand{\"}{PU}{\CYRE}{\84\001}% U+0401
16518 % U+0402 CYRILLIC CAPITAL LETTER DJE; Djecyrillic, *afii10051
16519 \DeclareTextCommand{\CYRDJE}{PU}{\84\002}% U+0402
16520 % U+0403 CYRILLIC CAPITAL LETTER GJE; Gjecyrillic, *afii10052
16521 \DeclareTextCompositeCommand{\'}{PU}{\CYRG}{\84\003}% U+0403
16522 % U+0404 CYRILLIC CAPITAL LETTER UKRAINIAN IE; Ecyrrilic, *afii10053
16523 \DeclareTextCommand{\CYRIE}{PU}{\84\004}% U+0404
16524 % U+0405 CYRILLIC CAPITAL LETTER DZE; Dzecyrillic, *afii10054
16525 \DeclareTextCommand{\CYRDZE}{PU}{\84\005}% U+0405
16526 % U+0406 CYRILLIC CAPITAL LETTER BYELORUSSIAN-UKRAINIAN I;
16527 % Icyrrilic, *afii10055
16528 \DeclareTextCommand{\CYRII}{PU}{\84\006}% U+0406
16529 % U+0407 CYRILLIC CAPITAL LETTER YI; Yicyrrilic, *afii10056
16530 \DeclareTextCommand{\CYRYI}{PU}{\84\007}% U+0407
16531 \DeclareTextCompositeCommand{\"}{PU}{\CYRII}{\84\007}% U+0407
16532 % U+0408 CYRILLIC CAPITAL LETTER JE; Jecyrillic, *afii10057
16533 \DeclareTextCommand{\CYRJE}{PU}{\84\010}% U+0408
16534 % U+0409 CYRILLIC CAPITAL LETTER LJJE; Ljecyrillic, *afii10058
16535 \DeclareTextCommand{\CYRLJE}{PU}{\84\011}% U+0409

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16536 % U+040A CYRILLIC CAPITAL LETTER NJE; Njecyrillic, *afii10059
 16537 \DeclareTextCommand{\CYRNJE}{PU}{\84\012}% U+040A
 16538 % U+040B CYRILLIC CAPITAL LETTER TSHE; Tshecyrillic, *afii10060
 16539 \DeclareTextCommand{\CYRTSHE}{PU}{\84\013}% U+040B
 16540 % U+040C CYRILLIC CAPITAL LETTER KJE; Kjecyrillic, *afii10061
 16541 \DeclareTextCompositeCommand{\'}{PU}{\CYRK}{\84\014}% U+040C
 16542 % U+040D CYRILLIC CAPITAL LETTER I WITH GRAVE
 16543 \DeclareTextCompositeCommand{\`}{PU}{\CYRI}{\84\015}% U+040D
 16544 % U+040E CYRILLIC CAPITAL LETTER SHORT U; Ushortcyrillic, *afii10062
 16545 \DeclareTextCommand{\CYRUSHRT}{PU}{\84\016}% U+040E
 16546 \DeclareTextCompositeCommand{\U}{PU}{\CYRU}{\84\016}% U+040E
 16547 % U+040F CYRILLIC CAPITAL LETTER DZHE; Dzhecyrillic, *afii10145
 16548 \DeclareTextCommand{\CYRDZHE}{PU}{\84\017}% U+040F
 16549 % U+0410 CYRILLIC CAPITAL LETTER A; Acyrillic, *afii10017
 16550 \DeclareTextCommand{\CYRA}{PU}{\84\020}% U+0410
 16551 % U+0411 CYRILLIC CAPITAL LETTER BE; Becyrillic, *afii10018
 16552 \DeclareTextCommand{\CYRB}{PU}{\84\021}% U+0411
 16553 % U+0412 CYRILLIC CAPITAL LETTER VE; Vecyrillic, *afii10019
 16554 \DeclareTextCommand{\CYRV}{PU}{\84\022}% U+0412
 16555 % U+0413 CYRILLIC CAPITAL LETTER GHE; Gecyrillic, *afii10020
 16556 \DeclareTextCommand{\CYRG}{PU}{\84\023}% U+0413
 16557 % U+0414 CYRILLIC CAPITAL LETTER DE; Decyrillic, *afii10021
 16558 \DeclareTextCommand{\CYRD}{PU}{\84\024}% U+0414
 16559 % U+0415 CYRILLIC CAPITAL LETTER IE; Iecyrillic, *afii10022
 16560 \DeclareTextCommand{\CYRE}{PU}{\84\025}% U+0415
 16561 % U+0416 CYRILLIC CAPITAL LETTER ZHE; Zhecyrillic, *afii10024
 16562 \DeclareTextCommand{\CYRZH}{PU}{\84\026}% U+0416
 16563 % U+0417 CYRILLIC CAPITAL LETTER ZE; Zecyrillic, *afii10025
 16564 \DeclareTextCommand{\CYRZ}{PU}{\84\027}% U+0417
 16565 % U+0418 CYRILLIC CAPITAL LETTER I; Iicyrillic, *afii10026
 16566 \DeclareTextCommand{\CYRI}{PU}{\84\030}% U+0418
 16567 % U+0419 CYRILLIC CAPITAL LETTER SHORT I; Iishortcyrillic, *afii10027
 16568 \DeclareTextCommand{\CYRISHRT}{PU}{\84\031}% U+0419
 16569 \DeclareTextCompositeCommand{\U}{PU}{\CYRI}{\84\031}% U+0419
 16570 % U+041A CYRILLIC CAPITAL LETTER KA; Kacyrillic, *afii10028
 16571 \DeclareTextCommand{\CYRK}{PU}{\84\032}% U+041A
 16572 % U+041B CYRILLIC CAPITAL LETTER EL; Elcyrillic, *afii10029
 16573 \DeclareTextCommand{\CYRL}{PU}{\84\033}% U+041B
 16574 % U+041C CYRILLIC CAPITAL LETTER EM; Emcyrillic, *afii10030
 16575 \DeclareTextCommand{\CYRM}{PU}{\84\034}% U+041C
 16576 % U+041D CYRILLIC CAPITAL LETTER EN; Encyrillic, *afii10031
 16577 \DeclareTextCommand{\CYRN}{PU}{\84\035}% U+041D
 16578 % U+041E CYRILLIC CAPITAL LETTER O; Ocyrillic, *afii10032
 16579 \DeclareTextCommand{\CYRO}{PU}{\84\036}% U+041E
 16580 % U+041F CYRILLIC CAPITAL LETTER PE; Pecyrillic, *afii10033
 16581 \DeclareTextCommand{\CYRP}{PU}{\84\037}% U+041F
 16582 % U+0420 CYRILLIC CAPITAL LETTER ER; Ercyrillic, *afii10034
 16583 \DeclareTextCommand{\CYRR}{PU}{\84\040}% U+0420
 16584 % U+0421 CYRILLIC CAPITAL LETTER ES; Escyrillic, *afii10035
 16585 \DeclareTextCommand{\CYRS}{PU}{\84\041}% U+0421
 16586 % U+0422 CYRILLIC CAPITAL LETTER TE; Tecyrillic, *afii10036
 16587 \DeclareTextCommand{\CYRT}{PU}{\84\042}% U+0422
 16588 % U+0423 CYRILLIC CAPITAL LETTER U; Ucyrillic, *afii10037
 16589 \DeclareTextCommand{\CYRU}{PU}{\84\043}% U+0423

16590 % U+0424 CYRILLIC CAPITAL LETTER EF; Efcyrillic, *afii10038
 16591 \DeclareTextCommand{\CYRF}{PU}{\84\044}% U+0424
 16592 % U+0425 CYRILLIC CAPITAL LETTER HA; Khacyrillic, *afii10039
 16593 \DeclareTextCommand{\CYRH}{PU}{\84\045}% U+0425
 16594 % U+0426 CYRILLIC CAPITAL LETTER TSE; Tsecyrillic, *afii10040
 16595 \DeclareTextCommand{\CYRC}{PU}{\84\046}% U+0426
 16596 % U+0427 CYRILLIC CAPITAL LETTER CHE; Checyrillic, *afii10041
 16597 \DeclareTextCommand{\CYRCH}{PU}{\84\047}% U+0427
 16598 % U+0428 CYRILLIC CAPITAL LETTER SHA; Shacyrillic, *afii10042
 16599 \DeclareTextCommand{\CYRSH}{PU}{\84\050}% U+0428
 16600 % U+0429 CYRILLIC CAPITAL LETTER SHCHA; Shchacyrillic, *afii10043
 16601 \DeclareTextCommand{\CYRSHCH}{PU}{\84\051}% U+0429
 16602 % U+042A CYRILLIC CAPITAL LETTER HARD SIGN;
 16603 % Hardsigncyrillic, *afii10044
 16604 \DeclareTextCommand{\CYRHRDSN}{PU}{\84\052}% U+042A
 16605 % U+042B CYRILLIC CAPITAL LETTER YERU; Yericyrillic, *afii10045
 16606 \DeclareTextCommand{\CYRERY}{PU}{\84\053}% U+042B
 16607 % U+042C CYRILLIC CAPITAL LETTER SOFT SIGN;
 16608 % Softsigncyrillic, *afii10046
 16609 \DeclareTextCommand{\CYRSFTSN}{PU}{\84\054}% U+042C
 16610 % U+042D CYRILLIC CAPITAL LETTER E; Eversedcyrillic, *afii10047
 16611 \DeclareTextCommand{\CYREREV}{PU}{\84\055}% U+042D
 16612 % U+042E CYRILLIC CAPITAL LETTER YU; Iucyrillic, *afii10048
 16613 \DeclareTextCommand{\CYRYU}{PU}{\84\056}% U+042E
 16614 % U+042F CYRILLIC CAPITAL LETTER YA; Iacyrillic, *afii10049
 16615 \DeclareTextCommand{\CYRYA}{PU}{\84\057}% U+042F
 16616 % U+0430 CYRILLIC SMALL LETTER A; acyrillic, *afii10065
 16617 \DeclareTextCommand{\cyra}{PU}{\84\060}% U+0430
 16618 % U+0431 CYRILLIC SMALL LETTER BE; *afii10066, becyrillic
 16619 \DeclareTextCommand{\cyrb}{PU}{\84\061}% U+0431
 16620 % U+0432 CYRILLIC SMALL LETTER VE; *afii10067, vecyrillic
 16621 \DeclareTextCommand{\cyrv}{PU}{\84\062}% U+0432
 16622 % U+0433 CYRILLIC SMALL LETTER GHE; *afii10068, gecyrillic
 16623 \DeclareTextCommand{\cyrg}{PU}{\84\063}% U+0433
 16624 % U+0434 CYRILLIC SMALL LETTER DE; *afii10069, decyrillic
 16625 \DeclareTextCommand{\cyrd}{PU}{\84\064}% U+0434
 16626 % U+0435 CYRILLIC SMALL LETTER IE; *afii10070, iecyrillic
 16627 \DeclareTextCommand{\cyre}{PU}{\84\065}% U+0435
 16628 % U+0436 CYRILLIC SMALL LETTER ZHE; *afii10072, zhacyrillic
 16629 \DeclareTextCommand{\cyrzh}{PU}{\84\066}% U+0436
 16630 % U+0437 CYRILLIC SMALL LETTER ZE; *afii10073, zecyrillic
 16631 \DeclareTextCommand{\cyrz}{PU}{\84\067}% U+0437
 16632 % U+0438 CYRILLIC SMALL LETTER I; *afii10074, iicyrillic
 16633 \DeclareTextCommand{\cyri}{PU}{\84\070}% U+0438
 16634 % U+0439 CYRILLIC SMALL LETTER SHORT I; *afii10075, iishortcyrillic
 16635 \DeclareTextCommand{\cyrishrt}{PU}{\84\071}% U+0439
 16636 \DeclareTextCompositeCommand{\U}{PU}{\cyri}{\84\071}% U+0439
 16637 % U+043A CYRILLIC SMALL LETTER KA; *afii10076, kacyrillic
 16638 \DeclareTextCommand{\cyrk}{PU}{\84\072}% U+043A
 16639 % U+043B CYRILLIC SMALL LETTER EL; *afii10077, elcyrillic
 16640 \DeclareTextCommand{\cyrl}{PU}{\84\073}% U+043B
 16641 % U+043C CYRILLIC SMALL LETTER EM; *afii10078, emcyrillic
 16642 \DeclareTextCommand{\cyrm}{PU}{\84\074}% U+043C
 16643 % U+043D CYRILLIC SMALL LETTER EN; *afii10079, encyrillic

16644 \DeclareTextCommand{\cyrn}{PU}{\84\075}% U+043D
16645 % U+043E CYRILLIC SMALL LETTER O; *afii10080, ocyrillic
16646 \DeclareTextCommand{\cyro}{PU}{\84\076}% U+043E
16647 % U+043F CYRILLIC SMALL LETTER PE; *afii10081, pecyrillic
16648 \DeclareTextCommand{\cyrp}{PU}{\84\077}% U+043F
16649 % U+0440 CYRILLIC SMALL LETTER ER; *afii10082, ercyrillic
16650 \DeclareTextCommand{\cyrr}{PU}{\84\100}% U+0440
16651 % U+0441 CYRILLIC SMALL LETTER ES; *afii10083, escyrillic
16652 \DeclareTextCommand{\cyrs}{PU}{\84\101}% U+0441
16653 % U+0442 CYRILLIC SMALL LETTER TE; *afii10084, tecyrillic
16654 \DeclareTextCommand{\cyrt}{PU}{\84\102}% U+0442
16655 % U+0443 CYRILLIC SMALL LETTER U; *afii10085, ucyrillic
16656 \DeclareTextCommand{\cyru}{PU}{\84\103}% U+0443
16657 % U+0444 CYRILLIC SMALL LETTER EF; *afii10086, efcyrillic
16658 \DeclareTextCommand{\cyrf}{PU}{\84\104}% U+0444
16659 % U+0445 CYRILLIC SMALL LETTER HA; *afii10087, khacyrillic
16660 \DeclareTextCommand{\cyrh}{PU}{\84\105}% U+0445
16661 % U+0446 CYRILLIC SMALL LETTER TSE; *afii10088, tsecyrillic
16662 \DeclareTextCommand{\cyrc}{PU}{\84\106}% U+0446
16663 % U+0447 CYRILLIC SMALL LETTER CHE; *afii10089, checyrillic
16664 \DeclareTextCommand{\cyrch}{PU}{\84\107}% U+0447
16665 % U+0448 CYRILLIC SMALL LETTER SHA; *afii10090, shacyrillic
16666 \DeclareTextCommand{\cyrsh}{PU}{\84\110}% U+0448
16667 % U+0449 CYRILLIC SMALL LETTER SHCHA; *afii10091, shchacyrillic
16668 \DeclareTextCommand{\cyrshch}{PU}{\84\111}% U+0449
16669 % U+044A CYRILLIC SMALL LETTER HARD SIGN; *afii10092, hardsigncyrillic
16670 \DeclareTextCommand{\cyrhrdsn}{PU}{\84\112}% U+044A
16671 %* \cyrhrdsn -> \hardsign (tipa)
16672 % U+044B CYRILLIC SMALL LETTER YERU; *afii10093, yericyrillic
16673 \DeclareTextCommand{\cyrrery}{PU}{\84\113}% U+044B
16674 % U+044C CYRILLIC SMALL LETTER SOFT SIGN; *afii10094, softsigncyrillic
16675 \DeclareTextCommand{\cyrsftsn}{PU}{\84\114}% U+044C
16676 %* \cyrsftsn -> \softsign (tipa)
16677 % U+044D CYRILLIC SMALL LETTER E; *afii10095, ereversedcyrillic
16678 \DeclareTextCommand{\cyrrerev}{PU}{\84\115}% U+044D
16679 % U+044E CYRILLIC SMALL LETTER YU; *afii10096, iucyrillic
16680 \DeclareTextCommand{\cyryu}{PU}{\84\116}% U+044E
16681 % U+044F CYRILLIC SMALL LETTER YA; *afii10097, iacyrillic
16682 \DeclareTextCommand{\cyrya}{PU}{\84\117}% U+044F
16683 % U+0450 CYRILLIC SMALL LETTER IE WITH GRAVE
16684 \DeclareTextCompositeCommand{\`}{PU}{\cyre}{\84\120}% U+0450
16685 % U+0451 CYRILLIC SMALL LETTER IO; *afii10071, iocyrillic
16686 \DeclareTextCommand{\cyryo}{PU}{\84\121}% U+0451
16687 \DeclareTextCompositeCommand{\"}{PU}{\cyre}{\84\121}% U+0451
16688 % U+0452 CYRILLIC SMALL LETTER DJE; *afii10099, djecyrillic
16689 \DeclareTextCommand{\cyrdje}{PU}{\84\122}% U+0452
16690 % U+0453 CYRILLIC SMALL LETTER GJE; *afii10100, gjecyrillic
16691 \DeclareTextCompositeCommand{\'}{PU}{\cyrg}{\84\123}% U+0453
16692 % U+0454 CYRILLIC SMALL LETTER UKRAINIAN IE; *afii10101, ecyrillic
16693 \DeclareTextCommand{\cyrie}{PU}{\84\124}% U+0454
16694 % U+0455 CYRILLIC SMALL LETTER DZE; *afii10102, dzecyrillic
16695 \DeclareTextCommand{\cyrdze}{PU}{\84\125}% U+0455
16696 % U+0456 CYRILLIC SMALL LETTER BYELORUSSIAN-UKRAINIAN I;

16697 % *afii10103, icyrillic
 16698 \DeclareTextCommand{\cyrii}{PU}{\84\126}% U+0456
 16699 % U+0457 CYRILLIC SMALL LETTER YI; *afii10104, yicyrillic
 16700 \DeclareTextCommand{\cyryi}{PU}{\84\127}% U+0457
 16701 \DeclareTextCompositeCommand{"}{PU}{\cyrii}{\84\127}% U+0457
 16702 % U+0458 CYRILLIC SMALL LETTER JE; *afii10105, jecyrillic
 16703 \DeclareTextCommand{\cyrje}{PU}{\84\130}% U+0458
 16704 % U+0459 CYRILLIC SMALL LETTER LJE; *afii10106, ljecyrillic
 16705 \DeclareTextCommand{\cyrlje}{PU}{\84\131}% U+0459
 16706 % U+045A CYRILLIC SMALL LETTER NJE; *afii10107, njecyrillic
 16707 \DeclareTextCommand{\cyrnje}{PU}{\84\132}% U+045A
 16708 % U+045B CYRILLIC SMALL LETTER TSHE; *afii10108, tshecyrillic
 16709 \DeclareTextCommand{\cyrtshe}{PU}{\84\133}% U+045B
 16710 % U+045C CYRILLIC SMALL LETTER KJE; *afii10109, kjecyrillic
 16711 \DeclareTextCompositeCommand{'}{PU}{\cyrk}{\84\134}% U+045C
 16712 % U+045D CYRILLIC SMALL LETTER I WITH GRAVE
 16713 \DeclareTextCompositeCommand{`}{PU}{\cyri}{\84\135}% U+045D
 16714 % U+045E CYRILLIC SMALL LETTER SHORT U; *afii10110, ushortcyrillic
 16715 \DeclareTextCommand{\cyrushrt}{PU}{\84\136}% U+045E
 16716 \DeclareTextCompositeCommand{U}{PU}{\curu}{\84\136}% U+045E
 16717 % U+045F CYRILLIC SMALL LETTER DZHE; *afii10193, dzhecyrillic
 16718 \DeclareTextCommand{\cyrdzhe}{PU}{\84\137}% U+045F
 16719 % U+0460 CYRILLIC CAPITAL LETTER OMEGA; Omegacyrillic
 16720 \DeclareTextCommand{\CYROMEGA}{PU}{\84\140}% U+0460
 16721 % U+0461 CYRILLIC SMALL LETTER OMEGA; omegacyrillic
 16722 \DeclareTextCommand{\cyromega}{PU}{\84\141}% U+0461
 16723 % U+0462 CYRILLIC CAPITAL LETTER YAT; Yatcyrillic, *afii10146
 16724 \DeclareTextCommand{\CYRYAT}{PU}{\84\142}% U+0462
 16725 % U+0463 CYRILLIC SMALL LETTER YAT; *afii10194, yatcyrillic
 16726 \DeclareTextCommand{\cyryat}{PU}{\84\143}% U+0463
 16727 % U+0464 CYRILLIC CAPITAL LETTER IOTIFIED E; Eiotifiedcyrillic
 16728 \DeclareTextCommand{\CYRIOTE}{PU}{\84\144}% U+0464
 16729 % U+0465 CYRILLIC SMALL LETTER IOTIFIED E; eiotifiedcyrillic
 16730 \DeclareTextCommand{\cyriote}{PU}{\84\145}% U+0465
 16731 % U+0466 CYRILLIC CAPITAL LETTER LITTLE YUS; Yuslitlecyrillic
 16732 \DeclareTextCommand{\CYRLYUS}{PU}{\84\146}% U+0466
 16733 % U+0467 CYRILLIC SMALL LETTER LITTLE YUS; yuslitlecyrillic
 16734 \DeclareTextCommand{\cyrlyus}{PU}{\84\147}% U+0467
 16735 % U+0468 CYRILLIC CAPITAL LETTER IOTIFIED LITTLE YUS; Yuslitlei-
 otifiedcyrillic
 16736 \DeclareTextCommand{\CYRIOTLYUS}{PU}{\84\150}% U+0468
 16737 % U+0469 CYRILLIC SMALL LETTER IOTIFIED LITTLE YUS; yuslitlei-
 otifiedcyrillic
 16738 \DeclareTextCommand{\cyriotlyus}{PU}{\84\151}% U+0469
 16739 % U+046A CYRILLIC CAPITAL LETTER BIG YUS; Yusbigcyrillic
 16740 \DeclareTextCommand{\CYRBYUS}{PU}{\84\152}% U+046A
 16741 % U+046B CYRILLIC SMALL LETTER BIG YUS; yusbigcyrillic
 16742 \DeclareTextCommand{\cyrbyus}{PU}{\84\153}% U+046B
 16743 % U+046C CYRILLIC CAPITAL LETTER IOTIFIED BIG YUS; Yusbigiotified-
 cyrillic
 16744 \DeclareTextCommand{\CYRIOTBYUS}{PU}{\84\154}% U+046C
 16745 % U+046D CYRILLIC SMALL LETTER IOTIFIED BIG YUS; yusbigiotified-
 cyrillic
 16746 \DeclareTextCommand{\cyriotbyus}{PU}{\84\155}% U+046D

16747 % U+046E CYRILLIC CAPITAL LETTER KSI; Ksicyrillic
 16748 \DeclareTextCommand{\CYRKSI}{PU}{\84\156}% U+046E
 16749 % U+046F CYRILLIC SMALL LETTER KSI; ksicyrillic
 16750 \DeclareTextCommand{\cyrksi}{PU}{\84\157}% U+046F
 16751 % U+0470 CYRILLIC CAPITAL LETTER PSI; Psicyrillic
 16752 \DeclareTextCommand{\CYRPSI}{PU}{\84\160}% U+0470
 16753 % U+0471 CYRILLIC SMALL LETTER PSI; psicyrillic
 16754 \DeclareTextCommand{\cyrpsi}{PU}{\84\161}% U+0471
 16755 % U+0472 CYRILLIC CAPITAL LETTER FITA; Fitacyrillic, *afii10147
 16756 \DeclareTextCommand{\CYRFITA}{PU}{\84\162}% U+0472
 16757 % U+0473 CYRILLIC SMALL LETTER FITA; *afii10195, fitacyrillic
 16758 \DeclareTextCommand{\cyrfita}{PU}{\84\163}% U+0473
 16759 % U+0474 CYRILLIC CAPITAL LETTER IZHITSA; Izhitsacyrillic, *afii10148
 16760 \DeclareTextCommand{\CYRIZH}{PU}{\84\164}% U+0474
 16761 % U+0475 CYRILLIC SMALL LETTER IZHITSA; *afii10196, izhitsacyrillic
 16762 \DeclareTextCommand{\cyrizh}{PU}{\84\165}% U+0475
 16763 % U+0476 CYRILLIC CAPITAL LETTER IZHITSA WITH DOUBLE
 16764 % GRAVE ACCENT; Izhitsadblgravecyrillic
 16765 \DeclareTextCompositeCommand{\C}{PU}{\CYRIZH}{\84\166}% U+0476
 16766 % U+0477 CYRILLIC SMALL LETTER IZHITSA WITH DOUBLE
 16767 % GRAVE ACCENT; izhitsadblgravecyrillic
 16768 \DeclareTextCompositeCommand{\C}{PU}{\cyrizh}{\84\167}% U+0477
 16769 % U+0478 CYRILLIC CAPITAL LETTER UK; Ukcyrillic
 16770 \DeclareTextCommand{\CYRUK}{PU}{\84\170}% U+0478
 16771 % U+0479 CYRILLIC SMALL LETTER UK; ukcyrillic
 16772 \DeclareTextCommand{\cyruk}{PU}{\84\171}% U+0479
 16773 % U+047A CYRILLIC CAPITAL LETTER ROUND OMEGA; Omegaroundcyrillic
 16774 \DeclareTextCommand{\CYROMEGARND}{PU}{\84\172}% U+047A
 16775 % U+047B CYRILLIC SMALL LETTER ROUND OMEGA; omegaroundcyrillic
 16776 \DeclareTextCommand{\cyromegarnd}{PU}{\84\173}% U+047B
 16777 % U+047C CYRILLIC CAPITAL LETTER OMEGA WITH TITLO; Omegatitlocyrillic
 16778 \DeclareTextCommand{\CYROMEGATITLO}{PU}{\84\174}% U+047C
 16779 % U+047D CYRILLIC SMALL LETTER OMEGA WITH TITLO; omegatitlocyrillic
 16780 \DeclareTextCommand{\cyromegatitlo}{PU}{\84\175}% U+047D
 16781 % U+047E CYRILLIC CAPITAL LETTER OT; Otcyrillic
 16782 \DeclareTextCommand{\CYROT}{PU}{\84\176}% U+047E
 16783 % U+047F CYRILLIC SMALL LETTER OT; otcyrillic
 16784 \DeclareTextCommand{\cyrot}{PU}{\84\177}% U+047F
 16785 % U+0480 CYRILLIC CAPITAL LETTER KOPPA; Koppacyrillic
 16786 \DeclareTextCommand{\CYRKOPPA}{PU}{\84\200}% U+0480
 16787 % U+0481 CYRILLIC SMALL LETTER KOPPA; koppacyrillic
 16788 \DeclareTextCommand{\cyrkoppa}{PU}{\84\201}% U+0481
 16789 % U+0482 CYRILLIC THOUSANDS SIGN; thousandcyrillic
 16790 \DeclareTextCommand{\cyrthousands}{PU}{\84\202}% U+0482
 \84\203: U+0483 COMBINING CYRILLIC TITLO; titlocyrillicmb
 \84\204: U+0484 COMBINING CYRILLIC PALATALIZATION; palatalizationcyrillicmb
 \84\205: U+0485 COMBINING CYRILLIC DASIA PNEUMATA; dasiapneumatacyrillicmb
 \84\206: U+0486 COMBINING CYRILLIC PSILI PNEUMATA; psilipneumat-

acyrilliccmb
 \84\207: U+0487 COMBINING CYRILLIC POKRYTIE
 \84\210: U+0488 COMBINING CYRILLIC HUNDRED THOUSANDS SIGN
 \84\211: U+0489 COMBINING CYRILLIC MILLIONS SIGN
 16791 % U+048A CYRILLIC CAPITAL LETTER SHORT I WITH TAIL
 16792 \DeclareTextCommand{\CYRISHRTDSC}{PU}{\84\212}% U+048A
 16793 % U+048B CYRILLIC SMALL LETTER SHORT I WITH TAIL
 16794 \DeclareTextCommand{\cyrishrtdsc}{PU}{\84\213}% U+048B
 16795 % U+048C CYRILLIC CAPITAL LETTER SEMISOFT SIGN
 16796 \DeclareTextCommand{\CYRSEMISFTSN}{PU}{\84\214}% U+048C
 16797 % U+048D CYRILLIC SMALL LETTER SEMISOFT SIGN
 16798 \DeclareTextCommand{\cyrsemisftsn}{PU}{\84\215}% U+048D
 16799 % U+048E CYRILLIC CAPITAL LETTER ER WITH TICK
 16800 \DeclareTextCommand{\CYRRTICK}{PU}{\84\216}% U+048E
 16801 % U+048F CYRILLIC SMALL LETTER ER WITH TICK
 16802 \DeclareTextCommand{\cyrrtick}{PU}{\84\217}% U+048F
 16803 % U+0490 CYRILLIC CAPITAL LETTER GHE WITH UPTURN; Gheupturn-
 cyrillic, *afii10050
 16804 \DeclareTextCommand{\CYRGUP}{PU}{\84\220}% U+0490
 16805 % U+0491 CYRILLIC SMALL LETTER GHE WITH UPTURN; *afii10098, ghe-
 upturncyrillic
 16806 \DeclareTextCommand{\cyrgup}{PU}{\84\221}% U+0491
 16807 % U+0492 CYRILLIC CAPITAL LETTER GHE WITH STROKE; Ghestroke-
 cyrillic
 16808 \DeclareTextCommand{\CYRGHCRS}{PU}{\84\222}% U+0492
 16809 % U+0493 CYRILLIC SMALL LETTER GHE WITH STROKE; ghestrokecyrillic
 16810 \DeclareTextCommand{\cyrghcrs}{PU}{\84\223}% U+0493
 16811 % U+0494 CYRILLIC CAPITAL LETTER GHE WITH MIDDLE HOOK;
 16812 % Ghemiddlehookcyrillic
 16813 \DeclareTextCommand{\CYRGHK}{PU}{\84\224}% U+0494
 16814 % U+0495 CYRILLIC SMALL LETTER GHE WITH MIDDLE HOOK;
 16815 % ghemiddlehookcyrillic
 16816 \DeclareTextCommand{\cyrghk}{PU}{\84\225}% U+0495
 16817 % U+0496 CYRILLIC CAPITAL LETTER ZHE WITH DESCENDER;
 16818 % Zhedescendercyrillic
 16819 \DeclareTextCommand{\CYRZHDSC}{PU}{\84\226}% U+0496
 16820 % U+0497 CYRILLIC SMALL LETTER ZHE WITH DESCENDER;
 16821 % zhedescendercyrillic
 16822 \DeclareTextCommand{\cyrzhdsc}{PU}{\84\227}% U+0497
 16823 % U+0498 CYRILLIC CAPITAL LETTER ZE WITH DESCENDER; Zedescen-
 dercyrillic
 16824 \DeclareTextCommand{\CYRZDSC}{PU}{\84\230}% U+0498
 16825 \DeclareTextCompositeCommand{\c}{PU}{\CYRZ}{\84\230}% U+0498
 16826 % U+0499 CYRILLIC SMALL LETTER ZE WITH DESCENDER; zedescender-
 cyrillic
 16827 \DeclareTextCommand{\cyrzdsc}{PU}{\84\231}% U+0499
 16828 \DeclareTextCompositeCommand{\c}{PU}{\cyrz}{\84\231}% U+0499
 16829 % U+049A CYRILLIC CAPITAL LETTER KA WITH DESCENDER; Kadescen-
 dercyrillic
 16830 \DeclareTextCommand{\CYRKDSC}{PU}{\84\232}% U+049A
 16831 % U+049B CYRILLIC SMALL LETTER KA WITH DESCENDER; kadescen-
 dercyrillic
 16832 \DeclareTextCommand{\cyrkdsc}{PU}{\84\233}% U+049B
 16833 % U+049C CYRILLIC CAPITAL LETTER KA WITH VERTICAL STROKE;

16834 % Kavertikalstrokecyrillic
 16835 \DeclareTextCommand{\CYRKVCRS}{PU}{\84\234}% U+049C
 16836 % U+049D CYRILLIC SMALL LETTER KA WITH VERTICAL STROKE;
 16837 % kavertikalstrokecyrillic
 16838 \DeclareTextCommand{\cyrkvcrs}{PU}{\84\235}% U+049D
 16839 % U+049E CYRILLIC CAPITAL LETTER KA WITH STROKE; Kastrokecyrillic
 16840 \DeclareTextCommand{\CYRKHCRS}{PU}{\84\236}% U+049E
 16841 % U+049F CYRILLIC SMALL LETTER KA WITH STROKE; kastrokecyrillic
 16842 \DeclareTextCommand{\cyrkhrs}{PU}{\84\237}% U+049F
 16843 % U+04A0 CYRILLIC CAPITAL LETTER BASHKIR KA; Kabashkircyrillic
 16844 \DeclareTextCommand{\CYRKBEAK}{PU}{\84\240}% U+04A0
 16845 % U+04A1 CYRILLIC SMALL LETTER BASHKIR KA; kabashkircyrillic
 16846 \DeclareTextCommand{\cyrkbeak}{PU}{\84\241}% U+04A1
 16847 % U+04A2 CYRILLIC CAPITAL LETTER EN WITH DESCENDER; Endescen-
 dercyrillic
 16848 \DeclareTextCommand{\CYRNDSC}{PU}{\84\242}% U+04A2
 16849 % U+04A3 CYRILLIC SMALL LETTER EN WITH DESCENDER; endescender-
 cyrillic
 16850 \DeclareTextCommand{\cyrndsc}{PU}{\84\243}% U+04A3
 16851 % U+04A4 CYRILLIC CAPITAL LIGATURE EN GHE; Enghecyrillic
 16852 \DeclareTextCommand{\CYRNG}{PU}{\84\244}% U+04A4
 16853 % U+04A5 CYRILLIC SMALL LIGATURE EN GHE; enghecyrillic
 16854 \DeclareTextCommand{\cyrng}{PU}{\84\245}% U+04A5
 16855 % U+04A6 CYRILLIC CAPITAL LETTER PE WITH MIDDLE HOOK; Pemid-
 dlehookcyrillic
 16856 \DeclareTextCommand{\CYRPHK}{PU}{\84\246}% U+04A6
 16857 % U+04A7 CYRILLIC SMALL LETTER PE WITH MIDDLE HOOK; pemiddle-
 hookcyrillic
 16858 \DeclareTextCommand{\cyrphk}{PU}{\84\247}% U+04A7
 16859 % U+04A8 CYRILLIC CAPITAL LETTER ABKHASIAN HA; Haabkhasiancyril-
 lic
 16860 \DeclareTextCommand{\CYRABHHA}{PU}{\84\250}% U+04A8
 16861 % U+04A9 CYRILLIC SMALL LETTER ABKHASIAN HA; haabkhasiancyrillic
 16862 \DeclareTextCommand{\cyrabhha}{PU}{\84\251}% U+04A9
 16863 % U+04AA CYRILLIC CAPITAL LETTER ES WITH DESCENDER; Esdescen-
 dercyrillic
 16864 \DeclareTextCommand{\CYRSDSC}{PU}{\84\252}% U+04AA
 16865 \DeclareTextCompositeCommand{\CYRSDSC}{PU}{\CYRS}{\84\252}% U+04AA
 16866 % U+04AB CYRILLIC SMALL LETTER ES WITH DESCENDER; esdescender-
 cyrillic
 16867 \DeclareTextCommand{\cyrsdsc}{PU}{\84\253}% U+04AB
 16868 \DeclareTextCompositeCommand{\k}{PU}{\cyrs}{\84\253}% U+04AB
 16869 % U+04AC CYRILLIC CAPITAL LETTER TE WITH DESCENDER; Tedescen-
 dercyrillic
 16870 \DeclareTextCommand{\CYRTDSC}{PU}{\84\254}% U+04AC
 16871 % U+04AD CYRILLIC SMALL LETTER TE WITH DESCENDER; tedescen-
 dercyrillic
 16872 \DeclareTextCommand{\cyrtldsc}{PU}{\84\255}% U+04AD
 16873 % U+04AE CYRILLIC CAPITAL LETTER STRAIGHT U; Ustraightcyrillic
 16874 \DeclareTextCommand{\CYRY}{PU}{\84\256}% U+04AE
 16875 % U+04AF CYRILLIC SMALL LETTER STRAIGHT U; ustraightcyrillic
 16876 \DeclareTextCommand{\cyry}{PU}{\84\257}% U+04AF
 16877 % U+04B0 CYRILLIC CAPITAL LETTER STRAIGHT U WITH STROKE; Us-
 traightstrokecyrillic

16878 \DeclareTextCommand{\CYRYHCRS}{PU}{\84\260}% U+04B0
16879 % U+04B1 CYRILLIC SMALL LETTER STRAIGHT U WITH STROKE; us-
straightstrokecyrillic
16880 \DeclareTextCommand{\cyryhcrs}{PU}{\84\261}% U+04B1
16881 % U+04B2 CYRILLIC CAPITAL LETTER HA WITH DESCENDER; Hadescen-
dercyrillic
16882 \DeclareTextCommand{\CYRHDSC}{PU}{\84\262}% U+04B2
16883 % U+04B3 CYRILLIC SMALL LETTER HA WITH DESCENDER; hadescen-
dercyrillic
16884 \DeclareTextCommand{\cyrhdsc}{PU}{\84\263}% U+04B3
16885 % U+04B4 CYRILLIC CAPITAL LIGATURE TE TSE; Tetsecyrillic
16886 \DeclareTextCommand{\CYRTETSE}{PU}{\84\264}% U+04B4
16887 % U+04B5 CYRILLIC SMALL LIGATURE TE TSE; tetsecyrillic
16888 \DeclareTextCommand{\cyrtetse}{PU}{\84\265}% U+04B5
16889 % U+04B6 CYRILLIC CAPITAL LETTER CHE WITH DESCENDER;
16890 % Chedescendercyrillic
16891 \DeclareTextCommand{\CYRCHRDSC}{PU}{\84\266}% U+04B6
16892 % U+04B7 CYRILLIC SMALL LETTER CHE WITH DESCENDER; chedescen-
dercyrillic
16893 \DeclareTextCommand{\cyrchrds}{PU}{\84\267}% U+04B7
16894 % U+04B8 CYRILLIC CAPITAL LETTER CHE WITH VERTICAL STROKE;
16895 % Cheverticalstrokecyrillic
16896 \DeclareTextCommand{\CYRCHVCRS}{PU}{\84\270}% U+04B8
16897 % U+04B9 CYRILLIC SMALL LETTER CHE WITH VERTICAL STROKE;
16898 % cheverticalstrokecyrillic
16899 \DeclareTextCommand{\cyrchvcrs}{PU}{\84\271}% U+04B9
16900 % U+04BA CYRILLIC CAPITAL LETTER SHHA; Shhacyrillic
16901 \DeclareTextCommand{\CYRSHHA}{PU}{\84\272}% U+04BA
16902 % U+04BB CYRILLIC SMALL LETTER SHHA; shhacyrillic
16903 \DeclareTextCommand{\cyrshha}{PU}{\84\273}% U+04BB
16904 % U+04BC CYRILLIC CAPITAL LETTER ABKHASIAN CHE; Cheabkhasian-
cyrillic
16905 \DeclareTextCommand{\CYRABHCH}{PU}{\84\274}% U+04BC
16906 % U+04BD CYRILLIC SMALL LETTER ABKHASIAN CHE; cheabkhasiancyril-
lic
16907 \DeclareTextCommand{\cyrabhch}{PU}{\84\275}% U+04BD
16908 % U+04BE CYRILLIC CAPITAL LETTER ABKHASIAN CHE WITH DESCEN-
DER; Chedescenderabkhasiancyrillic
16909 \DeclareTextCommand{\CYRABHCHDSC}{PU}{\84\276}% U+04BE
16910 \DeclareTextCompositeCommand{\k}{PU}{\CYRABHCH}{\84\276}% U+04BE
16911 % U+04BF CYRILLIC SMALL LETTER ABKHASIAN CHE WITH DESCEN-
DER; chedescenderabkhasiancyrillic
16912 \DeclareTextCommand{\cyrabhchdsc}{PU}{\84\277}% U+04BF
16913 \DeclareTextCompositeCommand{\k}{PU}{\cyrabhch}{\84\277}% U+04BF
16914 % U+04C0 CYRILLIC LETTER PALOCHKA; palochkacyrillic
16915 \DeclareTextCommand{\CYRpalochka}{PU}{\84\300}% U+04C0
16916 % U+04C1 CYRILLIC CAPITAL LETTER ZHE WITH BREVE; Zhebrevecyrillic
16917 \DeclareTextCompositeCommand{\U}{PU}{\CYRZH}{\84\301}% U+04C1
16918 % U+04C2 CYRILLIC SMALL LETTER ZHE WITH BREVE; zhebrevecyrillic
16919 \DeclareTextCompositeCommand{\U}{PU}{\cyrzh}{\84\302}% U+04C2
16920 % U+04C3 CYRILLIC CAPITAL LETTER KA WITH HOOK; Kahookcyrillic
16921 \DeclareTextCommand{\CYRKHK}{PU}{\84\303}% U+04C3
16922 % U+04C4 CYRILLIC SMALL LETTER KA WITH HOOK; kahookcyrillic
16923 \DeclareTextCommand{\cyrkhk}{PU}{\84\304}% U+04C4

16924 % U+04C5 CYRILLIC CAPITAL LETTER EL WITH TAIL
 16925 \DeclareTextCommand{\CYRLDSC}{PU}{\84\305}% U+04C5
 16926 % U+04C6 CYRILLIC SMALL LETTER EL WITH TAIL
 16927 \DeclareTextCommand{\cyrlDSC}{PU}{\84\306}% U+04C6
 16928 % U+04C7 CYRILLIC CAPITAL LETTER EN WITH HOOK; Enhookcyrillic
 16929 \DeclareTextCommand{\CYRNHK}{PU}{\84\307}% U+04C7
 16930 % U+04C8 CYRILLIC SMALL LETTER EN WITH HOOK; enhookcyrillic
 16931 \DeclareTextCommand{\cyrnhk}{PU}{\84\310}% U+04C8
 16932 % U+04CB CYRILLIC CAPITAL LETTER KHAKASSIAN CHE; Chekhakas-
 siancyrillic
 16933 \DeclareTextCommand{\CYRCHLDSC}{PU}{\84\313}% U+04CB
 16934 % U+04CC CYRILLIC SMALL LETTER KHAKASSIAN CHE; chekhakassian-
 cyrillic
 16935 \DeclareTextCommand{\cyrchldsc}{PU}{\84\314}% U+04CC
 16936 % U+04CD CYRILLIC CAPITAL LETTER EM WITH TAIL
 16937 \DeclareTextCommand{\CYRMDSC}{PU}{\84\315}% U+04CD
 16938 % U+04CE CYRILLIC SMALL LETTER EM WITH TAIL
 16939 \DeclareTextCommand{\cyrmdsc}{PU}{\84\316}% U+04CE
 \84\317: U+04CF CYRILLIC SMALL LETTER PALOCHKA
 16940 % U+04D0 CYRILLIC CAPITAL LETTER A WITH BREVE; Abrevecyrillic
 16941 \DeclareTextCompositeCommand{\U}{PU}{\CYRA}{\84\320}% U+04D0
 16942 % U+04D1 CYRILLIC SMALL LETTER A WITH BREVE; abrevecyrillic
 16943 \DeclareTextCompositeCommand{\U}{PU}{\cyra}{\84\321}% U+04D1
 16944 % U+04D2 CYRILLIC CAPITAL LETTER A WITH DIAERESIS; Adieresiscyril-
 lic
 16945 \DeclareTextCompositeCommand{\U}{PU}{\CYRA}{\84\322}% U+04D2
 16946 % U+04D3 CYRILLIC SMALL LETTER A WITH DIAERESIS; adieresiscyrillic
 16947 \DeclareTextCompositeCommand{\U}{PU}{\cyra}{\84\323}% U+04D3
 16948 % U+04D4 CYRILLIC CAPITAL LIGATURE A IE; Aiecyrillic
 16949 \DeclareTextCommand{\CYRAE}{PU}{\84\324}% U+04D4
 16950 % U+04D5 CYRILLIC SMALL LIGATURE A IE; aiecyrillic
 16951 \DeclareTextCommand{\cyrae}{PU}{\84\325}% U+04D5
 16952 % U+04D6 CYRILLIC CAPITAL LETTER IE WITH BREVE; Iebrevcyrillic
 16953 \DeclareTextCompositeCommand{\U}{PU}{\CYRE}{\84\326}% U+04D6
 16954 % U+04D7 CYRILLIC SMALL LETTER IE WITH BREVE; iebrevcyrillic
 16955 \DeclareTextCompositeCommand{\U}{PU}{\cyre}{\84\327}% U+04D7
 16956 % U+04D8 CYRILLIC CAPITAL LETTER SCHWA; Schwacyrillic
 16957 \DeclareTextCommand{\CYRSCHWA}{PU}{\84\330}% U+04D8
 16958 % U+04D9 CYRILLIC SMALL LETTER SCHWA; *afii10846, schwacyrillic
 16959 \DeclareTextCommand{\cyrswa}{PU}{\84\331}% U+04D9
 16960 % U+04DA CYRILLIC CAPITAL LETTER SCHWA WITH DIAERESIS;
 16961 % Schwadiescyrillic
 16962 \DeclareTextCompositeCommand{\U}{PU}{\CYRSCHWA}{\84\332}% U+04DA
 16963 % U+04DB CYRILLIC SMALL LETTER SCHWA WITH DIAERESIS;
 16964 % schwadiescyrillic
 16965 \DeclareTextCompositeCommand{\U}{PU}{\cyrswa}{\84\333}% U+04DB
 16966 % U+04DC CYRILLIC CAPITAL LETTER ZHE WITH DIAERESIS; Zhediere-
 siscyrillic
 16967 \DeclareTextCompositeCommand{\U}{PU}{\CYRZH}{\84\334}% U+04DC
 16968 % U+04DD CYRILLIC SMALL LETTER ZHE WITH DIAERESIS; zhedieresis-
 cyrillic
 16969 \DeclareTextCompositeCommand{\U}{PU}{\cyrzh}{\84\335}% U+04DD
 16970 % U+04DE CYRILLIC CAPITAL LETTER ZE WITH DIAERESIS; Zedieresis-
 cyrillic

16971 \DeclareTextCompositeCommand{"}{PU}{\CYRZ}{\84\336}% U+04DE
 16972 % U+04DF CYRILLIC SMALL LETTER ZE WITH DIAERESIS; zedieresiscyrillic
 16973 \DeclareTextCompositeCommand{"}{PU}{\cyrz}{\84\337}% U+04DF
 16974 % U+04E0 CYRILLIC CAPITAL LETTER ABKHASIAN DZE; Dzeabkhasian-cyrillic
 16975 \DeclareTextCommand{\CYRABHDZE}{PU}{\84\340}% U+04E0
 16976 % U+04E1 CYRILLIC SMALL LETTER ABKHASIAN DZE; dzeabkhasiancyrillic
 16977 \DeclareTextCommand{\cyrabhdze}{PU}{\84\341}% U+04E1
 16978 % U+04E2 CYRILLIC CAPITAL LETTER I WITH MACRON; Imacroncyrillic
 16979 \DeclareTextCompositeCommand{=} {PU}{\CYRI}{\84\342}% U+04E2
 16980 % U+04E3 CYRILLIC SMALL LETTER I WITH MACRON; imacroncyrillic
 16981 \DeclareTextCompositeCommand{=} {PU}{\cyri}{\84\343}% U+04E3
 16982 % U+04E4 CYRILLIC CAPITAL LETTER I WITH DIAERESIS; Idieresiscyrillic
 16983 \DeclareTextCompositeCommand{"}{PU}{\CYRI}{\84\344}% U+04E4
 16984 % U+04E5 CYRILLIC SMALL LETTER I WITH DIAERESIS; idieresiscyrillic
 16985 \DeclareTextCompositeCommand{"}{PU}{\cyri}{\84\345}% U+04E5
 16986 % U+04E6 CYRILLIC CAPITAL LETTER O WITH DIAERESIS; Odieresiscyrillic
 16987 \DeclareTextCompositeCommand{"}{PU}{\CYRO}{\84\346}% U+04E6
 16988 % U+04E7 CYRILLIC SMALL LETTER O WITH DIAERESIS; odieresiscyrillic
 16989 \DeclareTextCompositeCommand{"}{PU}{\cyro}{\84\347}% U+04E7
 16990 % U+04E8 CYRILLIC CAPITAL LETTER BARRED O; Obarredcyrillic
 16991 \DeclareTextCommand{\CYROTLD}{PU}{\84\350}% U+04E8
 16992 % U+04E9 CYRILLIC SMALL LETTER BARRED O; obarredcyrillic
 16993 \DeclareTextCommand{\cyrotld}{PU}{\84\351}% U+04E9
 16994 % U+04EA CYRILLIC CAPITAL LETTER BARRED O WITH DIAERESIS;
 16995 % Obarreddieresiscyrillic
 16996 \DeclareTextCompositeCommand{"}{PU}{\CYROTLD}{\84\352}% U+04EA
 16997 % U+04EB CYRILLIC SMALL LETTER BARRED O WITH DIAERESIS;
 16998 % obarreddieresiscyrillic
 16999 \DeclareTextCompositeCommand{"}{PU}{\cyrotld}{\84\353}% U+04EB
 17000 % U+04EC CYRILLIC CAPITAL LETTER E WITH DIAERESIS
 17001 \DeclareTextCompositeCommand{"}{PU}{\CYREREV}{\84\354}% U+04EC
 17002 % U+04ED CYRILLIC SMALL LETTER E WITH DIAERESIS
 17003 \DeclareTextCompositeCommand{"}{PU}{\cyreref}{\84\355}% U+04ED
 17004 % U+04EE CYRILLIC CAPITAL LETTER U WITH MACRON; Umacroncyrillic
 17005 \DeclareTextCompositeCommand{=} {PU}{\CYRU}{\84\356}% U+04EE
 17006 % U+04EF CYRILLIC SMALL LETTER U WITH MACRON; umacroncyrillic
 17007 \DeclareTextCompositeCommand{=} {PU}{\cyru}{\84\357}% U+04EF
 17008 % U+04F0 CYRILLIC CAPITAL LETTER U WITH DIAERESIS; Udieresiscyrillic
 17009 \DeclareTextCompositeCommand{"}{PU}{\CYRU}{\84\360}% U+04F0
 17010 % U+04F1 CYRILLIC SMALL LETTER U WITH DIAERESIS; udieresiscyrillic
 17011 \DeclareTextCompositeCommand{"}{PU}{\cyru}{\84\361}% U+04F1
 17012 % U+04F2 CYRILLIC CAPITAL LETTER U WITH DOUBLE ACUTE; Uhungarumlautcyrillic
 17013 \DeclareTextCompositeCommand{\H}{PU}{\CYRU}{\84\362}% U+04F2
 17014 % U+04F3 CYRILLIC SMALL LETTER U WITH DOUBLE ACUTE; uhungarumlautcyrillic
 17015 \DeclareTextCompositeCommand{\H}{PU}{\cyru}{\84\363}% U+04F3
 17016 % U+04F4 CYRILLIC CAPITAL LETTER CHE WITH DIAERESIS; Chedieresiscyrillic

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17017 \DeclareTextCompositeCommand{"}{PU}{\CYRCH}{\84\364}% U+04F4
17018 % U+04F5 CYRILLIC SMALL LETTER CHE WITH DIAERESIS; chedieresis-
      cyrillic
17019 \DeclareTextCompositeCommand{"}{PU}{\cyrch}{\84\365}% U+04F5
17020 % U+04F6 CYRILLIC CAPITAL LETTER GHE WITH DESCENDER
17021 \DeclareTextCommand{\CYRGDSC}{PU}{\84\366}% U+04F6
17022 % U+04F7 CYRILLIC SMALL LETTER GHE WITH DESCENDER
17023 \DeclareTextCommand{\cyrgdsc}{PU}{\84\367}% U+04F7
17024 % U+04F8 CYRILLIC CAPITAL LETTER YERU WITH DIAERESIS; Yerudiere-
      siscyrillic
17025 \DeclareTextCompositeCommand{"}{PU}{\CYRERY}{\84\370}% U+04F8
17026 % U+04F9 CYRILLIC SMALL LETTER YERU WITH DIAERESIS; yerudiere-
      siscyrillic
17027 \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
17028 % U+04FC CYRILLIC CAPITAL LETTER HA WITH HOOK
17029 \DeclareTextCommand{\CYRHHK}{PU}{\84\374}% U+04FC
17030 % U+04FD CYRILLIC SMALL LETTER HA WITH HOOK
17031 \DeclareTextCommand{\cyrhhk}{PU}{\84\375}% U+04FD
17032 \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

```

17033 \ifx\hebdalet\@undefined\else
17034 % U+05C3 HEBREW PUNCTUATION SOF PASUQ
17035 \DeclareTextCommand{\sofpasuq}{PU}{\85\303}% U+05C3
17036 % U+05D0 HEBREW LETTER ALEF
17037 \DeclareTextCommand{\hebalef}{PU}{\85\320}% U+05D0
17038 % U+05D1 HEBREW LETTER BET
17039 \DeclareTextCommand{\hebbet}{PU}{\85\321}% U+05D1
17040 % U+05D2 HEBREW LETTER GIMEL
17041 \DeclareTextCommand{\hebgimel}{PU}{\85\322}% U+05D2
17042 % U+05D3 HEBREW LETTER DALET
17043 \DeclareTextCommand{\hebdalet}{PU}{\85\323}% U+05D3
17044 % U+05D4 HEBREW LETTER HE
17045 \DeclareTextCommand{\hebhe}{PU}{\85\324}% U+05D4
17046 % U+05D5 HEBREW LETTER VAV
17047 \DeclareTextCommand{\hebvav}{PU}{\85\325}% U+05D5
17048 % U+05D6 HEBREW LETTER ZAYIN
17049 \DeclareTextCommand{\hebzayin}{PU}{\85\326}% U+05D6
17050 % U+05D7 HEBREW LETTER HET
17051 \DeclareTextCommand{\hebheth}{PU}{\85\327}% U+05D7
17052 % U+05D8 HEBREW LETTER TET
17053 \DeclareTextCommand{\hebtet}{PU}{\85\330}% U+05D8
17054 % U+05D9 HEBREW LETTER YOD

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17055 \DeclareTextCommand{\hebyod}{PU}{\85\331}% U+05D9
 17056 % U+05DA HEBREW LETTER FINAL KAF
 17057 \DeclareTextCommand{\hebfinalkaf}{PU}{\85\332}% U+05DA
 17058 % U+05DB HEBREW LETTER KAF
 17059 \DeclareTextCommand{\hebkafe}{PU}{\85\333}% U+05DB
 17060 % U+05DC HEBREW LETTER LAMED
 17061 \DeclareTextCommand{\heblamed}{PU}{\85\334}% U+05DC
 17062 % U+05DD HEBREW LETTER FINAL MEM
 17063 \DeclareTextCommand{\hebfinalmem}{PU}{\85\335}% U+05DD
 17064 % U+05DE HEBREW LETTER MEM
 17065 \DeclareTextCommand{\hebmem}{PU}{\85\336}% U+05DE
 17066 % U+05DF HEBREW LETTER FINAL NUN
 17067 \DeclareTextCommand{\hebfinalnun}{PU}{\85\337}% U+05DF
 17068 % U+05E0 HEBREW LETTER NUN
 17069 \DeclareTextCommand{\hebnun}{PU}{\85\340}% U+05E0
 17070 % U+05E1 HEBREW LETTER SAMEKH
 17071 \DeclareTextCommand{\hebsamekh}{PU}{\85\341}% U+05E1
 17072 % U+05E2 HEBREW LETTER AYIN
 17073 \DeclareTextCommand{\hebayin}{PU}{\85\342}% U+05E2
 17074 % U+05E3 HEBREW LETTER FINAL PE
 17075 \DeclareTextCommand{\hebfinalpe}{PU}{\85\343}% U+05E3
 17076 % U+05E4 HEBREW LETTER PE
 17077 \DeclareTextCommand{\hebpe}{PU}{\85\344}% U+05E4
 17078 % U+05E5 HEBREW LETTER FINAL TSADI
 17079 \DeclareTextCommand{\hebfinaltsadi}{PU}{\85\345}% U+05E5
 17080 % U+05E6 HEBREW LETTER TSADI
 17081 \DeclareTextCommand{\hebtsadi}{PU}{\85\346}% U+05E6
 17082 % U+05E7 HEBREW LETTER QOF
 17083 \DeclareTextCommand{\hebqof}{PU}{\85\347}% U+05E7
 17084 % U+05E8 HEBREW LETTER RESH
 17085 \DeclareTextCommand{\hebresh}{PU}{\85\350}% U+05E8
 17086 % U+05E9 HEBREW LETTER SHIN
 17087 \DeclareTextCommand{\hebshin}{PU}{\85\351}% U+05E9
 17088 %* \hebshin -> \hebsin (he8)
 17089 % U+05EA HEBREW LETTER TAV
 17090 \DeclareTextCommand{\hebtav}{PU}{\85\352}% U+05EA
 17091 % U+05F0 HEBREW LIGATURE YIDDISH DOUBLE VAV
 17092 \DeclareTextCommand{\doublevav}{PU}{\85\360}% U+05F0
 17093 % U+05F1 HEBREW LIGATURE YIDDISH VAV YOD
 17094 \DeclareTextCommand{\vavyod}{PU}{\85\361}% U+05F1
 17095 % U+05F2 HEBREW LIGATURE YIDDISH DOUBLE YOD
 17096 \DeclareTextCommand{\doubleyod}{PU}{\85\362}% U+05F2
 17097 \fi

46.2.12 Thai: U+0E00 to U+0E7F

17098 % U+0E3F THAI CURRENCY SYMBOL BAHT; bahtthai
 17099 \DeclareTextCommand{\textbaht}{PU}{\9016\077}% U+0E3F

46.2.13 Phonetic Extensions: U+1D00 to U+1D7F

17100 % U+1D00 LATIN LETTER SMALL CAPITAL A; \textsca (tipa)
 17101 \DeclareTextCommand{\textsca}{PU}{\9035\000}% U+1D00
 17102 % U+1D05 LATIN LETTER SMALL CAPITAL D; \scd (wsuipa)
 17103 \DeclareTextCommand{\textscd}{PU}{\9035\005}% U+1D05

17104 % U+1D07 LATIN LETTER SMALL CAPITAL E; \textsce (tipa)
 17105 \DeclareTextCommand{\textsce}{PU}{\9035\007}% U+1D07
 17106 % U+1D0A LATIN LETTER SMALL CAPITAL J; \textscj (tipa)
 17107 \DeclareTextCommand{\textscj}{PU}{\9035\012}% U+1D0A
 17108 % U+1D0B LATIN LETTER SMALL CAPITAL K; \textsck (tipx)
 17109 \DeclareTextCommand{\textPUsck}{PU}{\9035\013}% U+1D0B
 17110 %* \textPUsck -> \textsck (tipx)
 17111 % U+1D0D LATIN LETTER SMALL CAPITAL M; \textscm (tipx)
 17112 \DeclareTextCommand{\textPUscm}{PU}{\9035\015}% U+1D0D
 17113 %* \textPUscm -> \textscm (tipx)
 17114 % U+1D18 LATIN LETTER SMALL CAPITAL P; \textscp (tipx)
 17115 \DeclareTextCommand{\textPUscp}{PU}{\9035\030}% U+1D18
 17116 %* \textPUscp -> \textscp (tipx)
 17117 % U+1D19 LATIN LETTER SMALL CAPITAL REVERSED R; \textrevscr (tipx)
 17118 \DeclareTextCommand{\textPUrevscr}{PU}{\9035\031}% U+1D19
 17119 %* \textPUrevscr -> \textrevscr (tipx)
 17120 % U+1D1C LATIN LETTER SMALL CAPITAL U; \textscu (tipa), \scu (wsuipa)
 17121 \DeclareTextCommand{\textscu}{PU}{\9035\034}%* U+1D1C
 17122 % U+1D62 LATIN SUBSCRIPT SMALL LETTER I
 17123 \DeclareTextCommand{\textiinferior}{PU}{\9035\142}%* U+1D62
 17124 % U+1D63 LATIN SUBSCRIPT SMALL LETTER R
 17125 \DeclareTextCommand{\textrinferior}{PU}{\9035\143}%* U+1D63
 17126 % U+1D64 LATIN SUBSCRIPT SMALL LETTER U
 17127 \DeclareTextCommand{\textuinferior}{PU}{\9035\144}%* U+1D64
 17128 % U+1D65 LATIN SUBSCRIPT SMALL LETTER V
 17129 \DeclareTextCommand{\textvinferior}{PU}{\9035\145}%* U+1D65
 17130 % U+1D66 GREEK SUBSCRIPT SMALL LETTER BETA
 17131 \DeclareTextCommand{\textbetainferior}{PU}{\9035\146}%* U+1D66
 17132 % U+1D67 GREEK SUBSCRIPT SMALL LETTER GAMMA
 17133 \DeclareTextCommand{\textgammainferior}{PU}{\9035\147}%* U+1D67
 17134 % U+1D68 GREEK SUBSCRIPT SMALL LETTER RHO
 17135 \DeclareTextCommand{\textrhoinferior}{PU}{\9035\150}%* U+1D68
 17136 % U+1D69 GREEK SUBSCRIPT SMALL LETTER PHI
 17137 \DeclareTextCommand{\textphiinferior}{PU}{\9035\151}%* U+1D69
 17138 % U+1D6A GREEK SUBSCRIPT SMALL LETTER CHI
 17139 \DeclareTextCommand{\textchiinferior}{PU}{\9035\152}%* U+1D6A
 17140 % U+1D7B LATIN SMALL CAPITAL LETTER I WITH STROKE;
 17141 % \barsci (wsuipa)
 17142 \DeclareTextCommand{\textbarsci}{PU}{\9035\173}%* U+1D7B
 17143 % U+1D7D LATIN SMALL LETTER P WITH STROKE; \barp (wsuipa)
 17144 \DeclareTextCommand{\textbarp}{PU}{\9035\175}%* U+1D7D
 17145 % U+1D7E LATIN SMALL CAPITAL LETTER U WITH STROKE;
 17146 % \barscu (wsuipa)
 17147 \DeclareTextCommand{\textbarscu}{PU}{\9035\176}%* U+1D7E

46.2.14 Phonetic Extensions Supplement: U+1D80 to U+1DBF

17148 % U+1D8F LATIN SMALL LETTER A WITH RETROFLEX HOOK; \tex-
 trhooka (tipx)
 17149 \DeclareTextCommand{\textPUrhooka}{PU}{\9035\217}% U+1D8F
 17150 %* \textPUrhooka -> \textrhooka (tipx)
 17151 % U+1D91 LATIN SMALL LETTER D WITH HOOK AND TAIL; \texthtr-
 taild (tipa)
 17152 \DeclareTextCommand{\texthtrtaild}{PU}{\9035\221}%* U+1D91
 17153 % U+1D92 LATIN SMALL LETTER E WITH RETROFLEX HOOK; \tex-

trhook (tipx)
17154 \DeclareTextCommand{\textPurhook}{PU}{\9035\222}% U+1D92
17155 %* \textPurhook -> \textrhook (tipx)
17156 % U+1D93 LATIN SMALL LETTER OPEN E WITH RETROFLEX HOOK;
17157 % \textrhookepsilon (tipx)
17158 \DeclareTextCommand{\textPurhookepsilon}{PU}{\9035\223}% U+1D93
17159 %* \textPurhookepsilon -> \textrhookepsilon (tipx)
17160 % U+1D97 LATIN SMALL LETTER OPEN O WITH RETROFLEX HOOK;
17161 % \textrhookopeno (tipx)
17162 \DeclareTextCommand{\textPurhookopeno}{PU}{\9035\227}% U+1D97
17163 %* \textPurhookopeno -> \textrhookopeno (tipx)

46.2.15 Latin Extended Additional: U+1E00 to U+1EFF

17164 % U+1E00 LATIN CAPITAL LETTER A WITH RING BELOW; Aringbelow
17165 \DeclareTextCompositeCommand{\textsubring}{PU}{A}{\9036\000}% U+1E00
17166 % U+1E01 LATIN SMALL LETTER A WITH RING BELOW; aringbelow
17167 \DeclareTextCompositeCommand{\textsubring}{PU}{a}{\9036\001}% U+1E01
17168 % U+1E02 LATIN CAPITAL LETTER B WITH DOT ABOVE; Bdotaccent
17169 \DeclareTextCompositeCommand{\.}{PU}{B}{\9036\002}% U+1E02
17170 % U+1E03 LATIN SMALL LETTER B WITH DOT ABOVE; bdotaccent
17171 \DeclareTextCompositeCommand{\.}{PU}{b}{\9036\003}% U+1E03
17172 % U+1E04 LATIN CAPITAL LETTER B WITH DOT BELOW; Bdotbelow
17173 \DeclareTextCompositeCommand{\d}{PU}{B}{\9036\004}% U+1E04
17174 % U+1E05 LATIN SMALL LETTER B WITH DOT BELOW; bdotbelow
17175 \DeclareTextCompositeCommand{\d}{PU}{b}{\9036\005}% U+1E05
17176 % U+1E06 LATIN CAPITAL LETTER B WITH LINE BELOW; Blinebelow
17177 \DeclareTextCompositeCommand{\b}{PU}{B}{\9036\006}% U+1E06
17178 % U+1E07 LATIN SMALL LETTER B WITH LINE BELOW; blinebelow
17179 \DeclareTextCompositeCommand{\b}{PU}{b}{\9036\007}% U+1E07
17180 % U+1E0A LATIN CAPITAL LETTER D WITH DOT ABOVE; Ddotaccent
17181 \DeclareTextCompositeCommand{\.}{PU}{D}{\9036\012}% U+1E0A
17182 % U+1E0B LATIN SMALL LETTER D WITH DOT ABOVE; ddotaccent
17183 \DeclareTextCompositeCommand{\.}{PU}{d}{\9036\013}% U+1E0B
17184 % U+1E0C LATIN CAPITAL LETTER D WITH DOT BELOW; Ddotbelow
17185 \DeclareTextCompositeCommand{\d}{PU}{D}{\9036\014}% U+1E0C
17186 % U+1E0D LATIN SMALL LETTER D WITH DOT BELOW; ddotbelow
17187 \DeclareTextCompositeCommand{\d}{PU}{d}{\9036\015}% U+1E0D
17188 % U+1E0E LATIN CAPITAL LETTER D WITH LINE BELOW; Dlinebelow
17189 \DeclareTextCompositeCommand{\b}{PU}{D}{\9036\016}% U+1E0E
17190 % U+1E0F LATIN SMALL LETTER D WITH LINE BELOW; dlinebelow
17191 \DeclareTextCompositeCommand{\b}{PU}{d}{\9036\017}% U+1E0F
17192 % U+1E10 LATIN CAPITAL LETTER D WITH CEDILLA; Dcedilla
17193 \DeclareTextCompositeCommand{\c}{PU}{D}{\9036\020}% U+1E10
17194 % U+1E11 LATIN SMALL LETTER D WITH CEDILLA; dcedilla
17195 \DeclareTextCompositeCommand{\c}{PU}{d}{\9036\021}% U+1E11
17196 % U+1E12 LATIN CAPITAL LETTER D WITH CIRCUMFLEX BELOW; Dcir-
cumflexbelow
17197 \DeclareTextCompositeCommand{\textsubcircum}{PU}{D}{\9036\022}% U+1E12
17198 % U+1E13 LATIN SMALL LETTER D WITH CIRCUMFLEX BELOW; dcir-
cumflexbelow
17199 \DeclareTextCompositeCommand{\textsubcircum}{PU}{d}{\9036\023}% U+1E13
17200 % U+1E14 LATIN CAPITAL LETTER E WITH MACRON AND GRAVE;
17201 % Emacrongrave
17202 \DeclareTextCompositeCommand{\textgravemacron}{PU}{E}{\9036\024}% U+1E14

17203 % U+1E15 LATIN SMALL LETTER E WITH MACRON AND GRAVE;
17204 % `emacrongrave`
17205 \DeclareTextCompositeCommand{\textgravemacron}{PU}{e}{\9036\025}% U+1E15
17206 % U+1E16 LATIN CAPITAL LETTER E WITH MACRON AND ACUTE;
17207 % `Emacronacute`
17208 \DeclareTextCompositeCommand{\textacutemacron}{PU}{E}{\9036\026}% U+1E16
17209 % U+1E17 LATIN SMALL LETTER E WITH MACRON AND ACUTE;
17210 % `emacronacute`
17211 \DeclareTextCompositeCommand{\textacutemacron}{PU}{e}{\9036\027}% U+1E17
17212 % U+1E18 LATIN CAPITAL LETTER E WITH CIRCUMFLEX BELOW; `Ecir-`
 `cumflexbelow`
17213 \DeclareTextCompositeCommand{\textsubcircum}{PU}{E}{\9036\030}% U+1E18
17214 % U+1E19 LATIN SMALL LETTER E WITH CIRCUMFLEX BELOW; `ecir-`
 `cumflexbelow`
17215 \DeclareTextCompositeCommand{\textsubcircum}{PU}{e}{\9036\031}% U+1E19
17216 % U+1E1A LATIN CAPITAL LETTER E WITH TILDE BELOW; `Etildebelow`
17217 \DeclareTextCompositeCommand{\textsubtilde}{PU}{E}{\9036\032}% U+1E1A
17218 % U+1E1B LATIN SMALL LETTER E WITH TILDE BELOW; `etildebelow`
17219 \DeclareTextCompositeCommand{\textsubtilde}{PU}{e}{\9036\033}% U+1E1B
17220 % U+1E1E LATIN CAPITAL LETTER F WITH DOT ABOVE; `Fdotaccent`
17221 \DeclareTextCompositeCommand{\.}{PU}{F}{\9036\036}% U+1E1E
17222 % U+1E1F LATIN SMALL LETTER F WITH DOT ABOVE; `fdotaccent`
17223 \DeclareTextCompositeCommand{\.}{PU}{f}{\9036\037}% U+1E1F
17224 % U+1E20 LATIN CAPITAL LETTER G WITH MACRON; `Gmacron`
17225 \DeclareTextCompositeCommand{=} {PU}{G}{\9036\040}% U+1E20
17226 % U+1E21 LATIN SMALL LETTER G WITH MACRON; `gmacron`
17227 \DeclareTextCompositeCommand{=} {PU}{g}{\9036\041}% U+1E21
17228 % U+1E22 LATIN CAPITAL LETTER H WITH DOT ABOVE; `Hdotaccent`
17229 \DeclareTextCompositeCommand{\.}{PU}{H}{\9036\042}% U+1E22
17230 % U+1E23 LATIN SMALL LETTER H WITH DOT ABOVE; `hdotaccent`
17231 \DeclareTextCompositeCommand{\.}{PU}{h}{\9036\043}% U+1E23
17232 % U+1E24 LATIN CAPITAL LETTER H WITH DOT BELOW; `Hdotbelow`
17233 \DeclareTextCompositeCommand{\d}{PU}{H}{\9036\044}% U+1E24
17234 % U+1E25 LATIN SMALL LETTER H WITH DOT BELOW; `hdotbelow`
17235 \DeclareTextCompositeCommand{\d}{PU}{h}{\9036\045}% U+1E25
17236 % U+1E26 LATIN CAPITAL LETTER H WITH DIAERESIS; `Hdieresis`
17237 \DeclareTextCompositeCommand{"}{PU}{H}{\9036\046}% U+1E26
17238 % U+1E27 LATIN SMALL LETTER H WITH DIAERESIS; `hdieresis`
17239 \DeclareTextCompositeCommand{"}{PU}{h}{\9036\047}% U+1E27
17240 % U+1E28 LATIN CAPITAL LETTER H WITH CEDILLA; `Hcedilla`
17241 \DeclareTextCompositeCommand{\c}{PU}{H}{\9036\050}% U+1E28
17242 % U+1E29 LATIN SMALL LETTER H WITH CEDILLA; `hcedilla`
17243 \DeclareTextCompositeCommand{\c}{PU}{h}{\9036\051}% U+1E29
17244 % U+1E2A LATIN CAPITAL LETTER H WITH BREVE BELOW; `Hbrevebelow`
17245 \DeclareTextCompositeCommand{\textsubbreve}{PU}{H}{\9036\052}% U+1E2A
17246 % U+1E2B LATIN SMALL LETTER H WITH BREVE BELOW; `hbrevebelow`
17247 \DeclareTextCompositeCommand{\textsubbreve}{PU}{h}{\9036\053}% U+1E2B
17248 % U+1E2C LATIN CAPITAL LETTER I WITH TILDE BELOW; `Itildebelow`
17249 \DeclareTextCompositeCommand{\textsubtilde}{PU}{I}{\9036\054}% U+1E2C
17250 % U+1E2D LATIN SMALL LETTER I WITH TILDE BELOW; `itildebelow`
17251 \DeclareTextCompositeCommand{\textsubtilde}{PU}{i}{\9036\055}% U+1E2D
17252 % U+1E30 LATIN CAPITAL LETTER K WITH ACUTE; `Kacute`
17253 \DeclareTextCompositeCommand{'}{PU}{K}{\9036\060}% U+1E30
17254 % U+1E31 LATIN SMALL LETTER K WITH ACUTE; `kacute`

17255 \DeclareTextCompositeCommand{\'}{PU}{k}{\9036\061}% U+1E31
17256 % U+1E32 LATIN CAPITAL LETTER K WITH DOT BELOW; Kdotbelow
17257 \DeclareTextCompositeCommand{\d}{PU}{K}{\9036\062}% U+1E32
17258 % U+1E33 LATIN SMALL LETTER K WITH DOT BELOW; kdotbelow
17259 \DeclareTextCompositeCommand{\d}{PU}{k}{\9036\063}% U+1E33
17260 % U+1E34 LATIN CAPITAL LETTER K WITH LINE BELOW; Klinebelow
17261 \DeclareTextCompositeCommand{\b}{PU}{K}{\9036\064}% U+1E34
17262 % U+1E35 LATIN SMALL LETTER K WITH LINE BELOW; klinebelow
17263 \DeclareTextCompositeCommand{\b}{PU}{k}{\9036\065}% U+1E35
17264 % U+1E36 LATIN CAPITAL LETTER L WITH DOT BELOW; Ldotbelow
17265 \DeclareTextCompositeCommand{\d}{PU}{L}{\9036\066}% U+1E36
17266 % U+1E37 LATIN SMALL LETTER L WITH DOT BELOW; ldotbelow
17267 \DeclareTextCompositeCommand{\d}{PU}{l}{\9036\067}% U+1E37
17268 % U+1E3A LATIN CAPITAL LETTER L WITH LINE BELOW; Llinebelow
17269 \DeclareTextCompositeCommand{\b}{PU}{L}{\9036\072}% U+1E3A
17270 % U+1E3B LATIN SMALL LETTER L WITH LINE BELOW; llinebelow
17271 \DeclareTextCompositeCommand{\b}{PU}{l}{\9036\073}% U+1E3B
17272 % U+1E3C LATIN CAPITAL LETTER L WITH CIRCUMFLEX BELOW; Lcir-
cumflexbelow
17273 \DeclareTextCompositeCommand{\textsubcircum}{PU}{L}{\9036\074}% U+1E3C
17274 % U+1E3D LATIN SMALL LETTER L WITH CIRCUMFLEX BELOW; lcir-
cumflexbelow
17275 \DeclareTextCompositeCommand{\textsubcircum}{PU}{l}{\9036\075}% U+1E3D
17276 % U+1E3E LATIN CAPITAL LETTER M WITH ACUTE; Macute
17277 \DeclareTextCompositeCommand{\'}{PU}{M}{\9036\076}% U+1E3E
17278 % U+1E3F LATIN SMALL LETTER M WITH ACUTE; macute
17279 \DeclareTextCompositeCommand{\'}{PU}{m}{\9036\077}% U+1E3F
17280 % U+1E40 LATIN CAPITAL LETTER M WITH DOT ABOVE; Mdotaccent
17281 \DeclareTextCompositeCommand{\.}{PU}{M}{\9036\100}% U+1E40
17282 % U+1E41 LATIN SMALL LETTER M WITH DOT ABOVE; mdotaccent
17283 \DeclareTextCompositeCommand{\.}{PU}{m}{\9036\101}% U+1E41
17284 % U+1E42 LATIN CAPITAL LETTER M WITH DOT BELOW; Mdotbelow
17285 \DeclareTextCompositeCommand{\d}{PU}{M}{\9036\102}% U+1E42
17286 % U+1E43 LATIN SMALL LETTER M WITH DOT BELOW; mdotbelow
17287 \DeclareTextCompositeCommand{\d}{PU}{m}{\9036\103}% U+1E43
17288 % U+1E44 LATIN CAPITAL LETTER N WITH DOT ABOVE; Ndotaccent
17289 \DeclareTextCompositeCommand{\.}{PU}{N}{\9036\104}% U+1E44
17290 % U+1E45 LATIN SMALL LETTER N WITH DOT ABOVE; ndotaccent
17291 \DeclareTextCompositeCommand{\.}{PU}{n}{\9036\105}% U+1E45
17292 % U+1E46 LATIN CAPITAL LETTER N WITH DOT BELOW; Ndotbelow
17293 \DeclareTextCompositeCommand{\d}{PU}{N}{\9036\106}% U+1E46
17294 % U+1E47 LATIN SMALL LETTER N WITH DOT BELOW; ndotbelow
17295 \DeclareTextCompositeCommand{\d}{PU}{n}{\9036\107}% U+1E47
17296 % U+1E48 LATIN CAPITAL LETTER N WITH LINE BELOW; Nlinebelow
17297 \DeclareTextCompositeCommand{\b}{PU}{N}{\9036\110}% U+1E48
17298 % U+1E49 LATIN SMALL LETTER N WITH LINE BELOW; nlinebelow
17299 \DeclareTextCompositeCommand{\b}{PU}{n}{\9036\111}% U+1E49
17300 % U+1E4A LATIN CAPITAL LETTER N WITH CIRCUMFLEX BELOW; Ncir-
cumflexbelow
17301 \DeclareTextCompositeCommand{\textsubcircum}{PU}{N}{\9036\112}% U+1E4A
17302 % U+1E4B LATIN SMALL LETTER N WITH CIRCUMFLEX BELOW; ncir-
cumflexbelow
17303 \DeclareTextCompositeCommand{\textsubcircum}{PU}{n}{\9036\113}% U+1E4B
17304 % U+1E50 LATIN CAPITAL LETTER O WITH MACRON AND GRAVE;

17305 % Omacrongrave
17306 \DeclareTextCompositeCommand{\textgravemacron}{PU}{O}{\9036\120}% U+1E50
17307 % U+1E51 LATIN SMALL LETTER O WITH MACRON AND GRAVE;
17308 % omacrongrave
17309 \DeclareTextCompositeCommand{\textgravemacron}{PU}{o}{\9036\121}% U+1E51
17310 % U+1E52 LATIN CAPITAL LETTER O WITH MACRON AND ACUTE;
17311 % Omacronacute
17312 \DeclareTextCompositeCommand{\textacutemacron}{PU}{O}{\9036\122}% U+1E52
17313 % U+1E53 LATIN SMALL LETTER O WITH MACRON AND ACUTE;
17314 % omacronacute
17315 \DeclareTextCompositeCommand{\textacutemacron}{PU}{o}{\9036\123}% U+1E53
17316 % U+1E54 LATIN CAPITAL LETTER P WITH ACUTE; Pacute
17317 \DeclareTextCompositeCommand{\'}{PU}{P}{\9036\124}% U+1E54
17318 % U+1E55 LATIN SMALL LETTER P WITH ACUTE; pacute
17319 \DeclareTextCompositeCommand{\'}{PU}{p}{\9036\125}% U+1E55
17320 % U+1E56 LATIN CAPITAL LETTER P WITH DOT ABOVE; Pdotaccent
17321 \DeclareTextCompositeCommand{\.}{PU}{P}{\9036\126}% U+1E56
17322 % U+1E57 LATIN SMALL LETTER P WITH DOT ABOVE; pdotaccent
17323 \DeclareTextCompositeCommand{\.}{PU}{p}{\9036\127}% U+1E57
17324 % U+1E58 LATIN CAPITAL LETTER R WITH DOT ABOVE; Rdotaccent
17325 \DeclareTextCompositeCommand{\.}{PU}{R}{\9036\130}% U+1E58
17326 % U+1E59 LATIN SMALL LETTER R WITH DOT ABOVE; rdotaccent
17327 \DeclareTextCompositeCommand{\.}{PU}{r}{\9036\131}% U+1E59
17328 % U+1E5A LATIN CAPITAL LETTER R WITH DOT BELOW; Rdotbelow
17329 \DeclareTextCompositeCommand{\d}{PU}{R}{\9036\132}% U+1E5A
17330 % U+1E5B LATIN SMALL LETTER R WITH DOT BELOW; rdotbelow
17331 \DeclareTextCompositeCommand{\d}{PU}{r}{\9036\133}% U+1E5B
17332 % U+1E5E LATIN CAPITAL LETTER R WITH LINE BELOW; Rlinebelow
17333 \DeclareTextCompositeCommand{\b}{PU}{R}{\9036\136}% U+1E5E
17334 % U+1E5F LATIN SMALL LETTER R WITH LINE BELOW; rlinebelow
17335 \DeclareTextCompositeCommand{\b}{PU}{r}{\9036\137}% U+1E5F
17336 % U+1E60 LATIN CAPITAL LETTER S WITH DOT ABOVE; Sdotaccent
17337 \DeclareTextCompositeCommand{\.}{PU}{S}{\9036\140}% U+1E60
17338 % U+1E61 LATIN SMALL LETTER S WITH DOT ABOVE; sdotaccent
17339 \DeclareTextCompositeCommand{\.}{PU}{s}{\9036\141}% U+1E61
17340 % U+1E62 LATIN CAPITAL LETTER S WITH DOT BELOW; Sdotbelow
17341 \DeclareTextCompositeCommand{\d}{PU}{S}{\9036\142}% U+1E62
17342 % U+1E63 LATIN SMALL LETTER S WITH DOT BELOW; sdotbelow
17343 \DeclareTextCompositeCommand{\d}{PU}{s}{\9036\143}% U+1E63
17344 % U+1E6A LATIN CAPITAL LETTER T WITH DOT ABOVE; Tdotaccent
17345 \DeclareTextCompositeCommand{\.}{PU}{T}{\9036\152}% U+1E6A
17346 % U+1E6B LATIN SMALL LETTER T WITH DOT ABOVE; tdotaccent
17347 \DeclareTextCompositeCommand{\.}{PU}{t}{\9036\153}% U+1E6B
17348 % U+1E6C LATIN CAPITAL LETTER T WITH DOT BELOW; Tdotbelow
17349 \DeclareTextCompositeCommand{\d}{PU}{T}{\9036\154}% U+1E6C
17350 % U+1E6D LATIN SMALL LETTER T WITH DOT BELOW; tdotbelow
17351 \DeclareTextCompositeCommand{\d}{PU}{t}{\9036\155}% U+1E6D
17352 % U+1E6E LATIN CAPITAL LETTER T WITH LINE BELOW; Tlinebelow
17353 \DeclareTextCompositeCommand{\b}{PU}{T}{\9036\156}% U+1E6E
17354 % U+1E6F LATIN SMALL LETTER T WITH LINE BELOW; tlinebelow
17355 \DeclareTextCompositeCommand{\b}{PU}{t}{\9036\157}% U+1E6F
17356 % U+1E70 LATIN CAPITAL LETTER T WITH CIRCUMFLEX BELOW; Tcir-
cumflexbelow
17357 \DeclareTextCompositeCommand{\textsubcircum}{PU}{T}{\9036\160}% U+1E70

17358 % U+1E71 LATIN SMALL LETTER T WITH CIRCUMFLEX BELOW; tcircumflexbelow
 17359 \DeclareTextCompositeCommand{\textsubcircum}{PU}{t}{\9036\161}% U+1E71
 17360 % U+1E72 LATIN CAPITAL LETTER U WITH DIAERESIS BELOW; Udiere-
 sisbelow
 17361 \DeclareTextCompositeCommand{\textsubumlaut}{PU}{U}{\9036\162}% U+1E72
 17362 % U+1E73 LATIN SMALL LETTER U WITH DIAERESIS BELOW; udiere-
 sisbelow
 17363 \DeclareTextCompositeCommand{\textsubumlaut}{PU}{u}{\9036\163}% U+1E73
 17364 % U+1E74 LATIN CAPITAL LETTER U WITH TILDE BELOW; Utildebelow
 17365 \DeclareTextCompositeCommand{\textsubtilde}{PU}{U}{\9036\164}% U+1E74
 17366 % U+1E75 LATIN SMALL LETTER U WITH TILDE BELOW; utildebelow
 17367 \DeclareTextCompositeCommand{\textsubtilde}{PU}{u}{\9036\165}% U+1E75
 17368 % U+1E76 LATIN CAPITAL LETTER U WITH CIRCUMFLEX BELOW; Ucir-
 cumflexbelow
 17369 \DeclareTextCompositeCommand{\textsubcircum}{PU}{U}{\9036\166}% U+1E76
 17370 % U+1E77 LATIN SMALL LETTER U WITH CIRCUMFLEX BELOW; ucir-
 cumflexbelow
 17371 \DeclareTextCompositeCommand{\textsubcircum}{PU}{u}{\9036\167}% U+1E77
 17372 % U+1E7C LATIN CAPITAL LETTER V WITH TILDE; Vtilde
 17373 \DeclareTextCompositeCommand{\~}{PU}{V}{\9036\174}% U+1E7C
 17374 % U+1E7D LATIN SMALL LETTER V WITH TILDE; vtilde
 17375 \DeclareTextCompositeCommand{\~}{PU}{v}{\9036\175}% U+1E7D
 17376 % U+1E7E LATIN CAPITAL LETTER V WITH DOT BELOW; Vdotbelow
 17377 \DeclareTextCompositeCommand{\d}{PU}{V}{\9036\176}% U+1E7E
 17378 % U+1E7F LATIN SMALL LETTER V WITH DOT BELOW; vdotbelow
 17379 \DeclareTextCompositeCommand{\d}{PU}{v}{\9036\177}% U+1E7F
 17380 % U+1E80 LATIN CAPITAL LETTER W WITH GRAVE; Wgrave
 17381 \DeclareTextCompositeCommand{\`}{PU}{W}{\9036\200}% U+1E80
 17382 % U+1E81 LATIN SMALL LETTER W WITH GRAVE; wgrave
 17383 \DeclareTextCompositeCommand{\`}{PU}{w}{\9036\201}% U+1E81
 17384 % U+1E82 LATIN CAPITAL LETTER W WITH ACUTE; Wacute
 17385 \DeclareTextCompositeCommand{\'}{PU}{W}{\9036\202}% U+1E82
 17386 % U+1E83 LATIN SMALL LETTER W WITH ACUTE; wacute
 17387 \DeclareTextCompositeCommand{\'}{PU}{w}{\9036\203}% U+1E83
 17388 % U+1E84 LATIN CAPITAL LETTER W WITH DIAERESIS; Wdieresis
 17389 \DeclareTextCompositeCommand{\"}{PU}{W}{\9036\204}% U+1E84
 17390 % U+1E85 LATIN SMALL LETTER W WITH DIAERESIS; wdieresis
 17391 \DeclareTextCompositeCommand{\"}{PU}{w}{\9036\205}% U+1E85
 17392 % U+1E86 LATIN CAPITAL LETTER W WITH DOT ABOVE; Wdotaccent
 17393 \DeclareTextCompositeCommand{\.}{PU}{W}{\9036\206}% U+1E86
 17394 % U+1E87 LATIN SMALL LETTER W WITH DOT ABOVE; wdotaccent
 17395 \DeclareTextCompositeCommand{\.}{PU}{w}{\9036\207}% U+1E87
 17396 % U+1E88 LATIN CAPITAL LETTER W WITH DOT BELOW; wdotbelow
 17397 \DeclareTextCompositeCommand{\d}{PU}{W}{\9036\210}% U+1E88
 17398 % U+1E89 LATIN SMALL LETTER W WITH DOT BELOW; wdotbelow
 17399 \DeclareTextCompositeCommand{\d}{PU}{w}{\9036\211}% U+1E89
 17400 % U+1E8A LATIN CAPITAL LETTER X WITH DOT ABOVE; Xdotaccent
 17401 \DeclareTextCompositeCommand{\.}{PU}{X}{\9036\212}% U+1E8A
 17402 % U+1E8B LATIN SMALL LETTER X WITH DOT ABOVE; xdotaccent
 17403 \DeclareTextCompositeCommand{\.}{PU}{x}{\9036\213}% U+1E8B
 17404 % U+1E8C LATIN CAPITAL LETTER X WITH DIAERESIS; Xdieresis
 17405 \DeclareTextCompositeCommand{\"}{PU}{X}{\9036\214}% U+1E8C
 17406 % U+1E8D LATIN SMALL LETTER X WITH DIAERESIS; xdieresis

17407 \DeclareTextCompositeCommand{\x}{\PU}{x}{\9036\215}% U+1E8D
17408 % U+1E8E LATIN CAPITAL LETTER Y WITH DOT ABOVE; Ydotaccent
17409 \DeclareTextCompositeCommand{\Y}{\PU}{Y}{\9036\216}% U+1E8E
17410 % U+1E8F LATIN SMALL LETTER Y WITH DOT ABOVE; ydotaccent
17411 \DeclareTextCompositeCommand{\y}{\PU}{y}{\9036\217}% U+1E8F
17412 % U+1E90 LATIN CAPITAL LETTER Z WITH CIRCUMFLEX; Zcircumflex
17413 \DeclareTextCompositeCommand{\Z}{\PU}{Z}{\9036\220}% U+1E90
17414 % U+1E91 LATIN SMALL LETTER Z WITH CIRCUMFLEX; zcircumflex
17415 \DeclareTextCompositeCommand{\z}{\PU}{z}{\9036\221}% U+1E91
17416 % U+1E92 LATIN CAPITAL LETTER Z WITH DOT BELOW; Zdotbelow
17417 \DeclareTextCompositeCommand{\d}{\PU}{Z}{\9036\222}% U+1E92
17418 % U+1E93 LATIN SMALL LETTER Z WITH DOT BELOW; zdotbelow
17419 \DeclareTextCompositeCommand{\d}{\PU}{z}{\9036\223}% U+1E93
17420 % U+1E94 LATIN CAPITAL LETTER Z WITH LINE BELOW; Zlinebelow
17421 \DeclareTextCompositeCommand{\b}{\PU}{Z}{\9036\224}% U+1E94
17422 % U+1E95 LATIN SMALL LETTER Z WITH LINE BELOW; zlinebelow
17423 \DeclareTextCompositeCommand{\b}{\PU}{z}{\9036\225}% U+1E95
17424 % U+1E96 LATIN SMALL LETTER H WITH LINE BELOW; hlinebelow
17425 \DeclareTextCompositeCommand{\b}{\PU}{h}{\9036\226}% U+1E96
17426 % U+1E97 LATIN SMALL LETTER T WITH DIAERESIS; tdieresis
17427 \DeclareTextCompositeCommand{\t}{\PU}{t}{\9036\227}% U+1E97
17428 % U+1E98 LATIN SMALL LETTER W WITH RING ABOVE; wring
17429 \DeclareTextCompositeCommand{\r}{\PU}{w}{\9036\230}% U+1E98
17430 % U+1E99 LATIN SMALL LETTER Y WITH RING ABOVE; yring
17431 \DeclareTextCompositeCommand{\r}{\PU}{y}{\9036\231}% U+1E99
17432 % U+1E9B LATIN SMALL LETTER LONG S WITH DOT ABOVE; slongdo-
taccent
17433 \DeclareTextCompositeCommand{\.}{\PU}{\textlongs}{\9036\233}% U+1E9B
17434 % U+1EA0 LATIN CAPITAL LETTER A WITH DOT BELOW; Adotbelow
17435 \DeclareTextCompositeCommand{\d}{\PU}{A}{\9036\240}% U+1EA0
17436 % U+1EA1 LATIN SMALL LETTER A WITH DOT BELOW; adotbelow
17437 \DeclareTextCompositeCommand{\d}{\PU}{a}{\9036\241}% U+1EA1
17438 % U+1EB8 LATIN CAPITAL LETTER E WITH DOT BELOW; Edotbelow
17439 \DeclareTextCompositeCommand{\d}{\PU}{E}{\9036\270}% U+1EB8
17440 % U+1EB9 LATIN SMALL LETTER E WITH DOT BELOW; edotbelow
17441 \DeclareTextCompositeCommand{\d}{\PU}{e}{\9036\271}% U+1EB9
17442 % U+1EBC LATIN CAPITAL LETTER E WITH TILDE; Etilde
17443 \DeclareTextCompositeCommand{\~}{\PU}{E}{\9036\274}% U+1EBC
17444 % U+1EBD LATIN SMALL LETTER E WITH TILDE; etilde
17445 \DeclareTextCompositeCommand{\~}{\PU}{e}{\9036\275}% U+1EBD
17446 % U+1ECA LATIN CAPITAL LETTER I WITH DOT BELOW; Idotbelow
17447 \DeclareTextCompositeCommand{\d}{\PU}{I}{\9036\312}% U+1ECA
17448 % U+1ECB LATIN SMALL LETTER I WITH DOT BELOW; idotbelow
17449 \DeclareTextCompositeCommand{\d}{\PU}{i}{\9036\313}% U+1ECB
17450 % U+1ECC LATIN CAPITAL LETTER O WITH DOT BELOW; Odotbelow
17451 \DeclareTextCompositeCommand{\d}{\PU}{O}{\9036\314}% U+1ECC
17452 % U+1ECD LATIN SMALL LETTER O WITH DOT BELOW; odotbelow
17453 \DeclareTextCompositeCommand{\d}{\PU}{o}{\9036\315}% U+1ECD
17454 % U+1EE4 LATIN CAPITAL LETTER U WITH DOT BELOW; Udotbelow
17455 \DeclareTextCompositeCommand{\d}{\PU}{U}{\9036\344}% U+1EE4
17456 % U+1EE5 LATIN SMALL LETTER U WITH DOT BELOW; udotbelow
17457 \DeclareTextCompositeCommand{\d}{\PU}{u}{\9036\345}% U+1EE5
17458 % U+1EF2 LATIN CAPITAL LETTER Y WITH GRAVE; Ygrave
17459 \DeclareTextCompositeCommand{\`}{\PU}{Y}{\9036\362}% U+1EF2

17460 % U+1EF3 LATIN SMALL LETTER Y WITH GRAVE; ygrave
 17461 \DeclareTextCompositeCommand{\`}{PU}{y}{\9036\363}% U+1EF3
 17462 % U+1EF4 LATIN CAPITAL LETTER Y WITH DOT BELOW; Ydotbelow
 17463 \DeclareTextCompositeCommand{\d}{PU}{Y}{\9036\364}% U+1EF4
 17464 % U+1EF5 LATIN SMALL LETTER Y WITH DOT BELOW; ydotbelow
 17465 \DeclareTextCompositeCommand{\d}{PU}{y}{\9036\365}% U+1EF5
 17466 % U+1EF8 LATIN CAPITAL LETTER Y WITH TILDE; Ytilde
 17467 \DeclareTextCompositeCommand{\~}{PU}{Y}{\9036\370}% U+1EF8
 17468 % U+1EF9 LATIN SMALL LETTER Y WITH TILDE; ytilde
 17469 \DeclareTextCompositeCommand{\~}{PU}{y}{\9036\371}% U+1EF9

46.2.16 General Punctuation: U+2000 to U+206F

17470 % U+200C ZERO WIDTH NON-JOINER; *afii61664, zerowidthnonjoiner
 17471 \DeclareTextCommand{\textcompwordmark}{PU}{\9040\014}% U+200C
 17472 % U+2013 EN DASH; endash
 17473 \DeclareTextCommand{\textendash}{PU}{\9040\023}% U+2013
 17474 % U+2014 EM DASH; emdash
 17475 \DeclareTextCommand{\textemdash}{PU}{\9040\024}% U+2014
 17476 % U+2016 DOUBLE VERTICAL LINE; dblverticalbar
 17477 \DeclareTextCommand{\textbardbl}{PU}{\9040\026}% U+2016
 17478 %* \textbardbl -> \textdoublevertline (tipa)
 17479 % U+2018 LEFT SINGLE QUOTATION MARK; quoteleft
 17480 \DeclareTextCommand{\textquoteleft}{PU}{\9040\030}% U+2018
 17481 % U+2019 RIGHT SINGLE QUOTATION MARK; quoteright
 17482 \DeclareTextCommand{\textquoteright}{PU}{\9040\031}% U+2019
 17483 % U+201A SINGLE LOW-9 QUOTATION MARK; quotesinglbase
 17484 \DeclareTextCommand{\quotesinglbase}{PU}{\9040\032}% U+201A
 17485 % U+201C LEFT DOUBLE QUOTATION MARK; quotedblleft
 17486 \DeclareTextCommand{\textquotedblleft}{PU}{\9040\034}% U+201C
 17487 % U+201D RIGHT DOUBLE QUOTATION MARK; quotedblright
 17488 \DeclareTextCommand{\textquotedblright}{PU}{\9040\035}% U+201D
 17489 % U+201E DOUBLE LOW-9 QUOTATION MARK; quotedblbase
 17490 \DeclareTextCommand{\quotedblbase}{PU}{\9040\036}% U+201E
 17491 % U+2020 DAGGER; dagger
 17492 \DeclareTextCommand{\textdagger}{PU}{\9040\040}%* U+2020
 17493 %* \textdagger -> \dag (LaTeX)
 17494 % U+2021 DOUBLE DAGGER; daggerdbl; \ddagger (LaTeX)
 17495 \DeclareTextCommand{\textdaggerdbl}{PU}{\9040\041}% U+2021
 17496 %* \textdaggerdbl -> \ddagger (LaTeX)
 17497 %* \textdaggerdbl -> \ddag (LaTeX)
 17498 % U+2022 BULLET; bullet
 17499 \DeclareTextCommand{\textbullet}{PU}{\9040\042}%* U+2022
 17500 % U+2025 TWO DOT LEADER; \hdotfor (MnSymbol)
 17501 \DeclareTextCommand{\texthdotfor}{PU}{\9040\045}%* U+2025
 17502 % U+2026 HORIZONTAL ELLIPSIS; ellipsis
 17503 \DeclareTextCommand{\textellipsis}{PU}{\9040\046}% U+2026
 17504 %* \textellipsis -> \mathellipsis
 17505 % U+2030 PER MILLE SIGN; perthousand
 17506 \DeclareTextCommand{\textperthousand}{PU}{\9040\060}% U+2030
 17507 % U+2031 PER TEN THOUSAND SIGN
 17508 \DeclareTextCommand{\textpertenthousand}{PU}{\9040\061}% U+2031
 17509 % U+2032 PRIME; minute; \prime (MnSymbol)
 17510 \DeclareTextCommand{\textprime}{PU}{\9040\062}%* U+2032
 17511 % U+2033 DOUBLE PRIME; \second (mathabx)

17512 \DeclareTextCommand{\textsecond}{PU}{\9040\063}%* U+2033
 17513 % U+2034 TRIPLE PRIME; \third (mathabx)
 17514 \DeclareTextCommand{\textthird}{PU}{\9040\064}%* U+2034
 17515 % U+2035 REVERSED PRIME; \backprime (AmS)
 17516 \DeclareTextCommand{\textbackprime}{PU}{\9040\065}%* U+2035
 17517 % U+2039 SINGLE LEFT-POINTING ANGLE QUOTATION MARK; guil-
 ingleft
 17518 \DeclareTextCommand{\guilsingleft}{PU}{\9040\071}% U+2039
 17519 % U+203A SINGLE RIGHT-POINTING ANGLE QUOTATION MARK; guil-
 ingright
 17520 \DeclareTextCommand{\guilsingright}{PU}{\9040\072}% U+203A
 17521 % U+203B REFERENCE MARK; referencemark
 17522 \DeclareTextCommand{\textreferencemark}{PU}{\9040\073}% U+203B
 17523 % U+203D INTERROBANG
 17524 \DeclareTextCommand{\textinterrobang}{PU}{\9040\075}% U+203D
 17525 % U+2044 FRACTION SLASH; fraction
 17526 \DeclareTextCommand{\textfractionsolidus}{PU}{\9040\104}% U+2044
 17527 % U+2045 LEFT SQUARE BRACKET WITH QUILL
 17528 \DeclareTextCommand{\textlquill}{PU}{\9040\105}% U+2045
 17529 % U+2046 RIGHT SQUARE BRACKET WITH QUILL
 17530 \DeclareTextCommand{\textrquill}{PU}{\9040\106}% U+2046
 17531 % U+2052 COMMERCIAL MINUS SIGN
 17532 \DeclareTextCommand{\textdiscount}{PU}{\9040\122}% U+2052
 17533 % U+2056 THREE DOT PUNCTUATION; \lefttherefore (MnSymbol)
 17534 \DeclareTextCommand{\textlefttherefore}{PU}{\9040\126}%* U+2056
 17535 % U+2057 QUADRUPLE PRIME; \fourth (mathabx)
 17536 \DeclareTextCommand{\textfourth}{PU}{\9040\127}%* U+2057
 17537 % U+2058 FOUR DOT PUNCTUATION; \diamonddots (MnSymbol)
 17538 \DeclareTextCommand{\textdiamonddots}{PU}{\9040\130}%* U+2058

46.2.17 Superscripts and Subscripts: U+2070 to U+209F

17539 % U+2070 SUPERSCRIPT ZERO; zerosuperior
 17540 \DeclareTextCommand{\textzerosuperior}{PU}{\9040\160}%* U+2070
 17541 % U+2071 SUPERSCRIPT LATIN SMALL LETTER I
 17542 \DeclareTextCommand{\textisuperior}{PU}{\9040\161}%* U+2071
 17543 % U+2074 SUPERSCRIPT FOUR; foursuperior
 17544 \DeclareTextCommand{\textfoursuperior}{PU}{\9040\164}%* U+2074
 17545 % U+2075 SUPERSCRIPT FIVE; fivesuperior
 17546 \DeclareTextCommand{\textfivesuperior}{PU}{\9040\165}%* U+2075
 17547 % U+2076 SUPERSCRIPT SIX; sixsuperior
 17548 \DeclareTextCommand{\textsixsuperior}{PU}{\9040\166}%* U+2076
 17549 % U+2077 SUPERSCRIPT SEVEN; sevensuperior
 17550 \DeclareTextCommand{\textsevensuperior}{PU}{\9040\167}%* U+2077
 17551 % U+2078 SUPERSCRIPT EIGHT; eightsuperior
 17552 \DeclareTextCommand{\texteightsuperior}{PU}{\9040\170}%* U+2078
 17553 % U+2079 SUPERSCRIPT NINE; ninesuperior
 17554 \DeclareTextCommand{\textninesuperior}{PU}{\9040\171}%* U+2079
 17555 % U+207A SUPERSCRIPT PLUS SIGN; plussuperior
 17556 \DeclareTextCommand{\textplussuperior}{PU}{\9040\172}%* U+207A
 17557 % U+207B SUPERSCRIPT MINUS
 17558 \DeclareTextCommand{\textminussuperior}{PU}{\9040\173}%* U+207B
 17559 % U+207C SUPERSCRIPT EQUALS SIGN; equalsuperior
 17560 \DeclareTextCommand{\textequalsuperior}{PU}{\9040\174}%* U+207C
 17561 % U+207D SUPERSCRIPT LEFT PARENTHESIS; parenleftsuperior

17562 \DeclareTextCommand{\textparenleftsuperior}{PU}{\9040\175}%* U+207D
17563 % U+207E SUPERSCRIPT RIGHT PARENTHESIS; parenrightsuperior
17564 \DeclareTextCommand{\textparenrightsuperior}{PU}{\9040\176}%* U+207E
17565 % U+207F SUPERSCRIPT LATIN SMALL LETTER N; nsuperior
17566 \DeclareTextCommand{\textnsuperior}{PU}{\9040\177}%* U+207F
17567 % U+2080 SUBSCRIPT ZERO; zeroinferior
17568 \DeclareTextCommand{\textzeroinferior}{PU}{\9040\200}%* U+2080
17569 % U+2081 SUBSCRIPT ONE; oneinferior
17570 \DeclareTextCommand{\textoneinferior}{PU}{\9040\201}%* U+2081
17571 % U+2082 SUBSCRIPT TWO; twoinferior
17572 \DeclareTextCommand{\texttwoinferior}{PU}{\9040\202}%* U+2082
17573 % U+2083 SUBSCRIPT THREE; threeinferior
17574 \DeclareTextCommand{\textthreeinferior}{PU}{\9040\203}%* U+2083
17575 % U+2084 SUBSCRIPT FOUR; fourinferior
17576 \DeclareTextCommand{\textfourinferior}{PU}{\9040\204}%* U+2084
17577 % U+2085 SUBSCRIPT FIVE; fiveinferior
17578 \DeclareTextCommand{\textfiveinferior}{PU}{\9040\205}%* U+2085
17579 % U+2086 SUBSCRIPT SIX; sixinferior
17580 \DeclareTextCommand{\textsixinferior}{PU}{\9040\206}%* U+2086
17581 % U+2087 SUBSCRIPT SEVEN; seveninferior
17582 \DeclareTextCommand{\textseveninferior}{PU}{\9040\207}%* U+2087
17583 % U+2088 SUBSCRIPT EIGHT; eightinferior
17584 \DeclareTextCommand{\texteightinferior}{PU}{\9040\210}%* U+2088
17585 % U+2089 SUBSCRIPT NINE; nineinferior
17586 \DeclareTextCommand{\textnineinferior}{PU}{\9040\211}%* U+2089
17587 % U+208A SUBSCRIPT PLUS SIGN
17588 \DeclareTextCommand{\textplusinferior}{PU}{\9040\212}%* U+208A
17589 % U+208B SUBSCRIPT MINUS
17590 \DeclareTextCommand{\textminusinferior}{PU}{\9040\213}%* U+208B
17591 % U+208C SUBSCRIPT EQUALS SIGN
17592 \DeclareTextCommand{\textequalsinferior}{PU}{\9040\214}%* U+208C
17593 % U+208D SUBSCRIPT LEFT PARENTHESIS; parenleftinferior
17594 \DeclareTextCommand{\textparenleftinferior}{PU}{\9040\215}%* U+208D
17595 % U+208E SUBSCRIPT RIGHT PARENTHESIS; parenrightinferior
17596 \DeclareTextCommand{\textparenrightinferior}{PU}{\9040\216}%* U+208E
17597 % U+2090 LATIN SUBSCRIPT SMALL LETTER A
17598 \DeclareTextCommand{\textainferior}{PU}{\9040\220}%* U+2090
17599 % U+2091 LATIN SUBSCRIPT SMALL LETTER E
17600 \DeclareTextCommand{\texteinferior}{PU}{\9040\221}%* U+2091
17601 % U+2092 LATIN SUBSCRIPT SMALL LETTER O
17602 \DeclareTextCommand{\textoinferior}{PU}{\9040\222}%* U+2092
17603 % U+2093 LATIN SUBSCRIPT SMALL LETTER X
17604 \DeclareTextCommand{\textxinferior}{PU}{\9040\223}%* U+2093
17605 % U+2094 LATIN SUBSCRIPT SMALL LETTER SCHWA
17606 \DeclareTextCommand{\textschwainferior}{PU}{\9040\224}%* U+2094
17607 % U+2095 LATIN SUBSCRIPT SMALL LETTER H
17608 \DeclareTextCommand{\texthinferior}{PU}{\9040\225}%* U+2095
17609 % U+2096 LATIN SUBSCRIPT SMALL LETTER K
17610 \DeclareTextCommand{\textkinferior}{PU}{\9040\226}%* U+2096
17611 % U+2097 LATIN SUBSCRIPT SMALL LETTER L
17612 \DeclareTextCommand{\textlinferior}{PU}{\9040\227}%* U+2097
17613 % U+2098 LATIN SUBSCRIPT SMALL LETTER M
17614 \DeclareTextCommand{\textminferior}{PU}{\9040\230}%* U+2098
17615 % U+2099 LATIN SUBSCRIPT SMALL LETTER N

17616 \DeclareTextCommand{\textninferior}{PU}{\9040\231}%* U+2099
 17617 % U+209A LATIN SUBSCRIPT SMALL LETTER P
 17618 \DeclareTextCommand{\textpinferior}{PU}{\9040\232}%* U+209A
 17619 % U+209B LATIN SUBSCRIPT SMALL LETTER S
 17620 \DeclareTextCommand{\textsinferior}{PU}{\9040\233}%* U+209B
 17621 % U+209C LATIN SUBSCRIPT SMALL LETTER T
 17622 \DeclareTextCommand{\texttinferior}{PU}{\9040\234}%* U+209C

46.2.18 Currency Symbols: U+20A0 to U+20CF

17623 % U+20A1 COLON SIGN; *colonmonetary, colonsign
 17624 \DeclareTextCommand{\textcolonmonetary}{PU}{\9040\241}% U+20A1
 17625 % U+20A4 LIRA SIGN; afii08941, *lira
 17626 \DeclareTextCommand{\textlira}{PU}{\9040\244}% U+20A4
 17627 % U+20A6 NAIRA SIGN
 17628 \DeclareTextCommand{\textnaira}{PU}{\9040\246}% U+20A6
 17629 % U+20A7 PESETA SIGN; peseta
 17630 \DeclareTextCommand{\textpeseta}{PU}{\9040\247}% U+20A7
 17631 % U+20A9 WON SIGN; won
 17632 \DeclareTextCommand{\textwon}{PU}{\9040\251}% U+20A9
 17633 % U+20AB DONG SIGN; dong
 17634 \DeclareTextCommand{\textdong}{PU}{\9040\253}% U+20AB
 17635 % U+20AC EURO SIGN; *Euro, euro
 17636 \DeclareTextCommand{\texteuro}{PU}{\9040\254}% U+20AC
 17637 %* \texteuro -> \EurDig (marvosym)
 17638 %* \texteuro -> \EURdig (marvosym)
 17639 %* \texteuro -> \EurHv (marvosym)
 17640 %* \texteuro -> \EURhv (marvosym)
 17641 %* \texteuro -> \EurCr (marvosym)
 17642 %* \texteuro -> \EURcr (marvosym)
 17643 %* \texteuro -> \EurTm (marvosym)
 17644 %* \texteuro -> \EURtm (marvosym)
 17645 %* \texteuro -> \Eur (marvosym)
 17646 % U+20B0 GERMAN PENNY SIGN; \Deleatur (marvosym)
 17647 \DeclareTextCommand{\textDeleatur}{PU}{\9040\260}%* U+20B0
 17648 %* \textDeleatur -> \Denarius (marvosym)
 17649 % U+20B1 PESO SIGN
 17650 \DeclareTextCommand{\textpeso}{PU}{\9040\261}% U+20B1
 17651 % U+20B2 GUARANI SIGN
 17652 \DeclareTextCommand{\textguarani}{PU}{\9040\262}% U+20B2

46.2.19 Letterlike Symbols: U+2100 to U+214F

17653 % U+2103 DEGREE CELSIUS; centigrade
 17654 \DeclareTextCommand{\textcelsius}{PU}{\9041\003}% U+2103
 17655 % U+210F PLANCK CONSTANT OVER TWO PI; \hslash (AmS)
 17656 \DeclareTextCommand{\texthslash}{PU}{\9041\017}%* U+210F
 17657 % U+2111 BLACK-LETTER CAPITAL I (=imaginary part); Ifraktur; \Im (LaTeX)
 17658 \DeclareTextCommand{\textIm}{PU}{\9041\021}%* U+2111
 17659 % U+2113 SCRIPT SMALL L (=ell, liter); afii61289, lsquare; \ell (LaTeX)
 17660 \DeclareTextCommand{\textell}{PU}{\9041\023}%* U+2113
 17661 % U+2116 NUMERO SIGN; *afii61352, numero
 17662 \DeclareTextCommand{\textnumero}{PU}{\9041\026}% U+2116
 17663 % U+2117 SOUND RECORDING COPYRIGHT
 17664 \DeclareTextCommand{\textcircledP}{PU}{\9041\027}% U+2117

17665 % U+2118 SCRIPT CAPITAL P (=Weierstrass elliptic function);
 17666 % weierstrass; \wp (LaTeX)
 17667 \DeclareTextCommand{\textwp}{PU}{\9041\030}%* U+2118
 17668 % U+211C BLACK-LETTER CAPITAL R (=real part); Rfraktur; \Re (LaTeX)
 17669 \DeclareTextCommand{\textRe}{PU}{\9041\034}%* U+211C
 17670 % U+211E PRESCRIPTION TAKE; prescription
 17671 \DeclareTextCommand{\textrecipe}{PU}{\9041\036}% U+211E
 17672 % U+2120 SERVICE MARK
 17673 \DeclareTextCommand{\textservicemark}{PU}{\9041\040}% U+2120
 17674 % U+2122 TRADE MARK SIGN; trademark
 17675 \DeclareTextCommand{\texttrademark}{PU}{\9041\042}% U+2122
 17676 % U+2126 OHM SIGN; Ohm, Omega
 17677 \DeclareTextCommand{\textohm}{PU}{\9041\046}% U+2126
 17678 % U+2127 INVERTED OHM SIGN
 17679 \DeclareTextCommand{\textmho}{PU}{\9041\047}%* U+2127
 17680 %* \textmho -> \agemO (wasysym)
 17681 % U+2129 TURNED GREEK SMALL LETTER IOTA; \riota (phonetic)
 17682 \DeclareTextCommand{\textriota}{PU}{\9041\051}%* U+2129
 17683 % U+212B ANGSTROM SIGN; angstrom
 17684 \DeclareTextCommand{\textangstrom}{PU}{\9041\053}% U+212B
 17685 % U+212E ESTIMATED SYMBOL; estimated
 17686 \DeclareTextCommand{\textestimated}{PU}{\9041\056}% U+212E
 17687 %* \textestimated -> \EstimatedSign (marvosym)
 17688 %* \textestimated -> \Ecommerce (marvosym)
 17689 % U+2132 TURNED CAPITAL F; \Finv (AmS)
 17690 \DeclareTextCommand{\textFinv}{PU}{\9041\062}%* U+2132
 17691 % U+2135 ALEF SYMBOL; aleph; \aleph (LaTeX)
 17692 \DeclareTextCommand{\textaleph}{PU}{\9041\065}%* U+2135
 17693 % U+2136 BET SYMBOL; \beth (AmS, MnSymbol)
 17694 \DeclareTextCommand{\textbeth}{PU}{\9041\066}%* U+2136
 17695 % U+2137 GIMEL SYMBOL; \gimel (AmS, MnSymbol)
 17696 \DeclareTextCommand{\textgimel}{PU}{\9041\067}%* U+2137
 17697 % U+2138 DALET SYMBOL; \daleth (AmS, MnSymbol)
 17698 \DeclareTextCommand{\textdaleth}{PU}{\9041\070}%* U+2138
 17699 % U+213B FACSIMILE SIGN; \fax (marvosym)
 17700 \DeclareTextCommand{\textfax}{PU}{\9041\073}%* U+213B
 17701 % U+2141 TURNED SANS-SERIF CAPITAL G (=game); \Game
 17702 \DeclareTextCommand{\textGame}{PU}{\9041\101}%* U+2141
 17703 % U+214B TURNED AMPERSAND; \invamp (txfonts/pxfonts)
 17704 \DeclareTextCommand{\textinvamp}{PU}{\9041\113}% U+214B
 17705 %* \textinvamp -> \bindnasrepma (stmaryrd)
 17706 %* \textinvamp -> \parr (cml)

46.2.20 Number Forms: U+2150 to U+218F

17707 % U+2150 VULGAR FRACTION ONE SEVENTH
 17708 \DeclareTextCommand{\textoneseventh}{PU}{\9041\120}% U+2150
 17709 % U+2151 VULGAR FRACTION ONE NINTH
 17710 \DeclareTextCommand{\textoneninth}{PU}{\9041\121}% U+2151
 17711 % U+2152 VULGAR FRACTION ONE TENTH
 17712 \DeclareTextCommand{\textonetenth}{PU}{\9041\122}% U+2152
 17713 % U+2153 VULGAR FRACTION ONE THIRD; onethird
 17714 \DeclareTextCommand{\textonethird}{PU}{\9041\123}% U+2153
 17715 % U+2154 VULGAR FRACTION TWO THIRDS; twothirds
 17716 \DeclareTextCommand{\texttwothirds}{PU}{\9041\124}% U+2154

17717 % U+2155 VULGAR FRACTION ONE FIFTH
 17718 \DeclareTextCommand{\textonefifth}{PU}{\9041\125}% U+2155
 17719 % U+2156 VULGAR FRACTION TWO FIFTHS
 17720 \DeclareTextCommand{\texttwofifths}{PU}{\9041\126}% U+2156
 17721 % U+2157 VULGAR FRACTION THREE FIFTHS
 17722 \DeclareTextCommand{\textthreefifths}{PU}{\9041\127}% U+2157
 17723 % U+2158 VULGAR FRACTION FOUR FIFTHS
 17724 \DeclareTextCommand{\textfourfifths}{PU}{\9041\130}% U+2158
 17725 % U+2159 VULGAR FRACTION ONE SIXTH
 17726 \DeclareTextCommand{\textonesixth}{PU}{\9041\131}% U+2159
 17727 % U+215A VULGAR FRACTION FIVE SIXTHS
 17728 \DeclareTextCommand{\textfivesixths}{PU}{\9041\132}% U+215A
 17729 % U+215B VULGAR FRACTION ONE EIGHTH; oneeighth
 17730 \DeclareTextCommand{\textoneeighth}{PU}{\9041\133}% U+215B
 17731 % U+215C VULGAR FRACTION THREE EIGHTHS; threeeighths
 17732 \DeclareTextCommand{\textthreeeighths}{PU}{\9041\134}% U+215C
 17733 % U+215D VULGAR FRACTION FIVE EIGHTHS; fiveeighths
 17734 \DeclareTextCommand{\textfiveeighths}{PU}{\9041\135}% U+215D
 17735 % U+215E VULGAR FRACTION SEVEN EIGHTHS; seveneighths
 17736 \DeclareTextCommand{\textseveneighths}{PU}{\9041\136}% U+215E
 17737 % U+2184 LATIN SMALL LETTER REVERSED C
 17738 \DeclareTextCommand{\textrevc}{PU}{\9041\204}% U+2184
 17739 % U+2189 VULGAR FRACTION ZERO THIRDS
 17740 \DeclareTextCommand{\textzer thirds}{PU}{\9041\211}% U+2189

46.2.21 Arrows: U+2190 to U+21FF

17741 % U+2190 LEFTWARDS ARROW; arrowleft
 17742 \DeclareTextCommand{\textleftarrow}{PU}{\9041\220}%* U+2190
 17743 % U+2191 UPWARDS ARROW; arrowup
 17744 \DeclareTextCommand{\textuparrow}{PU}{\9041\221}%* U+2191
 17745 % U+2192 RIGHTWARDS ARROW; arrowright
 17746 \DeclareTextCommand{\textrightarrow}{PU}{\9041\222}%* U+2192
 17747 %* \textrightarrow -> \MVRightArrow (marvosym)
 17748 %* \textrightarrow -> \MVRightarrow (marvosym)
 17749 % U+2193 DOWNWARDS ARROW; arrowdown
 17750 \DeclareTextCommand{\textdownarrow}{PU}{\9041\223}%* U+2193
 17751 %* \textdownarrow -> \MVAArrowDown (marvosym)
 17752 %* \textdownarrow -> \Force (marvosym)
 17753 % U+2194 LEFT RIGHT ARROW; arrowboth; \leftrightharrow (LaTeX)
 17754 \DeclareTextCommand{\textleftrightharrow}{PU}{\9041\224}%* U+2194
 17755 % U+2195 UP DOWN ARROW; arrowupdn; \updownarrow (LaTeX)
 17756 \DeclareTextCommand{\textupdownarrow}{PU}{\9041\225}%* U+2195
 17757 % U+2196 NORTH WEST ARROW; arrowupleft; \nwarrow (LaTeX)
 17758 \DeclareTextCommand{\textnwarrow}{PU}{\9041\226}%* U+2196
 17759 % U+2197 NORTH EAST ARROW; arrowupright; \nearrow (LaTeX)
 17760 \DeclareTextCommand{\textnearrow}{PU}{\9041\227}%* U+2197
 17761 %* \textnearrow -> \textglobrise (tipa)
 17762 % U+2198 SOUTH EAST ARROW; arrowdownright; \searrow (LaTeX)
 17763 \DeclareTextCommand{\textsearrow}{PU}{\9041\230}%* U+2198
 17764 %* \textsearrow -> \textglobfall (tipa)
 17765 % U+2199 SOUTH WEST ARROW; arrowdownleft; \swarrow (LaTeX)
 17766 \DeclareTextCommand{\textswarrow}{PU}{\9041\231}%* U+2199
 17767 % U+219A LEFTWARDS ARROW WITH STROKE; \leftarrow (AmS)
 17768 \DeclareTextCommand{\textnleftarrow}{PU}{\9041\232}%* U+219A

17769 % U+219B RIGHTWARDS ARROW WITH STROKE; \nrightarrow (AmS)
17770 \DeclareTextCommand{\textnrightarrow}{PU}{\9041\233}%* U+219B
17771 % U+219E LEFTWARDS TWO HEADED ARROW; \twoheadleftarrow (AmS)
17772 \DeclareTextCommand{\texttwoheadleftarrow}{PU}{\9041\236}%* U+219E
17773 % \twoheadleftarrow (txfonts/pxfonts)
17774 \DeclareTextCommand{\textntwoheadleftarrow}{PU}{\9041\236\83\070}%* U+219E U+0338
17775 % U+219F UPWARDS TWO HEADED ARROW; \twoheaduparrow (MnSymbol)
17776 \DeclareTextCommand{\texttwoheaduparrow}{PU}{\9041\237}%* U+219F
17777 % U+21A0 RIGHTWARDS TWO HEADED ARROW;
17778 % \twoheadrightarrow (AmS)
17779 \DeclareTextCommand{\texttwoheadrightarrow}{PU}{\9041\240}%* U+21A0
17780 % \twoheadrightarrow (txfonts/pxfonts)
17781 \DeclareTextCommand{\textntwoheadrightarrow}{PU}{\9041\240\83\070}%* U+21A0 U+0338
17782 % U+21A1 DOWNWARDS TWO HEADED ARROW; \twoheaddownarrow (Mn-
Symbol)
17783 \DeclareTextCommand{\texttwoheaddownarrow}{PU}{\9041\241}%* U+21A1
17784 % U+21A2 LEFTWARDS ARROW WITH TAIL; \leftarrowtail (AmS)
17785 \DeclareTextCommand{\textleftarrowtail}{PU}{\9041\242}%* U+21A2
17786 % U+21A3 RIGHTWARDS ARROW WITH TAIL; \rightarrowtail (AmS)
17787 \DeclareTextCommand{\textrightarrowtail}{PU}{\9041\243}%* U+21A3
17788 % U+21A6 RIGHTWARDS ARROW FROM BAR; \mapsto (LaTeX)
17789 \DeclareTextCommand{\textmapsto}{PU}{\9041\246}%* U+21A6
17790 % U+21A9 LEFTWARDS ARROW WITH HOOK; \hookleftarrow (LaTeX)
17791 \DeclareTextCommand{\texthookleftarrow}{PU}{\9041\251}%* U+21A9
17792 % U+21AA RIGHTWARDS ARROW WITH HOOK; \hookrightarrow (LaTeX)
17793 \DeclareTextCommand{\texthookrightarrow}{PU}{\9041\252}%* U+21AA
17794 % U+21AB LEFTWARDS ARROW WITH LOOP; \looparrowleft (AmS)
17795 \DeclareTextCommand{\textlooparrowleft}{PU}{\9041\253}%* U+21AB
17796 % U+21AC RIGHTWARDS ARROW WITH LOOP; \looparrowright (AmS)
17797 \DeclareTextCommand{\textlooparrowright}{PU}{\9041\254}%* U+21AC
17798 % U+21AE LEFT RIGHT ARROW WITH STROKE; \nleftrightarrow (AmS)
17799 \DeclareTextCommand{\textnleftrightarrow}{PU}{\9041\256}%* U+21AE
17800 % U+21AF DOWNWARDS ZIGZAG ARROW; \lightning (stmaryrd)
17801 \DeclareTextCommand{\textlightning}{PU}{\9041\257}%* U+21AF
17802 %* \textlightning -> \Lightning (marvosym)
17803 % U+21B5 DOWNWARDS ARROW WITH CORNER LEFTWARDS;
17804 % \dls (mathabx)
17805 \DeclareTextCommand{\textdls}{PU}{\9041\265}%* U+21B5
17806 % U+21B6 ANTICLOCKWISE TOP SEMICIRCLE ARROW;
17807 % \curvearrowleft (AmS)
17808 \DeclareTextCommand{\textcurvearrowleft}{PU}{\9041\266}%* U+21B6
17809 % U+21B7 CLOCKWISE TOP SEMICIRCLE ARROW; \curvearrowright (AmS)
17810 \DeclareTextCommand{\textcurvearrowright}{PU}{\9041\267}%* U+21B7
17811 % U+21BC LEFTWARDS HARPOON WITH BARB UPWARDS; harpoonleft-
barbup;
17812 % \leftharpoonup (LaTeX)
17813 \DeclareTextCommand{\textleftharpoonup}{PU}{\9041\274}%* U+21BC
17814 % U+21BD LEFTWARDS HARPOON WITH BARB DOWNWARDS;
17815 % \leftharpoondown (LaTeX)
17816 \DeclareTextCommand{\textleftharpoondown}{PU}{\9041\275}%* U+21BD
17817 % U+21BE UPWARDS HARPOON WITH BARB RIGHTWARDS;
17818 % \upharpoonright (AmS)
17819 \DeclareTextCommand{\textupharpoonright}{PU}{\9041\276}%* U+21BE
17820 % U+21BF UPWARDS HARPOON WITH BARB LEFTWARDS;

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17821 % \upharpoonleft (AmS)
17822 \DeclareTextCommand{\textupharpoonleft}{PU}{\9041\277}%* U+21BF
17823 % U+21C0 RIGHTWARDS HARPOON WITH BARB UPWARDS; harpoonright-
      barbup
17824 % \rightharpoonup (LaTeX)
17825 \DeclareTextCommand{\textrightharpoonup}{PU}{\9041\300}%* U+21C0
17826 % U+21C1 RIGHTWARDS HARPOON WITH BARB DOWNWARDS;
17827 % \rightharpoondown (LaTeX)
17828 \DeclareTextCommand{\textrightharpoondown}{PU}{\9041\301}%* U+21C1
17829 % U+21C2 DOWNWARDS HARPOON WITH BARB RIGHTWARDS;
17830 % \downharpoonright (AmS)
17831 \DeclareTextCommand{\textdownharpoonright}{PU}{\9041\302}%* U+21C2
17832 % U+21C3 DOWNWARDS HARPOON WITH BARB LEFTWARDS;
17833 % \downharpoonleft (AmS)
17834 \DeclareTextCommand{\textdownharpoonleft}{PU}{\9041\303}%* U+21C3
17835 % U+21C4 RIGHTWARDS ARROW OVER LEFTWARDS ARROW;
17836 % arrowrightoverleft; \rightleftarrows (MnSymbol)
17837 \DeclareTextCommand{\textrightleftarrows}{PU}{\9041\304}%* U+21C4
17838 % U+21C5 UPWARDS ARROW LEFTWARDS OF DOWNWARDS ARROW; ar-
      rowupleftofdown;
17839 % \updownarrows (MnSymbol)
17840 \DeclareTextCommand{\textupdownarrows}{PU}{\9041\305}%* U+21C5
17841 % U+21C6 LEFTWARDS ARROW OVER RIGHTWARDS ARROW; arrowleft-
      overright;
17842 % \leftrightarrows (AmS)
17843 \DeclareTextCommand{\textleftrightarrows}{PU}{\9041\306}%* U+21C6
17844 % U+21C7 LEFTWARDS PAIRED ARROWS; \leftleftarrows (AmS)
17845 \DeclareTextCommand{\textleftleftarrows}{PU}{\9041\307}%* U+21C7
17846 % U+21C8 UPWARDS PAIRED ARROWS; \upuparrows (AmS)
17847 \DeclareTextCommand{\textupuparrows}{PU}{\9041\310}%* U+21C8
17848 % U+21C9 RIGHTWARDS PAIRED ARROWS; \rightrightarrows (AmS)
17849 \DeclareTextCommand{\textrightarrows}{PU}{\9041\311}%* U+21C9
17850 % U+21CA DOWNWARDS PAIRED ARROWS; \downdownarrows (AmS)
17851 \DeclareTextCommand{\textdowndownarrows}{PU}{\9041\312}%* U+21CA
17852 % U+21CB LEFTWARDS HARPOON OVER RIGHTWARDS HARPOON;
17853 % \leftrightharpoons (AmS);
17854 \DeclareTextCommand{\textleftrightharpoons}{PU}{\9041\313}%* U+21CB
17855 % U+21CC RIGHTWARDS HARPOON OVER LEFTWARDS HARPOON;
17856 % \rightleftharpoons (LaTeX, AmS)
17857 \DeclareTextCommand{\textrightleftharpoons}{PU}{\9041\314}%* U+21CC
17858 % U+21CD LEFTWARDS DOUBLE ARROW WITH STROKE; arrowleftd-
      blstroke;
17859 % \nLeftarrow (AmS)
17860 \DeclareTextCommand{\textnLeftarrow}{PU}{\9041\315}%* U+21CD
17861 % U+21CE LEFT RIGHT DOUBLE ARROW WITH STROKE; \nLeftrightarrow
      (AmS)
17862 \DeclareTextCommand{\textnLeftrightarrow}{PU}{\9041\316}%* U+21CE
17863 % U+21CF RIGHTWARDS DOUBLE ARROW WITH STROKE; arrowrightd-
      blstroke;
17864 % \nRightarrow (AmS)
17865 \DeclareTextCommand{\textnRightarrow}{PU}{\9041\317}%* U+21CF
17866 % U+21D0 LEFTWARDS DOUBLE ARROW; arrowdblleft, arrowleftdbl;
17867 % \Leftarrow (LaTeX)
17868 \DeclareTextCommand{\textLeftarrow}{PU}{\9041\320}%* U+21D0

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17869 % U+21D1 UPWARDS DOUBLE ARROW; arrowdblup; \Uparrow (LaTeX)
17870 \DeclareTextCommand{\textUparrow}{PU}{\9041\321}%* U+21D1
17871 % U+21D2 RIGHTWARDS DOUBLE ARROW; arrowdblright, dblarrowright;
17872 % \Rrightarrow (LaTeX)
17873 \DeclareTextCommand{\textRrightarrow}{PU}{\9041\322}%* U+21D2
17874 %* \textRrightarrow -> \Conclusion (marvosym)
17875 % U+21D3 DOWNWARDS DOUBLE ARROW; arrowdbldown; \Downarrow (LaTeX)
17876 \DeclareTextCommand{\textDownarrow}{PU}{\9041\323}%* U+21D3
17877 % U+21D4 LEFT RIGHT DOUBLE ARROW; arrowdblboth;
17878 % \Leftrightarrow (LaTeX)
17879 \DeclareTextCommand{\textLeftrightarrow}{PU}{\9041\324}%* U+21D4
17880 %* \textLeftrightarrow -> \Equivalence (marvosym)
17881 % U+21D5 UP DOWN DOUBLE ARROW; \Updownarrow (LaTeX)
17882 \DeclareTextCommand{\textUpdownarrow}{PU}{\9041\325}%* U+21D5
17883 % U+21D6 NORTH WEST DOUBLE ARROW; \Nwarrow (MnSymbol)
17884 \DeclareTextCommand{\textNwarrow}{PU}{\9041\326}%* U+21D6
17885 % U+21D7 NORTH EAST DOUBLE ARROW; \Nearrow (MnSymbol)
17886 \DeclareTextCommand{\textNearrow}{PU}{\9041\327}%* U+21D7
17887 % U+21D8 SOUTH EAST DOUBLE ARROW; \Searrow (MnSymbol)
17888 \DeclareTextCommand{\textSearrow}{PU}{\9041\330}%* U+21D8
17889 % U+21D9 SOUTH WEST DOUBLE ARROW; \Swarrow (MnSymbol)
17890 \DeclareTextCommand{\textSwarrow}{PU}{\9041\331}%* U+21D9
17891 % U+21DA LEFTWARDS TRIPLE ARROW; \Lleftarrow (AmS)
17892 \DeclareTextCommand{\textLleftarrow}{PU}{\9041\332}%* U+21DA
17893 % U+21DB RIGHTWARDS TRIPLE ARROW; \Rrightarrow (MnSymbol)
17894 \DeclareTextCommand{\textRrightarrow}{PU}{\9041\333}%* U+21DB
17895 % U+21DC LEFTWARDS SQUIGGLE ARROW; \leftsquigarrow (mathabx)
17896 \DeclareTextCommand{\textleftsquigarrow}{PU}{\9041\334}%* U+21DC
17897 % U+21DD RIGHTWARDS SQUIGGLE ARROW; \rightsquigarrow (mathabx)
17898 \DeclareTextCommand{\textright squigarrow}{PU}{\9041\335}%* U+21DD
17899 % U+21E0 LEFTWARDS DASHED ARROW; arrowdashleft;
17900 % \dashleftarrow (AmS)
17901 \DeclareTextCommand{\texdashleftarrow}{PU}{\9041\340}%* U+21E0
17902 %* \texdashleftarrow -> \dashedleftarrow (MnSymbol)
17903 % U+21E1 UPWARDS DASHED ARROW; arrowdashup; \dasheduparrow (MnSymbol)
17904 \DeclareTextCommand{\texdasheduparrow}{PU}{\9041\341}%* U+21E1
17905 % U+21E2 RIGHTWARDS DASHED ARROW; arrowdashright; \dashrightarrow (AmS)
17906 \DeclareTextCommand{\texdashrightarrow}{PU}{\9041\342}%* U+21E2
17907 %* \texdashrightarrow -> \dashedrightarrow (MnSymbol)
17908 % U+21E3 DOWNWARDS DASHED ARROW; arrowdashdown; \dasheddownarrow (MnSymbol)
17909 \DeclareTextCommand{\texdasheddownarrow}{PU}{\9041\343}%* U+21E3
17910 % U+21E8 RIGHTWARDS WHITE ARROW; \pointer (wasysym)
17911 \DeclareTextCommand{\textpointer}{PU}{\9041\350}%* U+21E8
17912 % U+21F5 DOWNWARDS ARROW LEFTWARDS OF UPWARDS ARROW;
17913 % \downuparrows (MnSymbol)
17914 \DeclareTextCommand{\textdownuparrows}{PU}{\9041\365}%* U+21F5
17915 % U+21FD LEFTWARDS OPEN-HEADED ARROW; \leftarrowtriangle (stmaryrd)
17916 \DeclareTextCommand{\textleftarrowtriangle}{PU}{\9041\375}%* U+21FD
17917 % U+21FE RIGHTWARDS OPEN-HEADED ARROW; \rightarrowtriangle (stmaryrd)
17918 \DeclareTextCommand{\textrightarrowtriangle}{PU}{\9041\376}%* U+21FE

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17919 % U+21FF LEFT RIGHT OPEN-HEADED ARROW; \leftrightharowtriangle (stmaryrd)
 17920 \DeclareTextCommand{\textleftrightharowtriangle}{PU}{\9041\377}%* U+21FF

46.2.22 Mathematical Operators: U+2200 to U+22FF

17921 % U+2200 FOR ALL; forall; \forall (LaTeX)
 17922 \DeclareTextCommand{\textforall}{PU}{\9042\000}%* U+2200
 17923 % U+2201 COMPLEMENT; \complement (AmS)
 17924 \DeclareTextCommand{\textcomplement}{PU}{\9042\001}%* U+2201
 17925 % U+2202 PARTIAL DIFFERENTIAL; partialdiff; \partial (LaTeX)
 17926 \DeclareTextCommand{\textpartial}{PU}{\9042\002}%* U+2202
 17927 % U+2203 THERE EXISTS; existential; \exists (LaTeX)
 17928 \DeclareTextCommand{\textexists}{PU}{\9042\003}%* U+2203
 17929 % U+2204 THERE DOES NOT EXIST; \nexists (AmS)
 17930 \DeclareTextCommand{\textnexists}{PU}{\9042\004}%* U+2204
 17931 % U+2205 EMPTY SET; emptyset; \emptyset (LaTeX), \varnothing (AmS)
 17932 \DeclareTextCommand{\textemptyset}{PU}{\9042\005}%* U+2205
 17933 %* \textemptyset -> \varnothing (AmS)
 17934 % U+2206 INCREMENT; increment, Delta; \triangle (LaTeX)
 17935 \DeclareTextCommand{\texttriangle}{PU}{\9042\006}%* U+2206
 17936 % U+2207 NABLA; nabla, gradient; \nabla (LaTeX)
 17937 \DeclareTextCommand{\textnabla}{PU}{\9042\007}%* U+2207
 17938 % U+2208 ELEMENT OF; element; \in (LaTeX)
 17939 \DeclareTextCommand{\textin}{PU}{\9042\010}%* U+2208
 17940 % U+2209 NOT AN ELEMENT OF; notelement, notelementof; \notin (LaTeX)
 17941 \DeclareTextCommand{\textnotin}{PU}{\9042\011}%* U+2209
 17942 % U+220A SMALL ELEMENT OF; \smallin (mathdesign)
 17943 \DeclareTextCommand{\textsmallin}{PU}{\9042\012}%* U+220A
 17944 % U+220B CONTAINS AS MEMBER; suchthat; \ni (LaTeX)
 17945 \DeclareTextCommand{\textni}{PU}{\9042\013}%* U+220B
 17946 %* \textni -> \owns (mathabx)
 17947 % U+220C DOES NOT CONTAIN AS MEMBER; \notowner (mathabx)
 17948 \DeclareTextCommand{\textnotowner}{PU}{\9042\014}%* U+220C
 17949 %* \textnotowner -> \notni (txfonts/pxfonts)
 17950 % U+220D SMALL CONTAINS AS MEMBER; \smallowns (mathdesign)
 17951 \DeclareTextCommand{\textsmallowns}{PU}{\9042\015}%* U+220D
 17952 % U+220F N-ARY PRODUCT; \prod (LaTeX)
 17953 \DeclareTextCommand{\textprod}{PU}{\9042\017}%* U+220F
 17954 % U+2210 N-ARY COPRODUCT; \amalg (LaTeX)
 17955 \DeclareTextCommand{\textamalg}{PU}{\9042\020}%* U+2210
 17956 % U+2211 N-ARY SUMMATION; summation; \sum (LaTeX)
 17957 \DeclareTextCommand{\textsum}{PU}{\9042\021}%* U+2211
 17958 % U+2212 MINUS SIGN; minus
 17959 \DeclareTextCommand{\textminus}{PU}{\9042\022}%* U+2212
 17960 % U+2213 MINUS-OR-PLUS SIGN; minusplus; \mp (LaTeX)
 17961 \DeclareTextCommand{\textmp}{PU}{\9042\023}%* U+2213
 17962 % U+2214 DOT PLUS; \dotplus (AmS)
 17963 \DeclareTextCommand{\textdotplus}{PU}{\9042\024}%* U+2214
 17964 % U+2215 DIVISION SLASH; divisionslash; \Divides (marvosym)
 17965 \DeclareTextCommand{\textDivides}{PU}{\9042\025}%* U+2215
 17966 % \DividesNot (marvosym)
 17967 \DeclareTextCommand{\textDividesNot}{PU}{\9042\025\9040\322}%* U+2215 U+20D2
 17968 % U+2216 SET MINUS; \setminus (LaTeX)
 17969 \DeclareTextCommand{\textsetminus}{PU}{\9042\026}%* U+2216

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17970 % U+2217 ASTERISK OPERATOR; asteriskmath; \ast (LaTeX)
17971 \DeclareTextCommand{\textast}{PU}{\9042\027}%* U+2217
17972 % U+2218 RING OPERATOR; \circ (LaTeX)
17973 \DeclareTextCommand{\textcirc}{PU}{\9042\030}%* U+2218
17974 % U+2219 BULLET OPERATOR; bulletoperator; \bullet (LaTeX)
17975 \DeclareTextCommand{\textbulletoperator}{PU}{\9042\031}% U+2219
17976 % U+221A SQUARE ROOT; radical
17977 \DeclareTextCommand{\textsurd}{PU}{\9042\032}%* U+221A
17978 % U+221D PROPORTIONAL TO; proportional; \propto (LaTeX)
17979 \DeclareTextCommand{\textpropto}{PU}{\9042\035}%* U+221D
17980 %* \textpropto -> \varprop (wasysym)
17981 % U+221E INFINITY; infinity; \infty (LaTeX)
17982 \DeclareTextCommand{\textinfty}{PU}{\9042\036}%* U+221E
17983 % U+2220 ANGLE; angle; \angle (LaTeX)
17984 \DeclareTextCommand{\textangle}{PU}{\9042\040}%* U+2220
17985 % U+2221 MEASURED ANGLE; \measuredangle (mathabx, MnSymbol)
17986 \DeclareTextCommand{\textmeasuredangle}{PU}{\9042\041}%* U+2221
17987 % U+2222 SPHERICAL ANGLE; \sphericalangle (AmS)
17988 \DeclareTextCommand{\textsphericalangle}{PU}{\9042\042}%* U+2222
17989 %* \textsphericalangle -> \varangle (wasysym)
17990 %* \textsphericalangle -> \Anglesign (marvosym)
17991 %* \textsphericalangle -> \AngleSign (marvosym)
17992 % U+2223 DIVIDES; divides; \mid (LaTeX)
17993 \DeclareTextCommand{\textmid}{PU}{\9042\043}%* U+2223
17994 % U+2224 DOES NOT DIVIDE; \nmid (AmS)
17995 \DeclareTextCommand{\textnmid}{PU}{\9042\044}%* U+2224
17996 %* \textnmid -> \notdivides (mathabx)
17997 % U+2225 PARALLEL TO; parallel; \parallel (LaTeX)
17998 \DeclareTextCommand{\textparallel}{PU}{\9042\045}%* U+2225
17999 % U+2226 NOT PARALLEL TO; notparallel; \nparallel (AmS)
18000 \DeclareTextCommand{\textnparallel}{PU}{\9042\046}%* U+2226
18001 %* \textnparallel -> nUpdownline (MnSymbol)
18002 % U+2227 LOGICAL AND; logicaland; \wedge (LaTeX)
18003 \DeclareTextCommand{\textwedge}{PU}{\9042\047}%* U+2227
18004 % \owedge (stmaryrd)
18005 \DeclareTextCommand{\textowedge}{PU}{\9042\047\9040\335}%* U+2227 U+20DD
18006 %* \textowedge -> \varowedge (stmaryrd)
18007 % U+2228 LOGICAL OR; logicalor; \vee (LaTeX)
18008 \DeclareTextCommand{\textvee}{PU}{\9042\050}%* U+2228
18009 % \ovee (stmaryrd)
18010 \DeclareTextCommand{\textovee}{PU}{\9042\050\9040\335}%* U+2228 U+20DD
18011 %* \textovee -> \varovee (stmaryrd)
18012 % U+2229 INTERSECTION; intersection; \cap (LaTeX)
18013 \DeclareTextCommand{\textcap}{PU}{\9042\051}%* U+2229
18014 % U+222A UNION; union; \cup (LaTeX)
18015 \DeclareTextCommand{\textcup}{PU}{\9042\052}%* U+222A
18016 % U+222B INTEGRAL; integral; \int (LaTeX)
18017 \DeclareTextCommand{\textint}{PU}{\9042\053}%* U+222B
18018 %* \textint -> \varint (wasysym)
18019 % U+222C DOUBLE INTEGRAL; dblintegral; \iint (AmS)
18020 \DeclareTextCommand{\textiint}{PU}{\9042\054}%* U+222C
18021 % U+222D TRIPLE INTEGRAL; \iiint (AmS)
18022 \DeclareTextCommand{\textiiint}{PU}{\9042\055}%* U+222D
18023 % U+222E CONTOUR INTEGRAL; contourintegral; \oint (LaTeX)

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18024 \DeclareTextCommand{\textoint}{PU}{\9042\056}%* U+222E
18025 %* \textoint -> \varoint (wasysym)
18026 % U+222F SURFACE INTEGRAL; \oiint (wasysym)
18027 \DeclareTextCommand{\textoiint}{PU}{\9042\057}%* U+222F
18028 % U+2232 CLOCKWISE CONTOUR INTEGRAL;
18029 % \ointclockwise (txfonts/pxfonts)
18030 \DeclareTextCommand{\textointclockwise}{PU}{\9042\062}%* U+2232
18031 % U+2233 ANTICLOCKWISE CONTOUR INTEGRAL; \ointctrackwise (tx-
      fonts/pxfonts)
18032 \DeclareTextCommand{\textointctrackwise}{PU}{\9042\063}%* U+2233
18033 % U+2234 THEREFORE; therefore; \therefore (AmS)
18034 \DeclareTextCommand{\texttherefore}{PU}{\9042\064}%* U+2234
18035 %* \texttherefore -> uptherefore (MnSymbol)
18036 % U+2235 BECAUSE; because; \because (AmS)
18037 \DeclareTextCommand{\textbecause}{PU}{\9042\065}%* U+2235
18038 %* \textbecause -> \downtherefore (MnSymbol)
18039 % U+2236 RATIO; \dotdot (MnSymbol)
18040 \DeclareTextCommand{\textvdotdot}{PU}{\9042\066}%* U+2236
18041 % U+2237 PROPORTION; \squaredots (MnSymbol)
18042 \DeclareTextCommand{\textsquaredots}{PU}{\9042\067}%* U+2237
18043 % U+2238 DOT MINUS; \dotminus (MnSymbol)
18044 \DeclareTextCommand{\textdotminus}{PU}{\9042\070}%* U+2238
18045 %* \textdotminus -> \textdotdiv (mathabx)
18046 % U+2239 EXCESS; \eqcolon (txfonts/pxfonts)
18047 \DeclareTextCommand{\texteqcolon}{PU}{\9042\071}%* U+2239
18048 % U+223C TILDE OPERATOR; similar; \sim (LaTeX)
18049 \DeclareTextCommand{\textsim}{PU}{\9042\074}%* U+223C
18050 %* \textsim -> \AC (wasysym)
18051 % U+223D REVERSED TILDE; reversedtilde; \backsim (AmS)
18052 \DeclareTextCommand{\textbacksim}{PU}{\9042\075}%* U+223D
18053 % \nbacksim (txfonts/pxfonts)
18054 \DeclareTextCommand{\textnbacksim}{PU}{\9042\075\83\070}%* U+223D U+0338
18055 % U+2240 WREATH PRODUCT; \wr (LaTeX)
18056 \DeclareTextCommand{\textwr}{PU}{\9042\100}%* U+2240
18057 %* \textwr -> \wreath (MnSymbol)
18058 % U+2241 NOT TILDE; \nsim (AmS)
18059 \DeclareTextCommand{\textnsim}{PU}{\9042\101}%* U+2241
18060 % U+2242 MINUS TILDE; \eqsim (MnSymbol)
18061 \DeclareTextCommand{\texteqsim}{PU}{\9042\102}%* U+2242
18062 % \neqsim (MnSymbol)
18063 \DeclareTextCommand{\textneqsim}{PU}{\9042\102\83\070}%* U+2242 U+0338
18064 % U+2243 ASYMPTOTICALLY EQUAL TO; asymptoticallyequal; \simeq (La-
      TeX)
18065 \DeclareTextCommand{\textsimeq}{PU}{\9042\103}%* U+2243
18066 % U+2244 NOT ASYMPTOTICALLY EQUAL TO; \nsimeq (txfonts/pxfonts)
18067 \DeclareTextCommand{\textnsimeq}{PU}{\9042\104}%* U+2244
18068 % U+2245 APPROXIMATELY EQUAL TO; approximatelyequal; \cong (LaTeX)
18069 \DeclareTextCommand{\textcong}{PU}{\9042\105}%* U+2245
18070 % U+2247 NEITHER APPROXIMATELY NOR ACTUALLY EQUAL TO;
18071 % \ncong (AmS)
18072 \DeclareTextCommand{\textncong}{PU}{\9042\107}%* U+2247
18073 % U+2248 ALMOST EQUAL TO; approxequal; \approx (LaTeX)
18074 \DeclareTextCommand{\textapprox}{PU}{\9042\110}%* U+2248
18075 % U+2249 NOT ALMOST EQUAL TO; \napprox (txfonts/pxfonts)

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18076 \DeclareTextCommand{\textnapprox}{PU}{\9042\111}%* U+2249
18077 %* \textnapprox -> \nthickapprox (txfonts/pxfonts)
18078 % U+224A ALMOST EQUAL OR EQUAL TO; \approxeq (AmS)
18079 \DeclareTextCommand{\textapproxeq}{PU}{\9042\112}%* U+224A
18080 % \napproxeq (txfonts/pxfonts)
18081 \DeclareTextCommand{\textnapproxeq}{PU}{\9042\112\83\070}%* U+224A U+0338
18082 % U+224B TRIPLE TILDE; \triplesim (MnSymbol)
18083 \DeclareTextCommand{\texttriplesim}{PU}{\9042\113}%* U+224B
18084 %* \texttriplesim -> \VHF (wasysym)
18085 % \ntriplesim (MnSymbol)
18086 \DeclareTextCommand{\textntriplesim}{PU}{\9042\113\83\070}%* U+224B U+0338
18087 % U+224C ALL EQUAL TO; allequal; \backcong (MnSymbol)
18088 \DeclareTextCommand{\textbackcong}{PU}{\9042\114}%* U+224C
18089 % \nbackcong (MnSymbol)
18090 \DeclareTextCommand{\textnbackcong}{PU}{\9042\114\83\070}%* U+224C U+0338
18091 % U+224D EQUIVALENT TO; \asymp (LaTeX)
18092 \DeclareTextCommand{\textasympt}{PU}{\9042\115}%* U+224D
18093 % \nasympt (txfonts/pxfonts)
18094 \DeclareTextCommand{\textnasympt}{PU}{\9042\115\83\070}%* U+224D U+0338
18095 %* \textnasympt -> \notasympt (mathabx)
18096 % U+224E GEOMETRICALLY EQUIVALENT TO; \Bumpeq (AmS)
18097 \DeclareTextCommand{\textBumpeq}{PU}{\9042\116}%* U+224E
18098 % \nBumpeq (txfonts/pxfonts)
18099 \DeclareTextCommand{\textnBumpeq}{PU}{\9042\116\83\070}%* U+224E U+0338
18100 % U+224F DIFFERENCE BETWEEN; \bumpeq (AmS)
18101 \DeclareTextCommand{\textbumpeq}{PU}{\9042\117}%* U+224F
18102 % \nbumpeq (txfonts/pxfonts)
18103 \DeclareTextCommand{\textnbumpeq}{PU}{\9042\117\83\070}%* U+224F U+0338
18104 % U+2250 APPROACHES THE LIMIT; approaches; \doteq (LaTeX)
18105 \DeclareTextCommand{\textdoteq}{PU}{\9042\120}%* U+2250
18106 % \ndoteq (MnSymbol)
18107 \DeclareTextCommand{\textndoteq}{PU}{\9042\120\83\070}%* U+2250 U+0338
18108 % U+2251 GEOMETRICALLY EQUAL TO; geometricallyequal;
18109 % \doteqdot (AmS)
18110 \DeclareTextCommand{\textdoteqdot}{PU}{\9042\121}%* U+2251
18111 %* \textdoteqdot -> \Doteq (MnSymbol)
18112 % \nDoteq (MnSymbol)
18113 \DeclareTextCommand{\textnDoteq}{PU}{\9042\121\83\070}%* U+2251 U+0338
18114 % U+2252 APPROXIMATELY EQUAL TO OR THE IMAGE OF; approx-
    equalorimage;
18115 % \fallingdotseq (AmS)
18116 \DeclareTextCommand{\textfallingdotseq}{PU}{\9042\122}%* U+2252
18117 % \nfallingdotseq (MnSymbol)
18118 \DeclareTextCommand{\textnfallingdotseq}{PU}{\9042\122\83\070}%* U+2252 U+0338
18119 % U+2253 IMAGE OF OR APPROXIMATELY EQUAL TO; imageorapproxi-
    matelyequal;
18120 % \risingdotseq (AmS)
18121 \DeclareTextCommand{\textrisingdotseq}{PU}{\9042\123}%* U+2253
18122 % \nrisingdotseq (MnSymbol)
18123 \DeclareTextCommand{\textnrisingdotseq}{PU}{\9042\123\83\070}%* U+2253 U+0338
18124 % U+2254 COLON EQUALS; \colonequals (colonequals)
18125 \DeclareTextCommand{\textcolonequals}{PU}{\9042\124}%* U+2254
18126 % U+2255 EQUALS COLON; \equalscolon (colonequals)
18127 \DeclareTextCommand{\textequalscolon}{PU}{\9042\125}%* U+2255

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18128 % U+2256 RING IN EQUAL TO; \eqcirc (AmS)
18129 \DeclareTextCommand{\texteqcirc}{PU}{\9042\126}%* U+2256
18130 % \neqcirc (MnSymbol)
18131 \DeclareTextCommand{\textneqcirc}{PU}{\9042\126\83\070}%* U+2256 U+0338
18132 % U+2257 RING EQUAL TO; \circeq (AmS)
18133 \DeclareTextCommand{\textcirceq}{PU}{\9042\127}%* U+2257
18134 % \ncirceq (MnSymbol)
18135 \DeclareTextCommand{\textncirceq}{PU}{\9042\127\83\070}%* U+2257 U+0338
18136 % U+2259 ESTIMATES; \hateq (MnSymbol)
18137 \DeclareTextCommand{\texthateq}{PU}{\9042\131}%* U+2259
18138 %* \texthateq -> \corresponds (mathabx)
18139 %* \texthateq -> \Corresponds (marvosym)
18140 % \nhateq (MnSymbol)
18141 \DeclareTextCommand{\textnhateq}{PU}{\9042\131\83\070}%* U+2259 U+0338
18142 % U+225C DELTA EQUAL TO; \triangleeq (AmS)
18143 \DeclareTextCommand{\texttriangleeq}{PU}{\9042\134}%* U+225C
18144 % U+2260 NOT EQUAL TO; notequal; \ne (LaTeX), \neq (LaTeX)
18145 \DeclareTextCommand{\textneq}{PU}{\9042\140}%* U+2260
18146 \DeclareTextCommand{\textne}{PU}{\9042\140}%* U+2260
18147 %* \textneq -> \nequal (MnSymbol)
18148 % U+2261 IDENTICAL TO; equivalence; \equiv (LaTeX)
18149 \DeclareTextCommand{\textequiv}{PU}{\9042\141}%* U+2261
18150 %* \textequiv -> \Congruent (marvosym)
18151 % U+2262 NOT IDENTICAL TO; notidentical; \nequiv (txfonts/pxfonts)
18152 \DeclareTextCommand{\textnequiv}{PU}{\9042\142}%* U+2262
18153 %* \textnequiv -> \NotCongruent (marvosym)
18154 %* \textnequiv -> \notequiv (mathabx)
18155 % U+2264 LESS-THAN OR EQUAL TO; lessequal; \le (LaTeX), \leq (LaTeX)
18156 \DeclareTextCommand{\textleq}{PU}{\9042\144}%* U+2264
18157 \DeclareTextCommand{\textle}{PU}{\9042\144}%* U+2264
18158 %* \textleq -> \LessOrEqual (marvosym)
18159 % U+2265 GREATER-THAN OR EQUAL TO; greaterequal;
18160 % \ge (LaTeX), \geq (LaTeX)
18161 \DeclareTextCommand{\textgeq}{PU}{\9042\145}%* U+2265
18162 \DeclareTextCommand{\textge}{PU}{\9042\145}%* U+2265
18163 %* \textgeq -> \LargerOrEqual (marvosym)
18164 % U+2266 LESS-THAN OVER EQUAL TO; lessorequal; \leqq (AmS)
18165 \DeclareTextCommand{\textleqq}{PU}{\9042\146}%* U+2266
18166 % \nleqq (txfonts/pxfonts)
18167 \DeclareTextCommand{\textnleqq}{PU}{\9042\146\83\070}%* U+2266 U+0338
18168 % U+2267 GREATER-THAN OVER EQUAL TO; greaterorequal; \geqq (AmS)
18169 \DeclareTextCommand{\textgeqq}{PU}{\9042\147}%* U+2267
18170 % \ngeqq (txfonts/pxfonts)
18171 \DeclareTextCommand{\textngeqq}{PU}{\9042\147\83\070}%* U+2267 U+0338
18172 % U+2268 LESS-THAN BUT NOT EQUAL TO; \lneqq (AmS)
18173 \DeclareTextCommand{\textlneqq}{PU}{\9042\150}%* U+2268
18174 % U+2269 GREATER-THAN BUT NOT EQUAL TO; \gneqq (AmS)
18175 \DeclareTextCommand{\textgneqq}{PU}{\9042\151}%* U+2269
18176 % U+226A MUCH LESS-THAN; muchless; \ll (LaTeX)
18177 \DeclareTextCommand{\textll}{PU}{\9042\152}%* U+226A
18178 % \nll (txfonts/pxfonts)
18179 \DeclareTextCommand{\textnll}{PU}{\9042\152\83\070}%* U+226A U+0338
18180 % U+226B MUCH GREATER-THAN; muchgreater; \gg (LaTeX)
18181 \DeclareTextCommand{\textgg}{PU}{\9042\153}%* U+226B

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18182 % \ngg (txfonts/pxfonts)
18183 \DeclareTextCommand{\textngg}{PU}{\9042\153\83\070}%* U+226B U+0338
18184 % U+226C BETWEEN; \between (AmS)
18185 \DeclareTextCommand{\textbetween}{PU}{\9042\154}%* U+226C
18186 % U+226E NOT LESS-THAN; notless; \nless (AmS)
18187 \DeclareTextCommand{\textnless}{PU}{\9042\156}%* U+226E
18188 % U+226F NOT GREATER-THAN; notgreater; \ngtr (AmS)
18189 \DeclareTextCommand{\textngtr}{PU}{\9042\157}%* U+226F
18190 % U+2270 NEITHER LESS-THAN NOR EQUAL TO; notlessnorequal;
18191 % \nleq (AmS)
18192 \DeclareTextCommand{\textnleq}{PU}{\9042\160}%* U+2270
18193 % U+2271 NEITHER GREATER-THAN NOR EQUAL TO; notgreaternorequal;
18194 % \ngeq (AmS)
18194 \DeclareTextCommand{\textngeq}{PU}{\9042\161}%* U+2271
18195 % U+2272 LESS-THAN OR EQUIVALENT TO; lessorequivalent; \lessim (AmS)
18196 \DeclareTextCommand{\textlessim}{PU}{\9042\162}%* U+2272
18197 % \textlessim -> \apprle (wasysym)
18198 % U+2273 GREATER-THAN OR EQUIVALENT TO; greaterorequivalent; \gtrsim (AmS)
18199 \DeclareTextCommand{\textgtrsim}{PU}{\9042\163}%* U+2273
18200 % \textgtrsim -> \apprge (wasysym)
18201 % U+2274 NEITHER LESS-THAN NOR EQUIVALENT TO; \nlessim (txfonts/pxfonts)
18202 \DeclareTextCommand{\textnlessim}{PU}{\9042\164}%* U+2274
18203 % U+2275 NEITHER GREATER-THAN NOR EQUIVALENT TO; \ngtrsim (txfonts/pxfonts)
18204 \DeclareTextCommand{\textngtrsim}{PU}{\9042\165}%* U+2275
18205 % U+2276 LESS-THAN OR GREATER-THAN; lessorgreater; \lessgtr (AmS)
18206 \DeclareTextCommand{\textlessgtr}{PU}{\9042\166}%* U+2276
18207 % U+2277 GREATER-THAN OR LESS-THAN; greaterorless; \gtrless (AmS)
18208 \DeclareTextCommand{\textgtrless}{PU}{\9042\167}%* U+2277
18209 % U+2278 NEITHER LESS-THAN NOR GREATER-THAN; \ngtrless (txfonts/pxfonts)
18210 \DeclareTextCommand{\textngtrless}{PU}{\9042\170}%* U+2278
18211 % U+2279 NEITHER GREATER-THAN NOR LESS-THAN; \nlessgtr (txfonts/pxfonts)
18212 \DeclareTextCommand{\textnlessgtr}{PU}{\9042\171}%* U+2279
18213 % U+227A PRECEDES; precedes; \prec (LaTeX)
18214 \DeclareTextCommand{\textprec}{PU}{\9042\172}%* U+227A
18215 % U+227B SUCCEEDS; succeeds; \succ (LaTeX)
18216 \DeclareTextCommand{\textsucc}{PU}{\9042\173}%* U+227B
18217 % U+227C PRECEDES OR EQUAL TO; \preccurlyeq (AmS)
18218 \DeclareTextCommand{\textpreccurlyeq}{PU}{\9042\174}%* U+227C
18219 % U+227D SUCCEEDS OR EQUAL TO; \succcurlyeq (AmS)
18220 \DeclareTextCommand{\textsucccurlyeq}{PU}{\9042\175}%* U+227D
18221 % U+227E PRECEDES OR EQUIVALENT TO; \precsim (AmS)
18222 \DeclareTextCommand{\textprecsim}{PU}{\9042\176}%* U+227E
18223 % \nprecsim (txfonts/pxfonts)
18224 \DeclareTextCommand{\textnprecsim}{PU}{\9042\176\83\070}%* U+227E U+0338
18225 % U+227F SUCCEEDS OR EQUIVALENT TO; \succsim (AmS)
18226 \DeclareTextCommand{\textsuccsim}{PU}{\9042\177}%* U+227F
18227 % \nsuccsim (txfonts/pxfonts)
18228 \DeclareTextCommand{\textnsuccsim}{PU}{\9042\177\83\070}%* U+227F U+0338
18229 % U+2280 DOES NOT PRECEDE; notprecedes; \nprec (AmS)

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18230 \DeclareTextCommand{\textnprec}{PU}{\9042\200}%* U+2280
18231 % U+2281 DOES NOT SUCCEED; \notsucc (AmS)
18232 \DeclareTextCommand{\textnsucc}{PU}{\9042\201}%* U+2281
18233 % U+2282 SUBSET OF; \propersubset; \subset (LaTeX)
18234 \DeclareTextCommand{\textsubset}{PU}{\9042\202}%* U+2282
18235 % U+2283 SUPERSET OF; \propersuperset; \supset (LaTeX)
18236 \DeclareTextCommand{\textsupset}{PU}{\9042\203}%* U+2283
18237 % U+2284 NOT A SUBSET OF; \notsubset; \nsubset (mathabx)
18238 \DeclareTextCommand{\textnsubset}{PU}{\9042\204}%* U+2284
18239 % U+2285 NOT A SUPERSET OF; \notsuperset; \nsupset (mathabx)
18240 \DeclareTextCommand{\textnsupset}{PU}{\9042\205}%* U+2285
18241 % U+2286 SUBSET OF OR EQUAL TO; \reflexsubset; \subteq (LaTeX)
18242 \DeclareTextCommand{\textsubteq}{PU}{\9042\206}%* U+2286
18243 % U+2287 SUPERSET OF OR EQUAL TO; \reflexsuperset; \supseteq (LaTeX)
18244 \DeclareTextCommand{\textsupseteq}{PU}{\9042\207}%* U+2287
18245 % U+2288 NEITHER A SUBSET OF NOR EQUAL TO; \nsubteq (AmS)
18246 \DeclareTextCommand{\textnsubteq}{PU}{\9042\210}%* U+2288
18247 % U+2289 NEITHER A SUPERSET OF NOR EQUAL TO; \nsupseteq (AmS)
18248 \DeclareTextCommand{\textnsupseteq}{PU}{\9042\211}%* U+2289
18249 % U+228A SUBSET OF WITH NOT EQUAL TO; \subsetneq; \subsetneq (AmS)
18250 \DeclareTextCommand{\textsubsetneq}{PU}{\9042\212}%* U+228A
18251 % U+228B SUPERSET OF WITH NOT EQUAL TO; \supsetneq; \supsetneq (AmS)
18252 \DeclareTextCommand{\textsupsetneq}{PU}{\9042\213}%* U+228B
18253 % U+228D MULTISSET MULTIPLICATION; \cupdot (MnSymbol)
18254 \DeclareTextCommand{\textcupdot}{PU}{\9042\215}%* U+228D
18255 % U+228E MULTISSET UNION; \cupplus (MnSymbol)
18256 \DeclareTextCommand{\textcupplus}{PU}{\9042\216}%* U+228E
18257 % U+228F SQUARE IMAGE OF; \sqsubset (latexsym, ...)
18258 \DeclareTextCommand{\textsqsubset}{PU}{\9042\217}%* U+228F
18259 % \nsqsubset (txfonts/pxfonts)
18260 \DeclareTextCommand{\textnsqsubset}{PU}{\9042\217\83\070}%* U+228F U+0338
18261 % U+2290 SQUARE ORIGINAL OF; \sqsupset (latexsym, ...)
18262 \DeclareTextCommand{\textsqsupset}{PU}{\9042\220}%* U+2290
18263 % \nsqsupset (txfonts/pxfonts)
18264 \DeclareTextCommand{\textnsqsupset}{PU}{\9042\220\83\070}%* U+2290 U+0338
18265 % U+2291 SQUARE IMAGE OF OR EQUAL TO; \sqsubteq (LaTeX)
18266 \DeclareTextCommand{\textsqsubteq}{PU}{\9042\221}%* U+2291
18267 % \nsqsubteq (txfonts/pxfonts)
18268 \DeclareTextCommand{\textnsqsubteq}{PU}{\9042\221\83\070}%* U+2291 U+0338
18269 % U+2292 SQUARE ORIGINAL OF OR EQUAL TO; \sqsupseteq (LaTeX)
18270 \DeclareTextCommand{\textsqsupseteq}{PU}{\9042\222}%* U+2292
18271 % \nsqsupseteq (txfonts/pxfonts)
18272 \DeclareTextCommand{\textnsqsupseteq}{PU}{\9042\222\83\070}%* U+2292 U+0338
18273 % U+2293 SQUARE CAP; \sqcap (LaTeX)
18274 \DeclareTextCommand{\textsqcap}{PU}{\9042\223}%* U+2293
18275 % U+2294 SQUARE CUP; \sqcup (LaTeX)
18276 \DeclareTextCommand{\textsqcup}{PU}{\9042\224}%* U+2294
18277 % U+2295 CIRCLED PLUS; \circleplus; \oplus (LaTeX)
18278 \DeclareTextCommand{\textoplus}{PU}{\9042\225}%* U+2295
18279 %* \textoplus -> \varoplus (stmaryrd)
18280 % U+2296 CIRCLED MINUS; \minuscircle; \ominus (LaTeX)
18281 \DeclareTextCommand{\textominus}{PU}{\9042\226}%* U+2296

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18282 %* \textominus -> \varominus (stmaryrd)
18283 % U+2297 CIRCLED TIMES; circlemultiply; \otimes (LaTeX)
18284 \DeclareTextCommand{\textotimes}{PU}{\9042\227}%* U+2297
18285 %* \textotimes -> \varotimes (stmaryrd)
18286 % U+2298 CIRCLED DIVISION SLASH; \oslash (LaTeX)
18287 \DeclareTextCommand{\textoslash}{PU}{\9042\230}%* U+2298
18288 %* \textoslash -> \varoslash (stmaryrd)
18289 % U+2299 CIRCLED DOT OPERATOR; circle(d?)ot; \odot (LaTeX)
18290 \DeclareTextCommand{\textodot}{PU}{\9042\231}%* U+2299
18291 %* \textodot -> \varodot (stmaryrd)
18292 % U+229A CIRCLED RING OPERATOR; \circledcirc (AmS)
18293 \DeclareTextCommand{\textcircledcirc}{PU}{\9042\232}%* U+229A
18294 %* \textcircledcirc -> \ocirc (mathabx)
18295 %* \textcircledcirc -> \varocircle (stmaryrd)
18296 % U+229B CIRCLED ASTERISK OPERATOR; \circledast (AmS)
18297 \DeclareTextCommand{\textcircledast}{PU}{\9042\233}%* U+229B
18298 %* \textcircledast -> \varoast (stmaryrd)
18299 %* \textcircledast -> \oasterisk (mathabx)
18300 % U+229D CIRCLED DASH; \circleddash (AmS)
18301 \DeclareTextCommand{\textcircleddash}{PU}{\9042\235}%* U+229D
18302 % U+229E SQUARED PLUS; \boxplus (AmS)
18303 \DeclareTextCommand{\textboxplus}{PU}{\9042\236}%* U+229E
18304 % U+229F SQUARED MINUS; \boxminus (AmS)
18305 \DeclareTextCommand{\textboxminus}{PU}{\9042\237}%* U+229F
18306 % U+22A0 SQUARED TIMES; \boxtimes (AmS)
18307 \DeclareTextCommand{\textboxtimes}{PU}{\9042\240}%* U+22A0
18308 % U+22A1 SQUARED DOT OPERATOR; \boxdot (AmS)
18309 \DeclareTextCommand{\textboxdot}{PU}{\9042\241}%* U+22A1
18310 % U+22A2 RIGHT TACK; \vdash (LaTeX)
18311 \DeclareTextCommand{\textvdash}{PU}{\9042\242}%* U+22A2
18312 %* \textvdash -> \rightvdash (MnSymbol)
18313 % U+22A3 LEFT TACK; \dashleftarrow; \dashv (LaTeX)
18314 \DeclareTextCommand{\textdashv}{PU}{\9042\243}%* U+22A3
18315 %* \textdashv -> \leftvdash (MnSymbol)
18316 % \ndashv (mathabx)
18317 \DeclareTextCommand{\textndashv}{PU}{\9042\243\83\070}%* U+22A3 U+0338
18318 %* \textndashv -> \leftvdash (MnSymbol)
18319 % U+22A4 DOWN TACK (=top); \tackdown; \top (LaTeX)
18320 \DeclareTextCommand{\textttop}{PU}{\9042\244}%* U+22A4
18321 %* \textttop -> \downvdash (MnSymbol)
18322 % \ndownvdash (MnSymbol)
18323 \DeclareTextCommand{\textndownvdash}{PU}{\9042\244\83\070}%* U+22A4 U+0338
18324 % U+22A5 UP TACK (=base, bottom); \bot (LaTeX)
18325 \DeclareTextCommand{\textbot}{PU}{\9042\245}%* U+22A5
18326 %* \textbot -> \upvdash (MnSymbol)
18327 % \nupvdash (MnSymbol)
18328 \DeclareTextCommand{\textnupvdash}{PU}{\9042\245\83\070}%* U+22A5 U+0338
18329 %* \textnupvdash -> \nperp (MnSymbol)
18330 % U+22A8 TRUE; \vDash (AmS)
18331 \DeclareTextCommand{\textvDash}{PU}{\9042\250}%* U+22A8
18332 %* \textvDash -> \models (LaTeX)
18333 %* \textvDash -> \rightmodels (MnSymbol)
18334 % U+22A9 FORCES; \Vdash (AmS)
18335 \DeclareTextCommand{\textVdash}{PU}{\9042\251}%* U+22A9

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18336 %* \textVdash -> \rightVdash (MnSymbol)
18337 % U+22AA TRIPLE VERTICAL BAR RIGHT TURNSTILE; \Vvdash (AmS)
18338 \DeclareTextCommand{\textVvdash}{PU}{\9042\252}%* U+22AA
18339 % \nVdash (mathabx)
18340 \DeclareTextCommand{\textnVdash}{PU}{\9042\252\83\070}%* U+22AA U+0338
18341 % U+22AB DOUBLE VERTICAL BAR DOUBLE RIGHT TURNSTILE;
18342 % \VDash (mathabx)
18343 \DeclareTextCommand{\textVDash}{PU}{\9042\253}%* U+22AB
18344 %* \textVDash -> \rightModels (MnSymbol)
18345 % U+22AC DOES NOT PROVE; \nvDash (AmS)
18346 \DeclareTextCommand{\textnvDash}{PU}{\9042\254}%* U+22AC
18347 %* \textnvDash -> \nrighnvDash (MnSymbol)
18348 % U+22AD NOT TRUE; \nvDash (AmS)
18349 \DeclareTextCommand{\textnvDash}{PU}{\9042\255}%* U+22AD
18350 %* \textnvDash -> \nrighmodels (MnSymbol)
18351 %* \textnvDash -> \nmodels (MnSymbol)
18352 % U+22AE DOES NOT FORCE; \nVdash (txfonts/pxfonts)
18353 \DeclareTextCommand{\textnVdash}{PU}{\9042\256}%* U+22AE
18354 %* \textnVdash -> \nrighVdash (MnSymbol)
18355 % U+22AF NEGATED DOUBLE VERTICAL BAR DOUBLE RIGHT TURN-
      STILE; \nVDash (AmS)
18356 \DeclareTextCommand{\textnVDash}{PU}{\9042\257}%* U+22AF
18357 %* \textnVDash -> \nrighModels (MnSymbol)
18358 % U+22B2 NORMAL SUBGROUP OF; \lhd (latexsym, ...)
18359 \DeclareTextCommand{\textlhd}{PU}{\9042\262}%* U+22B2
18360 %* \textlhd -> \lessclosed (MnSymbol)
18361 % U+22B3 CONTAINS AS NORMAL SUBGROUP; \rhd (latexsym, ...)
18362 \DeclareTextCommand{\textrhd}{PU}{\9042\263}%* U+22B3
18363 %* \textrhd -> \gtrclosed (MnSymbol)
18364 % U+22B4 NORMAL SUBGROUP OF OR EQUAL TO; \unlhd (latexsym, ...)
18365 \DeclareTextCommand{\textunlhd}{PU}{\9042\264}%* U+22B4
18366 %* \textunlhd -> \leqclosed (MnSymbol)
18367 %* \textunlhd -> \trianglelefteq (MnSymbol)
18368 % U+22B5 CONTAINS AS NORMAL SUBGROUP OR EQUAL TO; \unrhd (la-
      texsym, ...)
18369 \DeclareTextCommand{\textunrhd}{PU}{\9042\265}%* U+22B5
18370 %* \textunrhd -> \geqclosed (MnSymbol)
18371 %* \textunrhd -> \trianglerighteq (MnSymbol)
18372 % U+22B6 ORIGINAL OF; \multimapdotbothA (txfonts/pxfonts)
18373 \DeclareTextCommand{\textmultimapdotbothA}{PU}{\9042\266}%* U+22B6
18374 % U+22B7 IMAGE OF; \multimapdotbothB (txfonts/pxfonts)
18375 \DeclareTextCommand{\textmultimapdotbothB}{PU}{\9042\267}%* U+22B7
18376 % U+22B8 MULTIMAP; \multimap (AmS, txfonts/pxfonts)
18377 \DeclareTextCommand{\textmultimap}{PU}{\9042\270}%* U+22B8
18378 % U+22BB XOR; \veebar (AmS)
18379 \DeclareTextCommand{\textveebar}{PU}{\9042\273}%* U+22BB
18380 % U+22BC NAND; \barwedge (mathabx)
18381 \DeclareTextCommand{\textbarwedge}{PU}{\9042\274}%* U+22BC
18382 % U+22C6 STAR OPERATOR; \star (LaTeX)
18383 \DeclareTextCommand{\textstar}{PU}{\9042\306}%* U+22C6
18384 % U+22C7 DIVISION TIMES; \divideontimes (AmS)
18385 \DeclareTextCommand{\textdivideontimes}{PU}{\9042\307}%* U+22C7
18386 % U+22C8 BOWTIE; \bowtie (LaTeX)
18387 \DeclareTextCommand{\textbowtie}{PU}{\9042\310}%* U+22C8

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18388 %* \textbowtie -> \Bowtie (wasysym)
18389 % U+22C9 LEFT NORMAL FACTOR SEMIDIRECT PRODUCT; \ltimes (AmS)
18390 \DeclareTextCommand{\textltimes}{PU}{\9042\311}%* U+22C9
18391 % U+22CA RIGHT NORMAL FACTOR SEMIDIRECT PRODUCT;
18392 % \rtimes (AmS)
18393 \DeclareTextCommand{\textrtimes}{PU}{\9042\312}%* U+22CA
18394 % U+22CB LEFT SEMIDIRECT PRODUCT; \leftthreetimes (AmS)
18395 \DeclareTextCommand{\textleftthreetimes}{PU}{\9042\313}%* U+22CB
18396 % U+22CC RIGHT SEMIDIRECT PRODUCT; \rightthreetimes (AmS)
18397 \DeclareTextCommand{\textrightthreetimes}{PU}{\9042\314}%* U+22CC
18398 % U+22CD REVERSED TILDE EQUALS; \backsimeq (AmS)
18399 \DeclareTextCommand{\textbacksimeq}{PU}{\9042\315}%* U+22CD
18400 % \nbacksimeq (txfonts/pxfonts)
18401 \DeclareTextCommand{\textnbacksimeq}{PU}{\9042\315\83\070}%* U+22CD U+0338
18402 % U+22CE CURLY LOGICAL OR; curlyor; \curlyvee (AmS)
18403 \DeclareTextCommand{\textcurlyvee}{PU}{\9042\316}%* U+22CE
18404 %* \textcurlyvee -> \varcurlyvee (stmaryrd)
18405 % U+22CF CURLY LOGICAL AND; curlyand; \curlywedge (AmS)
18406 \DeclareTextCommand{\textcurlywedge}{PU}{\9042\317}%* U+22CF
18407 %* \textcurlywedge -> \varcurlywedge (stmaryrd)
18408 % U+22D0 DOUBLE SUBSET; \Subset (AmS)
18409 \DeclareTextCommand{\textSubset}{PU}{\9042\320}%* U+22D0
18410 % \nSubset (txfonts/pxfonts)
18411 \DeclareTextCommand{\textnSubset}{PU}{\9042\320\83\070}%* U+22D0 U+0338
18412 % U+22D1 DOUBLE SUPERSET; \Supset (AmS)
18413 \DeclareTextCommand{\textSupset}{PU}{\9042\321}%* U+22D1
18414 % \nSupset (txfonts/pxfonts)
18415 \DeclareTextCommand{\textnSupset}{PU}{\9042\321\83\070}%* U+22D1 U+0338
18416 % U+22D2 DOUBLE INTERSECTION; \Cap (AmS)
18417 \DeclareTextCommand{\textCap}{PU}{\9042\322}%* U+22D2
18418 %* \textCap -> \doublecap (mathabx)
18419 % U+22D3 DOUBLE UNION; \Cup (AmS)
18420 \DeclareTextCommand{\textCup}{PU}{\9042\323}%* U+22D3
18421 %* \textCup -> \doublecup (mathabx)
18422 % U+22D4 PITCHFORK; \pitchfork (mathabx)
18423 \DeclareTextCommand{\textpitchfork}{PU}{\9042\324}%* U+22D4
18424 % U+22D6 LESS-THAN WITH DOT; \lessdot (AmS)
18425 \DeclareTextCommand{\textlessdot}{PU}{\9042\326}%* U+22D6
18426 % U+22D7 GREATER-THAN WITH DOT; \gtrdot (AmS)
18427 \DeclareTextCommand{\textgtrdot}{PU}{\9042\327}%* U+22D7
18428 % U+22D8 VERY MUCH LESS-THAN; \lll (AmS)
18429 \DeclareTextCommand{\textlll}{PU}{\9042\330}%* U+22D8
18430 % U+22D9 VERY MUCH GREATER-THAN; \ggg (AmS)
18431 \DeclareTextCommand{\textggg}{PU}{\9042\331}%* U+22D9
18432 % U+22DA LESS-THAN EQUAL TO OR GREATER-THAN; lesseqqualorgreater;
18433 % \lesseqgtr (AmS)
18434 \DeclareTextCommand{\textlesseqgtr}{PU}{\9042\332}%* U+22DA
18435 % U+22DB GREATER-THAN EQUAL TO OR LESS-THAN; greaterequalorless;
18436 % \gtreqless (AmS)
18437 \DeclareTextCommand{\textgtreqless}{PU}{\9042\333}%* U+22DB
18438 % U+22DE EQUAL TO OR PRECEDES; \curlyeqprec (MnSymbol)
18439 \DeclareTextCommand{\textcurlyeqprec}{PU}{\9042\336}%* U+22DE
18440 % \ncurlyeqprec (mathabx)
18441 \DeclareTextCommand{\textncurlyeqprec}{PU}{\9042\336\83\070}%* U+22DE U+0338

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18442 % U+22DF EQUAL TO OR SUCCEEDS; \curlyeqsucc (MnSymbol)
18443 \DeclareTextCommand{\textcurlyeqsucc}{PU}{\9042\337}%* U+22DF
18444 % \ncurlyeqsucc (mathabx)
18445 \DeclareTextCommand{\textncurlyeqsucc}{PU}{\9042\337\83\070}%* U+22DF U+0338
18446 % U+22E0 DOES NOT PRECEDE OR EQUAL; \npreccurlyeq (txfonts/pxfonts)
18447 \DeclareTextCommand{\textnpreccurlyeq}{PU}{\9042\340}%* U+22E0
18448 % U+22E1 DOES NOT SUCCEED OR EQUAL; \nsucccurlyeq (txfonts/pxfonts)
18449 \DeclareTextCommand{\textnsucccurlyeq}{PU}{\9042\341}%* U+22E1
18450 % U+22E2 NOT SQUARE IMAGE OF OR EQUAL TO; \nsqsubsetq (tx-
    fonts/pxfonts)
18451 \DeclareTextCommand{\textnqsubsetq}{PU}{\9042\342}%* U+22E2
18452 % U+22E3 NOT SQUARE ORIGINAL OF OR EQUAL TO; \nsqsupseteq (tx-
    fonts/pxfonts)
18453 \DeclareTextCommand{\textnqsupseteq}{PU}{\9042\343}%* U+22E3
18454 % U+22E4 SQUARE IMAGE OF OR NOT EQUAL TO; \sqsubsetneq (mathabx)
18455 \DeclareTextCommand{\textsqsubsetneq}{PU}{\9042\344}%* U+22E4
18456 %* \textsqsubsetneq -> \varsqsubsetneq (mathabx)
18457 % U+22E5 SQUARE ORIGINAL OF OR NOT EQUAL TO; \sqsupsetneq (math-
    abx)
18458 \DeclareTextCommand{\textsqsupsetneq}{PU}{\9042\345}%* U+22E5
18459 %* \textsqsupsetneq -> \varsqsupsetneq (mathabx)
18460 % U+22E6 LESS-THAN BUT NOT EQUIVALENT TO; \lnsim (AmS)
18461 \DeclareTextCommand{\textlnsim}{PU}{\9042\346}%* U+22E6
18462 % U+22E7 GREATER-THAN BUT NOT EQUIVALENT TO; \gnsim (AmS)
18463 \DeclareTextCommand{\textgnsim}{PU}{\9042\347}%* U+22E7
18464 % U+22E8 PRECEDES BUT NOT EQUIVALENT TO; \precnsim (AmS)
18465 \DeclareTextCommand{\textprecnsim}{PU}{\9042\350}%* U+22E8
18466 % U+22E9 SUCCEEDS BUT NOT EQUIVALENT TO; \succnsim (AmS)
18467 \DeclareTextCommand{\textsuccnsim}{PU}{\9042\351}%* U+22E9
18468 % U+22EA NOT NORMAL SUBGROUP OF; \ntriangleleft (AmS)
18469 \DeclareTextCommand{\textntriangleleft}{PU}{\9042\352}%* U+22EA
18470 %* \textntriangleleft -> \nlessclosed (MnSymbol)
18471 % U+22EB DOES NOT CONTAIN AS NORMAL SUBGROUP; \ntriang-
    leright (AmS)
18472 \DeclareTextCommand{\textntriangleright}{PU}{\9042\353}%* U+22EB
18473 %* \textntriangleright -> \ngtrclosed (MnSymbol)
18474 % U+22EC NOT NORMAL SUBGROUP OF OR EQUAL TO;
18475 % \ntrianglelefteq (AmS)
18476 \DeclareTextCommand{\textntrianglelefteq}{PU}{\9042\354}%* U+22EC
18477 % U+22ED DOES NOT CONTAIN AS NORMAL SUBGROUP OR EQUAL;
18478 % \ntrianglerighteq (AmS)
18479 \DeclareTextCommand{\textntrianglerighteq}{PU}{\9042\355}%* U+22ED
18480 %* \textntrianglerighteq -> \textngeqclosed
18481 % U+22EE VERTICAL ELLIPSIS; \ellipsisvertical; \vdots (LaTeX)
18482 \DeclareTextCommand{\textvdots}{PU}{\9042\356}%* U+22EE
18483 % U+22EF MIDLINE HORIZONTAL ELLIPSIS; \cdots (LaTeX)
18484 \DeclareTextCommand{\textcdots}{PU}{\9042\357}%* U+22EF
18485 % U+22F0 UP RIGHT DIAGONAL ELLIPSIS; \udots (MnSymbol)
18486 \DeclareTextCommand{\textudots}{PU}{\9042\360}%* U+22F0
18487 % U+22F1 DOWN RIGHT DIAGONAL ELLIPSIS; \ddots (LaTeX)
18488 \DeclareTextCommand{\textddots}{PU}{\9042\361}%* U+22F1
18489 % U+22F6 ELEMENT OF WITH OVERBAR; \barin (mathabx)
18490 \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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18491 % U+2300 DIAMETER SIGN; \diameter (mathabx,wasysym)
18492 \DeclareTextCommand{\textdiameter}{PU}{\9043\000}%* U+2300
18493 % U+2310 REVERSED NOT SIGN; \backneg (MnSymbol)
18494 \DeclareTextCommand{\textbackneg}{PU}{\9043\020}%* U+2310
18495 % U+2311 SQUARE LOZENGE; \wasylozenge (wasysym)
18496 \DeclareTextCommand{\textwasylozenge}{PU}{\9043\021}%* U+2311
18497 % U+2319 TURNED NOT SIGN; \invbackneg (MnSymbol)
18498 \DeclareTextCommand{\textinvbackneg}{PU}{\9043\031}%* U+2319
18499 % U+231A WATCH; \clock (wasysym)
18500 \DeclareTextCommand{\textclock}{PU}{\9043\032}%* U+231A
18501 %* \textclock -> \Clocklogo (marvosym)
18502 %* \textclock -> \ClockLogo (marvosym)
18503 % U+231C TOP LEFT CORNER; \ulcorner (AmS)
18504 \DeclareTextCommand{\textulcorner}{PU}{\9043\034}%* U+231C
18505 % U+231D TOP RIGHT CORNER; \urcorner (AmS)
18506 \DeclareTextCommand{\texturcorner}{PU}{\9043\035}%* U+231D
18507 % U+231E BOTTOM LEFT CORNER; \llcorner (AmS)
18508 \DeclareTextCommand{\textllcorner}{PU}{\9043\036}%* U+231E
18509 % U+231F BOTTOM RIGHT CORNER; \lrcorner (AmS)
18510 \DeclareTextCommand{\textlrcorner}{PU}{\9043\037}%* U+231F
18511 % U+2322 FROWN; \frown (LaTeX)
18512 \DeclareTextCommand{\textfrown}{PU}{\9043\042}%* U+2322
18513 % U+2323 SMILE; \smile (LaTeX)
18514 \DeclareTextCommand{\textsmile}{PU}{\9043\043}%* U+2323
18515 % U+2328 KEYBOARD; \Keyboard (marvosym)
18516 \DeclareTextCommand{\textKeyboard}{PU}{\9043\050}%* U+2328
18517 % U+2329 LEFT-POINTING ANGLE BRACKET; \angleleft; \angle (LaTeX)
18518 \DeclareTextCommand{\textlangle}{PU}{\9043\051}%* U+2329
18519 % U+232A RIGHT-POINTING ANGLE BRACKET; \angleright; \rangle (LaTeX)
18520 \DeclareTextCommand{\textrangle}{PU}{\9043\052}%* U+232A
18521 % U+2339 APL FUNCTIONAL SYMBOL QUAD DIVIDE; \APLinv (wasysym)
18522 \DeclareTextCommand{\textAPLinv}{PU}{\9043\071}%* U+2339
18523 % U+233C APL FUNCTIONAL SYMBOL QUAD CIRCLE; \Tumbler (marvosym)
18524 \DeclareTextCommand{\textTumbler}{PU}{\9043\074}%* U+233C
18525 % U+233D APL FUNCTIONAL SYMBOL CIRCLE STILE; \baro (stmaryrd)
18526 \DeclareTextCommand{\textstmaryrdbaro}{PU}{\9043\075}% U+233D
18527 %* \textstmaryrdbaro -> \baro (stmaryrd)
18528 % U+233F APL FUNCTIONAL SYMBOL SLASH BAR; \notslash (wasysym)
18529 \DeclareTextCommand{\textnotslash}{PU}{\9043\077}%* U+233F
18530 % U+2340 APL FUNCTIONAL SYMBOL BACKSLASH BAR;
18531 % \notbackslash (wasysym)
18532 \DeclareTextCommand{\textnotbackslash}{PU}{\9043\100}%* U+2340
18533 % U+2342 APL FUNCTIONAL SYMBOL QUAD BACKSLASH; \boxbackslash (mathabx)
18534 \DeclareTextCommand{\textboxbackslash}{PU}{\9043\102}%* U+2342
18535 % U+2347 APL FUNCTIONAL SYMBOL QUAD LEFTWARDS ARROW;
18536 % \APLleftarrowbox (wasysym)
18537 \DeclareTextCommand{\textAPLleftarrowbox}{PU}{\9043\107}%* U+2347
18538 % U+2348 APL FUNCTIONAL SYMBOL QUAD RIGHTWARDS ARROW;
18539 % \APLrightarrowbox (wasysym)
18540 \DeclareTextCommand{\textAPLrightarrowbox}{PU}{\9043\110}%* U+2348

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18541 % U+2350 APL FUNCTIONAL SYMBOL QUAD UPWARDS ARROW; \APLuparrowbox (wasysym)
18542 \DeclareTextCommand{\textAPLuparrowbox}{PU}{\9043\120}%* U+2350
18543 % U+2357 APL FUNCTIONAL SYMBOL QUAD DOWNWARDS ARROW;
18544 % \APLdownarrowbox (wasysym)
18545 \DeclareTextCommand{\textAPLdownarrowbox}{PU}{\9043\127}%* U+2357
18546 % U+235E APL FUNCTIONAL SYMBOL QUOTE QUAD;
18547 % \APLinput (wasysym)
18548 \DeclareTextCommand{\textAPLinput}{PU}{\9043\136}%* U+235E
18549 % U+2370 APL FUNCTIONAL SYMBOL QUAD QUESTION; \Request (china2e)
18550 \DeclareTextCommand{\textRequest}{PU}{\9043\160}%* U+2370
18551 % U+2393 DIRECT CURRENT SYMBOL FORM TWO; \Beam (marvosym)
18552 \DeclareTextCommand{\textBeam}{PU}{\9043\223}%* U+2393
18553 % U+2394 SOFTWARE-FUNCTION SYMBOL; \hexagon (wasysym)
18554 \DeclareTextCommand{\texthexagon}{PU}{\9043\224}%* U+2394
18555 % U+2395 APL FUNCTIONAL SYMBOL QUAD; \APLbox (wasysym)
18556 \DeclareTextCommand{\textAPLbox}{PU}{\9043\225}%* U+2395
18557 % U+23ED BLACK RIGHT-POINTING DOUBLE TRIANGLE WITH VERTICAL BAR;
18558 % \ForwardToIndex (marvosym)
18559 \DeclareTextCommand{\textForwardToIndex}{PU}{\9043\355}%* U+23ED
18560 % U+23EE BLACK LEFT-POINTING DOUBLE TRIANGLE WITH VERTICAL BAR;
18561 % \RewindToIndex (marvosym)
18562 \DeclareTextCommand{\textRewindToIndex}{PU}{\9043\356}%* U+23EE

46.2.24 Control Pictures: U+2400 to U+243F

18563 % U+2422 BLANK SYMBOL
18564 \DeclareTextCommand{\textblank}{PU}{\9044\042}% U+2422
18565 % U+2423 OPEN BOX; blank
18566 \DeclareTextCommand{\textvisiblespace}{PU}{\9044\043}% U+2423

46.2.25 Optical Character Recognition: U+2440 to U+245F

18567 % U+244A OCR DOUBLE BACKSLASH; \bbslash (stmaryrd)
18568 \DeclareTextCommand{\textbbslash}{PU}{\9044\112}%* U+244A
18569 %* \textbbslash -> \varparalelinv (txfonts/pxfonts)

46.2.26 Enclosed Alphanumerics: U+2460 to U+24FF

18570 % U+2460 CIRCLED DIGIT ONE; onecircle
18571 \DeclareTextCompositeCommand{\textcircled}{PU}{1}{\9044\140}% U+2460
18572 % U+2461 CIRCLED DIGIT TWO; twocircle
18573 \DeclareTextCompositeCommand{\textcircled}{PU}{2}{\9044\141}% U+2461
18574 % U+2462 CIRCLED DIGIT THREE; threecircle
18575 \DeclareTextCompositeCommand{\textcircled}{PU}{3}{\9044\142}% U+2462
18576 % U+2463 CIRCLED DIGIT FOUR; fourcircle
18577 \DeclareTextCompositeCommand{\textcircled}{PU}{4}{\9044\143}% U+2463
18578 % U+2464 CIRCLED DIGIT FIVE; fivecircle
18579 \DeclareTextCompositeCommand{\textcircled}{PU}{5}{\9044\144}% U+2464
18580 % U+2465 CIRCLED DIGIT SIX; sixcircle
18581 \DeclareTextCompositeCommand{\textcircled}{PU}{6}{\9044\145}% U+2465
18582 % U+2466 CIRCLED DIGIT SEVEN; sevencircle
18583 \DeclareTextCompositeCommand{\textcircled}{PU}{7}{\9044\146}% U+2466
18584 % U+2467 CIRCLED DIGIT EIGHT; eightcircle
18585 \DeclareTextCompositeCommand{\textcircled}{PU}{8}{\9044\147}% U+2467

18586 % U+2468 CIRCLED DIGIT NINE; ninecircle
18587 \DeclareTextCompositeCommand{\textcircled}{PU}{9}{\9044\150}% U+2468
18588 % U+2469 CIRCLED NUMBER TEN; tencircle
18589 \DeclareTextCompositeCommand{\textcircled}{PU}{10}{\9044\151}% U+2469
18590 % U+246A CIRCLED NUMBER ELEVEN; elevencircle
18591 \DeclareTextCompositeCommand{\textcircled}{PU}{11}{\9044\152}% U+246A
18592 % U+246B CIRCLED NUMBER TWELVE; twelvecircle
18593 \DeclareTextCompositeCommand{\textcircled}{PU}{12}{\9044\153}% U+246B
18594 % U+246C CIRCLED NUMBER THIRTEEN; thirteencircle
18595 \DeclareTextCompositeCommand{\textcircled}{PU}{13}{\9044\154}% U+246C
18596 % U+246D CIRCLED NUMBER FOURTEEN; fourteencircle
18597 \DeclareTextCompositeCommand{\textcircled}{PU}{14}{\9044\155}% U+246D
18598 % U+246E CIRCLED NUMBER FIFTEEN; fifteencircle
18599 \DeclareTextCompositeCommand{\textcircled}{PU}{15}{\9044\156}% U+246E
18600 % U+246F CIRCLED NUMBER SIXTEEN; sixteencircle
18601 \DeclareTextCompositeCommand{\textcircled}{PU}{16}{\9044\157}% U+246F
18602 % U+2470 CIRCLED NUMBER SEVENTEEN; seventeencircle
18603 \DeclareTextCompositeCommand{\textcircled}{PU}{17}{\9044\160}% U+2470
18604 % U+2471 CIRCLED NUMBER EIGHTEEN; eighteencircle
18605 \DeclareTextCompositeCommand{\textcircled}{PU}{18}{\9044\161}% U+2471
18606 % U+2472 CIRCLED NUMBER NINETEEN; nineteencircle
18607 \DeclareTextCompositeCommand{\textcircled}{PU}{19}{\9044\162}% U+2472
18608 % U+2473 CIRCLED NUMBER TWENTY; twentycircle
18609 \DeclareTextCompositeCommand{\textcircled}{PU}{20}{\9044\163}% U+2473
18610 % U+24B6 CIRCLED LATIN CAPITAL LETTER A; Acircle
18611 \DeclareTextCompositeCommand{\textcircled}{PU}{A}{\9044\266}% U+24B6
18612 % \CircledA (marvosym)
18613 \DeclareTextCommand{\textCircledA}{PU}{\9044\266}%* U+24B6
18614 %* \textCircledA -> \CleaningA
18615 % U+24B7 CIRCLED LATIN CAPITAL LETTER B; Bcircle
18616 \DeclareTextCompositeCommand{\textcircled}{PU}{B}{\9044\267}% U+24B7
18617 % U+24B8 CIRCLED LATIN CAPITAL LETTER C; Ccircle
18618 \DeclareTextCompositeCommand{\textcircled}{PU}{C}{\9044\270}% U+24B8
18619 % U+24B9 CIRCLED LATIN CAPITAL LETTER D; Dcircle
18620 \DeclareTextCompositeCommand{\textcircled}{PU}{D}{\9044\271}% U+24B9
18621 % U+24BA CIRCLED LATIN CAPITAL LETTER E; Ecircle
18622 \DeclareTextCompositeCommand{\textcircled}{PU}{E}{\9044\272}% U+24BA
18623 % U+24BB CIRCLED LATIN CAPITAL LETTER F; Fcircle
18624 \DeclareTextCompositeCommand{\textcircled}{PU}{F}{\9044\273}% U+24BB
18625 % \CleaningF (marvosym)
18626 \DeclareTextCommand{\textCleaningF}{PU}{\9044\273}%* U+24BB
18627 % \CleaningFF (marvosym)
18628 \DeclareTextCommand{\textCleaningFF}{PU}{\9044\273\83\062}%* U+24BB U+0332
18629 % U+24BC CIRCLED LATIN CAPITAL LETTER G; Gcircle
18630 \DeclareTextCompositeCommand{\textcircled}{PU}{G}{\9044\274}% U+24BC
18631 % U+24BD CIRCLED LATIN CAPITAL LETTER H; Hcircle
18632 \DeclareTextCompositeCommand{\textcircled}{PU}{H}{\9044\275}% U+24BD
18633 % U+24BE CIRCLED LATIN CAPITAL LETTER I; Icircle
18634 \DeclareTextCompositeCommand{\textcircled}{PU}{I}{\9044\276}% U+24BE
18635 % U+24BF CIRCLED LATIN CAPITAL LETTER J; Jcircle
18636 \DeclareTextCompositeCommand{\textcircled}{PU}{J}{\9044\277}% U+24BF
18637 % U+24C0 CIRCLED LATIN CAPITAL LETTER K; Kcircle
18638 \DeclareTextCompositeCommand{\textcircled}{PU}{K}{\9044\300}% U+24C0
18639 % U+24C1 CIRCLED LATIN CAPITAL LETTER L; Lcircle

18640 \DeclareTextCompositeCommand{\textcircled}{PU}{L}{\9044\301}% U+24C1
18641 % U+24C2 CIRCLED LATIN CAPITAL LETTER M; Mcircle
18642 \DeclareTextCompositeCommand{\textcircled}{PU}{M}{\9044\302}% U+24C2
18643 % U+24C3 CIRCLED LATIN CAPITAL LETTER N; Ncircle
18644 \DeclareTextCompositeCommand{\textcircled}{PU}{N}{\9044\303}% U+24C3
18645 % U+24C4 CIRCLED LATIN CAPITAL LETTER O; Ocircle
18646 \DeclareTextCompositeCommand{\textcircled}{PU}{O}{\9044\304}% U+24C4
18647 % U+24C5 CIRCLED LATIN CAPITAL LETTER P; Pcircle
18648 \DeclareTextCompositeCommand{\textcircled}{PU}{P}{\9044\305}% U+24C5
18649 % \CleaningP (marvosym)
18650 \DeclareTextCommand{\textCleaningP}{PU}{\9044\305}%* U+24C5
18651 % \CleaningPP (marvosym)
18652 \DeclareTextCommand{\textCleaningPP}{PU}{\9044\305\83\062}%* U+24C5 U+0332
18653 % U+24C6 CIRCLED LATIN CAPITAL LETTER Q; Qcircle
18654 \DeclareTextCompositeCommand{\textcircled}{PU}{Q}{\9044\306}% U+24C6
18655 % U+24C7 CIRCLED LATIN CAPITAL LETTER R; Rcircle
18656 \DeclareTextCompositeCommand{\textcircled}{PU}{R}{\9044\307}% U+24C7
18657 % U+24C8 CIRCLED LATIN CAPITAL LETTER S; Scircle
18658 \DeclareTextCompositeCommand{\textcircled}{PU}{S}{\9044\310}% U+24C8
18659 % U+24C9 CIRCLED LATIN CAPITAL LETTER T; Tcircle
18660 \DeclareTextCompositeCommand{\textcircled}{PU}{T}{\9044\311}% U+24C9
18661 % U+24CA CIRCLED LATIN CAPITAL LETTER U; Ucircle
18662 \DeclareTextCompositeCommand{\textcircled}{PU}{U}{\9044\312}% U+24CA
18663 % U+24CB CIRCLED LATIN CAPITAL LETTER V; Vcircle
18664 \DeclareTextCompositeCommand{\textcircled}{PU}{V}{\9044\313}% U+24CB
18665 % U+24CC CIRCLED LATIN CAPITAL LETTER W; Wcircle
18666 \DeclareTextCompositeCommand{\textcircled}{PU}{W}{\9044\314}% U+24CC
18667 % U+24CD CIRCLED LATIN CAPITAL LETTER X; Xcircle
18668 \DeclareTextCompositeCommand{\textcircled}{PU}{X}{\9044\315}% U+24CD
18669 % U+24CE CIRCLED LATIN CAPITAL LETTER Y; Ycircle
18670 \DeclareTextCompositeCommand{\textcircled}{PU}{Y}{\9044\316}% U+24CE
18671 % U+24CF CIRCLED LATIN CAPITAL LETTER Z; Zcircle
18672 \DeclareTextCompositeCommand{\textcircled}{PU}{Z}{\9044\317}% U+24CF
18673 % U+24D0 CIRCLED LATIN SMALL LETTER A; acircle
18674 \DeclareTextCompositeCommand{\textcircled}{PU}{a}{\9044\320}% U+24D0
18675 % U+24D1 CIRCLED LATIN SMALL LETTER B; bcircle
18676 \DeclareTextCompositeCommand{\textcircled}{PU}{b}{\9044\321}% U+24D1
18677 % U+24D2 CIRCLED LATIN SMALL LETTER C; ccircle
18678 \DeclareTextCompositeCommand{\textcircled}{PU}{c}{\9044\322}% U+24D2
18679 % U+24D3 CIRCLED LATIN SMALL LETTER D; dcircle
18680 \DeclareTextCompositeCommand{\textcircled}{PU}{d}{\9044\323}% U+24D3
18681 % U+24D4 CIRCLED LATIN SMALL LETTER E; ecircle
18682 \DeclareTextCompositeCommand{\textcircled}{PU}{e}{\9044\324}% U+24D4
18683 % U+24D5 CIRCLED LATIN SMALL LETTER F; fcircle
18684 \DeclareTextCompositeCommand{\textcircled}{PU}{f}{\9044\325}% U+24D5
18685 % U+24D6 CIRCLED LATIN SMALL LETTER G; gcircle
18686 \DeclareTextCompositeCommand{\textcircled}{PU}{g}{\9044\326}% U+24D6
18687 % U+24D7 CIRCLED LATIN SMALL LETTER H; hcircle
18688 \DeclareTextCompositeCommand{\textcircled}{PU}{h}{\9044\327}% U+24D7
18689 % U+24D8 CIRCLED LATIN SMALL LETTER I; icircle
18690 \DeclareTextCompositeCommand{\textcircled}{PU}{i}{\9044\330}% U+24D8
18691 % U+24D9 CIRCLED LATIN SMALL LETTER J; jcircle
18692 \DeclareTextCompositeCommand{\textcircled}{PU}{j}{\9044\331}% U+24D9
18693 % U+24DA CIRCLED LATIN SMALL LETTER K; kcircle

18694 \DeclareTextCompositeCommand{\textcircled}{PU}{k}{\9044\332}% U+24DA
 18695 % U+24DB CIRCLED LATIN SMALL LETTER L; lcircle
 18696 \DeclareTextCompositeCommand{\textcircled}{PU}{l}{\9044\333}% U+24DB
 18697 % U+24DC CIRCLED LATIN SMALL LETTER M; mcircle
 18698 \DeclareTextCompositeCommand{\textcircled}{PU}{m}{\9044\334}% U+24DC
 18699 % U+24DD CIRCLED LATIN SMALL LETTER N; ncircle
 18700 \DeclareTextCompositeCommand{\textcircled}{PU}{n}{\9044\335}% U+24DD
 18701 % U+24DE CIRCLED LATIN SMALL LETTER O; ocircle
 18702 \DeclareTextCompositeCommand{\textcircled}{PU}{o}{\9044\336}% U+24DE
 18703 % U+24DF CIRCLED LATIN SMALL LETTER P; pcircle
 18704 \DeclareTextCompositeCommand{\textcircled}{PU}{p}{\9044\337}% U+24DF
 18705 % U+24E0 CIRCLED LATIN SMALL LETTER Q; qcircle
 18706 \DeclareTextCompositeCommand{\textcircled}{PU}{q}{\9044\340}% U+24E0
 18707 % U+24E1 CIRCLED LATIN SMALL LETTER R; rcircle
 18708 \DeclareTextCompositeCommand{\textcircled}{PU}{r}{\9044\341}% U+24E1
 18709 % U+24E2 CIRCLED LATIN SMALL LETTER S; scircle
 18710 \DeclareTextCompositeCommand{\textcircled}{PU}{s}{\9044\342}% U+24E2
 18711 % U+24E3 CIRCLED LATIN SMALL LETTER T; tcircle
 18712 \DeclareTextCompositeCommand{\textcircled}{PU}{t}{\9044\343}% U+24E3
 18713 % U+24E4 CIRCLED LATIN SMALL LETTER U; ucircle
 18714 \DeclareTextCompositeCommand{\textcircled}{PU}{u}{\9044\344}% U+24E4
 18715 % U+24E5 CIRCLED LATIN SMALL LETTER V; vcircle
 18716 \DeclareTextCompositeCommand{\textcircled}{PU}{v}{\9044\345}% U+24E5
 18717 % U+24E6 CIRCLED LATIN SMALL LETTER W; wcircle
 18718 \DeclareTextCompositeCommand{\textcircled}{PU}{w}{\9044\346}% U+24E6
 18719 % U+24E7 CIRCLED LATIN SMALL LETTER X; xcircle
 18720 \DeclareTextCompositeCommand{\textcircled}{PU}{x}{\9044\347}% U+24E7
 18721 % U+24E8 CIRCLED LATIN SMALL LETTER Y; ycircle
 18722 \DeclareTextCompositeCommand{\textcircled}{PU}{y}{\9044\350}% U+24E8
 18723 % U+24E9 CIRCLED LATIN SMALL LETTER Z; zcircle
 18724 \DeclareTextCompositeCommand{\textcircled}{PU}{z}{\9044\351}% U+24E9
 18725 % U+24EA CIRCLED DIGIT ZERO
 18726 \DeclareTextCompositeCommand{\textcircled}{PU}{0}{\9044\352}% U+24EA

46.2.27 Box Drawing: U+2500 to 257F

18727 % U+2504 BOX DRAWINGS LIGHT TRIPLE DASH HORIZONTAL; \Cutting-
 Line (marvosym)
 18728 \DeclareTextCommand{\textCuttingLine}{PU}{\9045\004}%* U+2504
 18729 %* \textCuttingLine -> \Kutline (marvosym)
 18730 %* \textCuttingLine -> \CutLine (marvosym)
 18731 %* \textCuttingLine -> \Cutline (marvosym)

46.2.28 Geometric Shapes: U+25A0 to U+25FF

18732 % U+25B2 BLACK UP-POINTING TRIANGLE; \UParrow (wasysym)
 18733 \DeclareTextCommand{\textUParrow}{PU}{\9045\262}%* U+25B2
 18734 %* \textUParrow -> \MoveUp (marvosym)
 18735 % U+25B3 WHITE UP-POINTING TRIANGLE; whiteuppointingtriangle;
 18736 % \bigtriangleup (LaTeX)
 18737 \DeclareTextCommand{\textbigtriangleup}{PU}{\9045\263}%* U+25B3
 18738 %* \textbigtriangleup -> \APLup (wasysym)
 18739 %* \textbigtriangleup -> \Bleech (marvosym)
 18740 % U+25B6 BLACK RIGHT-POINTING TRIANGLE; \Forward (marvosym)
 18741 \DeclareTextCommand{\textForward}{PU}{\9045\266}%* U+25B6
 18742 % U+25B7 WHITE RIGHT-POINTING TRIANGLE (= z notation range restric-

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tion);
18743 % whiterightpointingtriangle; \triangleright (LaTeX)
18744 \DeclareTextCommand{\texttriangleright}{PU}{\9045\267}%* U+25B7
18745 % U+25BA BLACK RIGHT-POINTING POINTER; \RHD (wasysym)
18746 \DeclareTextCommand{\textRHD}{PU}{\9045\272}%* U+25BA
18747 % U+25BC BLACK DOWN-POINTING TRIANGLE; \DOWNarrow (wasysym)
18748 \DeclareTextCommand{\textDOWNarrow}{PU}{\9045\274}%* U+25BC
18749 %* \textDOWNarrow -> \MoveDown (marvosym)
18750 % U+25BD WHITE DOWN-POINTING TRIANGLE; whitedownpointingtriangle;
18751 % \bigtriangledown (LaTeX)
18752 \DeclareTextCommand{\textbigtriangledown}{PU}{\9045\275}%* U+25BD
18753 %* \textbigtriangledown -> \APLdown (wasysym)
18754 % U+25C0 BLACK LEFT-POINTING TRIANGLE; \Rewind (marvosym)
18755 \DeclareTextCommand{\textRewind}{PU}{\9045\300}%* U+25C0
18756 % U+25C1 WHITE RIGHT-POINTING TRIANGLE (= z notation domain restriction);
18757 % whiteleftpointingtriangle; \triangleleft (LaTeX)
18758 \DeclareTextCommand{\texttriangleleft}{PU}{\9045\301}%* U+25C1
18759 % U+25C4 BLACK LEFT-POINTING POINTER; \LHD (wasysym)
18760 \DeclareTextCommand{\textLHD}{PU}{\9045\304}%* U+25C4
18761 % U+25C7 WHITE DIAMOND; whitediamond; \diamond (LaTeX)
18762 \DeclareTextCommand{\textdiamond}{PU}{\9045\307}%* U+25C7
18763 %* \textdiamond -> \Diamond (wasysym)
18764 % U+25CA LOZENGE; lozenge; \lozenge (AmS)
18765 \DeclareTextCommand{\textlozenge}{PU}{\9045\312}%* U+25CA
18766 % U+25D6 LEFT HALF BLACK CIRCLE; \LEFTCIRCLE (wasysym)
18767 \DeclareTextCommand{\textLEFTCIRCLE}{PU}{\9045\326}%* U+25D6
18768 % U+25D7 RIGHT HALF BLACK CIRCLE; \RIGHTCIRCLE (wasysym)
18769 \DeclareTextCommand{\textRIGHTCIRCLE}{PU}{\9045\327}%* U+25D7
18770 % U+25E6 WHITE BULLET; *openbullet, whitebullet
18771 \DeclareTextCommand{\textopenbullet}{PU}{\9045\346}%* U+25E6
18772 % U+25EB WHITE SQUARE WITH VERTICAL BISECTING LINE;
18773 % \boxbar (stmaryrd)
18774 \DeclareTextCommand{\textboxbar}{PU}{\9045\353}%* U+25EB
18775 % U+25EF LARGE CIRCLE; largecircle
18776 \DeclareTextCommand{\textbigcircle}{PU}{\9045\357}%* U+25EF
18777 %* \textbigcircle -> \varbigcirc (stmaryrd)
18778 %

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46.2.29 Miscellaneous Symbols: U+2600 to U+26FF

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18779 % U+2601 CLOUD; \Cloud (ifsym)
18780 \DeclareTextCommand{\textCloud}{PU}{\9046\001}%* U+2601
18781 % U+2605 BLACK STAR; \FiveStar (bbding)
18782 \DeclareTextCommand{\textFiveStar}{PU}{\9046\005}%* U+2605
18783 % U+2606 WHITE STAR; \FiveStarOpen (bbding)
18784 \DeclareTextCommand{\textFiveStarOpen}{PU}{\9046\006}%* U+2606
18785 % U+260E BLACK TELEPHONE; telephoneblack; \Phone (bbding)
18786 \DeclareTextCommand{\textPhone}{PU}{\9046\016}%* U+260E
18787 %* \textPhone -> \Telefon (marvosym)
18788 % U+2610 BALLOT BOX; \boxempty (stmaryrd)
18789 \DeclareTextCommand{\textboxempty}{PU}{\9046\020}%* U+2610
18790 %* \textboxempty -> \Box (wasysym)
18791 % U+2611 BALLOT BOX WITH CHECK; \Checkedbox (marvosym)

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18792 \DeclareTextCommand{\textCheckedbox}{PU}{\9046\021}%* U+2611
18793 %* \textCheckedbox -> \CheckedBox (marvosym)
18794 % U+2612 BALLOT BOX WITH X; \Crossedbox (marvosym)
18795 \DeclareTextCommand{\textCrossedbox}{PU}{\9046\022}%* U+2612
18796 %* \textCrossedbox -> \XBox (wasysym)
18797 %* \textCrossedbox -> \CrossedBox (marvosym)
18798 % U+2615 HOT BEVERAGE; \Coffeecup (marvosym)
18799 \DeclareTextCommand{\textCoffeecup}{PU}{\9046\025}%* U+2615
18800 % U+261A BLACK LEFT POINTING INDEX; \HandCuffLeft (bding)
18801 \DeclareTextCommand{\textHandCuffLeft}{PU}{\9046\032}%* U+261A
18802 % U+261B BLACK RIGHT POINTING INDEX; \HandCuffRight (bding)
18803 \DeclareTextCommand{\textHandCuffRight}{PU}{\9046\033}%* U+261B
18804 % U+261C WHITE LEFT POINTING INDEX; \HandLeft (bding)
18805 \DeclareTextCommand{\textHandLeft}{PU}{\9046\034}%* U+261C
18806 %* \textHandLeft -> \rightpointleft (fourier)
18807 % U+261E WHITE RIGHT POINTING INDEX; \HandRight (bding)
18808 \DeclareTextCommand{\textHandRight}{PU}{\9046\036}%* U+261E
18809 %* \textHandRight -> \leftpointright (fourier)
18810 %* \textHandRight -> \PointingHand (marvosym)
18811 %* \textHandRight -> \Pointinghand (marvosym)
18812 % U+2622 RADIOACTIVE SIGN; \Radioactivity (marvosym)
18813 \DeclareTextCommand{\textRadioactivity}{PU}{\9046\042}%* U+2622
18814 %* \textRadioactivity -> \Radiation (ifsym)
18815 % U+2623 BIOHAZARD SIGN; \Biohazard (marvosym)
18816 \DeclareTextCommand{\textBiohazard}{PU}{\9046\043}%* U+2623
18817 % U+2625 ANKH; \Ankh (marvosym)
18818 \DeclareTextCommand{\textAnkh}{PU}{\9046\045}%* U+2625
18819 % U+262F YIN YANG; \YinYang (marvosym)
18820 \DeclareTextCommand{\textYinYang}{PU}{\9046\057}%* U+262F
18821 %* \textYinYang -> \Yinyang (marvosym)
18822 %* \textYinYang -> \YingYang (marvosym)
18823 %* \textYinYang -> \Yingyang (marvosym)
18824 % U+2639 WHITE FROWNING FACE; \frownie (wasysym)
18825 \DeclareTextCommand{\textfrownie}{PU}{\9046\071}%* U+2639
18826 %* \textfrownie -> \Frowny (marvosym)
18827 % U+263A WHITE SMILING FACE; \smiley (wasysym)
18828 \DeclareTextCommand{\textsmiley}{PU}{\9046\072}%* U+263A
18829 %* \textsmiley -> \Smiley (marvosym)
18830 % U+263B BLACK SMILING FACE; \blacksmiley (wasysym)
18831 \DeclareTextCommand{\textblacksmiley}{PU}{\9046\073}%* U+263B
18832 % U+263C WHITE SUN WITH RAYS; \sun (wasysym)
18833 \DeclareTextCommand{\textsun}{PU}{\9046\074}%* U+263C
18834 %* \textsun -> \Sun (marvosym)
18835 % U+263D FIRST QUARTER MOON; \leftmoon (wasysym, mathabx)
18836 \DeclareTextCommand{\textleftmoon}{PU}{\9046\075}%* U+263D
18837 % U+263E LAST QUARTER MOON; \rightmoon (wasysym, mathabx)
18838 \DeclareTextCommand{\textrightmoon}{PU}{\9046\076}%* U+263E
18839 % U+263F MERCURY; \mercury (wasysym)
18840 \DeclareTextCommand{\textmercury}{PU}{\9046\077}%* U+263F
18841 %* \textmercury -> \Mercury (marvosym)
18842 % U+2640 FEMALE SIGN; female; \female (wasysym)
18843 \DeclareTextCommand{\textPUfemale}{PU}{\9046\100}% U+2640
18844 %* \textPUfemale -> \textfemale (tipx)
18845 %* \textPUfemale -> \female (wasysym)


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18846 %* \textPUfemale -> \venus (wasysym)
18847 %* \textPUfemale -> \Venus (marvosym)
18848 %* \textPUfemale -> \Female (marvosym)
18849 % U+2641 EARTH; \earth (wasysym)
18850 \DeclareTextCommand{\textearth}{PU}{\9046\101}%* U+2641
18851 %* \textearth -> \Earth (marvosym)
18852 % U+2642 MALE SIGN; male, mars; \male (wasysym)
18853 \DeclareTextCommand{\textmale}{PU}{\9046\102}%* U+2642
18854 %* \textmale -> \mars (wasysym)
18855 %* \textmale -> \Mars (marvosym)
18856 %* \textmale -> \Male (marvosym)
18857 % U+2643 JUPITER; \jupiter (wasysym)
18858 \DeclareTextCommand{\textjupiter}{PU}{\9046\103}%* U+2643
18859 %* \textjupiter -> \Jupiter (marvosym)
18860 % U+2644 SATURN; \saturn (wasysym)
18861 \DeclareTextCommand{\textsaturn}{PU}{\9046\104}%* U+2644
18862 %* \textsaturn -> \Saturn (marvosym)
18863 % U+2645 URANUS; \uranus (wasysym)
18864 \DeclareTextCommand{\texturanus}{PU}{\9046\105}%* U+2645
18865 %* \texturanus -> \Uranus (marvosym)
18866 % U+2646 NEPTUNE; \neptune (wasysym)
18867 \DeclareTextCommand{\textneptune}{PU}{\9046\106}%* U+2646
18868 %* \textneptune -> \Neptune (marvosym)
18869 % U+2647 PLUTO; \pluto (wasysym)
18870 \DeclareTextCommand{\textpluto}{PU}{\9046\107}%* U+2647
18871 %* \textpluto -> \Pluto (marvosym)
18872 % U+2648 ARIES; \aries (wasysym)
18873 \DeclareTextCommand{\textaries}{PU}{\9046\110}%* U+2648
18874 %* \textaries -> \Aries (marvosym)
18875 % U+2649 TAURUS; \taurus (wasysym)
18876 \DeclareTextCommand{\texttaurus}{PU}{\9046\111}%* U+2649
18877 %* \texttaurus -> \Taurus (marvosym)
18878 % U+264A GEMINI; \gemini (wasysym)
18879 \DeclareTextCommand{\textgemini}{PU}{\9046\112}%* U+264A
18880 %* \textgemini -> \Gemini (marvosym)
18881 % U+264B CANCER; \cancer (wasysym)
18882 \DeclareTextCommand{\textcancer}{PU}{\9046\113}%* U+264B
18883 %* \textcancer -> \Cancer (marvosym)
18884 % U+264C LEO; \leo (wasysym)
18885 \DeclareTextCommand{\textleo}{PU}{\9046\114}%* U+264C
18886 %* \textleo -> \Leo (marvosym)
18887 % U+264D VIRGO; \virgo (wasysym)
18888 \DeclareTextCommand{\textvirgo}{PU}{\9046\115}%* U+264D
18889 %* \textvirgo -> \Virgo (marvosym)
18890 % U+264E LIBRA; \libra (wasysym)
18891 \DeclareTextCommand{\textlibra}{PU}{\9046\116}%* U+264E
18892 %* \textlibra -> \Libra (marvosym)
18893 % U+264F SCORPIO; \scorpio (wasysym)
18894 \DeclareTextCommand{\textscorpio}{PU}{\9046\117}%* U+264F
18895 %* \textscorpio -> \Scorpio (marvosym)
18896 % U+2650 SAGITTARIUS; \sagittarius (wasysym)
18897 \DeclareTextCommand{\textsagittarius}{PU}{\9046\120}%* U+2650
18898 %* \textsagittarius -> \Sagittarius (marvosym)
18899 % U+2651 CAPRICORN; \capricornus (wasysym)

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18900 \DeclareTextCommand{\textcapricornus}{PU}{\9046\121}%* U+2651
18901 %* \textcapricornus -> \Capricorn (marvosym)
18902 % U+2652 AQUARIUS; \aquarius (wasysym)
18903 \DeclareTextCommand{\textaquarius}{PU}{\9046\122}%* U+2652
18904 %* \textaquarius -> \Aquarius (marvosym)
18905 % U+2653 PISCES; \pisces (wasysym)
18906 \DeclareTextCommand{\textpisces}{PU}{\9046\123}%* U+2653
18907 %* \textpisces -> \Pisces (marvosym)
18908 % U+2660 BLACK SPADE SUIT; spade, spadesuitblack; \spadesuit (LaTeX)
18909 \DeclareTextCommand{\textspadesuitblack}{PU}{\9046\140}% U+2660
18910 %* \textspadesuitblack -> \spadesuit (MnSymbol)
18911 % U+2661 WHITE HEART SUIT; heartsuitwhite; \heartsuit (LaTeX)
18912 \DeclareTextCommand{\textheartsuitwhite}{PU}{\9046\141}% U+2661
18913 %* \textheartsuitwhite -> \Heart (marvosym)
18914 %* \textheartsuitwhite -> \heartsuit (MnSymbol)
18915 % U+2662 WHITE DIAMOND SUIT; diamondsuitwhite; \diamondsuit (LaTeX)
18916 \DeclareTextCommand{\textdiamondsuitwhite}{PU}{\9046\142}% U+2662
18917 %* \textdiamondsuitwhite -> \diamondsuit (MnSymbol)
18918 % U+2663 BLACK CLUB SUIT; club, clubsuitblack; \clubsuit (LaTeX)
18919 \DeclareTextCommand{\textclubsuitblack}{PU}{\9046\143}% U+2663
18920 %* \textclubsuitblack -> \clubsuit (MnSymbol)
18921 % U+2664 WHITE SPADE SUIT; spadesuitwhite
18922 \DeclareTextCommand{\textspadesuitwhite}{PU}{\9046\144}% U+2664
18923 % U+2665 BLACK HEART SUIT; heartsuitblack, heart
18924 \DeclareTextCommand{\textheartsuitblack}{PU}{\9046\145}% U+2665
18925 % U+2666 BLACK DIAMOND SUIT; diamond
18926 \DeclareTextCommand{\textdiamondsuitblack}{PU}{\9046\146}% U+2666
18927 % U+2667 WHITE CLUB SUIT; clubsuitwhite
18928 \DeclareTextCommand{\textclubsuitwhite}{PU}{\9046\147}% U+2667
18929 % U+2669 QUARTER NOTE; quarternote; \quarternote (wasysym, arev)
18930 \DeclareTextCommand{\textquarternote}{PU}{\9046\151}%* U+2669
18931 % U+266A EIGHTH NOTE; musicalnote; \textmusicalnote (textcomp)
18932 \DeclareTextCommand{\textmusicalnote}{PU}{\9046\152}% U+266A
18933 %* \textmusicalnote -> \eighthnote (wasysym, arev)
18934 % U+266B BEAMED EIGHTH NOTES; eighthnotebeamed; \twonotes (wasysym)
18935 \DeclareTextCommand{\texttwonotes}{PU}{\9046\153}%* U+266B
18936 % U+266C BEAMED SIXTEENTH NOTES; beamedsixteenthnotes; \sixteenth-
      note (arev)
18937 \DeclareTextCommand{\textsixteenthnote}{PU}{\9046\154}%* U+266C
18938 % U+266D MUSIC FLAT SIGN; musicflatsign; \flat (LaTeX)
18939 \DeclareTextCommand{\textflat}{PU}{\9046\155}%* U+266D
18940 % U+266E MUSIC NATURAL SIGN; \natural (LaTeX)
18941 \DeclareTextCommand{\textnatural}{PU}{\9046\156}%* U+266E
18942 % U+266F MUSIC SHARP SIGN; musicsharpsign; \sharp (LaTeX)
18943 \DeclareTextCommand{\textsharp}{PU}{\9046\157}%* U+266F
18944 % U+2672 UNIVERSAL RECYCLING SYMBOL; \recycle (recycle)
18945 \DeclareTextCommand{\textrecycle}{PU}{\9046\162}%* U+2672
18946 %* \textrecycle -> \Recycling (marvosym)
18947 % U+267F WHEELCHAIR SYMBOL; \Wheelchair (marvosym)
18948 \DeclareTextCommand{\textWheelchair}{PU}{\9046\177}%* U+267F
18949 % U+2691 BLACK FLAG; \Flag (ifsym)
18950 \DeclareTextCommand{\textFlag}{PU}{\9046\221}%* U+2691
18951 %* \textFlag -> \VarFlag (ifsym)
18952 % U+2692 HAMMER AND PICK; \MineSign (marvosym)

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18953 \DeclareTextCommand{\textMineSign}{PU}{\9046\222}%* U+2692
 18954 % U+2694 CROSSED SWORDS; \dsmilitary (dictsym)
 18955 \DeclareTextCommand{\textdsmilitary}{PU}{\9046\224}%* U+2694
 18956 %* \textdsmilitary -> \textxswup (fourier)
 18957 % U+2695 STAFF OF AESCULAPIUS; \dsmedical (dictsym)
 18958 \DeclareTextCommand{\textdsmedical}{PU}{\9046\225}%* U+2695
 18959 % U+2696 SCALES; \dsjuridical (dictsym)
 18960 \DeclareTextCommand{\textdsjuridical}{PU}{\9046\226}%* U+2696
 18961 % U+2697 ALEMBIC; \dschemical (dictsym)
 18962 \DeclareTextCommand{\textdschemical}{PU}{\9046\227}%* U+2697
 18963 % U+2698 FLOWER; \dsbiological (dictsym)
 18964 \DeclareTextCommand{\textdsbiological}{PU}{\9046\230}%* U+2698
 18965 % U+269A STAFF OF HERMES; \dscommercial (dictsym)
 18966 \DeclareTextCommand{\textdscommercial}{PU}{\9046\232}%* U+269A
 18967 % U+269D OUTLINED WHITE STAR; \manstar (manfnt)
 18968 \DeclareTextCommand{\textmanstar}{PU}{\9046\235}%* U+269D
 18969 % U+26A0 WARNING SIGN; \danger (fourier)
 18970 \DeclareTextCommand{\textdanger}{PU}{\9046\240}%* U+26A0
 18971 % U+26A2 DOUBLED FEMALE SIGN; \FemaleFemale (marvosym)
 18972 \DeclareTextCommand{\textFemaleFemale}{PU}{\9046\242}%* U+26A2
 18973 % U+26A3 DOUBLED MALE SIGN; \MaleMale (marvosym)
 18974 \DeclareTextCommand{\textMaleMale}{PU}{\9046\243}%* U+26A3
 18975 % U+26A4 INTERLOCKED FEMALE AND MALE SIGN; \FemaleMale (marvosym)
 18976 \DeclareTextCommand{\textFemaleMale}{PU}{\9046\244}%* U+26A4
 18977 % U+26A5 MALE AND FEMALE SIGN; \Hermaphrodite (marvosym)
 18978 \DeclareTextCommand{\textHermaphrodite}{PU}{\9046\245}%* U+26A5
 18979 % U+26AA MEDIUM WHITE CIRCLE; \Neural (marvosym)
 18980 \DeclareTextCommand{\textNeutral}{PU}{\9046\252}%* U+26AA
 18981 % U+26AD MARRIAGE SYMBOL
 18982 \DeclareTextCommand{\textmarried}{PU}{\9046\255}% U+26AD
 18983 % U+26AE DIVORCE SYMBOL
 18984 \DeclareTextCommand{\textdivorced}{PU}{\9046\256}% U+26AE
 18985 % U+26B2 NEUTER; \textunrcfemale (tipx)
 18986 \DeclareTextCommand{\textPUunrcfemale}{PU}{\9046\262}% U+26B2
 18987 %* \textPUunrcfemale -> \textunrcfemale (tipx)
 18988 % U+26B9 SEXTILE; \hexstar (wasysym)
 18989 \DeclareTextCommand{\texthexstar}{PU}{\9046\271}%* U+26B9
 18990 % U+26BD SOCCER BALL; \Football (marvosym)
 18991 \DeclareTextCommand{\textSoccerBall}{PU}{\9046\275}% U+26BD
 18992 %* \textSoccerBall -> \Football (marvosym)
 18993 % U+26C5 SUN BEHIND CLOUD; \SunCloud (ifsym)
 18994 \DeclareTextCommand{\textSunCloud}{PU}{\9046\305}%* U+26C5
 18995 % U+26C6 RAIN; \Rain (ifsym)
 18996 \DeclareTextCommand{\textRain}{PU}{\9046\306}%* U+26C6
 18997 % U+26D4 NO ENTRY; \noway (fourier)
 18998 \DeclareTextCommand{\textnoway}{PU}{\9046\324}%* U+26D4
 18999 % U+26F0 MOUNTAIN; \Mountain (ifsym)
 19000 \DeclareTextCommand{\textMountain}{PU}{\9046\360}%* U+26F0
 19001 % U+26FA TENT; \Tent (ifsym)
 19002 \DeclareTextCommand{\textTent}{PU}{\9046\372}%* U+26FA

46.2.30 Dingbats: U+2700 to U+27BF

19003 % U+2701 UPPER BLADE SCISSORS; \ScissorRightBrokenBottom (bbding)

19004 \DeclareTextCommand{\textScissorRightBrokenBottom}{PU}{\9047\001}% U+2701
 19005 %* \textScissorRightBrokenBottom -> \CutLeft (marvosym)
 19006 %* \textScissorRightBrokenBottom -> \Cutright (marvosym)
 19007 % U+2702 BLACK SCISSORS; \ScissorRight (bding)
 19008 \DeclareTextCommand{\textScissorRight}{PU}{\9047\002}%* U+2702
 19009 %* \textScissorRight -> \RightScissors (marvosym)
 19010 %* \textScissorRight -> \Leftscissors (marvosym)
 19011 % U+2703 LOWER BLADE SCISSORS; \ScissorRightBrokenTop (bding)
 19012 \DeclareTextCommand{\textScissorRightBrokenTop}{PU}{\9047\003}%* U+2703
 19013 % U+2704 WHITE SCISSORS; \ScissorHollowRight (bding)
 19014 \DeclareTextCommand{\textScissorHollowRight}{PU}{\9047\004}%* U+2704
 19015 % U+2706 TELEPHONE LOCATION SIGN; \PhoneHandset (bding)
 19016 \DeclareTextCommand{\textPhoneHandset}{PU}{\9047\006}%* U+2706
 19017 % U+2707 TAPE DRIVE; \Tape (bding)
 19018 \DeclareTextCommand{\textTape}{PU}{\9047\007}%* U+2707
 19019 % U+2708 AIRPLANE; \Plane (bding)
 19020 \DeclareTextCommand{\textPlane}{PU}{\9047\010}%* U+2708
 19021 % U+2709 ENVELOPE; \Envelope (bding),
 19022 \DeclareTextCommand{\textEnvelope}{PU}{\9047\011}%* U+2709
 19023 %* \textEnvelope -> \Letter (marvosym)
 19024 % U+270C VICTORY HAND; \Peace (bding)
 19025 \DeclareTextCommand{\textPeace}{PU}{\9047\014}%* U+270C
 19026 % U+270D WRITING HAND; \WritingHand (marvosym)
 19027 \DeclareTextCommand{\textWritingHand}{PU}{\9047\015}%* U+270D
 19028 %* \textWritingHand -> \Writinghand (marvosym)
 19029 % U+270E LOWER RIGHT PENCIL; \PencilRightDown (bding)
 19030 \DeclareTextCommand{\textPencilRightDown}{PU}{\9047\016}%* U+270E
 19031 % U+270F PENCIL; \PencilRight (bding)
 19032 \DeclareTextCommand{\textPencilRight}{PU}{\9047\017}%* U+270F
 19033 % U+2710 UPPER RIGHT PENCIL; \PencilRightUp (bding)
 19034 \DeclareTextCommand{\textPencilRightUp}{PU}{\9047\020}%* U+2710
 19035 % U+2711 WHITE NIB; \NibRight (bding)
 19036 \DeclareTextCommand{\textNibRight}{PU}{\9047\021}%* U+2711
 19037 % U+2712 BLACK NIB; \NibSolidRight (bding)
 19038 \DeclareTextCommand{\textNibSolidRight}{PU}{\9047\022}%* U+2712
 19039 % U+2713 CHECK MARK; checkmark; \Checkmark (bding)
 19040 \DeclareTextCommand{\textCheckmark}{PU}{\9047\023}%* U+2713
 19041 %* \textCheckmark -> \checkmark (MnSymbol)
 19042 % U+2714 HEAVY CHECK MARK; \CheckmarkBold (bding)
 19043 \DeclareTextCommand{\textCheckmarkBold}{PU}{\9047\024}%* U+2714
 19044 % U+2715 MULTIPLICATION X; \XSolid (bding)
 19045 \DeclareTextCommand{\textXSolid}{PU}{\9047\025}%* U+2715
 19046 % U+2716 HEAVY MULTIPLICATION X; \XSolidBold (bding)
 19047 \DeclareTextCommand{\textXSolidBold}{PU}{\9047\026}%* U+2716
 19048 % U+2717 BALLOT X; \XSolidBrush (bding)
 19049 \DeclareTextCommand{\textXSolidBrush}{PU}{\9047\027}%* U+2717
 19050 % U+2719 OUTLINED GREEK CROSS; \PlusOutline (bding)
 19051 \DeclareTextCommand{\textPlusOutline}{PU}{\9047\031}%* U+2719
 19052 % U+271A HEAVY GREEK CROSS; \Plus (bding)
 19053 \DeclareTextCommand{\textPlus}{PU}{\9047\032}%* U+271A
 19054 % U+271B OPEN CENTRE CROSS; \PlusThinCenterOpen (bding)
 19055 \DeclareTextCommand{\textPlusThinCenterOpen}{PU}{\9047\033}%* U+271B
 19056 % U+271C HEAVY OPEN CENTRE CROSS; \PlusCenterOpen (bding)
 19057 \DeclareTextCommand{\textPlusCenterOpen}{PU}{\9047\034}%* U+271C

19058 % U+271D LATIN CROSS; \Cross (bding)
 19059 \DeclareTextCommand{\textCross}{PU}{\9047\035}%* U+271D
 19060 % U+271E SHADOWED WHITE LATIN CROSS; \CrossOpenShadow (bding)
 19061 \DeclareTextCommand{\textCrossOpenShadow}{PU}{\9047\036}%* U+271E
 19062 % U+271F OUTLINED LATIN CROSS; \CrossOutline (bding)
 19063 \DeclareTextCommand{\textCrossOutline}{PU}{\9047\037}%* U+271F
 19064 % U+2720 MALTESE CROSS; \CrossMaltese (bding)
 19065 \DeclareTextCommand{\textCrossMaltese}{PU}{\9047\040}%* U+2720
 19066 % U+2721 STAR OF DAVID; \DavidStar (bding)
 19067 \DeclareTextCommand{\textDavidStar}{PU}{\9047\041}%* U+2721
 19068 %* \textDavidStar -> \davidstar (wasysym)
 19069 % U+2722 FOUR TEARDROP-SPOKED ASTERISK; \FourAsterisk (bding)
 19070 \DeclareTextCommand{\textFourAsterisk}{PU}{\9047\042}%* U+2722
 19071 % U+2723 FOUR BALLOON-SPOKED ASTERISK; \JackStar (bding)
 19072 \DeclareTextCommand{\textJackStar}{PU}{\9047\043}%* U+2723
 19073 % U+2724 HEAVY FOUR BALLOON-SPOKED ASTERISK; \JackStarBold (bding)
 19074 \DeclareTextCommand{\textJackStarBold}{PU}{\9047\044}%* U+2724
 19075 % U+2725 FOUR CLUB-SPOKED ASTERISK; \CrossClowerTips (bding)
 19076 \DeclareTextCommand{\textClowerTips}{PU}{\9047\045}%* U+2725
 19077 % U+2726 BLACK FOUR POINTED STAR; \FourStar (bding)
 19078 \DeclareTextCommand{\textFourStar}{PU}{\9047\046}%* U+2726
 19079 % U+2727 WHITE FOUR POINTED STAR; \FourStarOpen (bding)
 19080 \DeclareTextCommand{\textFourStarOpen}{PU}{\9047\047}%* U+2727
 19081 % U+272A CIRCLED WHITE STAR; \FiveStarOpenCircled (bding)
 19082 \DeclareTextCommand{\textFiveStarOpenCircled}{PU}{\9047\052}%* U+272A
 19083 % U+272B OPEN CENTRE BLACK STAR; \FiveStarCenterOpen (bding)
 19084 \DeclareTextCommand{\textFiveStarCenterOpen}{PU}{\9047\053}%* U+272B
 19085 % U+272C BLACK CENTRE WHITE STAR; \FiveStarOpenDotted (bding)
 19086 \DeclareTextCommand{\textFiveStarOpenDotted}{PU}{\9047\054}%* U+272C
 19087 % U+272D OUTLINED BLACK STAR; \FiveStarOutline (bding)
 19088 \DeclareTextCommand{\textFiveStarOutline}{PU}{\9047\055}%* U+272D
 19089 % U+272E HEAVY OUTLINED BLACK STAR; \FiveStarOutlineHeavy (bding)
 19090 \DeclareTextCommand{\textFiveStarOutlineHeavy}{PU}{\9047\056}%* U+272E
 19091 % U+272F PINWHEEL STAR; \FiveStarConvex (bding)
 19092 \DeclareTextCommand{\textFiveStarConvex}{PU}{\9047\057}%* U+272F
 19093 % U+2730 SHADOWED WHITE STAR; \FiveStarShadow (bding)
 19094 \DeclareTextCommand{\textFiveStarShadow}{PU}{\9047\060}%* U+2730
 19095 % U+2731 HEAVY ASTERISK; \AsteriskBold (bding)
 19096 \DeclareTextCommand{\textAsteriskBold}{PU}{\9047\061}%* U+2731
 19097 % U+2732 OPEN CENTRE ASTERISK; \AsteriskCenterOpen (bding)
 19098 \DeclareTextCommand{\textAsteriskCenterOpen}{PU}{\9047\062}%* U+2732
 19099 % U+2734 EIGHT POINTED BLACK STAR; \EightStarTaper (bding)
 19100 \DeclareTextCommand{\textEightStarTaper}{PU}{\9047\064}%* U+2734
 19101 % U+2735 EIGHT POINTED PINWHEEL STAR; \EightStarConvex (bding)
 19102 \DeclareTextCommand{\textEightStarConvex}{PU}{\9047\065}%* U+2735
 19103 % U+2736 SIX POINTED BLACK STAR; \SixStar (bding)
 19104 \DeclareTextCommand{\textSixStar}{PU}{\9047\066}%* U+2736
 19105 % U+2737 EIGHT POINTED RECTILINEAR BLACK STAR; \EightStar (bding)
 19106 \DeclareTextCommand{\textEightStar}{PU}{\9047\067}%* U+2737
 19107 % U+2738 HEAVY EIGHT POINTED RECTILINEAR BLACK STAR; \EightStarBold (bding)
 19108 \DeclareTextCommand{\textEightStarBold}{PU}{\9047\070}%* U+2738

19109 % U+2739 TWELVE POINTED BLACK STAR; \TwelveStar (bding)
 19110 \DeclareTextCommand{\textTwelveStar}{PU}{\9047\071}%* U+2739
 19111 % U+273A SIXTEEN POINTED ASTERISK; \SixteenStarLight (bding)
 19112 \DeclareTextCommand{\textSixteenStarLight}{PU}{\9047\072}%* U+273A
 19113 % U+273B TEARDROP-SPOKED ASTERISK; \SixFlowerPetalRemoved (bding)
 19114 \DeclareTextCommand{\textSixFlowerPetalRemoved}{PU}{\9047\073}%* U+273B
 19115 % U+273C OPEN CENTRE TEARDROP-SPOKED ASTERISK;
 19116 % \SixFlowerOpenCenter (bding)
 19117 \DeclareTextCommand{\textSixFlowerOpenCenter}{PU}{\9047\074}%* U+273C
 19118 % U+273D HEAVY TEARDROP-SPOKED ASTERISK; \Asterisk (bding)
 19119 \DeclareTextCommand{\textAsterisk}{PU}{\9047\075}%* U+273D
 19120 % U+273E SIX PETALLED BLACK AND WHITE FLORETTE; \SixFlowerAlternate (bding)
 19121 \DeclareTextCommand{\textSixFlowerAlternate}{PU}{\9047\076}%* U+273E
 19122 % U+273F BLACK FLORETTE; \FiveFlowerPetal (bding)
 19123 \DeclareTextCommand{\textFiveFlowerPetal}{PU}{\9047\077}%* U+273F
 19124 % U+2740 WHITE FLORETTE; \FiveFlowerOpen (bding)
 19125 \DeclareTextCommand{\textFiveFlowerOpen}{PU}{\9047\100}%* U+2740
 19126 % U+2741 EIGHT PETALLED OUTLINED BLACK FLORETTE; \EightFlowerPetal (bding)
 19127 \DeclareTextCommand{\textEightFlowerPetal}{PU}{\9047\101}%* U+2741
 19128 % U+2742 CIRCLED OPEN CENTRE EIGHT POINTED STAR; \SunshineOpenCircled (bding)
 19129 \DeclareTextCommand{\textSunshineOpenCircled}{PU}{\9047\102}%* U+2742
 19130 % U+2743 HEAVY TEARDROP-SPOKED PINWHEEL ASTERISK; \SixFlowerAltPetal (bding)
 19131 \DeclareTextCommand{\textSixFlowerAltPetal}{PU}{\9047\103}%* U+2743
 19132 % U+2744 SNOWFLAKE; \SnowflakeChevron (bding)
 19133 \DeclareTextCommand{\textSnowflakeChevron}{PU}{\9047\104}%* U+2744
 19134 % U+2745 TIGHT TRIFOLIATE SNOWFLAKE; \Snowflake (bding)
 19135 \DeclareTextCommand{\textSnowflake}{PU}{\9047\105}%* U+2745
 19136 % U+2746 HEAVY CHEVRON SNOWFLAKE; \SnowflakeChevronBold (bding)
 19137 \DeclareTextCommand{\textSnowflakeChevronBold}{PU}{\9047\106}%* U+2746
 19138 % U+2747 SPARKLE; \Sparkle (bding)
 19139 \DeclareTextCommand{\textSparkle}{PU}{\9047\107}%* U+2747
 19140 % U+2748 HEAVY SPARKLE; \SparkleBold (bding)
 19141 \DeclareTextCommand{\textSparkleBold}{PU}{\9047\110}%* U+2748
 19142 % U+2749 BALLOON-SPOKED ASTERISK; \AsteriskRoundedEnds (bding)
 19143 \DeclareTextCommand{\textAsteriskRoundedEnds}{PU}{\9047\111}%* U+2749
 19144 % U+274A EIGHT TEARDROP-SPOKED PROPELLER ASTERISK;
 19145 % \EightFlowerPetalRemoved (bding)
 19146 \DeclareTextCommand{\textEightFlowerPetalRemoved}{PU}{\9047\112}%* U+274A
 19147 % U+274B HEAVY EIGHT TEARDROP-SPOKED PROPELLER ASTERISK;
 19148 % \EightAsterisk (bding)
 19149 \DeclareTextCommand{\textEightAsterisk}{PU}{\9047\113}%* U+274B
 19150 % U+274D SHADOWED WHITE CIRCLE; \CircleShadow (bding)
 19151 \DeclareTextCommand{\textCircleShadow}{PU}{\9047\115}%* U+274D
 19152 % U+274F LOWER RIGHT DROP-SHADOWED WHITE SQUARE;
 19153 % \SquareShadowBottomRight (bding)
 19154 \DeclareTextCommand{\textSquareShadowBottomRight}{PU}{\9047\117}%* U+274F
 19155 % U+2750 UPPER RIGHT DROP-SHADOWED WHITE SQUARE;
 19156 % \SquareShadowTopRight (bding)
 19157 \DeclareTextCommand{\textSquareTopRight}{PU}{\9047\120}%* U+2750

19158 % U+2751 LOWER RIGHT SHADOWED WHITE SQUARE;
 19159 % \SquareCastShadowBottomRight (bbding)
 19160 \DeclareTextCommand{\textSquareCastShadowBottomRight}{PU}{\9047\121}%* U+2751
 19161 % U+2752 UPPER RIGHT SHADOWED WHITE SQUARE;
 19162 % \SquareCastShadowTopRight (bbding)
 19163 \DeclareTextCommand{\textSquareCastShadowTopRight}{PU}{\9047\122}%* U+2752
 19164 % U+2756 BLACK DIAMOND MINUS WHITE X; \OrnamentDiamandSolid (bb-
 ding)
 19165 \DeclareTextCommand{\textDiamandSolid}{PU}{\9047\126}%* U+2756
 19166 % U+2758 LIGHT VERTICAL BAR; \RectangleThin (bbding)
 19167 \DeclareTextCommand{\textRectangleThin}{PU}{\9047\130}%* U+2758
 19168 % U+2759 MEDIUM VERTICAL BAR; \Rectangle (bbding)
 19169 \DeclareTextCommand{\textRectangle}{PU}{\9047\131}%* U+2759
 19170 % U+275A HEAVY VERTICAL BAR; \RectangleBold (bbding)
 19171 \DeclareTextCommand{\textRectangleBold}{PU}{\9047\132}%* U+275A

46.2.31 Miscellaneous Mathematical Symbols-A: U+27C0 to U+27EF

19172 % U+27C2 PERPENDICULAR; perpendicular; \perp (LaTeX)
 19173 \DeclareTextCommand{\textperp}{PU}{\9047\302}%* U+27C2
 19174 % \notperp (mathabx)
 19175 \DeclareTextCommand{\textnotperp}{PU}{\9047\302\83\070}%* U+27C2 U+0338
 19176 % U+27C7 OR WITH DOT INSIDE; \veedot (MnSymbol)
 19177 \DeclareTextCommand{\textveedot}{PU}{\9047\307}%* U+27C7
 19178 % U+27D1 AND WITH DOT; \wedgedot (MnSymbol)
 19179 \DeclareTextCommand{\textwedgedot}{PU}{\9047\321}%* U+27D1
 19180 % U+27DC LEFT MULTIMAP; \leftspoon (MnSymbol)
 19181 \DeclareTextCommand{\textleftspoon}{PU}{\9047\334}%* U+27DC
 19182 % U+27E6 MATHEMATICAL LEFT WHITE SQUARE BRACKET
 19183 \DeclareTextCommand{\textlbrackdbl}{PU}{\9047\346}%* U+27E6
 19184 %* \textlbrackdbl -> \llbracket (stmaryrd)
 19185 % U+27E7 MATHEMATICAL RIGHT WHITE SQUARE BRACKET
 19186 \DeclareTextCommand{\textrbrackdbl}{PU}{\9047\347}%* U+27E7
 19187 %* \textrbrackdbl -> \rrbracket (stmaryrd)

46.2.32 Supplemental Arrows-A: U+27F0 to U+27FF

19188 % U+27F2 ANTICLOCKWISE GAPPED CIRCLE ARROW;
 19189 % \circlearrowleft (AmS)
 19190 \DeclareTextCommand{\textcirclearrowleft}{PU}{\9047\362}%* U+27F2
 19191 % U+27F3 CLOCKWISE GAPPED CIRCLE ARROW; \circlearrowright (AmS)
 19192 \DeclareTextCommand{\textcirclearrowright}{PU}{\9047\363}%* U+27F3
 19193 % U+27F5 LONG LEFTWARDS ARROW; \longleftarrow (AmS)
 19194 \DeclareTextCommand{\textlongleftarrow}{PU}{\9047\365}%* U+27F5
 19195 % U+27F6 LONG RIGHTWARDS ARROW; \longrightarrow (AmS)
 19196 \DeclareTextCommand{\textlongrightarrow}{PU}{\9047\366}%* U+27F6
 19197 % U+27F7 LONG LEFT RIGHT ARROW; \longleftrightarrow (AmS)
 19198 \DeclareTextCommand{\textlongleftrightarrow}{PU}{\9047\367}%* U+27F7
 19199 % U+27F8 LONG LEFTWARDS DOUBLE ARROW; \Longleftarrow (AmS)
 19200 \DeclareTextCommand{\textLongleftarrow}{PU}{\9047\370}%* U+27F8
 19201 % U+27F9 LONG RIGHTWARDS DOUBLE ARROW; \longrightarrow (AmS)
 19202 \DeclareTextCommand{\textLongrightarrow}{PU}{\9047\371}%* U+27F9
 19203 % U+27FA LONG LEFT RIGHT DOUBLE ARROW; \Longleftrightarrow (AmS)
 19204 \DeclareTextCommand{\textLongleftrightarrow}{PU}{\9047\372}%* U+27FA
 19205 % U+27FC LONG RIGHTWARDS ARROW FROM BAR; \longmapsto (AmS)
 19206 \DeclareTextCommand{\textlongmapsto}{PU}{\9047\374}%* U+27FC

19207 % U+27FD LONG LEFTWARDS DOUBLE ARROW FROM BAR; \Longmapsfrom (stmaryrd)
 19208 \DeclareTextCommand{\textLongmapsfrom}{PU}{\9047\375}%* U+27FD
 19209 % U+27FE LONG RIGHTWARDS DOUBLE ARROW FROM BAR; \Longmapsto (stmaryrd)
 19210 \DeclareTextCommand{\textLongmapsto}{PU}{\9047\376}%* U+27FE

46.2.33 Supplemental Arrows-B: U+2900 to U+297F

19211 % U+2921 NORTH WEST AND SOUTH EAST ARROW; \nwsearrow (MnSymbol)
 19212 \DeclareTextCommand{\textnwsearrow}{PU}{\9051\041}%* U+2921
 19213 % U+2922 NORTH EAST AND SOUTH WEST ARROW; \neswarrow (MnSymbol)
 19214 \DeclareTextCommand{\textneswarrow}{PU}{\9051\042}%* U+2922
 19215 % U+2923 NORTH WEST ARROW WITH HOOK; \lhooknwarrow (MnSymbol)
 19216 \DeclareTextCommand{\textlhooknwarrow}{PU}{\9051\043}%* U+2923
 19217 % U+2924 NORTH EAST ARROW WITH HOOK; \rhooknearrow (MnSymbol)
 19218 \DeclareTextCommand{\textrhooknearrow}{PU}{\9051\044}%* U+2924
 19219 % U+2925 SOUTH EAST ARROW WITH HOOK; \lhooksearrow (MnSymbol)
 19220 \DeclareTextCommand{\textlhooksearrow}{PU}{\9051\045}%* U+2925
 19221 % U+2926 SOUTH WEST ARROW WITH HOOK; \rhookswarrow (MnSymbol)
 19222 \DeclareTextCommand{\textrhookswarrow}{PU}{\9051\046}%* U+2926
 19223 % U+2933 WAVE ARROW POINTING DIRECTLY RIGHT; \leadsto (wasysym)
 19224 \DeclareTextCommand{\textleadsto}{PU}{\9051\063}%* U+2933
 19225 % U+2934 ARROW POINTING RIGHTWARDS THEN CURVING UPWARDS;
 19226 % \rcurvearrowne (MnSymbol)
 19227 \DeclareTextCommand{\textrcurvearrowne}{PU}{\9051\064}%* U+2934
 19228 % U+2935 ARROW POINTING RIGHTWARDS THEN CURVING DOWNWARDS;
 19229 % \lcurvearrowse (MnSymbol)
 19230 \DeclareTextCommand{\textlcurvearrowse}{PU}{\9051\065}%* U+2935
 19231 % U+2936 ARROW POINTING DOWNWARDS THEN CURVING LEFTWARDS;
 19232 % \lcurvearrowsw (MnSymbol)
 19233 \DeclareTextCommand{\textlcurvearrowsw}{PU}{\9051\066}%* U+2936
 19234 % U+2937 ARROW POINTING DOWNWARDS THEN CURVING RIGHTWARDS;
 19235 % \rcurvearrowse (MnSymbol)
 19236 \DeclareTextCommand{\textrcurvearrowse}{PU}{\9051\067}%* U+2937
 19237 % U+2938 RIGHT-SIDE ARC CLOCKWISE ARROW; \lcurvearrowdown (MnSymbol)
 19238 \DeclareTextCommand{\textlcurvearrowdown}{PU}{\9051\070}%* U+2938
 19239 %* \textlcurvearrowdown -> \RightTorque (marvosym)
 19240 %* \textlcurvearrowdown -> \Righttorque (marvosym)
 19241 % U+2939 LEFT-SIDE ARC ANTICLOCKWISE ARROW;
 19242 % \rcurvearrowdown (MnSymbol)
 19243 \DeclareTextCommand{\textrcurvearrowdown}{PU}{\9051\071}%* U+2939
 19244 %* \textrcurvearrowdown -> \LeftTorque (marvosym)
 19245 %* \textrcurvearrowdown -> \Lefttorque (marvosym)
 19246 % U+293A TOP ARC ANTICLOCKWISE ARROW; \rcurvearrowleft (MnSymbol)
 19247 \DeclareTextCommand{\textrcurvearrowleft}{PU}{\9051\072}%* U+293A
 19248 % U+293B BOTTOM ARC ANTICLOCKWISE ARROW;
 19249 % \rcurvearrowright (MnSymbol)

19250 \DeclareTextCommand{\textrcurvearrowright}{PU}{\9051\073}%* U+293B
 19251 % U+294A LEFT BARB UP RIGHT BARB DOWN HARPOON; \leftrightharpoon (mathabx)
 19252 \DeclareTextCommand{\textleftrightharpoon}{PU}{\9051\112}%* U+294A
 19253 % U+294B LEFT BARB DOWN RIGHT BARB UP HARPOON; \rightleftharpoon (mathabx)
 19254 \DeclareTextCommand{\textrightleftharpoon}{PU}{\9051\113}%* U+294B
 19255 % U+294C UP BARB RIGHT DOWN BARB LEFT HARPOON;
 19256 % \updownharpoonrightleft (MnSymbol)
 19257 \DeclareTextCommand{\textupdownharpoonrightleft}{PU}{\9051\114}%* U+294C
 19258 % U+294D UP BARB LEFT DOWN BARB RIGHT HARPOON;
 19259 % \updownharpoonleftright (MnSymbol)
 19260 \DeclareTextCommand{\textupdownharpoonleftright}{PU}{\9051\115}%* U+294D
 19261 % U+2962 LEFTWARDS HARPOON WITH BARB UP ABOVE LEFTWARDS
 19262 % HARPOON WITH BARB DOWN; \leftleftharpoons (mathabx)
 19263 \DeclareTextCommand{\textleftleftharpoons}{PU}{\9051\142}%* U+2962
 19264 % U+2963 UPWARDS HARPOON WITH BARB LEFT BESIDE UPWARDS
 19265 % HARPOON WITH BARB RIGHT; \upupharpoons (mathabx)
 19266 \DeclareTextCommand{\textupupharpoons}{PU}{\9051\143}%* U+2963
 19267 % U+2964 RIGHTWARDS HARPOON WITH BARB UP ABOVE RIGHT-
 WARDS HARPOON
 19268 % WITH BARB DOWN; \rightrightarpoons (mathabx)
 19269 \DeclareTextCommand{\textrightarpoons}{PU}{\9051\144}%* U+2964
 19270 % U+2965 DOWNWARDS HARPOON WITH BARB LEFT BESIDE DOWN-
 WARDS HARPOON
 19271 % WITH BARB RIGHT; \downdownharpoons (mathabx)
 19272 \DeclareTextCommand{\textdowndownharpoons}{PU}{\9051\145}%* U+2965
 19273 % U+296A LEFTWARDS HARPOON WITH BARB UP ABOVE LONG DASH;
 19274 % \leftbarharpoon (mathabx)
 19275 \DeclareTextCommand{\textleftbarharpoon}{PU}{\9051\152}%* U+296A
 19276 % U+296B LEFTWARDS HARPOON WITH BARB DOWN BELOW
 19277 % LONG DASH; \barleftharpoon (mathabx)
 19278 \DeclareTextCommand{\textbarleftharpoon}{PU}{\9051\153}%* U+296B
 19279 % U+296C RIGHTWARDS HARPOON WITH BARB UP ABOVE
 19280 % LONG DASH; \rightbarharpoon (mathabx)
 19281 \DeclareTextCommand{\textrightbarharpoon}{PU}{\9051\154}%* U+296C
 19282 % U+296D RIGHTWARDS HARPOON WITH BARB DOWN BELOW
 19283 % LONG DASH; \barrightharpoon (mathabx)
 19284 \DeclareTextCommand{\textbarrightharpoon}{PU}{\9051\155}%* U+296D
 19285 % U+296E UPWARDS HARPOON WITH BARB LEFT BESIDE DOWN-
 WARDS HARPOON
 19286 % WITH BARB RIGHT; \updownharpoons (mathabx)
 19287 \DeclareTextCommand{\textupdownharpoons}{PU}{\9051\156}%* U+296E
 19288 % U+296F DOWNWARDS HARPOON WITH BARB LEFT BESIDE UP-
 WARDS HARPOON
 19289 % WITH BARB RIGHT; \downupharpoons (mathabx)
 19290 \DeclareTextCommand{\textdownupharpoons}{PU}{\9051\157}%* U+296F
 19291 % U+297F DOWN FISH TAIL
 19292 \DeclareTextCommand{\textmoo}{PU}{\9051\177\83\066}%* U+297F U+0336

46.2.34 Miscellaneous Mathematical Symbols-B: U+2980 to U+29FF

19293 % U+2987 Z NOTATION LEFT IMAGE BRACKET; \llparenthesis (stmaryrd)
 19294 \DeclareTextCommand{\textllparenthesis}{PU}{\9051\207}%* U+2987
 19295 % U+2988 Z NOTATION RIGHT IMAGE BRACKET; \rrparenthesis (stmaryrd)

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19296 \DeclareTextCommand{\textrrparenthesis}{PU}{\9051\210}%* U+2988
19297 % U+29B0 REVERSED EMPTY SET; \invdiameter (wasysym)
19298 \DeclareTextCommand{\textinvdiameter}{PU}{\9051\260}%* U+29B0
19299 % U+29B6 CIRCLED VERTICAL BAR; \obar (stmaryrd)
19300 \DeclareTextCommand{\textobar}{PU}{\9051\266}%* U+29B6
19301 %* \textobar -> \textvarobar (stmaryrd)
19302 % U+29B8 CIRCLED REVERSE SOLIDUS; \obslash (stmaryrd)
19303 \DeclareTextCommand{\textobslash}{PU}{\9051\270}%* U+29B8
19304 %* \textobslash -> \circledbslash (txfonts/pxfonts)
19305 %* \textobslash -> \obackslash (mathabx)
19306 %* \textobslash -> \varobslash (stmaryrd)
19307 % U+29BA CIRCLE DIVIDED BY HORIZONTAL BAR AND TOP HALF
19308 % DIVIDED BY VERTICAL BAR; \obot (mathabx)
19309 \DeclareTextCommand{\textobot}{PU}{\9051\272}%* U+29BA
19310 %* \textobot -> \odplus (ulsy)
19311 % U+29BB CIRCLE WITH SUPERIMPOSED X; \NoChemicalCleaning (mar-
      vosym)
19312 \DeclareTextCommand{\textNoChemicalCleaning}{PU}{\9051\273}%* U+29BB
19313 % U+29C0 CIRCLED LESS-THAN; \olessthan (stmaryrd)
19314 \DeclareTextCommand{\textolessthan}{PU}{\9051\300}%* U+29C0
19315 %* \textolessthan -> \varolessthan (stmaryrd)
19316 % U+29C1 CIRCLED GREATER-THAN; \ogreaterthan (stmaryrd)
19317 \DeclareTextCommand{\textogreaterthan}{PU}{\9051\301}%* U+29C1
19318 %* \textogreaterthan -> \varogreaterthan (stmaryrd)
19319 % U+29C4 SQUARED RISING DIAGONAL SLASH; \boxslash (mathabx, stmaryrd)
19320 \DeclareTextCommand{\textboxslash}{PU}{\9051\304}%* U+29C4
19321 % U+29C5 SQUARED FALLING DIAGONAL SLASH; \boxbslash (stmaryrd)
19322 \DeclareTextCommand{\textboxbslash}{PU}{\9051\305}%* U+29C5
19323 % U+29C6 SQUARED ASTERISK; \boxast (stmaryrd)
19324 \DeclareTextCommand{\textboxast}{PU}{\9051\306}%* U+29C6
19325 % U+29C7 SQUARED SMALL CIRCLE; \boxcircle (stmaryrd)
19326 \DeclareTextCommand{\textboxcircle}{PU}{\9051\307}%* U+29C7
19327 % U+29C8 SQUARED SQUARE; \boxbox (stmaryrd)
19328 \DeclareTextCommand{\textboxbox}{PU}{\9051\310}%* U+29C8
19329 % U+29D3 BLACK BOWTIE; \Valve (marvosym)
19330 \DeclareTextCommand{\textValve}{PU}{\9051\323}%* U+29D3
19331 % U+29DF DOUBLE-ENDED MULTIMAP; \multimapboth (txfonts/pxfonts)
19332 \DeclareTextCommand{\textmultimapboth}{PU}{\9051\337}%* U+29DF
19333 % U+29E2 SHUFFLE PRODUCT; \shuffle (shuffle)
19334 \DeclareTextCommand{\textshuffle}{PU}{\9051\342}%* U+29E2

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46.2.35 Supplemental Mathematical Operators: U+2A00 to U+2AFF

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19335 % U+2A04 N-ARY UNION OPERATOR WITH PLUS; \uplus (LaTeX)
19336 \DeclareTextCommand{\textuplus}{PU}{\9052\004}%* U+2A04
19337 % U+2A07 TWO LOGICAL AND OPERATOR; \bigdoublewedge (MnSymbol)
19338 \DeclareTextCommand{\textbigdoublewedge}{PU}{\9052\007}%* U+2A07
19339 % U+2A08 TWO LOGICAL OR OPERATOR; \bigdoublevee (MnSymbol)
19340 \DeclareTextCommand{\textbigdoublevee}{PU}{\9052\010}%* U+2A08
19341 % U+2A1D JOIN; \Join (latexsym, amsfonts, amssymb, mathabx, txfonts,
19342 % pxfonts, wasysym)
19343 \DeclareTextCommand{\textJoin}{PU}{\9052\035}%* U+2A1D
19344 % U+2A1F Z NOTATION SCHEMA COMPOSITION; \fatsemi (stmaryrd)
19345 \DeclareTextCommand{\textfatsemi}{PU}{\9052\037}%* U+2A1F
19346 % U+2A22 PLUS SIGN WITH SMALL CIRCLE ABOVE; \circplus (mathabx)

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19347 \DeclareTextCommand{\textcircledplus}{PU}{\9052\042}%* U+2A22
19348 % U+2A2A MINUS SIGN WITH DOT BELOW; \minusdot (MnSymbol)
19349 \DeclareTextCommand{\textminusdot}{PU}{\9052\052}%* U+2A2A
19350 %* \textminusdot -> \divdot (mathabx)
19351 % U+2A30 MULTIPLICATION SIGN WITH DOT ABOVE; \dottimes (mathabx)
19352 \DeclareTextCommand{\textdotimes}{PU}{\9052\060}%* U+2A30
19353 % U+2A32 SEMIDIRECT PRODUCT WITH BOTTOM CLOSED;
19354 % \dtimes (mathdesign)
19355 \DeclareTextCommand{\textdtimes}{PU}{\9052\062}%* U+2A32
19356 % U+2A38 CIRCLED DIVISION SIGN; \odiv (mathabx)
19357 \DeclareTextCommand{\textodiv}{PU}{\9052\070}%* U+2A38
19358 % U+2A3C INTERIOR PRODUCT; \invneg (MnSymbol)
19359 \DeclareTextCommand{\textinvneg}{PU}{\9052\074}%* U+2A3C
19360 % U+2A4E DOUBLE SQUARE INTERSECTION; \sqdoublecap (mathabx)
19361 \DeclareTextCommand{\textsqdoublecap}{PU}{\9052\116}%* U+2A4E
19362 %* \textsqdoublecap -> \doublesqcap (MnSymbol)
19363 % U+2A40 INTERSECTION WITH DOT; \capdot (MnSymbol)
19364 \DeclareTextCommand{\textcapdot}{PU}{\9052\100}%* U+2A40
19365 % U+2A4F DOUBLE SQUARE UNION; \sqdoublecup (mathabx)
19366 \DeclareTextCommand{\textsqdoublecup}{PU}{\9052\117}%* U+2A4F
19367 %* \textsqdoublecup -> \doublesqcup (MnSymbol)
19368 % U+2A55 TWO INTERSECTING LOGICAL AND; \doublewedge (MnSymbol)
19369 \DeclareTextCommand{\textdoublewedge}{PU}{\9052\125}%* U+2A55
19370 % U+2A56 TWO INTERSECTING LOGICAL OR; \doublevee (MnSymbol)
19371 \DeclareTextCommand{\textdoublevee}{PU}{\9052\126}%* U+2A56
19372 %* \textdoublevee -> \merge (stmaryrd)
19373 % U+2A5E LOGICAL AND WITH DOUBLE OVERBAR;
19374 % \doublebarwedge (AmS)
19375 \DeclareTextCommand{\textdoublebarwedge}{PU}{\9052\136}%* U+2A5E
19376 % U+2A63 LOGICAL OR WITH DOUBLE UNDERBAR;
19377 % \veedoublebar (mahtabx)
19378 \DeclareTextCommand{\textveedoublebar}{PU}{\9052\143}%* U+2A63
19379 % U+2A66 EQUALS SIGN WITH DOT BELOW; \eqdot (MnSymbol)
19380 \DeclareTextCommand{\texteqdot}{PU}{\9052\146}%* U+2A66
19381 % \neqdot (MnSymbol)
19382 \DeclareTextCommand{\textneqdot}{PU}{\9052\146\83\070}%* U+2A66 U+0338
19383 % U+2A74 DOUBLE COLON EQUAL; \coloncolonequals (colonequals)
19384 \DeclareTextCommand{\textcoloncolonequals}{PU}{\9052\164}%* U+2A74
19385 % U+2A7D LESS-THAN OR SLANTED EQUAL TO; \leqslant (AmS)
19386 \DeclareTextCommand{\textleqslant}{PU}{\9052\175}%* U+2A7D
19387 % \nleqslant (txfonts/pxfonts)
19388 \DeclareTextCommand{\textnleqslant}{PU}{\9052\175\83\070}%* U+2A7D U+0338
19389 % U+2A7E GREATER-THAN OR SLANTED EQUAL TO; \geqslant (AmS)
19390 \DeclareTextCommand{\textgeqslant}{PU}{\9052\176}%* U+2A7E
19391 % \ngeqslant (txfonts/pxfonts)
19392 \DeclareTextCommand{\textngeqslant}{PU}{\9052\176\83\070}%* U+2A7E U+0338
19393 % U+2A85 LESS-THAN OR APPROXIMATE; \lessapprox (AmS)
19394 \DeclareTextCommand{\textlessapprox}{PU}{\9052\205}%* U+2A85
19395 % \nlessapprox (txfonts/pxfonts)
19396 \DeclareTextCommand{\textnlessapprox}{PU}{\9052\205\83\070}%* U+2A85 U+0338
19397 % U+2A86 GREATER-THAN OR APPROXIMATE; \gtrapprox (AmS)
19398 \DeclareTextCommand{\textgtrapprox}{PU}{\9052\206}%* U+2A86
19399 % \ngtrapprox (txfonts/pxfonts)
19400 \DeclareTextCommand{\textngtrapprox}{PU}{\9052\206\83\070}%* U+2A86 U+0338

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19401 % U+2A87 LESS-THAN AND SINGLE-LINE NOT EQUAL TO; \lneq (AmS)
 19402 \DeclareTextCommand{\textlneq}{PU}{\9052\207}%* U+2A87
 19403 % U+2A88 GREATER-THAN AND SINGLE-LINE NOT EQUAL TO;
 19404 % \gneq (AmS)
 19405 \DeclareTextCommand{\textgneq}{PU}{\9052\210}%* U+2A88
 19406 % U+2A89 LESS-THAN AND NOT APPROXIMATE; \lnapprox (AmS)
 19407 \DeclareTextCommand{\textlnapprox}{PU}{\9052\211}%* U+2A89
 19408 % U+2A8A GREATER-THAN AND NOT APPROXIMATE; \gnapprox (AmS)
 19409 \DeclareTextCommand{\textgnapprox}{PU}{\9052\212}%* U+2A8A
 19410 % U+2A8B LESS-THAN ABOVE DOUBLE-LINE EQUAL ABOVE GREATER-
 THAN;
 19411 % \lesseqqgtr (AmS)
 19412 \DeclareTextCommand{\textlesseqqgtr}{PU}{\9052\213}%* U+2A8B
 19413 % U+2A8C GREATER-THAN ABOVE DOUBLE-LINE EQUAL ABOVE LESS-
 THAN;
 19414 % \gtreqqless (AmS)
 19415 \DeclareTextCommand{\textgtreqqless}{PU}{\9052\214}%* U+2A8C
 19416 % U+2A95 SLANTED EQUAL TO OR LESS-THAN; \eqslantless (AmS)
 19417 \DeclareTextCommand{\texteqslantless}{PU}{\9052\225}%* U+2A95
 19418 % U+2A96 SLANTED EQUAL TO OR GREATER-THAN; \eqslantgtr (AmS)
 19419 \DeclareTextCommand{\texteqslantgtr}{PU}{\9052\226}%* U+2A96
 19420 % U+2AA6 LESS-THAN CLOSED BY CURVE; \leftslice (stmaryrd)
 19421 \DeclareTextCommand{\textleftslice}{PU}{\9052\246}%* U+2AA6
 19422 % U+2AA7 GREATER-THAN CLOSED BY CURVE; \rightslice (stmaryrd)
 19423 \DeclareTextCommand{\textright slice}{PU}{\9052\247}%* U+2AA7
 19424 % U+2AAF PRECEDES ABOVE SINGLE-LINE EQUALS SIGN; \preceq (Mn-
 Symbol)
 19425 \DeclareTextCommand{\textpreceq}{PU}{\9052\257}%* U+2AAF
 19426 % \npreceq (txfonts/pxfonts)
 19427 \DeclareTextCommand{\textnpreceq}{PU}{\9052\257\83\070}%* U+2AAF U+0338
 19428 % U+2AB0 SUCCEEDS ABOVE SINGLE-LINE EQUALS SIGN; \succeq (Mn-
 Symbol)
 19429 \DeclareTextCommand{\textsucceq}{PU}{\9052\260}%* U+2AB0
 19430 % \nsucceq (txfonts/pxfonts)
 19431 \DeclareTextCommand{\textnsucceq}{PU}{\9052\260\83\070}%* U+2AB0 U+0338
 19432 % U+2AB1 PRECEDES ABOVE SINGLE-LINE NOT EQUAL TO; \precneq
 (mathabx)
 19433 \DeclareTextCommand{\textprecneq}{PU}{\9052\261}%* U+2AB1
 19434 % U+2AB2 SUCCEEDS ABOVE SINGLE-LINE NOT EQUAL TO; \succneq
 (mathabx)
 19435 \DeclareTextCommand{\textsuccneq}{PU}{\9052\262}%* U+2AB2
 19436 % U+2AB3 PRECEDES ABOVE EQUALS SIGN; \preceqq (txfonts/pxfonts)
 19437 \DeclareTextCommand{\textpreceqq}{PU}{\9052\263}%* U+2AB3
 19438 % \npreceqq (txfonts/pxfonts)
 19439 \DeclareTextCommand{\textnpreceqq}{PU}{\9052\263\83\070}%* U+2AB3 U+0338
 19440 % U+2AB4 SUCCEEDS ABOVE EQUALS SIGN; \succeqq (txfonts/pxfonts)
 19441 \DeclareTextCommand{\textsucceqq}{PU}{\9052\264}%* U+2AB4
 19442 % \nsucceqq (txfonts/pxfonts)
 19443 \DeclareTextCommand{\textnsucceqq}{PU}{\9052\264\83\070}%* U+2AB4 U+0338
 19444 % U+2AB5 PRECEDES ABOVE NOT EQUAL TO; \precneqq (txfonts/pxfonts)
 19445 \DeclareTextCommand{\textprecneqq}{PU}{\9052\265}%* U+2AB5
 19446 % U+2AB6 SUCCEEDS ABOVE NOT EQUAL TO; \succneqq (txfonts/pxfonts)
 19447 \DeclareTextCommand{\textsuccneqq}{PU}{\9052\266}%* U+2AB6
 19448 % U+2AB7 PRECEDES ABOVE ALMOST EQUAL TO; \precapprox (AmS)

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19449 \DeclareTextCommand{\textprecapprox}{PU}{\9052\267}%* U+2AB7
19450 % \nprecapprox (txfonts/pxfonts)
19451 \DeclareTextCommand{\textnprecapprox}{PU}{\9052\267\83\070}%* U+2AB7 U+0338
19452 % U+2AB8 SUCCEEDS ABOVE ALMOST EQUAL TO; \succapprox (AmS)
19453 \DeclareTextCommand{\textsuccapprox}{PU}{\9052\270}%* U+2AB8
19454 % \nsuccapprox (txfonts/pxfonts)
19455 \DeclareTextCommand{\textnsuccapprox}{PU}{\9052\270\83\070}%* U+2AB8 U+0338
19456 % U+2AB9 PRECEDES ABOVE NOT ALMOST EQUAL TO; \precnap-
prox (AmS)
19457 \DeclareTextCommand{\textprecnapprox}{PU}{\9052\271}%* U+2AB9
19458 % U+2ABA SUCCEEDS ABOVE NOT ALMOST EQUAL TO; \succnap-
prox (AmS)
19459 \DeclareTextCommand{\textsuccnapprox}{PU}{\9052\272}%* U+2ABA
19460 % U+2AC5 SUBSET OF ABOVE EQUALS SIGN; \subseteqq (AmS)
19461 \DeclareTextCommand{\textsubseteqq}{PU}{\9052\305}%* U+2AC5
19462 % \nsubseteqq (txfonts/pxfonts, mathabx)
19463 \DeclareTextCommand{\textnsubseteqq}{PU}{\9052\305\83\070}%* U+2AC5 U+0338
19464 % U+2AC6 SUPERSET OF ABOVE EQUALS SIGN; \supseteqq (AmS)
19465 \DeclareTextCommand{\textsupseteqq}{PU}{\9052\306}%* U+2AC6
19466 % \nsupseteqq (mathabx)
19467 \DeclareTextCommand{\textnsupseteqq}{PU}{\9052\306\83\070}%* U+2AC6 U+0338
19468 % U+2AE3 DOUBLE VERTICAL BAR LEFT TURNSTILE
19469 \DeclareTextCommand{\textdashV}{PU}{\9052\343}%* U+2AE3
19470 %* \textdashV -> \leftVdash (MnSymbol)
19471 % \ndashV (mathabx)
19472 \DeclareTextCommand{\textndashV}{PU}{\9052\343\83\070}%* U+2AE3 U+0338
19473 %* \textndashV -> \nleftVdash (MnSymbol)
19474 % U+2AE4 VERTICAL BAR DOUBLE LEFT TURNSTILE; \Dashv (mathabx)
19475 \DeclareTextCommand{\textDashv}{PU}{\9052\344}%* U+2AE4
19476 %* \textDashv -> \leftmodels (MnSymbol)
19477 % \nDashv (mathabx)
19478 \DeclareTextCommand{\textnDashv}{PU}{\9052\344\83\070}%* U+2AE4 U+0338
19479 %* \textnDashv -> \nleftmodels (MnSymbol)
19480 % U+2AE5 DOUBLE VERTICAL BAR DOUBLE LEFT TURNSTILE;
19481 % \DashV (mathabx)
19482 \DeclareTextCommand{\textDashV}{PU}{\9052\345}%* U+2AE5
19483 %* \textDashV -> \leftModels (MnSymbol)
19484 % \nDashV (mathabx)
19485 \DeclareTextCommand{\textnDashV}{PU}{\9052\345\83\070}%* U+2AE5 U+0338
19486 %* \textnDashV -> \nleftModels (MnSymbol)
19487 % U+2AEA DOUBLE DOWN TACK; \downmodels (MnSymbol)
19488 \DeclareTextCommand{\textdownmodels}{PU}{\9052\352}%* U+2AEA
19489 % \ndownmodels (MnSymbol)
19490 \DeclareTextCommand{\textndownmodels}{PU}{\9052\352\83\070}%* U+2AEA U+0338
19491 % U+2AEB DOUBLE UP TACK; \upmodels (MnSymbol)
19492 \DeclareTextCommand{\textupmodels}{PU}{\9052\353}%* U+2AEB
19493 % \nupmodels (MnSymbol)
19494 \DeclareTextCommand{\textnupmodels}{PU}{\9052\353\83\070}%* U+2AEB U+0338
19495 % U+2AEF VERTICAL LINE WITH CIRCLE ABOVE; \upspoon (MnSymbol)
19496 \DeclareTextCommand{\textupspoon}{PU}{\9052\357}%* U+2AEF
19497 % U+2AF4 TRIPLE VERTICAL BAR BINARY RELATION;
19498 % \interleave (stmaryrd)
19499 \DeclareTextCommand{\textinterleave}{PU}{\9052\364}%* U+2AF4
19500 % U+2AFD DOUBLE SOLIDUS OPERATOR; \slash (stmaryrd)

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19501 \DeclareTextCommand{\textsslash}{PU}{\9052\375}%* U+2AFD
 19502 %* \textsslash -> \varparallel (txfonts\pxfonts)

46.2.36 Miscellaneous Symbols and Arrows: U+2B00 to U+2BFF

19503 % U+2B20 WHITE PENTAGON; \pentagon (wasysym)
 19504 \DeclareTextCommand{\textpentagon}{PU}{\9053\040}%* U+2B20
 19505 % U+2B21 WHITE HEXAGON; \varhexagon (wasysym)
 19506 \DeclareTextCommand{\textvarhexagon}{PU}{\9053\041}%* U+2B21

46.2.37 Latin Extended-C: U+2C60 to U+2C7F

19507 % U+2C7C LATIN SUBSCRIPT SMALL LETTER J
 19508 \DeclareTextCommand{\textjinferior}{PU}{\9054\174}%* U+2C7C

46.2.38 Supplemental Punctuation: U+2E00 to U+2E7F

19509 % U+2E13 DOTTED OBELOS; \slashdiv (MnSymbol)
 19510 \DeclareTextCommand{\textslashdiv}{PU}{\9056\023}%* U+2E13
 19511 % U+2E18 INVERTED INTERROBANG; \textinterrobangdown (textcomp)
 19512 \DeclareTextCommand{\textinterrobangdown}{PU}{\9056\030}% U+2E18
 19513 % U+2E2D FIVE DOT MARK; \fivedots (MnSymbol)
 19514 \DeclareTextCommand{\textfivedots}{PU}{\9056\055}%* U+2E2D

46.2.39 Modifier Tone Letters: U+A700 to U+A71F

19515 % U+A71B MODIFIER LETTER RAISED UP ARROW; \textupstep (tipa)
 19516 \DeclareTextCommand{\textupstep}{PU}{\9247\033}% U+A71B
 19517 % U+A71C MODIFIER LETTER RAISED DOWN ARROW;
 19518 % \textdownstep (tipa)
 19519 \DeclareTextCommand{\textdownstep}{PU}{\9247\034}% U+A71C

46.2.40 Latin Extended-D: U+A720 to U+A7FF

19520 % U+A727 LATIN SMALL LETTER HENG; \textheng (tipx)
 19521 \DeclareTextCommand{\textPUheng}{PU}{\9247\047}% U+A727
 19522 %* \textPUheng -> \textheng (tipx)
 19523 % U+A72C LATIN CAPITAL LETTER CUATRILLO; \textlhookfour (tipx)
 19524 \DeclareTextCommand{\textPULhookfour}{PU}{\9247\054}% U+A72C
 19525 %* \textPULhookfour -> \textlhookfour (tipx)
 19526 % U+A730 LATIN LETTER SMALL CAPITAL F; \textscf (tipx)
 19527 \DeclareTextCommand{\textPUscf}{PU}{\9247\060}% U+A730
 19528 %* \textPUscf -> \textscf (tipx)
 19529 % U+A735 LATIN SMALL LETTER AO; \textao lig (tipx)
 19530 \DeclareTextCommand{\textPUaolig}{PU}{\9247\065}% U+A735
 19531 %* \textPUaolig -> \textao lig (tipx)
 19532 % U+A74F LATIN SMALL LETTER OO; \oo (wsuipa)
 19533 \DeclareTextCommand{\textoo}{PU}{\9247\117}%* U+A74F
 19534 % U+A788 MODIFIER LETTER LOW CIRCUMFLEX ACCENT
 19535 \DeclareTextCommand{\textcircumlow}{PU}{\9247\210}% U+A788

46.2.41 Alphabetic Presentation Forms: U+FB00 to U+FB4F

19536 % U+FB01 LATIN SMALL LIGATURE FI; fi
 19537 \DeclareTextCommand{\textfi}{PU}{\9373\001}% U+FB01
 19538 % U+FB02 LATIN SMALL LIGATURE FL; fl
 19539 \DeclareTextCommand{\textfl}{PU}{\9373\002}% U+FB02

46.2.42 Musical Symbols: U+1D100 to U+1D1FF

19540 % U+1D13B MUSICAL SYMBOL WHOLE REST; \GaPa (harmony)
 19541 \DeclareTextCommand{\textGaPa}{PU}{\9330\064\9335\073}%* U+1D13B
 19542 % U+1D13C MUSICAL SYMBOL HALF REST; \HaPa (harmony)
 19543 \DeclareTextCommand{\textHaPa}{PU}{\9330\064\9335\074}%* U+1D13C
 19544 % U+1D13D MUSICAL SYMBOL QUARTER REST; \ViPa (harmony)
 19545 \DeclareTextCommand{\textViPa}{PU}{\9330\064\9335\075}%* U+1D13D
 19546 % U+1D13E MUSICAL SYMBOL EIGHTH REST; \AcPa (harmony)
 19547 \DeclareTextCommand{\textAcPa}{PU}{\9330\064\9335\076}%* U+1D13E
 19548 % U+1D13F MUSICAL SYMBOL SIXTEENTH REST; \SePa (harmony)
 19549 \DeclareTextCommand{\textSePa}{PU}{\9330\064\9335\077}%* U+1D13F
 19550 % U+1D140 MUSICAL SYMBOL THIRTY-SECOND REST; \ZwPa (harmony)
 19551 \DeclareTextCommand{\textZwPa}{PU}{\9330\064\9335\100}%* U+1D140
 19552 % U+1D15D MUSICAL SYMBOL WHOLE NOTE; \fullnote (wasysym)
 19553 \DeclareTextCommand{\textfullnote}{PU}{\9330\064\9335\135}%* U+1D15D
 19554 %* \textfullnote -> \Ganz (harmony)
 19555 % U+1D15E MUSICAL SYMBOL HALF NOTE; \halfnote (wasysym)
 19556 \DeclareTextCommand{\texthalfnote}{PU}{\9330\064\9335\136}%* U+1D15E
 19557 %* \texthalfnote -> \Halb (harmony)
 19558 % U+1D15F MUSICAL SYMBOL QUARTER NOTE; \Vier (harmony)
 19559 \DeclareTextCommand{\textVier}{PU}{\9330\064\9335\137}%* U+1D15F
 19560 % U+1D160 MUSICAL SYMBOL EIGHTH NOTE; \Acht (harmony)
 19561 \DeclareTextCommand{\textAcht}{PU}{\9330\064\9335\140}%* U+1D160
 19562 % U+1D161 MUSICAL SYMBOL SIXTEENTH NOTE; \Sech (harmony)
 19563 \DeclareTextCommand{\textSech}{PU}{\9330\064\9335\141}%* U+1D161
 19564 % U+1D162 MUSICAL SYMBOL THIRTY-SECOND NOTE; \Zwdr (harmony)
 19565 \DeclareTextCommand{\textZwdr}{PU}{\9330\064\9335\142}%* U+1D162

46.2.43 Miscellaneous Symbols and Pictographs: U+1F300 to U+1F5FF

19566 % U+1F30D EARTH GLOBE EUROPE-AFRICA; \Mundus (marvosym)
 19567 \DeclareTextCommand{\textMundus}{PU}{\9330\074\9337\015}%* U+1F30D
 19568 % U+1F319 CRESCENT MOON; \Moon (marvosym)
 19569 \DeclareTextCommand{\textMoon}{PU}{\9330\074\9337\031}%* U+1F319
 19570 % U+1F468 MAN; \ManFace (marvosym)
 19571 \DeclareTextCommand{\textManFace}{PU}{\9330\075\9334\150}%* U+1F468
 19572 % U+1F469 WOMAN; \WomanFace (marvosym)
 19573 \DeclareTextCommand{\textWomanFace}{PU}{\9330\075\9334\151}%* U+1F469
 19574 %* \textWomanFace -> \Womanface (marvosym)
 19575 % U+1F4E0 FAX MACHINE; \Fax (marvosym)
 19576 \DeclareTextCommand{\textFax}{PU}{\9330\075\9334\340}%* U+1F4E0
 19577 %* \textFax -> \Faxmachine (marvosym)
 19578 % U+1F525 FIRE; \Fire (ifsym)
 19579 \DeclareTextCommand{\textFire}{PU}{\9330\075\9335\045}%* U+1F525

46.2.44 Transport and Map Symbols: U+1F680 to U+1F6FF

19580 % U+1F6B2 BICYCLE; \Bicycle (marvosym)
 19581 \DeclareTextCommand{\textBicycle}{PU}{\9330\075\9336\262}%* U+1F6B2
 19582 % U+1F6B9 MENS SYMBOL; \Gentsroom (marvosym)
 19583 \DeclareTextCommand{\textGentsroom}{PU}{\9330\075\9336\271}%* U+1F6B9
 19584 % U+1F6BA WOMENS SYMBOL; \Ladiesroom (marvosym)
 19585 \DeclareTextCommand{\textLadiesroom}{PU}{\9330\075\9336\272}%* U+1F6BA

46.2.45 Miscellaneous

19586 \DeclareTextCommand{\SS}{PU}{SS}%
 19587 % \textcopyleft (textcomp)

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19588 \DeclareTextCommand{\textcopyleft}{PU}{\9041\204\9040\335}% U+2184 U+20DD
19589 % \ccnc (ccllicenses)
19590 \DeclareTextCommand{\textccnc}{PU}{\80\044\9040\340}%* U+0024 U+20E0
19591 % \ccnd (ccllicenses)
19592 \DeclareTextCommand{\textccnd}{PU}{=\9040\335}%* U+003D U+20DD
19593 % \ccsa (ccllicenses)
19594 \DeclareTextCommand{\textccsa}{PU}{\9047\362\9040\335}%* U+27F2 U+20DD
19595 % \Info (marvosym, china2e)
19596 \DeclareTextCommand{\textInfo}{PU}{\9330\065\9334\042\9040\336}%* U+1D422 U+20DE
19597 % \CESign (marvosym)
19598 \DeclareTextCommand{\textCESign}{PU}{\80\103\80\105}%* U+0043 U+0045
19599 %* \textCESign -> \CESign (marvosym)

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46.2.46 Aliases

Aliases (german.sty)

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19600 \DeclareTextCommand{\textglqq}{PU}{\quotedblbase}%
19601 \DeclareTextCommand{\textgrqq}{PU}{\textquotedblleft}%
19602 \DeclareTextCommand{\textglq}{PU}{\quotesinglbase}%
19603 \DeclareTextCommand{\textgrq}{PU}{\textquoteleft}%
19604 \DeclareTextCommand{\textflqq}{PU}{\guillemetleft}%
19605 \DeclareTextCommand{\textfrqq}{PU}{\guillemetright}%
19606 \DeclareTextCommand{\textflq}{PU}{\guilsinglleft}%
19607 \DeclareTextCommand{\textfrq}{PU}{\guilsinglright}%

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Aliases (math names)

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19608 \DeclareTextCommand{\textneg}{PU}{\textlogicalnot}%*
19609 \DeclareTextCommand{\texttimes}{PU}{\textmultiply}%*
19610 \DeclareTextCommand{\textdiv}{PU}{\textdivide}%*
19611 \DeclareTextCommand{\textpm}{PU}{\textplusminus}%*
19612 \DeclareTextCommand{\textcdot}{PU}{\textperiodcentered}%*
19613 \langle/puenc\rangle

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46.3 PU encoding, additions for VnTeX

This file is provided by Han The Thanh.

```

19614 \langle*puvnenc\rangle
19615 \DeclareTextCommand{\abreve}{PU}{\81\003}% U+0103
19616 \DeclareTextCommand{\acircumflex}{PU}{\80\342}% U+00E2
19617 \DeclareTextCommand{\ecircumflex}{PU}{\80\352}% U+00EA
19618 \DeclareTextCommand{\ocircumflex}{PU}{\80\364}% U+00F4
19619 \DeclareTextCommand{\ohorn}{PU}{\81\241}% U+01A1
19620 \DeclareTextCommand{\uhorn}{PU}{\81\260}% U+01B0
19621 \DeclareTextCommand{\ABREVE}{PU}{\81\002}% U+0102
19622 \DeclareTextCommand{\ACIRCUMFLEX}{PU}{\80\302}% U+00C2
19623 \DeclareTextCommand{\ECIRCUMFLEX}{PU}{\80\312}% U+00CA
19624 \DeclareTextCommand{\OCIRCUMFLEX}{PU}{\80\324}% U+00D4
19625 \DeclareTextCommand{\OHORN}{PU}{\81\240}% U+01A0
19626 \DeclareTextCommand{\UHORN}{PU}{\81\257}% U+01AF
19627 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\341}% U+00E1
19628 \DeclareTextCompositeCommand{\d}{PU}{a}{\9036\241}% U+1EA1
19629 \DeclareTextCompositeCommand{\`}{PU}{a}{\80\340}% U+00E0
19630 \DeclareTextCompositeCommand{\h}{PU}{a}{\9036\243}% U+1EA3

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19631 \DeclareTextCompositeCommand{\~}{PU}{a}{\80\343}% U+00E3
19632 \DeclareTextCompositeCommand{\'}{PU}{\abreve}{\9036\257}% U+1EAF
19633 \DeclareTextCompositeCommand{\d}{PU}{\abreve}{\9036\267}% U+1EB7
19634 \DeclareTextCompositeCommand{\`}{PU}{\abreve}{\9036\261}% U+1EB1
19635 \DeclareTextCompositeCommand{\h}{PU}{\abreve}{\9036\263}% U+1EB3
19636 \DeclareTextCompositeCommand{\~}{PU}{\abreve}{\9036\265}% U+1EB5
19637 \DeclareTextCompositeCommand{\'}{PU}{\acircumflex}{\9036\245}% U+1EA5
19638 \DeclareTextCompositeCommand{\d}{PU}{\acircumflex}{\9036\255}% U+1EAD
19639 \DeclareTextCompositeCommand{\`}{PU}{\acircumflex}{\9036\247}% U+1EA7
19640 \DeclareTextCompositeCommand{\h}{PU}{\acircumflex}{\9036\251}% U+1EA9
19641 \DeclareTextCompositeCommand{\~}{PU}{\acircumflex}{\9036\253}% U+1EAB
19642 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\351}% U+00E9
19643 \DeclareTextCompositeCommand{\d}{PU}{e}{\9036\271}% U+1EB9
19644 \DeclareTextCompositeCommand{\`}{PU}{e}{\80\350}% U+00E8
19645 \DeclareTextCompositeCommand{\h}{PU}{e}{\9036\273}% U+1EBB
19646 \DeclareTextCompositeCommand{\~}{PU}{e}{\9036\275}% U+1EBD
19647 \DeclareTextCompositeCommand{\'}{PU}{\ecircumflex}{\9036\277}% U+1EBF
19648 \DeclareTextCompositeCommand{\d}{PU}{\ecircumflex}{\9036\307}% U+1EC7
19649 \DeclareTextCompositeCommand{\`}{PU}{\ecircumflex}{\9036\301}% U+1EC1
19650 \DeclareTextCompositeCommand{\h}{PU}{\ecircumflex}{\9036\303}% U+1EC3
19651 \DeclareTextCompositeCommand{\~}{PU}{\ecircumflex}{\9036\305}% U+1EC5
19652 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}% U+00ED
19653 \DeclareTextCompositeCommand{\d}{PU}{i}{\9036\313}% U+1ECB
19654 \DeclareTextCompositeCommand{\`}{PU}{i}{\80\354}% U+00EC
19655 \DeclareTextCompositeCommand{\h}{PU}{i}{\9036\311}% U+1EC9
19656 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}% U+0129
19657 \DeclareTextCompositeCommand{\'}{PU}{o}{\80\363}% U+00F3
19658 \DeclareTextCompositeCommand{\d}{PU}{o}{\9036\315}% U+1ECD
19659 \DeclareTextCompositeCommand{\`}{PU}{o}{\80\362}% U+00F2
19660 \DeclareTextCompositeCommand{\h}{PU}{o}{\9036\317}% U+1ECF
19661 \DeclareTextCompositeCommand{\~}{PU}{o}{\80\365}% U+00F5
19662 \DeclareTextCompositeCommand{\'}{PU}{\ocircumflex}{\9036\321}% U+1ED1
19663 \DeclareTextCompositeCommand{\d}{PU}{\ocircumflex}{\9036\331}% U+1ED9
19664 \DeclareTextCompositeCommand{\`}{PU}{\ocircumflex}{\9036\323}% U+1ED3
19665 \DeclareTextCompositeCommand{\h}{PU}{\ocircumflex}{\9036\325}% U+1ED5
19666 \DeclareTextCompositeCommand{\~}{PU}{\ocircumflex}{\9036\327}% U+1ED7
19667 \DeclareTextCompositeCommand{\'}{PU}{\ohorn}{\9036\333}% U+1EDB
19668 \DeclareTextCompositeCommand{\d}{PU}{\ohorn}{\9036\343}% U+1EE3
19669 \DeclareTextCompositeCommand{\`}{PU}{\ohorn}{\9036\335}% U+1EDD
19670 \DeclareTextCompositeCommand{\h}{PU}{\ohorn}{\9036\337}% U+1EDF
19671 \DeclareTextCompositeCommand{\~}{PU}{\ohorn}{\9036\341}% U+1EE1
19672 \DeclareTextCompositeCommand{\'}{PU}{u}{\80\372}% U+00FA
19673 \DeclareTextCompositeCommand{\d}{PU}{u}{\9036\345}% U+1EE5
19674 \DeclareTextCompositeCommand{\`}{PU}{u}{\80\371}% U+00F9
19675 \DeclareTextCompositeCommand{\h}{PU}{u}{\9036\347}% U+1EE7
19676 \DeclareTextCompositeCommand{\~}{PU}{u}{\81\151}% U+0169
19677 \DeclareTextCompositeCommand{\'}{PU}{\uhorn}{\9036\351}% U+1EE9
19678 \DeclareTextCompositeCommand{\d}{PU}{\uhorn}{\9036\361}% U+1EF1
19679 \DeclareTextCompositeCommand{\`}{PU}{\uhorn}{\9036\353}% U+1EEB
19680 \DeclareTextCompositeCommand{\h}{PU}{\uhorn}{\9036\355}% U+1EED
19681 \DeclareTextCompositeCommand{\~}{PU}{\uhorn}{\9036\357}% U+1EEF
19682 \DeclareTextCompositeCommand{\'}{PU}{y}{\80\375}% U+00FD
19683 \DeclareTextCompositeCommand{\d}{PU}{y}{\9036\365}% U+1EF5
19684 \DeclareTextCompositeCommand{\`}{PU}{y}{\9036\363}% U+1EF3

19685 \DeclareTextCompositeCommand{\h}{PU}{y}{\9036\367}% U+1EF7
 19686 \DeclareTextCompositeCommand{\~}{PU}{y}{\9036\371}% U+1EF9
 19687 \DeclareTextCompositeCommand{\'}{PU}{A}{\80\301}% U+00C1
 19688 \DeclareTextCompositeCommand{\d}{PU}{A}{\9036\240}% U+1EA0
 19689 \DeclareTextCompositeCommand{\`}{PU}{A}{\80\300}% U+00C0
 19690 \DeclareTextCompositeCommand{\h}{PU}{A}{\9036\242}% U+1EA2
 19691 \DeclareTextCompositeCommand{\~}{PU}{A}{\80\303}% U+00C3
 19692 \DeclareTextCompositeCommand{\'}{PU}{\ABREVE}{\9036\256}% U+1EAE
 19693 \DeclareTextCompositeCommand{\d}{PU}{\ABREVE}{\9036\266}% U+1EB6
 19694 \DeclareTextCompositeCommand{\`}{PU}{\ABREVE}{\9036\260}% U+1EB0
 19695 \DeclareTextCompositeCommand{\h}{PU}{\ABREVE}{\9036\262}% U+1EB2
 19696 \DeclareTextCompositeCommand{\~}{PU}{\ABREVE}{\9036\264}% U+1EB4
 19697 \DeclareTextCompositeCommand{\'}{PU}{\ACIRCUMFLEX}{\9036\244}% U+1EA4
 19698 \DeclareTextCompositeCommand{\d}{PU}{\ACIRCUMFLEX}{\9036\254}% U+1EAC
 19699 \DeclareTextCompositeCommand{\`}{PU}{\ACIRCUMFLEX}{\9036\246}% U+1EA6
 19700 \DeclareTextCompositeCommand{\h}{PU}{\ACIRCUMFLEX}{\9036\250}% U+1EA8
 19701 \DeclareTextCompositeCommand{\~}{PU}{\ACIRCUMFLEX}{\9036\252}% U+1EAA
 19702 \DeclareTextCompositeCommand{\'}{PU}{E}{\80\311}% U+00C9
 19703 \DeclareTextCompositeCommand{\d}{PU}{E}{\9036\270}% U+1EB8
 19704 \DeclareTextCompositeCommand{\`}{PU}{E}{\80\310}% U+00C8
 19705 \DeclareTextCompositeCommand{\h}{PU}{E}{\9036\272}% U+1EBA
 19706 \DeclareTextCompositeCommand{\~}{PU}{E}{\9036\274}% U+1EBC
 19707 \DeclareTextCompositeCommand{\'}{PU}{\ECIRCUMFLEX}{\9036\276}% U+1EBE
 19708 \DeclareTextCompositeCommand{\d}{PU}{\ECIRCUMFLEX}{\9036\306}% U+1EC6
 19709 \DeclareTextCompositeCommand{\`}{PU}{\ECIRCUMFLEX}{\9036\300}% U+1EC0
 19710 \DeclareTextCompositeCommand{\h}{PU}{\ECIRCUMFLEX}{\9036\302}% U+1EC2
 19711 \DeclareTextCompositeCommand{\~}{PU}{\ECIRCUMFLEX}{\9036\304}% U+1EC4
 19712 \DeclareTextCompositeCommand{\'}{PU}{I}{\80\315}% U+00CD
 19713 \DeclareTextCompositeCommand{\d}{PU}{I}{\9036\312}% U+1ECA
 19714 \DeclareTextCompositeCommand{\`}{PU}{I}{\80\314}% U+00CC
 19715 \DeclareTextCompositeCommand{\h}{PU}{I}{\9036\310}% U+1EC8
 19716 \DeclareTextCompositeCommand{\~}{PU}{I}{\81\050}% U+0128
 19717 \DeclareTextCompositeCommand{\'}{PU}{O}{\80\323}% U+00D3
 19718 \DeclareTextCompositeCommand{\d}{PU}{O}{\9036\314}% U+1ECC
 19719 \DeclareTextCompositeCommand{\`}{PU}{O}{\80\322}% U+00D2
 19720 \DeclareTextCompositeCommand{\h}{PU}{O}{\9036\316}% U+1ECE
 19721 \DeclareTextCompositeCommand{\~}{PU}{O}{\80\325}% U+00D5
 19722 \DeclareTextCompositeCommand{\'}{PU}{\OCIRCUMFLEX}{\9036\320}% U+1ED0
 19723 \DeclareTextCompositeCommand{\d}{PU}{\OCIRCUMFLEX}{\9036\330}% U+1ED8
 19724 \DeclareTextCompositeCommand{\`}{PU}{\OCIRCUMFLEX}{\9036\322}% U+1ED2
 19725 \DeclareTextCompositeCommand{\h}{PU}{\OCIRCUMFLEX}{\9036\324}% U+1ED4
 19726 \DeclareTextCompositeCommand{\~}{PU}{\OCIRCUMFLEX}{\9036\326}% U+1ED6
 19727 \DeclareTextCompositeCommand{\'}{PU}{\OHORN}{\9036\332}% U+1EDA
 19728 \DeclareTextCompositeCommand{\d}{PU}{\OHORN}{\9036\342}% U+1EE2
 19729 \DeclareTextCompositeCommand{\`}{PU}{\OHORN}{\9036\334}% U+1EDC
 19730 \DeclareTextCompositeCommand{\h}{PU}{\OHORN}{\9036\336}% U+1EDE
 19731 \DeclareTextCompositeCommand{\~}{PU}{\OHORN}{\9036\340}% U+1EE0
 19732 \DeclareTextCompositeCommand{\'}{PU}{U}{\80\332}% U+00DA
 19733 \DeclareTextCompositeCommand{\d}{PU}{U}{\9036\344}% U+1EE4
 19734 \DeclareTextCompositeCommand{\`}{PU}{U}{\80\331}% U+00D9
 19735 \DeclareTextCompositeCommand{\h}{PU}{U}{\9036\346}% U+1EE6
 19736 \DeclareTextCompositeCommand{\~}{PU}{U}{\81\150}% U+0168
 19737 \DeclareTextCompositeCommand{\'}{PU}{\UHORN}{\9036\350}% U+1EE8
 19738 \DeclareTextCompositeCommand{\d}{PU}{\UHORN}{\9036\360}% U+1EF0

```

19739 \DeclareTextCompositeCommand{\`}{PU}{\UHORN}{\9036\352}% U+1EEA
19740 \DeclareTextCompositeCommand{\h}{PU}{\UHORN}{\9036\354}% U+1EEC
19741 \DeclareTextCompositeCommand{\~}{PU}{\UHORN}{\9036\356}% U+1EEE
19742 \DeclareTextCompositeCommand{\'}{PU}{Y}{\80\335}% U+00DD
19743 \DeclareTextCompositeCommand{\d}{PU}{Y}{\9036\364}% U+1EF4
19744 \DeclareTextCompositeCommand{\`}{PU}{Y}{\9036\362}% U+1EF2
19745 \DeclareTextCompositeCommand{\h}{PU}{Y}{\9036\366}% U+1EF6
19746 \DeclareTextCompositeCommand{\~}{PU}{Y}{\9036\370}% U+1EF8
19747 </puvnenc>

```

46.4 PU encoding, additions for Arabi

This file is provided and maintained by Youssef Jabri.

```

19748 <*puarenc>
19749 % U+0621;afii57409;ARABIC LETTER HAMZA
19750 \DeclareTextCommand{\hamza}{PU}{\86\041}% U+0621
19751 % U+0622;afii57410;ARABIC LETTER ALEF WITH MADDA ABOVE
19752 \DeclareTextCommand{\alefmadda}{PU}{\86\042}% U+0622
19753 % U+0623;afii57411;ARABIC LETTER ALEF WITH HAMZA ABOVE
19754 \DeclareTextCommand{\alefhamza}{PU}{\86\043}% U+0623
19755 % U+0624;afii57412;ARABIC LETTER WAW WITH HAMZA ABOVE
19756 \DeclareTextCommand{\wawhamza}{PU}{\86\044}% U+0624
19757 % U+0625;afii57413;ARABIC LETTER ALEF WITH HAMZA BELOW
19758 \DeclareTextCommand{\aleflowerhamza}{PU}{\86\045}% U+0625
19759 % U+0626;afii57414;ARABIC LETTER YEH WITH HAMZA ABOVE
19760 \DeclareTextCommand{\yahamza}{PU}{\86\046}% U+0626
19761 % U+0627;afii57415;ARABIC LETTER ALEF
19762 \DeclareTextCommand{\alef}{PU}{\86\047}% U+0627
19763 % U+0628;afii57416;ARABIC LETTER BEH
19764 \DeclareTextCommand{\baa}{PU}{\86\050}% U+0628
19765 % U+0629;afii57417;ARABIC LETTER TEH MARBUTA
19766 \DeclareTextCommand{\T}{PU}{\86\051}% U+0629
19767 % U+062A;afii57418;ARABIC LETTER TEH
19768 \DeclareTextCommand{\taa}{PU}{\86\052}% U+062A
19769 % U+062B;afii57419;ARABIC LETTER THEH
19770 \DeclareTextCommand{\thaa}{PU}{\86\053}% U+062B
19771 % U+062C;afii57420;ARABIC LETTER JEEM
19772 \DeclareTextCommand{\jeem}{PU}{\86\054}% U+062C
19773 % U+062D;afii57421;ARABIC LETTER HAH
19774 \DeclareTextCommand{\Haa}{PU}{\86\055}% U+062D
19775 % U+062E;afii57422;ARABIC LETTER KHAH
19776 \DeclareTextCommand{\kha}{PU}{\86\056}% U+062E
19777 % U+062F;afii57423;ARABIC LETTER DAL
19778 \DeclareTextCommand{\dal}{PU}{\86\057}% U+062F
19779 % U+0630;afii57424;ARABIC LETTER THAL
19780 \DeclareTextCommand{\dhal}{PU}{\86\060}% U+0630
19781 % U+0631;afii57425;ARABIC LETTER REH
19782 \DeclareTextCommand{\ra}{PU}{\86\061}% U+0631
19783 % U+0632;afii57426;ARABIC LETTER ZAIN
19784 \DeclareTextCommand{\zay}{PU}{\86\062}% U+0632
19785 % U+0633;afii57427;ARABIC LETTER SEEN
19786 \DeclareTextCommand{\seen}{PU}{\86\063}% U+0633
19787 % U+0634;afii57428;ARABIC LETTER SHEEN

```

19788 \DeclareTextCommand{\sheen}{PU}{\86\064}% U+0634
 19789 % U+0635;afii57429;ARABIC LETTER SAD
 19790 \DeclareTextCommand{\sad}{PU}{\86\065}% U+0635
 19791 % U+0636;afii57430;ARABIC LETTER DAD
 19792 \DeclareTextCommand{\dad}{PU}{\86\066}% U+0636
 19793 % U+0637;afii57431;ARABIC LETTER TAH
 19794 \DeclareTextCommand{\Ta}{PU}{\86\067}% U+0637
 19795 % U+0638;afii57432;ARABIC LETTER ZAH
 19796 \DeclareTextCommand{\za}{PU}{\86\070}% U+0638
 19797 % U+0639;afii57433;ARABIC LETTER AIN
 19798 \DeclareTextCommand{\ayn}{PU}{\86\071}% U+0639
 19799 % U+063A;afii57434;ARABIC LETTER GHAIN
 19800 \DeclareTextCommand{\ghayn}{PU}{\86\072}% U+063A
 19801 % U+0640;afii57440;ARABIC TATWEEL
 19802 \DeclareTextCommand{\tatweel}{PU}{\86\100}% U+0640
 19803 % U+0641;afii57441;ARABIC LETTER FEH
 19804 \DeclareTextCommand{\fa}{PU}{\86\101}% U+0641
 19805 % U+0642;afii57442;ARABIC LETTER QAF
 19806 \DeclareTextCommand{\qaf}{PU}{\86\102}% U+0642
 19807 % U+0643;afii57443;ARABIC LETTER KAF
 19808 \DeclareTextCommand{\kaf}{PU}{\86\103}% U+0643
 19809 % U+0644;afii57444;ARABIC LETTER LAM
 19810 \DeclareTextCommand{\lam}{PU}{\86\104}% U+0644
 19811 % U+0645;afii57445;ARABIC LETTER MEEM
 19812 \DeclareTextCommand{\meem}{PU}{\86\105}% U+0645
 19813 % U+0646;afii57446;ARABIC LETTER NOON
 19814 \DeclareTextCommand{\nun}{PU}{\86\106}% U+0646
 19815 % U+0647;afii57470;ARABIC LETTER HEH
 19816 \DeclareTextCommand{\ha}{PU}{\86\107}% U+0647
 19817 % U+0648;afii57448;ARABIC LETTER WAW
 19818 \DeclareTextCommand{\waw}{PU}{\86\110}% U+0648
 19819 % U+0649;afii57449;ARABIC LETTER ALEF MAKSURA
 19820 \DeclareTextCommand{\alefmaqsura}{PU}{\86\111}% U+0649
 19821 % U+064A;afii57450;ARABIC LETTER YEH
 19822 \DeclareTextCommand{\ya}{PU}{\86\112}% U+064A

 19823 % U+064B;afii57451;ARABIC FATHATAN
 19824 \DeclareTextCommand{\nasb}{PU}{\86\113}% U+064B
 19825 % U+064C;afii57452;ARABIC DAMMATAN
 19826 \DeclareTextCommand{\raff}{PU}{\86\114}% U+064C
 19827 % U+064D;afii57453;ARABIC KASRATAN
 19828 \DeclareTextCommand{\jarr}{PU}{\86\115}% U+064D
 19829 % U+064E;afii57454;ARABIC FATHA
 19830 \DeclareTextCommand{\fatha}{PU}{\86\116}% U+064E
 19831 % U+064F;afii57455;ARABIC DAMMA
 19832 \DeclareTextCommand{\damma}{PU}{\86\117}% U+064F
 19833 % U+0650;afii57456;ARABIC KASRA
 19834 \DeclareTextCommand{\kasra}{PU}{\86\120}% U+0650
 19835 % U+0651;afii57457;ARABIC SHADDA
 19836 \DeclareTextCommand{\shadda}{PU}{\86\121}% U+0651
 19837 % U+0652;afii57458;ARABIC SUKUN
 19838 \DeclareTextCommand{\sukun}{PU}{\86\122}% U+0652

 Farsi
 19839 % U+067E ARABIC LETTER PEH; afii57506

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19840 \DeclareTextCommand{\peh}{PU}{\86\176}% U+067E
19841 % U+0686 ARABIC LETTER TCHEH; afi57507
19842 \DeclareTextCommand{\tcheh}{PU}{\86\206}% U+0686
19843 % U+0698 ARABIC LETTER JEHE; afi57508
19844 \DeclareTextCommand{\jeh}{PU}{\86\230}% U+0698
19845 % U+06A9 ARABIC LETTER KEHEH
19846 \DeclareTextCommand{\farsikaf}{PU}{\86\251}% U+06A9
19847 % U+06AF ARABIC LETTER GAF; afi57509
19848 \DeclareTextCommand{\gaf}{PU}{\86\257}% U+06AF
19849 % U+06CC ARABIC LETTER FARSI YEH
19850 \DeclareTextCommand{\farsiya}{PU}{\86\314}% U+06CC

19851 % U+200C ZERO WIDTH NON-JOINER; afi61664
19852 \DeclareTextCommand{\ZWJ}{PU}{\9040\014}% U+200C
19853 % U+200D ZERO WIDTH JOINER; afi301
19854 \DeclareTextCommand{\textEncodingNoboundary}{PU}{\9040\015}% U+200D

19855 (/puarenc)

19856 (*psdextra)
19857 \Hy@VersionCheck{psdextra.def}
19858 \newcommand*{\psdmapshortnames}{%
19859   \let\MVPlus\textMVPlus
19860   \let\MVComma\textMVComma
19861   \let\MVMinus\textMVMinus
19862   \let\MVPeriod\textMVPeriod
19863   \let\MVDivision\textMVDivision
19864   \let\MVZero\textMVZero
19865   \let\MVOne\textMVOne
19866   \let\MVTwo\textMVTwo
19867   \let\MVThree\textMVThree
19868   \let\MVFour\textMVFour
19869   \let\MVFive\textMVFive
19870   \let\MVSix\textMVSix
19871   \let\MVSeven\textMVSeven
19872   \let\MVEight\textMVEight
19873   \let\MVNine\textMVNine
19874   \let\MVAt\textMVAt
19875   \let\copyright\textcopyright
19876   \let\twosuperior\texttwosuperior
19877   \let\threesuperior\textthreesuperior
19878   \let\onesuperior\textonesuperior
19879   \let\Thorn\textThorn
19880   \let\thorn\textthorn
19881   \let\hbar\texthbar
19882   \let\hausaB\texthausaB
19883   \let\hausaD\texthausaD
19884   \let\hausaK\texthausaK
19885   \let\barl\textbarl
19886   \let\inve\textinve
19887   \let\slashc\textslashc
19888   \let\scripta\textscripta
19889   \let\openo\textopeno
19890   \let\rtaild\textrtaild
19891   \let\reve\textreve
19892   \let\schwa\textschwa

```

19893 \let\niepsilon\textniepsilon
 19894 \let\repsilon\textrepsilon
 19895 \let\rhookrepsilon\textrho\hookrepsilon
 19896 \let\scriptg\textscriptg
 19897 \let\scg\textscg
 19898 \let\ipagamma\textipagamma
 19899 \let\babygamma\textbabygamma
 19900 \let\bari\textbari
 19901 \let\niota\textniota
 19902 \let\sci\textsci
 19903 \let\scn\textscn
 19904 \let\niphi\textniphi
 19905 \let\longleg\textlongleg
 19906 \let\scr\textscr
 19907 \let\invscr\textinvscr
 19908 \let\esh\textesh
 19909 \let\baru\textbaru
 19910 \let\niupsilon\textniupsilon
 19911 \let\scriptv\textscriptv
 19912 \let\turnv\textturnv
 19913 \let\turnw\textturnw
 19914 \let\turny\textturny
 19915 \let\scy\textscy
 19916 \let\yogh\textyogh
 19917 \let\glotstop\textglotstop
 19918 \let\revglotstop\textrevglotstop
 19919 \let\invglotstop\textinvglotstop
 19920 \let\Gamma\textGamma
 19921 \let\Delta\textDelta
 19922 \let\Theta\textTheta
 19923 \let\Lambda\textLambda
 19924 \let\Xi\textXi
 19925 \let\Pi\textPi
 19926 \let\Sigma\textSigma
 19927 \let\Upsilon\textUpsilon
 19928 \let\Phi\textPhi
 19929 \let\Psi\textPsi
 19930 \let\Omega\textOmega
 19931 \let\alpha\textalpha
 19932 \let\beta\textbeta
 19933 \let\gamma\textgamma
 19934 \let\delta\textdelta
 19935 \let\epsilon\textepsilon
 19936 \let\zeta\textzeta
 19937 \let\eta\texteta
 19938 \let\theta\texttheta
 19939 \let\iota\textiota
 19940 \let\kappa\textkappa
 19941 \let\lambda\textlambda
 19942 \let\mu\textmu
 19943 \let\mugreek\textmugreek
 19944 \let\nu\textnu
 19945 \let\xi\textxi
 19946 \let\pi\textpi

19947 \let\rho\textrho
 19948 \let\varsigma\textvarsigma
 19949 \let\sigma\textsigma
 19950 \let\tau\texttau
 19951 \let\upsilon\textupsilon
 19952 \let\phi\textphi
 19953 \let\chi\textchi
 19954 \let\psi\textpsi
 19955 \let\omega\textomega
 19956 \let\scd\textscd
 19957 \let\scu\textscu
 19958 \let\iinferior\textiinferior
 19959 \let\rinferior\extrinferior
 19960 \let\uinferior\textuinferior
 19961 \let\vinferior\textvinferior
 19962 \let\betainferior\textbetainferior
 19963 \let\gammainferior\textgammainferior
 19964 \let\rhoinferior\textrhoinferior
 19965 \let\phiinferior\textphiinferior
 19966 \let\chiinferior\textchiinferior
 19967 \let\barsci\textbarsci
 19968 \let\barp\textbarp
 19969 \let\barscu\textbarscu
 19970 \let\htrtaild\texthtrtaild
 19971 \let\dagger\textdagger
 19972 \let\bullet\textbullet
 19973 \let\hdotfor\texthdotfor
 19974 \let\prime\textprime
 19975 \let\second\textsecond
 19976 \let\third\textthird
 19977 \let\backprime\textbackprime
 19978 \let\lefttherefore\textlefttherefore
 19979 \let\fourth\textfourth
 19980 \let\diamonddots\textdiamonddots
 19981 \let\zerosuperior\textzerosuperior
 19982 \let\isuperior\textisuperior
 19983 \let\foursuperior\textfoursuperior
 19984 \let\fivesuperior\textfivesuperior
 19985 \let\sixsuperior\textsixsuperior
 19986 \let\sevensuperior\textsevensuperior
 19987 \let\eightsuperior\texteightsuperior
 19988 \let\ninesuperior\textninesuperior
 19989 \let\plussuperior\textplussuperior
 19990 \let\minussuperior\textminussuperior
 19991 \let>equalsuperior\textequalsuperior
 19992 \let\parenleftsuperior\textparenleftsuperior
 19993 \let\parenrightsuperior\textparenrightsuperior
 19994 \let\nsuperior\textnsuperior
 19995 \let\zeroinferior\textzeroinferior
 19996 \let\oneinferior\textoneinferior
 19997 \let\twoinferior\texttwoinferior
 19998 \let\threeinferior\textthreeinferior
 19999 \let\fourinferior\textfourinferior
 20000 \let\fiveinferior\textfiveinferior

20001 \let\sixinferior\textsixinferior
 20002 \let\seveninferior\textseveninferior
 20003 \let\eightinferior\texteightinferior
 20004 \let\nineinferior\textnineinferior
 20005 \let\plusinferior\textplusinferior
 20006 \let\minusinferior\textminusinferior
 20007 \let\equalsinferior\textequalsinferior
 20008 \let\parenleftinferior\textparenleftinferior
 20009 \let\parenrightinferior\textparenrightinferior
 20010 \let\ainferior\textainferior
 20011 \let\einferior\texteinferior
 20012 \let\oinferior\textoinferior
 20013 \let\xinferior\textxinferior
 20014 \let\schwainferior\textschwainferior
 20015 \let\hinferior\texthinferior
 20016 \let\kinferior\textkinferior
 20017 \let\linferior\textlinferior
 20018 \let\minferior\textminferior
 20019 \let\ninferior\textninferior
 20020 \let\pinferior\textpinferior
 20021 \let\sinferior\textsinferior
 20022 \let\tinferior\texttinferior
 20023 \let\Deleatur\textDeleatur
 20024 \let\hslash\texthslash
 20025 \let\Im\textIm
 20026 \let\ell\textell
 20027 \let\wp\textwp
 20028 \let\Re\textRe
 20029 \let\mho\textmho
 20030 \let\riota\textriota
 20031 \let\Finv\textFinv
 20032 \let\aleph\textaleph
 20033 \let\beth\textbeth
 20034 \let\gimel\textgimel
 20035 \let\daleth\textdaleth
 20036 \let\xfax\textfax
 20037 \let\Game\textGame
 20038 \let\leftarrow\textleftarrow
 20039 \let\uparrow\textuparrow
 20040 \let\rightarrow\textrightarrow
 20041 \let\downarrow\textdownarrow
 20042 \let\leftrightarrow\textleftrightarrow
 20043 \let\updownarrow\textupdownarrow
 20044 \let\nwarrow\textnwarrow
 20045 \let\nearrow\textnearrow
 20046 \let\searrow\textsearrow
 20047 \let\swarrow\textswarrow
 20048 \let\nleftarrow\textnleftarrow
 20049 \let\nrightarrow\textnrightarrow
 20050 \let\twoheadleftarrow\texttwoheadleftarrow
 20051 \let\ntwoheadleftarrow\textntwoheadleftarrow
 20052 \let\twoheaduparrow\texttwoheaduparrow
 20053 \let\twoheadrightarrow\texttwoheadrightarrow
 20054 \let\ntwoheadrightarrow\textntwoheadrightarrow

20055 \let\twoheaddownarrow\texttwoheaddownarrow
 20056 \let\leftarrowtail\textleftarrowtail
 20057 \let\rightarrowtail\textrightarrowtail
 20058 \let\mapsto\textmapsto
 20059 \let\hookleftarrow\texthookleftarrow
 20060 \let\hookrightarrow\texthookrightarrow
 20061 \let\looparrowleft\textlooparrowleft
 20062 \let\looparrowright\textlooparrowright
 20063 \let\leftrightharrow\textleftrightharrow
 20064 \let\lightning\textlightning
 20065 \let\dlsh\textdlsh
 20066 \let\curvearrowleft\textcurvearrowleft
 20067 \let\curvearrowright\textcurvearrowright
 20068 \let\leftharpoonup\textleftharpoonup
 20069 \let\leftharpoondown\textleftharpoondown
 20070 \let\upharpoonright\textupharpoonright
 20071 \let\upharpoonleft\textupharpoonleft
 20072 \let\upharpoonup\textupharpoonup
 20073 \let\upharpoondown\textupharpoondown
 20074 \let\downharpoonright\textdownharpoonright
 20075 \let\downharpoonleft\textdownharpoonleft
 20076 \let\rightleftarrows\textrightleftarrows
 20077 \let\updownarrows\textupdownarrows
 20078 \let\leftrightarrows\textleftrightarrows
 20079 \let\leftleftarrows\textleftleftarrows
 20080 \let\upuparrows\textupuparrows
 20081 \let\upuparrows\textupuparrows
 20082 \let\downarrows\textdownarrows
 20083 \let\leftrightharpoons\textleftrightharpoons
 20084 \let\rightleftharpoons\textrightleftharpoons
 20085 \let\Leftarrow\textLeftarrow
 20086 \let\Leftarrow\textLeftarrow
 20087 \let\Rightarrow\textRightarrow
 20088 \let\Leftarrow\textLeftarrow
 20089 \let\Uparrow\textUparrow
 20090 \let\Uparrow\textUparrow
 20091 \let\Downarrow\textDownarrow
 20092 \let\Leftarrow\textLeftarrow
 20093 \let\Updownarrow\textUpdownarrow
 20094 \let\Narrow\textNarrow
 20095 \let\Narrow\textNarrow
 20096 \let\searrow\textsearrow
 20097 \let\searrow\textsearrow
 20098 \let\Lleftarrow\textLleftarrow
 20099 \let\Rrightarrow\textRrightarrow
 20100 \let\leftsquigarrow\textleftsquigarrow
 20101 \let\rightsquigarrow\textrightsquigarrow
 20102 \let\dashleftarrow\textdashleftarrow
 20103 \let\dasheduparrow\textdasheduparrow
 20104 \let\dashrightarrow\textdashrightarrow
 20105 \let\dasheddownarrow\textdasheddownarrow
 20106 \let\pointer\textpointer
 20107 \let\downuparrows\textdownuparrows
 20108 \let\leftarrowtriangle\textleftarrowtriangle

20109 `\let\rightarrowtriangle\textrightarrowtriangle`
 20110 `\let\leftrightarrowtriangle\textleftrightarrowtriangle`
 20111 `\let\forall\textforall`
 20112 `\let\complement\textcomplement`
 20113 `\let\partial\textpartial`
 20114 `\let\exists\textexists`
 20115 `\let\nexists\textnexists`
 20116 `\let\emptyset\textemptyset`
 20117 `\let\triangle\texttriangle`
 20118 `\let\nabla\textnabla`
 20119 `\let\in\textin`
 20120 `\let\notin\textnotin`
 20121 `\let\smallin\textsmallin`
 20122 `\let\ni\textni`
 20123 `\let\notowner\textnotowner`
 20124 `\let\smallowns\textsmallowns`
 20125 `\let\prod\textprod`
 20126 `\let\amalg\textamalg`
 20127 `\let\sum\textsum`
 20128 `\let\mp\textmp`
 20129 `\let\dotplus\textdotplus`
 20130 `\let\Divides\textDivides`
 20131 `\let\DividesNot\textDividesNot`
 20132 `\let\setminus\textsetminus`
 20133 `\let\ast\textast`
 20134 `\let\circ\textcirc`
 20135 `\let\surd\textsurd`
 20136 `\let\propto\textpropto`
 20137 `\let\infty\textinfty`
 20138 `\let\angle\textangle`
 20139 `\let\measuredangle\textmeasuredangle`
 20140 `\let\sphericalangle\textsphericalangle`
 20141 `\let\mid\textmid`
 20142 `\let\nmid\textnmid`
 20143 `\let\parallel\textparallel`
 20144 `\let\nparallel\textnparallel`
 20145 `\let\wedge\textwedge`
 20146 `\let\owedge\textowedge`
 20147 `\let\vee\textvee`
 20148 `\let\ovee\textovee`
 20149 `\let\cap\textcap`
 20150 `\let\cup\textcup`
 20151 `\let\int\textint`
 20152 `\let\iint\textiint`
 20153 `\let\iiint\textiiint`
 20154 `\let\oint\textoint`
 20155 `\let\oiint\textoiint`
 20156 `\let\ointclockwise\textointclockwise`
 20157 `\let\ointctrlockwise\textointctrlockwise`
 20158 `\let\therefore\texttherefore`
 20159 `\let\because\textbecause`
 20160 `\let\vdots\textvdots`
 20161 `\let\squaredots\textsquaredots`
 20162 `\let\dotminus\textdotminus`

20163 \let\eqcolon\texteqcolon
 20164 \let\sim\textsim
 20165 \let\backsim\textbacksim
 20166 \let\nbacksim\textnbacksim
 20167 \let\wr\textwr
 20168 \let\nsim\textnsim
 20169 \let\eqsim\texteqsim
 20170 \let\neqsim\textneqsim
 20171 \let\simeq\textsimeq
 20172 \let\nsimeq\textnsimeq
 20173 \let\cong\textcong
 20174 \let\ncong\textncong
 20175 \let\approx\textapprox
 20176 \let\napprox\textnapprox
 20177 \let\approxeq\textapproxeq
 20178 \let\napproxeq\textnapproxeq
 20179 \let\triplesim\texttriplesim
 20180 \let\ntriplesim\textntriplesim
 20181 \let\backcong\textbackcong
 20182 \let\nbackcong\textnbackcong
 20183 \let\asympt\textasympt
 20184 \let\nasympt\textnasympt
 20185 \let\Bumpeq\textBumpeq
 20186 \let\NBumpeq\textNBumpeq
 20187 \let\bumpeq\textbumpeq
 20188 \let\NBumpeq\textNBumpeq
 20189 \let\doteq\textdoteq
 20190 \let\ndoteq\textndoteq
 20191 \let\doteqdot\textdoteqdot
 20192 \let\NDoteq\textNDoteq
 20193 \let\fallingdoteq\textfallingdoteq
 20194 \let\Nfallingdoteq\textNfallingdoteq
 20195 \let\risingdoteq\textrisingdoteq
 20196 \let\Nrisingdoteq\textNrisingdoteq
 20197 \let\colonequals\textcolonequals
 20198 \let\equalscolon\textequalscolon
 20199 \let\eqcirc\texteqcirc
 20200 \let\neqcirc\textneqcirc
 20201 \let\circeq\textcirceq
 20202 \let\ncirceq\textncirceq
 20203 \let\hateq\texthateq
 20204 \let\nhateq\textnhateq
 20205 \let\triangleeq\texttriangleeq
 20206 \let\neq\textneq
 20207 \let\ne\textne
 20208 \let\equiv\textequiv
 20209 \let\nequiv\textnequiv
 20210 \let\leq\textleq
 20211 \let\le\textle
 20212 \let\geq\textgeq
 20213 \let\ge\textge
 20214 \let\leqq\textleqq
 20215 \let\Nleqq\textNleqq
 20216 \let\geqq\textgeqq

20217 \let\ngeqq\textngeqq
 20218 \let\lneqq\textlneqq
 20219 \let\gneqq\textgneqq
 20220 \let\ll\textll
 20221 \let\nll\textnll
 20222 \let\gg\textgg
 20223 \let\ngg\textngg
 20224 \let\between\textbetween
 20225 \let\nless\textnless
 20226 \let\ngtr\textngtr
 20227 \let\leq\textleq
 20228 \let\ngeq\textngeq
 20229 \let\lessim\textlessim
 20230 \let\gtrsim\textgtrsim
 20231 \let\nlessim\textnlessim
 20232 \let\ngtrsim\textngtrsim
 20233 \let\lessgtr\textlessgtr
 20234 \let\gtrless\textgtrless
 20235 \let\ngtrless\textngtrless
 20236 \let\nlessgtr\textnlessgtr
 20237 \let\prec\textprec
 20238 \let\succ\textsucc
 20239 \let\preccurlyeq\textpreccurlyeq
 20240 \let\succcurlyeq\textsucccurlyeq
 20241 \let\precsim\textprecsim
 20242 \let\nprecsim\textnprecsim
 20243 \let\succsim\textsuccsim
 20244 \let\nsuccsim\textnsuccsim
 20245 \let\nprec\textnprec
 20246 \let\nsucc\textnsucc
 20247 \let\subset\textsubset
 20248 \let\supset\textsupset
 20249 \let\nsubset\textnssubset
 20250 \let\nsupset\textnsupset
 20251 \let\subseteq\textsubseteq
 20252 \let\supseteq\textsupseteq
 20253 \let\nsubseteq\textnsubseteq
 20254 \let\nsupseteq\textnsupseteq
 20255 \let\subsetneq\textsubsetneq
 20256 \let\supsetneq\textsupsetneq
 20257 \let\cupdot\textcupdot
 20258 \let\cupplus\textcupplus
 20259 \let\sqsubset\textsqssubset
 20260 \let\nsqsubset\textnsqsubset
 20261 \let\sqsupset\textsqsupset
 20262 \let\nsqsupset\textnsqsupset
 20263 \let\sqsubseteq\textsqssubseteq
 20264 \let\nsqsubseteq\textnsqsubseteq
 20265 \let\sqsupseteq\textsqsupseteq
 20266 \let\nsqsupseteq\textnsqsupseteq
 20267 \let\sqcap\textsqqcap
 20268 \let\sqqcup\textsqqcup
 20269 \let\oplus\textoplus
 20270 \let\ominus\textominus

20271 $\backslash\mathrm{otimes}\backslash\mathrm{textotimes}$
 20272 $\backslash\mathrm{oslash}\backslash\mathrm{textoslash}$
 20273 $\backslash\mathrm{odot}\backslash\mathrm{textodot}$
 20274 $\backslash\mathrm{circledcirc}\backslash\mathrm{textcircledcirc}$
 20275 $\backslash\mathrm{circledast}\backslash\mathrm{textcircledast}$
 20276 $\backslash\mathrm{circleddash}\backslash\mathrm{textcircleddash}$
 20277 $\backslash\mathrm{boxplus}\backslash\mathrm{textboxplus}$
 20278 $\backslash\mathrm{boxminus}\backslash\mathrm{textboxminus}$
 20279 $\backslash\mathrm{boxtimes}\backslash\mathrm{textboxtimes}$
 20280 $\backslash\mathrm{boxdot}\backslash\mathrm{textboxdot}$
 20281 $\backslash\mathrm{vdash}\backslash\mathrm{textvdash}$
 20282 $\backslash\mathrm{dashv}\backslash\mathrm{textdashv}$
 20283 $\backslash\mathrm{ndashv}\backslash\mathrm{textndashv}$
 20284 $\backslash\mathrm{top}\backslash\mathrm{texttop}$
 20285 $\backslash\mathrm{ndownvdash}\backslash\mathrm{textndownvdash}$
 20286 $\backslash\mathrm{bot}\backslash\mathrm{textbot}$
 20287 $\backslash\mathrm{nupvdash}\backslash\mathrm{textnupvdash}$
 20288 $\backslash\mathrm{vDash}\backslash\mathrm{textvDash}$
 20289 $\backslash\mathrm{Vdash}\backslash\mathrm{textVdash}$
 20290 $\backslash\mathrm{Vvdash}\backslash\mathrm{textVvdash}$
 20291 $\backslash\mathrm{nVdash}\backslash\mathrm{textnVdash}$
 20292 $\backslash\mathrm{VDash}\backslash\mathrm{textVDash}$
 20293 $\backslash\mathrm{nvDash}\backslash\mathrm{textnvDash}$
 20294 $\backslash\mathrm{nvDash}\backslash\mathrm{textnvDash}$
 20295 $\backslash\mathrm{nVdash}\backslash\mathrm{textnVdash}$
 20296 $\backslash\mathrm{nVDash}\backslash\mathrm{textnVDash}$
 20297 $\backslash\mathrm{lhs}\backslash\mathrm{textrhs}$
 20298 $\backslash\mathrm{rhd}\backslash\mathrm{textrhd}$
 20299 $\backslash\mathrm{unlhd}\backslash\mathrm{textunlhd}$
 20300 $\backslash\mathrm{unrhd}\backslash\mathrm{textunrhd}$
 20301 $\backslash\mathrm{multimapdotbothA}\backslash\mathrm{textmultimapdotbothA}$
 20302 $\backslash\mathrm{multimapdotbothB}\backslash\mathrm{textmultimapdotbothB}$
 20303 $\backslash\mathrm{multimap}\backslash\mathrm{textmultimap}$
 20304 $\backslash\mathrm{veebar}\backslash\mathrm{textveebar}$
 20305 $\backslash\mathrm{barwedge}\backslash\mathrm{textbarwedge}$
 20306 $\backslash\mathrm{star}\backslash\mathrm{textstar}$
 20307 $\backslash\mathrm{divideontimes}\backslash\mathrm{textdivideontimes}$
 20308 $\backslash\mathrm{bowtie}\backslash\mathrm{textbowtie}$
 20309 $\backslash\mathrm{ltimes}\backslash\mathrm{textltimes}$
 20310 $\backslash\mathrm{rtimes}\backslash\mathrm{textrtimes}$
 20311 $\backslash\mathrm{leftthreetimes}\backslash\mathrm{textleftthreetimes}$
 20312 $\backslash\mathrm{rightthreetimes}\backslash\mathrm{textrightthreetimes}$
 20313 $\backslash\mathrm{backsimeq}\backslash\mathrm{textbacksimeq}$
 20314 $\backslash\mathrm{nbacksimeq}\backslash\mathrm{textnbacksimeq}$
 20315 $\backslash\mathrm{curlyvee}\backslash\mathrm{textcurlyvee}$
 20316 $\backslash\mathrm{curlywedge}\backslash\mathrm{textcurlywedge}$
 20317 $\backslash\mathrm{Subset}\backslash\mathrm{textSubset}$
 20318 $\backslash\mathrm{nSubset}\backslash\mathrm{textnSubset}$
 20319 $\backslash\mathrm{Supset}\backslash\mathrm{textSupset}$
 20320 $\backslash\mathrm{nSupset}\backslash\mathrm{textnSupset}$
 20321 $\backslash\mathrm{Cap}\backslash\mathrm{textCap}$
 20322 $\backslash\mathrm{Cup}\backslash\mathrm{textCup}$
 20323 $\backslash\mathrm{pitchfork}\backslash\mathrm{textpitchfork}$
 20324 $\backslash\mathrm{lessdot}\backslash\mathrm{textlessdot}$

20325 \let\gtrdot\textgtrdot
 20326 \let\lll\textlll
 20327 \let\ggg\textggg
 20328 \let\lesseqgtr\textlesseqgtr
 20329 \let\gtreqless\textgtreqless
 20330 \let\curlyeqprec\textcurlyeqprec
 20331 \let\ncurlyeqprec\textncurlyeqprec
 20332 \let\curlyeqsucc\textcurlyeqsucc
 20333 \let\ncurlyeqsucc\textncurlyeqsucc
 20334 \let\mpreccurlyeq\textmpreccurlyeq
 20335 \let\msucccurlyeq\textmsucccurlyeq
 20336 \let\mqsubseteq\textmqsubseteq
 20337 \let\mqsupseteq\textmqsupseteq
 20338 \let\sqsubsetneq\textsqsubsetneq
 20339 \let\sqsupsetneq\textsqsupsetneq
 20340 \let\lnsim\textlnsim
 20341 \let\gnsim\textgnsim
 20342 \let\precnsim\textprecnsim
 20343 \let\succnsim\textsuccnsim
 20344 \let\ltriangleright\textltriangleright
 20345 \let\rtriangleright\textrtriangleright
 20346 \let\ltrianglerighteq\textltrianglerighteq
 20347 \let\rtrianglerighteq\textrtrianglerighteq
 20348 \let\vdots\textvdots
 20349 \let\cdots\textcdots
 20350 \let\udots\textudots
 20351 \let\ddots\textddots
 20352 \let\barin\textbarin
 20353 \let\diameter\textdiameter
 20354 \let\backneg\textbackneg
 20355 \let\wasylounge\textwasylounge
 20356 \let\invbackneg\textinvbackneg
 20357 \let\clock\textclock
 20358 \let\ulcorner\textulcorner
 20359 \let\urcorner\texturcorner
 20360 \let\llcorner\textllcorner
 20361 \let\lrcorner\textlrcorner
 20362 \let\frown\textfrown
 20363 \let\smile\textsmile
 20364 \let\Keyboard\textKeyboard
 20365 \let\langle\textlangle
 20366 \let\rangle\textrangle
 20367 \let\APLinv\textAPLinv
 20368 \let\Tumbler\textTumbler
 20369 \let\notslash\textnotslash
 20370 \let\notbackslash\textnotbackslash
 20371 \let\boxbackslash\textboxbackslash
 20372 \let\APLleftarrowbox\textAPLleftarrowbox
 20373 \let\APLrightarrowbox\textAPLrightarrowbox
 20374 \let\APLuparrowbox\textAPLuparrowbox
 20375 \let\APLdownarrowbox\textAPLdownarrowbox
 20376 \let\APLinput\textAPLinput
 20377 \let\Request\textRequest
 20378 \let\Beam\textBeam

20379 \let\hexagon\texthexagon
 20380 \let\APLbox\textAPLbox
 20381 \let\ForwardToIndex\textForwardToIndex
 20382 \let\RewindToIndex\textRewindToIndex
 20383 \let\bbslash\textbbslash
 20384 \let\CircledA\textCircledA
 20385 \let\CleaningF\textCleaningF
 20386 \let\CleaningFF\textCleaningFF
 20387 \let\CleaningP\textCleaningP
 20388 \let\CleaningPP\textCleaningPP
 20389 \let\CuttingLine\textCuttingLine
 20390 \let\UParrow\textUParrow
 20391 \let\bigtriangleup\textbigtriangleup
 20392 \let\Forward\textForward
 20393 \let\triangleright\texttriangleright
 20394 \let\RHD\textRHD
 20395 \let\DOWNarrow\textDOWNarrow
 20396 \let\bigtriangledown\textbigtriangledown
 20397 \let\Rewind\textRewind
 20398 \let\triangleleft\texttriangleleft
 20399 \let\LHD\textLHD
 20400 \let\diamond\textdiamond
 20401 \let\lozenge\textlozenge
 20402 \let\LEFTCIRCLE\textLEFTCIRCLE
 20403 \let\RIGHTCIRCLE\textRIGHTCIRCLE
 20404 \let\openbullet\textopenbullet
 20405 \let\boxbar\textboxbar
 20406 \let\bigcircle\textbigcircle
 20407 \let\Cloud\textCloud
 20408 \let\FiveStar\textFiveStar
 20409 \let\FiveStarOpen\textFiveStarOpen
 20410 \let\Phone\textPhone
 20411 \let\boxempty\textboxempty
 20412 \let\Checkedbox\textCheckedbox
 20413 \let\Crossedbox\textCrossedbox
 20414 \let\Coffeecup\textCoffeecup
 20415 \let\HandCuffLeft\textHandCuffLeft
 20416 \let\HandCuffRight\textHandCuffRight
 20417 \let\HandLeft\textHandLeft
 20418 \let\HandRight\textHandRight
 20419 \let\Radioactivity\textRadioactivity
 20420 \let\Biohazard\textBiohazard
 20421 \let\Ankh\textAnkh
 20422 \let\YinYang\textYinYang
 20423 \let\frownie\textfrownie
 20424 \let\smiley\textsmiley
 20425 \let\blacksmiley\textblacksmiley
 20426 \let\sun\textsun
 20427 \let\leftmoon\textleftmoon
 20428 \let\rightmoon\textrightmoon
 20429 \let\mercury\textmercury
 20430 \let\earth\textearth
 20431 \let\male\textmale
 20432 \let\jupiter\textjupiter

20433 \let\saturn\textsaturn
 20434 \let\uranus\texturanus
 20435 \let\neptune\textneptune
 20436 \let\pluto\textpluto
 20437 \let\aries\textaries
 20438 \let\taurus\texttaurus
 20439 \let\gemini\textgemini
 20440 \let\cancer\textcancer
 20441 \let\leo\textleo
 20442 \let\virgo\textvirgo
 20443 \let\libra\textlibra
 20444 \let\scorpio\textscorpio
 20445 \let\sagittarius\textsagittarius
 20446 \let\capricornus\textcapricornus
 20447 \let\aquarius\textaquarius
 20448 \let\pisces\textpisces
 20449 \let\quarternote\textquarternote
 20450 \let\twonotes\texttwonotes
 20451 \let\sixteenthnote\textsixteenthnote
 20452 \let\flat\textflat
 20453 \let\natural\textnatural
 20454 \let\sharp\textsharp
 20455 \let\recycle\textrecycle
 20456 \let\Wheelchair\textWheelchair
 20457 \let\Flag\textFlag
 20458 \let\MineSign\textMineSign
 20459 \let\ds\military\textds\military
 20460 \let\ds\medical\textds\medical
 20461 \let\ds\juridical\textds\juridical
 20462 \let\ds\chemical\textds\chemical
 20463 \let\ds\biological\textds\biological
 20464 \let\ds\commercial\textds\commercial
 20465 \let\manstar\textmanstar
 20466 \let\danger\textdanger
 20467 \let\FemaleFemale\textFemaleFemale
 20468 \let\MaleMale\textMaleMale
 20469 \let\FemaleMale\textFemaleMale
 20470 \let\Hermaphrodite\textHermaphrodite
 20471 \let\Neutral\textNeutral
 20472 \let\hexstar\texthexstar
 20473 \let\SunCload\textSunCload
 20474 \let\Rain\textRain
 20475 \let\noway\textnoway
 20476 \let\Mountain\textMountain
 20477 \let\Tent\textTent
 20478 \let\ScissorRight\textScissorRight
 20479 \let\ScissorRightBrokenTop\textScissorRightBrokenTop
 20480 \let\ScissorHollowRight\textScissorHollowRight
 20481 \let\PhoneHandset\textPhoneHandset
 20482 \let\Tape\textTape
 20483 \let\Plane\textPlane
 20484 \let\Envelope\textEnvelope
 20485 \let\Peace\textPeace
 20486 \let\WritingHand\textWritingHand

20487 \let\PencilRightDown\textPencilRightDown
 20488 \let\PencilRight\textPencilRight
 20489 \let\PencilRightUp\textPencilRightUp
 20490 \let\NibRight\textNibRight
 20491 \let\NibSolidRight\textNibSolidRight
 20492 \let\Checkmark\textCheckmark
 20493 \let\CheckmarkBold\textCheckmarkBold
 20494 \let\XSolid\textXSolid
 20495 \let\XSolidBold\textXSolidBold
 20496 \let\XSolidBrush\textXSolidBrush
 20497 \let\PlusOutline\textPlusOutline
 20498 \let\Plus\textPlus
 20499 \let\PlusThinCenterOpen\textPlusThinCenterOpen
 20500 \let\PlusCenterOpen\textPlusCenterOpen
 20501 \let\Cross\textCross
 20502 \let\CrossOpenShadow\textCrossOpenShadow
 20503 \let\CrossOutline\textCrossOutline
 20504 \let\CrossMaltese\textCrossMaltese
 20505 \let\DavidStar\textDavidStar
 20506 \let\FourAsterisk\textFourAsterisk
 20507 \let\JackStar\textJackStar
 20508 \let\JackStarBold\textJackStarBold
 20509 \let\ClowerTips\textClowerTips
 20510 \let\FourStar\textFourStar
 20511 \let\FourStarOpen\textFourStarOpen
 20512 \let\FiveStarOpenCircled\textFiveStarOpenCircled
 20513 \let\FiveStarCenterOpen\textFiveStarCenterOpen
 20514 \let\FiveStarOpenDotted\textFiveStarOpenDotted
 20515 \let\FiveStarOutline\textFiveStarOutline
 20516 \let\FiveStarOutlineHeavy\textFiveStarOutlineHeavy
 20517 \let\FiveStarConvex\textFiveStarConvex
 20518 \let\FiveStarShadow\textFiveStarShadow
 20519 \let\AsteriskBold\textAsteriskBold
 20520 \let\AsteriskCenterOpen\textAsteriskCenterOpen
 20521 \let\EightStarTaper\textEightStarTaper
 20522 \let\EightStarConvex\textEightStarConvex
 20523 \let\SixStar\textSixStar
 20524 \let\EightStar\textEightStar
 20525 \let\EightStarBold\textEightStarBold
 20526 \let\TwelveStar\textTwelveStar
 20527 \let\SixteenStarLight\textSixteenStarLight
 20528 \let\SixFlowerPetalRemoved\textSixFlowerPetalRemoved
 20529 \let\SixFlowerOpenCenter\textSixFlowerOpenCenter
 20530 \let\Asterisk\textAsterisk
 20531 \let\SixFlowerAlternate\textSixFlowerAlternate
 20532 \let\FiveFlowerPetal\textFiveFlowerPetal
 20533 \let\FiveFlowerOpen\textFiveFlowerOpen
 20534 \let\EightFlowerPetal\textEightFlowerPetal
 20535 \let\SunshineOpenCircled\textSunshineOpenCircled
 20536 \let\SixFlowerAltPetal\textSixFlowerAltPetal
 20537 \let\SnowflakeChevron\textSnowflakeChevron
 20538 \let\Snowflake\textSnowflake
 20539 \let\SnowflakeChevronBold\textSnowflakeChevronBold
 20540 \let\Sparkle\textSparkle

20541 `\let\SparkleBold\textSparkleBold`
 20542 `\let\AsteriskRoundedEnds\textAsteriskRoundedEnds`
 20543 `\let\EightFlowerPetalRemoved\textEightFlowerPetalRemoved`
 20544 `\let\EightAsterisk\textEightAsterisk`
 20545 `\let\CircleShadow\textCircleShadow`
 20546 `\let\SquareShadowBottomRight\textSquareShadowBottomRight`
 20547 `\let\SquareTopRight\textSquareTopRight`
 20548 `\let\SquareCastShadowBottomRight\textSquareCastShadowBottomRight`
 20549 `\let\SquareCastShadowTopRight\textSquareCastShadowTopRight`
 20550 `\let\DiamandSolid\textDiamandSolid`
 20551 `\let\RectangleThin\textRectangleThin`
 20552 `\let\Rectangle\textRectangle`
 20553 `\let\RectangleBold\textRectangleBold`
 20554 `\let\perp\textperp`
 20555 `\let\notperp\textnotperp`
 20556 `\let\veedot\textveedot`
 20557 `\let\wedgedot\textwedgedot`
 20558 `\let\leftspoon\textleftspoon`
 20559 `\let\lbrackdbl\textlbrackdbl`
 20560 `\let\rbrackdbl\textrbrackdbl`
 20561 `\let\circlearrowleft\textcirclearrowleft`
 20562 `\let\circlearrowright\textcirclearrowright`
 20563 `\let\longleftarrow\textlongleftarrow`
 20564 `\let\longrightarrow\textlongrightarrow`
 20565 `\let\longleftarrow\textLongleftarrow`
 20566 `\let\Longleftarrow\textLongleftarrow`
 20567 `\let\Longrightarrow\textLongrightarrow`
 20568 `\let\Longleftarrow\textLongleftarrow`
 20569 `\let\longmapsto\textlongmapsto`
 20570 `\let\Longmapsfrom\textLongmapsfrom`
 20571 `\let\Longmapsto\textLongmapsto`
 20572 `\let\nwsearrow\textnwsearrow`
 20573 `\let\neswarrow\textneswarrow`
 20574 `\let\lhooknwarrow\textlhooknwarrow`
 20575 `\let\rhooknearrow\textlhooknearrow`
 20576 `\let\lhooksearrow\textlhooksearrow`
 20577 `\let\rhookswarrow\textlhookswarrow`
 20578 `\let\leadsto\textleadsto`
 20579 `\let\rcurvearrowne\textrcurvearrowne`
 20580 `\let\lcurvearrowse\textlcurvearrowse`
 20581 `\let\lcurvearrowsw\textlcurvearrowsw`
 20582 `\let\rcurvearrowse\textrcurvearrowse`
 20583 `\let\lcurvearrowdown\textlcurvearrowdown`
 20584 `\let\rcurvearrowdown\textrcurvearrowdown`
 20585 `\let\rcurvearrowleft\textrcurvearrowleft`
 20586 `\let\rcurvearrowright\textrcurvearrowright`
 20587 `\let\leftrightharpoon\textleftrightharpoon`
 20588 `\let\rightleftharpoon\textrightleftharpoon`
 20589 `\let\updownharpoonrightleft\textupdownharpoonrightleft`
 20590 `\let\updownharpoonleftright\textupdownharpoonleftright`
 20591 `\let\leftleftharpoons\textleftleftharpoons`
 20592 `\let\upupharpoons\textupupharpoons`
 20593 `\let\rightleftharpoons\textrightleftharpoons`
 20594 `\let\downdownharpoons\textdowndownharpoons`

20595 $\backslash\text{let}\backslash\text{leftbarharpoon}\backslash\text{textleftbarharpoon}$
 20596 $\backslash\text{let}\backslash\text{barleftharpoon}\backslash\text{textbarleftharpoon}$
 20597 $\backslash\text{let}\backslash\text{rightbarharpoon}\backslash\text{textrightbarharpoon}$
 20598 $\backslash\text{let}\backslash\text{barrightharpoon}\backslash\text{textbarrightharpoon}$
 20599 $\backslash\text{let}\backslash\text{updownharpoons}\backslash\text{textupdownharpoons}$
 20600 $\backslash\text{let}\backslash\text{downupharpoons}\backslash\text{textdownupharpoons}$
 20601 $\backslash\text{let}\backslash\text{moo}\backslash\text{textmoo}$
 20602 $\backslash\text{let}\backslash\text{llparenthesis}\backslash\text{textllparenthesis}$
 20603 $\backslash\text{let}\backslash\text{rrparenthesis}\backslash\text{textrrparenthesis}$
 20604 $\backslash\text{let}\backslash\text{invdiameter}\backslash\text{textinvdiameter}$
 20605 $\backslash\text{let}\backslash\text{oobar}\backslash\text{textobar}$
 20606 $\backslash\text{let}\backslash\text{obslash}\backslash\text{textobslash}$
 20607 $\backslash\text{let}\backslash\text{obot}\backslash\text{textobot}$
 20608 $\backslash\text{let}\backslash\text{NoChemicalCleaning}\backslash\text{textNoChemicalCleaning}$
 20609 $\backslash\text{let}\backslash\text{olessthan}\backslash\text{textolessthan}$
 20610 $\backslash\text{let}\backslash\text{ogreaterthan}\backslash\text{textogreaterthan}$
 20611 $\backslash\text{let}\backslash\text{boxslash}\backslash\text{textboxslash}$
 20612 $\backslash\text{let}\backslash\text{boxbslash}\backslash\text{textboxbslash}$
 20613 $\backslash\text{let}\backslash\text{boxast}\backslash\text{textboxast}$
 20614 $\backslash\text{let}\backslash\text{boxcircle}\backslash\text{textboxcircle}$
 20615 $\backslash\text{let}\backslash\text{boxbox}\backslash\text{textboxbox}$
 20616 $\backslash\text{let}\backslash\text{Valve}\backslash\text{textValve}$
 20617 $\backslash\text{let}\backslash\text{multimapboth}\backslash\text{textmultimapboth}$
 20618 $\backslash\text{let}\backslash\text{shuffle}\backslash\text{textshuffle}$
 20619 $\backslash\text{let}\backslash\text{upplus}\backslash\text{textupplus}$
 20620 $\backslash\text{let}\backslash\text{bigdoublewedge}\backslash\text{textbigdoublewedge}$
 20621 $\backslash\text{let}\backslash\text{bigdoublevee}\backslash\text{textbigdoublevee}$
 20622 $\backslash\text{let}\backslash\text{Join}\backslash\text{textJoin}$
 20623 $\backslash\text{let}\backslash\text{fatsemi}\backslash\text{textfatsemi}$
 20624 $\backslash\text{let}\backslash\text{circplus}\backslash\text{textcircplus}$
 20625 $\backslash\text{let}\backslash\text{minusdot}\backslash\text{textminusdot}$
 20626 $\backslash\text{let}\backslash\text{dotimes}\backslash\text{textdotimes}$
 20627 $\backslash\text{let}\backslash\text{dtimes}\backslash\text{textdtimes}$
 20628 $\backslash\text{let}\backslash\text{odiv}\backslash\text{textodiv}$
 20629 $\backslash\text{let}\backslash\text{invneg}\backslash\text{textinvneg}$
 20630 $\backslash\text{let}\backslash\text{sqdoublecap}\backslash\text{textsquaddoublecap}$
 20631 $\backslash\text{let}\backslash\text{capdot}\backslash\text{textcapdot}$
 20632 $\backslash\text{let}\backslash\text{sqdoublecup}\backslash\text{textsquaddoublecup}$
 20633 $\backslash\text{let}\backslash\text{doublewedge}\backslash\text{textdoublewedge}$
 20634 $\backslash\text{let}\backslash\text{doublevee}\backslash\text{textdoublevee}$
 20635 $\backslash\text{let}\backslash\text{doublebarwedge}\backslash\text{textdoublebarwedge}$
 20636 $\backslash\text{let}\backslash\text{veedoublebar}\backslash\text{textveedoublebar}$
 20637 $\backslash\text{let}\backslash\text{eqdot}\backslash\text{texteqdot}$
 20638 $\backslash\text{let}\backslash\text{neqdot}\backslash\text{textneqdot}$
 20639 $\backslash\text{let}\backslash\text{coloncolonequals}\backslash\text{textcoloncolonequals}$
 20640 $\backslash\text{let}\backslash\text{leqslant}\backslash\text{textleqslant}$
 20641 $\backslash\text{let}\backslash\text{nleqslant}\backslash\text{textnleqslant}$
 20642 $\backslash\text{let}\backslash\text{geqslant}\backslash\text{textgeqslant}$
 20643 $\backslash\text{let}\backslash\text{ngeqslant}\backslash\text{textngeqslant}$
 20644 $\backslash\text{let}\backslash\text{lessapprox}\backslash\text{textlessapprox}$
 20645 $\backslash\text{let}\backslash\text{nlessapprox}\backslash\text{textnlessapprox}$
 20646 $\backslash\text{let}\backslash\text{gtrapprox}\backslash\text{textgtrapprox}$
 20647 $\backslash\text{let}\backslash\text{ngtrapprox}\backslash\text{textngtrapprox}$
 20648 $\backslash\text{let}\backslash\text{ineq}\backslash\text{textineq}$

20649 $\backslash\text{let}\backslash\text{gneq}\backslash\text{textgneq}$
 20650 $\backslash\text{let}\backslash\text{lnapprox}\backslash\text{textlnapprox}$
 20651 $\backslash\text{let}\backslash\text{gnapprox}\backslash\text{textgnapprox}$
 20652 $\backslash\text{let}\backslash\text{lesseqqgtr}\backslash\text{textlesseqqgtr}$
 20653 $\backslash\text{let}\backslash\text{gtreqqless}\backslash\text{textgtreqqless}$
 20654 $\backslash\text{let}\backslash\text{eqslantless}\backslash\text{texteqslantless}$
 20655 $\backslash\text{let}\backslash\text{eqslantgtr}\backslash\text{texteqslantgtr}$
 20656 $\backslash\text{let}\backslash\text{leftslice}\backslash\text{textleftslice}$
 20657 $\backslash\text{let}\backslash\text{rightslice}\backslash\text{textrightslice}$
 20658 $\backslash\text{let}\backslash\text{preceq}\backslash\text{textpreceq}$
 20659 $\backslash\text{let}\backslash\text{npreceq}\backslash\text{textnpreceq}$
 20660 $\backslash\text{let}\backslash\text{succeq}\backslash\text{textsucceq}$
 20661 $\backslash\text{let}\backslash\text{nsucceq}\backslash\text{textnsucceq}$
 20662 $\backslash\text{let}\backslash\text{precneq}\backslash\text{textprecneq}$
 20663 $\backslash\text{let}\backslash\text{succneq}\backslash\text{textsuccneq}$
 20664 $\backslash\text{let}\backslash\text{preceqq}\backslash\text{textpreceqq}$
 20665 $\backslash\text{let}\backslash\text{npreceqq}\backslash\text{textnpreceqq}$
 20666 $\backslash\text{let}\backslash\text{succeqq}\backslash\text{textsucceqq}$
 20667 $\backslash\text{let}\backslash\text{nsucceqq}\backslash\text{textnsucceqq}$
 20668 $\backslash\text{let}\backslash\text{precneqq}\backslash\text{textprecneqq}$
 20669 $\backslash\text{let}\backslash\text{succneqq}\backslash\text{textsuccneqq}$
 20670 $\backslash\text{let}\backslash\text{precapprox}\backslash\text{textprecapprox}$
 20671 $\backslash\text{let}\backslash\text{nprecapprox}\backslash\text{textnprecapprox}$
 20672 $\backslash\text{let}\backslash\text{succapprox}\backslash\text{textsuccapprox}$
 20673 $\backslash\text{let}\backslash\text{nsuccapprox}\backslash\text{textnsuccapprox}$
 20674 $\backslash\text{let}\backslash\text{precnapprox}\backslash\text{textprecnapprox}$
 20675 $\backslash\text{let}\backslash\text{succnapprox}\backslash\text{textsuccnapprox}$
 20676 $\backslash\text{let}\backslash\text{subseteqq}\backslash\text{textsubseteqq}$
 20677 $\backslash\text{let}\backslash\text{nsubseteqq}\backslash\text{textnsubseteqq}$
 20678 $\backslash\text{let}\backslash\text{supseteqq}\backslash\text{textsupseteqq}$
 20679 $\backslash\text{let}\backslash\text{nsupseteqq}\backslash\text{textnsupseteqq}$
 20680 $\backslash\text{let}\backslash\text{dashV}\backslash\text{textdashV}$
 20681 $\backslash\text{let}\backslash\text{ndashV}\backslash\text{textndashV}$
 20682 $\backslash\text{let}\backslash\text{Dashv}\backslash\text{textDashv}$
 20683 $\backslash\text{let}\backslash\text{nDashv}\backslash\text{textnDashv}$
 20684 $\backslash\text{let}\backslash\text{DashV}\backslash\text{textDashV}$
 20685 $\backslash\text{let}\backslash\text{nDashV}\backslash\text{textnDashV}$
 20686 $\backslash\text{let}\backslash\text{downmodels}\backslash\text{textdownmodels}$
 20687 $\backslash\text{let}\backslash\text{ndownmodels}\backslash\text{textndownmodels}$
 20688 $\backslash\text{let}\backslash\text{upmodels}\backslash\text{textupmodels}$
 20689 $\backslash\text{let}\backslash\text{nupmodels}\backslash\text{textnupmodels}$
 20690 $\backslash\text{let}\backslash\text{upspoon}\backslash\text{textupspoon}$
 20691 $\backslash\text{let}\backslash\text{interleave}\backslash\text{textinterleave}$
 20692 $\backslash\text{let}\backslash\text{slash}\backslash\text{textslash}$
 20693 $\backslash\text{let}\backslash\text{pentagon}\backslash\text{textpentagon}$
 20694 $\backslash\text{let}\backslash\text{varhexagon}\backslash\text{textvarhexagon}$
 20695 $\backslash\text{let}\backslash\text{jinferior}\backslash\text{textjinferior}$
 20696 $\backslash\text{let}\backslash\text{slashdiv}\backslash\text{textslashdiv}$
 20697 $\backslash\text{let}\backslash\text{fivedots}\backslash\text{textfivedots}$
 20698 $\backslash\text{let}\backslash\text{oo}\backslash\text{textoo}$
 20699 $\backslash\text{let}\backslash\text{GaPa}\backslash\text{textGaPa}$
 20700 $\backslash\text{let}\backslash\text{HaPa}\backslash\text{textHaPa}$
 20701 $\backslash\text{let}\backslash\text{ViPa}\backslash\text{textViPa}$
 20702 $\backslash\text{let}\backslash\text{AcPa}\backslash\text{textAcPa}$

20703 \let\SePa\textSePa
 20704 \let\ZwPa\textZwPa
 20705 \let\fullnote\textfullnote
 20706 \let\halfnote\texthalfnote
 20707 \let\Vier\textVier
 20708 \let\Acht\textAcht
 20709 \let\Sech\textSech
 20710 \let\Zwdr\textZwdr
 20711 \let\Mundus\textMundus
 20712 \let\Moon\textMoon
 20713 \let\ManFace\textManFace
 20714 \let\WomanFace\textWomanFace
 20715 \let\Fax\textFax
 20716 \let\Fire\textFire
 20717 \let\Bicycle\textBicycle
 20718 \let\Gentsroom\textGentsroom
 20719 \let\Ladiesroom\textLadiesroom
 20720 \let\ccnc\textccnc
 20721 \let\ccsa\textccsa
 20722 \let\Info\textInfo
 20723 \let\CESign\textCESign
 20724 \let\neg\textneg
 20725 \let\times\texttimes
 20726 \let\div\textdiv
 20727 \let\pm\textpm
 20728 \let\cdot\textcdot
 20729 }% \psdmapshortnames
 20730 \newcommand*{\psdaliasnames}{%
 20731 \let\epsdice\HyPsd@DieFace
 20732 \let\fcdice\HyPsd@DieFace
 20733 \let\MoonPha\HyPsd@MoonPha
 20734 \let\mathdollar\textdollar
 20735 \let\EyesDollar\textdollar
 20736 \let\binampersand\textampersand
 20737 \let\with\textampersand
 20738 \let\mathunderscore\textunderscore
 20739 \let\textvertline\textbar
 20740 \let\mathsterling\textsterling
 20741 \let\pounds\textsterling
 20742 \let\brokenvert\textbrokenbar
 20743 \let\mathsection\textsection
 20744 \let\S\textsection
 20745 \let\mathparagraph\textparagraph
 20746 \let\MultiplicationDot\textperiodcentered
 20747 \let\Squaredot\textperiodcentered
 20748 \let\vartimes\textmultiply
 20749 \let\MVMultiplication\textmultiply
 20750 \let\eth\dh
 20751 \let\crossd\textcrd
 20752 \let\textbard\textcrd
 20753 \let\bard\textcrd
 20754 \let\textcrh\textthbar
 20755 \let\crossh\textthbar
 20756 \let\planck\textthbar

20757 \let\eng\ng
 20758 \let\engma\ng
 20759 \let\crossb\textcrb
 20760 \let\textbarb\textcrb
 20761 \let\barb\textcrb
 20762 \let\Florin\textflorin
 20763 \let\hv\texthvlig
 20764 \let\hausak\texthtk
 20765 \let\crossnilambda\textcrlambda
 20766 \let\barlambda\textcrlambda
 20767 \let\lambdabar\textcrlambda
 20768 \let\lambdaslash\textcrlambda
 20769 \let\textnrleg\textPUnrleg
 20770 \let\textpipevar\textpipe
 20771 \let\textdoublepipevar\textdoublepipe
 20772 \let\textdoublebarpipevar\textdoublebarpipe
 20773 \let\textcrg\textgslash
 20774 \let\textdblig\textPUdblig
 20775 \let\textqplig\textPUqplig
 20776 \let\textcentoldstyle\textslashc
 20777 \let\textbarc\textslashc
 20778 \let\inva\textturna
 20779 \let\vara\textscripta
 20780 \let\invscripta\textturnscripta
 20781 \let\rotvara\textturnscripta
 20782 \let\hookb\texthtb
 20783 \let\hausab\texthtb
 20784 \let\varopeno\textopeno
 20785 \let\curlyc\textctc
 20786 \let\taild\textrtaild
 20787 \let\hookd\texthtd
 20788 \let\hausad\texthtd
 20789 \let\er\textrhooschwa
 20790 \let\epsi\textniepsilon
 20791 \let\hookrevespsilon\textrhooschwa
 20792 \let\closedrevespsilon\textcloserespsilon
 20793 \let\barj\textbardotlessj
 20794 \let\hookg\texthtg
 20795 \let\varg\textscriptg
 20796 \let\vod\textipagamma
 20797 \let\invh\textturnh
 20798 \let\udesc\textturnh
 20799 \let\hookh\textthh
 20800 \let\voicedh\textthh
 20801 \let\hookheng\textthheng
 20802 \let\ibar\textbari
 20803 \let\vari\textniiota
 20804 \let\tildel\texttilde
 20805 \let\latfric\textbeltl
 20806 \let\tail\textrtail
 20807 \let\lz\textlyoghlig
 20808 \let\invm\textturnm
 20809 \let\rotm\textturnm
 20810 \let\legm\textturnmrleg

20811 \let\labdentalnas\textltailm
 20812 \let\emgma\textltailm
 20813 \let\nj\textltailn
 20814 \let\enya\textltailn
 20815 \let\tailn\textrtailn
 20816 \let\closedniomega\textcloseomega
 20817 \let\varomega\textcloseomega
 20818 \let\invr\textturnr
 20819 \let\rotr\textturnr
 20820 \let\invlegr\textturnlonglegr
 20821 \let\tailinvr\textturnrrtail
 20822 \let\legr\textlonglegr
 20823 \let\tailr\textrtailr
 20824 \let\flapr\textfishhookr
 20825 \let\flap\textfishhookr
 20826 \let\tails\textrtails
 20827 \let\curlyesh\textctesh
 20828 \let\clickt\textturnt
 20829 \let\tailt\textrtailt
 20830 \let\ubar\textbaru
 20831 \let\rotOmega\textniupsilon
 20832 \let\invv\textturnv
 20833 \let\pwedge\textturnv
 20834 \let\invw\textturnw
 20835 \let\rotw\textturnw
 20836 \let\invy\textturny
 20837 \let\roty\textturny
 20838 \let\tailz\textrtailz
 20839 \let\curlyz\textctz
 20840 \let\curlyyogh\textctyogh
 20841 \let\ejective\textglotstop
 20842 \let\glottal\textglotstop
 20843 \let\reveject\textrevglotstop
 20844 \let\clickc\textstretchc
 20845 \let\textstretchcvar\textstretchc
 20846 \let\clickb\textbullseye
 20847 \let\textObullseye\textbullseye
 20848 \let\textctjvar\textctj
 20849 \let\textturnsck\textturnk
 20850 \let\dz\textdzlig
 20851 \let\tesh\textteshlig
 20852 \let\digamma\textdigammagreek
 20853 \let\hardsign\cyrhrdsn
 20854 \let\softsign\cyrsoftsn
 20855 \let\hebsin\hebshin
 20856 \let\textsc\textPUsc
 20857 \let\textscm\textPUscm
 20858 \let\textscp\textPUscp
 20859 \let\textrevscr\textPUrevscr
 20860 \let\textrhoocka\textPUrhoocka
 20861 \let\textrhoocke\textPUrhoocke
 20862 \let\textrhoockepsilon\textPUrhoockepsilon
 20863 \let\textrhoockopeno\textPUrhoockopeno
 20864 \let\textdoublevertline\textbardbl

20865 \let\dag\textdagger
 20866 \let\ddagger\textdaggerdbl
 20867 \let\ddag\textdaggerdbl
 20868 \let\mathellipsis\textellipsis
 20869 \let\EurDig\texteuro
 20870 \let\EURdig\texteuro
 20871 \let\EurHv\texteuro
 20872 \let\EURhv\texteuro
 20873 \let\EurCr\texteuro
 20874 \let\EURcr\texteuro
 20875 \let\EurTm\texteuro
 20876 \let\EURtm\texteuro
 20877 \let\Eur\texteuro
 20878 \let\Denarius\textDeleatur
 20879 \let\agemO\textmho
 20880 \let\EstimatedSign\textestimated
 20881 \let\Ecommerce\textestimated
 20882 \let\bindnasrepma\textinvamp
 20883 \let\parr\textinvamp
 20884 \let\MVRightArrow\textrightarrow
 20885 \let\MVRightarrow\textrightarrow
 20886 \let\MVArrowDown\textdownarrow
 20887 \let\Force\textdownarrow
 20888 \let\textglobrise\textnearrow
 20889 \let\textglobfall\textsearrow
 20890 \let\Lightning\textlightning
 20891 \let\Conclusion\textrightarrow
 20892 \let\dashedleftarrow\textdashleftarrow
 20893 \let\dashedrightarrow\textdashrightarrow
 20894 \let\varnothing\textemptyset
 20895 \let\owns\textni
 20896 \let\notni\textnotowner
 20897 \let\varprop\textpropto
 20898 \let\varangle\textsphericalangle
 20899 \let\Anglesign\textsphericalangle
 20900 \let\AngleSign\textsphericalangle
 20901 \let\notdivides\textnmid
 20902 \let\varowedge\textowedge
 20903 \let\varovee\textovee
 20904 \let\varint\textint
 20905 \let\varoint\textoint
 20906 \let\downtherefore\textbecause
 20907 \let\textdotdiv\textdotminus
 20908 \let\AC\textsim
 20909 \let\wreath\textwr
 20910 \let\nthickapprox\textnapprox
 20911 \let\VHF\texttriplesim
 20912 \let\notasymp\textnasympt
 20913 \let\Doteq\textdoteqdot
 20914 \let\corresponds\texthateq
 20915 \let\Corresponds\texthateq
 20916 \let\nequal\textneq
 20917 \let\Congruent\textequiv
 20918 \let\NotCongruent\textnequiv

20919 `\let\notequiv\textnequiv`
 20920 `\let\LessOrEqual\textleq`
 20921 `\let\LargerOrEqual\textgeq`
 20922 `\let\apprle\textless`
 20923 `\let\apprge\textgtr`
 20924 `\let\varoplus\textplus`
 20925 `\let\varominus\textminus`
 20926 `\let\varotimes\texttimes`
 20927 `\let\varoslash\textoslash`
 20928 `\let\varodot\textodot`
 20929 `\let\ocirc\textcircledcirc`
 20930 `\let\varocircle\textcircledcirc`
 20931 `\let\varoast\textcircledast`
 20932 `\let\oasterisk\textcircledast`
 20933 `\let\rightvdash\textvdash`
 20934 `\let\leftvdash\textdashv`
 20935 `\let\nleftvdash\textndashv`
 20936 `\let\downvdash\texttop`
 20937 `\let\upvdash\textbot`
 20938 `\let\nperp\textnupvdash`
 20939 `\let\models\textvDash`
 20940 `\let\rightmodels\textvDash`
 20941 `\let\rightVdash\textVdash`
 20942 `\let\rightModels\textVDash`
 20943 `\let\nrightvdash\textnvdash`
 20944 `\let\nrightmodels\textnvDash`
 20945 `\let\nmodels\textnvDash`
 20946 `\let\nrightVdash\textnVdash`
 20947 `\let\nrightModels\textnVDash`
 20948 `\let\lessclosed\textlhd`
 20949 `\let\gtrclosed\textrhd`
 20950 `\let\leqclosed\textunlhd`
 20951 `\let\trianglelefteq\textunlhd`
 20952 `\let\geqclosed\textunrhd`
 20953 `\let\trianglerighteq\textunrhd`
 20954 `\let\Bowtie\textbowtie`
 20955 `\let\varcurlyvee\textcurlyvee`
 20956 `\let\varcurlywedge\textcurlywedge`
 20957 `\let\doublecap\textCap`
 20958 `\let\doublecup\textCup`
 20959 `\let\varsubsetneq\textsubsetneq`
 20960 `\let\varsupsetneq\textsupsetneq`
 20961 `\let\nlessclosed\textntriangleleft`
 20962 `\let\ngtrclosed\textntriangleright`
 20963 `\let\Clocklogo\textclock`
 20964 `\let\ClockLogo\textclock`
 20965 `\let\baro\textstmaryrdbaro`
 20966 `\let\varparallel\textbbslash`
 20967 `\let\CleaningA\textCircledA`
 20968 `\let\Kutline\textCuttingLine`
 20969 `\let\CutLine\textCuttingLine`
 20970 `\let\Cutline\textCuttingLine`
 20971 `\let\MoveUp\textUParrow`
 20972 `\let\APLup\textbigtriangleup`

20973 \let\Bleech\textbigtriangleup
 20974 \let\MoveDown\textDOWNarrow
 20975 \let\APLdown\textbigtriangledown
 20976 \let\Diamond\textdiamond
 20977 \let\varbigcirc\textbigcircle
 20978 \let\Telefon\textPhone
 20979 \let\Box\textboxempty
 20980 \let\CheckedBox\textCheckedbox
 20981 \let\XBox\textCrossedbox
 20982 \let\CrossedBox\textCrossedbox
 20983 \let\rightpointleft\textHandLeft
 20984 \let\leftpointright\textHandRight
 20985 \let\PointingHand\textHandRight
 20986 \let\Pointinghand\textHandRight
 20987 \let\Radiation\textRadioactivity
 20988 \let\Yinyang\textYinYang
 20989 \let\YingYang\textYinYang
 20990 \let\Yingyang\textYinYang
 20991 \let\Frowny\textfrownie
 20992 \let\Smiley\textsmiley
 20993 \let\Sun\textsun
 20994 \let\Mercury\textmercury
 20995 \let\textfemale\textPUfemale
 20996 \let\female\textPUfemale
 20997 \let\venus\textPUfemale
 20998 \let\Venus\textPUfemale
 20999 \let\Female\textPUfemale
 21000 \let\Earth\textearth
 21001 \let\mars\textmale
 21002 \let\Mars\textmale
 21003 \let\Male\textmale
 21004 \let\Jupiter\textjupiter
 21005 \let\Saturn\textsaturn
 21006 \let\Uranus\texturanus
 21007 \let\Neptune\textneptune
 21008 \let\Pluto\textpluto
 21009 \let\Aries\textaries
 21010 \let\Taurus\texttaurus
 21011 \let\Gemini\textgemini
 21012 \let\Cancer\textcancer
 21013 \let\Leo\textleo
 21014 \let\Virgo\textvirgo
 21015 \let\Libra\textlibra
 21016 \let\Scorpio\textscorpio
 21017 \let\Sagittarius\textsagittarius
 21018 \let\Capricorn\textcapricornus
 21019 \let\Aquarius\textaquarius
 21020 \let\Pisces\textpisces
 21021 \let\spadesuit\textspadesuitblack
 21022 \let\Heart\textheartsuitwhite
 21023 \let\heartsuit\textheartsuitwhite
 21024 \let\diamondsuit\textdiamondsuitwhite
 21025 \let\clubsuit\textclubsuitblack
 21026 \let\ eighthnote\textmusicalnote

```

21027 \let\Recycling\textrecycle
21028 \let\VarFlag\textFlag
21029 \let\textxswup\textdsilitary
21030 \let\textuncrfemale\textPUuncrfemale
21031 \let\Football\textSoccerBall
21032 \let\CutLeft\textScissorRightBrokenBottom
21033 \let\Cutright\textScissorRightBrokenBottom
21034 \let\RightScissors\textScissorRight
21035 \let\Leftscissors\textScissorRight
21036 \let\Letter\textEnvelope
21037 \let\Writinghand\textWritingHand
21038 \let\checkmark\textCheckmark
21039 \let\davidstar\textDavidStar
21040 \let\llbracket\textlbrackdbl
21041 \let\rrbracket\textrrbrackdbl
21042 \let\RightTorque\textlcurvearrowdown
21043 \let\Righttorque\textlcurvearrowdown
21044 \let\LeftTorque\textrcurvearrowdown
21045 \let\Lefttorque\textrcurvearrowdown
21046 \let\textvarobar\textobar
21047 \let\circledbslash\textobslash
21048 \let\obackslash\textobslash
21049 \let\varobslash\textobslash
21050 \let\odplus\textobot
21051 \let\varolessthan\textolessthan
21052 \let\varogreaterthan\textogreaterthan
21053 \let\divdot\textminusdot
21054 \let\doublesqcap\textsdoublecap
21055 \let\doublesqcup\textsdoublecup
21056 \let\merge\textdoublevee
21057 \let\leftVdash\textdashV
21058 \let\nleftVdash\textndashV
21059 \let\leftmodels\textDashv
21060 \let\nleftmodels\textnDashv
21061 \let\leftModels\textDashV
21062 \let\nleftModels\textnDashV
21063 \let\varparallel\textsslash
21064 \let\textheng\textPUheng
21065 \let\textlhookfour\textPUlhookfour
21066 \let\textscf\textPUscf
21067 \let\textao lig\textPUaolig
21068 \let\Ganz\textfullnote
21069 \let\Halb\texthalfnote
21070 \let\Womanface\textWomanFace
21071 \let\Faxmachine\textFax
21072 \let\CEsign\textCESign
21073 }% \psdaliasnames
21074 </psdextra>

```

47 End of file hycheck.tex

```

21075 < *check>
21076 \typeout{}

```

```
21077 \begin{document}  
21078 \end{document}  
21079 </check>
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